Financial Report
2020–2021
Yale University

Yale University Financial Report 2020–2021

Front cover (top to bottom)

A student on Old Campus during the COVID-19 pandemic. Photo: Dan Renzetti

Sara Drummond, founding dean of Andover Newton Seminary at Yale Divinity School, conducting class. Photo: Andrew Hurley

Graduate School of Arts and Sciences students attending the 2021 commencement ceremonies. Photo: Dan Renzetti

Critical research continued at the university while health and safety precautions were strictly followed during the COVID-19 pandemic. Photo: Dan Renzetti

Back cover (top to bottom)

Sage Boy, located outside of Sage Hall at the Yale School of the Environment. Photo: Dan Renzetti

Students enjoying a break on Cross Campus. Photo: Andrew Hurley

Handsome Dan XIX, the latest bulldog to serve as Yale's live mascot, a tradition that began over 130 years ago. Photo: Dan Renzetti

Mark Bradford, a professor at the Yale School of the Environment, teaching class in an outdoor tent. Photo: Dan Renzetti

Hospitality team member preparing boxed meals to be delivered around campus during the COVID-19 pandemic. Photo: Yale Hospitality

Highlights

	Fiscal Years				
Five-Year Financial Overview ($ in millions)	**2021**	**2020**	**2019**	**2018**	**2017**
Net Operating Results - Management View	$ 276	$ 125	$ 87	$ 91	$ 115
Financial Position Highlights:					
Total assets	$ 56,223	$ 44,696	$ 44,428	$ 41,873	$ 39,194
Total liabilities	11,931	12,964	12,186	9,616	10,208
Total net assets	$ 44,292	$ 31,732	$ 32,242	$ 32,257	$ 28,986
Endowment:					
Net investments, at fair value	$ 41,913	$ 30,957	$ 30,295	$ 29,445	$ 27,217
Total return on investments	40.2%	6.8%	5.7%	12.3%	11.3%
Spending from endowment	5.0%	4.8%	4.6%	4.7%	4.8%
Facilities:					
Land, buildings and equipment, net of accumulated depreciation	$ 5,508	$ 5,438	$ 5,251	$ 5,092	$ 4,967
Disbursements for building projects	$ 380	$ 437	$ 447	$ 367	$ 395
Debt	$ 5,200	$ 5,242	$ 3,775	$ 3,785	$ 3,515
Statement of Activities Highlights:					
Operating revenues	$ 4,579	$ 4,247	$ 4,105	$ 3,817	$ 3,619
Operating expenses	4,201	4,044	3,835	3,627	3,452
Increase in net assets from operating activities	$ 378	$ 203	$ 270	$ 190	$ 167

Five-Year Enrollment Statistics	**2021**	**2020**	**2019**	**2018**	**2017**
First-Year Enrollment Class of:	'24	'23	'22	'21	'20
First-Year applications	35,220	36,844	35,306	34,154	31,445
First-Year admitted	2,299	2,269	2,229	2,316	1,988
Admissions rate	6.5%	6.2%	6.3%	6.8%	6.3%
First-Year enrollment	1,264	1,550	1,573	1,579	1,371
Yield	55.0%	68.3%	70.6%	69.3%	70.3%
Total Enrollment:					
Yale College	4,703	6,092	5,964	5,743	5,472
Graduate and professional schools	7,357	7,517	7,469	7,228	6,986
Total	12,060	13,609	13,433	12,971	12,458
Yale College Term Bill and Financial Aid:					
Yale College term bill	$ 74,900	$ 72,100	$ 69,430	$ 66,900	$ 64,650
Average grant award for students receiving aid	$ 58,340	$ 59,205	$ 57,633	$ 53,703	$ 50,950

Message from the President

Dear Members of the Yale Community,

The events of the past year—an ongoing pandemic, devastating climate events, and widening divides in our society—underscore the urgency of Yale's commitment to world-changing scholarship and education. More than ever before, we see the vital need for innovative ideas, new knowledge, and creative leadership. It is a privilege, therefore, for me to present this 2020-2021 Financial Report, which details our accomplishments and reflects the hard work and dedication of so many students, faculty, staff, and alumni.

Since the beginning of the COVID-19 pandemic, we have ensured the continuity of Yale's educational and research mission while focusing on the health and well-being of students, faculty, staff, and community members. The careful management of Yale's financial resources has allowed us to create a public health infrastructure designed to minimize the spread of COVID-19 on campus and in the broader community. Following the guidance of Yale experts, our approach has included a rigorous, campus-based contact-tracing program; widespread testing and isolation of positive cases; scientifically informed guidelines regarding the use of face masks, social distancing, and other mitigation measures; and a robust vaccination program. For the 2021-2022 academic year, Yale implemented a COVID-19 vaccine requirement. As of mid-September, 99 percent of undergraduates, 98 percent of graduate and professional school students, 93 percent of faculty, and 92 percent of staff have been fully vaccinated. Our efforts foster a healthy campus community and provide a national model for other institutions.

Although we have been addressing the challenges posed by the pandemic, we have made tremendous progress toward realizing Yale's academic priorities in science and engineering; empirical, policy-relevant social science research; the arts and humanities; and support for faculty and students. In each of these areas, we are focused on preparing future leaders and creating knowledge that will benefit humanity and improve and extend life—now and for years to come.

Scientific discovery and understanding are essential to solving some of our most vexing challenges, and we recognize Yale must be a leader in these disciplines to fulfill our responsibilities to the world. This year, the transformation of Science Hill continued with new and reimagined facilities for research and education. After the opening of the new Yale Science Building in 2019, work is now underway on Kline Tower, Yale's tallest building. After a comprehensive renovation, Kline Tower will be home to the Departments of Statistics and Data Science, Mathematics, and Astronomy. By relocating the building's equipment-heavy laboratories to the nearby Yale Science Building, we freed up an entirely new floor, where we will advance our priorities in data science. Across the university, we are investing in data science and computer science because of their critical importance to so many disciplines and problems. The Peabody Museum also is undergoing an extensive renovation; when complete, it will include a new four-story, nearly 60,000 square-foot addition at the museum's center. This addition will support expanded research activities and enrich the museum's educational offerings as we seek to "share Yale" with visitors of all ages from New Haven and around the world.

Complex challenges require expertise from many fields, which is why we are forging connections among different schools, departments, and programs. The establishment of the Wu Tsai Institute represents a major step forward in our plans for neuroscience, an area of multidisciplinary focus. Made possible through a historic gift from Joe Tsai '86, '90 J.D. and his wife Clara Wu Tsai, the Wu Tsai Institute is dedicated to understanding the human mind on all levels—from molecules and cells to circuits, systems, and behavior. The institute will unite hundreds of faculty members and students working on different aspects of human cognition, with the shared goal of driving breakthroughs that will reduce suffering and increase well-being.

Climate change—an existential threat to life on this planet—is another challenge that requires imagination and insight from multiple disciplines. This year, we launched the Planetary Solutions Project to bring the full weight of Yale's expertise and resources to bear on pressing global crises like climate change and biodiversity loss. These efforts provide a university-wide framework for promoting cooperation among scholars, students, and practitioners working on climate-related questions. A $100 million gift from FedEx to establish the Yale Center for Natural Carbon Capture, dedicated to developing collaborative and innovative solutions, will further amplify our efforts.

Yale's investments in social science will help scholars directly respond to current and multifaceted issues. For example, scholars at the Tobin Center for Economic Policy have been producing studies on every aspect of the public health crisis, from unemployment to child care. Their research is helping shape and inform domestic policy in real-time. On the international stage, the future Yale Jackson School of Global Affairs will bring together scholars, policymakers, and practitioners and convene world leaders to discuss, analyze, and address problems in global health, terrorism and cybersecurity, diplomacy, trade, and other areas.

At Yale, we believe the arts and humanities enrich and illuminate, allowing us to engage with timeless and contemporary questions. The new Humanities Quadrangle (HQ) at 320 York, which opened this year, signals Yale's continued leadership in and commitment to the humanities. HQ (the former Hall of Graduate Studies) brings students and faculty members from fifteen departments across the Faculty of Arts and Sciences, as well as Directed Studies and the Whitney Humanities Center, together under one roof. A top-to-bottom renovation and expansion of this historic building includes offices, classrooms, and various places for study and discussion, providing a superb home for students and scholars to pursue their best ideas.

When our students returned to campus this fall, they embraced an exceptional number of opportunities to gather as a community and experience all that Yale offers. After several years of renovation, the Yale Schwarzman Center, a new hub for student life, opened its doors. Featuring the historic Commons as well as several spaces for dining and the performing arts, the Schwarzman Center is a magnificent gathering place, bringing us closer together as individuals and as a university.

As perhaps never before, we appreciate the importance of human connection in our lives and in our work. To achieve our highest ambitions for Yale, we must foster a university culture where everyone feels they can contribute and thrive. Every part of the university is engaged in implementing the next phase of the Belonging at Yale initiative, which includes programs that delve into our history, assess and build on our current actions, support members of the university community, and create a stronger Yale for the future.

As we reflect on a year unlike any other, I want to extend my deepest gratitude to all members of the Yale community. To the many employees who worked on campus throughout the pandemic and to many others who worked from home, I recognize the special challenges you faced while supporting our university, and I celebrate your achievements. By working together, we fulfilled Yale's commitment to excellence in research, education, preservation, and practice.

For over 300 years, Yale has pioneered discoveries and prepared students for lives of meaning, leadership, and service. Through the faithful stewardship of our financial resources, we will continue to advance our mission of *lux et veritas*, "improving the world today and for future generations."

Peter Salovey
President
Chris Argyris Professor of Psychology

Message from the Senior Vice President for Operations and the Vice President for Finance

Financial Results

Yale finished the year ended June 30, 2021 with a surplus from operations on both a generally accepted accounting principles (GAAP) and a Management View basis – the way Yale looks at financial information for internal discussion and decision-making purposes (see page 6 for additional information). The university generated a surplus of $378 million from operations on a GAAP basis and a surplus of $276 million on a Management View basis. This surplus was well ahead of expectations given the uncertainty created by the pandemic and its impact on market conditions.

The university finished the year in a strong financial position, with $44.3 billion in net assets. This represents an increase over the prior year of $13 billion or 39.6%, primarily as a result of the investment return on the Yale Endowment.

Revenues, Expenses, and the Impact of the COVID-19 Pandemic

Operating revenues increased by 7.8% to $4.6 billion for the year. The university's three largest revenue sources each demonstrated strong growth over the prior year. Spending from the endowment, the largest source of income for the university, was $1,513 million, an increase of 5.2% over the prior year. Medical services income, Yale's second largest source of income, was $1,250 million, an increase of 14.7% over the prior year, rebounding from a decline in the early months of the pandemic. Grant and contract income, the third largest source of income, was $877 million, an increase of 4.8% over the prior year. Notably, net tuition, room and board declined by 23.1% versus the prior year to $296 million, largely caused by deferrals and leaves of absence by some undergraduates due to the COVID-19 pandemic. The university expects the large majority of these students to matriculate in the subsequent academic years. The pandemic also led to significant reductions in other areas, including conferences and events, executive education, theater, athletics, and parking revenues.

Operating expenses grew by 3.9%, largely driven by an increase in employee benefit costs, which was primarily related to a higher pension and retiree health expense from a decline in the discount rate used to calculate the expense this fiscal year. Salaries and wages grew by 1.9% due to a slowdown in hiring and salary freezes. Other operating expenditures fell by 1.2% this year as a result of pandemic-related spending reductions on travel, conferences and events, utilities, and other items. These spending reductions were partially offset by university investments of over $40 million in the campus public health infrastructure, including COVID-19 testing, personal protective equipment, enhanced cleaning procedures, and isolation living quarters, as well as measures to support community well-being during the pandemic such as enhanced childcare benefits and assistance for local community organizations.

Yale Endowment and the Legacy of David Swensen

The Yale community experienced a profound loss this year in the passing of David Swensen, the university's chief investment officer since 1985. A visionary leader, brilliant colleague, and beloved mentor, he revolutionized the approach to institutional investment, creating the "Yale Model," which is now the standard for many university and foundation endowments. With his lifelong commitment to Yale and unending support for our community, David's legacy cannot be overstated. Looking forward, Yale is fortunate to have identified an able successor to lead the Investments Office. Matthew Mendelsohn, a 14-year veteran of the Investments Office and protégé of David's, began his tenure as chief investment officer on September 1.

The value of the Yale Endowment increased by $11 billion to $42 billion as the result of a 40.2% investment return. This positive result is well above long-term targets and is the second highest of any year since the implementation of the Swensen model at Yale in 1985.

Since investment returns are volatile – and what goes up can also come down - this year's result reinforces the importance of Yale's Endowment Spending Policy, whereby the university aims to spend 5.25% of the endowment's value each year, while moderating the impact of recent returns (high or low) through an 80/20 smoothing component that provides a stable flow of income for the operating budget. The Endowment Spending Policy is described in more detail in the footnotes to the financial statements.

Fundraising

Gifts to Yale from individuals, corporations, and foundations represent a valued and critically important source of revenue. This year was notable for the continued generosity of alumni and friends with aggregate contributions of $946 million. This marked a 41% increase from the prior year and a record high for gifts in a fiscal year. This extraordinary support provides financial aid to families and affordable access to a Yale College experience, undergraduate and graduate education for aspiring leaders who serve all sectors of society, ground-breaking research across a wide array of disciplines, and other areas that support the university's academic mission. This year's fundraising result was a fitting accomplishment in the final year of the quiet phase of the new fundraising campaign, which launched its public phase on October 2, 2021.

Capital Spending Highlights

This fiscal year included $380 million in capital spending, a 13% decrease from the prior year. Despite the challenges posed by the pandemic, a number of key projects were completed, including the Humanities Quadrangle, the result of a complete renovation to 320 York Street, featuring Swensen Tower at its center and uniting 15 departments under one roof; the Schwarzman Center, Yale's state-of-the art hub for social and cultural spaces; the Tsai Center for Innovative Thinking at Yale (Tsai CITY); and the conversion of portions of Wall and High Streets into Alexander Walk, a fully pedestrian thoroughfare in the campus center. In addition, extensive renovations proceeded on the Peabody Museum and the transformation of Kline Tower, as well as other projects.

Looking Ahead and Supporting the Yale Community

While the pandemic inflicted considerable negative impacts on certain revenues and expenses, the university's overall financial performance was strong for the year, which positions Yale well to continue to advance the mission of the university, including President Salovey's strategic academic priorities.

Yale's community – its outstanding faculty, staff, students, alumni, and friends – is the heart of our institution, and we are grateful for its unwavering commitment to excellence in pursuit of the university's mission, particularly during this past year of the pandemic.

Jack F. Callahan, Jr.
Senior Vice President for Operations and
Chief Operating Officer

Stephen C. Murphy
Vice President for Finance and
Chief Financial Officer

Financial Results

Overview

Yale University ("Yale" or the "university") manages its operations to achieve long-term financial equilibrium. It is committed to sustaining both the programs and the capital assets (endowment and facilities) supporting those programs over multiple generations. Endowment allocation, Yale's largest source of revenue, is allocated to the operating budget based on a spending policy that preserves the endowment asset values for future generations, while providing a robust revenue stream for current programs. Similarly, Yale's operating budget provides the major portion of the funds needed, through the capital replacement charge ("CRC"), to replenish the capital base necessary to ensure that buildings are maintained to support current programs.

The consolidated statement of activities in the audited financial statements is presented in accordance with accounting principles generally accepted in the United States of America ("GAAP"). GAAP recognizes revenue when earned and expenses when incurred. The Management View, used for internal decision-making, is focused more on resources available and used in the fiscal period presented. Some of the more significant difference between the two views are as follows:

- The Management View presents the expenses related to the defined benefit plans differently as compared to GAAP.
- The Management View does not include certain revenue that will not be received within the next fiscal year, such as pledged contribution revenue.
- The Management View recognizes capital maintenance through a CRC and recognizes equipment purchases as expensed in the year acquired versus the historical cost depreciation expensed in the consolidated statement of activities.
- The Management View includes the realized gains and losses on energy hedges and interest rate swaps used to manage exposure to energy and interest rate fluctuations. GAAP requires these realized gains and losses to be presented net of related unrealized gains and losses.
- The GAAP financial statements do not present fund balance transfers between the operating, physical, and financial categories as the Management View does.

The Management View presentation, along with a summary of the differences between the university's net operating results from the Management View to the GAAP View, is presented below.

