Duke UNIVERSITY

Financial Statements
2017/2018

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The cover of this report features the new Rubenstein Arts Center. Photo credit to Robert Benson Photography.

Letter from The Executive Vice President

Duke University experienced another year of solid financial performance in fiscal 2018, driven by strong investment returns, positive operating results for both the University and Duke University Health System (DUHS), continued significant capital investments, and sustained levels of philanthropic support one year after conclusion of the largest fundraising campaign in Duke's history.

Consolidated net assets increased $1.6 billion to a record high of $15.0 billion, largely reflecting the favorable returns on our investments, and both DUHS and the University ended the year with positive operating results. Patient volume increases continue to drive strong financial results for DUHS. The University also had a positive operating margin – for the third consecutive year - primarily reflecting increased support from our endowment and invested balances.

Duke continued its commitment to capital investment, with significant progress made this year on undergraduate housing, collaborative research facilities, enhancing the arts, and a new alumni and visitors center. While such investments will likely return to more traditional levels in the coming years, Duke will maintain focus on undergraduate housing, investments in the sciences, and expansion at our major hospitals to meet patient needs.

Fiscal 2017 marked the end of the Duke Forward campaign, the largest fundraising initiative in Duke's history, raising $3.85 billion. The Campaign not only provided critical long-term support for our faculty, students, and infrastructure, it importantly established new annual giving expectations, well above those experienced historically at Duke. Fiscal 2018 was the second highest annual giving year in Duke's history, with $517 million of support provided by alumni and friends of the University.

We are grateful to our staff, faculty, and students, as well as Duke alumni and friends, for their commitment in helping us achieve this year's financial performance. We look forward to working together on the broad set of strategic priorities recently outlined by President Price to guide our progress in the years ahead.

Abele Quad on West Campus

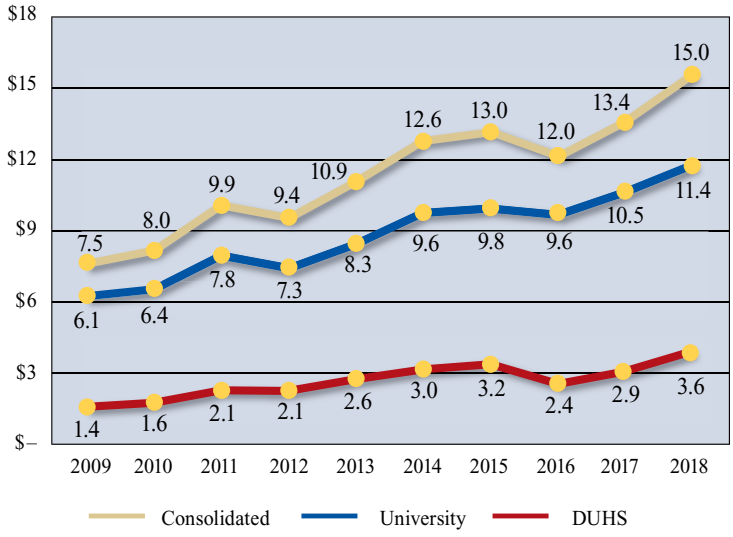
Discussion of Financial Results for Fiscal Year 2018

The Discussion of Financial Results (the Discussion) includes highly summarized data and should, therefore, be read in conjunction with the accompanying consolidated financial statements, notes, and supplementary schedules. All figures presented within the Discussion are consolidated and inclusive of Duke University (the University) and Duke University Health System, Inc. (DUHS) and collectively referred to herein as Duke, unless specifically designated otherwise.

Net Assets

Duke's consolidated net asset base increased $1.6 billion in fiscal 2018 to $15.0 billion as of June 30, 2018. The increase reflects a 12.9% return on the University's Long-Term Pool (LTP) investments and a 11.4% return on DUHS' Health System Pool (HSP) investments, positive operating results from both the University and DUHS, and sustained philanthropic support from alumni and other donors in the post-campaign environment. Over the past ten (10) years, despite declines in fiscal 2012 and fiscal 2016, consolidated net assets have grown at a compound annual growth rate of 4%.

Consolidated Net Assets ($ in billions)



The following table summarizes the major components of net assets activity in fiscal 2018 and 2017:

Summary of Changes in Consolidated Net Assets
(in millions)

	2018	2017
Operating results		
University	$ 87	$ 133
Less: Operating support from DUHS	(87)	(102)
DUHS	261	249
Consolidated operating results	261	280
Nonoperating results:		
Investment return, net of spending	912	815
Restricted contributions, net of amounts released from restrictions	118	165
Nonperiodic changes in defined benefit plans	228	130
Gains on interests in perpetual trusts held by others	64	33
Other	(1)	14
Total nonoperating income	1,321	1,157
Total increase in consolidated net assets	1,582	1,437
Total consolidated net assets	$ 15,005	$ 13,423

The operating results of the University and DUHS are detailed independently later in the Discussion. Nonoperating activities of Duke resulted in a net increase of $1.3 billion to the consolidated net asset base in fiscal 2018 (compared to a net increase of $1.2 billion in fiscal 2017) and include:

