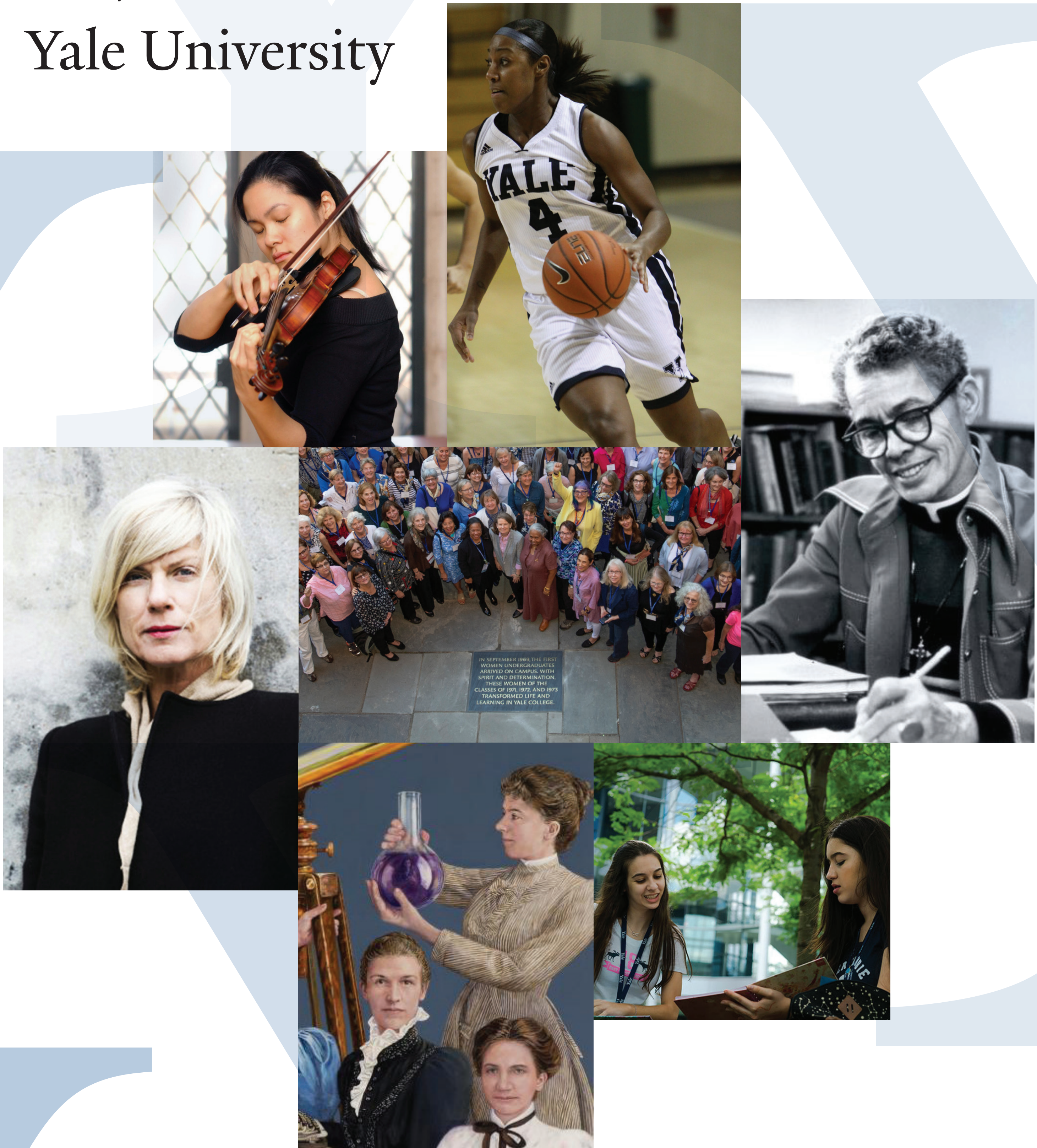
Financial Report
2019–2020
Yale University



Yale University Financial Report 2019–2020

Highlights

	Fiscal Years				
Five-Year Financial Overview ($ in millions)	**2020**	**2019**	**2018**	**2017**	**2016**
Net Operating Results - Management View	$ 125	$ 87	$ 91	$ 115	$ 37
Financial Position Highlights:					
Total assets	$ 44,696	$ 44,428	$ 41,873	$ 39,194	$ 36,957
Total liabilities	12,964	12,186	9,616	10,208	10,419
Total net assets	$ 31,732	$ 32,242	$ 32,257	$ 28,986	$ 26,538
Endowment:					
Net investments, at fair value	$ 31,108	$ 30,295	$ 29,445	$ 27,217	$ 25,413
Total return on investments	6.8%	5.7%	12.3%	11.3%	3.4%
Spending from endowment	4.8%	4.6%	4.7%	4.8%	4.5%
Facilities:					
Land, buildings and equipment, net of accumulated depreciation	$ 5,438	$ 5,251	$ 5,092	$ 4,967	$ 4,779
Disbursements for building projects	$ 437	$ 447	$ 367	$ 395	$ 498
Debt	$ 5,242	$ 3,775	$ 3,785	$ 3,515	$ 3,534
Statement of Activities Highlights					
Operating revenues	$ 4,247	$ 4,105	$ 3,817	$ 3,619	$ 3,424
Operating expenses	4,044	3,835	3,627	3,452	3,318
Increase in net assets from operating activities	$ 203	$ 270	$ 190	$ 167	$ 106

Five-Year Enrollment Statistics	**2020**	**2019**	**2018**	**2017**	**2016**
First-Year Enrollment Class of:	'23	'22	'21	'20	'19
First-Year applications	36,844	35,306	34,154	31,445	30,236
First-Year admitted	2,269	2,229	2,316	1,988	2,034
Admissions rate	6.2%	6.3%	6.8%	6.3%	6.7%
First-Year enrollment	1,550	1,573	1,579	1,371	1,364
Yield	68.3%	70.6%	69.4%	70.3%	68.8%
Total Enrollment:					
Yale College	6,092	5,964	5,743	5,472	5,532
Graduate and professional schools	7,517	7,469	7,228	6,986	6,853
Total	13,609	13,433	12,971	12,458	12,385
Yale College Term Bill and Financial Aid:					
Yale College term bill	$ 72,100	$ 69,430	$ 66,900	$ 64,650	$ 62,200
Average grant award for students receiving aid	$ 59,205	$ 57,633	$ 53,703	$ 50,950	$ 48,294

Message from the President

It is an honor to present the Yale Financial Report for 2019-2020, which reflects the exceptional expertise and dedication of all members of the Yale community during an unprecedented period of turbulence in the world. In the last year, we altered our lives dramatically to contain the spread of COVID-19, while we confronted the racial inequality and injustice rooted in our country's history of slavery and still corroding our society today. Despite these challenges, the Yale community came together to take care of one another and to care for our world.

Stewarding our resources wisely has enabled us to focus on the health and safety of our staff, faculty, students, and neighbors, while sustaining our mission of education, research, scholarship, practice, and preservation. Now more than ever, our country and our world need the very best from Yale. We need to create and share knowledge to fight disease, mitigate inequality, alleviate suffering, find justice, and answer urgent and long-standing questions. That is why Yale is continuing to make strategic investments in areas where we can have the greatest impact. Yale has made significant progress in realizing the academic priorities I announced in 2016 in four key areas: science and engineering, data-driven social science research, arts and humanities, and our students (future leaders for a better world).

In science and engineering, Yale has recently made historic investments—from faculty recruitment to new facilities—to increase our capacity to expand scientific understanding and lead the way toward a healthier and more sustainable future. We have welcomed to our campus field-changing faculty members in key multidisciplinary areas where we can build on Yale's signature strengths: data science, computer science, neuroscience, inflammation science, planetary solutions, and quantum science and engineering.

The Yale Science Building, a major milestone in the university's academic strategy, has opened, and thirty research groups that represent multiple disciplines have begun to teach and make discoveries in it. We are finalizing plans for a neuroscience institute at 100 College Street, and we are moving forward with the Kline Tower project to create a state-of-the-art building that will transform the pursuit of data science, statistics, and mathematics. We also are planning a physical science building to house quantum science, engineering, and materials research on Science Hill.

In the midst of global turmoil, Yale is committed to supporting data-driven social science research to address the great issues of the day, such as health care, migration, and international security. The new Yale Jackson School of Global Affairs, for example, will bring together scholars, policymakers, and practitioners working on critical issues that span borders. We are recruiting exceptional faculty members in political science, economics, history, law, and other fields to the Jackson School to realize the great potential of this multidisciplinary environment. We also have made significant progress in raising the endowment needed to open the school in 2022.

In domestic policy, we are emphasizing the importance of empirical research in advancing American society. The new Tobin Center for Economic Policy is part of Yale's commitment to conducting social science research to solve critical challenges. For example, in recent months, faculty from the Tobin Center have been working on the safe and responsible reopening of the economy in light of COVID-19. Faculty members are conducting economic research and analysis to guide policymakers on numerous pressing issues, such as barriers to virus testing production and unemployment insurance policies, to name two.

Over the past year, as we have coped with grave uncertainty, many of us looked to the arts and humanities—in addition to science and social science—for reprieve, understanding, guidance, and hope. For Yale faculty members in the arts and humanities, the challenges we are facing today intersect with years of teaching and research on related themes. Scholars at Yale are asking vital questions about how epidemics shape society and about the origins and manifestations of injustices in our country.

We have continued to strengthen Yale's historic commitment to the arts and humanities. The Humanities Quadrangle at 320 York Street—the former Hall of Graduate Studies—will open in December 2020. The Humanities Quadrangle was carefully designed to encourage collaboration among scholars from different departments. It will further support Yale students and faculty as they search for "light and truth" in the complexity of the human experience. I also am focused on creating new professorships that will bridge the arts to the rest of the university.

Our academic strategy fosters excellence across Yale and supports our mission to educate future leaders who will serve all sectors of society. To realize our aspirations to improve the world, we must continue to attract to Yale the most promising students from all walks of life. That is why, even during a time of economic challenges, we remain committed to Yale's generous financial aid policies. Between 2013 and 2019, we have nearly doubled the number of entering first-year students who are eligible for Pell Grants, and increased by 65 percent those who are first in their families to attend college.

We also have been cultivating innovative, multidisciplinary thinking among all our students. The Yale innovation corridor—including the Tsai Center for Innovative Thinking at Yale (CITY), the Yale Center for Engineering Innovation and Design (CEID), and the Greenberg Engineering Teaching Concourse—brings students across Yale together to create new ventures and address pressing challenges. The Tsai CITY building is complete and will open once the pandemic is over; however, its programs have already supported hundreds of student ventures.

In addition, the Schwarzman Center, which will be complete in December 2020, will strengthen connections among our undergraduate, graduate, and professional school students; faculty members; alumni; and the local community. And when we can safely gather again, the Schwarzman Center will play a vital role in helping us reengage fully with performances, discussions, lectures, and other events.

I am immensely grateful for the hard work everyone put in to accomplish so much and maintain the core functions of the university during this turbulent period. Our staff—whether on campus or working remotely—have kept the university operational. Our faculty—through their willingness to teach and conduct research in new ways—have ensured that we continue to educate students and create knowledge. Our students have worked hard to adapt to innovative formats of learning. And, of course, Yale experts in medicine, nursing, public health, and related fields have worked tirelessly on the frontlines to save lives. I also am grateful to colleagues at Yale who have been coordinating with the City of New Haven and with the State of Connecticut. Working collaboratively with people across our city and state, we are supporting one another and sharing research findings, best practices, and strategic planning.

By remaining "a unified Yale" and by carefully managing our financial resources, we will become even more resilient to the challenges that our world will face in the decades ahead. Today and in the years to come, Yale faculty, students, staff, and alumni will continue to seek light and truth and to share knowledge and understanding with the world.

Sincerely,

Peter Salovey

Peter Salovey
President
Chris Argyris Professor of Psychology
Professor of Epidemiology & Public Health, Management, and Sociology

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

Financial Results

Yale finished the year ended June 30, 2020 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). Yale generated a surplus of $203 million from operations on a GAAP basis and a surplus of $125 million on a Management View basis.

The university finished the year in a strong financial position with $31.7 billion in net assets.

