

A photograph of a Harvard University building, likely the Old Chapel, at dusk. The building features a prominent blue dome and a tall spire with a golden orb. The interior lights are on, casting a warm orange glow through the arched windows. The sky is a mix of blue and orange from the setting sun.

FINANCIAL REPORT

FISCAL YEAR 2017



HARVARD
UNIVERSITY

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Message from the President

I write to report on Harvard University's financial results for fiscal year 2017.

The past year was one of great progress toward our educational and research goals. Advances in scholarship and discovery helped to confront some of society's greatest challenges; increases in financial aid ensured that talented students could pursue their highest aspirations regardless of their means; and the renovation and expansion of Harvard's physical spaces enhanced our teaching, learning, and research environments.

We undertook these efforts amid ongoing financial challenges across higher education. The past year was marked by deep uncertainty over levels of federal research funding. Continued pressures on the cost of educating students confront institutions even as we seek to contain tuition, increase affordability, and broaden access. And there is a shared understanding across higher education that endowment returns are likely to be more constrained in the decade to come.

The University is taking steps to address these new realities while continuing to advance its mission. The creative efforts of Harvard's Schools and academic units have seen sustained growth in continuing and executive education. Our efforts, alongside others' across higher education, have helped secure significant federal budget increases for biomedical research funding. The new CEO at Harvard Management Company, Narv Narvekar, is implementing an ambitious and far-reaching plan to improve endowment returns, and prudent financial management has the University positioned to weather future uncertainties.

With less than a year remaining, The Harvard Campaign continues to showcase the deep and lasting connection between the University and its alumni and supporters, and contributions from more than 143,000 households already have begun to make an impact. More than \$1 billion has been raised to support financial aid, broadening access and making the opportunities available at Harvard a reality for thousands of talented individuals across all of our Schools. This generosity has enabled Harvard to deepen its long-standing commitment to financial aid for undergraduate and graduate students.

The Campaign also has enabled a transformation of our physical spaces. The new Harvard Kennedy School campus will soon be completed, while across the river at Harvard Business School, Tata Hall, the Ruth Mulan Chu Chao Center, and Klarman Hall will provide additional classroom, meeting, and conference space. House renewal has enhanced our undergraduates' residential experience, and great progress has been made on common spaces designed to strengthen our sense of community and encourage spontaneous interactions. Cabot Library and the adjoining Pritzker Commons reopened in April, and the Richard A. and Susan F. Smith Campus Center is on track to reopen in 2018.

In Allston, the new Science and Engineering Complex—the future home of the Harvard John A. Paulson School of Engineering and Applied Sciences—is taking shape. At the center will be the Maker Space, a state-of-the-art manufacturing and assembly studio for engineers, designers, artists, and other creators in the Harvard community. Last fall, the Pagliuca Harvard Life Lab joined the i-lab and Launch Lab, establishing a dynamic cluster that will foster a cross-disciplinary approach to entrepreneurship and innovation.

Across the University, Harvard researchers have continued their efforts to find solutions to some of the world's great challenges. They have probed the potential role of infection in Alzheimer's disease, made breakthroughs in the treatment of hearing loss, and unraveled molecular reactions that suggest ways to thwart some of the detrimental effects of aging. They have created innovations in robotics to assist with disease modeling, improve screening of new drugs, and help the heart beat, potentially opening new treatment options for people suffering from heart failure. They have resolved a major conflict in estimates of how much the Earth will warm in response to a doubling of carbon dioxide in the atmosphere, enabling more accurate climate change modeling. They have worked to improve early childhood education, uncovered and begun to address some of the underlying causes of the opioid epidemic, and so much more.

The University also has expanded its academic offerings, announcing a joint master's degree program between the Business School and the Harvard Paulson School as well as a dual program between the Faculty of Arts and Sciences and Berklee College of Music, launching the Bloomberg Harvard City Leadership Initiative at the Kennedy School in collaboration with the Business School, and kicking off a University-wide Data Science Initiative.

In all of these projects and initiatives, as well as many others across Harvard's campus, members of the University community in Boston, Cambridge, and beyond are strengthening our capacity to advance ideas and innovation every day. With careful stewardship of resources, we are laying the groundwork for future generations of faculty and scholars to confront the challenges of their times. It is with deep thanks, therefore, that I present the University's financial report for fiscal year 2017.

Sincerely,



Drew Gilpin Faust
PRESIDENT

October 26, 2017

Financial Overview

From the Vice President for Finance and the Treasurer

The operating results of the University for fiscal year 2017 showed a positive surplus of \$114 million, or 2% of total revenue of \$5 billion. This year's surplus was \$37 million more than fiscal year 2016 as a result of Harvard's individual Schools and units carefully managing their spending in line with revenue gains, and also due to a reduction in interest expense of \$33 million, stemming from a debt refinancing in October. This year's operating surplus of \$114 million may represent a high water mark for the foreseeable future, however, due to the broad and ongoing revenue pressures in higher education, as discussed below.

Total revenues increased 5% or a solid \$222 million versus the prior year, with many of the University's traditional sources of revenue—endowment distributions, sponsored research funding, and net tuition—all performing at pace. Additionally, with thanks to our entrepreneurial faculty and staff, the University was able to invest in mission-related activities with non-federal research funding up 8%, and revenue from continuing and executive education also up 8%. Although smaller in size, these represent important revenue sources for the future.

The balance sheet was strengthened this past year as net assets increased by \$1.7 billion, or 4%, to \$44.1 billion. The increase in net assets was driven by endowment returns in excess of distributions, as well as new gifts to the endowment and to capital projects. Moody's and Standard & Poor's both reconfirmed Harvard's AAA rating this past year, and in October we refinanced \$2.5 billion of our existing bond portfolio. In testimony to Harvard's standing in the investment community, our underwriters tell us that Harvard set records on the new debt issuance—the \$500 million tranches of 30-year and 40-year taxable debt in the Series 2016A offering achieved the lowest interest rates ever recorded for those maturities in the history of taxable bond markets.

Although investment returns on the endowment this past year exceeded distributions, HMC's 8% return for the year was generally less than peers'.

Narv Narvekar's letter reviewing this result, as well as his discussion on the repositioning of Harvard Management Company, is included later in this financial report. After decades of market leadership, HMC's investment results in recent years have been comparatively disappointing. We believe that the key underlying issues are being squarely addressed, and that the repositioning of portfolio and staff, as well as the changes in investment approach, are necessary and correct. Narv's leadership is also most encouraging. We caution, however, that it will likely take time to see the benefit of these important changes.

Harvard is at the forefront of many of the exciting changes in academia and higher education including new approaches to online and blended learning; cross-disciplinary scholarship; and the emergence of new science, technologies, and data science. In the background, however, the business model of higher education is under enormous pressure.

Since the 1950's, higher education in the United States has been a growth industry, and has enjoyed demographic increases in student populations, generally steady economic expansion, increases in federal research funding, and robust investment markets. This picture has changed. Higher education has matured as an industry and revenues are under pressure as student numbers have plateaued, tuition costs reach limits of affordability, federal research support is threatened, and expectations for returns in the investment markets are muted. The industry is showing financial strain, even in these comparatively healthy economic times, with the recent closures, shrinkages, and mergers of smaller, less well-positioned schools. Large research universities have been to date somewhat less affected, but they are not immune. While Harvard is fortified by its resources in people, as well as physical and financial capital, and in more recent years by the extraordinary success of The Capital Campaign, we are mindful in our long-term planning for a less favorable future revenue environment.

Harvard's Schools and units are keenly aware of the changing economic landscape. Our Deans and administrative staff are first focused on mission excellence, but they are also increasingly focused on cost containment and newer sources of mission-related revenues. Harvard is comparatively agile in that every school and unit is managed locally under the centuries-old discipline of "every tub on its bottom." In addition, budgeting, financial planning, and management processes are well developed, and "guard rails" for performance and accounting practices have been established and embraced. In the years ahead, however, it will be increasingly difficult to balance budgets in a new era of constrained revenue growth, and also, inevitably, when the current economic expansion wanes. We raise this not as a matter of discouragement, but simply to signal to the University's many friends, supporters, alumni, faculty, students, and staff that the University, and its Schools and units, will need to further adjust to the environment, change, and embrace new ways of extending Harvard's excellence in the future.


Any discussion of Harvard's finances is incomplete without emphasizing the significance of philanthropy. Fully 45% of University's revenues are thanks to the generosity of past donors in the form of distributions from the endowment (36% of revenues), as well as current donors through gifts received this past year (9% of revenues). Excellence in academics and research is highly correlated with philanthropy, and Harvard is blessed by its many supporters. The Harvard Campaign has recently surpassed \$8 billion in pledges and receipts, and the funding has made possible, for example: supporting a need-blind affordable education for every Harvard undergraduate, sustaining nearly 120 chairs for faculty, dozens of

new research discoveries, and an invigorated campus, including the recently renewed Winthrop House, the Science Center's new Pritzker Commons and modernized Cabot Library, the new Ruth Mulan Chu Chao Center at Harvard Business School, and an entirely transformed Harvard Kennedy School campus. From a financial standpoint, every dollar donated to Harvard is needed and appreciated as the full costs of teaching and research are not respectively covered by tuition and research sponsorship.

In closing, we want to thank each and every donor to the University — past and present — for understanding that Harvard's excellence in teaching and research is made possible through your philanthropy, and we want to thank each and every member of Harvard's faculty and staff for their contributions, on a daily basis, in making Harvard one of the world's preeminent institutions.



Thomas J. Hollister
VICE PRESIDENT FOR FINANCE



Paul J. Finnegan
TREASURER

October 26, 2017

FINANCIAL OVERVIEW

The University ended fiscal year 2017 with an operating surplus of \$114 million compared to an operating surplus of \$77 million in fiscal year 2016. The University’s net assets increased by \$1.7 billion to \$44.1 billion at June 30, 2017, due to investment returns on the endowment, generous campaign contributions, and a reduction in the University’s interest expense.

OPERATING REVENUE

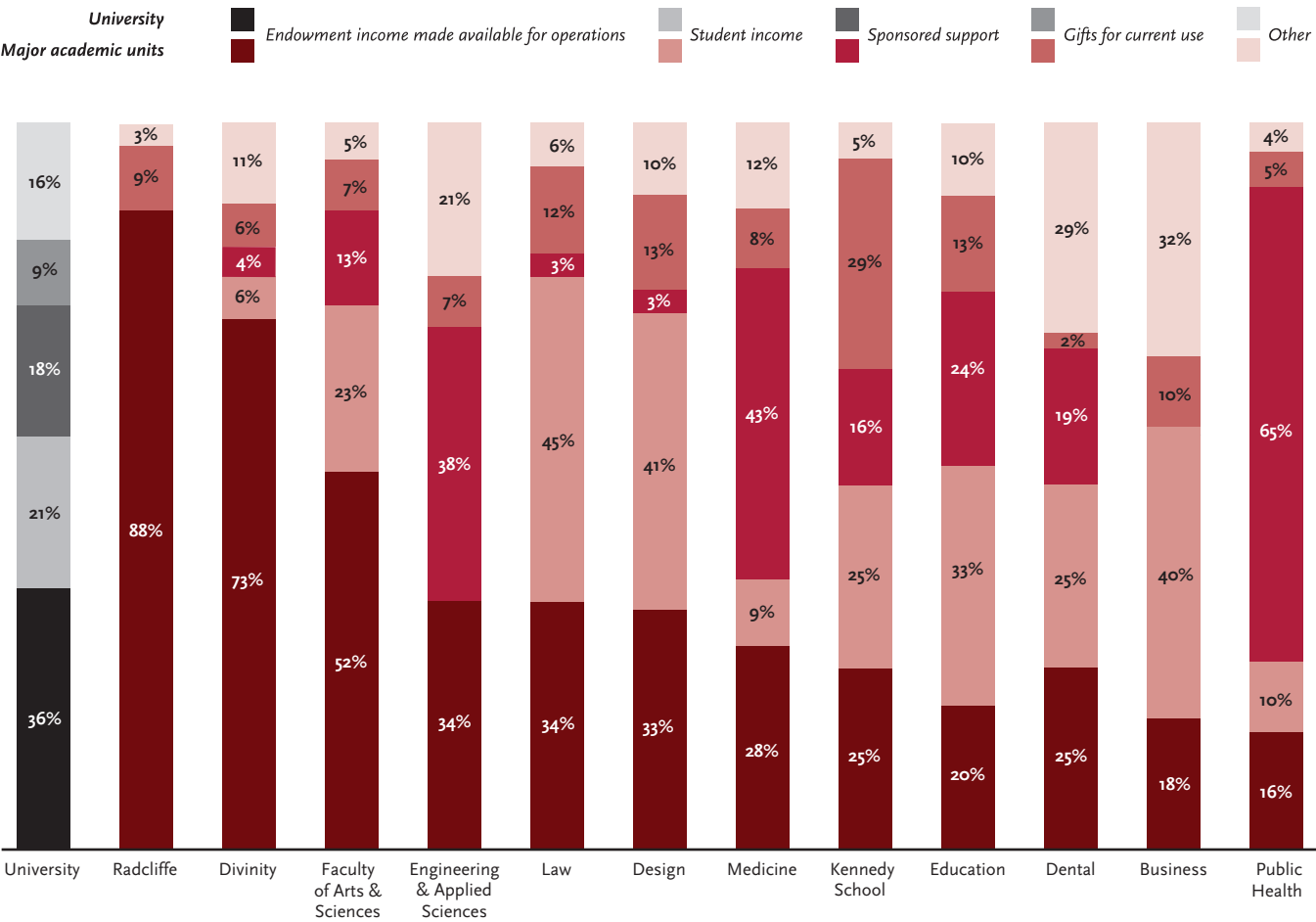
Total operating revenue increased 5% to \$5.0 billion. The largest drivers were the annual endowment distribution, gifts for current use and sponsored support revenues.

In fiscal year 2017, the endowment distribution increased 5% to \$1.8 billion. Growth in the endowment distribution was a result of the annual Corporation-approved increase and the impact of new

gifts. In the aggregate, Harvard’s endowment payout rate (i.e., the dollars withdrawn annually for operations and for one-time or time-limited strategic purposes, as a percentage of the endowment’s prior year-end market value) was 5.4% compared to the 5.1% payout rate in fiscal year 2016.

The University experienced a notable increase in current use giving in fiscal year 2017 thanks to the extraordinary generosity of our donor community. Gifts for current use were \$450 million in fiscal year 2017, while total cash receipts from giving, including gifts designated as endowment, grew to \$1.3 billion (see *Note 16* of the audited financial statements). We are grateful to our donor community for fulfilling their early campaign promises and continuing to support new initiatives as we approach the final year of the Campaign.

FISCAL YEAR 2017 SOURCES OF OPERATING REVENUE



Revenue from federal and non-federal sponsored sources increased by 5% to \$885 million in fiscal year 2017. Federal funding, which accounted for approximately 70% of total sponsored revenue in fiscal year 2017, increased 4% to \$618 million. Fiscal year 2017 is the second year the University's federal revenue has increased since 2011, and the Department of Health and Human Services remains the most significant contributor of the University's federal funding. The University's relationships with foundations, corporations and other non-federal sponsors expanded in fiscal year 2017, resulting in an 8% increase in non-federal support revenues to \$267 million.

Net student revenue increased approximately 6% to \$1.1 billion in fiscal year 2017, mainly driven by 8% growth in revenue from continuing and executive education programs. Rising demand for expanded program offerings across the University contributed to the anticipated growth in continuing and executive education. Net undergraduate and graduate tuition increased 6% due to a continued focus on expanding graduate course offerings and annual rate changes. The University's steadfast commitment to financial aid is reflected in the increase in scholarships applied to student income of \$16 million, totaling \$414 million in fiscal year 2017.

OPERATING EXPENSES

Total operating expenses increased by 4% to \$4.9 billion. Compensation expense (i.e., salaries, wages and benefits), which represents approximately half of the University's total operating expense, increased 5% to \$2.5 billion. Salary and wage expenses grew 4% and employee benefit costs rose 7%. These increases were offset by a 14% decrease in interest expense resulting from the refinancing of debt in October of 2016.

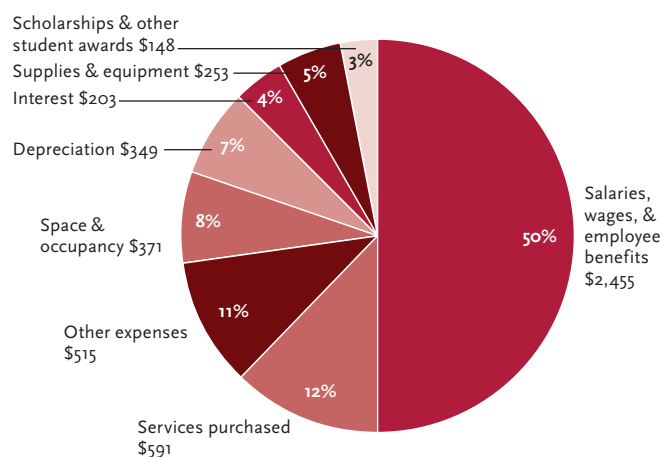
Salaries and wages increased by 4%, or \$79 million, to \$1.9 billion in fiscal year 2017 due to the University's merit increase programs and the addition of faculty and staff to strategic areas of focus such as academic and research programs and online learning and publishing activities.