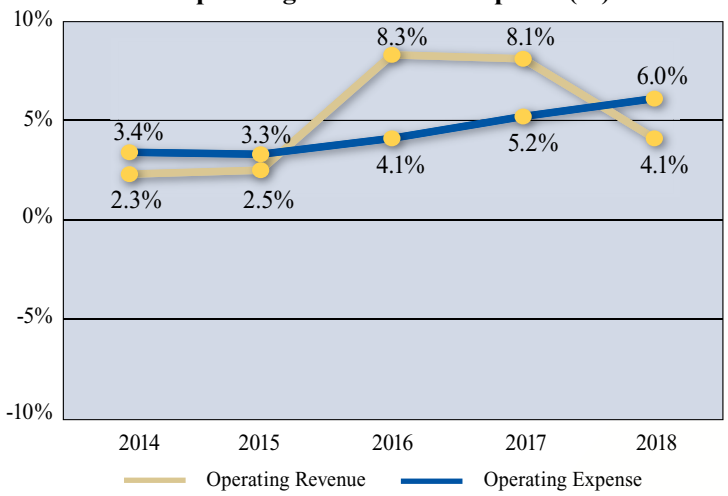
- Total investment returns, including the LTP and HSP, of $1.5 billion and $1.3 billion for fiscal 2018 and 2017, respectively, less amounts distributed to support operations of $594 million and $529 million for fiscal 2018 and 2017, respectively. Duke's investment programs and related outcomes are described in more detail within the "Investments/Endowments" segment of this Discussion.
- Restricted contributions primarily received for endowment and capital projects, net of amounts released from restrictions ($61 million and $73 million for fiscal 2018 and 2017, respectively).
- Nonperiodic changes in defined benefit plans, which reflect positive investment returns on plan assets as well as increases in the discount rates used to value the obligations associated with the defined benefit pension and postretirement healthcare plans.
- Gains from the University's interests in perpetual trusts held by others, primarily The Duke Endowment.

University Operating Performance

The operating results of the University are presented in the supplemental Statements of Activities (Schedule 2 on page 44) following the notes to the consolidated financial statements. University operating activities primarily include all revenues and expenses that support education and research efforts, and are discussed in more detail in their respective segments of this Discussion.

The fiscal 2018 operating results of the University declined $46 million compared to fiscal 2017, reflecting a 6.0% increase in operating expenses partially offset by a 4.1% increase in operating revenues.

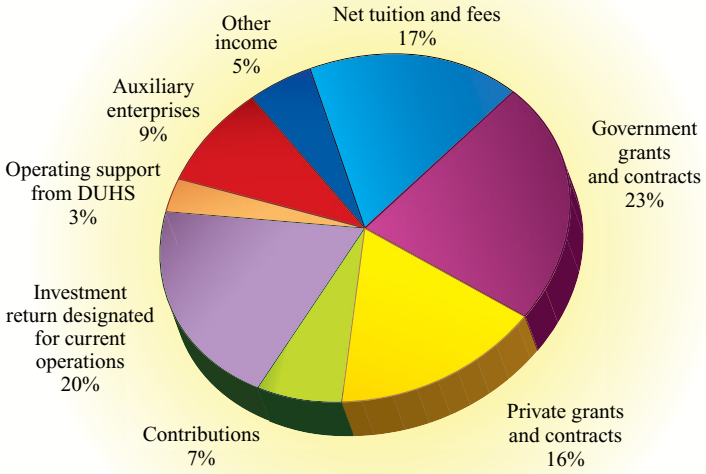
Year-to-Year Change in University Operating Revenue and Expense (%)



The larger operating revenue increases shown above for fiscal 2016 and 2017 primarily reflect incremental investment support discussed in the "Investments/Endowments" section of this discussion. The fiscal 2018 increase is more comparable to fiscal 2015 and 2014 rates shown, and in line with the administration's expectations for future growth rates.

Total operating revenues for the University increased $117 million to $2.95 billion in fiscal 2018. The University's major revenue components are summarized below:

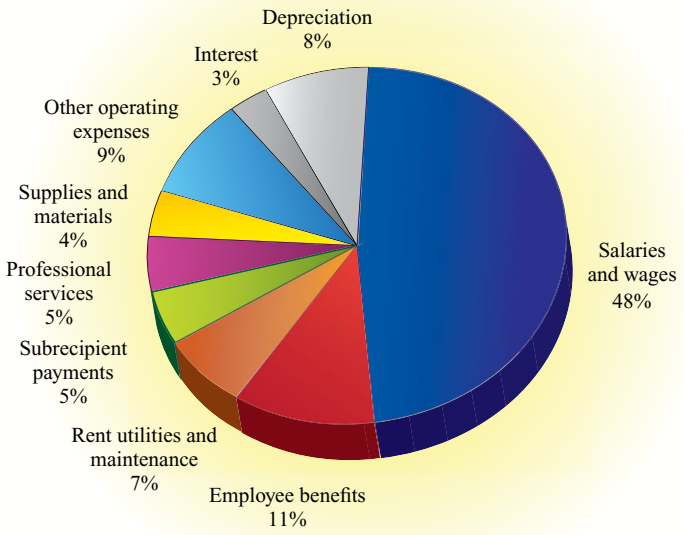
FY 2018 University Operating Revenues by Source – $2.95 billion