Yale University Operating Results – Management View

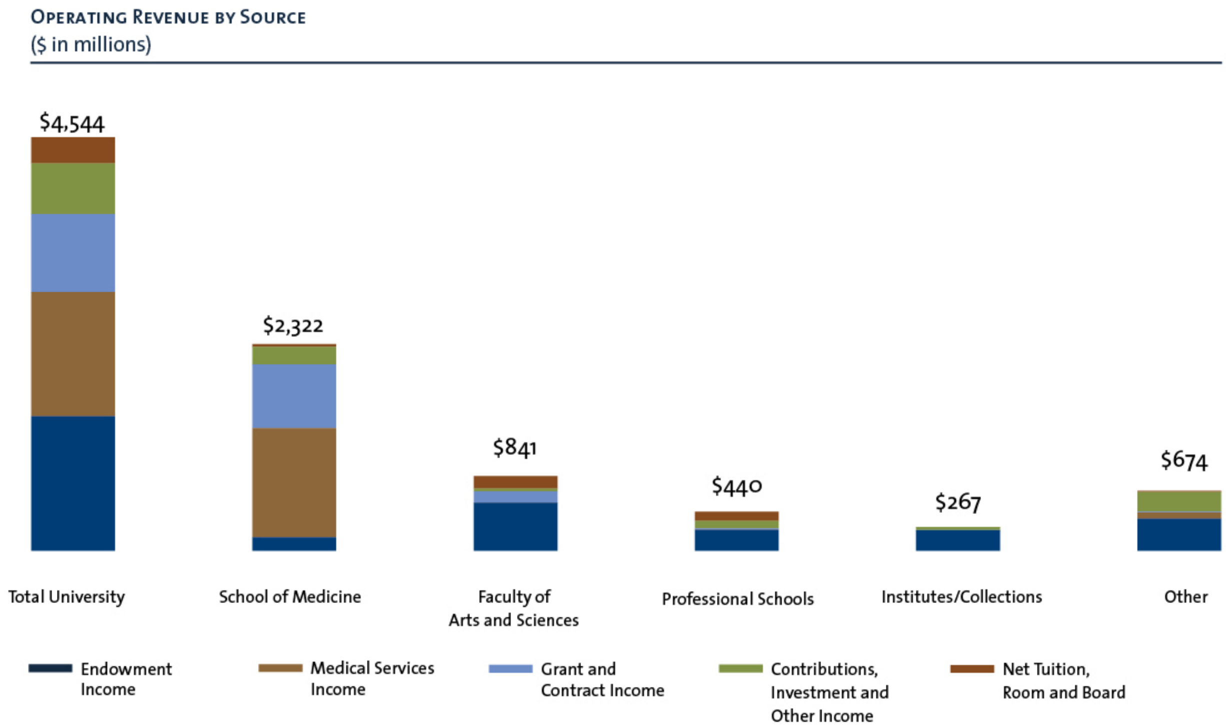
for the years ended June 30, 2021 and 2020 ($ in thousands)

	June 30, 2021	June 30, 2020
Revenues:		
Tuition, room and board - gross	$ 650,331	$ 754,348
Tuition discount	(357,036)	(365,959)
Tuition, room and board - net	293,295	388,389
Grants and contract income	876,936	836,597
Medical services income	1,293,680	1,133,250
Contributions	201,229	160,073
Endowment income	1,511,831	1,437,336
Investment and other income	366,789	317,550
Total external income	**4,543,760**	**4,273,195**
Expenses:		
Faculty salaries	1,078,617	1,044,512
All other salaries	963,966	959,206
Employee benefits	698,987	640,471
Total salaries and benefits	**2,741,570**	**2,644,189**
Stipends and fellowships	110,157	107,425
Non-salary expenses	962,729	964,775
Interest, CRC and other amortization	408,440	379,765
Total expenses	**4,222,896**	**4,096,154**
Transfers	(44,972)	(51,626)
TOTAL NET OPERATING RESULTS (MANAGEMENT VIEW)	**275,892**	**125,415**
Summary of differences between the Management View and GAAP presentation of net operating results:		
Operating pledge activity	46,768	48,721
Expenses related to long-term liabilities	(81,264)	(61,485)
Capital funding, depreciation and disposals	(30,934)	(8,181)
Lease activity	2,157	2,142
Interest rate and energy hedge	55,344	33,091
Deferred investment income	64,627	11,652
Funding transfers	44,972	51,626
INCREASE IN NET ASSETS FROM OPERATIONS PER THE CONSOLIDATED STATEMENT OF ACTIVITIES (GAAP VIEW)	**$ 377,562**	**$ 202,981**

Fiscal Year 2021 Management View Results

The university budget structure is managed through 48 separate budget units that are combined into five categories for reporting purposes.

The following table summarizes Management View operating revenue by source in fiscal year 2021.



School of Medicine

The largest unit is the School of Medicine, representing 51% of university total operating revenue. The School of Medicine engages in research, teaching, and clinical practice. Revenues for patient care services, net of contractual adjustments, are primarily based on negotiated contracts with managed care companies (31%), BlueCross BlueShield (29%), Medicare (22%), Medicaid (9%) and commercial insurance and others (9%). Additionally, approximately 37% of the School of Medicine's medical services income in 2021 represents revenue recognized as a result of the university's affiliation with Yale-New Haven Hospital (the "Hospital"). Yale Medicine ("YM") is one of the largest academic multi-specialty practices in the country and the largest in Connecticut. As of June 30, 2021, YM was composed of 1,532 full-time and 163 part-time physicians providing services in over 100 specialty and subspecialty areas organized into 21 departments, engaging in research, and participating in teaching approximately 1,181 total students (excluding Ph.D. students) and 913 residents. The School of Medicine performs significant research for federal and state governments, foundations, and corporate entities. Research funded by the federal government represents 79% of total research performed at the School of Medicine with the National Institutes of Health ("NIH") providing the largest component of that funding at 88%. The university has established policies and procedures to manage and monitor compliance with these important agreements. School of Public Health revenues are included in the figures reported for the School of Medicine.

Faculty of Arts and Sciences

The Faculty of Arts and Sciences includes Yale's undergraduate and graduate programs in the arts and sciences. During the 2020-2021 academic year, 4,703 undergraduate students were enrolled at Yale College. The undergraduate population is a diverse group attracted from across the United States and from many foreign countries. Foreign students account for approximately 10% of the undergraduate population. Yale College is dedicated to providing undergraduates with a liberal arts education that fosters intellectual curiosity, independent thinking, and leadership abilities. Students learn to think critically and independently and to write, reason, and communicate clearly in preparation for a spectrum of careers and vocations. During the 2020-2021 academic year, 3,093 students were pursuing their studies at the Graduate School of Arts and Sciences. Yale Graduate School of Arts and Sciences considers learning to teach to be an integral part of doctoral education and incorporates training and teaching opportunities into every program. Throughout the unique program of study crafted by graduate students and their faculty advisers, the university provides support that allows Ph.D. students to focus on their scholarship, successfully complete their degrees, and pursue rewarding careers.

Professional Schools

The Professional Schools category includes the Divinity School, the Law School, the School of Art, the School of Music, the School of the Environment, the School of Nursing, the School of Drama, the School of Architecture, and the School of Management. During the 2020-2021 academic year, 3,283 students were pursuing their studies at one of Yale's professional schools.

Institutes/Collections and Other

Institutes and Collections includes the libraries, museums and galleries, and large institutes with significant programmatic and financial activity across multiple academic units. First-hand encounters with Yale's collections are an integral part of teaching and learning across the university, helping students forge creative connections and inspiring tomorrow's leaders. The Other category includes Athletics and various administrative and support units.

The university ended the year with a surplus from operations of $276 million on the Management View basis. Operating revenues increased 6% and operating expenses, excluding transfers, increased 3% compared to 2020. Endowment income growth contributed to the increase in revenues. Grant and contract income, as well as medical services income, were higher than the prior year due to research and clinical activities returning to pre-pandemic levels. Revenues grew at a faster pace than expenses, as a result of the continued growth of the clinical practice due to physician practices added during the year, additional funding received through the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act"), and increased contributions raised during the quiet phase of the university's current fundraising campaign.

Fiscal Year 2021 GAAP Results

Operating Revenue

The university derives its operating revenue from the following sources: tuition, room and board (net of certain scholarships and fellowships), grant and contract income, medical services income, allocation of endowment spending from financial capital, contributions, investment income, and other income.

Net Tuition, Room and Board

Net tuition, room and board totaled $296 million in fiscal year 2021, a decrease of 23% from 2020, and represented 6% of the university's total operating revenue. Gross tuition, room and board totaled $650 million in 2021, a decrease of 14% from 2020 which totaled $754 million. Of this amount, $615 million represents tuition, a 9% decrease over 2020 due primarily to a decrease in enrollment as a result of students electing to defer their education or take leaves of absences in light of the COVID-19 pandemic, and $35 million represents revenue from room and board, which decreased 55% from 2020 due to student housing not offered to certain classes of students in an effort to de-densify the campus. In accordance with GAAP, student income is presented net of certain scholarships and fellowships, which totaled $354 million and $369 million for 2021 and 2020, respectively, representing an 4% decrease in 2021. The university continued to provide financial aid to its students. Scholarships and fellowships as a percentage of gross tuition, room and board were 54% and 49% for 2021 and 2020, respectively.

Tuition for students enrolled in Yale College was $57,700, and room and board was $17,200, bringing the total term bill to $74,900 for the 2020-2021 academic year. The increase in the Yale College term bill was 4% over the 2019-2020 academic year.

The university maintains a policy of offering Yale College admission to qualified applicants without regard to family financial circumstances. This "need-blind" admission policy is supported with a commitment to meet in full the demonstrated financial need of all students throughout their undergraduate years, and the university does not expect students to finance their college education with debt.

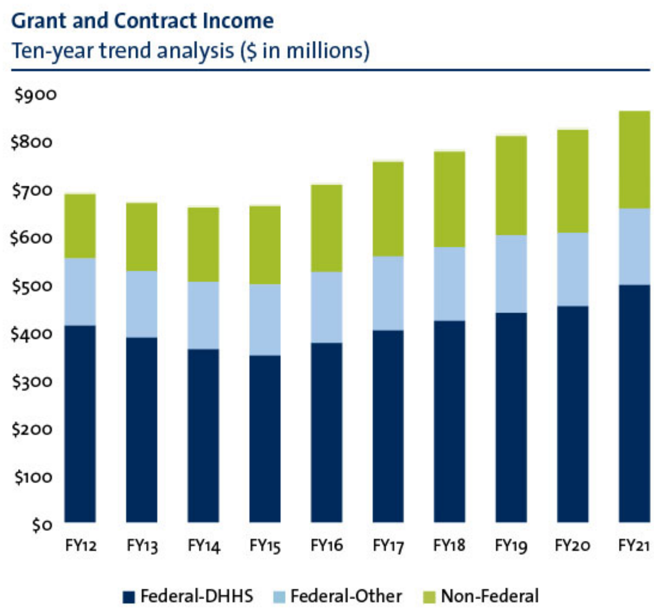
During the 2020-2021 academic year, 61% of Yale College undergraduates received financial aid. In the Graduate School of Arts and Sciences, 96% received financial aid in the form of tuition discounts, stipends, and health insurance. In the professional schools, 87% received financial aid. In all, 78% of total university eligible students enrolled received some form of university-administered student aid in the form of scholarships, loans, or a combination of both scholarships and loans.

Grant and Contract Income

Grant and contract income totaled $877 million in fiscal year 2021, an increase of 5% from 2020, and represented 19% of the university's total operating revenue. The Yale School of Medicine, which received 82% of the university's grant and contract income in fiscal year 2021, reported an increase of 7% for 2021, while the remaining university units decreased by 4%.

Revenue recognized on grants and contracts from the federal government was $669 million, or 76% of 2021 grant and contract income, supporting Yale's research and training programs. Included in the $669 million is Department of Health and Human Services ("DHHS") funding of $506 million, primarily through the NIH, an increase of 10% compared to the prior year. The university also receives significant research funding from the National Science Foundation, the Department of Energy, and student aid awards from the Department of Education. Non-federal sources, which include foundations, voluntary health agencies, corporations, and the State of Connecticut, provided an additional $208 million in funding for research, training, clinical, and other sponsored agreements during 2021.

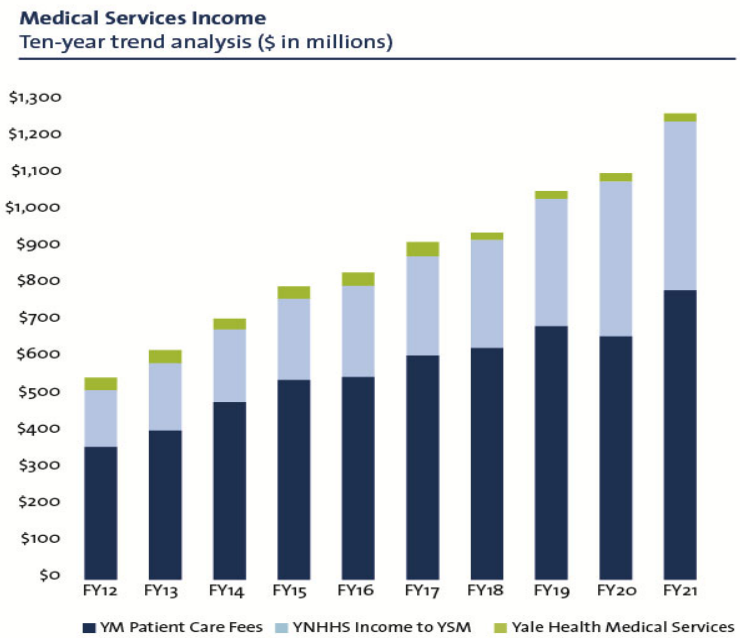
In addition to the reimbursement of direct costs charged to sponsored awards, sponsoring agencies reimburse the university for a portion of its facilities and administrative costs, which include costs related to research laboratory space, facilities, and utilities, as well as administrative and support costs incurred for sponsored activities. These reimbursements for facility and administrative costs amounted to $230 million in 2021 and $208 million in 2020. Recovery of facility and administrative costs associated with federally sponsored awards is recorded at rates negotiated with DHHS, the university's cognizant agency. Yale's current rate agreement is effective through June 30, 2023, and the base year for the university's next facilities and administrative calculation is FY2022.



Medical Services Income

Medical services income totaled $1.3 billion in fiscal year 2021, an increase of 15% from 2020, and represented 27% of the university's operating revenue. The largest portion of this revenue stream is derived from medical services provided by YM. The strong investment in YM for physician leadership, recruitment and program development by the Hospital continued in fiscal year 2021 with support increasing by 9%, to a total of $453 million.

Medical services income generated by YM increased by $160 million over 2020, or 15%. Patient care income, which accounts for 56% of medical services income, was up 18% due to a strong and robust recovery across the practice from the start of the COVID-19 pandemic. Both ambulatory and surgical volumes recovered more rapidly than originally expected and surpassed pre-COVID-19 levels by the end of the first quarter of 2021. Other contributors to the clinical income growth include expansion of medical services outside of New Haven County through partnerships with Yale New Haven Health System's delivery network hospital affiliates, Lawrence + Memorial, Greenwich, Bridgeport, and Westerly hospitals. While certain clinical departments experienced volume decreases as a result of COVID-19, volume generated by new clinics outside of New Haven resulted in overall year-over-year growth at YM.



Contributions

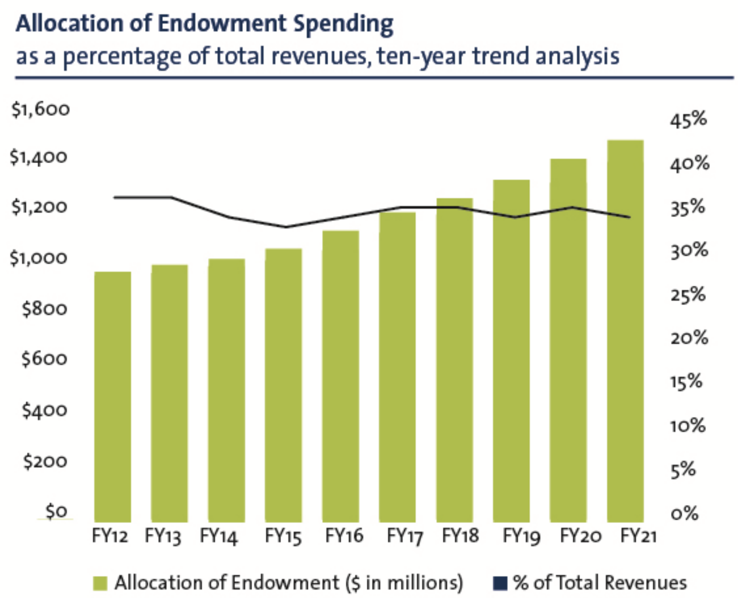
Donations from individuals, corporations, and foundations represent a vitally important source of revenue for the university. Gifts to the university provide necessary funding for current operations, for long-term investments in the university's physical infrastructure, and, in the case of gifts to the endowment, provide permanent resources for core activities for future generations. Gifts of $247 million in 2021 and $209 million in 2020, made by donors to support the operations of the university, are reflected as contribution revenue in the operating section of the consolidated statement of activities, whereas gifts to the university's endowment and for building construction and renovation are reflected as contribution revenue in the non-operating section of the consolidated statement of activities. In aggregate, contributions included in the university consolidated financial statements total $946 million in 2021 compared to $670 million in 2020.

Certain gifts commonly reported in fundraising results are not recognized as contributions in the university's consolidated financial statements. For example, "in-kind" gifts such as works of art and books that will be maintained as part of the university's collections are not recognized as financial transactions in the consolidated financial statements. Grants from private, non-governmental sources (i.e., corporations and foundations) reported as gifts for fundraising purposes are included in the consolidated statement of activities as grant and contract income.

Allocation of Endowment Spending

Each year a portion of the endowment's market value is allocated to support operational activity. This important source of revenue represents 33% of total operating revenue in fiscal year 2021, and it is the largest source of operating revenue for the university. The level of spending is computed in accordance with an endowment spending policy that has the effect of smoothing year-to-year market swings. Endowment investment returns allocated to operating activities increased by 5% in 2021 to $1.5 billion.

Additional information on Yale's endowment spending policy is provided in the endowment section of this report and in the Notes to Consolidated Financial Statements.



Other Investment Income
Other investment income includes interest, dividends, and gains on non-endowment investments.