Employee benefits expense increased 7% to \$569 million. The increase was mainly driven by growth in defined benefit and post-retirement costs due to

the change in the discount rate at the end of fiscal year 2016. Active employee health expense increased over 4% due to higher prescription costs as well as plan enrollments.

FISCAL YEAR 2017 OPERATING EXPENSES

In millions of dollars



TOTAL OPERATING EXPENSES \$4,885

BALANCE SHEET

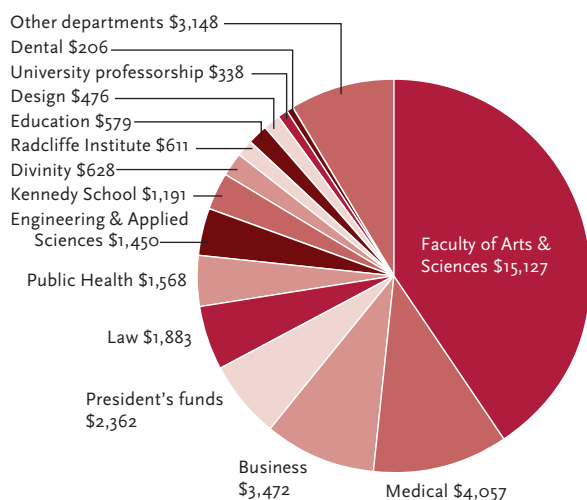
Investments

In fiscal year 2017, the return on the endowment was 8% and its value (after the net impact of distributions from the endowment for operations and the addition of new gifts to the endowment during the year) increased from \$35.7 billion at the end of fiscal year 2016 to \$37.1 billion at the end of fiscal year 2017. The University presents gross investment assets and gross investment liabilities in the *Balance Sheet*. Fiscal year 2017 reflects a significant decrease in gross investment assets and gross investment liabilities primarily given Harvard Management Company's (HMC) change in investment approach. More information can be found in the Message from the CEO of Harvard Management Company, found on page 8 of this report.

The University's holdings of liquid investments (e.g., cash and treasuries) outside of the General Investment Account (GIA) decreased from \$1.2 billion at June 30, 2016 to approximately \$800 million at June 30, 2017 and is included in other investments as presented in *Note 3*. The University has a policy of maintaining a cash reserve floor held outside the General Investment Account (GIA) of \$800 million.

MARKET VALUE OF THE ENDOWMENT AS OF JUNE 30, 2017

In millions of dollars



TOTAL MARKET VALUE \$37,096

Debt

The par value of outstanding debt decreased \$64 million to \$5.1 billion as of June 30, 2017. In October 2016, the University executed a major refinancing of approximately half of the debt portfolio, resulting in a decrease in the average interest rate from 4.6% to 4.1%, and generating approximately \$33 million of interest expense savings versus the prior year. Bonds and notes payable increased modestly from \$5.2 billion at June 30, 2016 to \$5.4 billion at June 30, 2017, resulting from bond premiums associated with the refinancing.

The University is rated AAA by S&P Global Ratings (re-affirmed in September 2016) and Aaa by Moody's Investors Service (re-affirmed in September 2016). Additional detail regarding the University's debt portfolio can be found in *Note 12* of the audited financial statements.

Accrued Retirement Obligations

The University's accrued retirement obligations decreased by \$151.6 million or 12% to \$1.1 billion at June 30, 2017. The primary driver of the decrease was an improvement in post-retirement claims experience and an increase in the discount rate used to calculate the obligation for both the pension and postretirement plans.

Capital Expenditures

The University invested \$906 million in capital projects and acquisitions during fiscal year 2017, compared to \$597 million in fiscal year 2016. This enabled significant progress on several noteworthy projects, including:

- Renovations of Winthrop House (including the addition) and Lowell House for the undergraduate long-term house renewal initiative;
- Early construction activities for the Allston Science and Engineering Complex and District Energy Facility which will anchor an innovation area that will lead to the development of an enterprise research campus, combining science and engineering innovation with business expertise;
- Continued construction of the Kennedy School's transformative Pavilions project, which includes expansion, new buildings and a raised, pedestrian-only courtyard;
- Ongoing efforts to transform the Smith Campus Center to support the University's goal of creating new and programmable common space for the entire community;
- Construction of Klarman Hall which will allow the Harvard Business School to accommodate large-scale events for approximately 1,000 individuals;
- The renovation of the Faculty of Arts and Sciences' Cabot Library to better support learning and teaching for the digital age while effortlessly connecting the library to the Science Center atrium and plaza social spaces; and
- The establishment of the Pagliuca Life Lab to provide shared laboratory space for high-potential life sciences and biotech startups founded by Harvard faculty, alumni, students, and postdoctoral scholars.

This concludes the summary of the key financial highlights for fiscal year 2017. We encourage you to read the audited financial statements and related notes for more information regarding the financial position and results of the University.



HARVARD
MANAGEMENT
COMPANY, INC.

Message from the CEO

SEPTEMBER 2017

Dear Members of the Harvard Community,

I'm writing to share with you the performance of the Harvard endowment for fiscal year 2017 and to provide an update on our progress since my January letter.

For the fiscal year ended June 30, 2017, the return on the Harvard endowment was 8.1% and the value of the endowment was \$37.1 billion. Performance reflects strong returns from public equity, private equity, and our direct real estate platform, while natural resources experienced a challenging year. We also executed secondary sales in real estate and private equity that generated significant liquidity for the endowment.

The State of HMC

Our performance is disappointing and not where it needs to be. Indeed, the opportunity to improve this is what attracted me to the leadership role of Harvard Management Company. The endowment's returns are a symptom of deep structural problems at HMC and the resultant significant issues in the portfolio. These matters have challenged HMC for years, despite a highly talented and dedicated team of professionals and active support from the University and the HMC Board of Directors. The problems highlight the critical impact of culture, structure, and incentives in an investment organization.

I believe strongly that an honest, reflective, and clear-sighted recognition of these problems is the first critical step towards generating solutions. It is an unfortunate truth that the issues that have impacted HMC and its performance in the past will continue to negatively impact returns in the near term and will require time to overcome.

As a fourteen-year leader of a highly successful endowment, it is my firm conviction that a talented and skilled team supported and guided by the right organizational and investment culture, and properly incentivized, will overcome legacy issues and produce strong long-term results.

When I took this position, it was clear to me that the time had come for an aggressive plan to restructure HMC and create the necessary organizational and investment culture. Accordingly, my first seven months included establishing a generalist investment model, recruiting new senior investment team members, integrating existing team members from the previous silo model and new team members (including myself) into our generalist model, spinning off various internal platforms and preparing to spin off others, rebuilding our investment processes and analytics, creating a new risk framework, generating meaningful liquidity, and designing our new compensation framework. In a perfect world, we would have moved through these changes over a much longer period. However, given the time needed for these changes to impact results, the HMC Board of Directors and I strongly believe that HMC will be in a far better position by moving quickly. We have done so.

In my January letter, I touched upon the vision for the future of HMC. This letter provides an update on our progress toward that vision, what has been accomplished, the plan going forward, and the timeframe to be expected.

Organizational Update

Internal Management

As of June 30, 2017, HMC has largely exited internal management of public markets assets. We have based this approach on practical considerations rather than any specific dogma. While internal management generally generates lower fees and expenses, today's market landscape makes it ever more difficult to attract and retain top portfolio managers. I strongly believe that the changes we are making as an organization will produce better returns for Harvard in a more efficient manner over time.

Accordingly, as of June 30, we have made the following moves:

- The relative value platform has shut down. We expect that two of these teams will continue to be external partners to Harvard on a going-forward basis.
- The internally managed equity platform has shut down.
- The credit platform has been repositioned and is currently executing its strategy internally. We expect this team to depart HMC and are working to execute a mutually beneficial arrangement as an external manager.
- The real estate platform responsible for direct investments is also expected to spin out. We are working closely with the team to support this effort and to execute a mutually beneficial arrangement as an external manager.
- The size of the support organization has been reduced as a result of our new investment approach.

As stated in my January letter, the natural resources portfolio will continue to be managed internally. Separately, while we do not expect to rebuild a sizeable internal platform, we will always be opportunistic, and we will innovate when appropriate investment opportunities are identified.

From Silos to Generalist Model

HMC's investment professionals have historically focused their work within specific asset classes. Over time, however, this "silo" approach created unintended consequences. Portfolio managers conducted research and analysis and executed investment decisions within their respective asset class independent of the rest of the portfolio, sometimes creating both gaps in the portfolio and unnecessary duplication. This model also created an overemphasis on individual asset class benchmarks. Overall, I believe the silo approach did not lead to the best investment thinking for a major endowment.

We have now moved our approach towards a generalist investment model in which all members of the investment team take ownership of the entire portfolio. The team will have a singular focus: the performance of the overall endowment. We will engage in focused debate and discussion about investment opportunities, both within asset classes and across the investment universe.

I first experienced the generalist investment model while working at the University of Pennsylvania's endowment and I subsequently brought this approach to Columbia. Other highly successful endowments have used elements of the generalist model, and HMC will create its own version.

Organizational Culture

A successful investment organization is reliant upon the development and execution of an appropriate organizational culture.

Besides the obvious need to strive for excellence and to conduct ourselves with integrity, we seek to build an organization that is highly collaborative and less hierarchical than previously structured. Ultimately, we seek to develop a partnership culture in which colleagues can easily access one another and engage in informal debate. By cultivating ideas from a broad range of team members, we increase the opportunity to make superior investment decisions. This approach will also help maintain high team morale while attracting and retaining top endowment talent.

Investment Culture

A central tenet of our investment culture is the belief that a disciplined set of processes practiced consistently by a highly skilled team will generate superior long-term results. Therefore, a central effort of our team is to build investment processes and supporting analytics, and execute them consistently with high competence. Our objective is to create a common language to consider and evaluate assets across the investment spectrum. Put another way, these processes and analytics will provide the fuel behind the generalist model.

A second central tenet of our investment culture is the belief that a stable organization is critical to investment success. When I departed Columbia, ten of our team members had worked together for eight years or more, with most of us in excess of ten years. By contrast, HMC has experienced several leadership changes during a relatively short period of time. I believe the strong long-term performance of several endowments with consistent senior teams is not a coincidence.

In that context, I have recruited four senior Generalist team members with whom I have an established professional history. We are exceptionally fortunate to have recruited Rick Slocum, whom I have known for thirty-two years, as HMC's first chief investment officer. The newest team members and I are joined by a highly talented and dedicated group of existing HMC colleagues. I look forward to creating longevity and deep familiarity amongst our collective Generalist team.

Compensation

We have created a new compensation framework impacting fiscal year 2018 and beyond.

There are five central tenets to our approach:

1. The framework applies to all HMC staff, excluding any remaining internal management platforms.
2. Compensation will be determined by the performance of the entire portfolio, not any individual silo or sub-portfolio.
3. The framework will ultimately relate to a five-year look back period, thereby incentivizing our team to focus upon medium-term results. (As a practical matter, we will have to build up to a five-year period, starting with fiscal year 2018).
4. Bonuses for Executive and the senior-most Generalist team members will be paid out over a multi-year period. This is a critical feature to align interests.
5. Finally, the program is designed to allow HMC to attract and retain top endowment management talent.

Risk Framework

We have created a new risk allocation framework that will replace the asset allocation approach previously used by HMC. This model is very different from past HMC approaches and we have completed the first phase of building and integrating this framework into our investment decision making.

In managing the University's financial assets, HMC seeks to maximize returns, subject to the risk tolerance established by the University, in consultation with HMC's Board of Directors. We will determine with the University's financial team the appropriate risk level for Harvard. Our dialogue with this team is just beginning and we expect it to grow over time, allowing us to achieve this important understanding and objective.

The risk allocation framework is a management tool for assessing the underlying assets in the portfolio, which:

- Allows us to understand basic exposures in the portfolio, dispensing with common labels, such as hedge funds and private equity.
- Highlights exposures as a portion of portfolio risk, rather than dollars.
- Allows us to estimate the total risk in the portfolio, in order to inform our portfolio actions and our dialogue with the University.
- Makes long-term assumptions (e.g., risk, return, and correlation), thereby avoiding attempts to forecast short-term asset class returns or respond to day-to-day market moves (e.g., short-term volatility targeting).

- Eliminates a policy portfolio in nominal terms, as any risk allocation can be executed with a theoretically infinite set of asset allocations.
- Does not require a policy portfolio even in risk terms as, like many endowments, we have grown highly skeptical of optimizations.

While at Columbia, it was a proud moment on two separate occasions to have the highest ten-year return of any endowment, despite taking less risk than many. That being said, I also consider it to be of limited relevance. HMC's returns will largely be a function of Harvard's chosen risk level and not necessarily related to that of any peers, who might have different risk appetites. Comparisons to other peers are natural, but not productive. In my opinion, misdirected pressures caused by peer return comparisons contributed meaningfully to the challenges experienced by leading endowments during the financial crisis. A more sophisticated lens will always focus first upon risk appetites rather than simply returns.

Timeframe

As I explained in my January letter, the HMC Board of Directors and I expect that it will take a number of years to reposition HMC in order to perform up to our expectations from that point forward. As those highly familiar with endowment investing understand, change takes time. In HMC's case, there are four factors contributing to this timeframe.

First, like most endowments, HMC's portfolio includes some highly illiquid assets, with long duration. Managers of these assets will typically execute a multi-year plan to add value and will only sell the asset upon completion of these efforts. However, the timing of dispositions is not entirely within HMC's control.

Where we could take prudent direct action to reduce exposure, we have done so—and will continue to do so. As an example, HMC successfully executed a sizeable secondary sale of externally managed partnerships in both our real estate and private equity portfolios. Our internal real estate, legal, and portfolio accounting teams were critical in achieving this terrific outcome. This resulted in both a reduction in exposure and generated significant liquidity for our portfolio.

By the same token, meaningfully increasing our exposure to certain other illiquid assets will take a similar multi-year period. We will make commitments to external managers, diversified by vintage year, and will only see our capital drawn and invested over the next few years, at the manager's discretion.

We also have started to make changes in the public markets portfolio. While these changes should take less time, executing them in a prudent manner will take at least two years and perhaps longer.

Second, HMC's former silo model constrained team members to thinking about only small pieces of the overall portfolio. Therefore, some of the best ideas were sized in the context of a sub-portfolio, not the entire endowment. As a result, the portfolio includes investments in many high conviction managers undersized for such a large endowment. Unfortunately, many of these managers (liquid or illiquid) are now closed or in high demand from peer institutions, making HMC's desire to "upsized" exceptionally difficult in the immediate future.

Third, many of the most appealing external managers seek reliable investment partners, whom they believe are stable and aligned with their investment vision. The lack of consistent leadership at HMC over the past several years has complicated this effort. We are now focused on re-establishing HMC as an investment partner of choice.

Fourth, HMC is obviously undergoing substantial philosophical and structural change that will take time to fully absorb into the organization's culture.

We are progressing through each of these highly significant factors simultaneously and their impact on the portfolio will obviously be incremental over time. Ultimately, restructuring illiquid portions of the portfolio requires the longest time to implement. Several of today's best performing endowments have undergone such evolutions over multiple years and ultimately emerged as leaders. HMC will do the same.

Natural Resources

For years, HMC benefited from an internally managed natural resources program that generated strong returns. At this stage, however, while most assets remain attractive, a few have significant challenges.

The HMC Board of Directors took some markdowns on value prior to my arrival, and we have taken more markdowns in fiscal year 2017, which meaningfully impacted our results.

Markdowns do not imply sales. HMC will choose to hold many of the assets if the prospects for forward-looking returns are reasonable. Furthermore, certain assets were sold at or above their previous valuations during fiscal year 2017.

Our natural resources platform will take multiple years to reposition. We are in active dialogue with our largely new and accomplished natural resources team to determine the best path forward with regards to the existing assets and to develop a strategic longer-term plan for the overall natural resources portfolio. As noted previously, the illiquid nature of this portfolio means that change will be incremental and a multi-year process.

Looking Ahead

Since arriving at HMC, I have focused my priorities upon positioning the endowment for better future performance. As investors are well aware, performance can only be meaningfully evaluated over a full market cycle, including inevitable ups and downs. One or even three-year performance is not informative. Our focus at HMC will reflect a longer-term view.

Our primary focus has now shifted to having the Generalist investment team gain a collective understanding of the entire portfolio. As we do so, we will gain proficiency in our new processes and continue to develop the analytics which support them. At the same time, we will make portfolio moves accordingly.

Indeed, my time at Harvard has given me many reasons to be even more optimistic for our future. We are equipped with dynamic investment and support teams and collectively we are driven by our mission to support the educational and research goals of Harvard University. There is certainly much work to be done. However, I am confident that our efforts will ultimately result in a stronger model and improved investment performance that will benefit many future generations of Harvard students, faculty, and staff to come.