- Grants and contracts revenue represents the largest component of University revenue ($1.1 billion and 39%). Revenue from these sources increased approximately 1% in fiscal 2018, as covered in detail within the "Sponsored Programs" segment of this Discussion.
- Net tuition and fees reflect gross tuition and fees net of student financial aid provided by the University. Gross tuition and fees ($829 million) increased $57 million, or 7%, compared to the prior year, reflecting modest rate increases and enrollment growth in certain programs. Student financial aid ($324 million) increased $29 million, or 10%, in fiscal 2018, reflecting the administration's continued commitment to need-blind admission for undergraduates and strong financial support for graduate and professional students.
- Investment return designated for current operations consists of endowment spending distributions, returns on other invested funds, and distributions from The Duke Endowment, and increased $65 million, or 12%, in fiscal 2018. The changes in each component are covered in more detail within the "Investments/Endowments" segment of this Discussion.

Operating expenses for the University increased $163 million to $2.86 billion in fiscal 2018. The major components of University operating expenses are summarized below:

FY 2018 University Operating Expenses – $2.86 billion



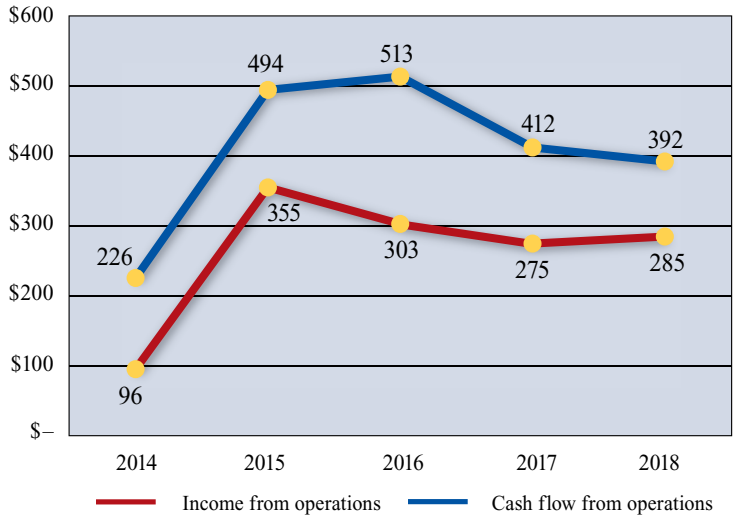
- Salaries, wages, and employee benefits represent $1.7 billion, or 59%, of the University's operating expenses. Labor-related expenses increased $103 million, or 7%, in fiscal 2018. This increase primarily reflects fiscal 2018 merit-based salary increases for faculty and staff, as well as planned growth.
- Depreciation expense represented 8% of total operating expenses in fiscal 2018, and increased $24 million compared to the prior year. Fiscal 2018 capital activity is covered in detail within the "Capital Spending and Debt" segment of this Discussion.

- Other operating expenses represented $243 milllion, or 9%, of University operating expenses in fiscal 2018 and include various nonlabor expenses, most notably travel expenses, royalties and public relations expenses.

DUHS Operating Performance

As detailed in Note 1 to the consolidated financial statements, DUHS operates as a controlled affiliate of the University, and manages all of Duke's clinical health operations and facilities. The financial results and financial position of DUHS are consolidated into the financial statements of Duke under financial statement presentation requirements governing colleges and universities. This differs from financial statement presentation requirements governing health care organizations and used by DUHS in their separately issued financial statements. The fiscal 2018 net operating income of $285 million reported in DUHS' separately-issued consolidated statement of operations represents an increase of $10 million compared to fiscal 2017.

DUHS Operating Income and Cash Flow ($ in millions)[1]



Total DUHS operating revenue for fiscal 2018 increased $233 million, or 7%, over the prior year. Inpatient volumes, measured in number of adult discharges, remained flat relative to 2017, with an increase of 0.3%, while the average daily census increased 2%. Duke Hospital increased its number of available beds by 17 due to this increased inpatient volume. Total outpatient volumes increased 4%. Within the total outpatient volume growth is a 4% increase in outpatient surgical procedures, 1% decrease in emergency department visits, and 5% increase in all other outpatient visits (excluding surgical procedures and emergency department visits). In addition, approximately 1% of the operating revenue growth over the prior year is attributed to an increase in the supplemental Medicaid DSH payments compared to fiscal 2017.

DUHS operating expenses increased $223 million, or 7%, in fiscal 2018 compared to the prior year. The most significant increases were primarily in labor costs which increased $80 million, or 5%, and medical supplies which increased $75 million, or 10%. The increase in labor costs is attributed to a 4% increase in the number of full-time equivalents (FTEs), as well as a 2% increase in the salary per FTE. The increase in medical supplies is due to a $40 million and $35 million increase in drugs and medical supplies, respectively, over the prior year. The increase in drug expense is attributed to growth in prescription volumes and chemotherapy drugs. The increase in medical supplies is attributed to volume growth and specialty supplies to treat a small patient population with complicated diagnosis.