Other Income
Other income primarily includes publications income, income from executive education and other non-degree granting programs, royalty income, admissions revenue relating to athletic events and drama productions, parking revenue, special event and seminar fees, application and enrollment fees, and provider relief funds received through the CARES Act.

Operating Expenses

Operating expenses totaled $4.2 billion for 2021, representing a 4% increase over 2020. With 4,937 faculty, 1,428 postdoctoral associates, 5,066 managerial and professional staff, and 5,205 clerical, technical, service, and maintenance personnel, personnel costs are the single largest component (65%) of the university's total operating expenses (counts represent headcount as of fall 2020).

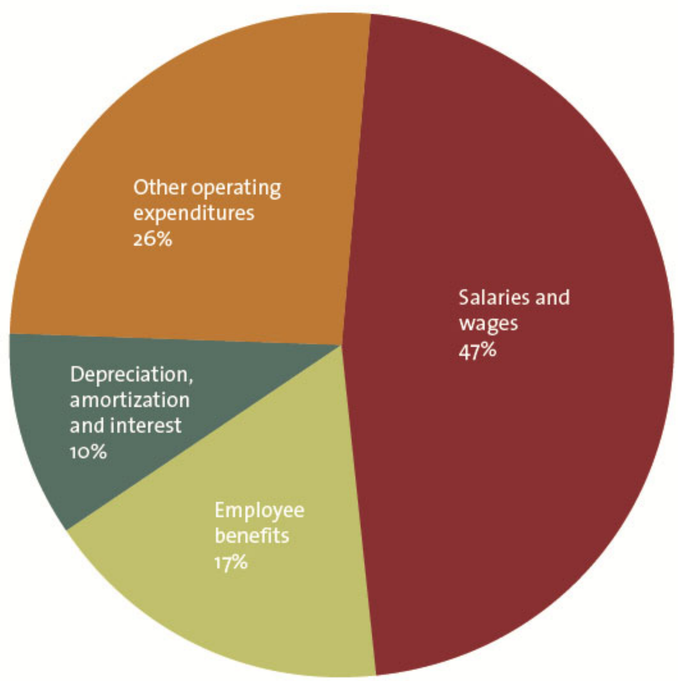
Personnel costs were $2.7 billion in 2021, a 5% increase over 2020. Faculty salary expenses increased 3% which includes increased headcount to support growth in clinical activities. Staff salaries and wages increased less than 1% from 2020 to 2021 due to partial hiring and salary freezes related to the COVID-19 pandemic. The cost of providing employee benefits, including various pension, post-retirement health, and insurance plans in addition to Social Security and other statutory benefits, totaled $741million for 2021, an increase of 16% from 2020. The increase was due primarily to a decline in the prior year's pension and post-retirement health discount rate, which drives a significant portion of the current year's expense. Expenses related to retirement incentive plans established in 2021 contributed to the increase as well.

Depreciation, amortization, and interest expense increased 9% from 2020, primarily as a result of additional depreciation expense due to the opening of the Schwarzman Center and the Humanities Quadrangle (formerly the Hall of Graduate Studies). The Yale Science Building also had its first full year in operation in 2021, resulting in increased depreciation costs.

Other operating expenses, including services, materials and supplies, and other expenses, decreased 1% from 2020, primarily due to a decrease in non-salary expenses in most schools and units as a result of reduced activity on campus, partially offset by increases in medical services supplies and other services expenses, related to the COVID-19 pandemic and the growth of the clinical practice.

Yale reports its operating expenses by natural classification in the consolidated statement of activities and discloses these operating expenses across functional classification in the Notes to Consolidated Financial Statements in accordance with GAAP.

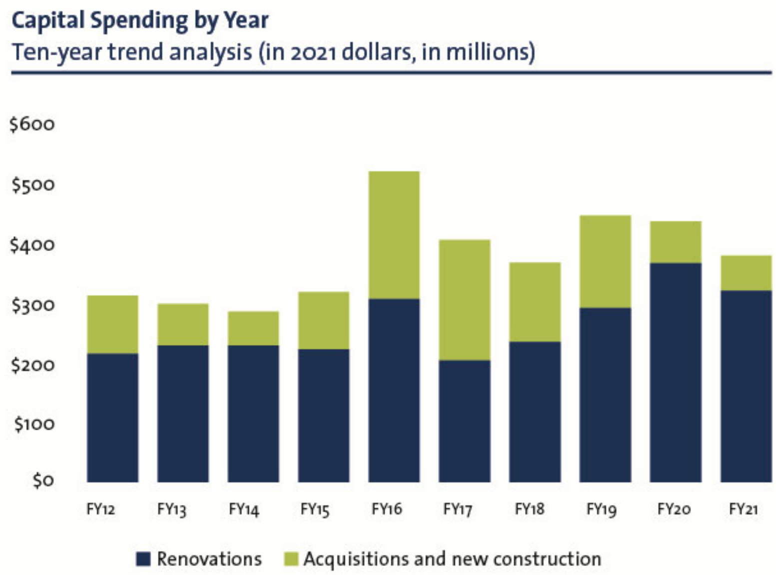
Operating Expenses by Natural Classification



The university spent 68% of its operating resources on programmatic support, 25% on patient care and other related services, and 7% on administration and other institutional support.

Physical Capital

Capital spending on facilities in fiscal year 2021 totaled $380 million. This represents a decrease of approximately 13% from the 2020 spending level. The decrease was primarily due to project delays caused by the COVID-19 pandemic.



The Yale Schwarzman Center, which began construction in 2018 and completed in February 2021, united two historic buildings, University Commons and Memorial Hall to create the first university-wide center for student life and the arts. It can accommodate thousands of individuals simultaneously and be utilized by hundreds of student organizations who will have access to the center's multipurpose spaces. The Schwarzman Center opened in fall 2021.

Thirteen percent of the University's capital spending was invested in the sciences. The comprehensive renovation of Kline Tower which began in January 2021, will convert research labs into academic office space and create an entry level common space connecting to the Yale Science Building and Sloane Physics Laboratory. The redesigned tower aims to foster new collaborations among academic departments. When the transformation is complete, the Departments of Astronomy, Mathematics, and Statistics and Data Science, as well as parts of the Department of Physics will move into new space in the tower designed specifically for their use. Construction is on schedule to complete in summer 2023. Investments were also made in various building code upgrades, and for renovations to support programmatic needs throughout the sciences.

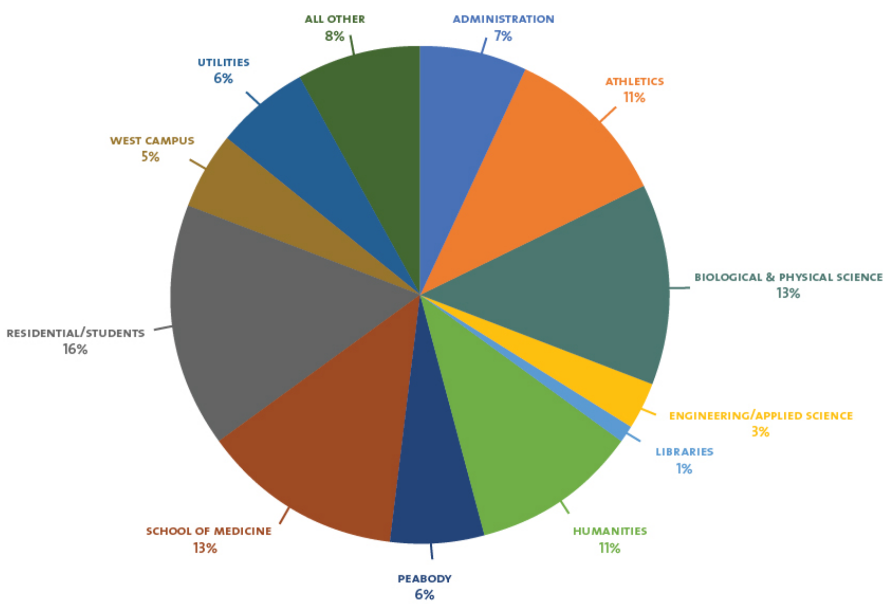
Eleven percent of the University's capital spending was allocated to the support of the humanities, primarily through the completion of the Humanities Quadrangle (at 320 York Street). The building opened in February 2021 after 30 months of construction. It is now the new hub for humanities on campus, centralizing fifteen of its departments under one roof, and includes offices, classrooms, and shared meeting spaces, as well as lounge areas, study spaces and kitchenettes for graduate and postdoctoral scholars.

The University also invested 11% of its Capital Spending in Athletics projects. Work concluded on the new field house adjacent to Reese Stadium, home of the university's soccer and lacrosse teams. The 34,800-square-foot facility, located just southwest of the Yale Bowl, includes a new athletic medicine and sports performance area, film room, team center, locker rooms, and offices for the lacrosse and soccer teams. A new raised crosswalk over Central Avenue, which divides the athletic complex, will improve pedestrian safety. Construction began in 2020 and concluded in April 2021.

The School of Medicine accounted for approximately 13% of the University's 2021 capital expenditures. Major capital spending included the completion of a large renovation to construct research laboratories, lab support and faculty offices for the Yale School of Medicine. The remaining expenditures related to other programmatic renovation and capital maintenance projects throughout the school.

The University's ambitious renovation and building plans were funded by a combination of gifts, debt, and the operating budget. The University continues to rely heavily on the extraordinary generosity of its alumni and friends. Gifts for facilities in 2021 totaled $63.5 million. In FY2021, the University started the comprehensive renovation of the Peabody Museum to be completed in June of FY2023 and construction on the Economics Building to be completed in December of FY2023.

Capital Spending by Campus Area



An important source of funding for the capital program is debt provided through the Connecticut Health and Facilities Authority (CHEFA) which allows the university to borrow at tax exempt rates. This funding source is critical to keeping the cost of funding at lower levels which allows the university to maximize the use of its resources in the fulfillment of its mission of teaching and research. The university continues to receive the highest bond ratings available: AAA from Standard and Poor's and Aaa from Moody's.

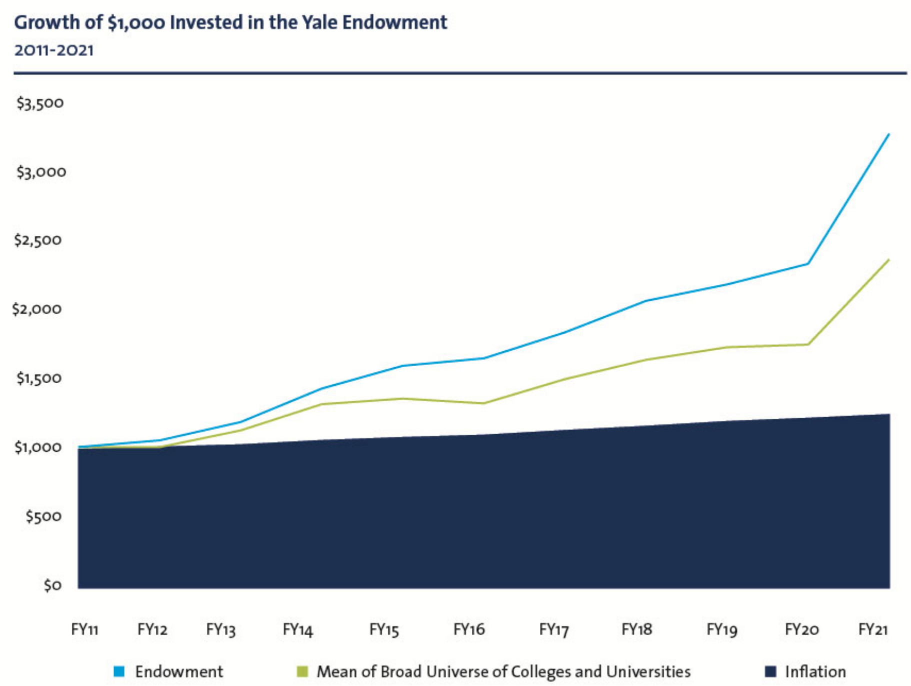
Recognizing the critical importance of maintaining its physical capital over many generations, the university allocates funds directly from the operating budget to a capital maintenance account. The annual equilibrium funding target for internal purposes is an estimate that is earmarked from annual operating funding sources to maintain Yale's facilities in good condition on a consistent basis, thus avoiding deferred maintenance. While not an exact science, an estimate of the full capital replacement equilibrium level for 2021 is $275 million. In 2021, most of this amount was funded with operating funds and capital gifts.

Endowment

The endowment provides the largest source of support for the academic programs of the university. To balance current and future needs, Yale employs investment and spending policies designed to preserve endowment asset values while providing a substantial flow of income to the operating budget. At June 30, 2021, net assets in the endowment totaled approximately $42.3 billion, after the allocation of endowment spending of $1.5 billion to the operating budget during the year.

Investment Performance

For the fiscal year ended June 30, 2021, the endowment earned a 40.2% investment return. During the past decade, the endowment earned an annualized 12.4% return, which added $17.9 billion of value relative to a composite passive benchmark and $14.0 billion relative to the mean return of a broad universe of colleges and universities.



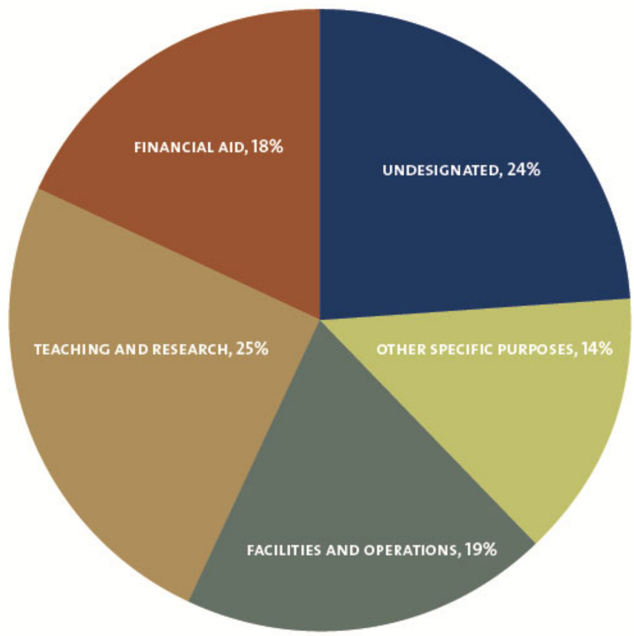
Endowment Spending

The endowment spending policy, which allocates endowment earnings to operations, balances the competing objectives of providing a stable flow of income to the operating budget and protecting the real value of the endowment over time. The spending policy manages the trade-off between these two objectives by using a long-term targeted spending rate combined with a smoothing rule, which adjusts spending in any given year gradually in response to changes in endowment market value.

The targeted spending rate approved by the Yale Corporation currently stands at 5.25%. According to the smoothing rule, endowment spending in a given year sums to 80% of the previous year's spending and 20% of the targeted long-term spending rate applied to the market value at the start of the prior year. The spending amount determined by the formula is adjusted for inflation and an allowance for taxes and constrained so that the calculated rate is at least 4.0%, and not more than 6.5%, of the endowment's inflation adjusted market value at the start of the prior year. The smoothing rule and the diversified nature of the endowment mitigate the impact of short-term market volatility on the flow of funds to support Yale's operations.

The majority of endowment spending is allocated across multiple purposes, including financial aid and professorships, based on donor restrictions or internal designations by the university. Endowment spending that is neither restricted nor designated provides additional support for budgetary priorities, including purposes to carry out the university's mission.

Endowment Spending Allocation



Asset Allocation

Asset allocation proves critical to successful endowment performance. Yale's asset allocation policy combines tested theory and informed market judgment to balance investment risks with the desire for high returns.

Both the need to provide resources for current operations and the desire to preserve the purchasing power of assets dictate investing for high returns, which leads the endowment to be weighted toward equity. In addition, the endowment's vulnerability to inflation directs the university away from fixed income and toward equity instruments. Hence, about 90% of the endowment is invested in assets expected to produce equity-like returns, through domestic and international securities, real assets, and private equity.

Endowment Summary

Yale continues to rely on the principles of equity orientation and diversification. These principles guide Yale's investment strategy, as equity orientation makes sense for investors with long time horizons and diversification allows the construction of portfolios with superior risk and return characteristics. The university's equity-oriented, well-diversified portfolio positions the endowment for long-term investment success.

Management's Responsibility for Financial Statements

Management of the university is responsible for the integrity and reliability of the consolidated financial statements. Management represents that, with respect to the university's financial information, the consolidated financial statements in this annual report have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP").

The accompanying consolidated financial statements have been audited by the university's independent auditors, PricewaterhouseCoopers LLP. Their audit opinion, on the following page, expresses an informed judgment as to whether the consolidated financial statements, considered in their entirety, present fairly, in conformity with GAAP, the consolidated financial position and changes in net assets and cash flows.

The university maintains a system of internal controls over financial reporting, which is designed to provide a reasonable assurance to the university's management and the Yale Corporation (the "Corporation") regarding the preparation of reliable published financial statements. Such 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 control, including the possibility of human error and the circumvention of controls. Accordingly, even an effective internal control system can provide only reasonable assurance with respect to financial statement preparation. Furthermore, the effectiveness of the internal control system can change with circumstances.

The Corporation, through its Audit Committee comprised of members not employed by the university, are responsible for engaging the independent auditors and meeting with management, internal auditors, and the independent auditors to independently assess whether each is carrying out its responsibilities. Both the internal auditors and the independent auditors have full and free access to the Audit Committee.