Best regards,



N.P. "Narv" Narvekar
Chief Executive Officer



Report of Independent Auditors

To the Joint Committee on Inspection of the Governing Boards of Harvard University:

We have audited the accompanying consolidated financial statements of Harvard University (the "University"), which comprise the consolidated balance sheet as of June 30, 2017, and the related consolidated statements of changes in net assets with general operating account detail, changes in net assets of the endowment and of cash flows for the year then ended.

Management's Responsibility for the Consolidated Financial Statements

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

Auditors' Responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audits. We conducted our 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 Harvard University as of June 30, 2017 and the changes in its net assets and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 2 to the consolidated financial statements, the University changed the manner in which it accounts for the consolidation of limited liability investment entities in 2017. Our opinion is not modified with respect to this matter.

Other Matter

We previously audited the consolidated balance sheet as of June 30, 2016, and the related consolidated statements of changes in net assets with general operating account detail, changes in net assets of the endowment and of cash flows for the year then ended (not presented herein), and in our report dated November 1, 2016, 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, 2016 and for the year then ended is consistent, in all material respects, with the audited consolidated financial statements from which it has been derived.

October 26, 2017

BALANCE SHEETS

with summarized financial information as of June 30, 2016

In thousands of dollars				June 30	
				2017	2016
ASSETS:					
Cash				\$ 139,896	\$ 113,738
Receivables, net (Note 6)				261,841	248,204
Prepayments and deferred charges				130,701	151,053
Notes receivables, net (Note 7)				383,063	381,191
Pledges receivables, net (Note 8)				1,948,026	2,134,220
Fixed assets, net (Note 9)				7,125,898	6,529,540
Interests in trusts held by others (Note 4)				397,161	355,835
Investment portfolio, at fair value (Notes 3, 4 and 5)				43,275,926	47,068,312
Securities pledged to counterparties, at fair value (Notes 3, 4 and 5)				57,551	15,357,995
TOTAL ASSETS				53,720,063	72,340,088
LIABILITIES:					
Accounts payable				\$ 346,322	\$ 343,289
Deposits and other liabilities				930,439	824,244
Securities lending and other liabilities associated with the investment portfolio (Notes 3, 4, 5 and 12)				920,558	21,479,179
Liabilities due under split interest agreements (Note 11)				840,736	791,202
Bonds and notes payable (Note 12)				5,431,090	5,176,702
Accrued retirement obligations (Note 13)				1,092,275	1,243,846
Government loan advances (Note 7)				72,564	70,296
TOTAL LIABILITIES				9,633,984	29,928,758
NET ASSETS				44,086,079	42,411,330
TOTAL LIABILITIES AND NET ASSETS				\$ 53,720,063	\$ 72,340,088
				June 30	
				2017	2016
NET ASSETS:					
General Operating Account (GOA) (Note 10)	\$ 3,924,841	\$ 2,432,666	\$ 98,216	\$ 6,455,723	\$ 6,243,721
Endowment (Note 10)	6,148,173	23,032,044	7,916,257	37,096,474	35,665,743
Split interest agreements (Note 11)		53,838	480,044	533,882	501,866
TOTAL NET ASSETS	\$ 10,073,014	\$ 25,518,548	\$ 8,494,517	\$ 44,086,079	\$ 42,411,330

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

STATEMENTS OF CHANGES IN NET ASSETS WITH GENERAL OPERATING ACCOUNT DETAIL

with summarized financial information for the year ended June 30, 2016

				For the year ended	
				June 30	
<i>In thousands of dollars</i>	Unrestricted	Temporarily Restricted	Permanently Restricted	2017	2016
OPERATING REVENUE:					
Student income:					
Undergraduate program	\$ 313,224			\$ 313,224	\$ 300,691
Graduate and professional degree programs	559,474			559,474	530,978
Board and lodging	184,732			184,732	183,185
Continuing education and executive programs	410,664			410,664	381,068
Scholarships applied to student income (Note 14)	(413,870)			(413,870)	(397,524)
Total student income	1,054,224	0	0	1,054,224	998,398
Sponsored support (Note 15)					
Federal government – direct costs	452,852			452,852	435,778
Federal government – indirect costs	165,253			165,253	161,458
Non-federal sponsors – direct costs	93,064	\$ 139,382		232,446	212,817
Non-federal sponsors – indirect costs	22,477	12,507		34,984	35,402
Total sponsored support	733,646	151,889	0	885,535	845,455
Gifts for current use (Note 16)	152,532	297,407		449,939	421,169
Investment income:					
Endowment returns made available for operations (Note 10)	311,169	1,476,248		1,787,417	1,706,244
GOA returns made available for operations	164,893			164,893	133,351
Other investment income	13,578	4,884		18,462	16,572
Total investment income	489,640	1,481,132	0	1,970,772	1,856,167
Other income (Note 17)	638,310			638,310	655,700
Net assets released from restriction	1,838,262	(1,838,262)		0	0
TOTAL OPERATING REVENUE	4,906,614	92,166	0	4,998,780	4,776,889
OPERATING EXPENSES:					
Salaries and wages	1,885,692			1,885,692	1,806,280
Employee benefits (Note 13)	569,030			569,030	530,047
Services purchased	591,135			591,135	582,583
Space and occupancy	371,349			371,349	345,345
Depreciation (Note 9)	348,885			348,885	338,173
Supplies and equipment	253,163			253,163	256,826
Interest (Note 12)	202,547			202,547	235,303
Scholarships and other student awards (Note 14)	147,555			147,555	142,070
Other expenses (Note 18)	515,229			515,229	463,598
TOTAL OPERATING EXPENSES	4,884,585	0	0	4,884,585	4,700,225
NET OPERATING SURPLUS	22,029	92,166	0	114,195	76,664
NON-OPERATING ACTIVITIES:					
Income from GOA Investments	14,630			14,630	18,707
GOA realized and change in unrealized (depreciation)/appreciation, net (Note 3)	303,751			303,751	(115,457)
GOA returns made available for operations	(164,893)			(164,893)	(133,351)
Change in pledge balances (Note 8)		(136,928)		(136,928)	(67,866)
Change in interests in trusts held by others		(413)		(413)	(8,430)
Gifts for facilities and loan funds (Note 16)		109,748	\$ 330	110,078	117,224
Change in retirement obligations (Note 13)	209,981			209,981	(245,722)
Charges related to debt redemption	(229,357)			(229,357)	0
Other changes	(970)			(970)	5,245
Transfers between GOA and endowment (Note 10)	(49,964)	25,751	937	(23,276)	91,228
Transfers between GOA and split interest agreements (Note 11)		15,180	24	15,204	11,027
Non-operating net assets released from restrictions	80,757	(79,699)	(1,058)	0	0
TOTAL NON-OPERATING ACTIVITIES	163,935	(66,361)	233	97,807	(327,395)
GENERAL OPERATING ACCOUNT NET CHANGE DURING THE YEAR	185,964	25,805	233	212,002	(250,731)
Endowment net change during the year	300,794	549,168	580,769	1,430,731	(1,949,802)
Split interest agreements net change during the year (Note 11)		2,198	29,818	32,016	43,320
NET CHANGE DURING THE YEAR	486,758	577,171	610,820	1,674,749	(2,157,213)
Net assets, beginning of year	9,586,256	24,941,377	7,883,697	42,411,330	44,568,543
NET ASSETS, END OF YEAR	\$ 10,073,014	\$ 25,518,548	\$ 8,494,517	\$ 44,086,079	\$ 42,411,330

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

STATEMENTS OF CHANGES IN NET ASSETS OF THE ENDOWMENT

with summarized financial information for the year ended June 30, 2016

In thousands of dollars	Unrestricted	Temporarily Restricted	Permanently Restricted	For the year ended June 30	
				2017	2016
Investment return (Note 3):					
Income from general investments	\$ 14,688	\$ 70,777		\$ 85,465	\$ 131,075
Realized and change in unrealized appreciation/(depreciation), net	432,980	2,133,546		2,566,526	(757,067)
Total investment return	447,668	2,204,323	0	2,651,991	(625,992)
Endowment returns made available for operations	(311,169)	(1,476,248)		(1,787,417)	(1,706,244)
Net investment return	136,499	728,075	0	864,574	(2,332,236)
Gifts for endowment (Note 16)	1,028	165,898	\$ 383,603	550,529	491,983
Transfers between endowment and the GOA (Note 10)	49,964	(25,751)	(937)	23,276	(91,228)
Capitalization of split interest agreements (Note 11)	0	3,593	25,650	29,243	20,971
Change in pledge balances (Note 8)	0	(108,217)	59,325	(48,892)	(42,878)
Change in interests in trusts held by others (Note 10)	0	(2,428)	44,167	41,739	1,090
Other changes	(994)	(96,765)	68,021	(29,738)	2,496
Net assets released from restrictions	114,297	(115,237)	940	0	0
NET CHANGE DURING THE YEAR	300,794	549,168	580,769	1,430,731	(1,949,802)
Net assets of the endowment, beginning of year	5,847,379	22,482,876	7,335,488	35,665,743	37,615,545
NET ASSETS OF THE ENDOWMENT, end of year	\$ 6,148,173	\$ 23,032,044	\$ 7,916,257	\$ 37,096,474	\$ 35,665,743

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

STATEMENTS OF CASH FLOWS

with summarized financial information for the year ended June 30, 2016

In thousands of dollars	For the year ended June 30	
	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES:		
Change in net assets	\$ 1,674,749	\$ (2,157,213)
Adjustments to reconcile change in net assets to net cash (used in) operating activities:		
Depreciation	348,885	338,173
Amortization of premium and discount related to bonds and notes payable	(55,748)	(5,211)
Realized and change in unrealized (appreciation)/depreciation, net	(2,956,361)	905,297
Change in fair value of interest rate exchange agreements	(14,212)	19,118
Change in interests in trusts held by others	(41,326)	7,340
Change in liabilities due under split interest agreements	49,534	(118,882)
Gifts of donated securities	(149,964)	(200,806)
Proceeds from the sales of gifts of unrestricted securities	47,615	80,363
Gifts of donated securities in other investments		5,882
Gifts for restricted purposes	(590,189)	(501,319)
Loss on redemption of debt	50,797	
Loss on disposal of assets	32,274	11,408
Gain on sale of property	(3,003)	(10,347)
Change in accrued retirement obligations	(151,571)	286,844
Changes in operating assets and liabilities:		
Receivables, net	(13,637)	(8,242)
Prepayments and deferred charges	20,352	(18,570)
Pledges receivable, net	186,194	110,979
Accounts payable	13,198	18,556
Deposits and other liabilities	106,195	16,926
NET CASH (USED IN) OPERATING ACTIVITIES	(1,446,218)	(1,219,704)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Loans made to students, faculty, and staff	(50,122)	(51,311)
Payments received on student, faculty, and staff loans	46,210	47,423
Change in other notes receivable	2,040	534
Proceeds from the sales and maturities of investments	70,540,252	88,023,222
Purchase of investments	(59,712,601)	(91,802,151)
Change associated with repurchase agreements	828,320	(94,950)
Additions to fixed assets	(979,169)	(692,798)
Proceeds from sale of property	3,649	10,790
NET CASH PROVIDED BY/(USED IN) INVESTING ACTIVITIES	10,678,579	(4,559,241)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Change in overdrafts included in accounts payable	(9,159)	8,582
Proceeds from issuance of debt	3,331,926	5,707
Debt repayments	(3,072,587)	(367,192)
Proceeds from the sales of gifts of restricted securities	102,349	120,443
Gifts for restricted purposes	590,189	501,319
Affiliated entity contributions and distributions, net	(15,411)	(38,293)
Change in repurchase and reverse repurchase agreements	(10,135,778)	5,551,555
Change in government loan advances	2,268	864
NET CASH (USED IN)/PROVIDED BY FINANCING ACTIVITIES	(9,206,203)	5,782,985
NET CHANGE IN CASH	26,158	4,040
Cash, beginning of year	113,738	109,698
CASH, end of year	\$ 139,896	\$ 113,738
Supplemental disclosure of cash flow information:		
Accounts payable related to fixed asset additions	\$ 71,468	\$ 72,474
Cash paid for interest	\$ 203,778	\$ 246,464

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

1. UNIVERSITY ORGANIZATION

Harvard University (the “University”) is a private, not-for-profit institution of higher education with approximately 6,645 undergraduate and 13,270 graduate students. Established in 1636, the University includes the Faculty of Arts and Sciences, the John A. Paulson School of Engineering and Applied Sciences, the Division of Continuing Education, ten graduate and professional Schools, the Radcliffe Institute for Advanced Study, a variety of research museums and institutes, and an extensive library system to support the teaching and research activities of the Harvard community. The President and

Fellows of Harvard College (the “Corporation”), a governing board of the University, has oversight responsibility for all of the University’s financial affairs. The Corporation delegates substantial authority to the Schools and departments for the management of their resources and operations.

The University includes Harvard Management Company (HMC), a wholly owned subsidiary founded in 1974 to manage the University’s investment assets. HMC is governed by a Board of Directors that is appointed by the Corporation.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of presentation

The accompanying consolidated financial statements have been prepared on the accrual basis of accounting and include the accounts of the University and affiliated organizations controlled by the University. Significant inter-affiliate accounts and transactions have been eliminated.

Funds transferred to the University on behalf of specific beneficiaries (agency funds) are recorded as assets and liabilities in the *Balance Sheets* and are not included in the *Statement of Changes in Net Assets with General Operating Account Detail*.

The financial statements include certain prior year summarized comparative information in total, not by net asset classification. This information is not presented in sufficient detail to conform to generally accepted accounting principles (GAAP). Accordingly, such information should be read in conjunction with the University’s financial statements for the year ended June 30, 2016, from which the summarized information is derived.

Net asset classifications

For the purposes of financial reporting, the University classifies resources into three net asset categories pursuant to any donor-imposed restrictions and applicable law. Accordingly, the net assets of the University are classified in the accompanying financial statements in the categories that follow:

UNRESTRICTED net assets are not subject to donor-imposed restrictions. Funds invested in fixed assets and unrestricted endowment funds comprise 98% of the University’s unrestricted net assets as of June 30, 2017. In addition, this category includes unrestricted gifts and endowment income balances, University-designated loan funds, and other unrestricted current funds.

TEMPORARILY RESTRICTED net assets are subject to legal or donor-imposed stipulations that will be satisfied either by actions of the University, the passage of time, or both. These net assets include gifts donated for a particular purpose, amounts subject to time restrictions such as funds pledged for future payment, or amounts subject to legal restrictions such as portions of otherwise unrestricted capital appreciation and income, which must be reported as temporarily restricted net assets until appropriated for spending in accordance with Massachusetts law.

PERMANENTLY RESTRICTED net assets are subject to donor-imposed stipulations that they be invested to provide a perpetual source of income to the University. Generally, donors of these assets require the University to maintain and invest the original contribution in perpetuity, but permit the use of some or all investment returns for general or specific purposes.

Revenues from sources other than contributions are generally reported as increases in unrestricted net assets. Expenses are reported as decreases in unrestricted net assets. Gains and losses on investments are reported as increases or decreases in unrestricted net assets, unless their use is restricted by donor stipulations or by law. Investment returns earned by restricted donor funds are initially classified as temporarily restricted net assets and then reclassified to unrestricted net assets when expenses are appropriated or incurred for their intended purpose. Expirations of temporary restrictions on net assets are reported as reclassifications from temporarily restricted to unrestricted net assets and appear as “Net assets released from restrictions” and “Non-operating net assets released from restrictions” in the *Statements of Changes in Net Assets*.

Unconditional pledges are reported as increases in the appropriate categories of net assets in accordance with donor restrictions.

Net operating surplus

Revenues earned, expenses incurred, and returns made available for operations for the purpose of teaching, conducting research, and the other programs and services of the University are the components of “Net operating surplus” in the *Statement of Changes in Net Assets with General Operating Account Detail*.

Collections

The University’s vast array of museums and libraries contains priceless works of art, historical treasures, literary works, and artifacts. These collections are protected and preserved for public exhibition, education, research, and the furtherance of public service. They are neither disposed of for financial gain nor encumbered in any manner. Accordingly, such collections are not recorded for financial statement purposes.

Insurance programs

The University, together with the Harvard-affiliated teaching hospitals, has formed a captive insurance company, Controlled Risk Insurance Company (CRICO), to provide limited professional liability, general liability, and medical malpractice insurance for its shareholders. The University self-insures a portion of its professional liability and general liability programs and maintains a reserve for incurred claims, including those related to Harvard Medical School activities occurring away from the affiliated teaching hospitals. CRICO provided malpractice coverage applies with no deductible for medical professionals practicing within Harvard’s University Health Services department, the School of Dental Medicine, and the T.H. Chan School of Public Health. The University also maintains reserves for the self-insured portion of claims related to automobile liability, property damage, and workers’ compensation; these programs are supplemented with commercial excess insurance above the University’s self-insured limit. In addition, the University is self-insured for unemployment, the primary retiree health plan, and all health and dental plans for active employees. The University’s claims liabilities are recognized as incurred, including claims that have been incurred but not reported, and are included in operating expenses.

Tax-exempt status

The University is a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code.