Revenues, Expenses, and the Impact of the COVID-19 Public Health Crisis

The COVID-19 pandemic had a significant impact on the university's 2019-20 financial results and operations with many activities moving off campus in late March 2020, including all education activities were online for the balance of the spring semester

Operating revenues increased by 3.4% to $4.2 billion for the year. This result was well behind pre-pandemic expectations and was less than half the rate of revenue growth seen in the prior year. Spending from the endowment, the largest source of income for the university, was $1,438 million, an increase of 6.2% over the prior year. Medical services income, the second largest revenue source for the university, grew by 4.6% to $1,090 million, but this growth was considerably lower than it would have been absent COVID-19 as many patients cancelled or deferred surgeries, doctor visits, and other medical care during the initial months of the pandemic in Connecticut. These revenues have rebounded as the 2021 fiscal year began although there are risks from another wave of the virus. Grant and contract income as well as gifts – consisting of operating, endowment, and facilities gifts – grew versus the prior year as sponsors and donors provided high levels of support for the university before and after the onset of the pandemic. Net tuition, room and board fell due to the university refunding a portion of room and board when undergraduates left campus in the spring. Other income was also negatively impacted by the pandemic as a result of cancelled programs, events, and performances, and a range of other ancillary revenues were also impacted by the disruption to the campus.

Expenses grew by 5.5% for the year, faster than revenues. Salaries and wages grew by 7.7% which was driven primarily by growth in faculty and staff in the School of Medicine related to the expansion of clinical and sponsored research activities. Employee benefits grew by 10.9% due to the growth in salaries and wages as well as health care inflation and increased contributions to fund pension and retiree health benefits. Other operating expenditures fell slightly as a direct result of the pandemic-related reduction of campus activities, which led to a significant curtailment in spending on travel, conferences and events, materials, supplies, utilities, and a wide range of other items. These cost decreases were partially offset by multi-million dollar investments in the public health infrastructure for the campus, including personal protective equipment, enhanced cleaning, COVID-19 testing, isolation living quarters, a field hospital, and other pandemic-related expenses. These pandemic related expenses have stepped up considerably in 2021.

Net Assets

As noted above, the consolidated statement of financial position for the university remains strong with $31.7 billion in net assets.

This amount represents a decline of $510 million or 1.6% versus the prior year due to a combination of factors. The value of the Yale Endowment increased by $813 million to $31.1 billion as a result of a 6.8% investment return which was partially offset by $1.4 billion in spending from the endowment to support the operations of the university. Net assets were also increased by the $203 million surplus from operations and $461 million in gifts to the endowment and for buildings. Net assets were reduced by $606 million as a result of the university no longer consolidating one of its previously consolidated investment companies which is described further in Note 2 to the financial statements. In addition, net assets were reduced by increases in certain long-term liabilities resulting from the low interest rate environment described below.

Pension and retiree health benefit liabilities represent the present value of benefits promised to current and former employees with payments that will be made over the course of decades. The present value of these liabilities increased last year due to the low interest rate environment which reduced the discount rate from 3.1% to 2.2%. That resulted in a $384 million increase in these liabilities. The university's operating budget includes contributions each year to fund these benefits at responsible levels over time, following a policy approved by the board of trustees.

The university, through the expert management of the Yale Investments Office, has an integrated debt strategy that uses interest rate swaps to manage interest rate volatility and interest cost on debt for the university's capital building plan. The interest rate environment also impacted the valuation of these liabilities, and that resulted in a $647 million decrease in net assets related to the change in market value of this liability. The university's operating budget includes a funding plan for these related payments, recognizing for internal management accounting purposes the swap expense as part of annual interest cost on debt, and this approach has been instrumental in securing long-term financing at low long-term effective rates.

Also, in June 2020 the university issued $1.5 billion in taxable debt in 5-year, 10-year, and 30-year maturities, detailed in the footnotes to the financial statements. This has provided the university with additional liquidity at historically low interest rates during a time of uncertainty caused by the pandemic and disruption in the economy.

Supporting the Yale Community

Overall, the 2019-20 financial results for Yale University provide us with a reassuring foundation during an otherwise uncertain time. Even though the pandemic's total effect on our finances is unknown, the university is entering the current fiscal year in a solid position to manage successfully through the time ahead. We remain committed to responsible and conservative financial management to ensure the university's ability to weather unforeseen financial shocks.

Yale's operating results and net asset position have allowed us to continue to support Yale's faculty, staff, and students during a difficult time for the Yale community and the world, while continuing to invest in the academic priorities highlighted in President Salovey's letter.

We are pleased to continue advancing the university's mission, especially during this challenging time, and we are grateful for all of the faculty, staff, students, alumni, and friends who have made that possible throughout this past year.

Jack F. Callahan, Sr.

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. The Management View presents the expenses related to the defined benefit plans differently as compared to GAAP and does not include certain revenue that will not be received within the next fiscal year, such as pledged contribution revenue. Another significant difference is that the Management View recognizes capital maintenance through a CRC and recognizes equipment purchases as expense 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, 2020 and 2019 ($ in thousands)

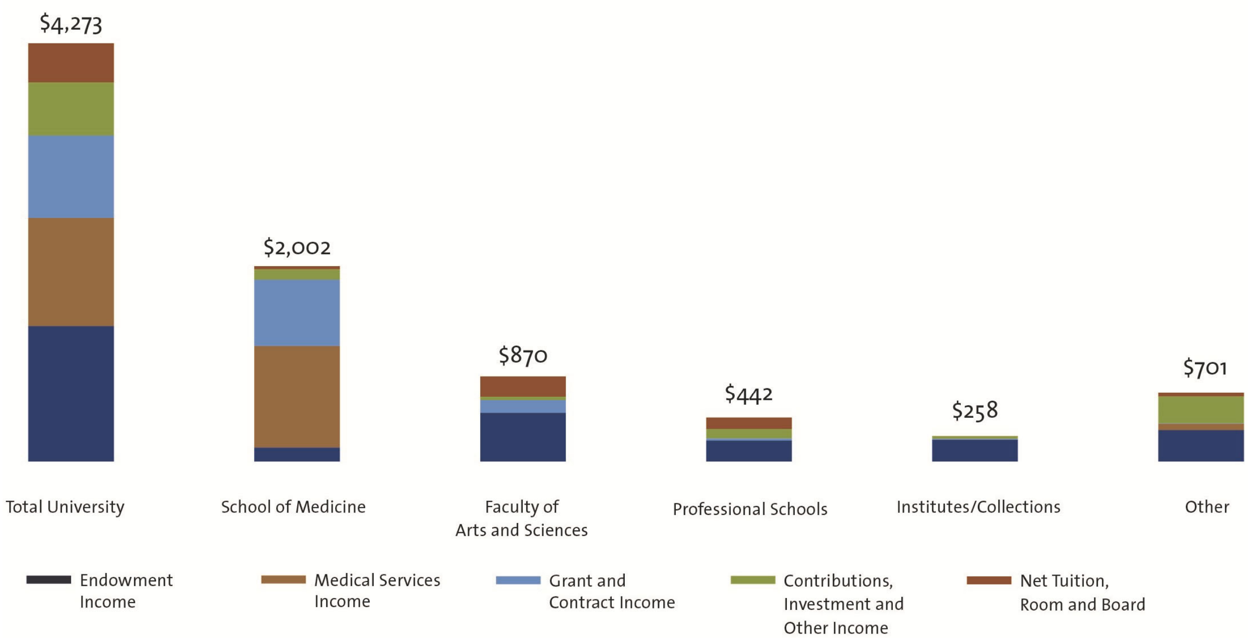
		June 30, 2020		June 30, 2019
Revenues:				
Tuition, room and board - gross	$	754,348	$	730,424
Tuition discount		(365,959)		(338,492)
Tuition, room and board - net		388,389		391,932
Grants and contract income		836,597		823,530
Medical services income		1,133,250		1,081,322
Contributions		160,073		162,321
Endowment income		1,437,336		1,354,667
Investment and other income		317,550		367,618
Total external income		**4,273,195**		**4,181,390**
Expenses:				
Faculty salaries		1,044,512		966,457
All other salaries		959,206		906,040
Employee benefits		640,471		647,313
Total salaries and benefits		**2,644,189**		**2,519,810**
Stipends and fellowships		107,425		105,622
Allocations, net of internal service revenue		(379,117)		(378,314)
Other expenses		1,343,892		1,348,779
Non-salary expenses		964,775		970,465
Interest, CRC and other amortization		379,765		347,716
Total expenses		**4,096,154**		**3,943,613**
Transfers		(51,626)		(150,566)
TOTAL NET OPERATING RESULTS (MANAGEMENT VIEW)		**125,415**		**87,211**
Summary of differences between the Management View and GAAP presentation of net operating results:				
Operating pledge activity		48,721		48,582
Expenses related to long-term liabilities		(61,485)		37,540
Capital funding, depreciation and disposals		(8,181)		(34,106)
Lease activity		2,142		(53,000)
Interest rate and energy hedge		33,091		28,698
Deferred investment income		11,652		5,000
Funding transfers		51,626		150,566
INCREASE IN NET ASSETS FROM OPERATIONS PER THE CONSOLIDATED STATEMENT OF ACTIVITIES (GAAP VIEW)		**202,981**	**$**	**270,491**

Fiscal Year 2020 Management View Results

The university budget structure is managed through 47 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 2020.

Operating Revenue by Source
($ in millions)



School of Medicine

The largest unit is the School of Medicine, representing 47% 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 from managed care companies (35%), BlueCross BlueShield (26%), Medicare (21%), Medicaid (9%) and commercial insurance and others (9%). Additionally, approximately 39% of the School of Medicine's medical services income in 2020 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, 2020, YM was composed of 1,254 full-time and 270 part-time physicians providing services in over 100 specialty and subspecialty areas organized into 21 departments, engaging in research, and participating in teaching approximately 1,010 total students (excluding Ph.D. students) and 867 residents. The School of Medicine performs significant research for federal, state and corporate entities. Research funded by the federal government represents 78% of total research performed at the School of Medicine with the National Institutes of Health ("NIH") providing the largest component of that funding at 91%. 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 2019-2020 academic year, 6,092 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 2019-2020 academic year, 3,079 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 Forestry & Environmental Studies, now known as the School of the Environment, the School of Nursing, the School of Drama, the School of Architecture, and the School of Management. During the 2019-2020 academic year, 3,424 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 $125 million on the Management View basis. Operating revenues increased 2% and operating expenses, excluding transfers, increased 4% compared to 2019. Endowment income growth contributed to the increase in revenues. Grant and contract income was higher than the prior year due to new grants received offset by lower reimbursable expenditures incurred in the last quarter of the fiscal year due to the COVID-19 pandemic. Expenses grew at a faster pace than revenues, as a result of the continued growth of the clinical practice due to physician practices added during the year in light of experiencing reduced volume in the last quarter as a result of the COVID-19 pandemic.

Fiscal Year 2020 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 $385 million in fiscal year 2020, a decrease of 1% from 2019, and represented 9% of the university's total operating revenue. Gross tuition, room and board totaled $754 million in 2020, an increase of 3% from 2019 which totaled $730 million. Of this amount, $677 million represents tuition, a 6% increase over 2019 due primarily to the increased enrollment in Yale College coupled with an increase in the related term bill, and $78 million represents revenue from room and board, which decreased 17% from 2019 due to student housing reimbursements and meal plan rebates issued as a result of students vacating campus during the spring semester as a result of the COVID-19 pandemic. In accordance with GAAP, student income is presented net of certain scholarships and fellowships, which totaled $369 million and $343 million for 2020 and 2019, respectively, representing an 8% increase in 2020.

Tuition for students enrolled in Yale College was $55,500, and room and board was $16,600, bringing the total term bill to $72,100 for the 2019-2020 academic year. The increase in the Yale College term bill was 4% over the 2018-2019 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.