DUHS continues to provide care to patients who meet certain criteria under its financial assistance policies without charge or at amounts less than its established rates. Because DUHS does not pursue collection of amounts determined to qualify as charity care, they are not reported as revenue or included in patient accounts receivable. In fiscal 2018, DUHS provided charity care with an estimated cost of $98 million, an increase of $1 million compared to fiscal 2017. Total community benefit as defined by and reported to the Internal Revenue Service was $274 million in fiscal 2018, and combined with an additional $278 million of community investments, DUHS provided $552 million of benefit to the community. This is an increase of 8% from $509 million in fiscal 2017, due primarily to the increase in unreimbursed Medicare.

DUHS operating margins and positive cash flows from operating activities over the last ten (10) years, combined with returns on its invested reserves, allowed DUHS to make transfers to the University in support of the School of Medicine and other University functions of $1.3 billion during this time period. These transfers included a $510 million transfer of cash and investments to the School of Medicine on July 1, 2016. DUHS continued its history of providing annual operating support for University-based medical faculty research and education with net transfers totaling $87 million to the School of Medicine in fiscal 2018, also included in the $1.3 billion above total.

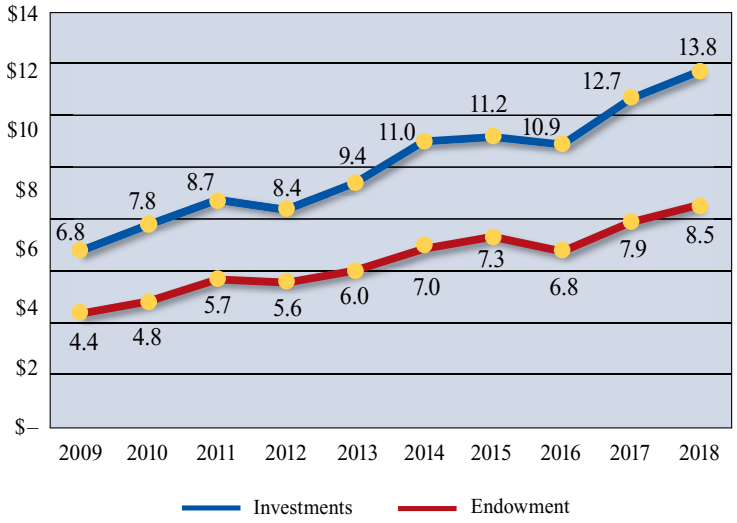
[1] Certain components of nonoperating activities in the DUHS consolidated statement of operations and statements of cash flows are reclassified as operating items in Duke's consolidated statements of activities and statements of cash flows in order to conform to financial statement presentation generally followed by colleges and universities. Interest payments related to derivative swaps ($11 million) represents the primary component reclassified in fiscal 2018. Duke's consolidated statements of activities and cash flows include $261 million of income and $403 million of implied cash flows, respectively, from operations related to DUHS for fiscal 2018.

Investments/Endowments

Responsibility for managing Duke's investment portfolio rests with DUMAC, Inc. (DUMAC), a separate nonprofit support corporation organized and controlled by Duke. DUMAC invests Duke's assets across domestic and international asset groups, principally through investment advisory firms and partnerships. Growth of the investment and endowment base is a critical factor in maintaining Duke's financial strength and flexibility to meet current needs and fund future initiatives.

Duke's investment portfolio primarily consists of debt, equity, and other investments within the LTP and the HSP. Duke's investments have grown significantly over the last ten (10) years and total approximately $13.8 billion as of June 30, 2018. Duke's endowment (including interests in perpetual trusts held by others), representing $8.5 billion of this total, supports the current and future operations of the schools, academic departments, libraries and other facilities, and student financial aid.

Growth of Investments and Endowment
(June 30 values, $ in billions)



DUHS accounts for $4.0 billion of Duke's cash and investment portfolio which primarily represents unrestricted working capital, reinvested operating surpluses, and associated appreciation.

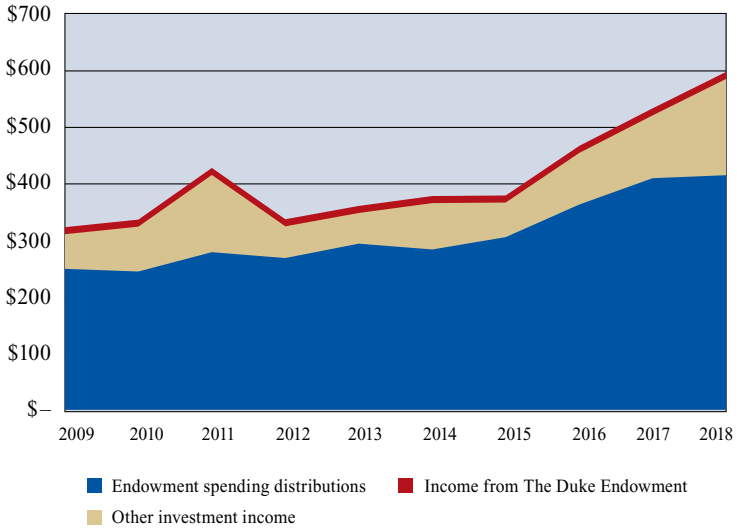
For fiscal 2018, the LTP, in which 98% of the endowment (excluding perpetual trusts) is invested, returned 12.9%. DUMAC seeks to achieve an annualized real rate of return of at least 5.0%, net of fees, to fund the LTP spending rate and to allow growth of the endowment after considering the effects of inflation. The total return on the HSP, a more liquid fund managed for DUHS, was 11.4% in 2018.