Stephen C. Murphy Vice President for Finance and Chief Financial Officer	Shannon N. Smith University Controller

Report of Independent Auditors

To the President and Fellows of Yale University

We have audited the accompanying consolidated financial statements of Yale University and its subsidiaries (the "University"), which comprise the consolidated statements of financial position as of June 30, 2021 and 2020, and the related consolidated statements of activities for the year ended June 30, 2021, and of cash flows for the years ended June 30, 2021 and 2020.

Management's Responsibility for the Consolidated Financial Statements

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

Auditors' Responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the University's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Yale University and its subsidiaries as of June 30, 2021 and 2020, and the changes in their net assets for the year ended June 30, 2021 and their cash flows for the years ended June 30, 2021 and 2020 in accordance with accounting principles generally accepted in the United States of America.

Other Matter

We previously audited the consolidated statement of financial position as of June 30, 2020, and the related consolidated statements of activities and of cash flows for the year then ended (the statement of activities is not presented herein), and in our report dated October 22, 2020, we expressed an unmodified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying summarized financial information as of June 30, 2020 and for the year then ended is consistent, in all material respects, with the audited consolidated financial statements from which it has been derived.

PricewaterhouseCoopers LLP

Hartford, Connecticut
October 25, 2021

PricewaterhouseCoopers LLP, 185 Asylum Street, Suite 2400, Hartford, Connecticut 06103
T: (860) 241 7000, F: (860) 241 7458, www.pwc.com/us

Yale University Consolidated Statements of Financial Position

as of June 30, 2021 and June 30, 2020 ($ in thousands)

	2021	2020
Assets:		
Cash and cash equivalents	$ 772,593	$ 1,011,373
Accounts receivable, net	397,974	364,852
Contributions receivable, net	1,197,417	858,450
Notes receivable	96,509	103,732
Investments, at fair value	47,830,139	36,512,063
Right of use assets	182,694	155,438
Other assets	238,088	252,928
Land, buildings and equipment, net of accumulated depreciation	5,507,845	5,437,546
Total assets	$ 56,223,259	$ 44,696,382
Liabilities:		
Accounts payable and accrued liabilities	$ 807,966	$ 589,420
Advances under grants and contracts and other deposits	174,478	184,377
Lease liabilities	254,428	224,021
Other liabilities	1,780,250	2,283,679
Liabilities under split-interest agreements	149,105	140,078
Bonds and notes payable	5,199,573	5,242,106
Liabilities associated with investments	3,565,475	4,300,747
Total liabilities	$ 11,931,275	$ 12,964,428
Net Assets:		
Net assets without donor restrictions: Yale University	$ 7,652,769	$ 4,294,849
Net assets without donor restrictions: non-controlling interests	779	101,533
Total net assets without donor restrictions	7,653,548	4,396,382
Net assets with donor restrictions	36,638,436	27,335,572
Total net assets	$ 44,291,984	$ 31,731,954
Total liabilities and net assets	$ 56,223,259	$ 44,696,382

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

Yale University Consolidated Statement of Activities

for the year ended June 30, 2021 with summarized comparative totals for the year ended June 30, 2020 ($ in thousands)

	Without Donor Restrictions	With Donor Restrictions	2021	2020
Operating				
Revenues and releases:				
Net tuition, room and board	$ 295,972	$ -	$ 295,972	$ 384,925
Grant and contract income, primarily for research and training	876,936	-	876,936	836,597
Medical services income	1,250,086	-	1,250,086	1,090,055
Contributions	19,959	227,512	247,471	208,694
Allocation of endowment spending from financial capital	432,659	1,079,942	1,512,601	1,438,078
Other investment income	155,124	7,952	163,076	97,662
Other income	232,796	167	232,963	190,919
Total revenues	3,263,532	1,315,573	4,579,105	4,246,930
Net assets released from restrictions	1,116,818	(1,116,818)	-	-
Total revenues and releases	4,380,350	198,755	4,579,105	4,246,930
Expenses:				
Salaries and wages	1,971,143	-	1,971,143	1,935,330
Employee benefits	741,114	-	741,114	640,988
Depreciation, amortization and interest	407,673	-	407,673	373,392
Other operating expenditures	1,081,613	-	1,081,613	1,094,239
Total expenses	4,201,543	-	4,201,543	4,043,949
Increase in net assets from operating activities	178,807	198,755	377,562	202,981
Non-operating				
Contributions	1,079	697,641	698,720	461,281
Total endowment return	2,085,099	9,967,725	12,052,824	1,931,965
Allocation of endowment spending to operations	(274,465)	(1,238,136)	(1,512,601)	(1,438,078)
Other investment income (loss)	431,173	2,668	433,841	(675,432)
Change in funding status of defined benefit plans	671,287	-	671,287	(358,489)
Other increases (decreases)	(2,885)	(57,964)	(60,849)	(28,147)
Net assets released from restrictions	267,825	(267,825)	-	-
Increase (decrease) in net assets from non-operating activities	3,179,113	9,104,109	12,283,222	(106,900)
Total increase in net assets - Yale University	3,357,920	9,302,864	12,660,784	96,081
Change in non-controlling interests	(100,754)	-	(100,754)	(605,878)
Total increase (decrease) in net assets	3,257,166	9,302,864	12,560,030	(509,797)
Net assets, beginning of year	4,396,382	27,335,572	31,731,954	32,241,751
Net assets, end of year	$ 7,653,548	$ 36,638,436	$ 44,291,984	$ 31,731,954

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

Yale University Consolidated Statements of Cash Flows

for the years ended June 30, 2021 and 2020 ($ in thousands)

		2021		2020
Operating activities:				
Change in net assets	$	12,560,030	$	(509,797)
Adjustments to reconcile change in net assets to net cash used in operating activities:				
Depreciation and amortization		332,458		306,088
Realized and unrealized (gain) loss on other investments		(459,059)		666,352
Net endowment investment gain		(11,888,742)		(1,509,575)
Change in non-controlling interests		100,754		605,878
Change in funding status of defined benefit plans		(671,287)		358,489
Non-operating contributions		(698,720)		(461,281)
Contributed securities		(212,670)		(134,577)
Proceeds from sale of donated securities		38,273		30,144
Other adjustments		74,980		40,197
Changes in assets and liabilities that (use) provide cash:				
Accounts receivable		(33,122)		(65,179)
Contributions receivable		(46,276)		(48,610)
Other operating assets		(7,355)		29,219
Accounts payable and accrued expenses		224,342		24,012
Advances under grants and contracts and other deposits		(9,899)		56,422
Other liabilities		170,986		61,457
Net cash used in operating activities		(525,307)		(550,761)
Investing activities:				
Student loans repaid		13,461		14,501
Student loans granted		(5,611)		(6,779)
Purchases related to capitalized software costs and other assets		(47,426)		(40,540)
Proceeds from sales and maturities of investments		15,468,766		17,678,892
Purchases of investments		(15,174,268)		(18,131,664)
Purchases of land, buildings and equipment		(381,017)		(478,639)
Net cash used in investing activities		(126,095)		(964,229)
Financing activities:				
Proceeds from restricted contributions		406,029		321,902
Proceeds from sale of contributed securities restricted for endowment		174,397		104,433
Contributions received for split-interest agreements		4,434		4,946
Payments made under split-interest agreements		(17,345)		(14,557)
Proceeds from long-term debt		-		1,500,000
Repayments of long-term debt		(50,966)		(41,373)
Repayments to the Federal government for student loans		(3,128)		(7,450)
Net cash provided by financing activities		513,421		1,867,901
Net (decrease) increase in cash and cash equivalents		(137,981)		352,911
Cash and cash equivalents, beginning of year		1,069,158		716,247
Cash and cash equivalents, end of year	$	931,177	$	1,069,158

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

Yale University
Notes to Consolidated Financial Statements

1. Significant Accounting Policies

a. General

Yale University ("Yale" or the "university") is a private, not-for-profit institution of higher education located in New Haven, Connecticut. The university is governed by the Yale Corporation (the "Corporation"), a body comprised of the President, ten appointed Successor Trustees, six elected Alumni Fellows, and the Governor and Lieutenant Governor of Connecticut, who are board members *ex officio*.

The university provides educational services primarily to students and trainees at the undergraduate, graduate and postdoctoral levels, and performs research, training and other services under grants, contracts and other similar agreements with agencies of the federal government and other sponsoring organizations. The university's academic organization includes Yale College, the Graduate School of Arts and Sciences, twelve professional schools and a variety of research institutions and museums. The largest professional school is the Yale School of Medicine, which conducts medical services in support of its teaching and research missions.

b. Basis of Presentation

The consolidated financial statements of the university include the accounts of academic and administrative departments of the university, and affiliated organizations which are required to be consolidated under the applicable accounting guidance.

The university measures aggregate net assets and net asset activity based on the absence or existence of donor-imposed restrictions. Net assets are reported as without donor restrictions and with donor restrictions and serve as the foundation of the accompanying consolidated financial statements. Brief definitions of the two net asset classes are presented below:

Net Assets Without Donor Restrictions - Net assets derived from tuition and other institutional resources that are not subject to explicit donor-imposed restrictions. Net assets without donor restrictions also include board-designated funds functioning as endowment.

Net Assets With Donor Restrictions - Net assets that are subject to explicit donor-imposed restrictions on the expenditure of contributions, including those given to be maintained in perpetuity; income and gains on contributed assets subject to donor-imposed restrictions not yet appropriated for spending by the Corporation and student loan funds. In addition, net assets with donor restrictions include restricted contributions from donors classified as funds functioning as endowment. Restrictions include support of specific schools or departments of the university, for professorships, research, faculty support, scholarships and fellowships, library and art museums, building construction and other purposes. When time and purpose restrictions expire, net assets with donor restrictions are reclassified to net assets without donor restrictions.

Measure of Operations - The university's measure of operations as presented in the consolidated statement of activities includes revenue from tuition (net of certain scholarships and fellowships) and fees, grants and contracts, medical services, contributions for operating programs, the allocation of endowment spending for operations and other revenues. Operating expenses are reported on the consolidated statement of activities by natural classification.

The university's non-operating activity within the consolidated statement of activities includes contributions to the university's endowment and for building construction and renovation, investment returns and other activities related to endowment, and long-term benefit plan obligation funding changes.

Liquidity - The university's financial assets available within one year of the date of the consolidated statement of financial position for general expenditure as of June 30 are as follows, in thousands of dollars:

		2021	2020
Total assets, at year end		$ 56,223,259	$ 44,696,382
Less nonfinancial assets:			
	Land, buildings and equipment, net of accumulated depreciation	5,507,845	5,437,546
	Other assets	238,088	252,928
	Right of use assets	182,694	155,438
Financial assets, at year end		50,294,632	38,850,470
Less those unavailable for general expenditure within one year due to contractual or donor-imposed restrictions:			
	Restricted by donor with time or purpose restrictions	1,095,679	784,391
	Subject to appropriation and satisfaction of donor restrictions including board-designated endowments	44,779,408	33,577,100
	Other long-term notes receivable	96,509	103,732
Financial assets available to meet cash needs for general expenditures within one year		$ 4,323,036	$ 4,385,247

The university has $4,323.0 million of financial assets that are available within one year of the date of the consolidated statement of financial position to meet cash needs for general expenditure consisting of cash of $772.6 million, accounts receivable of $398.0 million, contributions receivable of $101.7 million, and short-term investments of $3,050.7 million. In addition to these available financial assets, a significant portion of the university's annual expenditures will be funded by current year operating revenues including tuition, grant and contract income and medical services income. The university has a policy to structure its financial assets to be available as its general expenditures, liabilities, and other obligations come due. As part of its liquidity management, the university invests cash in excess of daily requirements in various short-term investments, including U.S. government instruments.

Additionally, the university has board-designated funds of $7.2 billion. Although the university does not intend to spend from this endowment, other than amounts appropriated for general expenditure as part of its annual budget approval and appropriation process, amounts from its board-designated funds could be made available if necessary. However, both the board-designated funds and donor-restricted endowments contain investments with lock-up provisions that would reduce the total investments that could be made available, as described in Note 2.

c. Cash and Cash Equivalents

Cash and cash equivalents are recorded at cost, which approximates fair value due to their short-term nature and include institutional money market funds and similar temporary investments with maturities of three months or less at the time of purchase. Cash and short-term investments awaiting investment in the long-term investment pool are reported as investments and totaled $1,187.9 million and $1,270.8 million at June 30, 2021 and 2020, respectively. Short-term investments included in the long-term investment pool which may otherwise qualify as cash equivalents under the university's policy are accounted for as investments by policy and are accordingly not included within these cash disclosures.

Supplemental disclosures of cash flow information include the following, in thousands of dollars:

		2021		2020
Cash paid during the year for interest	$	170,086	$	148,155
Noncash investing activities:				
Land, buildings and equipment purchases payable to vendor	$	53,568	$	45,131

The following table summarizes supplemental cash flow information related to leases for the year ended June 30, in thousands of dollars:

		2021		2020
Cash paid for amounts included in measurement of liabilities:				
Operating cash flows from financing leases	$	7,730	$	7,177
Operating cash flows from operating leases		10,422		10,275
Financing cash flows from financing leases		4,783		4,079
Non-cash lease related items:				
ROU assets obtained in exchange for new financing liabilities	$	41,561	$	9,429
ROU assets obtained in exchange for new operating liabilities		3,178		3,553

The following table provides a reconciliation of amounts reported within the statement of financial position that sum to the total of the amount shown in the statement of cash flows for the years ended June 30, in thousands of dollars.

		2021		2020
Cash and cash equivalents	$	772,593	$	1,011,373
Cash included in Investments, at fair value		158,584		57,785
Total cash and cash equivalents shown in the consolidated statement of cash flows	$	931,177	$	1,069,158

d. Investments

Fair Value - The university's investments are recorded in the consolidated financial statements at fair value.

Fair value is a market-based measurement based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering assumptions, a three-tier fair value hierarchy has been established which categorizes the inputs used in measuring fair value. The hierarchy of inputs used to measure fair value and the primary methodologies used by the university to measure fair value include:

- *Level 1* – Quoted prices for identical assets and liabilities in active markets. Market price data is generally obtained from relevant exchange or dealer markets.
- *Level 2* – Inputs, other than the quoted prices in active markets, that are observable either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable.
- *Level 3* – Unobservable inputs for which there is little or no market data, requiring the university to develop its own assumptions.

Assets and liabilities measured at fair value are determined based on the following valuation techniques:

- *Market approach* – Prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities; and/or
- *Income approach* – Techniques to convert future amounts to a single present amount based on market expectations, including present value techniques and option-pricing models.

The fair value of publicly traded fixed income and equity securities is based upon quoted market prices and exchange rates, if applicable. The fair value of direct real estate investments is determined from periodic valuations prepared by independent appraisers.

Investments are exposed to various risks, such as interest rate, market and credit risks. Due to the level of risk associated with certain investments, it is at least reasonably possible that changes in the values of investments will occur in the near term and that such changes could materially affect the amounts reported in the university’s consolidated financial statements.

Derivatives - Derivative financial instruments in the investment portfolio include interest rate swaps, equity swaps, credit default swaps, commodity swap contracts, and currency forward contracts which are recorded at fair value with the resulting gain or loss recognized in the consolidated statement of activities.

Resell and Repurchase Agreements - Cash paid relating to resell agreements is generally collateralized by federal agency and foreign debt securities. The university takes possession of the underlying collateral and monitors the value of the underlying collateral to the amount due under the agreement. Cash received under repurchase agreements is collateralized by investments in asset-backed securities, corporate debt, federal agency debt, and foreign debt securities. Collateral fair value is monitored to the amounts due under the agreements.

Management Fees - The university records the cost of managing its endowment portfolio as a decrease in non-operating activity as a component of total endowment return within the applicable net asset class in the consolidated statement of activities. Management fees consist of the internal costs of the university's Investments Office (the "Investments Office"), outside custodian fees, and fees for external investment managers and general partners.

Total Return - The university invests its endowment portfolio and allocates the related earnings for expenditure in accordance with the total return concept. A distribution of endowment return that is independent of the cash yield and appreciation of investments earned during the year is provided for program support. The university has adopted a current endowment spending policy in accordance with the Uniform Prudent Management of Institutional Funds Act ("UPMIFA") as adopted in the State of Connecticut, designed specifically to stabilize annual spending levels and to preserve the real value of the endowment portfolio over time. The spending policy attempts to achieve these two objectives by using a long-term targeted spending rate combined with a smoothing rule, which adjusts spending gradually to changes in the endowment's fair value. An administrative charge is assessed against the funds when distributed.

To the extent that a donor-restricted endowment fund falls below its historic dollar value a deficit would exist, and it would be reported as a reduction of net assets with donor restrictions. Spending from an endowment fund in a deficit position would continue under the spending policy so long as the fund's value is more than 70% of its historical dollar value. There were no funds in a deficit position at June 30, 2021 and 2020.

The university uses a long-term targeted spending rate of 5.25%. The spending amount is calculated using 80% of the previous year's spending and 20% of the targeted long-term spending rate applied to the fair value at the start of the prior year. The spending amount determined by the formula is adjusted for inflation and taxes and constrained so that the calculated rate is at least 4.0% and not more than 6.5% of the endowment's fair value as of the start of the prior year. The actual rate of spending for 2021 and 2020, when measured against the previous year's June 30th endowment fair value, was 5.0% and 4.8%, respectively.