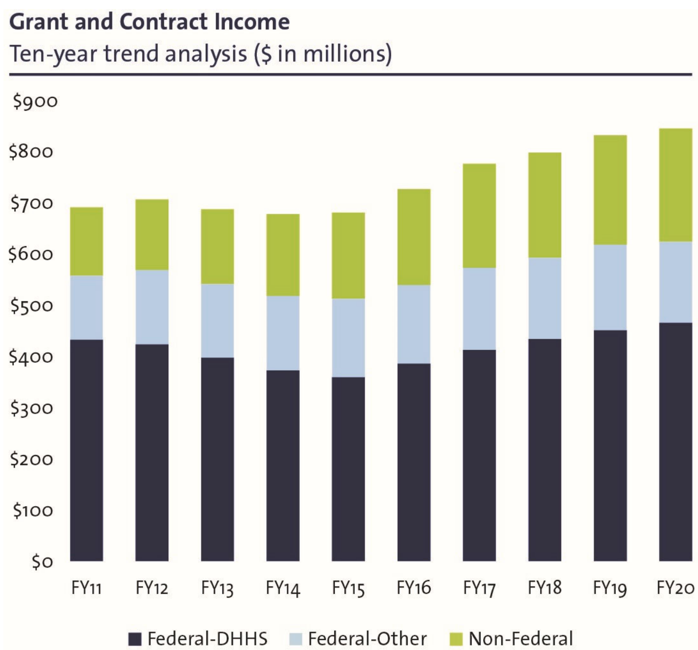
During the 2019-20 academic year, 53% of Yale College undergraduates received financial aid. In the Graduate School of Arts and Sciences, nearly 100% received financial aid in the form of tuition discounts, stipends, and health insurance. In the professional schools, 79% received financial aid. In all, 72% 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 $837 million in fiscal year 2020, an increase of 2% from 2019, and represented 20% of the university's total operating revenue. The Yale School of Medicine, which received 80% of the university's grant and contract income in fiscal year 2020, reported an increase of 3% for 2020, while the remaining university units decreased by 3%.

Revenue recognized on grants and contracts from the federal government was $617 million, or 74% of 2020 grant and contract income, supporting Yale's research and training programs. Included in the $617 million is Department of Health and Human Services ("DHHS") funding of $461 million, primarily through the NIH, an increase of 3% 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 $220 million in funding for research, training, clinical, and other sponsored agreements during 2020.

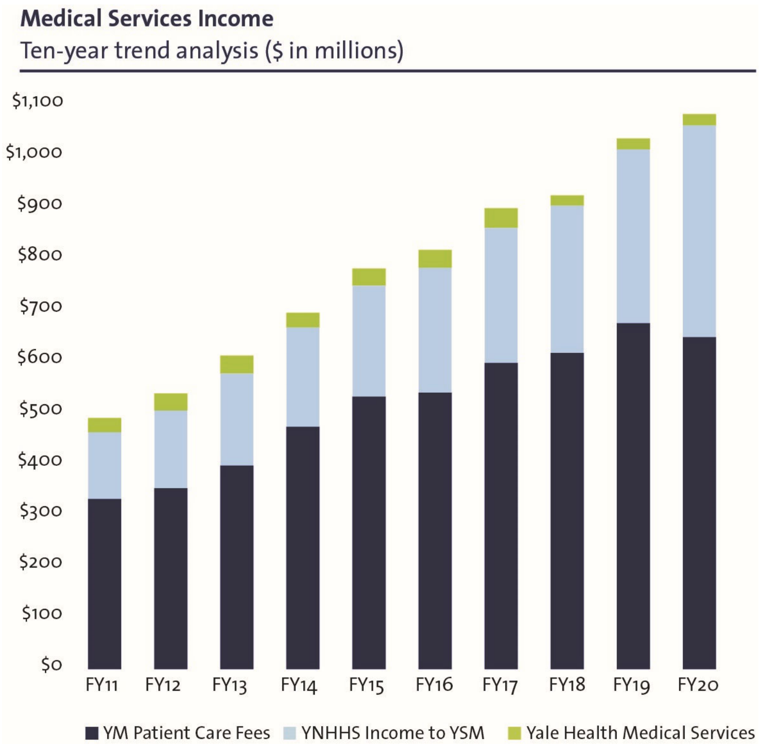
In addition to the reimbursement of direct costs charged to sponsored awards, sponsoring agencies reimburse the university for a portion of its facilities and administrative costs, which include costs related to research laboratory space, facilities, and utilities, as well as administrative and support costs incurred for sponsored activities. These reimbursements for facility and administrative costs amounted to $208 million in 2020 and $210 million in 2019. Recovery of facility and administrative costs associated with federally sponsored awards is recorded at rates negotiated with DHHS, the university's cognizant agency.



Medical Services Income

Medical services income totaled $1.1 billion in fiscal year 2020, an increase of 5% from 2019, and represented 26% of the university's operating revenue. The largest portion of this revenue stream is derived from medical services provided by the YM. The strong investment in YM for physician leadership, recruitment and program development by the Hospital continued in fiscal year 2020 with support increasing by 22%, to a total of $416 million.

Medical services income generated by YM increased by $47 million over 2019, or 5%. Patient care income, which accounts for 54% of medical services income, was down 7% due to the reduction of elective procedures and ambulatory visits due to the COVID-19 pandemic. By the end of fiscal year 2020, ambulatory volume recovered to 95% and surgical volume to 90% of 2019 levels. Other contributors to the clinical income growth include expansion of medical services outside of New Haven County through contracts with Lawrence + Memorial, Greenwich, and Bridgeport hospitals, among others.



Contributions

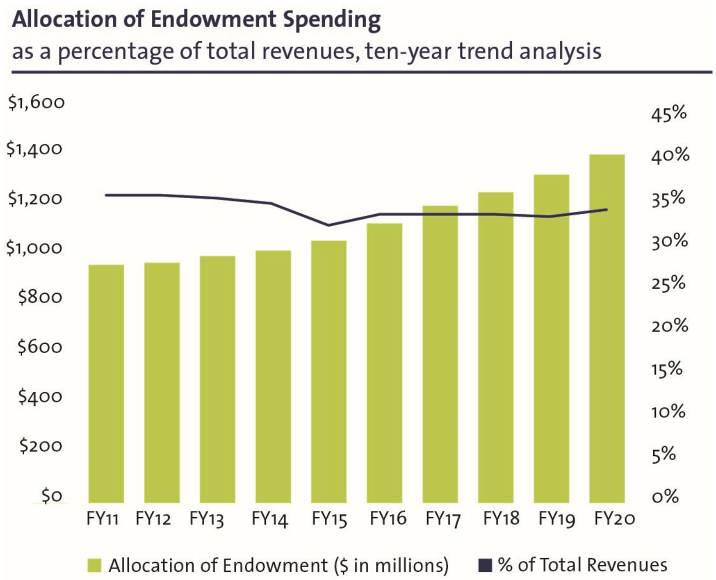
Donations from individuals, corporations, and foundations represent a vitally important source of revenue for the university. Gifts to the university provide necessary funding for current operations, for long-term investments in the university's physical infrastructure, and, in the case of gifts to the endowment, provide permanent resources for core activities for future generations. Gifts of $209 million in 2020 and $211 million in 2019, 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 $670 million in 2020 compared to $627 million in 2019.

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 34% of total operating revenue in fiscal year 2020, 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 6% in 2020 to $1.4 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, and application and enrollment fees.

Operating Expenses

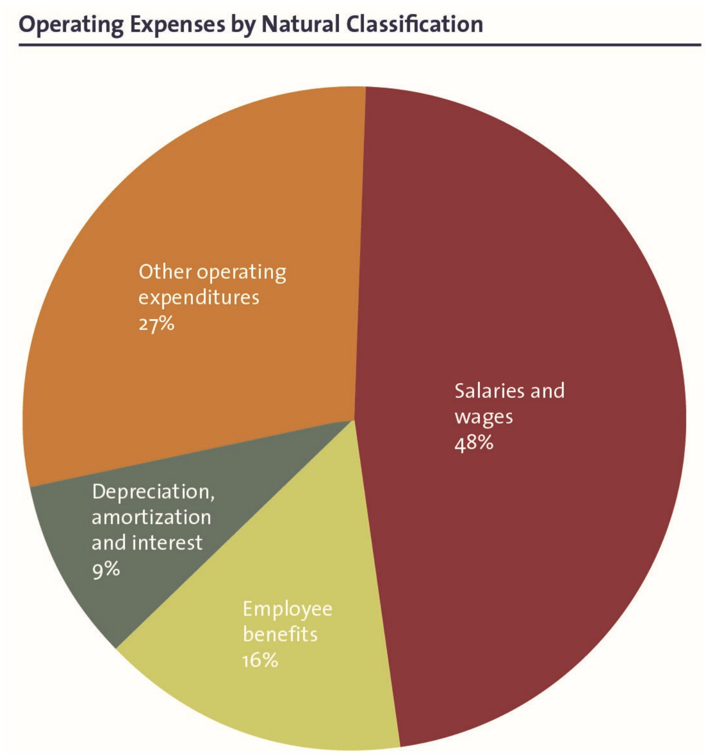
Operating expenses totaled $4.0 billion for 2020, representing a 6% increase over 2019. With 4,838 faculty, 1,426 postdoctoral associates, 4,995 managerial and professional staff, and 5,106 clerical, technical, service, and maintenance personnel, personnel costs are the single largest component (64%) of the university's total operating expenses (counts represent headcount as of fall 2019).

Personnel costs were $2.6 billion in 2020, a 9% increase over 2019. Faculty salary expenses increased 8% which includes increased headcount to support growth in clinical activities. Staff salaries and wages also increased 8% from 2019 to 2020 due to increased headcount as well as incremental wages 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 $641million for 2020, an increase of 11% from 2019.

Depreciation, amortization, and interest expense increased 4% from 2019, primarily as a result of additional depreciation expense due to the opening of the new Yale Science Building.

Other operating expenses, including services, materials and supplies, and other expenses, decreased 1% from 2019, primarily due to a significant decrease in non-salary expenses in most schools and units as a result of reduced activity on campus, offset by proportionate increases in medical services supplies and other services expenses, largely related to the COVID-19 pandemic.

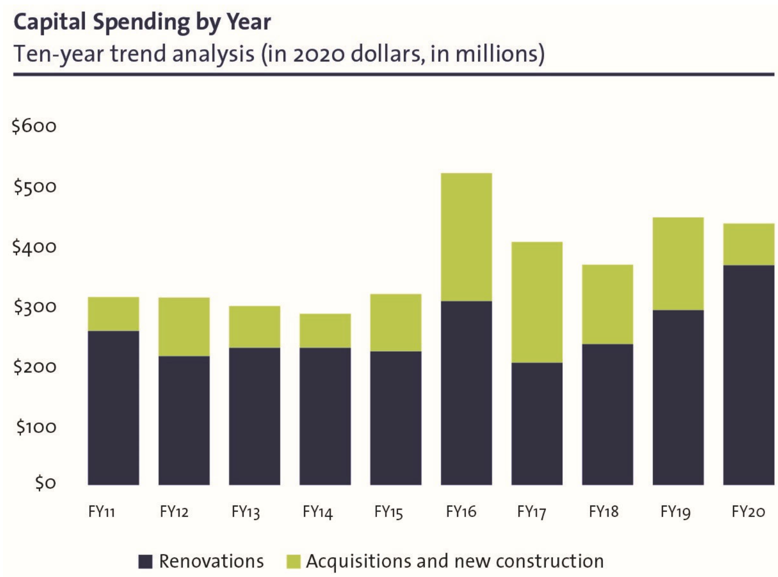
Yale reports its operating expenses by natural classification in the consolidated statement of activities and discloses these operating expenses across functional classification in the Notes to Consolidated Financial Statements in accordance with GAAP.



The university spent 70% of its operating resources on programmatic support, 23% on patient care and other related services, and 7% on administrative and other institutional support.

Physical Capital

Capital spending on facilities in fiscal year 2020 totaled $437 million. This represents a decrease of approximately 2% from the 2019 spending level.