Use of estimates

The preparation of financial statements in accordance with GAAP in the United States of America requires management to make estimates and assumptions that affect reported amounts and disclosures. Actual results could differ from those estimates.

New accounting pronouncements

In January 2016, the Financial Accounting Standards Board (FASB) issued ASU 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*, which address certain aspects of recognition, measurement, presentation and disclosure of financial instruments. This guidance allows an entity to choose, investment-by-investment, to report an equity investment that neither has a readily determinable fair value, nor qualifies for the practical expedient for fair value estimation using NAV, at its cost minus impairment (if any), plus or minus changes resulting from observable price changes in orderly transactions for the identical or similar investment of the same issue. Impairment of such investments must be assessed qualitatively at each reporting period. Entities must disclose their financial assets and liabilities by measurement category and form of asset either on the face of the statement of financial position or in the accompanying notes. The ASU is effective for fiscal year 2020 for the University. The provision to eliminate the requirement to disclose the fair value of financial instruments measured at cost (such as the fair value of debt) has been early adopted by the University for fiscal year 2016. The University is currently evaluating the impact of the remaining new guidance on the consolidated financial statements.

Effective July 1, 2016, the University elected to retroactively adopt ASU No. 2017-02, *Not-for-Profit Entities – Consolidation (Subtopic 958-810): Clarifying When a Not-for-Profit Entity That Is a General Partner or a Limited Partner Should Consolidate a For-Profit Limited Partnership or Similar Entity*, which impacts consolidation for not-for-profit entities. As a result of adopting this guidance, certain previously consolidated limited liability investment entities are no longer consolidated. Other assets associated with these investment entities amounted to \$343 million in the 2016 *Statement of Financial Position* and are now included in investment assets for that year, rather than included in other assets. The liabilities associated with these investment entities amounted to \$3,659 million in the 2016 *Statement of Financial Position* and are now netted against investment assets for that year, rather than shown separately as liabilities. In addition, certain non-controlling interests are no longer shown as assets, net assets, and changes in net assets in the *Statement of Financial Position* and in the *Statement of Activities*. Therefore, \$213 million of the change in net assets attributable to non-controlling interests for fiscal 2016, as well as \$905 million of non-controlling interests as of June 30, 2016 are no longer shown in the related 2016 comparative statements. These changes have also been appropriately reflected in the investment notes.

In August 2016, the FASB issued ASU 2016-14, *Presentation of Financial Statements for Not-for-Profit Entities*, which makes targeted changes to the not-for-profit financial reporting model. Under the new ASU, net asset reporting will be streamlined and clarified. The ASU is effective for fiscal year 2019 for the University. The University is evaluating the impact of the new guidance on the consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers* at the conclusion of a joint effort with the International Accounting Standards Board to create common revenue recognition guidance for U.S. GAAP and international accounting standards. This framework ensures that entities appropriately reflect the consideration to which they expect to be entitled in exchange for goods and services, by allocating transaction price to identified performance obligations, and recognizing that revenue as performance obligations are satisfied. Qualitative and quantitative disclosures will be required to enable users of financial statements to understand the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. The ASU is effective for fiscal year 2019 for the University. The University is evaluating the impact this will have on the consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases*, which, requires a lessee to recognize a right-of-use asset and a lease liability, initially measured at the present value of the lease payments, in its balance sheet. The guidance also expands the required quantitative and qualitative disclosures surrounding leases. The ASU is effective for fiscal year 2020 for the University. The University is evaluating the impact of the new guidance on the consolidated financial statements.

In March 2017, the FASB issued final guidance on ASU 2017-07, *Compensation – Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. Presently, net benefit cost is reported as an employee cost within operating income (or capitalized into assets where appropriate). The amendment requires the bifurcation of net benefit cost. The service cost component will be presented with other employee costs in operating income (or capitalized in assets). The other components will be reported separately outside of operations, and will not be eligible for capitalization. The ASU is effective for fiscal year 2020 for the University. The University is evaluating the impact of the new guidance on the consolidated financial statements.

3. INVESTMENTS

Investments are presented at fair value in accordance with GAAP. The University's investment valuation policies and procedures are discussed in detail in *Note 4*.

Cash and short-term investments are recorded at cost, which approximates fair value, and include cash in bank accounts, institutional money market funds, and other temporary investments held for working capital purposes with maturities of three months or less. Cash and short-term investments do not include cash balances held as collateral by the University. Cash and short-term investment balances designated for investment purposes are included in the "Investment portfolio, at fair value" in the *Balance Sheets*.

Dividend income is recognized net of applicable withholding taxes on the ex-dividend date. Non-cash dividends are recorded at the fair value of the securities received. Interest income and expenses are recorded net of applicable withholding taxes on the accrual basis of accounting. The University amortizes bond premiums and accretes bond discounts using the effective yield method and when cash collection is expected.

The University utilizes a number of wholly owned subsidiary entities to support its investment activities. The consolidated financial statements include all assets, liabilities, income, and expenses associated with these entities and intercompany accounts and transactions have been eliminated during consolidation.

The University separately reports the fair value of assets for which counterparties have the right to pledge or exchange the collateral they have received; investment portfolio assets that are unencumbered are included in "Investment portfolio, at fair value" in the *Balance Sheets*.

The majority of the University's investments are managed by HMC in the GIA, a pooled fund that consists primarily of endowment assets. Certain other investments are managed separately from the GIA. These other investments consist primarily of cash, short-term investments, and fixed income securities (principally US government securities) held for the University's working capital and liquidity needs; publicly traded securities associated with split interest agreements; and public and private investments donated to the University.

The University's investment holdings as of June 30, 2017 and 2016 are summarized in the following table (in thousands of dollars):

	2017	2016
Investment portfolio, at fair value:		
Pooled general investment account assets ¹	\$ 41,796,466	\$ 60,430,331
Other investments ²	1,537,011	1,995,976
Investment assets ³	43,333,477	62,426,307
Pooled general investment account liabilities	898,614	21,443,023
Interest rate exchange agreement	21,944	36,156
Investment liabilities	920,558	21,479,179
TOTAL INVESTMENTS, NET	\$ 42,412,919	\$ 40,947,128

¹ Includes securities pledged to counterparties of \$57,551 and \$15,357,995 at June 30, 2017 and 2016, respectively.

² As of June 30, 2017, other investments consisted primarily of repurchase agreements and US government securities of \$630,488 and split interest agreement assets outside of the GIA of \$581,696. As of June 30, 2016, other investments consisted primarily of repurchase agreements and US government securities of \$1,025,559 and split interest agreement assets outside of the GIA of \$535,218.

³ Investment assets include cash and cash equivalents that consist principally of deposits that have maturities of 90 days or less. Cash and cash equivalents classified as investments were \$3,422,154 and \$1,001,104 at June 30, 2017 and 2016, respectively.

A summary of the University's total return on investments for fiscal years 2017 and 2016 is presented below (in thousands of dollars):

	2017	2016
Return on pooled general investment account:		
Realized and change in unrealized appreciation/(depreciation), net	\$ 2,923,828	\$ (945,217)
Net investment income	98,912	150,843
Total return on pooled general investment account ¹	3,022,740	(794,374)
Return on other investments:		
Realized and change in unrealized appreciation, net	32,533	39,920
Net investment income	32,944	27,816
Total return on other investments	65,477	67,736
Realized and change in unrealized appreciation/(depreciation) on interest rate exchange agreement, net	11,234	(22,767)
TOTAL RETURN ON INVESTMENTS	\$ 3,099,451	\$ (749,405)

¹ Net of all internal and external management fees and expenses.

The University's investment strategy incorporates a diversified asset allocation approach and maintains, within defined limits, exposure to the movements of the global equity, fixed income, real estate, commodities, and private equity markets. The pooled GIA assets and liabilities on

page 22 have been disaggregated based on the exposure of the investment to these markets. Exposure to each asset class is achieved through investments in individual securities, direct investments in special purpose vehicles, and/or through vehicles advised by external managers.

The pooled GIA assets and liabilities as of June 30, 2017 and 2016 are summarized as follows (in thousands of dollars):

	2017	2016
POOLED GENERAL INVESTMENT ACCOUNT ASSETS:¹		
Investment assets:		
Domestic equity	\$ 4,517,932	\$ 4,545,144
Foreign equity	1,425,863	1,199,078
Global equity	1,239,346	993,935
Domestic fixed income	1,585,222	12,006,907
Foreign fixed income		3,625,651
Emerging market equity and debt	1,310,664	2,842,114
High yield	861,706	333,037
Absolute return	7,964,080	6,575,034
Private equity	7,467,640	7,125,969
Natural resources	2,867,835	3,950,295
Real estate	5,377,910	6,438,004
Inflation-indexed bonds	804,841	1,950,290
Due from brokers ²	67,608	430,715
Total investment assets	35,490,647	52,016,173
Repurchase agreements	1,600,102	6,938,860
Cash and short-term investments	3,285,096	861,949
Other assets ³	1,420,621	613,349
POOLED GENERAL INVESTMENT ACCOUNT ASSETS	41,796,466	60,430,331
POOLED GENERAL INVESTMENT ACCOUNT LIABILITIES:¹		
Investment liabilities:		
Equity securities sold, not yet purchased		94,104
Fixed income securities sold, not yet purchased		4,520,021
Due to brokers ⁴	12,903	254,798
Total investment liabilities	12,903	4,868,923
Reverse repurchase agreements		14,900,986
Other liabilities ⁵	885,711	1,673,114
POOLED GENERAL INVESTMENT ACCOUNT LIABILITIES	898,614	21,443,023
POOLED GENERAL INVESTMENT ACCOUNT NET ASSETS^{1,6}	\$ 40,897,852	\$ 38,987,308

¹ Certain prior year amounts have been reclassified to conform to current year presentation and reflect the University's early adoption of ASU 2017-02.

² Includes collateral advanced under securities borrowing agreements of \$100,848 as of June 30, 2016.

³ As of June 30, 2017, other assets consisted primarily of receivables for transactions that settled subsequent to the balance sheet date of \$1,390,858, before eliminating inter-company balances, and consolidated assets of \$116,361. As of June 30, 2016, other assets consisted primarily of receivables for transactions that settled subsequent to the balance sheet date of \$480,039, before eliminating inter-company balances, and consolidated assets of \$142,455.

⁴ Includes collateral held under securities lending agreements of \$55,029 as of June 30, 2016.

⁵ As of June 30, 2017, other liabilities consisted primarily of payables for the purchase of securities of \$102,479, before eliminating inter-company balances, and consolidated liabilities of \$348,323. As of June 30, 2016, other liabilities consisted primarily of payables for the purchase of securities of \$721,172, before eliminating inter-company balances, and consolidated liabilities of \$462,935.

⁶ The cost of the total investment assets was \$31,972,479 and \$42,062,076 as of June 30, 2017 and 2016, respectively.

As of June 30, 2017 and 2016, the GIA was comprised of the following components (in thousands of dollars):

	2017	2016
POOLED GENERAL INVESTMENT ACCOUNT		
Endowment ¹	\$ 35,399,801	\$ 33,863,945
General Operating Account	4,066,488	3,788,288
Split interest agreements	789,972	755,923
Other internally designated funds	641,591	579,152
TOTAL POOLED GENERAL INVESTMENT ACCOUNT NET ASSETS	\$ 40,897,852	\$ 38,987,308

¹ Includes only the portion of the endowment invested in the GIA and excludes pledges, interests in trusts held by others, other non-GIA investments, and GIA income.

The asset allocation of the University's investment portfolio involves exposure to a diverse set of markets. The investments within these markets involve various risks such as price, interest rate, market, sovereign, currency, liquidity, and credit risks. Additionally, the GIA's direct investments in natural resources and real estate expose the University

to a unique set of risks such as operational, environmental, and geopolitical risks. Uncertain national policies and social, political and economic instability increase the potential for expropriation of assets and imposition of governmental restrictions. As of June 30, 2017, 19% of the GIA NAV was made up of four diversified fund managers

and one direct investment manager. The University anticipates that the value and composition of its investments may, from time to time, fluctuate substantially in response to any or all of the risks described herein.

The University has various sources of liquidity at its disposal within its investment pools, including approximately \$4.4 billion in cash and cash equivalents (including repurchase agreements of \$1.9 billion) at June 30, 2017 in the GIA and the GOA. In addition, the University estimates that as of June 30, 2017, it could liquidate additional unencumbered US government securities of \$3.2 billion within one business day (typical settlement terms, unaudited) to meet any immediate short-term needs of the University.

The University *Balance Sheets* display both the assets and corresponding liabilities generated by repurchase, reverse repurchase, securities borrowing, and securities

lending transactions. The University enters into these transactions under agreements containing master netting arrangements. The University requires the fair value of the collateral exchanged under these agreements to be equal to or in excess of the total amount of the agreement, including interest where applicable. Collateral is exchanged as required by fluctuations in the fair value of these instruments. In the event of a counterparty default, the University generally has the right to close out all transactions traded under such agreements and to net amounts owed or due across all transactions and offset such net payable or receivable with collateral posted by one party or the other.

The following table presents information about the offsetting of these instruments and related collateral amounts as of June 30, 2017 and 2016 (in thousands of dollars):

	As of June 30, 2017			As of June 30, 2016		
	Gross asset amounts ¹	Collateral	Net exposure ²	Gross asset amounts ¹	Collateral	Net exposure ²
Repurchase agreements	\$ 1,850,245	\$ 1,850,245	\$ 0	\$ 7,443,773	\$ 7,443,773	\$ 0
Securities borrowing agreements			0	100,848	100,848	0
TOTAL REPURCHASE AND SECURITIES BORROWING AGREEMENTS	\$ 1,850,245	\$ 1,850,245	\$ 0	\$ 7,544,621	\$ 7,544,621	\$ 0
	Gross liability amounts ¹	Collateral	Net exposure ²	Gross liability amounts ¹	Collateral	Net exposure ²
Reverse repurchase agreements			\$ 0	\$ 14,900,986	\$ 14,900,986	\$ 0
Securities lending agreements			0	55,029	55,029	0
TOTAL REVERSE REPURCHASE AND SECURITIES LENDING AGREEMENTS			\$ 0	\$ 14,956,015	\$ 14,956,015	\$ 0

¹ The University does not offset repurchase and securities borrowing agreements and reverse repurchase and securities lending agreements that are subject to master netting arrangements or similar arrangements on the University's Balance Sheets. Refer to Note 5 for information related to offsetting of derivatives.

² Net exposure excludes any over-collateralized amounts.

As of June 30, 2017, the University did not have reverse repurchase and securities lending agreements. The following table presents information about the collateral pledged and maturity dates for reverse repurchase and securities lending transactions as of June 30, 2016:

	As of June 30, 2016		
	Remaining contractual maturity of agreements		
	Overnight and Continuous	Up to 30 days	Total
Reverse repurchase agreements:			
Domestic fixed income	\$ 3,292,021	\$ 7,228,071	\$ 10,520,092
Foreign fixed income		3,531,153	3,531,153
High yield	59,550		59,550
Inflation-indexed bonds	68,846	721,345	790,191
TOTAL REVERSE REPURCHASE AGREEMENTS	3,420,417	11,480,569	14,900,986
Securities lending agreements:			
Emerging market equity and debt	27,564		27,564
High yield	27,465		27,465
TOTAL SECURITIES LENDING AGREEMENTS	55,029		55,029
TOTAL REVERSE REPURCHASE AND SECURITIES LENDING AGREEMENTS	\$ 3,475,446	\$ 11,480,569	\$ 14,956,015

4. FAIR VALUE OF INVESTMENT ASSETS AND LIABILITIES

The University endeavors to utilize all relevant and available information in measuring fair value. Investments are valued in accordance with ASC 820, and under the guidelines prescribed by the HMC investment valuation policy, which is reviewed and approved by the HMC Board of Directors on an annual basis.

Instruments listed or traded on a securities exchange are valued at the last quoted price on the primary exchange where the security is traded. Where there is no readily available closing price on the valuation date, long positions are valued at the bid price and short positions are valued at the ask price. Restrictions that are attached to a security are factored into the valuation of that security, reflective of the estimated impact of those restrictions. Investments in non-exchange traded debt and equity instruments are primarily valued using inputs provided by independent pricing services or by broker/dealers who actively make markets in these securities.

Over the counter (OTC) derivative products classified as due to/from brokers include option, swap, credit default, interest rate, and forward contracts. These types of instruments are primarily valued using industry standard models with independent market inputs, or by broker quotes. Inputs such as prices, spreads, curves, and/or broker quotes are evaluated for source reliability and consistency with industry standards. Counterparty marks obtained and utilized to determine daily collateral requirements are also used to corroborate input reasonability. The University considers current market conditions including interest rate and credit risks in its evaluation of inputs, pricing methodologies, and models utilized to determine fair values.

Investments managed by external advisors include investments in private equity, real estate, natural resources, absolute return, and other externally managed funds. The majority of these investments are not readily marketable and are reported at fair value utilizing the most current information provided by the external advisor, subject to assessments that the information is representative of fair value and in consideration of any additional factors deemed pertinent to the fair value measurement. The University evaluates its external advisors through a manager due-diligence program executed by HMC, which includes an analysis of an advisor's use of and adherence to fair value principles. In situations where the information provided by the external advisor is deemed to not be representative of fair value as of the measurement date, the University will evaluate specific features of the investment and utilize supplemental information provided by the external advisor along with any relevant market data to measure the investment's fair value as of that date.