Fiscal Year Investment Returns

	2014	2015	2016	2017	2018
LTP	20.1%	4.4%	-2.6%	12.7%	12.9%
HSP	19.7%	3.0%	-3.3%	12.1%	11.4%

As Duke's investment base has grown over the last ten (10) years, investment related support has become a larger contributor to the current operations of the University. Investment returns supporting operations includes endowment spending, withdrawals from quasi-endowments, distributions from The Duke Endowment, and income from invested working capital that totaled $598 million in fiscal 2018. This is a $275 million, or 85%, increase from fiscal 2009 levels of investment support.

Investment Return Supporting Current Operations
($ in millions – University Only)



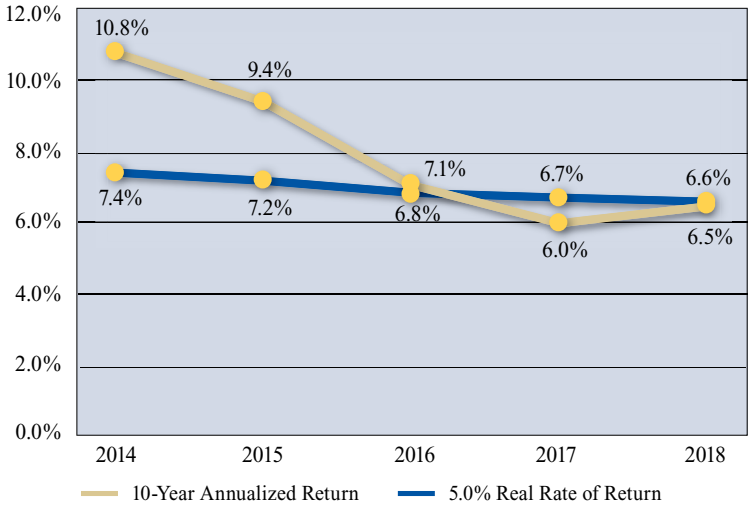
To balance current and future needs, the University employs investment and spending policies designed to provide an appropriate flow of income to the operating budget while preserving the future purchasing power of the endowment assets in perpetuity. The LTP spending rate is set by the administration and approved by the Board of Trustees. For fiscal 2018, to avoid downward pressure on future rates, the administration recommended and the Board approved holding the spending rates flat. The effective spending rates for fiscal 2018 – based on June 30, 2017 investment market values – were 5.5% for financial aid endowments and 4.1% for non-financial aid endowments. The HSP is not subject to the University's spending policies.

In addition, the Board authorizes the use of supplemental endowment distributions from quasi-endowments for special academic development initiatives and to support the operations and maintenance of certain facilities. These supplemental distributions have grown from $76 million in fiscal 2009 to $167 million in fiscal 2018, due primarily to two quasi-endowment funds established by transfers from DUHS to the School of Medicine to provide annual academic support through 2026. In addition, the Board approved a $250 million liquidation from central unrestricted quasi-endowments to occur over six years beginning in fiscal 2016. The University withdrew $50 million of the $250 million in fiscal 2018.

Other investment income is another major component of investment returns supporting current operations ($170 million in fiscal 2018). Such support is generated through the corporate cash management strategies of Duke and is released under protocols approved by the Board of Trustees.

Other investment income increased $59 million compared to fiscal 2017, and primarily represents the fiscal 2018 liquidation of invested working capital, as well as the Board approved funding of certain annual programmatic opportunities through the liquidation of investments.

LTP Ten Year Annualized Investment Returns (%)



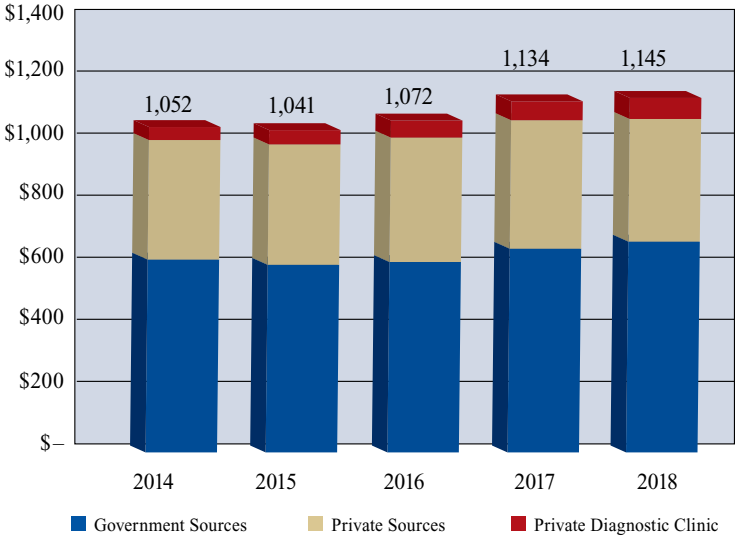
The graph above reflects a rolling ten-year average of investment returns, and the reality that the University has distributed slightly more from our invested funds than LTP returns have provided during this ten-year period, primarily due to a 24.3% market decline experienced in fiscal 2009. Absent that unusually negative annual return and the best annual return during this period (24.5% in fiscal 2011), the LTP ten-year annualized investment return was 9.2%.