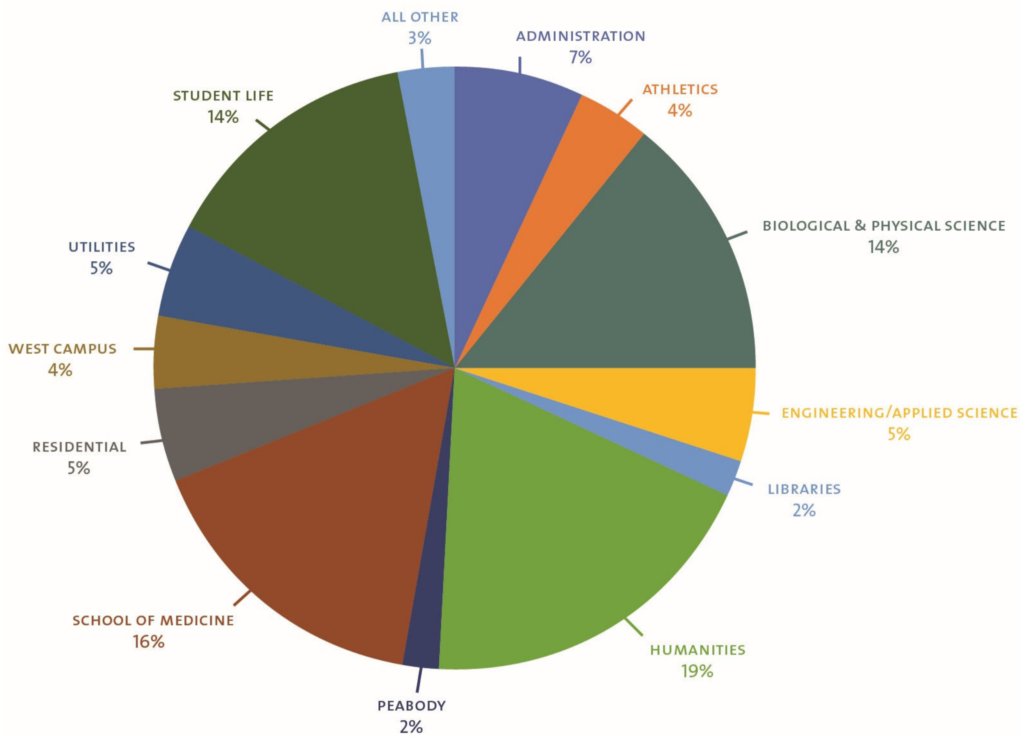
Construction on the Schwarzman Center, located at 168 Grove Street, continued during the year. The Schwarzman Center will house many distinct spaces including the grand main hall, light-filled lounge areas, gallery spaces, performance spaces, and student meeting rooms. Construction is scheduled for completion in the fall of 2020. Investments were also made throughout central campus to upgrade infrastructure systems, and to complete other planned capital maintenance projects at various locations.

Nineteen percent of the university's capital spending was allocated to the support of the humanities, mainly through a complete exterior and interior renovation of The Humanities Quadrangle at 320 York Street (formerly known as the Hall of Graduate Studies). Construction continued throughout 2020 to transform the building into the intellectual hub for the teaching and research of humanities at Yale. Construction, which began in 2018, is scheduled for completion in December 2020.

Fourteen percent of the university's capital spending was invested in the sciences. Early in fiscal year 2020, following two years of construction, the new Yale Science Building opened for teaching and research. The project, which began with the demolition of J.W. Gibbs Laboratory, provided Science Hill with nearly 300,000 gross square feet of new research lab, lecture hall, and central gathering spaces. Spending in this category also included planning for a major renovation of Kline Tower. The Kline project is part of the university's broader investment in Science Hill.

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 2020 totaled $130 million. The university has been the beneficiary of an outstanding response from donors for the renovation of the Schwartzman Center, Reese Stadium, Tsai Center for Innovative Thinking at Yale (CITY), and The Humanities Quadrangle at 320 York Street.

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.

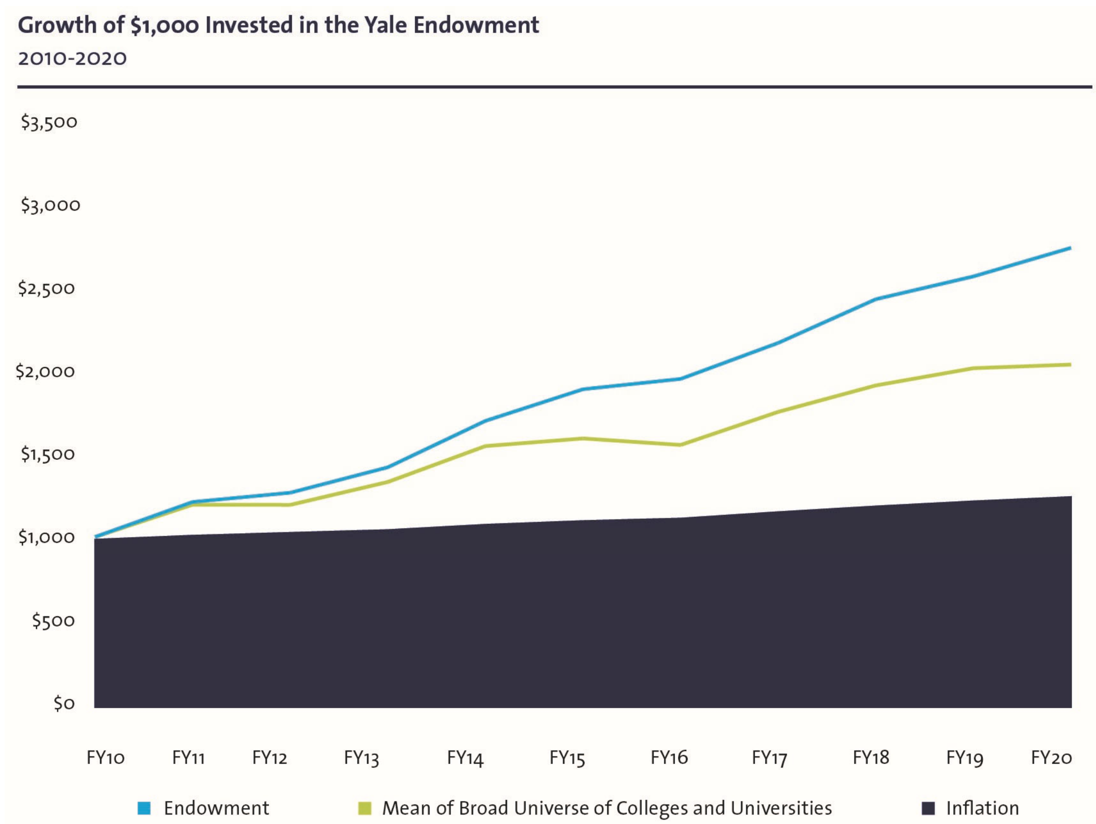
Recognizing the critical importance of maintaining its physical capital over many generations, the university allocates funds directly from the operating budget to a capital maintenance account. The annual equilibrium funding target for internal purposes is an estimate that is earmarked from annual operating 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 2020 is $260 million. In 2020, 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, 2020, net assets in the endowment totaled approximately $31.2 billion, after the allocation of endowment spending of $1.4 billion to the operating budget during the year.

Investment Performance

For the fiscal year ended June 30, 2020, the endowment earned a 6.8% investment return. During the past decade, the endowment earned an annualized 10.9% return, which added $10.3 billion of value relative to a composite passive benchmark and $9.6 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.

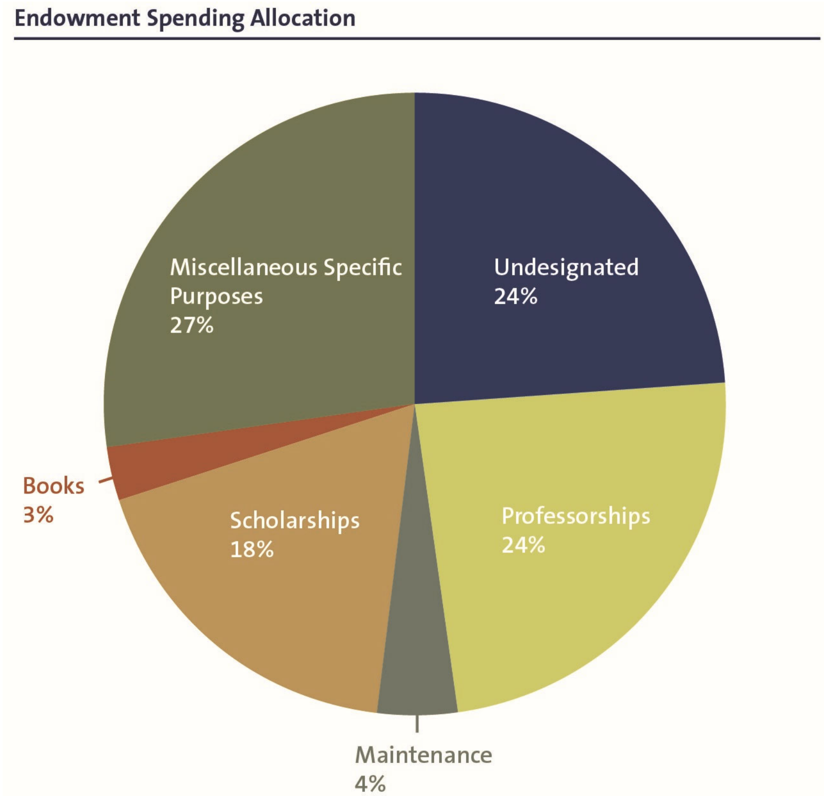
The majority of endowment spending is allocated across multiple purposes, including financial aid and professorships, based on donor restrictions or internal designations by the university. Endowment spending that is neither restricted nor designated provides additional support for budgetary priorities,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

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, over 92% of the endowment is invested in assets expected to produce equity-like returns, through domestic and international securities, real assets, and private equity.

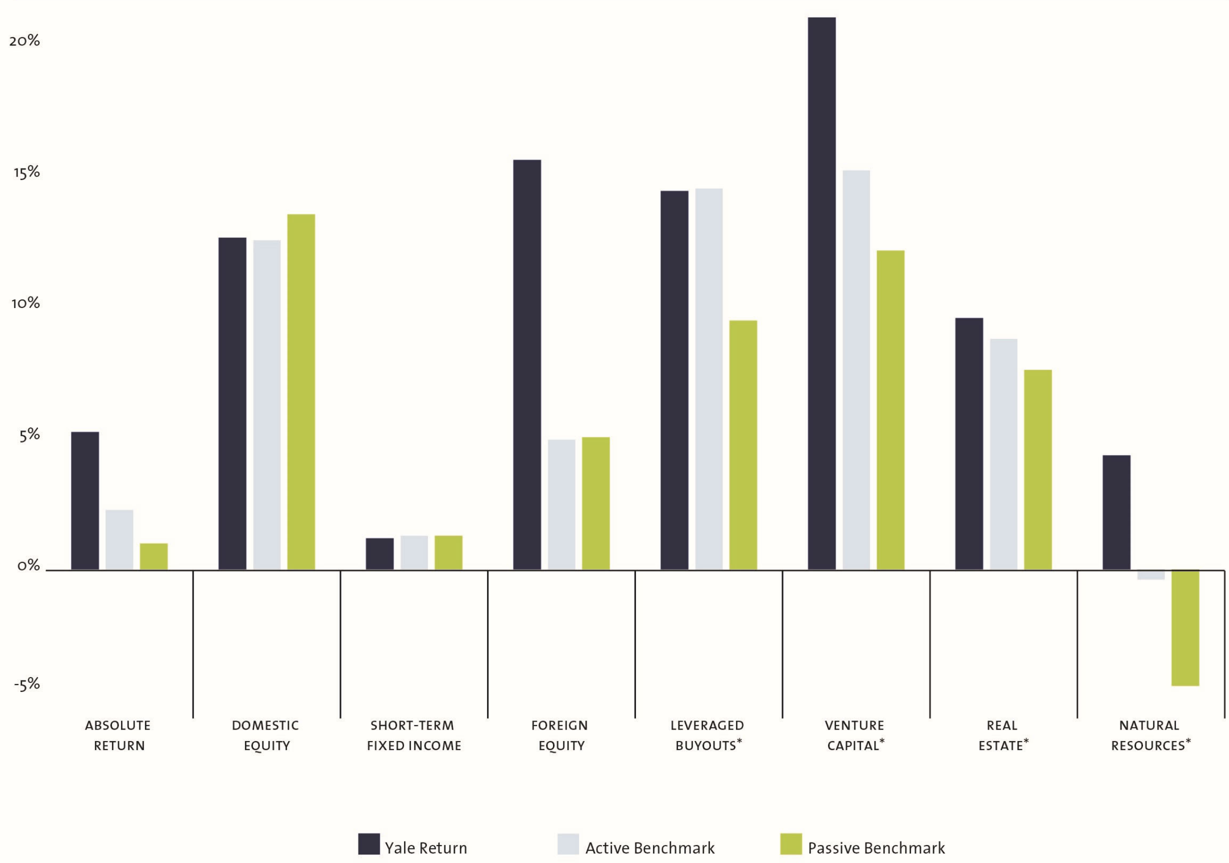
Over the past thirty years, Yale significantly reduced the endowment's exposure to traditional domestic marketable securities, reallocating assets to nontraditional asset classes. In 1990, 70% of the endowment was committed to U.S. stocks, bonds, and cash. Today, Yale targets approximately 10% of the portfolio to domestic marketable securities and around 90% to private equity, absolute return strategies, real assets, and foreign equity.