Direct investments in real estate, natural resources, specifically timberland and agriculture, as well as private equity are primarily valued using a combination of independent appraisals and/or one or more industry standard valuation techniques (e.g., income approach, market approach, or cost approach). The income approach is primarily based on the investment's anticipated future income using one of two principal methods: the discounted cash flow method or the capitalization method. Inputs and estimates developed and utilized in the income approach may be subjective and require judgment regarding significant matters such as estimating the amount and timing of future cash flows, forward pricing assumptions and the selection of discount and capitalization rates that appropriately reflect market and credit risks. The market approach derives investment value through comparison to recent and relevant market transactions with similar investment characteristics. The cost approach is utilized when the cost of the investment is determined to be the best representation of fair value. This method is typically used for newly purchased or undeveloped assets. The valuation process encompasses a wide range of procedures that in the aggregate allow the University to assert as to the adequacy of the fair values reported as of the measurement date. The HMC Board of Directors discusses the valuation process and results with HMC management, and makes determinations on significant matters impacting valuation that may arise from time to time.

The University's investments have been categorized based upon the fair value hierarchy in accordance with ASC 820, which prioritizes the inputs to valuation techniques used to measure fair value of investment assets and liabilities into three levels:

LEVEL 1 Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;

LEVEL 2 Quoted prices in markets that are not considered to be active or financial instruments for which all significant inputs are observable, either directly or indirectly;

LEVEL 3 Prices or valuations that require inputs that are significant to the fair value measurement, unobservable and/or require the University to develop its own assumptions.

Per ASU No. 2015-07 investments measured at net asset value, as reported by external managers, as a practical expedient for the fair value, are excluded from the fair value hierarchy.

The level of an asset or liability within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Transfers between levels are recognized at the beginning of the year.

The following is a summary of the levels within the fair value hierarchy for those investment assets and liabilities subject to fair value measurement as of June 30, 2017 and 2016 (in thousands of dollars):

	2017				2016			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
INVESTMENT ASSETS:¹								
Cash and short-term investments	\$ 3,422,154			\$ 3,422,154	\$ 1,001,104			\$ 1,001,104
Domestic equity	68,002			68,002	86,354			86,354
Foreign equity	167,300			167,300	119,179			119,179
Domestic fixed income	2,038,354	\$ 29,325		2,067,679	12,561,479	\$ 53,242	\$ 10,000	12,624,721
Foreign fixed income	28,378			28,378	778,927	2,874,363		3,653,290
Emerging market equity and debt	1,612	33,901		35,513	1,687,492	66,367		1,753,859
High yield	865,474	25	\$ 425	865,924	132,983	197,236	6,624	336,843
Absolute return			89,471	89,471			98,929	98,929
Private equity			880,530	880,530			185,372	185,372
Natural resources	2,119		2,778,134	2,780,253	1,393		3,632,472	3,633,865
Real estate			4,292,544	4,292,544	37,840		3,279,174	3,317,014
Inflation-indexed bonds	825,719			825,719	1,966,233			1,966,233
Due from brokers		62,968	4,640	67,608	7,839	154,281	184,282	346,402
Other investments	13,550	3,379	2,559	19,488	21,621	3,306	3,147	28,074
Repurchase agreements		1,850,245		1,850,245		7,443,773		7,443,773
Interests in trusts held by others ²			397,161	397,161			355,835	355,835
INVESTMENT ASSETS SUBJECT TO FAIR VALUE LEVELING	\$ 7,432,662	\$ 1,979,843	\$ 8,445,464	\$ 17,857,969	\$ 18,402,444	\$ 10,792,568	\$ 7,755,835	\$ 36,950,847
Investments measured using the practical expedient				24,328,333				24,949,883
Securities borrowing agreements								100,848
Other assets not subject to fair value				1,544,336				797,101
TOTAL ASSETS³				\$ 43,730,638				\$ 62,798,679
INVESTMENT LIABILITIES:¹								
Equity securities sold, not yet purchased					\$ 94,104			\$ 94,104
Fixed income securities sold, not yet purchased					4,264,293	\$ 255,729		4,520,022
Due to brokers ⁴	\$ 2,052	\$ 32,795		\$ 34,847	57,079	176,736	\$ 18,646	252,461
Reverse repurchase agreements						14,900,986		14,900,986
Liabilities due under split interest agreements ²		840,736		840,736		791,202		791,202
Other liabilities subject to fair value			\$ 177,993	177,993			184,196	184,196
LIABILITIES SUBJECT TO FAIR VALUE LEVELING	\$ 2,052	\$ 873,531	\$ 177,993	1,053,576	\$ 4,415,476	\$ 16,124,653	\$ 202,842	20,742,971
Securities lending agreements								55,029
Other liabilities not subject to fair value				707,718				1,488,918
TOTAL LIABILITIES³				\$ 1,761,294				\$ 22,286,918

¹ Certain prior year amounts have been reclassified to conform to current year presentation, and reflect the University's early adoption of ASU 2017-02.

² Amounts excluded from investments and included separately on the University's Balance Sheets.

³ For purposes of reporting by level under the fair value hierarchy, some assets and liabilities are shown gross that are otherwise reported net in the table on page 22.

⁴ Includes fair value of interest rate exchange agreement on the University's debt portfolio of \$21,944 and \$36,156 as of June 30, 2017 and 2016, respectively.

The following is a rollforward of Level 3 investments for the year ended June 30, 2017 (in thousands of dollars):

	Beginning balance as of July 1, 2016	Net realized gains/(losses)	Net change in unrealized appreciation/(depreciation) ¹	Purchases/contributions	Sales/distributions	Transfers into Level 3 ²	Ending balance as of June 30, 2017
INVESTMENT ASSETS:							
Foreign equity				\$ 4,000	\$ (4,000)		\$ 0
Domestic fixed income	\$ 10,000	\$ 111		83,444	(93,555)		0
High yield	6,624	222	\$ (418)	3,089	(9,092)		425
Absolute return	98,929	174	(4,660)		(4,972)		89,471
Private equity	185,372	33,018	(261,045)	30,866	(618,111)	\$ 1,510,430	880,530
Natural resources	3,632,472	(53,164)	(1,105,762)	298,069	(192,327)	198,846	2,778,134
Real estate	3,279,174	220,527	(13,604)	959,156	(1,806,041)	1,653,332	4,292,544
Due from brokers	184,282	(193,103)	212,328	9,089	(207,956)		4,640
Other investments	3,147	152	(740)				2,559
Interests in trusts held by others	355,835		41,326				397,161
TOTAL ASSETS SUBJECT TO FAIR VALUE LEVELING	\$ 7,755,835	\$ 7,937	\$ (1,132,575)	\$ 1,387,713	\$ (2,936,054)	\$ 3,362,608	\$ 8,445,464
INVESTMENT LIABILITIES:							
Due to brokers	\$ 18,646	\$ (251,390)	\$ 257,715	\$ (32,189)	\$ 7,218		\$ 0
Other liabilities subject to fair value	184,196		(10,382)	(27,868)	32,047		177,993
TOTAL LIABILITIES SUBJECT TO FAIR VALUE LEVELING	\$ 202,842	\$ (251,390)	\$ 247,333	\$ (60,057)	\$ 39,265		\$ 177,993

¹ Total change in unrealized appreciation/(depreciation) relating to Level 3 investment assets and investment liabilities still held by the University at June 30, 2017 is \$(1,117,334) and is reflected in "Realized and change in unrealized appreciation/(depreciation), net" in the Statements of Changes in Net Assets.

² During the fiscal year, certain transfers into Level 3 represent instances of deviation from the practical expedient whereas certain transfers out of Level 3 represent a return to the practical expedient. Certain securities, included in Private equity, Natural resources and Real estate, were valued using a secondary sale price and were transferred into Level 3.

The following is a rollforward of Level 3 investments for the year ended June 30, 2016 (in thousands of dollars):

	Beginning balance as of July 1, 2015	Net realized gains/ (losses)	Net change in unrealized appreciation (depreciation) ²	Purchases/ contributions	Sales/ distributions	Transfers into Level 3 ³	Transfers out of Level 3 ³	Ending balance as of June 30, 2016
INVESTMENT ASSETS:¹								
Domestic fixed income				\$ 10,000				\$ 10,000
High yield	\$ 35,197	\$ 165	\$ 15,032	40,887	\$ (84,657)			6,624
Absolute return	175,556	217	(74,544)	2,265	(4,565)			98,929
Private equity	278,042	141,859	(234,546)	205,002	(205,002)	\$ 17		185,372
Natural resources	3,955,287	103,991	(378,379)	210,422	(258,849)			3,632,472
Real estate	2,442,222	116,483	327,282	1,026,030	(627,409)		\$ (5,434)	3,279,174
Due from brokers	103,444	13,638	93,091	155,469	(195,575)	14,326	(111)	184,282
Other investments	20,326	296	(17,475)					3,147
Interests in trusts held by others	363,175		(7,340)					355,835
TOTAL ASSETS SUBJECT TO FAIR VALUE LEVELING	\$ 7,373,249	\$ 376,649	\$ (276,879)	\$ 1,650,075	\$ (1,376,057)	\$ 14,343	\$ (5,545)	\$ 7,755,835
INVESTMENT LIABILITIES:¹								
Due to brokers	\$ 462	\$ (24,287)	\$ 78,662	\$ (133,739)	\$ 83,222	\$ 14,326		\$ 18,646
Other liabilities subject to fair value	177,004		(34,237)	(16,964)	58,393			184,196
TOTAL LIABILITIES SUBJECT TO FAIR VALUE LEVELING	\$ 177,466	\$ (24,287)	\$ 44,425	\$ (150,703)	\$ 141,615	\$ 14,326		\$ 202,842

¹ Certain prior year amounts have been reclassified to conform to current year presentation and reflect the University's early adoption of ASU 2017-02.

² Total change in unrealized appreciation/(depreciation) relating to Level 3 investment assets and investment liabilities still held by the University at June 30, 2016 is \$(341,862) and is reflected in "Realized and change in unrealized appreciation/(depreciation), net" in the Statements of Changes in Net Assets.

³ During the fiscal year, certain transfers into Level 3 represent instances of deviation from the practical expedient whereas certain transfers out of Level 3 represent a return to the practical expedient. Certain securities, included in Due from/to brokers, valued using single broker quotes were transferred into Level 3. Certain securities, included in Due from brokers, no longer valued using single broker quotes were transferred out of Level 3.

Investments that trade in inactive markets, but are valued based on quoted market prices, broker/dealer quotations, or independent pricing services supported by observable inputs are primarily classified within Level 2. These may include non-exchange traded equity and fixed income securities, securities subject to restriction, and certain OTC derivatives. Other investments, including OTC derivatives valued using broker quotes or other industry standard models, where unobservable inputs may have been obtained

from third parties, have been classified as Level 3 in accordance with the fair value hierarchy under ASC 820.

The University is a limited partner in private equity and real estate partnerships, and other external investment managers, which include commitments to make periodic contributions in future periods. The amounts of these expected disbursements as of June 30, 2017 and 2016 are disclosed below (in thousands of dollars):

	As of June 30, 2017			As of June 30, 2016		
	Fair value ¹	Remaining unfunded commitments	Estimated remaining life ²	Fair value ¹	Remaining unfunded commitments	Estimated remaining life ²
Private equity	\$ 5,845,459	\$ 4,635,090	4 – 10	\$ 5,670,822	\$ 4,084,380	4 – 10
Real estate	1,552,640	926,382	4 – 10	2,424,358	1,714,591	4 – 10
Other externally managed funds ³	2,352,402	1,924,219	2 – 8	2,266,998	1,416,297	2 – 8
TOTAL	\$ 9,750,501	\$ 7,485,691		\$ 10,362,178	\$ 7,215,268	

¹ Represents the fair value of the funded portion of investments with remaining unfunded commitments.

² The estimated remaining lives of these funds, expressed in years, are forward-looking projections based on the University's estimates and could vary significantly depending on the investment decisions of external managers, changes in the University's investment portfolio, and other circumstances.

³ Investments in externally managed funds primarily include exposures to absolute return and natural resources.

The nature of these partnership interests is that distributions are received through the liquidation of the underlying assets of the partnership over its remaining life. The fair value of the investments in these asset classes has generally been estimated using the University's capital account balance with each partnership, unless the University has deemed the NAV to be an inappropriate representation of fair value. To evaluate the fair value of the University's externally managed investments, the University has assessed factors including, but not limited to, the external advisor's adherence to fair value principles

in calculating the capital account balance, the existence of transactions at NAV at the measurement date, and the existence or absence of certain restrictions at the measurement date. Investments in externally managed funds generally have limited redemption options for investors and, subsequent to final closing, may or may not permit subscriptions by new or existing investors. These entities may also have the ability to impose gates, lockups, and other restrictions on an investor's ability to readily redeem out of their investment interest in the partnership.

The valuation procedures performed on direct investments are based on industry standard processes for each respective asset class. The inputs utilized in any valuation model may be significant and unobservable, and require a certain degree of judgment. The University examines market data and collaborates closely with industry experts to attempt to arrive at the best estimation of fair value for each respective asset. While the inputs described below represent the range of inputs utilized as of the measurement date, these inputs may change over time, which may have a material effect on the valuation of these types of investments in the future.

Additionally, there may be interrelationships between the unobservable inputs utilized in any valuation model, and significant changes in any of those inputs, in isolation or in the aggregate, may trigger changes in other inputs or in the estimated fair value for each respective investment asset. The University has not assessed the sensitivity to unforeseeable changes in significant unobservable inputs; rather the range of inputs described below illustrate those inputs utilized by management in arriving at fair value for these direct investments as of the measurement date.

Significant unobservable input by asset class ^{1,4}	As of June 30, 2017		As of June 30, 2016	
	Level 3 investments subject to fair value (in thousands of dollars) ²	Range of inputs utilized in valuation model ³	Level 3 investments subject to fair value (in thousands of dollars) ²	Range of inputs utilized in valuation model ³
Natural resources:	\$ 2,695,739		\$ 3,632,472	
Income approach discount rate		5.0% – 20.0%		5.5% – 18.0%
Price per planted hectare		\$2,394 – \$168,932		\$2,106 – \$161,206
Price per gross hectare		\$448 – \$48,560		\$447 – \$33,855
Real estate:	3,373,294		3,262,893	
Income approach discount rate		5.3% – 17.8%		5.8% – 19.8%
Capitalization rate		2.3% – 8.5%		2.5% – 10.0%
Recent financing – discount		22.5%		20.0%
Loan to value		12.8% – 83.9%		13.4% – 87.7%
Market interest rate		2.6% – 8.3%		2.0% – 8.5%
Private equity:	46,005		147,571	
Income approach discount rate		6.0% – 8.0%		6.0% – 15.25%
EBITDA multiple		10x		8.0x – 10x
Equity valuation multiple				6.0x – 8.5x
Net income multiple		7.0x		7.0x
Comparable transaction price per unit		\$25 – \$30		
Revenue per unit				\$0.40
Absolute return:	72,717		78,789	
Book value multiplier		0.7x		0.7x
Other liabilities subject to fair value	(177,993)		(184,196)	
Loan to value		3.8% – 42.9%		3.7% – 47.7%
Market interest rate		2.5% – 15.0%		2.5% – 18.7%
NET AMOUNT	\$ 6,009,762		\$ 6,937,529	

¹ The fair value of investments may be determined using multiple valuation techniques.

² Included within Level 3 investments is \$2,257,709 and \$615,464 as of June 30, 2017 and 2016, respectively, which were valued using other inputs including, but not limited to single source broker quotations, third party pricing and prior transactions.

³ The range of inputs encompasses a variety of investment types within each asset class.

⁴ Prior year balances have been adjusted to reflect the University's early adoption of ASU 2017-02.

5. DERIVATIVES

The University uses a variety of financial instruments with off-balance sheet risk involving contractual or optional commitments for future settlement, which are exchange traded or executed OTC. Certain instruments are cleared and settled through central clearing counterparties, while others are bilateral contracts between two counterparties. These instruments are used to increase or decrease exposure to a given asset class, with the goal of enhancing the returns of these asset classes. The market risk of a particular strategy is influenced by the relationship between the financial instruments with off-balance sheet risk and the offsetting positions recorded in the *Balance Sheets*. The University manages exposure to market risk through the

use of industry standard analytical tools that measure the market exposure of each position within a strategy. The strategies are monitored daily, and positions are frequently adjusted in response to changes in the financial markets.

In connection with its derivative activities, the University generally maintains master netting agreements and collateral agreements with its counterparties. These agreements provide the University the right, in the event of default by the counterparty (such as bankruptcy or a failure to pay or perform), to net a counterparty's rights and obligations under the agreement and to liquidate and offset collateral against any net amount owed by the counterparty.