Sponsored Programs

The University conducts research in a collaborative interdisciplinary environment among its schools. The School of Medicine is one of the largest biomedical research enterprises in the country with programs focused on the causes, prevention, and treatment of human disease. Campus-based schools under the Provost continue to increase their research activity, primarily within Arts and Sciences, the Pratt School of Engineering, the Sanford School of Public Policy, and the Nicholas School of the Environment.

The United States government is the largest source of grant and contract funding for the University, with 40% of this support from the Department of Health and Human Services, Duke's cognizant agency. Since 2009, the University's government grant and contract funding has grown 24%, reflecting the success of our faculty in pursuing support for their research.

Total Grants, Contracts and Similar Agreements
($ in millions)



Fiscal 2018 government sourced revenue was $681 million, a $23 million, or 3.5%, increase compared to fiscal 2017. The most notable increase was from the Department of Health and Human Services for projects within Duke Clinical Research Institute (DCRI).

In addition to government sourced grants and contracts, Duke also received $396 million of research support from private sources in fiscal 2018, a decline of $18 million, or 4%, compared to fiscal 2017. This decline is primarily within DCRI due to shifting its portfolio to government funded trials. DCRI remains the world's largest academic clinical research organization, generating roughly 25% of Duke's total grant and contract revenue.

Philanthropy

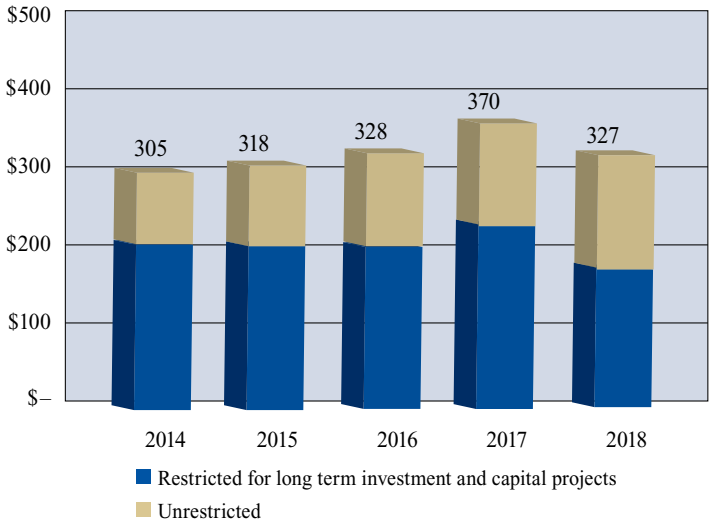
Contributions revenue reported within the consolidated financial statements is calculated based on generally accepted accounting principles (GAAP). This differs from philanthropic support reported by Duke according to the guidelines established by the Council for Advancement and Support of Education (CASE). CASE guidelines represent the philanthropy reporting standard for colleges and universities, and is based on cash collections.

The generosity of alumni and friends in fiscal 2018 helped Duke remain at the forefront of academics, research, and patient care. Under CASE guidelines, philanthropic cash receipts totaled $517 million in fiscal 2018, the second highest annual giving year in Duke history.

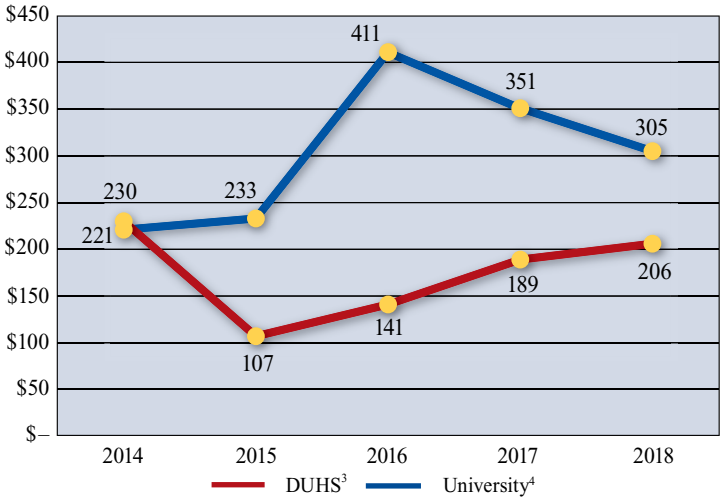
Fiscal 2017 marked the end of *Duke Forward,* a seven year comprehensive fundraising campaign, which surpassed its original goal of $3.25 billion, raising $3.85 billion. The Campaign provided critical long-term support for Duke, and established new annual cash receipts standards well in excess of $400 million (relative to historic highs of $380 million).

On a GAAP basis, Duke recorded $327 million in contributions revenue, including pledges, in fiscal 2018, a $43 million, or 12%, decline from fiscal 2017 reflecting the conclusion of the *Duke Forward* campaign in June 2017.

Contributions (GAAP-basis, $ in millions)



Capital Spending ($ in millions)



For details on Duke's goals and initiatives, and ways to give to Duke, visit http://giving.duke.edu.