The university determines the expected return on endowment investments with the objective of producing a return exceeding the sum of inflation and the target spending rate. Asset allocation is the key factor driving expected return. Yale's asset allocation policy combines tested theory and informed market judgment to balance investment risks with the need for high returns. Both the need to provide resources for current operations and the desire to preserve the purchasing power of assets lead the endowment to be weighted toward equity investments.

The university manages the majority of its endowment in its Long-Term Investment Pool (the "Pool"). The Pool is unitized and allows for efficient investment among a diverse group of funds with varying restricted purposes. In addition to university funds, the Pool includes assets of affiliated entities where the university has established investment management agreements.

e. Leases

At the inception of an arrangement, the university determines if an arrangement is, or contains, a lease based on the unique facts and circumstances present in that arrangement. Lease classification, recognition, and measurement are then determined as of the lease commencement date. For arrangements that contain a lease, the university (i) identifies lease and non-lease components, (ii) determines the consideration in the contract, (iii) determines whether the lease is an operating or financing lease, and (iv) recognizes lease right of use ("ROU") assets and lease liabilities. Lease liabilities and their corresponding ROU assets are recorded based on the present value of lease payments over the expected lease term. The interest rate implicit in lease contracts is typically not readily determinable, and as such, the university uses its incremental borrowing rate based on the information available at the lease commencement date, a rate which represents one that would be incurred to borrow, on a collateralized basis, over a similar term, an amount equal to the lease payments in a similar economic environment. Some leases include options to renew and/or terminate the lease, which can impact the lease term. The exercise of these options is at the university's discretion and the university does not include any of these options within the expected lease term where it is not reasonably certain that these options will be exercised.

Fixed, or in-substance fixed, lease payments on operating leases are recognized over the expected term of the lease on a straight-line basis, while fixed, or in-substance fixed, payments on financing leases are recognized using the effective interest method. Variable lease expenses that are not considered fixed, or in-substance fixed, are recognized as incurred. Fixed and variable lease expense on operating leases is recognized within other operating expenditures in the consolidated statement of activities. Financing lease ROU asset amortization and interest costs are recorded within depreciation, amortization and interest in the consolidated statement of activities. The university has elected the short-term lease exemption and, therefore, does not recognize a ROU asset or corresponding liability for lease arrangements with an original term of 12 months or less.

Operating and financing leases are included in right of use assets and lease liabilities in the university's consolidated statement of financial position as of June 30, 2021 and 2020.

The university leases to others portions of certain buildings owned for retail and research purposes. Leases are generally five-year terms or less and are classified as operating leases. These leasing arrangements are not material to the consolidated financial statements.

f. Land, Buildings and Equipment

Land, buildings, and equipment are generally stated at cost. Annual depreciation is calculated on a straight-line basis over useful lives, or over the lease term for financing leases, ranging from 15 to 50 years for buildings and improvements and 4 to 15 years for equipment.

g. Other Assets

Other assets include an insurance receivable, capitalized software costs, deferred expenses, and inventories. Capitalized software costs are amortized on a straight-line basis over the estimated useful lives of the software, ranging from 5 to 10 years.

h. Collections

Collections at Yale include works of art, literary works, historical treasures, and artifacts that are maintained in the university's museums and libraries. These collections are protected and preserved for public exhibition, education, research, and the furtherance of public service. Collections are not capitalized; purchases of collection items are recorded as expenses in the university's consolidated statement of activities in the period in which the items are acquired.

i. Split-Interest Agreements

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

Contribution revenue related to charitable gift annuities and charitable remainder trusts is recognized at the date the agreements are established. In addition, the fair value of the estimated future payments to be made to the beneficiaries under these agreements is recorded as a liability. For pooled income funds, contribution revenue is recognized upon establishment of the agreement at the fair value of the estimated future receipts, discounted for the estimated time period until culmination of the agreement.

j. Beneficial Interest in Trust Assets

The university is the beneficiary of certain irrevocable perpetual trusts and charitable remainder trusts held and administered by others. The estimated fair values of trust assets are recognized as assets and as gift revenue when reported to the university.

k. Net Tuition, Room and Board

Tuition, room and board revenue is generated from an enrolled student population of approximately 12,100 and 13,600 in 2021 and 2020, respectively, and is recognized in the period in which it satisfies its performance obligations. Net tuition, room and board revenue from undergraduate enrollment represents approximately 49.9% and 58.2% of total tuition, room and board revenue in 2021 and 2020, respectively.

The university maintains a policy of offering qualified applicants admission to Yale College without regard to financial circumstance, as well as meeting in full the demonstrated financial need of those admitted. Student need in all programs throughout the university is generally fulfilled through a combination of scholarships and fellowships, loans and employment during the academic year. Tuition, room and board revenue has been reduced by certain scholarships and fellowships in the amounts of $354.4 million and $369.4 million in 2021 and 2020, respectively.

l. Contributions

Unconditional promises to give that are expected to be collected within one year are recorded at their net realizable value. Amounts expected to be collected in future years are recorded at the present value of estimated future cash flows, which includes estimates for potential uncollectible receivables. The discount on those contributions is computed using an interest rate that reflects the time value of money applicable to the year in which the promise is received. Amortization of the discount is included in contribution revenue.

Contributions are considered conditional when the underlying agreement includes a performance barrier and a right of return or a right to release promised assets exists. Conditional promises to give are not recognized as revenue until the performance barrier and the right of return or release have been overcome.

m. Grant and Contract Income

The university receives grant and contract income for exchange and non-exchange agreements from both governmental and private sources. Revenue from exchange agreements is recognized when performance obligations are met. Revenue from conditional non-exchange agreements is recognized as performance barriers are overcome and as the university overcomes either a right of return of assets transferred or the right of release of a promisor’s obligation to transfer assets. Grant and contract revenue from conditional non-exchange agreements is generally recognized as qualified costs of sponsored programs are incurred. At June 30, 2021 and 2020, the university has research activities which are contractually authorized by the sponsor, but for which costs have not yet been incurred, totaling $1,775.8 million and $1,681.9 million, respectively.

In 2021 and 2020, grant and contract income from the federal government totaled $668.6 million and $617.4 million, respectively. Recovery of facilities and administrative costs of federally sponsored programs is at rates negotiated with the university's cognizant agency, the Department of Health and Human Services. The current negotiated rates will expire on June 30, 2023. New rates will be negotiated based on actual costs incurred in fiscal year 2022.

n. Medical Services Income

The university provides medical care to patients primarily under agreements with third-party payors, including health maintenance organizations, that provide payment for medical services at amounts different from standard rates established by the university. The university determines performance obligations based on the nature of the services provided and recognizes revenue as it satisfies those performance obligations. Generally, these performance obligations are satisfied at the point in time the service is provided.

Medical services income is reported net of contractual discounts from third-party payors and implicit price concessions to uninsured patients. The university estimates the discounts based on contractual agreements and estimates the implicit price concessions based on its historical collection experience with these classes of patients.

In 2021 and 2020, net patient revenue, included in income from medical services, totaled $494.5 million and $416.7 million from insurance companies, $182.9 million and $145.0 million from Medicare, $74.0 million and $59.1 million from Medicaid, and $80.9 million and $63.6 million from other third parties, respectively.

o. Net Assets Released from Restrictions

Net assets released from restrictions are based upon the satisfaction of the purpose for which the net assets were restricted or the completion of a time stipulation. Restricted operating activity including contributions and net investment return earned, which are restricted, are reported as net assets with donor restrictions and reclassified to net assets without donor restrictions when any donor-imposed restrictions are satisfied. Non-operating restricted net assets associated with building costs are reclassified to net assets without donor restrictions when the capital asset is placed in service.

p. Self-Insurance

The university self-insures at varying levels for unemployment, disability, workers' compensation, property losses, certain healthcare plans, general liability, and professional liability, and obtains coverage through a captive insurance company for medical malpractice and related general liability losses. Insurance is purchased to cover liabilities above self-insurance limits. Estimates of retained exposures are accrued.

q. Tax Status

The university has been granted tax-exempt status under section 501(c)(3) of the Internal Revenue Code.

The Tax Cuts and Jobs Act (the "Act"), enacted on December 22, 2017, impacts the university in several ways, including the new excise taxes on net investment income and executive compensation, as well as updated rules for calculating unrelated business taxable income. The university records tax assets and liabilities in its consolidated financial statements based on reasonable estimates determined using current guidance, including the U.S. Treasury Department final regulations. Management will continue to monitor regulatory developments and assess the future impact of the relevant provisions of the Act on the university's consolidated financial statements.

r. Estimates

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America ("GAAP") requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and disclosures of contingencies at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period.

Significant estimates made by management include the valuation of certain investments and interest rate swap agreements, the estimated net realizable value of receivables, estimated asset retirement obligations, liabilities under split interest agreements, estimated tax liabilities, the valuation of the deferred tax asset resulting from provisions of the Act, and the actuarially determined employee benefit and self-insurance liabilities. Actual results could differ from those estimates.

s. Recent Authoritative Pronouncements

On July 1, 2019, the university adopted new accounting guidance related to leasing using the modified retrospective approach. The standard requires lessees to recognize leases on the balance sheet and disclose key information about leasing arrangements. The standard establishes a ROU model that requires a lessee to recognize a ROU asset and lease liability on the balance sheet for all leases with a term longer than 12 months. Leases have been classified as financing or operating, with classification affecting the pattern of expense recognition and classification of expense in the consolidated statement of activities.

The university elected the “package of practical expedients,” an option which permits it to not reassess prior conclusions about lease identification, lease classification and initial direct costs under the new standard.

Upon adoption of the new lease standard, on July 1, 2019, the university capitalized ROU assets and liabilities of $60.7 million within the consolidated statement of financial position. Further, the university reclassified leases previously identified as capital leases from land, buildings and equipment of $129.7 million and related accumulated depreciation of $26.6 million to right of use assets as of July 1, 2019. The related lease liabilities were reclassified from bonds and notes payable to lease liabilities in the amount of $169.6 million as of July 1, 2019.

On July 1, 2019, the university adopted new accounting guidance related to fair value disclosures. The impact of adopting the new guidance was not significant to the university’s consolidated financial statements.

On July 1, 2019, the university adopted several new accounting pronouncements relating to the treatment of certain transactions and balances on the statement of cash flows. The new guidance requires that all cash balances, regardless of their location on the balance sheet, be included in the beginning and ending cash balances displayed on the statement of cash flows. Furthermore, Note 1c includes a reconciliation of cash and cash equivalents reported on the consolidated statement of cash flows to the line items on the consolidated statement of financial position which comprise those cash and cash equivalents.

On July 1, 2020, the university adopted new accounting guidance relating to the accounting for collections. The new guidance provides for an updated definition of collections and was not significant to the university’s consolidated financial statements.

In August of 2018, the Financial Accounting Standards Board (“FASB”) issued new accounting guidance updating disclosure requirements for defined benefit plans. The new accounting guidance will remove certain disclosure requirements and add other new requirements. The guidance is required to be implemented in the university’s fiscal year 2022. The university is currently evaluating the potential impact to the consolidated financial statements.

In June of 2016, the FASB issued new accounting guidance relating to credit losses. The guidance is required to be implemented in the university’s fiscal year 2024. The standard is not expected to have a significant impact to the university’s consolidated financial statements.

t. Reclassifications

Certain amounts from 2020 have been reclassified to conform to the current year presentation.

u. Summarized 2020 Financial Information

The 2021 consolidated financial statements include selected comparative summarized financial information for 2020. Such information does not include sufficient detail to constitute a presentation in conformity with GAAP. Accordingly, such information should be read in conjunction with the university’s 2020 consolidated financial statements, from which the summarized financial information was derived.

2. Investments

The university endowment maintains a diversified investment portfolio with a strong orientation to equity investments and strategies designed to take advantage of market inefficiencies. The university's investment objectives are guided by its asset allocation policy and are achieved in partnership with external investment managers operating through a variety of investment vehicles, including separate accounts, limited partnerships and commingled funds. The university's heavy allocation to non-traditional asset classes, such as absolute return (hedge strategies), private equity (venture capital and leveraged buyouts), real estate, and natural resources (timber, energy and minerals) generates return potential and diversification in the portfolio.

The components of endowment and non-endowment investments, net of related liabilities at June 30 are presented below, in thousands of dollars:

	2021	2020
Endowment investments:		
Long-term investment pool	$ 41,790,089	$ 30,838,373
Other	122,493	118,257
Total net endowment investments	41,912,582	30,956,630
Non-endowment investments:		
Long-term investment pool	300,000	300,000
Fixed income	1,356,965	1,196,885
Derivatives	(628,384)	(1,106,103)
Other	1,322,722	762,371
Total non-endowment investments	2,351,303	1,153,153
Net investments, at fair value	$ 44,263,885	$ 32,109,783

As described in Note 1d, investments are recorded at fair value. The following tables summarize the fair values of the university's investments by major type and related liabilities as of June 30, in thousands of dollars:

2021	Level 1	Level 2	Level 3	Total
Investments, at fair value:				
Short-term investments	$ 1,519,592	$ -	$ -	$ 1,519,592
Fixed income:				
US government securities	4,287,079	-	65	4,287,144
Foreign government securities	16,494	-	-	16,494
Corporate and other securities	2,077	-	-	2,077
Total fixed income	4,305,650	-	65	4,305,715
Common stock:				
Domestic	943,860	13,513	3,972	961,345
Foreign	1,427,070	-	80,689	1,507,759
Total common stock	2,370,930	13,513	84,661	2,469,104
Other equity investments:				
Venture capital	-	-	479,519	479,519
Natural resources	-	-	618,580	618,580
Total other equity investments	-	-	1,098,099	1,098,099
Other investments	160,314	325,074	304,970	790,358
Total leveled investments, at fair value	$ 8,356,486	$ 338,587	$ 1,487,795	10,182,868
Investments at net asset value				37,647,271
Total investments				$ 47,830,139
Liabilities associated with investments:				
Securities sold, not yet purchased	$ 787,354	$ -	$ -	$ 787,354
Other liabilities	52,339	986,705	1,739,077	2,778,121
Total liabilities associated with investments	$ 839,693	$ 986,705	$ 1,739,077	3,565,475
Non-controlling interests				779
Net investments				$ 44,263,885

2020		Level 1		Level 2		Level 3		Total
Investments, at fair value:								
Short-term investments	$	2,171,988	$	-	$	-	$	2,171,988
Fixed income:								
U.S. government securities		3,068,449		-		65		3,068,514
Foreign government securities		16,194		63,505		-		79,699
Corporate and other securities		47,774		227,375		62,978		338,127
Total fixed income		3,132,417		290,880		63,043		3,486,340
Common stock:								
Domestic		791,860		24,672		50,533		867,065
Foreign		1,911,072		13,280		87,400		2,011,752
Total common stock		2,702,932		37,952		137,933		2,878,817
Other equity investments:								
Venture capital		-		-		342,778		342,778
Natural resources		-		-		234,977		234,977
Total other equity investments		-		-		577,755		577,755
Other investments		358,627		299,101		285,858		943,586
Total leveled investments, at fair value	$	8,365,964	$	627,933	$	1,064,589		10,058,486
Investments at net asset value								26,453,577
Total investments							$	36,512,063
Liabilities associated with investments:								
Securities sold, not yet purchased	$	1,076,138	$	65,984	$	-	$	1,142,122
Repurchase agreements		-		17,682		-		17,682
Other liabilities		294,457		1,402,663		1,443,823		3,140,943
Total liabilities associated with investments	$	1,370,595	$	1,486,329	$	1,443,823		4,300,747
Non-controlling interests								101,533
Net investments							$	32,109,783

Included within cash and short-term investments are restricted short-term investment balances held as collateral in the amount of $1,029.3 million and $1,213.0 million as of June 30, 2021 and 2020, respectively.

While not part of a leveling category, fair values for certain investments held are based on the net asset value ("NAV") of such investments as determined by the respective external investment managers, including general partners, if market values are not readily ascertainable. These valuations involve assumptions and methods that are reviewed by the Investments Office.

Investments at NAV as of June 30, in thousands of dollars, include:

		2021		2020
Absolute return	$	8,166,231	$	6,515,709
Domestic		329,439		294,404
Foreign		3,828,545		2,761,108
Leveraged buyout		8,758,246		5,221,747
Natural resources		1,297,193		1,026,590
Real estate		3,290,177		2,869,946
Venture capital		11,977,440		7,764,073
Total investments, at NAV	$	37,647,271	$	26,453,577

Assets and liabilities of investment companies that are controlled by the university are consolidated for reporting purposes. Certain consolidated subsidiaries are controlled but not wholly owned by the university. The portion of a consolidated entity's net assets that is not owned by the university is reported as a non-controlling interest.

The fair value of consolidated investment company assets and liabilities included in the university's consolidated financial statements, in thousands of dollars, include:

		2021		2020
Consolidated investment company assets	$	135,643	$	1,744,522
Consolidated investment company liabilities		4,479		302,553
	$	131,164	$	1,441,969

Effective June 30, 2021, the university entered into several agreements which resulted in the university no longer consolidating several of its previously consolidated investment companies. The assets and liabilities associated with these investment entities amounted to $1,608.9 million and $299.2 million, respectively, in the 2020 consolidated statement of financial position. The related non-controlling interest was $99.5 million in the 2020 consolidated statement of financial position. In the 2021 consolidated statement of financial position, investments of $1,643.5 million are included within Investments, at fair value. In addition, the investment companies' assets and liabilities are no longer part of the university's leveling tables in footnote 2, as the investments' fair value is based on NAV.