The heavy allocation to nontraditional asset classes stems from the diversifying power they provide to the portfolio as a whole. Alternative assets, by their nature, tend to be less efficiently priced than traditional marketable securities, providing an opportunity to exploit market inefficiencies through active management. Today's portfolio has significantly higher expected returns and lower volatility than the 1990 portfolio.

Asset Class	Current Target
Venture Capital	23.5%
Absolute Return	23.5%
Leveraged Buyouts	17.5%
Foreign Equity	11.75%
Real Estate	9.5%
Cash and Short-Term Fixed Income	7.5%
Natural Resources	4.5%
Domestic Equity	2.25%
Total	100.0%

Yale Endowment
Annualized Returns vs. Benchmarks by Asset Class
Net of Fees, Ten Years Ended June 30, 2020



*Yale's returns and active benchmarks are money-weighted.

Benchmarks utilized in the table above are:

Active Benchmarks

Absolute Return: Credit Suisse and Inverse Wilshire 5000 Composite

Domestic Equity: BNY Median Manager, U.S. Equity

Fixed Income: Barclays 6-12 Month U.S. Treasury Index after June 2018. Barclays 1-3 Year Treasury Index from October 2013 to June 2018. Barclays 1-5 Year Treasury Index through September 2013.

Foreign Equity: BNY Median Manager Composite, Foreign Equity

Leveraged Buyouts: Cambridge Associates Global Leveraged Buyouts

Venture Capital: Cambridge Associates Global Venture Capital (85%) / Cambridge Associates Global Growth Equity (15%)

Real Estate: Cambridge Associates Real Estate

Natural Resources: Cambridge Associates Natural Resources

Passive Benchmarks

Absolute Return: Barclays 9-12 Mo Treasury

Domestic Equity: Wilshire 5000

Fixed Income: Barclays 6-12 Month U.S. Treasury Index after June 2018. Barclays 1-3 Year Treasury Index from October 2013 to June 2018. Barclays 1-5 Year Treasury Index through September 2013

Foreign Equity: MSCI Emerging Markets Investable Market Index with China All Shares after June 2020. MSCI EAFE Investable Market Index / MSCI Emerging Markets Investable Market Index + MSCI China A-Share Investable Market Index, weighted according to target developed and emerging equity allocations from December 2014 to June 2020. MSCI EAFE Investable Market Index / MSCI Emerging Markets Investable Market Index + MSCI China A-Share Investable Market Index / Custom Opportunistic Benchmark, weighted according to target developed, emerging and opportunistic allocations through November 2014

Leveraged Buyouts: Russell 2000 (75%) / MSCI ACWI ex-US Small-Cap Index (20%) / MSCI China All Shares Mid-Cap Index (5%) after June 2019. Russell 2000 (75%) / MSCI ACWI ex-US Small-Cap Index (25%) through June 2019

Venture Capital: Russell 2000 Technology Index (56%) / MSCI China Small-Cap Index (20%) / NASDAQ Biotechnology Index (19%) / MSCI India Small-Cap Index (5%) after June 2018. Russell 2000 Technology Index (56%) / NASDAQ Biotechnology Index (19%) / MSCI China Small Cap Index (17%) / MSCI India Small Cap Index (8%) after April 2014 through June 2018. Russell 2000 Technology Index (75%) / MSCI China Small Cap Index (17%) / MSCI India Small Cap Index (8%) through April 2014. Russell 2000 Technology Index through June 2010

Natural Resources: Custom Timber REIT basket / S&P Oil & Gas Exploration & Production Index / Euromoney Global Mining Index / Custom Agriculture REIT Basket, weighted according to contemporaneous target timber, oil and gas, mining and agriculture allocations

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

pwc

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, 2020 and 2019 and the related consolidated statements of activities for the year ended June 30, 2020 and of cash flows for the years ended June 30, 2020 and 2019.

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 audit. We conducted our audit 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, 2020 and 2019 and the changes in their net assets for the year ended June 30, 2020 and their cash flows for the years ended June 30, 2020 and 2019 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, 2019, 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, 2019, 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, 2019 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

October 22, 2020

Yale University Consolidated Statement of Financial Position

as of June 30, 2020 and June 30, 2019 ($ in thousands)

	2020	2019
Assets:		
Cash and cash equivalents	$ 1,011,373	$ 709,449
Accounts receivable, net	364,852	299,673
Contributions receivable, net	858,450	670,461
Notes receivable	103,732	110,424
Investments, at fair value	36,512,063	37,060,058
Right of use assets	155,438	103,068
Other assets	252,928	223,543
Land, buildings and equipment, net of accumulated depreciation	5,437,546	5,251,449
Total assets	$ 44,696,382	$ 44,428,125
Liabilities:		
Accounts payable and accrued liabilities	$ 589,420	$ 506,495
Advances under grants and contracts and other deposits	184,377	127,955
Lease liabilities	224,021	169,581
Other liabilities	2,419,310	1,999,364
Liabilities under split-interest agreements	140,078	144,096
Bonds and notes payable	5,242,106	3,775,372
Liabilities associated with investments	4,149,129	5,438,228
Advances from federal government for student loans	15,987	25,283
Total liabilities	$ 12,964,428	$ 12,186,374
Net Assets:		
Net assets without donor restrictions: Yale University	$ 4,294,849	$ 5,184,946
Net assets without donor restrictions: non-controlling interests	101,533	707,411
Total net assets without donor restrictions	4,396,382	5,892,357
Net assets with donor restrictions	27,335,572	26,349,394
Total net assets	$ 31,731,954	$ 32,241,751
Total liabilities and net assets	$ 44,696,382	$ 44,428,125

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

Yale University Consolidated Statement of Activities

for the year ended June 30, 2020 with summarized comparative totals for the year ended June 30, 2019 ($ in thousands)

	Without Donor Restrictions	With Donor Restrictions	2020	2019
Operating				
Revenues and releases:				
Net tuition, room and board	$ 384,925	$ -	$ 384,925	$ 387,172
Grant and contract income, primarily for research and training	836,597	-	836,597	823,530
Medical services income	1,090,055	-	1,090,055	1,041,988
Contributions	19,480	189,214	208,694	210,903
Allocation of endowment spending from financial capital	411,739	1,026,339	1,438,078	1,354,568
Other investment income	92,311	5,351	97,662	94,839
Other income	190,626	293	190,919	192,358
Total revenues	3,025,733	1,221,197	4,246,930	4,105,358
Net assets released from restrictions	1,086,837	(1,086,837)	-	-
Total revenues and releases	4,112,570	134,360	4,246,930	4,105,358
Expenses:				
Salaries and wages	1,935,330	-	1,935,330	1,796,642
Employee benefits	640,988	-	640,988	577,782
Depreciation, amortization and interest	373,392	-	373,392	359,432
Other operating expenditures	1,094,239	-	1,094,239	1,101,011
Total expenses	4,043,949	-	4,043,949	3,834,867
Increase in net assets from operating activities	68,621	134,360	202,981	270,491
Non-operating				
Contributions	739	460,542	461,281	416,379
Total endowment return	312,638	1,619,327	1,931,965	1,629,992
Allocation of endowment spending to operations	(228,061)	(1,210,017)	(1,438,078)	(1,354,568)
Other investment (loss) income	(675,501)	69	(675,432)	(301,819)
Change in funding status of defined benefit plans	(358,489)	-	(358,489)	(663,686)
Other increases (decreases)	(33,695)	5,548	(28,147)	(6,221)
Net assets released from restrictions	23,651	(23,651)	-	-
(Decrease) increase in net assets from non-operating activities	(958,718)	851,818	(106,900)	(279,923)
Total (decrease) increase in net assets - Yale University	(890,097)	986,178	96,081	(9,432)
Change in non-controlling interests	(605,878)	-	(605,878)	(5,932)
Total (decrease) increase in net assets	(1,495,975)	986,178	(509,797)	(15,364)
Net assets, beginning of year	5,892,357	26,349,394	32,241,751	32,257,115
Net assets, end of year	$ 4,396,382	$ 27,335,572	$ 31,731,954	$ 32,241,751

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

Yale University Consolidated Statement of Cash Flows

for the years ended June 30, 2020 and 2019 ($ in thousands)

	2020	2019
Operating activities:		
Change in net assets	$ (509,797)	$ (15,364)
Adjustments to reconcile change in net assets to net cash used in operating activities:		
Depreciation and amortization	306,088	291,604
Unrealized loss on other investments	666,352	295,426
Net endowment investment gain	(1,509,575)	(1,174,398)
Change in non-controlling interests	605,878	5,932
Change in funding status of defined benefit plans	358,489	663,686
Non-operating contributions	(461,281)	(416,379)
Contributed securities	(134,577)	(141,628)
Proceeds from sale of donated securities	30,144	27,898
Other adjustments	40,197	44,297
Changes in assets and liabilities that provide (use) cash:		
Accounts receivable	(65,179)	(38,031)
Contributions receivable	(48,610)	(50,116)
Other operating assets	29,219	(39,135)
Accounts payable and accrued expenses	24,012	97,089
Advances under grants and contracts and other deposits	56,422	(5,557)
Other liabilities	61,457	24,806
Net cash used in operating activities	(550,761)	(429,870)
Investing activities:		
Student loans repaid	14,501	12,398
Student loans granted	(6,779)	(8,062)
Purchases related to capitalized software costs and other assets	(40,540)	(33,407)
Proceeds from sales and maturities of investments	17,678,892	13,777,776
Purchases of investments	(18,131,664)	(13,207,799)
Purchases of land, buildings and equipment	(478,639)	(492,937)
Net cash (used in) provided by investing activities	(964,229)	47,969
Financing activities:		
Proceeds from restricted contributions	321,902	307,779
Proceeds from sale of contributed securities restricted for endowment	104,433	113,730
Contributions received for split-interest agreements	4,946	8,228
Payments made under split-interest agreements	(14,557)	(18,283)
Proceeds from long-term debt	1,500,000	451,525
Repayments of long-term debt	(41,373)	(362,687)
Repayments to the Federal government for student loans	(7,450)	-
Net cash provided by financing activities	1,867,901	500,292
Net increase in cash and cash equivalents	352,911	118,391
Cash and cash equivalents, beginning of year	716,247	597,856
Cash and cash equivalents, end of year	$ 1,069,158	$ 716,247

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 of nineteen Trustees consisting of the President, ten Successor Trustees who are Successors to the original Trustees, six Alumni Fellows, and the Governor and Lieutenant Governor of Connecticut, 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 controlled by the university.

Financial statements of private, not-for-profit organizations measure 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 or income and gains on contributed assets, net assets from endowments 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. The university records as net assets with donor restrictions the original amount of gifts which donors have given to be maintained in perpetuity. 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, 2020 and 2019, are as follows, in thousands of dollars:

		2020	2019
Total assets, at year end		$44,696,382	$44,428,125
Less nonfinancial assets:			
	Land, buildings and equipment, net of accumulated depreciation	5,437,546	5,251,449
	Other assets	252,928	223,543
	Right of use assets	155,438	103,068
Financial assets, at year end		38,850,470	38,850,065
Less those unavailable for general expenditure within one year due to contractual or donor-imposed restrictions:			
	Restricted by donor with time or purpose restrictions	784,391	595,649
	Subject to appropriation and satisfaction of donor restrictions including board-designated endowments	33,577,100	34,779,353
	Other long-term notes receivable	103,732	110,424
Financial assets available to meet cash needs for general expenditures within one year		$ 4,385,247	$ 3,364,639

The university has $4,385.2 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 $1,011.4 million, accounts receivable of $364.9 million, contributions receivable of $74.0 million, and short-term investments of $2,934.9 million. The university issued $1.5 billion in taxable debt in June 2020 which increased liquidity. 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 $5.5 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 $1,270.8 million and $660.8 million at June 30, 2020 and 2019, 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:

	2020	2019
Cash paid during the year for interest	$ 148,155	$ 129,527
Noncash investing activities:		
Land, buildings and equipment purchases payable to vendor	$ 45,131	$ 47,308

The following table summarizes supplemental cash flow information related to leases for the year ended June 30, 2020, in thousands of dollars:

Cash paid for amounts included in measurement of liabilities:	
Operating cash flows from financing leases	$ 7,177
Operating cash flows from operating leases	10,275
Financing cash flows from financing leases	4,079
Non-cash lease related items:	
ROU assets obtained in exchange for new financing liabilities(1)	9,429
ROU assets obtained in exchange for new operating liabilities(2)	3,553

(1) The university capitalized $103.1 million of right of use ("ROU") financing assets upon adoption of the new lease standard as of July 1, 2019 that are excluded from the figures for the year ended June 30, 2020.