A reconciliation of the CASE and GAAP totals is provided below (in millions):

Cash gifts per CASE (cash basis)	$ 517
Amounts included in grants and similar agreements (gifts per CASE)	(141)
Grants and gifts from The Duke Endowment (gifts per CASE)	(13)
Net fiscal 2018 change in pledges[2]	(36)
Total consolidated contributions per GAAP statements	$ 327

Additional information on GAAP reporting of contributions revenue and contributions receivable is provided in Notes 3 and 5 of the consolidated financial statements, respectively.

Capital Spending and Debt

Over the last decade, the University and DUHS have made significant investments in land, buildings, and equipment. The University invested more than $1.5 billion over the last five years, impacting in excess of one million square feet of new or renovated living, teaching, and research space. DUHS, while owned and controlled by the University, operates under a different business model and has different budgetary considerations. DUHS has increased its net investment in property and equipment by almost $900 million over the last five years.

Capital spending by the University in fiscal 2018 totaled $305 million, a 13% decline from fiscal 2017.

Major capital activity in 2018 for the University reflects significant investments in undergraduate housing, with the completion of major renovations to Crowell Residence Hall, the completion of the new Trinity Residence Hall, and notable progress on the construction of the new Hollows Residence Hall. Other noteworthy capital projects supporting the arts, sciences, and other campus activities included the completion of the new Rubenstein Arts Center, and ongoing construction of the Medical Science Research Building III and the Karsh Alumni and Visitors Center.

- Crowell Quad was one of the first residential halls built on West Campus. The renovation, which was completed in summer 2018, brought the 350 bed facility up to modern standards, while maintaining its historic character from 80 years ago.
- The Trinity Residence Hall, completed in January 2018, provides 250 new beds on East Campus, accommodating students displaced by planned renovations to dormitories on West Campus, and will serve as the potential replacement of three aging East Campus residence halls.
- The Hollows Residence Hall, scheduled for completion in summer 2019, will provide over 500 beds in suite style housing and will allow for the planned demolition of housing on Central Campus in 2019.
- The new Rubenstein Arts Center, which opened in January 2018, is a campus-wide destination for the study and production of the arts at Duke. This state-of-the-art facility provides flexible multipurpose studios, classrooms, and exhibition space, as well as two theaters, and is featured on the cover of this report.
- The Karsh Alumni and Visitors Center, with expected completion in summer 2019, will serve as a gateway for alumni, prospective students, and visitors to Duke. The Center will include event space, meeting rooms, offices, a café, and revolving exhibitions and displays.
- The Medical Sciences Research Building III, opening in phases beginning in summer 2018, continues Duke's ongoing commitment to invest in the sciences and foster collaboration among basic science faculty. The 155,000 square foot facility will primarily house bench lab research.

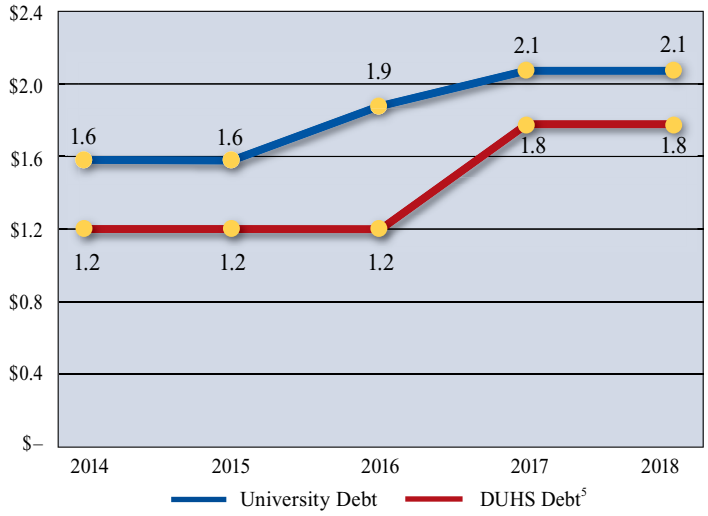
[2] Includes changes to previously reported multi-year pledges, pledges receivable due to new multi-year commitments, and other fiscal 2018 adjustments.
[3] DUHS capital spend amounts shown as reported in the separately issued DUHS consolidated financial statements.
[4] Fiscal 2017 capital spend amount includes a $50 million purchase of an apartment building to support undergraduate housing.

The University's capital plan calls for $1.3 billion of additional spending over the next five (5) years, including continued focus on undergraduate student housing, as well as investments in the sciences.

DUHS began its plans in fiscal 2018 to invest in long-term facilities renewal and expansion projects, while providing the equipment and technology to deliver the highest quality of patient care. DUHS expects to spend approximately $1.9 billion over the next five (5) years in order to meet strategic capital and maintenance needs. The fiscal 2019 to 2023 capital plan includes the following key strategic projects: (1) a new Duke University Hospital inpatient bed tower to allow full utilization of its licensed bed capacity and better serve patients, as well as clinicians and staff; (2) a new Duke Raleigh Hospital inpatient bed tower and operating room (OR) modernization project that enables Duke Raleigh Hospital to operate its licensed beds as single occupancy rooms, as well as expand OR and perioperative services for growth of key clinical services; (3) a new Duke Regional Hospital addition that consolidates behavioral health services for Durham County on the hospital campus in an efficient and modern new facility and the renovation and expansion of the existing emergency department; and (4) ambulatory projects throughout Duke's service area adding new or expanded sites enabling DUHS to reach additional communities and meet growing demand.