Level 3 investments are valued by the university or by its external investment managers using valuation techniques standard in the industry in which they operate. The Investments Office reviews these valuation methods and evaluates the appropriateness of these valuations each year. In certain circumstances, when the general partner does not provide a valuation or the valuation provided is not considered appropriate, the Investments Office will determine those values.

The following table summarizes quantitative inputs and assumptions used for Level 3 investments at June 30, for which fair value is based on unobservable inputs that are not developed by external investment managers. Weighted averages were calculated based on relative fair values. Significant increases or decreases in these unobservable inputs may result in significantly higher or lower valuation results.

Asset Class	Fair Value (in 000s) 2021	2020	Valuation Technique	Significant Unobservable Input	Range 2021	2020	Weighted Average 2021	2020
Equity securities	$84,661	$137,933	Indicative Market Quotations	Recent funding activity	*	N/A	*	N/A
			Calibrated price of recent investment	Calibrated price of recent round in private investment	N/A	*	N/A	*
			Market Comparables	Discount for Lack of Control	*	10.0 - 17.0%	*	15.0%
				EV/Revenue Multiple	N/A	10.0 - 17.0%	N/A	15.0%
			Cost	Cost Basis	*	$2,019,642.00	*	N/A
			NAV of the underlying fund	NAV of Investment Holding Company	N/A	N/A	N/A	N/A
			Legal Analysis	Discount for legal restriction on sale	5.0 - 15.0%	*	10.0%	*
Fixed income securities	$65	$63,043	Bond + Option Model	Discount Rate	*	7.0 - 32.0%	*	15.0%
				Yield Going Concern	*	9.0 - 33.0%	*	20.0%
				Volatility	*	50.0 - 60.0%	*	55.0%
			Indicative Market Quotations	Recent funding activity	N/A	N/A	N/A	N/A
			Liquidation Model	Liquidation probability	*	15.0 - 100.0%	*	40.0%
Natural resources	$618,580	$234,977	Discounted Cash Flow	Discount rate	8.0 - 12.0%	10.0 - 15.0%	10.0%	12.0%
				Exit Multiple	*	8.0x - 10.0x	*	9.0x
			Legal Analysis	Probability of recovery	25.0%	*	25.0%	*
Trusts	$237,210	$188,690	Net present value	Discount rate	2.3%	1.5%	2.3%	1.5%
Venture capital	$479,519	$342,778	Tax Analysis	Likelihood of taxation	0.0%	0.0%	N/A	N/A
Other investments	$67,760	$97,168	Black-Scholes	Volatility	*	19.0 - 21.0%	*	20.0%
			Market Comparables	Multiples - EBITDA	*	5.5x - 9.0x	*	7.0x
				Broadcast Cash Flow	*	3.8x - 5.0x	*	4.5x
				Price per acre	$8,834.00 - $9,164.00	*	$9,000.00	*
Liabilities	$(1,739,077)	$(1,443,823)	Various methods	University pooled unit market value	$5,041.79	$3,757.65	N/A	N/A

* Valuation technique does not apply to year.

The valuation process for investments at NAV and those categorized in Level 3 of the fair value hierarchy includes evaluating the operations and valuation procedures of external investment managers and the transparency of those processes through background and reference checks, attendance at investor meetings, and periodic site visits. In determining the fair value of investments, Investments Office staff reviews periodic investor reports, interim and annual audited financial statements received from external investment managers, and material quarter over quarter changes in valuation; and assesses the impact of macro market factors on the performance. The Investments Office meets with the Corporation's Investment Committee quarterly to review investment transactions and monitor performance of external investment managers.

Realized and unrealized gains and losses are reported in total endowment return, net of fees. Included in net realized and unrealized gain (loss) in Level 3 reported below were unrealized gains of $94.5 million and $168.1 million that relate to investments held at June 30, 2021 and 2020, respectively.

The tables below present the change in fair value measurements for the university's Level 3 investments during the years ended June 30, in thousands of dollars:

2021	Venture Capital	Natural Resources	Other	Liabilities	Total
Beginning balance	$ 342,778	$ 234,977	$ 486,834	$ (1,443,823)	$ (379,234)
Realized and unrealized gain (loss), net	199,130	248,309	40,574	(395,115)	92,898
Purchases	420	13,243	20,992	(63,340)	(28,685)
Sales	(62,809)	(47,686)	(9,268)	163,201	43,438
Transfers in	-	169,737	-	-	169,737
Transfers out	-	-	(149,436)	-	(149,436)
Ending balance	$ 479,519	$ 618,580	$ 389,696	$ (1,739,077)	$ (251,282)

2020	Venture Capital	Natural Resources	Other	Liabilities	Total
Beginning balance	$ 194,028	$ 189,278	$ 762,076	$ (1,246,403)	$ (101,021)
Realized and unrealized gain (loss), net	256,188	(11,241)	(48,790)	(26,580)	169,577
Purchases	878	73,003	123,090	(80,220)	116,751
Sales	(9,265)	(16,063)	(164,081)	22,227	(167,182)
Transfers in	-	-	144,332	(136,267)	8,065
Transfers out	(99,051)	-	(329,793)	23,420	(405,424)
Ending balance	$ 342,778	$ 234,977	$ 486,834	$ (1,443,823)	$ (379,234)

Transfers into Level 3 consist primarily of investments reclassified from NAV to level 3 as the practical expedient is not used for certain limited partnership investments. Transfers out of Level 3 are due to the deconsolidation of investment entities.

Agreements with external investment managers include certain redemption terms and restrictions as noted in the following table:

Asset Class	Fair Value (in 000s) 2021	2020	Remaining Life	Unfunded Commitment (in 000s) 2021	2020	Redemption Terms	Redemption Restrictions
Absolute return	$ 8,166,231	$ 6,515,709	No Limit	$ 268,586	$ 150,227	Range from monthly with 30 days notice to annually with 90 days notice.	Lock-up provisions range from none to 5 years.
Domestic equity	329,439	294,404	No Limit	114,041	159,632	Range from monthly with 3 days notice to annually with 90 days notice.	Lock-up provisions range from none to 7 years.
Foreign equity	3,828,545	2,761,108	No Limit	110,700	233,000	Range from monthly with 15 days notice to closed end structures not available for redemption.	Lock-up provisions range from none to 7 years.
Leveraged buyout	8,758,246	5,221,747	1-25 years	4,438,331	4,149,436	Closed end funds not eligible for redemption.	Not redeemable.
Natural resources	1,915,773	1,261,567	1-35 years	614,028	585,000	Closed end funds not eligible for redemption.	Not redeemable.
Real estate	3,290,177	2,869,946	1-25 years	2,401,792	1,861,074	Closed end funds not eligible for redemption.	Not redeemable.
Venture capital	12,456,959	8,106,851	1-25 years	1,524,279	1,281,072	Range from 2 years with 3 years notice to closed end structures not available for redemption.	Not redeemable.
Total	$ 38,745,370	$ 27,031,332		$ 9,471,757	$ 8,419,441		

The university enters into resell agreements (where securities are purchased under agreements to resell) and into repurchase agreements (where securities are sold under an agreement to repurchase). All resell agreements and repurchase agreements are carried at their contractual value which approximates fair value. Resell and repurchase agreements are presented gross in the university's consolidated statement of financial position as investment assets and liabilities associated with investments.

The table below illustrates the exposure for these financial instruments at June 30, in thousands of dollars, where enforceable netting agreements are in place:

	2021 Assets	2021 Liabilities	2020 Assets	2020 Liabilities
Resell and repurchase agreements	$ -	$ -	$ -	$ 17,682
Amounts contractually eligible for offset	-	-	-	(17,682)
Net exposure for resell and repurchase agreements	$ -	$ -	$ -	$ -

The fair value of fixed income securities of $520.5 million and $807.6 million was provided at June 30, 2021 and 2020, respectively, to collateralize securities sold, not yet purchased.

The university may employ derivatives and other strategies to (1) manage against market risks, (2) arbitrage mispricings of related securities, and (3) replicate long or short positions more cost effectively. The university does not invest in derivatives for speculation. The fair value of derivative positions held at June 30 and related gain (loss) for the year, in thousands of dollars, were as follows:

2021

	Assets	Liabilities	(Loss) Gain
Endowment:			
Other	$ -	$ 45,255	$ (206,440)
	-	45,255	(206,440)
Other:			
Interest rate swaps	27,058	672,100	423,253
	27,058	672,100	423,253
Gross value of derivatives	27,058	717,355	$ 216,813
Other-counterparty netting	(27,058)	(27,058)	
Net collateral (received)/posted	-	(651,036)	
Total net exposure for derivatives	$ -	$ 39,261	

2020

	Assets	Liabilities	(Loss) Gain
Endowment:			
Credit default swaps	$ 908	$ 652	$ (687)
Interest rate swaps	-	-	(82)
Other	38,018	6,328	61,165
	38,926	6,980	60,396
Other:			
Interest rate swaps	54,160	1,175,173	(684,412)
Energy swaps	-	-	(829)
	54,160	1,175,173	(685,241)
Gross value of derivatives	93,086	1,182,153	$ (624,845)
Other-counterparty netting	(50,841)	(50,841)	
Net collateral (received)/posted	(12,345)	(1,101,441)	
Total net exposure for derivatives	$ 29,900	$ 29,871	

Derivatives are reported as other investments and other liabilities for fair value leveling purposes. The university initiates derivatives under legally enforceable master netting agreements. The net exposure for derivatives is presented above, net of these master netting agreements and required collateral.

Credit Default Swaps

Credit default swaps are used to simulate long or short positions that are unavailable in the market or to reduce credit risk where exposure exists. The buyer of a credit default swap is obligated to pay to the seller a periodic stream of payments over the term of the contract in return for a contingent payment upon occurrence of a contracted credit event. There are no credit default swap contracts for buy protection as of June 30, 2021 and $126.3 million as of June 30, 2020, and there is no notional amount related to sell protection as of June 30, 2021 or June 30, 2020.

Interest Rate Swaps

Interest rate swaps are used to manage exposure to interest rate fluctuations. The notional amount of contracts that pay based on fixed rates and receive based on variable rates was $2.4 billion at June 30, 2021 and 2020. The notional amount of contracts that pay based on variable rates and receive based on fixed rates were $725 million and $1.0 billion at June 30, 2021 and 2020, respectively.

Energy Swaps

Energy swaps are used in connection with settling planned purchases of energy consumption and adjusting market exposures.

Derivative assets are reported as investments in the consolidated statement of financial position and derivative liabilities are reported as liabilities associated with investments. Gains and losses on derivatives used for investing are reported as part of total endowment return and gains and losses related to university debt management and energy consumption are reported as other investment (loss) income in the consolidated statement of activities as non-operating activity.

Derivatives held by limited partnerships and commingled investment trusts in which Yale invests pose no off-balance sheet risk to the university due to the limited liability structure of the investments.

Certain investment transactions, including derivative financial instruments, necessarily involve counterparty credit exposure. Such exposure is monitored regularly by the university's Investments Office in accordance with established credit policies and other relevant criteria.

Endowment investments include beneficial interests in outside trusts of $186.8 million and $147.9 million at June 30, 2021 and 2020, respectively.

The following investments held under split-interest agreements are included in the endowment investment portfolio, in thousands of dollars:

	2021	2020
Charitable gift annuities	$ 293,211	$ 224,335
Charitable remainder trusts	124,504	99,544
Pooled income funds	5,762	5,743
	$ 423,477	$ 329,622

Split-interest liabilities reported in the consolidated statement of financial position totaled $149.1 million and $140.1 million at June 30, 2021 and 2020, respectively, and are recorded at fair value using Level 2 measurements.

The university has agreements with certain affiliates to invest in the Pool. The obligation to these affiliates included in other liabilities within liabilities associated with investments is $1,464.4 million and $1,231.6 million at June 30, 2021 and 2020, respectively. The largest balance recorded is for Yale-New Haven Hospital ("the Hospital"), with $1,121.4 million and $977.9 million invested at June 30, 2021 and 2020, respectively.

A summary of the university's total investment return as reported in the consolidated statement of activities is presented below, in thousands of dollars:

	2021	2020
Investment income	$ 164,082	$ 422,390
Realized and unrealized gain, net of investment management fees	11,888,742	1,509,575
Total endowment return	12,052,824	1,931,965
Other investment income (loss)	596,917	(577,770)
	$ 12,649,741	$ 1,354,195

Endowment investment returns totaling $1,512.6 million and $1,438.1 million were allocated to operating activities in 2021 and 2020, respectively, using the spending policy described in Note 1d.

3. Accounts Receivable

Accounts receivable from the following sources were outstanding at June 30, in thousands of dollars:

	2021	2020
Medical services, net	$ 95,728	$ 77,730
Grant and contracts	132,519	128,696
Affiliated organizations	100,965	114,003
Publications	6,294	5,941
Other	78,426	49,508
	413,932	375,878
Less: Allowance for doubtful accounts	(15,958)	(11,026)
	$ 397,974	$ 364,852

Medical services receivables are net of discounts and allowances of $188.8 million and $144.2 million at June 30, 2021 and 2020, respectively. Receivables for medical services, net of contractual adjustments, are primarily based on negotiated contracts with insurance companies (47%), Medicare (15%), Medicaid (4%), payments due directly from patients (23%) and commercial insurance and others (11%). The university assesses credit losses on certain accounts receivable on a regular basis to determine the allowance for doubtful accounts.

The university and the Hospital are parties to an affiliation agreement that establishes guidelines for the operation of activities between these two separate organizations. These guidelines set forth each organization's responsibility under the common goal of delivering comprehensive patient care services. The university provides professional services from faculty of the Yale School of Medicine and a variety of other administrative and clinical services. The net receivable from the Hospital amounted to $89.3 million and $101.3 million at June 30, 2021 and 2020, respectively. Balances are settled in the ordinary course of business. The university recognized $453.5 million and $415.7 million in revenue and incurred $122.3 million and $120.7 million in expenses related to activities with the Hospital during the periods ended June 30, 2021 and 2020, respectively.

4. Contributions Receivable

Contributions receivable consist of the following unconditional promises to give as of June 30, in thousands of dollars:

	2021	2020
Purpose:		
Operating programs	$ 512,226	$ 478,061
Endowment	797,637	480,626
Capital purposes	131,250	124,356
Gross unconditional promises to give	1,441,113	1,083,043
Less: Discount to present value	(114,403)	(129,246)
Allowance for uncollectible accounts	(129,293)	(95,347)
	$ 1,197,417	$ 858,450
Amounts due in:		
Less than one year	$ 468,030	$ 293,877
One to five years	661,891	466,377
More than five years	311,192	322,789
	$ 1,441,113	$ 1,083,043

Discount rates used to calculate the present value of contributions receivable ranged from .16% to 7.00% at June 30, 2021 and 2020.

The university had conditional pledges of approximately $17.4 million and $2.9 million at June 30, 2021 and June 30, 2020, respectively, which are subject to a donor-imposed condition.

5. Notes Receivable

Notes receivable at June 30, in thousands of dollars, include:

	2021	2020
Institutional student loans	$ 44,187	$ 45,584
Federally-sponsored student loans	14,893	19,265
Notes receivable	49,535	50,889
	108,615	115,738
Less: Allowance for doubtful accounts	(12,106)	(12,006)
	$ 96,509	$ 103,732

Student Loans

Institutional student loans include donor funds restricted for student loan purposes and university funds made available to meet demonstrated need in excess of all other sources of student loan borrowings. Interest accrues at fixed rates upon loan disbursement.

Management regularly assesses the adequacy of the allowance for credit losses for student loans by performing ongoing evaluations of the student loan portfolio, including such factors as the differing economic risks associated with each loan category, the financial condition of specific borrowers, the level of delinquent loans, and, where applicable, the existence of any guarantees or indemnifications. Federally-sponsored loans represent amounts due from current and former students under certain federal loan programs. Loans disbursed under these programs can be assigned to the federal government in certain non-repayment situations. In these situations, the federal portion of the loan balance is guaranteed. Federally-sponsored student loans have mandated interest rates and repayment terms subject to restrictions as to their transfer and disposition.

Amounts received from the federal government to fund a portion of the federally-sponsored student loans are ultimately refundable to the federal government and have been reported as part of other liabilities in the consolidated statement of financial position. The recorded value of student loan instruments approximates fair value.

Notes Receivable

The university and the Hospital entered into an agreement under which the Hospital will reimburse the university over a 40-year term for advances made relating to the construction of Hospital facilities. The payment includes interest based on the five-year Treasury bill plus 175 basis points, which resets every five years. In 2020, the interest rate was reset, and the monthly payment was adjusted accordingly.