(2) The university capitalized $60.7 million of ROU operating assets upon adoption of the new lease standard as of July 1, 2019 that are excluded from the figures for the year ended June 30, 2020.

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, in thousands of dollars.

		2020		2019
Cash and cash equivalents	$	1,011,373	$	709,449
Cash included in Investments, at fair value		57,785		6,798
Total cash and cash equivalents shown in the consolidated statement of cash flows	$	1,069,158	$	716,247

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 an endowment spending policy 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, 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 2020 and 2019, when measured against the previous year's June 30th endowment fair value, was 4.8% and 4.6%, 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 leads 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 ROU assets and 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, 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 are 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 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 13,600 and is recognized in the period in which it satisfies its performance obligations. Net tuition, room and board revenue from undergraduate enrollment represents approximately 58.2% and 59.4% of total tuition, room and board revenue in 2020 and 2019, 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 $369.4 million and $343.3 million in 2020 and 2019, 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 fair value 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, 2020 and 2019, the university has research activities which are contractually authorized by the sponsor, but for which costs have not yet been incurred, totaling $1,681.9 million and $1,543.5 million, respectively.

In 2020 and 2019, grant and contract income from the federal government totaled $617.4 million and $612.0 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 2020 and 2019, income from medical services totaled $416.7 million and $447.9 million for insurance companies, $145.0 million and $143.9 million for Medicare, and $59.1 million and $62.6 million for Medicaid, 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 overall impact of the Act remains uncertain, and the full impact will not be known until further regulatory guidance is published. The university records tax assets and liabilities in its consolidated financial statements based on reasonable estimates determined using current guidance. 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 alternative investments, the estimated net realizable value of receivables, estimated asset retirement obligations, liabilities under split interest agreements, estimated tax liabilities and 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 new standard requires lessees to recognize leases on the balance sheet and disclose key information about leasing arrangements. The new 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.

Results for June 30, 2020 are presented under the new standard, while prior period amounts are not adjusted and continue to be reported under the accounting standards in effect for the prior period. 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 for 2020 and 2019. Furthermore, Note 1c now 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.

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 2023, however entities may elect to adopt the guidance early. The university is currently evaluating the potential impact to the consolidated financial statements, as well as whether or not the guidance will be early adopted.

In March of 2019, the FASB issued new accounting guidance relating to the accounting for collections. The new guidance provides for an updated definition of collections and may result in additional disclosures for some entities. The guidance is required to be implemented in the university's fiscal year 2021. 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 2022. The standard is not expected to have a significant impact to the university's consolidated financial statements.

t. Reclassifications

As discussed in Note 1s, as a result of implementation of ASC 842, *Leases*, certain amounts from 2019 have been reclassified to conform to the current year presentation. In addition, as discussed in Note 1s, the 2019 statement of cash flows has been updated to present all of the university's cash balances regardless of their location on the consolidated statement of financial position.

u. Summarized 2019 Financial Information

The 2020 consolidated financial statements include selected comparative summarized financial information for 2019. 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 2019 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:

	2020	2019
Endowment investments:		
Long-term investment pool	$ 30,838,373	$ 30,013,883
Other	269,875	281,120
Total net endowment investments	31,108,248	30,295,003
Non-endowment investments:		
Long-term investment pool	300,000	400,000
Fixed income	1,196,885	526,137
Derivatives	(1,106,103)	(459,213)
Other	762,371	152,492
Total non-endowment investments	1,153,153	619,416
Net investments, at fair value	$ 32,261,401	$ 30,914,419

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:

2020	Level 1	Level 2	Level 3	Total
Investments, at fair value:				
Cash and 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	1,292,205	2,989,325
Total liabilities associated with investments	$ 1,370,595	$ 1,486,329	$ 1,292,205	4,149,129
Non-controlling interests				101,533
Net investments				$ 32,261,401

2019	Level 1	Level 2	Level 3	Total
Investments, at fair value:				
Cash and short-term investments	$ 1,300,316	$ -	$ -	$ 1,300,316
Fixed income:				
U.S. government securities	2,367,143	116	61	2,367,320
Foreign government securities	24,145	302,743	11,058	337,946
Corporate and other securities	50,118	2,542,451	253,072	2,845,641
Total fixed income	2,441,406	2,845,310	264,191	5,550,907
Common stock:				
Domestic	1,108,851	42,083	79,520	1,230,454
Foreign	1,642,821	106,236	102,423	1,851,480
Total common stock	2,751,672	148,319	181,943	3,081,934
Other equity investments:				
Venture capital	-	-	194,028	194,028
Natural resources	-	-	189,278	189,278
Total other equity investments	-	-	383,306	383,306
Other investments	475,609	1,283,593	315,942	2,075,144
Total leveled investments, at fair value	$ 6,969,003	$ 4,277,222	$ 1,145,382	12,391,607
Investments at net asset value				24,668,451
Total investments				37,060,058
Liabilities associated with investments:				
Securities sold, not yet purchased	$ 597,722	$ 694,431	$ -	1,292,153
Repurchase agreements	-	1,613,783	1,239	1,615,022
Other liabilities	265,027	1,020,862	1,245,164	2,531,053
Total liabilities associated with investments	$ 862,749	$ 3,329,076	$ 1,246,403	5,438,228
Non-controlling interests				707,411
Net investments				$ 30,914,419

Included within cash and short-term investments are restricted short-term investment balances held as collateral in the amount of $1,213.0 million and $654.0 million as of June 30, 2020 and 2019, 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:

		2020		2019
Absolute return	$	6,515,709	$	5,372,169
Domestic		294,404		467,482
Foreign		2,761,108		2,721,844
Leveraged buyout		5,221,747		4,977,975
Natural resources		1,026,590		1,259,534
Real estate		2,869,946		3,119,090
Venture capital		7,764,073		6,750,357
Total investments, at NAV	$	26,453,577	$	24,668,451

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:

		2020		2019
Consolidated investment company assets	$	1,744,522	$	6,362,187
Consolidated investment company liabilities		302,553		3,089,803
	$	1,441,969	$	3,272,384

Effective May 31, 2020, the university entered into an agreement which resulted in the university no longer controlling one of its previously consolidated investment companies. As a result of this agreement, the university has deconsolidated this investment company as of May 31, 2020. The assets and liabilities associated with this investment entity amounted to $4,754.8 million and $2,933.3 million, respectively, in the 2019 consolidated statement of financial position. The related non-controlling interest was $602.6 million in the 2019 consolidated statement of financial position. In the 2020 consolidated statement of financial position, the investment of $1,229.3 million is included within Investments, at fair value. In addition, the investment company's assets and liabilities are no longer part of the university's leveling tables in footnote 2, as the investment's fair value is based on its 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, 2020 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)	Valuation Technique	Significant Unobservable Input	Range	Weighted Average
Equity securities	$	137,933	Indicative Market Quotations	Recent funding activity	N/A	N/A
			Market Comparables	Discount for Lack of Control	10.0 - 17.0%	15.0%
			Cost	Indicative quotes	$2,019,642.00	N/A
Fixed income securities	$	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
			Liquidation Model	Liquidation probability	15.0 - 100.0%	40.0%
Natural resources	$	234,977	Discounted Cash Flow	Discount rate	10.0 - 15.0%	12.0%
				Exit Multiple	8.0x - 10.0x	9.0x
Trusts	$	188,690	Net present value	Discount rate	1.5%	N/A
Venture Capital	$	342,778	Tax Analysis	Likelihood of taxation	0.0%	N/A
Other investments	$	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
Liabilities	$	(1,292,205)	Various methods	University pooled unit market value	$3,757.64	N/A

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 $168.1 million and unrealized losses of $26.2 million that relate to assets held at June 30, 2020 and 2019, 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:

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		(62,996)		133,975
Sales		(9,265)		(16,063)		(164,081)		22,227		(167,182)
Transfers in		-		-		144,332		(1,873)		142,459
Transfers out		(99,051)		-		(329,793)		23,420		(405,424)
Ending balance	$	342,778	$	234,977	$	486,834	$	(1,292,205)	$	(227,616)

2019		Venture Capital		Natural Resources		Other		Liabilities		Total
Beginning balance	$	169,949	$	210,163	$	788,958	$	(1,244,797)	$	(75,727)
Realized and unrealized gain (loss), net		35,479		(30,354)		(10,132)		(12,686)		(17,693)
Purchases		7,299		32,600		203,685		(15,298)		228,286
Sales		(7,987)		(23,131)		(225,000)		25,871		(230,247)
Transfers in		98,811		-		77,325		(1)		176,135
Transfers out		(109,523)		-		(72,760)		508		(181,775)
Ending balance	$	194,028	$	189,278	$	762,076	$	(1,246,403)	$	(101,021)

The transfers out of Level 3 consist primarily of investments reclassified from Level 3 to investments at NAV due to the use of the practical expedient for certain limited partnership investments. Included in other transfers out and liabilities transfers out are $329.0 million and $23.4 million, respectively, related to the deconsolidation of an investment company in 2020.

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

Asset Class	Fair Value (in 000s)	Remaining Life	Unfunded Commitment (in 000s)	Redemption Terms	Redemption Restrictions
Absolute return	$ 6,515,709	No Limit	$ 150,227	Redemption terms range from monthly with 30 days notice to annually with 90 days notice.	Lock-up provisions range from none to 5 years.
Domestic equity	294,404	No Limit	159,632	Redemption terms range from monthly with 3 days notice to annually with 90 days notice.	Lock-up provisions range from none to 7 years.
Foreign equity	2,761,108	No Limit	233,000	Redemption terms 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	5,221,747	1-25 years	4,149,436	Closed end funds not eligible for redemption.	Not redeemable.
Natural resources	1,261,567	1-35 years	585,000	Closed end funds not eligible for redemption.	Not redeemable.
Real estate	2,869,946	1-25 years	1,861,074	Closed end funds not eligible for redemption.	Not redeemable.
Venture capital	8,106,851	1-25 years	1,281,072	Redemption terms range from 2 years with 3 years notice to closed end structures not available for redemption.	Not redeemable.
Total	$ 27,031,332		$ 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, 2020, in thousands of dollars, where enforceable netting agreements are in place:

	Assets	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 $807.6 million was provided at June 30, 2020 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, 2020 and related gain (loss) for the year, in thousands of dollars, were as follows:

	Assets	Liabilities	Gain (Loss)
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. The total notional amount of credit default swap contracts for buy protection amounts to $126.3 million and $2.9 billion as of June 30, 2020 and 2019, respectively, and there is no notional amount related to sell protection as of June 30, 2020. As of June 30, 2019, the notional amount related to sell protection was $1.0 billion.

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 at June 30, 2020 and 2019 were $2.4 billion and $9.2 billion, respectively. The notional amount of contracts that pay based on variable rates and receive based on fixed rates were $1.0 billion and $10.9 billion at June 30, 2020 and 2019, 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 $147.9 million and $151.8 million at June 30, 2020 and 2019, respectively.

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

		2020		2019
Charitable gift annuities	$	224,335	$	227,355
Charitable remainder trusts		99,544		104,058
Pooled income funds		5,743		6,826
	$	329,622	$	338,239

Split-interest liabilities reported in the consolidated statement of financial position totaled $140.1 million and $144.1 million at June 30, 2020 and 2019, 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 $1,231.6 million and $1,160.8 million at June 30, 2020 and 2019, respectively. The largest balance recorded is for Yale-New Haven Hospital ("the Hospital"), with $977.9 million and $916.0 million invested at June 30, 2020 and 2019, respectively. On July 1, 2020, the Hospital liquidated $100.0 million from the Pool.