The following table presents information about the University's derivatives by primary risk exposure for the years ended June 30, 2017 and 2016 (in thousands of dollars):

	As of June 30, 2017		For the year ended June 30, 2017	As of June 30, 2016		For the year ended June 30, 2016
	Gross derivative assets	Gross derivative liabilities	Net profit/ (loss) ⁴	Gross derivative assets	Gross derivative liabilities	Net profit/ (loss) ⁴
Primary risk exposure						
Equity instruments:						
Equity futures	\$	2,051	\$ (22,001)	\$ 1,778	\$ 11,111	\$ (47,007)
Equity options			8,117	157,782	141,404	(41,090)
Equity exchange agreements	\$ 94,460	32,898	528,861	195,941	125,851	(231,112)
TOTAL EQUITY INSTRUMENTS	94,460	34,949	514,977	355,501	278,366	(319,209)
Fixed income instruments:						
Fixed income futures			92,925	28,780	83,232	(26,753)
Fixed income options			(2,799)	8,270	2,470	13,067
Interest rate exchange agreements ¹		21,944	57,577	2,103,301	2,078,179	(303,236)
Interest rate caps and floors			9,507	61,628	69,614	(10,547)
TOTAL FIXED INCOME INSTRUMENTS		21,944	157,210	2,201,979	2,233,495	(327,469)
Commodity instruments:						
Commodity futures			(2,976)	50,233	48,100	(15,476)
Commodity options			(81)	13		(673)
Commodity exchange agreements			(194)	87		1,680
TOTAL COMMODITY INSTRUMENTS			(3,251)	50,333	48,100	(14,469)
Currency instruments:						
Currency forwards	1,713,930	1,723,578	(16,658)	10,874,893	10,861,727	26,263
Currency options			(3,251)	35,316	33,441	11,570
Currency exchange agreements			1,300	6,329	3,366	(1,284)
TOTAL CURRENCY INSTRUMENTS	1,713,930	1,723,578	(18,609)	10,916,538	10,898,534	36,549
CREDIT INSTRUMENTS	4,842		56,111	70,338	42,252	30,181
SUBTOTAL	1,813,232	1,780,471	\$ 706,438	13,594,689	13,500,747	\$ (594,417)
Counterparty netting ²						
Exchange traded				(89,271)	(89,271)	
Centrally cleared				(349,572)	(349,572)	
Bilateral OTC	(1,745,624)	(1,745,624)		(12,862,135)	(12,862,135)	
TOTAL COUNTERPARTY NETTING	(1,745,624)	(1,745,624)		(13,300,978)	(13,300,978)	
NET AMOUNTS INCLUDED IN THE BALANCE SHEETS³	67,608	34,847		293,711	199,769	
Collateral						
Cash collateral received/posted		6,009		10,007	129,670	
Securities collateral received/posted ^{5,6}	114,290	34,818		226,359	329,801	
TOTAL COLLATERAL	114,290	40,827		236,366	459,471	
NET AMOUNT	(46,682)	(5,980)		57,345	(259,702)	
NET AMOUNT IN ACCORDANCE WITH ASC 210⁷	\$ 0	\$ 0		\$ 57,345	\$ 0	

¹ For the year ended June 30, 2017, includes a gross derivative liability of \$21,944 and a net gain of \$11,234, related to an interest rate exchange agreement on the University's debt portfolio. For the year ended June 30, 2016, includes a gross derivative liability of \$36,156 and a net loss of \$22,767, related to an interest rate exchange agreement on the University's debt portfolio. These positions are further discussed in Note 12.

² GAAP permits the netting of derivative assets and liabilities and the related cash collateral received and paid when a legally enforceable master netting agreement exists between the University and a derivative counterparty. Refer to Note 3 for information related to offsetting of certain other collateralized transactions.

³ Included within the "Investment portfolio, at fair value" and "Securities lending and other liabilities associated with the investment portfolio" line items of the Balance Sheets.

⁴ Included within "Realized and change in unrealized appreciation/(depreciation), net" within the Statements of Changes in Net Assets.

⁵ Includes securities posted to meet initial margin requirements on exchange traded futures and centrally cleared derivatives.

⁶ Includes collateral in transit of \$106,960 as of June 30, 2016, that settled within one to two business days subsequent to the transaction date.

⁷ Excludes any over-collateralized amounts in accordance with ASC 210.

The following section details the accounting for each type of derivative contract, as well as the University's intended purpose for entering into each type of derivative instrument.

Options

The University purchases and sells put and call options to take advantage of expected volatility in the price of underlying instruments. When purchasing an option, the University pays a premium, which is recorded as an asset and subsequently marked-to-market to reflect the current value of the option. When the University sells (writes) an option, the premium received is recorded as a liability and subsequently marked-to-market to reflect the current fair value of the option written. Premiums paid or received from options that expire unexercised are treated as realized losses and gains, respectively. When an option is closed before expiration or exercise, the University records a realized gain or loss equal to the difference between the proceeds paid/received upon closing and the original premium paid/received.

During fiscal years 2017 and 2016, the University transacted approximately 600 and 2,100 equity and fixed income option trades with an average transaction size of approximately 78,600 and 108,500 contracts, respectively. During the same period the University transacted approximately 100 and 300 currency option contracts with average USD equivalent notional amounts of approximately \$90.4 million and \$40.7 million per contract, respectively. Additionally, the University transacted approximately 70 and 100 commodity option trades during fiscal years 2017 and 2016, respectively, with an average transaction size of approximately 300 contracts each year.

Swap contracts

The University enters into swap contracts, which are contracts between two parties to exchange future cash flows at periodic intervals based on a notional principal amount, to increase or decrease its exposure to changes in the level of interest rates, underlying asset values and/or credit risk. Payments are exchanged at specified intervals, accrued daily commencing with the effective date of the contract and recorded as realized gains or losses. Gains or losses are realized in the event of an early termination of a swap contract. Risks of loss may include unfavorable changes in the returns of the underlying instruments or indexes, adverse fluctuations of interest rates, failure of the counterparty to perform under the terms of the agreement, and lack of liquidity in the market.

Collateral in the form of securities or cash may be posted to or received from the swap counterparty in accordance with the terms of the swap contract. Realized gains or losses are recorded relating to periodic payments received or made on swap contracts and with respect to swaps that are closed prior to termination date. When the University enters into a swap transaction, it may make or receive a payment equal to the value of the swap on the entry date and amortizes such payments to realized gain or loss over the outstanding term of the swap. The terms of the swap contracts can vary, and they are reported at fair value based on a valuation model or a counterparty provided price.

The University generally enters into credit default, interest rate, and total return swap contracts.

Credit default contracts

The University enters into credit derivatives to simulate long and short bond exposure that is either unavailable or considered to be less attractively priced in the bond market, or to hedge exposure obtained in the bond market. The University also uses these derivatives to reduce risk where it has exposure to the issuer, or to take an active long or short position with respect to the likelihood of an event of default. The underlying debt security on which the derivative is structured can be based on a single issuer, a "basket" of issuers, or an index. During fiscal years 2017 and 2016, the University transacted approximately 450 and 1,100 credit default contracts, respectively. These contracts had average notional amounts of approximately \$14.0 million and \$8.0 million in fiscal years 2017 and 2016, respectively.

In instances where the University has purchased credit protection on an underlying debt security, the University is obligated to pay the seller of the credit protection a periodic stream of payments over the term of the contract in return for a contingent payment upon the occurrence of a credit event with respect to the issuer of the debt security. The contingent payment may be a cash settlement or a physical delivery of the debt security in return for payment of the face amount of the obligation. The amount paid for purchased protection is typically a nominal percentage of the notional amount. In instances where the University has sold credit protection on an underlying debt security, the University receives a fixed rate of income throughout the term of the contract, which typically is between one month and five years, and in some instances up to ten years. In the case where the University sold credit protection, if a credit event occurs, the University may cash settle the contract or pay the purchaser of credit protection the full notional value of the contract in exchange for the debt security.

As of June 30, 2017, the University did not have significant purchased or written credit derivatives. As of June 30, 2016, the University's purchased and written credit derivatives had gross notional amounts of \$1,157.8 million and \$1,565.9 million, respectively, for total net written protection

of \$408.1 million in notional value. The table below summarizes certain information regarding credit protection purchased and written as of June 30, 2016 (in thousands of dollars):

Credit rating on underlying	As of June 30, 2016							
	Purchased protection		Written protection					
	Purchased notional ¹	Purchased fair value	Years to maturity – notional		Total written notional	Offsetting purchased notional ²	Net written notional	Net written fair value
			< 5 years	5-10 years				
A- to AAA	\$ 221,250	\$ (4,278)	\$ 65,000		\$ 65,000	\$ 12,000	\$ 53,000	\$ 494
BBB- to BBB+	566,524	(8,076)	756,390		756,390	43,000	713,390	11,940
Non-investment grade	218,553	(4,299)	727,000	\$ 17,500	744,500	96,500	648,000	4,908
TOTAL	\$ 1,006,327	\$ (16,653)	\$ 1,548,390	\$ 17,500	\$ 1,565,890	\$ 151,500	\$ 1,414,390	\$ 17,342

¹ Amounts shown are net of purchased credit protection that directly offsets written credit protection, as discussed in the note ⁽²⁾ below.

² Offsetting purchased credit derivatives represent the notional amount of purchased credit derivatives to the extent they hedge written credit derivatives with identical underlying debt securities.

Credit ratings on the underlying debt security, together with the period of expiration, are indicators of payment/performance risk. For example, the seller of credit protection is least likely to pay or otherwise be required to perform where the credit ratings are AAA and the period of expiration is "< 5 years". The likelihood of payment or performance is generally greater as the credit ratings fall and period of expiration increases.

Interest rate contracts

The University enters into interest rate swaps to hedge certain investment positions against interest rate fluctuations; to benefit from interest rate fluctuations; to obtain better interest rate terms than it would have been able to get without the swap; or to manage the interest, cost, and risk associated with its outstanding and/or future debt. Interest rate swaps involve the exchange by the University with another party of its respective commitments to pay or receive interest at specified intervals based on a notional amount of principal. During fiscal years 2017 and 2016, the University transacted approximately 2,800 and 3,200 interest rate swap and cap/floor contracts with average notional amounts of approximately \$184.3 million and \$248.0 million, respectively.

Total return swaps

The University enters into total return swaps to manage its exposure to market fluctuations in various asset classes. Total return swaps involve commitments to pay interest in exchange for a market linked return, both based on notional amounts. To the extent the total return of the security or

index underlying the transaction exceeds or falls short of the offsetting interest rate obligation, the University will receive a payment from or make a payment to the counterparty, respectively. During fiscal years 2017 and 2016, the University transacted approximately 25 and 50 commodity swap contracts with average notional amounts of approximately \$33.9 million and \$1.8 million; 1,400 and 1,800 equity swap contracts with average notional amounts of approximately \$9.4 million and \$7.9 million; 200 and 100 currency swap contracts with average notional amounts of approximately \$17.8 million and \$29.0 million; and 100 and 60 credit swaps with average notional amounts of approximately \$22.0 million and \$27.0 million, respectively.

Forward currency contracts

The University enters into forward currency contracts in connection with settling planned purchases or sales of securities, or to hedge the currency exposure associated with some or all of the University's portfolio securities. A forward currency contract is an agreement between two parties to buy and sell a currency at a set price on a future date. The value of a forward currency contract fluctuates with changes in forward currency exchange rates. Forward currency contracts are marked-to-market daily and the change in fair value is recorded by the University as an unrealized gain or loss. During fiscal years 2017 and 2016, the University transacted approximately 8,200 and 17,700 forward currency contracts with average USD equivalent notional amounts of approximately \$5.7 million and \$4.6 million, respectively.

Futures contracts

The University uses futures contracts to manage its exposure to financial markets, including hedging such exposures. Buying futures tends to increase the University's exposure to the underlying instrument, while selling futures tends to decrease exposure to the underlying instrument. Upon entering into a futures contract, the University is required to deposit an amount of cash or securities with its prime broker in accordance with the initial margin requirements of the broker or exchange. Futures contracts are marked-to-market daily based on settlement prices established by the board of trade or exchange on which they are traded, and an appropriate payable or receivable for the change in fair value is recorded by the University. Gains and losses are realized when the contracts expire or are closed. During fiscal years 2017 and 2016, the University transacted approximately 49,000 and 15,900 futures trades with an average transaction size of approximately 30 and 160 contracts, respectively.

Counterparty credit exposure

Financial instruments with off-balance sheet risk involve counterparty credit exposure. The policy of the University is to require collateral to the maximum extent possible under normal trading practices. Collateral, generally in the form of debt obligations issued by the US Treasury, is exchanged on a daily basis as required by fluctuations in the market. In the event of counterparty default, the University has the right to use the collateral held to offset any losses ensuing from the default event. Specific credit limits are established for counterparties based on their individual credit ratings. Credit limits are monitored daily by the University and are adjusted according to policy, as necessary. Some of the financial instruments entered into by the University contain credit-risk-related contingency features that allow the parties to the agreement to demand immediate payment for outstanding contracts and/or collateral. If material credit-risk-related contingency features were triggered on June 30, 2017, \$8 million in additional collateral would have been due to counterparties whereas at June 30, 2016, no additional collateral would have been due to counterparties for derivative contracts.

6. RECEIVABLES

The major components of receivables, net of reserves for doubtful accounts of \$10.6 million and \$11.3 million as of June 30, 2017 and 2016, respectively, were as follows (in thousands of dollars):

	2017	2016
Federal sponsored support	\$ 59,730	\$ 63,773
Publications	52,280	51,072
Executive education	46,824	40,468
Non-federal sponsored support	21,046	15,842
Tuition and fees	19,932	19,504
Gift receipts	13,098	8,333
Other	48,931	49,212
TOTAL RECEIVABLES, NET	\$ 261,841	\$ 248,204

7. NOTES RECEIVABLE

Notes receivable are recorded initially at face value plus accrued interest, which approximates fair value. Notes receivable, and related allowance for doubtful accounts, were as follows (in thousands of dollars):

	2017			2016		
	Receivable	Allowance	Net	Receivable	Allowance	Net
Student Loans:						
Government revolving	\$ 72,712	\$ 1,817	\$ 70,895	\$ 77,846	\$ 2,033	\$ 75,813
Institutional	87,027	2,248	84,779	88,115	2,207	85,908
Federally insured	375		375	389		389
Total student loans	\$ 160,114	\$ 4,065	\$ 156,049	\$ 166,350	\$ 4,240	\$ 162,110
Faculty and staff loans	217,069	179	216,890	207,096	179	206,917
Other loans	24,832	14,708	10,124	18,763	6,599	12,164
TOTAL	\$ 402,015	\$ 18,952	\$ 383,063	\$ 392,209	\$ 11,018	\$ 381,191

Government revolving loans are funded principally with federal advances to the University under the Perkins Loan Program and certain other programs. These advances totaled \$72.6 million and \$70.3 million as of June 30, 2017 and 2016, respectively, and are classified as liabilities in the *Balance Sheets*. Interest earned on the revolving and institutional loan programs is reinvested to support additional loans. The repayment and interest rate terms of the institutional loans vary considerably.

Faculty and staff notes receivable primarily consists of mortgage and educational loans. Mortgages include shared appreciation loans, loans that bear interest at the applicable federal rate and interest-free loans. In addition, certain mortgages that bear interest at the current market rate or applicable federal rate may be subsidized for an initial period. The educational loans are primarily zero-interest loans.

The University assesses the adequacy of the allowance for doubtful accounts by evaluating the loan portfolio, including such factors as the differing economic risks associated with each loan category, the financial condition of specific borrowers, the economic environment in which the borrowers operate, the level of delinquent loans, the value of any collateral, and, where applicable, the existence of any guarantees or indemnifications. In addition to these factors, the University reviews the aging of the loans receivable and the default rate in comparison to prior years. The allowance is adjusted based on these reviews. The University considers the allowance at June 30, 2017 and 2016 to be reasonable and adequate to absorb potential credit losses inherent in the loan portfolio.

8. PLEDGES RECEIVABLE

Unconditional promises to donate to the University in the future are initially recorded at fair value (pledge net of discount) and subsequently amortized over the expected payment period, net of an allowance for uncollectible pledges. The University's indicative 1- to 5-year taxable unsecured borrowing rate is used to discount pledges receivable upon receipt. Discounts of \$75.7 million and \$77.2 million for the years ended June 30, 2017 and 2016, respectively, were calculated using rates ranging from 1.3% to 2.1%.

Pledges receivable included in the financial statements as of June 30, 2017 and 2016 are expected to be realized as follows (in thousands of dollars):

	2017	2016
Within one year	\$ 283,376	\$ 313,278
Between one and five years	1,133,505	1,253,113
More than five years	705,632	732,062
Less: discount and allowance for uncollectible pledges	(174,487)	(164,233)
TOTAL PLEDGES RECEIVABLE, NET	\$ 1,948,026	\$ 2,134,220

Pledges receivable as of June 30, 2017 and 2016 have been designated for the following purposes (in thousands of dollars):

	2017	2016
General Operating Account balances:		
Gifts for current use	\$ 550,819	\$ 638,719
Non-federal sponsored awards	99,623	131,368
Facilities and loan funds	222,626	240,283
Total General Operating Account balances	873,068	1,010,370
Endowment	1,074,958	1,123,850
TOTAL PLEDGES RECEIVABLE, NET	\$ 1,948,026	\$ 2,134,220

Because of uncertainties with regard to realizability and valuation, bequest intentions and other conditional promises are only recognized as assets if and when the specified conditions are met. Non-bequest conditional pledges totaled \$49.1 million and \$65.8 million as of June 30, 2017 and 2016, respectively.