6. Right of Use Assets and Lease Liabilities

The following table summarizes the university's lease assets and liabilities as of June 30, in thousands of dollars:

Right of use assets and liabilities	Statement of financial position location	2021	2020
Right of use asset - Operating	Right of use assets	$ 41,433	$ 48,491
Right of use asset - Financing	Right of use assets	141,261	106,947
Right of use liabilities - Operating	Lease liabilities	41,959	48,623
Right of use liabilities - Financing	Lease liabilities	212,469	175,398

The following table summarizes the university's lease related costs for the year ended June 30, in thousands of dollars:

Lease cost	Statement of activities location	2021	2020
Financing lease cost			
Amortization of right of use assets	Depreciation, amortization and interest	$ 9,404	$ 5,550
Interest on lease liabilities	Depreciation, amortization and interest	7,675	7,177
Operating lease cost	Other operating expenses	10,815	3,028
Total lease cost		$ 27,894	$ 15,755

The following table summarizes maturities of lease liabilities as of June 30, 2021, in thousands of dollars:

	Financing	Operating	Total
2022	$ 14,410	$ 8,400	$ 22,810
2023	14,610	6,754	21,364
2024	14,813	6,429	21,242
2025	15,019	5,722	20,741
2026	15,228	4,370	19,598
Thereafter	227,706	14,044	241,750
Undiscounted expected future cash flows	301,786	45,719	347,505
Discount	(89,317)	(3,760)	(93,077)
Discounted expected future cash flows	$ 212,469	$ 41,959	$ 254,428

The following table summarizes information about financing and operating leases as of June 30, in thousands of dollars:

	2021		2020	
	Financing	Operating	Financing	Operating
Weighted-average remaining lease term (years)	19	9	21	8
Weighted-average discount rate	3.66%	2.16%	4.06%	2.18%
Total undiscounted lease liability	$ 301,786	$ 45,720	$ 262,779	$ 53,866

7. Other Assets

Other assets at June 30, in thousands of dollars, include:

	2021	2020
Insurance receivable	$ 135,086	$ 155,032
Software costs, net of accumulated amortization	42,295	42,387
Deferred expenses	44,315	40,068
Inventories	16,392	15,441
	$ 238,088	$ 252,928

Amortization expense related to other assets included in operating expenses amounted to $13.3 million and $14.6 million in 2021 and 2020, respectively.

8. Land, Buildings and Equipment

Land, buildings and equipment at June 30, less accumulated depreciation and amortization, in thousands of dollars, are as follows:

	2021	2020
Land and real estate improvements	$ 137,585	$ 137,053
Buildings	8,163,195	7,496,882
Equipment	641,254	646,784
	8,942,034	8,280,719
Less: Accumulated depreciation and amortization	(3,706,913)	(3,437,016)
	5,235,121	4,843,703
Construction in progress	272,724	593,843
	$ 5,507,845	$ 5,437,546

Depreciation expense included in operating expenses amounted to $301.2 million and $277.1 million in 2021 and 2020, respectively.

9. Other Liabilities

Other liabilities include obligations of the university that will be paid over extended periods of time and consist of the following as of June 30, in thousands of dollars:

	2021	2020
Employee benefit obligations	$ 1,503,483	$ 2,023,797
Compensated absences	92,819	80,422
Financial aid grant obligations	65,321	67,998
Asset retirement obligations	39,422	42,380
Other	79,205	69,082
	$ 1,780,250	$ 2,283,679

Included in employee benefit obligations are defined benefit plan liabilities in excess of plan assets. These liabilities amounted to $1,247.0 million at June 30, 2021 and $1,825.3 million at June 30, 2020 (see Note 12).

10. Bonds and Notes Payable

Bonds and notes payable outstanding at June 30, in thousands of dollars, include:

	Effective Interest Rate June 30, 2021	Calendar Year of Maturity	Outstanding Balance 2021	2020
CHEFA tax-exempt bonds:				
Series S	5.00%	2027	$ 111,205	$ 111,205
Series T	5.00%	2029	93,625	93,625
Series U	2.00%	2033	250,000	250,000
Series V	0.03%	2036	200,000	200,000
Series X	0.25%	2037	125,000	125,000
Series 2010A	1.13%	2049	300,000	300,000
Series 2013A	1.45%	2042	100,000	100,000
Series 2014A	1.10%	2048	250,000	250,000
Series 2015A	2.05%	2035	300,000	300,000
Series 2016A	1.79%	2042	399,320	399,320
Series 2017A	5.00%	2042	170,920	170,920
Series 2017B	2.44%	2029/2037	194,530	224,200
Series 2017C	5.00%	2040/2057	383,380	383,380
Series 2018A	5.00%	2025	67,610	67,610
Total CHEFA bonds			2,945,590	2,975,260
Medium term notes	7.38%	2096	125,000	125,000
Taxable Series 2020A	1.59%	2025/2030/2050	1,500,000	1,500,000
Commercial paper	0.16%	2021	500,000	500,000
US Department of Energy	2.70%	2029	31,879	37,921
Other notes payable		2020	-	157
Principal amount			5,102,469	5,138,338
Less: Bond issue costs			(18,174)	(9,666)
Plus: Unamortized premiums and discounts, net			115,278	113,434
			$ 5,199,573	$ 5,242,106

CHEFA Tax-Exempt Bonds

The university borrows at tax-exempt rates through the Connecticut Health and Facilities Authority (“CHEFA”), a conduit issuer. CHEFA debt is a general unsecured obligation of the university. Although CHEFA is the issuer, the university is responsible for the repayment of the tax-exempt debt.

Series S bonds consist of $111.2 million, bear a fixed interest rate of 5.00%, and mature in July 2027. These bonds include a net premium of $17.6 million as of June 2021.

Series T bonds, remarketed in February 2020, consist of $93.6 million Series T-2 bonds maturing in July 2029. The Series T-2 bonds bear a fixed interest rate of 5.00% through June 2029. These bonds include a net premium of $26.7 million as of June 2021.

Series U bonds consist of 1) $125.0 million Series U-1 bonds and 2) $125.0 million Series U-2 bonds with a fixed interest rate of 2.00% through February 7, 2022 and mature in July 2033.

Series V bonds consist of $200.0 million, bear interest at a daily rate, and mature in July 2036. The bonds may be converted from a daily rate period to other variable rate modes or to a fixed rate mode at the discretion of the university.

Series X bonds consist of $125.0 million Series X-2 bonds maturing in July 2037. On February 9, 2021, the bonds were remarketed from a fixed rate of 1.80% to a fixed interest rate of 0.25% through February 8, 2024.

Series 2010A bonds consist of 1) $150.0 million Series 2010A-3 and 2) $150 million Series 2010A-4, maturing July 2049. On February 9, 2021, Series 2010A-3 bonds were remarketed to a fixed rate of 0.25% through February 8, 2024. Series 2010A-4 bears a fixed interest rate of 2.00% through February 2022.

Series 2013A bonds consist of $100.0 million maturing in July 2042. In July 2019, the Series 2013A bonds were remarketed from a fixed interest rate of 1.00% to a fixed interest rate of 1.45% through June 2022.

Series 2014A bonds consist of $250.0 million maturing in July 2048. The bonds bear a fixed interest rate of 1.10% through February 6, 2023.

Series 2015A bonds consist of $300.0 million, maturing in July 2035. In July 2021, the bonds were remarketed from a fixed interest rate of 2.05% to a fixed interest rate of 0.375% through July 11, 2024.

Series 2016A bonds consist of 1) $150.0 million Series 2016A-1 bonds bearing a fixed interest rate of 1.45% through June 30, 2022; and 2) $249.3 million Series 2016A-2 bonds bearing a fixed interest rate of 2.00% through June 30, 2026. Both bond series mature in July 2042. Series 2016A-2 include a net premium of $338 thousand as of June 2021.

Series 2017A bonds consist of 1) $85.5 million Series 2017A-1 bonds and 2) $85.5 million Series 2017A-2 bonds. Both bond series mature in July 2042 and bear a fixed interest rate of 5.00% through June 30, 2022. These bonds include a net premium of $5.8 million as of June 30, 2021.

Series 2017B bonds consist of 1) $82.4 million Series 2017B-1 bonds maturing in July 2029. 2017B-1 bonds were originally issued at a par value of $112.1 million until they were remarketed in July 2020 bearing a fixed interest rate of 5.00% through July 2029 which includes a net premium of $26.4 million as of June 2021and 2) $112.1 million Series 2017B-2 bonds maturing in July 2037. In July 2020, Series 2017B-2 bonds were remarketed to a term interest rate of 0.55% through July 2, 2023.

Series 2017C-1 bonds were issued in December 2017 to refund Series 2010A-2 bonds and consist of $123.3 million maturing in July 2040. The bonds bear a fixed interest rate of 5.00% through January

2028. These bonds include a net premium of $19.3 million as of June 30, 2021. Series 2017C-2 bonds were issued in December 2017 and consist of $260.1 million maturing in July 2057. The bonds bear a fixed interest rate of 5.00% through January 2023. These bonds include a net premium of $12.4 million as of June 30, 2021.

Series 2018A bonds were issued in July 2018 to refund Series 2010A-1 bonds and consist of $67.6 million maturing in July 2025. The bonds bear a fixed interest rate of 5.00%. These bonds include a net premium of $7.1 million as of June 30, 2021.

Notes Payable

Medium-term notes bear a fixed interest rate of 7.38% and mature in 2096, with an optional redemption provision in the year 2026. The discount associated with these notes was $190 thousand as of June 30, 2021.

Taxable Bonds

Taxable bonds, Series 2020A, in the amount of $1.5 billion were issued on June 9, 2020 consisting of: 2020A-1 in the amount of $500 million bearing a fixed rate of 0.873% through maturity due April 15, 2025, 2020A-2 in the amount of $500 million bearing a fixed rate of 1.48% through maturity due April 15, 2030, and 2020A-3 in the amount of $500 million bearing a fixed rate of 2.40% through maturity due April 15, 2050. The bonds are subject to an optional redemption (in whole or in part) prior to maturity at the written direction of the issuer to the trustee.

Commercial Paper

Commercial paper consists of notes issued in the short-term taxable market and is sold at a discount from par. In April 2019, additional commercial paper was issued and the proceeds were partially used to redeem $250.0 million of medium term notes Series B. The maturities of individual notes are issued in ranges from one day to no more than one year and fall on average in a range of thirty to sixty days. The discount associated with commercial paper was $29 thousand as of June 30, 2021.

Other Financing Arrangements

The university financed a wind energy project, Record Hill Wind, LLC, through a financing arrangement with the U.S. Department of Energy. The financing arrangement is non-recourse debt to the university and bears interest at rates ranging from 2.24% to 2.78%.

Scheduled maturities of the debt obligations, in thousands of dollars, are as follows:

2022	$	504,835
2023		4,835
2024		4,835
2025		504,835
2026		72,445
Thereafter		4,010,684
Total	$	5,102,469

Certain CHEFA Series are subject to tender by bondholders. To the extent all bonds subject to tender could not be remarketed, $2.4 billion of bonds scheduled for maturity between 2029 and 2057 would be due when tendered.

Total interest expense incurred on indebtedness was $78.5 million and $69.0 million in 2021 and 2020, respectively. Interest capitalized to land, buildings and equipment totaled $5.6 million and $5.1 million in 2021 and 2020, respectively. Amortization expense related to bond issue costs included in operating expenses amounted to $3.3 million and $2.6 million in 2021 and 2020, respectively.

11. Retirement Plans – Defined Contribution

The university maintains defined contribution plans for faculty and certain staff employees. Participants may direct employee and employer contributions to annuities, mutual funds, and other investment options. Retirement expense for these plans $136.7 million and $132.2 million in 2021 and 2020, respectively.

12. Pension and Postretirement Plans – Defined Benefit

The university has a noncontributory, defined benefit pension plan for staff. The staff pension plan provides payments based on the employee's earnings and years of participation.

In addition, the university provides postretirement benefits including health benefits based on years of service, life insurance, and a pay-out of unused sick time. While the university's subsidy of the cost of comprehensive health care benefits differs among retiree groups, substantially all employees who meet minimum age and service requirements and retire from the university are eligible for these benefits. Non-faculty employees are paid 50% of unused sick time and receive life insurance benefits upon retirement from active status.

The university uses a June 30th measurement date for its defined benefit plans.

The following table sets forth the pension and postretirement plans' funded status that is reported in the consolidated statement of financial position at June 30, in thousands of dollars:

	Pension		Postretirement	
	2021	2020	2021	2020
Change in benefit obligation:				
Benefit obligation, beginning of year	$ 2,388,609	$ 1,948,900	$ 1,609,298	$ 1,422,596
Service cost	103,235	79,339	70,732	57,520
Interest cost	52,013	59,946	36,007	42,936
Benefit payments	(44,391)	(37,846)	(26,668)	(28,251)
Assumption changes	(106,864)	320,175	(27,063)	202,066
Actuarial loss (gain)	15,160	18,095	46,296	(87,569)
Benefit obligation, end of year	$ 2,407,762	$ 2,388,609	$ 1,708,602	$ 1,609,298
Change in plan assets:				
Fair value, beginning of year	$ 1,593,132	$ 1,415,611	$ 579,458	$ 514,602
Actual return on plan assets	489,569	141,374	186,277	49,558
University contributions	31,318	76,708	64,715	44,945
Benefits paid	(44,391)	(37,846)	(26,668)	(28,251)
Expenses paid	(2,664)	(2,715)	(1,340)	(1,396)
Fair value, end of year	$ 2,066,964	$ 1,593,132	$ 802,442	$ 579,458
Funded Status	$ (340,798)	$ (795,477)	$ (906,160)	$ (1,029,840)

Benefit Obligation

The benefit obligation represents the actuarial present value of expected future payments to plan participants for services rendered prior to that date, based on the pension benefit formula. In calculating the value, the participants' compensation levels are projected to retirement.

The accumulated benefit obligation differs from the benefit obligation above in that it does not consider assumptions about future compensation levels. It represents the actuarial present value of future payments to plan participants using current and past compensation levels. The accumulated benefit obligation for the pension plan was $2,013.1 million and $1,996.4 million at June 30, 2021 and June 30, 2020, respectively.

Assumptions used in determining the year end obligation of the pension and postretirement plans are:

	2021	2020
Weighted-average discount rate - all plans except unused sick pay plan	2.45%	2.20%
Weighted-average discount rate - unused sick pay plan	2.15%	1.90%
Weighted-average increase in future compensation levels	3.13%	3.14%
Projected health care cost trend rate (pre-65/post-65)	6.22% / 11.83%	6.44% / 9.58%
Ultimate trend rate (pre-65/post-65)	4.50% / 4.50%	4.50% / 4.50%
Year ultimate trend rate is achieved	2030	2028
Mortality	RP2014 Collar Adj., Scale MP2019	RP2014 Collar Adj., Scale MP2019

The health care cost trend rate assumption has a significant effect on the amounts reported. For the fiscal year ended June 30, a 1% change in the health care cost trend rate would affect 2021 and 2020 as follows, in thousands of dollars:

	2021		2020	
	1% Increase	1% Decrease	1% Increase	1% Decrease
Effect on postretirement service and interest cost	$ 25,600	$ (18,600)	$ 26,400	$ (13,400)
Effect on postretirement benefit obligation at June 30	305,100	(232,700)	289,700	(217,500)

Changes in assumptions during the year resulted in a (decrease) increase to the pension benefit obligation and a (decrease) increase to the postretirement benefit obligation at June 30, as follows, in thousands of dollars:

	2021		2020	
	Pension	Postretirement	Pension	Postretirement
Discount rate	$ (120,535)	$ (89,438)	$ 374,215	$ 257,675
Inflation	637	40,920	(138)	(7,761)
Mortality	-	-	(58,062)	(52,365)
Turnover rates	17,661	12,709	4,160	4,517
Retirement rates	(4,627)	(6,137)	-	-
Medical trend rates	-	14,883	-	-
	$ (106,864)	$ (27,063)	$ 320,175	$ 202,066

Net Periodic Benefit Cost

Net periodic benefit cost for the plans includes the following components for the year ended June 30, in thousands of dollars:

	Pension		Postretirement	
	2021	2020	2021	2020
Service cost	$ 103,235	$ 79,339	$ 70,732	$ 57,520
Administrative expenses	2,803	2,700	1,400	1,300
Interest cost	52,013	59,946	36,007	42,936
Expected return on plan assets	(112,130)	(104,345)	(42,229)	(37,785)
Net amortization:				
Prior service cost	2,917	3,343	-	1
Net loss	53,381	31,166	20,832	11,157
Net periodic benefit cost	$ 102,219	$ 72,149	$ 86,742	$ 75,129

The service cost component of net periodic benefit cost is included in employee benefits as a part of operating expenses in the consolidated statement of activities. The components of net periodic benefit cost other than service cost, are included in other increases (decreases), which is reported as non-operating activity in the consolidated statement of activities.

Assumptions used in determining the net periodic benefit cost of the pension and postretirement plans are:

	2021	2020
Weighted-average discount rate - all plans except unused sick pay plan	2.20%	3.10%
Weighted-average discount rate - unused sick pay plan	1.90%	2.85%
Expected long-term rate of return	7.25%	7.25%
Weighted-average compensation increase	3.14%	3.14%
Health care cost increase (pre-65/post-65)	6.44% / 9.58%	6.66% / 12.40%
Ultimate trend rate (pre-65/post-65)	4.50% / 4.50%	4.50% / 4.50%
Year ultimate trend rate is achieved	2028	2028
Mortality	RP2014 Collar Adj., Scale MP2019	RP2014 Aggregate, Scale MP2014

The funded status consists of the cumulative unfunded net periodic benefit cost and the cumulative change in funding status of defined benefit plans. The components of the change in funding status of defined benefit plans, which is reported in non-operating results, for the year ended June 30, in thousands of dollars, include:

	Pension		Postretirement	
	2021	2020	2021	2020
Unrecognized net actuarial loss	$ (469,283)	$ 301,256	$ (124,875)	$ 102,900
Amortization of unrecognized obligation	(56,297)	(34,509)	(20,832)	(11,158)
	$ (525,580)	$ 266,747	$ (145,707)	$ 91,742

The cumulative amounts of these adjustments reported as deductions to net assets in the consolidated statement of financial position at June 30, in thousands of dollars, include:

	Pension		Postretirement	
	2021	2020	2021	2020
Unrecognized net actuarial loss	$ 287,538	$ 810,204	$ 265,027	$ 410,731
Unrecognized prior service cost	7,784	10,701	-	-
	$ 295,322	$ 820,905	$ 265,027	$ 410,731

Amounts recorded as an adjustment at June 30, 2021 that are expected to be amortized into non-operating activity during fiscal year 2021 and fiscal year 2022, in thousands of dollars, include:

	Pension		Postretirement	
	2022	2021	2022	2021
Net actuarial loss	$ 30,576	$ 51,928	$ 14,502	$ 17,438
Prior service cost	2,725	2,917	-	-
	$ 33,301	$ 54,845	$ 14,502	$ 17,438

Actuarial gains or losses and prior service costs resulting from plan amendments are amortized over the average remaining years of service of active participants.