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

		2020		2019
Investment income	$	422,390	$	455,594
Realized and unrealized gain, net of investment management fees		1,509,575		1,174,398
Total endowment return		1,931,965		1,629,992
Other investment (loss) income		(577,770)		(206,980)
	$	1,354,195	$	1,423,012

Endowment investment returns totaling $1,438.1 million and $1,354.6 million were allocated to operating activities in 2020 and 2019, 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:

	2020	2019
Medical services, net	$ 77,730	$ 95,906
Grant and contracts	128,696	105,743
Affiliated organizations	114,003	79,877
Publications	5,941	6,551
Other	49,508	33,597
	375,878	321,674
Less: Allowance for doubtful accounts	(11,026)	(22,001)
	$ 364,852	$ 299,673

Medical services receivables are net of discounts and allowances of $144.2 million and $159.8 million at June 30, 2020 and 2019, respectively. Receivables for medical services, net of contractual adjustments, are primarily based on negotiated contracts with insurance companies (39%), Medicare (14%), Medicaid (4%), payments due directly from patients (32%) 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 $101.3 million and $68.1 million at June 30, 2020 and 2019, respectively. Balances are settled in the ordinary course of business. The university recognized $415.7 million and $341.4 million in revenue and incurred $120.7 million and $115.0 million in expenses related to activities with the Hospital during the periods ended June 30, 2020 and 2019, respectively.

4. Contributions Receivable

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

	2020	2019
Purpose:		
Operating programs	$ 478,061	$ 435,821
Endowment	480,626	348,196
Capital purposes	124,356	107,000
Gross unconditional promises to give	1,083,043	891,017
Less: Discount to present value	(129,246)	(139,539)
Allowance for uncollectible accounts	(95,347)	(81,017)
	$ 858,450	$ 670,461

Amounts due in:		
Less than one year	$ 293,877	$ 235,612
One to five years	466,377	350,879
More than five years	322,789	304,526
	$ 1,083,043	$ 891,017

Discount rates used to calculate the present value of contributions receivable ranged from .16% to 7.00% at June 30, 2020 and 2019.

At June 30, 2020, the university had conditional pledges of approximately $2.9 million which are subject to a donor-imposed condition.

5. Notes Receivable

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

	2020	2019
Institutional student loans	$ 45,584	$ 46,627
Federally-sponsored student loans	19,265	23,115
Notes receivable	50,889	52,337
	115,738	122,079
Less: Allowance for doubtful accounts	(12,006)	(11,655)
	$ 103,732	$ 110,424

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 advances from federal government for student loans 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, 2020, in thousands of dollars:

Right of use assets and liabilities	Statement of financial position location		
Right of use asset - Operating	Right of use assets	$	48,491
Right of use asset - Financing	Right of use assets		106,947
Right of use liabilities - Operating	Lease liabilities		48,623
Right of use liabilities - Financing	Lease liabilities		175,398

The following table summarizes the university's lease related costs for the year ended June 30, 2020, in thousands of dollars:

Lease cost	Statement of activities location		
Financing lease cost			
Amortization of right of use assets	Depreciation, amortization and interest	$	5,550
Interest on lease liabilities	Depreciation, amortization and interest		7,177
Operating lease cost	Other operating expenses		3,028
Total lease cost		$	15,755

The following tables summarize maturities of lease liabilities and information about financing and operating leases as of June 30, 2020:

	Financing	Operating	Total
2021	$ 11,758	$ 10,241	$ 21,999
2022	11,919	7,925	19,844
2023	12,082	6,062	18,144
2024	12,247	5,729	17,976
2025	12,414	5,019	17,433
Thereafter	202,359	18,890	221,249

	Financing	Operating
Weighted-average remaining lease term (years)	21	8
Weighted-average discount rate	4.06%	2.18%
Total undiscounted lease liability	$ 262,779	$ 53,866

7. Other Assets

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

	2020	2019
Insurance receivable	$ 155,032	$ 96,119
Software costs, net of accumulated amortization	42,387	42,330
Deferred expenses	40,068	70,466
Inventories	15,441	14,628
	$ 252,928	$ 223,543

Amortization expense related to other assets included in operating expenses amounted to $14.6 million and $13.5 million in 2020 and 2019, 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:

	2020	2019
Land and real estate improvements	$ 137,053	$ 137,053
Buildings	7,496,882	7,124,734
Equipment	646,784	614,278
	8,280,719	7,876,065
Less: Accumulated depreciation and amortization	(3,437,016)	(3,161,912)
	4,843,703	4,714,153
Construction in progress	593,843	537,296
	$ 5,437,546	$ 5,251,449

Depreciation expense included in operating expenses amounted to $277.1 million and $270.4 million in 2020 and 2019, respectively.

9. Other Liabilities

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

	2020	2019
Employee benefit obligations	$ 2,023,797	$ 1,622,551
Compensated absences	80,422	67,289
Financial aid grant obligations	67,998	64,534
Asset retirement obligations	42,380	39,100
Other	204,713	205,890
	$ 2,419,310	$ 1,999,364

Included in employee benefit obligations are defined benefit plan liabilities in excess of plan assets. These liabilities amounted to $1,825.3 million at June 30, 2020 and $1,441.3 million at June 30, 2019 (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, 2020	Calendar Year of Maturity	Outstanding Balance 2020	2019
CHEFA tax-exempt bonds:				
Series S	5.00%	2027	$ 111,205	$ 111,205
Series T	5.00%	2029	93,625	125,000
Series U	2.00%	2033	250,000	250,000
Series V	0.80%	2036	200,000	200,000
Series X	1.80%	2037	125,000	125,000
Series 2010A	1.90%	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	5.00%	2029/2037	224,200	224,200
Series 2017C	5.00%	2040/2057	383,380	383,380
Series 2018A	5.00%	2025	67,610	67,610
Total CHEFA bonds			2,975,260	3,006,635
Medium term notes	7.38%	2096	125,000	125,000
Taxable Series 2020A	1.59%	2025/2030/2050	1,500,000	-
Commercial paper	1.76%	2020	500,000	500,000
US Department of Energy	2.71%	2029	37,921	43,891
Other notes payable	7.85%	2020	157	605
Principal amount			5,138,338	3,676,131
Less: Bond issue costs			(9,666)	(12,359)
Plus: Unamortized premiums and discounts, net			113,434	111,600
			$ 5,242,106	$ 3,775,372

CHEFA Tax-Exempt Bonds

The university borrows at tax-exempt rates through 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 maturing in July 2027. In February 2019, the Series S-1 and S-2 bonds, totaling $135.9 million, were remarketed as a single Series S. The principal was reduced and it was converted from a variable money market municipal interest rate to a fixed interest rate of 5.00%. These bonds include a net premium of $20.5 million as of June 2020.

Series T bonds, remarketed on 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 $29.9 million as of June 2020.

Series U bonds consist of 1) $125.0 million Series U-1 bonds and 2) $125.0 million Series U-2 bonds. In February 2019, both series were remarketed from a fixed interest rate of 1.00% to 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. The bonds bear a fixed interest rate of 1.80% through January 2021.

Series 2010A bonds consist of 1) $150.0 million Series 2010A-3 bonds, maturing July 2049. The bonds bear a fixed interest rate of 1.80% through February 2021; and 2) $150.0 million Series 2010A-4 bonds, maturing July 2049. In February 2019, the bonds were remarketed from a fixed interest rate of 1.20% to a fixed interest rate of 2.00% through February 2022. In July 2018, $80.0 million Series 2010A-1 bonds were redeemed by new Series 2018A bonds in the amount of $67.6 million (see Series 2018A below).

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, 2033.

Series 2015A bonds consist of $300.0 million maturing in July 2035. In July 2018, the Series 2015A bonds were remarketed from a fixed interest rate of 1.38% to a fixed interest rate of 2.05% through July 2021.

Series 2016A bonds consist of 1) $150.0 million Series 2016A-1 bonds bearing a fixed interest rate of 1.00% through June 30, 2019; 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. In July 2019, the Series 2016A-1 bonds were remarketed to a fixed interest rate of 1.45% through June 2022. Series 2016A-2 include a net premium of $405 thousand as of June 2020.

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 $11.6 million as of June 30, 2020.

Series 2017B bonds consist of 1) $112.1 million Series 2017B-1 bonds maturing in July 2029 and 2) $112.1 million Series 2017B-2 bonds maturing in July 2037. In July 2020, the Series 2017B-1 bonds were remarketed to a fixed interest rate of 5.00% through June 30, 2029, and the 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 $22.1 million as of June 30, 2020. 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 $20.1 million as of June 30, 2020.

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 $8.8 million as of June 30, 2020.

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 $221 thousand as of June 30, 2020.

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.

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:

2021	$	504,992
2022		4,835
2023		4,835
2024		4,835
2025		504,835
Thereafter		4,114,006
Total	$	5,138,338

Certain CHEFA Series are subject to tender by bondholders. To the extent all bonds subject to tender could not be remarketed, $2.5 billion of bonds scheduled for maturity between 2029 and 2057 would be due when tendered.

Total interest expense incurred on indebtedness was $69.0 million and $72.5 million in 2020 and 2019, respectively. Interest capitalized to land, buildings and equipment totaled $5.1 million and $5.7 million in 2020 and 2019, respectively. Amortization expense related to bond issue costs included in operating expenses amounted to $2.6 million and $1.8 million in 2020 and 2019, 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 this plan was $132.2 million and $124.9 million in 2020 and 2019, 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	
	2020	2019	2020	2019
Change in benefit obligation:				
Benefit obligation, beginning of year	$ 1,948,900	$ 1,658,508	$ 1,422,596	$ 1,137,991
Service cost, excluding assumed administrative expenses	79,339	56,850	57,520	42,109
Interest cost	59,946	68,036	42,936	46,238
Benefit payments	(37,846)	(53,477)	(28,251)	(29,568)
Settlements	-	(156,700)	-	-
Assumption changes	320,175	358,524	202,066	270,442
Actuarial loss (gain)	18,095	17,159	(87,569)	(44,616)
Benefit obligation, end of year	$ 2,388,609	$ 1,948,900	$ 1,609,298	$ 1,422,596
Change in plan assets:				
Fair value, beginning of year	$ 1,415,611	$ 1,487,183	$ 514,602	$ 493,791
Actual return on plan assets	141,374	33,266	49,558	15,262
University contributions	76,708	107,998	44,945	36,233
Benefits and expenses paid	(40,561)	(56,136)	(29,647)	(30,684)
Settlements	-	(156,700)	-	-
Fair value, end of year	$ 1,593,132	$ 1,415,611	$ 579,458	$ 514,602
Funded Status	$ (795,477)	$ (533,289)	$ (1,029,840)	$ (907,994)

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 $1,996.4 million and $1,654.0 million at June 30, 2020 and June 30, 2019, respectively.

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

	2020	2019
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%
Weighted-average increase in future compensation levels	3.14%	3.14%
Projected health care cost trend rate (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

In 2019, the university revised its methodology for determining the interest rates it uses to discount the pension and postretirement obligations, primarily because of the changing demographics of benefit plan participants.

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

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

Changes in assumptions during the year resulted in an increase to the pension benefit obligation and an increase to the postretirement benefit obligation at June 30, 2020, as follows, in thousands of dollars:

	Pension	Postretirement	Total
Discount rate	$ 374,215	$ 257,675	$ 631,890
Inflation	(138)	(7,761)	(7,899)
Mortality	(58,062)	(52,365)	(110,427)
Turnover rates	4,160	4,517	8,677
	$ 320,175	$ 202,066	$ 522,241

Net Periodic Benefit Cost

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

	Pension		Postretirement	
	2020	2019	2020	2019
Service cost	$ 79,339	$ 56,850	$ 57,520	$ 42,109
Administrative expenses	2,700	2,700	1,300	1,300
Interest cost	59,946	68,036	42,936	46,238
Expected return on plan assets	(104,345)	(101,485)	(37,785)	(34,070)
Net amortization:				
Prior service cost	3,343	3,343	1	21
Net loss	31,166	606	11,157	6
Net periodic benefit cost	72,149	30,050	75,129	55,604
Settlement charge	-	20,652	-	-
Total expense	$ 72,149	$ 50,702	$ 75,129	$ 55,604

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:

	2020	2019
Weighted-average discount rate - all plans except unused sick pay plan	3.10%	4.30%
Weighted-average discount rate - unused sick pay plan	2.85%	4.00%
Expected long-term rate of return	7.25%	7.25%
Weighted-average compensation increase	3.14%	3.20%
Health care cost increase (pre-65/post-65)	6.66% / 12.40%	7.08% / 6.89%
Ultimate trend rate (pre-65/post-65)	4.50% / 4.50%	4.50% / 4.31%
Year ultimate trend rate is achieved	2028	2028
Mortality	RP2014 Aggregate, Scale MP2014	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:

2020		Pension		Postretirement		Total
Unrecognized net actuarial loss	$	301,256	$	102,900	$	404,156
Amortization of unrecognized obligation		(34,509)		(11,158)		(45,667)
	$	266,747	$	91,742	$	358,489