9. FIXED ASSETS

Fixed assets are reported at cost or, if a gift, at fair value as of the date of the gift, net of accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets.

The major categories of fixed assets as of June 30, 2017 and 2016 are summarized as follows (in thousands of dollars):

	2017	2016	Estimated useful life (in years)
Research facilities	\$ 2,302,795	\$ 2,235,809	*
Classroom and office facilities	1,831,097	1,776,972	35
Housing facilities	1,757,609	1,729,232	35
Other facilities	414,587	406,626	35
Service facilities	733,956	686,274	35
Libraries	483,836	479,899	35
Museums and assembly facilities	783,536	740,647	35
Athletic facilities	191,782	198,559	35
Land	967,978	783,864	N/A
Construction in progress	1,079,120	680,602	N/A
Equipment	1,288,717	1,224,016	**
SUBTOTAL AT COST	11,835,013	10,942,500	
Less: accumulated depreciation	(4,709,115)	(4,412,960)	
FIXED ASSETS, NET	\$ 7,125,898	\$ 6,529,540	

* Estimated useful lives of components range from 10 to 45 years.

** Estimated useful lives of equipment range from 3 to 8 years.

Certain University facilities are subject to restrictions as to use, structural modifications, and ownership transfer. Included in the fixed asset balances are restricted facilities with a net book value of \$260.7 million and \$255.6 million as of June 30, 2017 and 2016, respectively.

The costs of research facilities are separated into the shell, roof, finishes, fixed equipment, and services. These components are separately depreciated.

Equipment includes general and scientific equipment, computers, software, furniture, and vehicles.

The University has asset retirement obligations of \$132.0 million and \$101.3 million, which are included in "Deposits and other liabilities" in the *Balance Sheets* as of June 30, 2017 and 2016, respectively.

10. ENDOWMENT AND GENERAL OPERATING ACCOUNT NET ASSETS

The University's endowment consists of 13,487 separate funds established over many years for a wide variety of purposes. Endowment fund balances, including funds functioning as endowment, are classified and reported as unrestricted, temporarily restricted, or permanently restricted net assets in accordance with donor specifications and state law. Net unrealized losses on permanently restricted endowment funds are classified as a reduction to unrestricted net assets until such time as the fair value equals or exceeds historic dollar value. Unrestricted net assets were reduced by \$3.4 million and \$5.4 million for such losses in fiscal year 2017 and 2016, respectively. Although funds functioning as endowment are not subject to donor restrictions, decisions to spend their principal require the approval of the Corporation. All but a small fraction of the endowment is invested in the GIA (*Note 3*).

The University is also the beneficiary of certain irrevocable trusts held and administered by others. The estimated fair values of trust assets, which include the present values of expected future cash flows from outside trusts and the fair value of the underlying assets of perpetual trusts, are recognized as assets and increases in net assets when the required trust documentation is provided to the University.

The fair values of these trusts are provided by the external trustees and are adjusted annually by the University. These are included as Level 3 investments in the fair value hierarchy table in *Note 4*.

The endowment consisted of the following as of June 30, 2017 and 2016 (in thousands of dollars):

	2017				2016
	Unrestricted	Temporarily restricted	Permanently restricted	Total	Total
Endowment funds	\$ (3,401)	\$ 19,648,050	\$ 6,971,295	\$ 26,615,944	\$ 25,505,237
Funds functioning as endowment	6,151,574	2,889,572		9,041,146	8,713,969
Pledge balances		480,577	594,381	1,074,958	1,123,850
Interests in trusts held by others		13,845	350,581	364,426	322,687
TOTAL ENDOWMENT	\$ 6,148,173	\$ 23,032,044	\$ 7,916,257	\$ 37,096,474	\$ 35,665,743

The University's endowment distribution policies are designed to preserve the value of the endowment in real terms (after inflation) and generate a predictable stream of available income. Each fall, the Corporation approves the endowment distribution for the following fiscal year.

The endowment distribution is based in part on presumptive guidance from a formula that is intended to provide budgetary stability by smoothing the impact of annual investment gains and losses. The formula's inputs reflect expectations about long-term returns and inflation rates. For fiscal year 2017, the endowment distribution approved by the Corporation (prior to decapitalizations) was equal to 5.3% of the fair value of the endowment invested in the GIA as of the beginning of the fiscal year. The total endowment distribution made available for operations was \$1.8 billion and \$1.7 billion in fiscal year 2017 and 2016, respectively.

Each year the Corporation also approves certain decapitalizations from the endowment to support strategic, mission-critical activities or objectives that are typically one-time or time-limited and therefore, are excluded from net operating surplus. These decapitalizations totaled \$53.5 and \$128.4 million in fiscal year 2017 and 2016, respectively. These additional decapitalizations, in combination with the endowment distribution, resulted in an aggregate payout rate of 5.4% and 5.1% in fiscal year 2017 and 2016, respectively.

General operating account

The GOA consists of the general or current funds of the University as well as the assets and liabilities related to student and faculty loans and facilities. The GOA accepts, manages, and pays interest on deposits made by University departments; invests surplus working capital; makes loans; and arranges external financing for major capital projects. It is used to manage, control, and execute all University financial transactions, except for those related to investment activities conducted by HMC.

The GOA consisted of the following as of June 30, 2017 and 2016 (in thousands of dollars):

	2017				2016
	Unrestricted	Temporarily restricted	Permanently restricted	Total	Total
General Operating Account	\$ 3,924,841	\$ 2,432,666	\$ 98,216	\$ 6,455,723	\$ 6,243,721

The temporarily restricted net assets consist primarily of unexpended income, gifts, and pledges. The permanently restricted net assets are loan funds.

11. SPLIT INTEREST AGREEMENTS

Under split interest agreements, donors enter into trust or other arrangements with the University in which the University receives benefits that are shared with other beneficiaries and institutions. Split interest agreement (SIA) investment assets are invested primarily in the GIA and publicly traded securities, a small segment is managed by an external advisor, and all are recorded in the "Investment portfolio, at fair value" in the University's *Balance Sheets*. Additional disclosures are included in *Notes 3 and 4*. The publicly traded securities are included as Level 1 and externally managed investments are included in

investments measured using the practical expedient in the fair value hierarchy table in *Note 4*. Associated liabilities are recorded at the present value of estimated future payments due to beneficiaries and other institutions. These liabilities are calculated using the University's current taxable unsecured borrowing rate of 2.3% and 1.4% as of June 30, 2017 and 2016, respectively.

The changes in split interest agreement net assets for fiscal years 2017 and 2016 were as follows (in thousands of dollars):

	2017			2016
	Temporarily restricted	Permanently restricted	Total	Total
Investment return:				
Investment income	\$ 3,205	\$ 10,075	\$ 13,280	\$ 12,261
Change in realized and unrealized appreciation, net	23,348	73,400	96,748	(55,206)
Total investment return	26,553	83,475	110,028	(42,945)
Gifts (<i>Note 16</i>) ¹	7,043	12,563	19,606	18,832
Payments to annuitants	(15,604)	(49,055)	(64,659)	(63,012)
Transfers to endowment	(3,593)	(25,650)	(29,243)	(20,971)
Transfers between SIA and the GOA	(15,180)	(24)	(15,204)	(11,027)
Change in liabilities and other adjustments	2,979	8,509	11,488	162,443
NET CHANGE DURING THE YEAR	2,198	29,818	32,016	43,320
Total split interest agreement net assets, beginning of year	51,640	450,226	501,866	458,546
TOTAL SPLIT INTEREST AGREEMENT NET ASSETS, end of year	\$ 53,838	\$ 480,044	\$ 533,882	\$ 501,866

¹ Shown at net present value. The undiscounted value of these gifts was \$42,217 and \$34,597 for the years ended June 30, 2017 and 2016, respectively.

Split interest agreement net assets as of June 30, 2017 and 2016 consisted of the following (in thousands of dollars):

	2017	2016
Split interest agreement investments (<i>Note 3</i>)		
Charitable remainder trusts	\$ 896,451	\$ 847,850
Charitable lead trusts	123,396	116,896
Charitable gift annuities	230,352	213,262
Pooled income funds	124,419	115,060
Total split interest agreement investments	1,374,618	1,293,068
Liabilities due under split interest agreements:		
Amounts due to beneficiaries	(779,885)	(742,808)
Amounts due to other institutions	(60,851)	(48,394)
Total liabilities due under split interest agreements	(840,736)	(791,202)
TOTAL SPLIT INTEREST AGREEMENT NET ASSETS, end of year¹	\$ 533,882	\$ 501,866

¹ Includes an out-of-period adjustment for the year ended June 30, 2016, which is recorded in the "Split Interest Agreements Net Change during the Year" line in the Statement of Changes in Net Assets with General Operating Account Detail.

12. BONDS AND NOTES PAYABLE

Bonds and notes payable as of June 30, 2017 and 2016 were as follows (in thousands of dollars):

	Fiscal year of issue	Years to final maturity ¹	One-year yield ²	Outstanding principal	
				2017 ³	2016 ³
Tax-exempt bonds and notes payable:					
Variable-rate demand bonds and commercial paper:					
Series R – daily	2000-2006	15	0.4%	\$ 131,200	\$ 131,200
Series Y – weekly	2000	18	0.7%	117,905	117,905
Commercial paper	2017		0.5%		284,785
Total variable-rate bonds and notes payable			0.5%	249,105	533,890
Fixed-rate bonds:					
Series N (par value, \$80,000)	1992	3	6.3%	79,714	79,613
Series 2008B	2008		4.9%		214,772
Series 2009A (par value, \$45,290)	2009	1	4.8%	45,513	921,553
Series 2010A (par value, \$49,590)	2010	4	4.7%	52,861	483,322
Series 2010B (par value, \$110,235)	2011	7	4.8%	117,938	642,900
Series 2016A (par value, \$1,539,720)	2017	23	3.8%	1,912,871	
Total fixed-rate bonds			4.2%	2,208,897	2,342,160
Total tax-exempt bonds and notes payable			3.7%	2,458,002	2,876,050
Taxable bonds and notes payable:					
Variable-rate bonds:					
Commercial paper	2012	<1	0.8%	343,341	164,622
Total variable-rate bonds			0.8%	343,341	164,622
Fixed-rate bonds:					
Series 2008A (par value, \$243,000)	2008	21	5.6%	242,869	242,862
Series 2008C (par value, \$125,205)	2008	1	5.3%	125,205	125,205
Series 2008D (par value, \$500,000)	2009	22	6.4%	498,691	998,015
Series 2010C (par value, \$300,000)	2011	23	4.9%	298,439	298,373
Series 2013A (par value, \$402,000)	2013	20	3.4%	402,000	402,000
Series 2016B (par value, \$1,000,000)	2017	39	3.3%	995,521	
Total fixed-rate bonds			4.4%	2,562,725	2,066,455
Total taxable bonds and notes payable			4.3%	2,906,066	2,231,077
Other notes payable	Various	Various	Various	86,773	86,497
Unamortized bond issuance costs				(19,751)	(16,922)
TOTAL BONDS AND NOTES PAYABLE			4.1%	\$ 5,431,090	\$ 5,176,702

¹ The weighted average maturity of the portfolio on June 30, 2017 was 18.8 years.

² Exclusive of interest rate exchange agreement. Inclusive of this agreement, the overall portfolio rate was 0.05% higher (4.12% vs. 4.07%).

³ Balances include original issuance premiums/discounts.

Interest expense related to bonds and notes payable was \$201.1 million and \$233.8 million for fiscal year 2017 and 2016, respectively. The interest expense in the *Statement of Changes in Net Assets with General Operating Account Detail* includes additional components related to capital leases. Excluding maturity of commercial paper (due within a year), unamortized discounts and premiums, underwriter's discounts and cost of issuance fees, scheduled principal payments are (in thousands of dollars):

Fiscal year	Principal payments
2018	\$ 22,361
2019	147,502
2020	117,999
2021	88,185
2022	109,619
Thereafter	4,245,251
TOTAL PRINCIPAL PAYMENTS	\$ 4,730,917

In fiscal year 2017, the University issued \$1.539 billion of tax-exempt fixed-rate Series 2016A Bonds and \$1.0 billion of taxable fixed-rate Series 2016B Bonds. Proceeds from the Series 2016A issue were used to refinance all or a portion of Series 2008B, 2009A, 2010A, 2010B-1 and 2010B-2. Proceeds of Series 2016B were used to refinance all or a portion of Series 2010B-1 and 2008D and to finance capital projects initially funded by the University's commercial paper program. The University also issued \$256.7 million of taxable commercial paper to refinance a portion of Series 2009A.

In connection with the issuance of Series 2016A and 2016B, the University's AAA/Aaa credit ratings were affirmed with S&P Global Ratings and Moody's Investors Service, respectively.

In January 2017, the University entered into a \$500 million unsecured, revolving credit facility with a syndicate of banks, which expires in January 2020. The University also has a separate \$1 billion unsecured, revolving credit facility outstanding, which expires in January 2020. There was no outstanding balance on either of these credit facilities at June 30, 2017.

In February 2017, the University obtained reauthorization of its tax-exempt commercial paper program.

As of June 30, 2017, the University had \$249.1 million of variable-rate demand bonds outstanding (excluding commercial paper) with either a daily or weekly interest rate reset, as noted in the bonds and notes payable table on page 36. In the event that the University receives notice of any optional tender on its variable-rate demand bonds, or if the bonds become subject to mandatory tender, the purchase price of the bonds will be paid from the remarketing of such bonds. However, if the remarketing proceeds are insufficient, the University will have a general obligation to purchase the bonds tendered with cash on hand.

Interest rate exchange agreements

In fiscal year 2017, the University had in place one interest rate exchange agreement used to manage the interest cost and risk associated with a portion of its outstanding debt.

The fair value of the interest rate exchange agreement was \$(21.9) million and \$(36.2) million as of June 30, 2017 and 2016, respectively and is recorded in "Securities lending and other liabilities associated with the investment portfolio" on the University's *Balance Sheets*.

13. EMPLOYEE BENEFITS

The University offers current employees a choice of health plans, a dental plan, short-term and long-term disability plans, life insurance, tuition assistance, and a variety of other benefits such as subsidized passes for public transportation and for Harvard athletic facilities. In addition, the University has retirement plans covering substantially all employees.

The University uses a measurement date of June 30 for its pension and postretirement health plans.

Pension benefits

All eligible faculty members and staff are covered by retirement programs that include a defined benefit component, a defined contribution component, or a combination of the two.

In accordance with the Employee Retirement Income Security Act (ERISA) requirements, the University has

established a trust to hold plan assets for its defined benefit pension plans. The fair value of the trust's assets was \$836.5 million and \$803.7 million as of June 30, 2017 and 2016, respectively. During fiscal years 2017 and 2016, the University made cash contributions to the defined benefit pension plan of \$13.4 million and \$11.4 million, respectively. The University recorded expenses for its defined contribution plans of \$135.0 million and \$131.2 million for fiscal year 2017 and 2016, respectively.

Postretirement health benefits

The University provides postretirement health coverage and life insurance to substantially all of its employees. As of June 30, 2017, the University had internally designated and invested \$633.6 million to fund the postretirement health benefit accrued liability of \$853.0 million. As of June 30, 2016, the University had internally designated and invested \$571.6 million to fund the postretirement health benefit accrued liability of \$941.8 million.

The following table sets forth the pension and postretirement plans' funded status that is reported in the *Balance Sheets* as of June 30, 2017 and 2016 (in thousands of dollars):

	Pension benefits		Postretirement health benefits	
	2017	2016	2017	2016
Change in projected benefit obligation:				
Projected benefit obligation, beginning of year	\$1,105,690	\$ 961,868	\$ 941,815	\$ 809,499
Service cost	12,274	10,254	40,155	35,292
Interest cost	42,056	44,069	37,872	39,644
Plan participants' contributions			3,449	3,477
Plan change ¹			(5,094)	(26,369)
Gross benefits paid	(40,459)	(45,388)	(24,247)	(25,542)
Actuarial (gain)/loss	(43,833)	134,887	(140,947)	105,814
PROJECTED BENEFIT OBLIGATION, end of year²	1,075,728	1,105,690	853,003	941,815
Change in plan assets:				
Fair value of plan assets, beginning of year	803,659	814,365		
Actual return on plan assets	59,832	23,282		
Employer contributions	13,424	11,400		
Gross benefits paid	(40,459)	(45,388)		
FAIR VALUE OF PLAN ASSETS, end of year	836,456	803,659	0	0
UNFUNDED STATUS	\$ (239,272)	\$ (302,031)	\$ (853,003)	\$ (941,815)

¹ The postretirement plan change of \$(5.1) million for 2017 and \$(26.4) million for 2016 reflects plan changes for union employees, effective January 1, 2016, that increased cost-sharing and the length of service needed for the maximum subsidy.