Plan Assets

The defined benefit plan assets are valued utilizing the same fair value hierarchy as the university's investments as described in Note 1d.

The following table summarizes the fair values of investments by major type held by the staff pension plan at June 30, 2021 in thousands of dollars:

	Level 1	Level 2	Level 3	2021
Investments, at fair value:				
Cash and cash equivalents	$ 89,308	$ -	$ -	$ 89,308
US government securities	169,332	-	-	169,332
Equity investments:				
Domestic	28,482	-	-	28,482
Foreign	13,483	-	-	13,483
Total equity investments	41,965	-	-	41,965
Limited partnerships:				
Natural resources	-	-	21,364	21,364
Total limited partnerships	-	-	21,364	21,364
Other investments	663	-	-	663
Total leveled investments	$ 301,268	$ -	$ 21,364	322,632
Investments at NAV				1,741,952
Total investments, at fair value				2,064,584
Liabilities associated with investments	$ 1,262	$ 134	$ -	1,396
Net investments, at fair value				2,063,188
Benefit payable				3,776
Fair value, end of year				$ 2,066,964

The following table summarizes the fair values of investments by major type held by the staff pension plan at June 30, 2020 in thousands of dollars:

	Level 1	Level 2	Level 3	2020
Investments, at fair value:				
Cash and cash equivalents	$ 124,140	$ -	$ -	$ 124,140
US government securities	114,430	-	-	114,430
Equity investments:				
Domestic	16,016	-	-	16,016
Foreign	23,649	-	-	23,649
Total equity investments	39,665	-	-	39,665
Limited partnerships:				
Natural resources	-	-	15,124	15,124
Total limited partnerships	-	-	15,124	15,124
Other investments	35			35
Total leveled investments	$ 278,270	$ -	$ 15,124	293,394
Investments at NAV				1,305,073
Total investments, at fair value				1,598,467
Liabilities associated with investments	$ 5,270	$ 65	$ -	5,335
Net investments, at fair value				$ 1,593,132

The following table summarizes the fair values of investments by major type held by the retiree health plan at June 30, 2021 in thousands of dollars:

	Level 1	Level 2	Level 3	2021
Investments, at fair value:				
Cash and cash equivalents	$ 35,927	$ -	$ -	$ 35,927
US government securities	72,994	-	-	72,994
Equity investments:				
Domestic	32,663	-	-	32,663
Foreign	13,806	-	-	13,806
Total equity investments	46,469	-	-	46,469
Other Investments	338	-	-	338
Total leveled investments	$ 155,728	$ -	$ -	155,728
Investments at NAV				649,081
Total investments, at fair value				804,809
Liabilities associated with investments	$ 596	$ 83	$ -	679
Net investments, at fair value				804,130
Receivable				1,688
Fair value, end of year				$ 802,442

The following table summarizes the fair values of investments by major type held by the retiree health plan at June 30, 2020 in thousands of dollars:

	Level 1	Level 2	Level 3	2020
Investments, at fair value:				
Cash and cash equivalents	$ 43,134	$ -	$ -	$ 43,134
US government securities	19,332	-	-	19,332
Equity investments:				
Domestic	18,880	-	-	18,880
Foreign	3,652	6,888	-	10,540
Total equity investments	22,532	6,888	-	29,420
Limited partnerships:				
Natural resources	-	-	93	93
Total limited partnerships	-	-	93	93
Other Investments	77			77
Total leveled investments	$ 85,075	$ 6,888	$ 93	92,056
Investments at NAV				495,200
Total investments, at fair value				587,256
Liabilities associated with investments	$ 5,804	$ 59	$ -	5,863
Net investments, at fair value				$ 581,393
Receivable				1,935
Fair value, end of year				$ 579,458

The table below represents the change in fair value measurements for Level 3 investments held by the staff pension plan and the retiree health plan for the plans' year ended June 30, in thousands of dollars:

	Pension		Postretirement	
	2021	2020	2021	2020
Beginning balance	$ 15,124	$ 11,329	$ 93	$ 156
Unrealized gain/ (loss)	6,899	(434)	(48)	1
Purchases	1,037	5,740	-	-
Sales	(1,696)	(1,511)	(45)	(64)
Ending balance	$ 21,364	$ 15,124	$ -	$ 93

The investment objective for the pension and retiree health plans seeks a positive long-term total return after inflation to meet the university's current and future plan obligations. Asset allocations for both plans combine tested theory and informed market judgment to balance investment risks with the need for high returns. Actual plan asset allocations by category at June 30 are as follows:

	Pension		Retiree Health	
	2021	2020	2021	2020
Absolute return	23.0%	26.5%	24.1%	27.9%
Domestic equity	6.8%	6.9%	10.2%	10.9%
Fixed income	8.2%	7.2%	9.1%	3.3%
Foreign equity	19.3%	20.5%	21.8%	23.3%
Leveraged buyouts	12.7%	8.6%	8.2%	7.0%
Venture capital	18.2%	15.2%	15.7%	13.1%
Real estate	5.8%	6.2%	5.5%	7.1%
Natural resources	1.8%	1.3%	1.2%	0.5%
Cash	4.2%	7.6%	4.2%	6.9%

The pension and retiree health long-term rate of return assumption is determined by adding expected inflation to expected long-term real returns of various asset classes, considering expected volatility and correlation between the returns of various asset classes.

Contributions

Annual contributions for the pension and retiree health plans are determined by the university considering calculations prepared by the plans' actuary as well as other factors. Expected contributions on a cash basis to the pension plan and retiree health plan in fiscal year 2022 are $49.9 million and $73.3 million, respectively.

Benefit Payments

The following estimated benefit payments, which reflect expected future service, are expected to be paid out of the plans, in thousands of dollars:

Fiscal year	Pension	Postretirement	Total
2022	$ 55,768	$ 37,826	$ 93,594
2023	60,864	42,243	103,107
2024	65,934	45,734	111,668
2025	71,091	49,562	120,653
2026	76,346	53,299	129,645
2027-2031	455,166	305,588	760,754
	$ 785,169	$ 534,252	$ 1,319,421

13. Net Assets

The university's net assets as of June 30, in thousands of dollars, includes:

	2021	2020
With Donor Restrictions:		
Donor-restricted endowments, perpetual in nature	$ 5,229,165	$ 4,604,445
Student loans, perpetual in nature	52,226	50,738
Donor-restricted endowments, subject to spending policy and appropriation	29,724,341	21,123,669
Board designated endowment, subject to spending policy and appropriation	281,249	326,925
Unexpended gift balances	1,351,455	1,229,795
Total net assets with donor restrictions	36,638,436	27,335,572
Without Donor Restrictions:		
Board designated endowment, subject to spending policy and appropriation	$ 7,048,097	$ 5,146,647
Funded status of defined benefit plans	(1,246,958)	(1,825,317)
Derivatives	(628,384)	(1,106,103)
Undesignated	2,480,014	2,079,622
Non-controlling interest	779	101,533
Total net assets without donor restrictions	7,653,548	4,396,382
Total net assets	$ 44,291,984	$ 31,731,954

Yale's endowment consists of approximately 8,000 funds established for a variety of purposes.

The endowment includes both donor-restricted and board designated endowment funds. Board designated endowment funds are designated by the Corporation to function as endowments and include funds that have donor-imposed purpose restrictions. The university endowment fund composition by fund type as of June 30, in thousands of dollars, includes:

2021	Without Donor Restrictions	With Donor Restrictions	Total
Donor-restricted endowment	$ -	$ 34,953,506	$ 34,953,506
Board-designated endowment	7,048,097	281,249	7,329,346
	$ 7,048,097	$ 35,234,755	$ 42,282,852

2020	Without Donor Restrictions	With Donor Restrictions	Total
Donor-restricted endowment	$ -	$ 25,728,114	$ 25,728,114
Board-designated endowment	5,146,647	326,925	5,473,572
	$ 5,146,647	$ 26,055,039	$ 31,201,686

The classification of endowment net assets by purpose as of June 30, in thousands of dollars, is as follows:

	2021	2020
Undesignated	$ 9,790,997	$ 7,302,791
Teaching and research	10,312,979	7,636,543
Facilities and operations	7,647,723	5,674,726
Financial aid	7,446,749	5,481,093
Other specific purposes	7,084,404	5,106,533
	$ 42,282,852	$ 31,201,686

Changes in endowment net assets for the fiscal year ended June 30, in thousands of dollars, were:

2021	Without Donor Restrictions	With Donor Restrictions	Total
Endowment net assets, beginning of year	$ 5,146,647	$ 26,055,039	$ 31,201,686
Investment return:			
Investment income	27,612	136,470	164,082
Net appreciation	2,057,487	9,831,255	11,888,742
Total investment return	2,085,099	9,967,725	12,052,824
Contributions	1,079	635,040	636,119
Allocation of endowment spending	(274,465)	(1,238,136)	(1,512,601)
Other increases/ (decreases)	89,737	(184,913)	(95,176)
Endowment net assets, end of year	$ 7,048,097	$ 35,234,755	$ 42,282,852

2020	Without Donor Restrictions	With Donor Restrictions	Total
Endowment net assets, beginning of year	$ 5,008,493	$ 25,306,323	$ 30,314,816
Investment return:			
Investment income	59,500	321,841	381,341
Net appreciation	253,138	1,297,486	1,550,624
Total investment return	312,638	1,619,327	1,931,965
Contributions	739	330,967	331,706
Allocation of endowment spending	(228,061)	(1,210,017)	(1,438,078)
Other increases	52,838	8,439	61,277
Endowment net assets, end of year	$ 5,146,647	$ 26,055,039	$ 31,201,686

14. Functional and Natural Classification of Expenses

The consolidated financial statements report certain categories of expenses that are attributable to one or more program or supporting functions of the university. Expenses reported by functional categories include allocations of costs for the operation and maintenance of plant, interest on indebtedness and depreciation and amortization expense. The university applies various methods to allocate costs among the program and support functions, the most significant of which is based on the amount of building space utilized.

Operating and non-operating expenses by functional and natural classification for the fiscal year ended June 30, in thousands of dollars, were:

2021	Programmatic support	Patient care and other related services	Administration and other institutional support	Total
Salaries and wages	$ 1,241,664	$ 578,994	$ 150,485	$ 1,971,143
Employee benefits	482,490	189,055	69,569	741,114
Depreciation, amortization and interest	367,915	14,375	25,383	407,673
Other operating expenditures	764,322	251,880	65,411	1,081,613
Total operating expenses	2,856,391	1,034,304	310,848	4,201,543
Non-operating expenses	63,031	4,714	5,689	73,434
	$ 2,919,422	$ 1,039,018	$ 316,537	$ 4,274,977

2020	Programmatic support	Patient care and other related services	Administration and other institutional support	Total
Salaries and wages	$ 1,230,800	$ 551,415	$ 153,115	$ 1,935,330
Employee benefits	432,445	149,829	58,714	640,988
Depreciation, amortization and interest	337,085	13,032	23,275	373,392
Other operating expenditures	813,281	227,122	53,836	1,094,239
Total operating expenses	2,813,611	941,398	288,940	4,043,949
Non-operating expenses	40,952	2,890	3,103	46,945
	$ 2,854,563	$ 944,288	$ 292,043	$ 4,090,894

15. Commitments and Contingencies

The university is involved in various legal actions arising in the normal course of activities and is also subject to periodic audits and inquiries by various regulatory agencies. Although the ultimate outcome is not determinable at this time, management, after taking into consideration advice of legal counsel, believes that the resolution of these pending matters should not have a material adverse effect upon the university's financial position.

The university has outstanding commitments on contracts to construct campus facilities in the amount of $407.9 million at June 30, 2021. Funding for these projects is expected to come from capital replacement reserves, gifts, and debt.

The outbreak of COVID-19 has caused domestic and global disruption in operations for institutions of higher education. Adverse consequences of COVID-19 or any other similar outbreaks in the future may include, but are not limited to, a limitation on the size of the university's future student body due to the inability of potential students to visit campus and decline in medical services income as a result of the cancellation or deferral of elective healthcare procedures. The full impact of COVID-19 and the scope of any adverse impact on the university's finances and operations cannot be fully determined at this time.

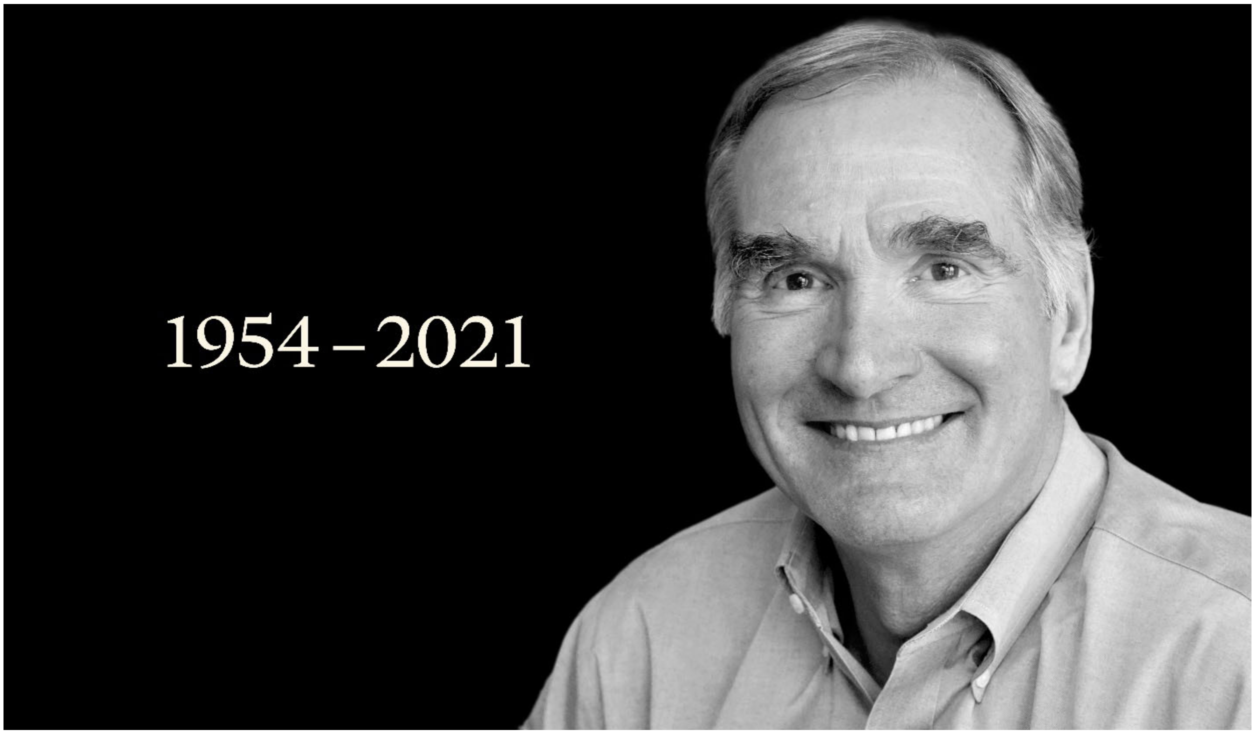
16. Subsequent Events

Management has evaluated subsequent events for the period after June 30, 2021, through October 25, 2021, the date the consolidated financial statements were issued. Other than what has been disclosed in Note 10, there were no subsequent events that occurred after the balance sheet date that have a material impact on the university's consolidated financial statements.

The President and Fellows of Yale University

The Officers of Yale University

David F. Swensen ’80 Ph.D.



David Swensen, Yale University’s renowned chief investment officer, passed away in May 2021. He was a graduate of the university and began managing Yale’s endowment in 1985, a role which he held until the time of his death. During his tenure, he revolutionized university investment management strategy and developed the endowment into one of the most successful ones in the nation, allowing Yale to grow exponentially and to significantly enhance support of its missions surrounding research, teaching, and clinical practice. Other universities have since emulated David’s “Yale Model.” He was a generous philanthropist and known to many as a valued colleague, friend, and mentor.

“When you walk through Yale today and you look around, what you’re seeing is David’s legacy. The students, and vibrant buildings, and diverse faculty — none of that would be possible without David.”

–Ben Polak, former Yale University Provost

(*Source: Yale News; Photo: Office of Public Affairs and Communications*)

The Humanities Quadrangle

Construction on the Humanities Quadrangle ("HQ"), formerly known as the Hall of Graduate Studies, was completed in 2021, and the building reopened to students in the fall. Architect Ann Beha has given a new and modern face to the humanities at Yale, designing the space to encourage collaboration and casual encounters while preserving its historical characteristics. HQ now houses fifteen humanities departments and programs. Its central tower, named for the late David Swensen, has been renovated as graduate student study space.

Yale

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