2019		Pension		Postretirement		Total
Unrecognized net actuarial loss	$	443,865	$	244,450	$	688,315
Amortization of unrecognized obligation		(24,602)		(27)		(24,629)
	$	419,263	$	244,423	$	663,686

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:

2020		Pension		Postretirement		Total
Unrecognized net actuarial loss	$	810,204	$	410,731	$	1,220,935
Unrecognized prior service cost		10,701		-		10,701
	$	820,905	$	410,731	$	1,231,636

2019		Pension		Postretirement		Total
Unrecognized net actuarial loss	$	540,114	$	318,988	$	859,102
Unrecognized prior service cost		14,044		1		14,045
	$	554,158	$	318,989	$	873,147

Amounts recorded as an adjustment at June 30, 2020 that are expected to be amortized into non-operating activity during fiscal year 2021, in thousands of dollars, include:

	Pension	Postretirement	Total
Net actuarial loss	$ 51,928	$ 17,438	$ 69,366
Prior service cost	2,917	-	2,917
	$ 54,845	$ 17,438	$ 72,283

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, in thousands of dollars:

	Level 1	Level 2	Level 3	2020	2019
Investments, at fair value:					
Cash and cash equivalents	$ 124,140	$ -	$ -	$ 124,140	$ 111,261
US government securities	114,430	-	-	114,430	113,231
Equity investments:					
Domestic	16,016	-	-	16,016	21,844
Foreign	23,649	-	-	23,649	36,477
Total equity investments	39,665	-	-	39,665	58,321
Limited partnerships:					
Natural resources	-	-	15,124	15,124	11,329
Total limited partnerships	-	-	15,124	15,124	11,329
Other investments	35			35	4
Total leveled investments	$ 278,270	$ -	$ 15,124	293,394	294,146
Investments at NAV				1,305,073	1,138,881
Total investments, at fair value				1,598,467	1,433,027
Liabilities associated with investments	$ 5,270	$ 65	$ -	5,335	17,416
Net investments, at fair value				$ 1,593,132	$ 1,415,611

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

	Level 1	Level 2	Level 3	2020	2019
Investments, at fair value:					
Cash and cash equivalents	$ 43,134	$ -	$ -	$ 43,134	$ 43,604
US government securities	19,332	-	-	19,332	20,611
Equity investments:					
Domestic	18,880	-	-	18,880	18,079
Foreign	3,652	6,888	-	10,540	8,037
Total equity investments	22,532	6,888	-	29,420	26,116
Limited partnerships:					
Natural resources	-	-	93	93	156
Total limited partnerships	-	-	93	93	156
Other Investments	77			77	-
Total leveled investments	$ 85,075	$ 6,888	$ 93	92,056	90,487
Investments at NAV				495,200	426,302
Total investments, at fair value				587,256	516,789
Liabilities associated with investments	$ 5,804	$ 59	$ -	5,863	124
Net investments, at fair value				$ 581,393	$ 516,665

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, 2020, in thousands of dollars:

	Pension	Retiree Health
Beginning balance	$ 11,329	$ 156
Unrealized (loss)/ gain	(434)	1
Purchases	5,740	-
Sales	(1,511)	(64)
Ending balance	$ 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. Plan asset allocations by category at June 30 are as follows:

	Pension		Retiree Health	
	2020	2019	2020	2019
Absolute return	26.5%	24.4%	27.9%	24.0%
Domestic equity	6.9%	5.9%	10.9%	10.0%
Fixed income	7.2%	8.0%	3.3%	4.0%
Foreign equity	20.5%	22.6%	23.3%	24.6%
Leveraged buyouts	8.6%	8.6%	7.0%	8.4%
Venture capital	15.2%	14.2%	13.1%	12.5%
Real estate	6.2%	6.8%	7.1%	8.8%
Natural resources	1.3%	1.9%	0.5%	0.9%
Cash	7.6%	7.6%	6.9%	6.8%

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 2021 are $31.3 million and $65.2 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
2021	$ 51,917	$ 35,696	$ 87,613
2022	56,621	38,517	95,138
2023	61,450	42,873	104,323
2024	66,265	46,390	112,655
2025	71,183	49,867	121,050
2026-2030	427,452	286,679	714,131
	$ 734,888	$ 500,022	$ 1,234,910

13. Net Assets

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

	2020	2019
With Donor Restrictions:		
Donor-restricted endowments, perpetual in nature	$ 4,604,445	$ 4,260,677
Student loans, perpetual in nature	50,738	47,690
Donor-restricted endowments, subject to spending policy and appropriation	21,123,669	20,735,383
Board designated endowment, subject to spending policy and appropriation	326,925	310,263
Unexpended gift balances	1,229,795	995,381
Total net assets with donor restrictions	27,335,572	26,349,394
Without Donor Restrictions:		
Board designated endowment, subject to spending policy and appropriation	$ 5,146,647	$ 5,008,493
Funded status of defined benefit plans	(1,825,317)	(1,441,283)
Derivatives	(1,106,103)	(459,213)
Undesignated	2,079,622	2,076,949
Non-controlling interest	101,533	707,411
Total net assets without donor restrictions	4,396,382	5,892,357
Total net assets	$ 31,731,954	$ 32,241,751

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:

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

2019	Without Donor Restrictions	With Donor Restrictions	Total
Donor-restricted endowment	$ -	$ 24,996,060	$ 24,996,060
Board-designated endowment	5,008,493	310,263	5,318,756
	$ 5,008,493	$ 25,306,323	$ 30,314,816

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

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

2019	Without Donor Restrictions	With Donor Restrictions	Total
Endowment net assets, beginning of year	$ 4,722,139	$ 24,628,927	$ 29,351,066
Investment return:			
Investment income	70,636	393,084	463,720
Net appreciation	185,534	980,738	1,166,272
Total investment return	256,170	1,373,822	1,629,992
Contributions	13,296	367,890	381,186
Allocation of endowment spending	(210,826)	(1,143,742)	(1,354,568)
Other increases	227,714	79,426	307,140
Endowment net assets, end of year	$ 5,008,493	$ 25,306,323	$ 30,314,816

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:

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

2019	Programmatic support	Patient care and other related services	Administration and other institutional support	Total
Salaries and wages	$ 1,137,449	$ 522,476	$ 136,717	$ 1,796,642
Employee benefits	381,789	146,026	49,967	577,782
Depreciation, amortization and interest	323,722	12,641	23,069	359,432
Other operating expenditures	851,785	190,160	59,066	1,101,011
Total operating expenses	2,694,745	871,303	268,819	3,834,867
Non-operating expenses	34,069	2,460	1,285	37,814
	$ 2,728,814	$ 873,763	$ 270,104	$ 3,872,681

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 $376.2 million at June 30, 2020. 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, 2020, through October 22, 2020, the date the consolidated financial statements were issued. Other than what has been disclosed in Note 2 and 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

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Peter Salovey, A.B., A.M., Ph.D.

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Nathaniel W. Nickerson, B.A.

Vice President for Alumni Affairs and Development
Joan Elizabeth O'Neill, B.A.

Yale Science Building

260 Whitney Avenue, home of the new Yale Science Building, photographed by Jack Devlin

In the fall of 2019, after two years of construction, the Yale Science Building opened on Science Hill. The building, which replaced the J.W. Gibbs laboratory, is the newest project in supporting the university's effort to further its scientific research initiatives. The building contains cutting-edge technology, has been designed to accommodate an array of scientific ventures and will be instrumental in addressing many of the challenges that the world faces today.

Women at
50 Yale 150

Front cover

Student playing the violin. Photo: Michael Marsland

Member of the women's basketball team. Photo: Michael Marsland

Marta Kuzma, the current, and first woman, dean of the School of Art. This year marked the 150th anniversary of the first women students at Yale, who studied at the newly opened School of the Fine Arts in 1869. Photo: Karin Alfredsson

Commemorative stone inside Phelps Gate, dedicated to Yale's first classes of women undergraduates, at the 2019 celebration of fifty years of coeducation at Yale College. Photo: Melanie C. Stengel

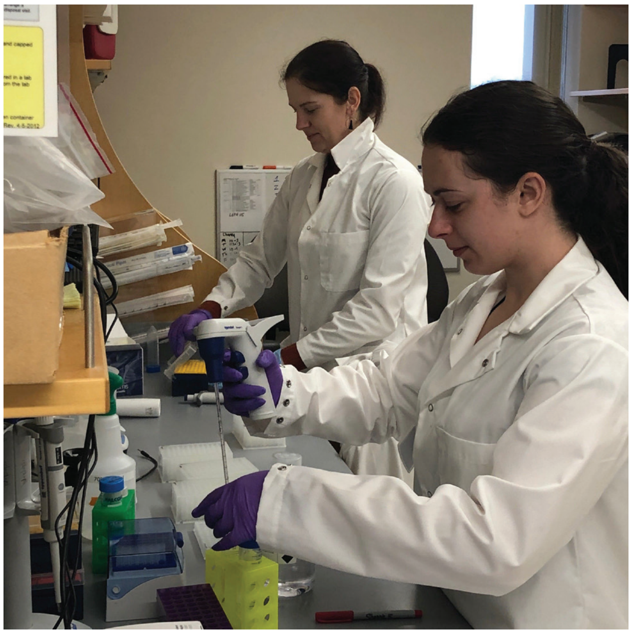
Anna Pauline "Pauli" Murray, '65 J.S.D., '79 Hon. D.Div. In 2017 Murray College became the first Yale residential college named after a woman. Photo: Manuscripts & Archives, Yale University Library

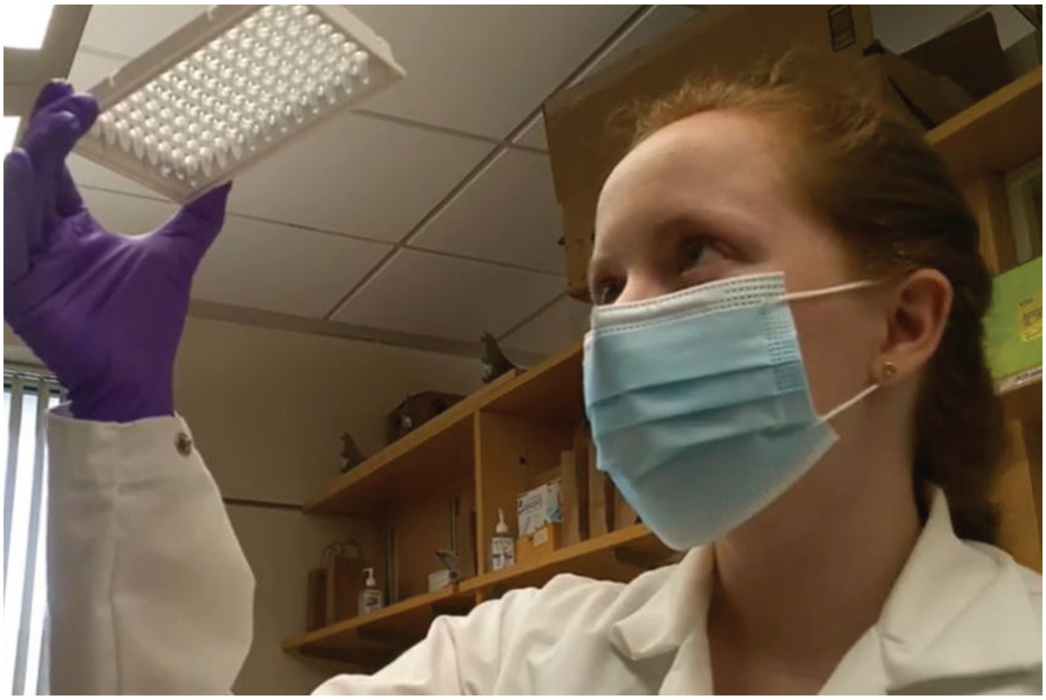
Three of the seven students who in 1894 were the first women to receive Ph.D.s from Yale. Detail: *Yale Women*, by Brenda Zlamany, 2016

High school students attending a summer camp at Yale. Photo: courtesy Julian Krinsky Camps & Programs

Back cover

Anne Wyllie, associate research scientist (top left), Mary Petrone, graduate student (top right), and Annie Watkins, graduate student (bottom) of the Epidemiology of Microbial Diseases department are researching a new saliva-based COVID-19 test known as SalivaDirect™. Photos: courtesy Yale School of Public Health





Yale

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