² Measurement of the University's pension benefit obligation including assumed salary increases (required by GAAP).

The accumulated pension benefit obligation (ABO) is a measurement of the University's pension benefit obligation, based on past and present compensation levels and does not include assumed salary increases. The ABO was \$908.7 million and \$928.3 million at June 30, 2017 and 2016, respectively. The funded status disclosed above has been prepared in accordance with pension accounting rules. When measured on an IRS funding basis, which informs the University's required cash contribution amount, the plan was overfunded at January 1, 2017.

Net periodic benefit cost

Components of net periodic benefit cost recognized in operating activity and other amounts recognized in non-operating activity in unrestricted net assets in the *Statements of Changes in Net Assets with General Operating Account Detail* are summarized as follows for the years ended June 30, 2017 and 2016 (in thousands of dollars):

	Pension benefits		Postretirement health benefits	
	2017	2016	2017	2016
Components of net periodic benefit cost:				
Service cost	\$ 12,274	\$ 10,254	\$ 40,155	\$ 35,292
Interest cost	42,056	44,069	37,872	39,644
Expected return on plan assets	(49,030)	(49,529)		
Amortization of:				
Actuarial loss/(gain)	15,710	3,656		(4,604)
Prior service (credit)/cost	288	288	(6,693)	(4,483)
Total net periodic benefit cost recognized in operating activity	21,298	8,738	71,334	65,849
Other amounts recognized in non-operating activity in unrestricted net assets:				
Current year net actuarial (gain)/loss	(54,635)	161,134	(140,947)	105,814
Current year net prior service cost			(5,094)	(26,369)
Amortization of:				
Prior service (cost)/credit	(288)	(288)	6,693	4,483
Actuarial (loss)/gain	(15,710)	(3,656)		4,604
Total other amounts recognized in non-operating activity¹	(70,633)	157,190	(139,348)	88,532
Total recognized in <i>Statements of Changes in Net Assets with General Operating Account Detail</i>	\$ (49,335)	\$ 165,928	\$ (68,014)	\$ 154,381

¹ These amounts totaling \$(210.0) million in fiscal year 2017 and \$245.7 million in fiscal year 2016 include gains and losses and other changes in the actuarially determined benefit obligations arising in the current period but that have not yet been reflected within net periodic benefit cost/(income) and are included in the "Change in Retirement Obligations" line in the *Statements of Changes in Net Assets with General Operating Account Detail*.

Cumulative amounts recognized as non-operating changes in unrestricted net assets are summarized as follows for the years ended June 30, 2017 and 2016 (in thousands of dollars):

	Pension benefits		Postretirement health benefits	
	2017	2016	2017	2016
Net actuarial loss/(gain)	\$ 157,921	\$ 228,266	\$ (176,612)	\$ (35,665)
Prior service cost/(credit)	1,756	2,043	(60,512)	(62,111)
Cumulative amounts recognized in unrestricted net assets	\$ 159,677	\$ 230,309	\$ (237,124)	\$ (97,776)

The estimated net actuarial loss and prior service cost for the defined benefit plan that will be amortized from unrestricted net assets into net periodic benefit (income)/cost in fiscal year 2018 are \$10.1 million and \$0.3 million, respectively. The estimated net actuarial gain and estimated prior service credit for the postretirement health benefit that will be amortized from unrestricted net assets into net periodic benefit (income)/cost in fiscal year 2018 are (\$6.5) million and (\$7.1) million, respectively.

Other assumptions and health care cost trend rates used in determining the year end obligation as well as the net periodic benefit (income)/cost of the pension and postretirement health plans are summarized as follows for fiscal years 2017 and 2016:

	Pension benefits		Postretirement health benefits	
	2017	2016	2017	2016
Weighted-average assumptions used to determine benefit obligation as of June 30:				
Discount rate	4.00%	3.85%	4.05%	3.90%
Compensation increase trend:				
Initial rate	3.00%	3.00%	3.00%	3.00%
Ultimate rate	4.00%	4.00%	4.00%	4.00%
Year of ultimate	2021	2021	2021	2021
Health care cost trend rate:				
Initial rate	N/A	N/A	5.50%	6.00%
Ultimate rate	N/A	N/A	4.75%	4.75%
Year of ultimate	N/A	N/A	2023	2023
Weighted-average assumptions used to determine net periodic benefit (income)/cost:				
Discount rate	3.85%	4.65%	3.90%	4.75%
Expected long-term rate of return on plan assets	6.50%	6.75%	N/A	N/A
Compensation increase trend:				
Initial rate	3.00%	3.00%	3.00%	3.00%
Ultimate rate	4.00%	4.00%	4.00%	4.00%
Year of ultimate	2021	2016	2021	2016
Health care cost trend rate:				
Initial rate	N/A	N/A	6.00%	6.50%
Ultimate rate	N/A	N/A	4.75%	4.75%
Year of ultimate	N/A	N/A	2023	2023

As an indicator of sensitivity, a one percentage point change in assumed health care cost trend rate would affect 2017 as shown in the following table (in thousands of dollars):

	1% point increase	1% point decrease
Effect on 2017 postretirement health benefits service and interest cost	\$ 26,371	\$ (15,896)
Effect on postretirement health benefits obligation as of June 30, 2017	208,808	(135,482)

The expected return on pension plan assets is determined by utilizing HMC's capital markets model, which takes into account the expected real return, before inflation, for each of the pension portfolio's asset classes, as well as the correlation of any one asset class to every other asset class. This model calculates the real returns and correlations and derives an expected real return for the entire portfolio,

given the percentage weighting allocated to each asset class. After calculating the expected real return, an assessment is made to accommodate the expected inflation rate for the forthcoming period. The final expected return on assets is the aggregate of the expected real return plus the expected inflation rate.

Plan assets

The actual asset allocation of the investment portfolio for the pension plan at June 30, 2017 and 2016, along with target allocations for June 30, 2018, is as follows:

	2018 Target	June 30, 2017	June 30, 2016
Asset allocation by category for pension plan:			
Equity securities	30-50%	37.7%	34.7%
Fixed income securities	30-50	45.3	46.2
Real estate	0-5	1.0	1.5
Absolute return	10-30	12.9	14.5
Cash	0-10	3.1	3.1
TOTAL OF ASSET ALLOCATION CATEGORIES		100.0%	100.0%

The University's investment strategy for the pension portfolio is to manage the assets across a broad and diversified range of investment categories, both domestic and international. The objective is to achieve a risk-adjusted return that is in line with the long-term obligations that the University has to the pension plan beneficiaries. During fiscal year 2017, the University maintained its allocation to fixed income securities to manage the interest rate volatility associated with its pension obligations. The University

expects to continue this strategy in future years. The investment program is also managed to comply with all ERISA regulations.

The following is a summary of the levels within the fair value hierarchy for the pension plan assets subject to fair value measurement as of June 30, 2017 and 2016 (in thousands of dollars):

	2017				2016			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
PLAN ASSETS:								
Cash and short-term investments	\$34,158			\$ 34,158	\$ 34,681			\$ 34,681
Domestic equity	1,061			1,061	17			17
Foreign equity	95,735			95,735	76,015			76,015
Domestic fixed income	63,457	\$ 273,435		336,892	52,460	\$ 278,108		330,568
Foreign fixed income		20,200		20,200		23,126		23,126
Emerging market equity and debt	34,323	11,654		45,977	29,396	10,035		39,431
Private equities			\$ 15,445	15,445				
Real estate			8,264	8,264				
Due from broker	404			404	1,123	3		1,126
PLAN ASSETS SUBJECT TO FAIR VALUE LEVELING	\$ 229,138	\$ 305,289	\$ 23,709	558,136	\$ 193,692	\$ 311,272		504,964
Investments measured using the practical expedient				268,866				294,946
Other assets not subject to fair value				9,454				3,749
TOTAL PLAN ASSETS				\$ 836,456				\$ 803,659

The following is a rollforward of Level 3 investments for the year ended June 30, 2017 (in thousands of dollars):

	Beginning balance as of July 1, 2016	Net realized gains/ (losses)	Net change in unrealized appreciation (depreciation)	Purchases/ contributions	Sales/ distributions	Transfers into Level 3 ¹	Transfers out of Level 3	Ending balance as of June 30, 2017
PLAN ASSETS:								
Private equity	\$ 0	\$ 4,202	\$ (2,867)	\$ 64	\$ (6,736)	\$ 20,782		\$ 15,445
Real estate	0	210	(10)		(2,891)	10,955		8,264
PLAN ASSETS SUBJECT TO FAIR VALUE LEVELING	\$ 0	\$ 4,412	\$ (2,877)	\$ 64	\$ (9,627)	\$ 31,737		\$ 23,709

¹ During the fiscal year, certain transfers into Level 3 represent instances of deviation from the practical expedient. Certain securities, included in Private equity, Natural resources and Real estate, were valued using a secondary sale price and were transferred into Level 3.

The following is a rollforward of Level 3 investments for the year ended June 30, 2016 (in thousands of dollars):

	Beginning balance as of July 1, 2015	Net realized gains/ (losses)	Net change in unrealized appreciation (depreciation)	Purchases/ contributions	Sales/ distributions	Transfers into Level 3	Transfers out of Level 3	Ending balance as of June 30, 2016
PLAN ASSETS:								
Emerging market equity and debt	\$ 925						\$ (925)	\$ 0
PLAN ASSETS SUBJECT TO FAIR VALUE LEVELING	\$ 925						\$ (925)	\$ 0

Expected future benefit payments

Employer contributions of \$15.5 million are expected for fiscal year 2018 to fund the pension benefit plan.

The following table summarizes expected benefit payments and subsidies for pension and other postretirement benefits for the University (in thousands of dollars):

Fiscal year	Expected benefit payments	
	Pension	Postretirement health
2018	\$ 53,555	\$ 21,313
2019	54,005	23,623
2020	56,591	25,781
2021	59,183	27,900
2022	61,565	30,063
Thereafter	335,419	188,664

14. STUDENT FINANCIAL AID

Financial aid granted to students is summarized as follows for the years ended June 30, 2017 and 2016 (in thousands of dollars):

	2017	2016
Scholarships and other student awards:		
Scholarships applied to student income	\$ 413,870	\$ 397,524
Scholarships and other student awards paid directly to students	147,555	142,070
Total scholarships and other student awards	561,425	539,594
Student employment	74,074	73,723
Student loans	21,519	25,975
Agency financial aid*	19,282	19,164
TOTAL STUDENT FINANCIAL AID	\$ 676,300	\$ 658,456

* Represents aid from sponsors for which the University acts as an agent for the recipient.

15. SPONSORED SUPPORT

Total expenditures funded by US government sponsors or by institutions that subcontract federally sponsored projects to the University were \$618.1 million and \$597.2 million in fiscal year 2017 and 2016, respectively. The University's principal source of federal sponsored funds is the Department of Health and Human Services. The University also has many non-federal sources of sponsored awards and grants, including corporations, foundations, state and local governments, foreign governments, and research institutes.

Sponsored grants and contracts normally provide for the recovery of direct and indirect costs. The University recognizes revenue associated with direct costs as the related costs are incurred. Recovery of related indirect costs is generally recorded at fixed or predetermined rates negotiated with the federal government and other sponsors. Predetermined federal indirect cost rates have been established for the University Area, T.H. Chan School of Public Health and the Medical School (including the School of Dental Medicine) through fiscal year 2019. Funds received for federally sponsored activity are subject to audit.

16. GIFTS

Gifts are classified as unrestricted, temporarily restricted, or permanently restricted net assets in accordance with donor specifications.

Additionally gifts are categorized by purpose as "Current use", "Non-federal sponsored grants", "Endowment funds", "Split interest agreements", or "Facilities and loan funds".

Gifts received for the year ended June 30, 2017 are summarized as follows (in thousands of dollars):

	2017	
	Gifts received	Donor redesignations/ other changes
		Total
Current use	\$ 450,978	\$ (1,039)
Non-federal sponsored grants	153,566	(1,677)
Endowment funds	514,639	35,890
Split interest agreements*	19,606	
Facilities and loan funds	142,098	(32,020)
TOTAL GIFTS	\$ 1,280,887	\$ 1,154

* Shown at net present value. The undiscounted value of these gifts was \$42,217 for the year ended June 30, 2017.

Gifts received for the year ended June 30, 2016 are summarized as follows (in thousands of dollars):

	2016	
	Gifts received	Donor redesignations/ other changes
		Total
Current use	\$ 424,685	\$ (3,516)
Non-federal sponsored grants	137,900	(2,116)
Endowment funds*	488,599	3,384
Split interest agreements**	18,832	
Facilities and loan funds	117,418	(194)
TOTAL GIFTS	\$ 1,187,434	\$ (2,442)

* Gift receipts include non-cash gifts of \$5.9 million for the year ended June 30, 2016.

** Shown at net present value. The undiscounted value of these gifts was \$34,597 for the year ended June 30, 2016.

17. OTHER INCOME

The major components of other income for the years ended June 30, 2017 and 2016 were as follows (in thousands of dollars):

	2017	2016
Publication and royalties		
from copyrights	\$ 216,377	\$ 215,176
Rental and parking ¹	134,974	143,412
Services income	103,463	101,660
Health and clinic fees	53,937	50,292
Sales income	31,695	34,940
Interest income	10,390	10,031
Other student income	5,463	5,625
Other	82,011	94,564
TOTAL OTHER INCOME	\$ 638,310	\$ 655,700

¹ The University is the lessor of space and facilities under operating leases, the income from which is included in rental and parking.

18. OTHER EXPENSES

The major components of other expenses for the years ended June 30, 2017 and 2016 were as follows (in thousands of dollars):

	2017	2016
Subcontract expenses under		
sponsored projects	\$ 167,416	\$ 156,286
Travel	96,199	94,158
Publishing	47,671	47,103
Taxes and Fees	31,445	31,263
Advertising	29,543	28,099
Postage	19,047	18,987
Insurance	16,977	12,466
Telephone	13,942	13,742
Other	92,989	61,494
TOTAL OTHER EXPENSES	\$ 515,229	\$ 463,598

19. FUNCTIONAL CLASSIFICATION OF OPERATING EXPENSES

Operating expenses are allocated functionally on a direct basis. Operations and maintenance expenses are allocated based on square footage. During the fiscal year 2017, the University adjusted certain functional expense classifications to better align with industry practice. Fiscal year 2016 were also reclassified for comparative purposes.

Operating expenses by functional classification for the years ended June 30, 2017 and 2016 were as follows (in thousands of dollars):

	2017	2016
Instruction	\$ 1,193,349	\$ 1,143,405
Research	1,077,541	1,054,455
Institutional support	911,811	852,399
Academic support	614,877	586,070
Auxiliary services	557,406	544,446
Student services	203,323	205,735
Libraries	178,723	171,645
Scholarships and other student awards	147,555	142,070
TOTAL EXPENSES	\$ 4,884,585	\$ 4,700,225

20. COMMITMENTS AND CONTINGENCIES

Lease commitments

The University is the lessee of equipment and space under operating (rental) and capital leases. Rent expense related to leases was \$76.5 million and \$68.8 million in fiscal year 2017 and 2016, respectively.

Future minimum lease payments under these operating and capital leases (in thousands of dollars):

	Operating	Capital
2018	\$ 69,940	\$ 9,692
2019	63,855	13,757
2020	54,081	8,930
2021	42,587	8,147
2022	40,145	8,358
Thereafter	262,671	141,801
TOTAL FUTURE MINIMUM PAYMENTS	\$ 533,279	\$ 190,685

Fixed asset-related commitments

The University has various commitments for capital projects involving construction and renovation of certain facilities, real estate acquisitions, and equipment purchases, for which the outstanding commitments as of June 30, 2017 totaled approximately \$753.3 million.

Environmental remediation

The University is subject to laws and regulations concerning environmental remediation and has established reserves for potential obligations that management considers to be probable and for which reasonable estimates can be made. These estimates may change substantially depending on new information regarding the nature and extent of contamination, appropriate remediation technologies, and regulatory approvals. Costs of future environmental remediation have been discounted to their net present value.

Management is not aware of any existing conditions that it believes are likely to have a material adverse effect on the University's financial position, changes in net assets, or cash flows.

Utilities purchase commitments

The University has entered into Power Purchase Agreements (PPAs) with a series of utilities providers to purchase natural gas and electricity for various quantities and time periods. As of June 30, 2017, future obligations under the PPAs are as follows (in thousands of dollars):

2018	\$ 21,373
2019	17,352
2020	14,594
2021	14,534
2022	9,824
Thereafter	27,606
TOTAL UTILITY FUTURE PURCHASE OBLIGATIONS	\$ 105,283

General

The University is a defendant in various legal actions arising from the normal course of its operations. While it is not possible to predict accurately or determine the eventual outcome of such actions, management believes that the outcome of these proceedings will not have a material adverse effect on the University's financial position, changes in net assets, or cash flows.

The University has evaluated subsequent events through October 26, 2017, the date the financial statements were issued. The University has concluded that no material events have occurred that are not accounted for in the accompanying financial statements or disclosed in the accompanying notes.

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