Both the University and DUHS have issued various forms of debt as a primary source of capital project funding. Formal comprehensive debt policies provide guidelines for the use of long-term financing, commercial paper, and derivative transactions (in the form of interest rate and other swaps) in order to optimize the debt portfolios. Effective and responsible debt portfolio management enables the University and DUHS to execute their strategic plans for facilities while preserving working capital. The University and DUHS hold ratings of Aa1 and Aa2 with Moody's and AA+ and AA with Standard & Poor's, respectively.

Outstanding Debt ($ in billions)



Outstanding debt for the University remained at $2.1 billion for fiscal 2018 after two years of increases to finance construction, as well as refinance existing debt ($225 million and $243 million, in fiscal 2017 and 2016, respectively).

In fiscal 2017, DUHS' incremental debt increased $582 million primarily due to the issuance of the 2017 taxable bonds. The proceeds are being used to finance various capital additions and improvements at its healthcare facilities and pay certain expenses of issuing the bonds.

Looking Ahead

In fiscal 2019, the administration's focus will remain on operating effectively and efficiently in order to protect and advance Duke's current financial health and commitment to our most important priorities. These include:

- Continued investment in the sciences as a primary component of the new academic strategic plan.
- Continued focus on the affordability of a Duke education, and supporting the University's ongoing commitment to need-blind admissions for undergraduates.
- Completion of ongoing capital projects, particularly supporting undergraduate housing and the sciences.
- Continued focus on the evolving approach to population health models and the healthcare reimbursement environment including the health insurance exchange market, value-based reimbursement, and Medicare and Medicaid changes, all further complicated by the extended period of continuing uncertainty in national healthcare policy.
- Planning and execution of strategic capital projects to facilitate future clinical growth plans, including new inpatient bed towers, a new behavioral health center, and numerous planned projects in support of ambulatory and outpatient facilities.

The administration will continue to proactively address financial and other challenges by operating with a strong sense of fiscal responsibility and prudent decision making, while directing Duke's resources to areas of highest priority and need.

[5] Includes a $125 million capital lease for Duke Regional Hospital.

Statistical Highlights

(dollars in thousands)	2018	2017	2016	2015	2014
Students:					
Undergraduate	6,457	6,388	6,379	6,401	6,390
Graduate and professional	8,390	8,132	8,135	8,100	7,927
Total fall enrollment	14,847	14,520	14,514	14,501	14,317
Degrees conferred:					
Baccalaureate	1,814	1,848	1,823	1,843	1,831
Masters	2,771	2,578	2,561	2,412	2,477
Doctorate	893	885	872	774	781
Total degrees conferred	5,478	5,311	5,256	5,029	5,089
Research:					
Grants, contracts and similar agreements:					
Federal government sources	$ 639,825	$ 615,118	$ 562,730	$ 549,682	$ 569,015
Other government sources	48,918	47,960	53,030	56,645	54,834
Other	534,842	546,000	513,585	490,482	474,027
Total grants, contracts and similar agreements	$ 1,223,585	$ 1,209,078	$ 1,129,345	$ 1,096,809	$ 1,097,876
Patient Care:					
Discharges	68,699	68,483	66,085	64,222	62,733
Patient days	418,466	410,620	390,561	384,584	371,650
Surgical and endoscopy cases	95,618	92,185	90,809	88,729	85,248
Outpatient visits	2,266,711	2,173,687	2,080,315	1,965,264	1,841,458
Emergency room visits	186,239	187,234	186,209	179,549	170,461
Endowment:					
Market value of endowment	$ 8,524,846	$ 7,911,175	$ 6,839,780	$ 7,296,545	$ 7,036,776
Endowment funds per full-time equivalent student	$ 574,180	$ 544,847	$ 471,254	$ 503,175	$ 491,498
Financial aid spending rate	5.5%	5.9%	5.4%	5.2%	5.9%
Non-financial aid spending rate	4.1%	4.6%	4.1%	4.1%	4.4%
LTP rate of return[1]	12.9%	12.7%	(2.6%)	4.4%	20.1%
Faculty and Staff:					
Tenured and tenure track	1,669	1,670	1,714	1,740	1,784
Non-tenure track	1,973	1,855	1,713	1,650	1,556
Total regular rank faculty	3,642	3,525	3,427	3,390	3,340
Staff	49,352	47,455	45,898	44,900	44,833
Total employees	52,994	50,980	49,325	48,290	48,173

[1] Net of external management fees but before internal costs.

KPMG LLP
Suite 400
300 North Greene Street
Greensboro, NC 27401

Independent Auditors' Report

The Board of Trustees of Duke University:

We have audited the accompanying consolidated financial statements of Duke University, which comprise the consolidated balance sheets as of June 30, 2018 and 2017, the related consolidated statements of activities and cash flows for the years then ended, and the related notes to the consolidated financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with U.S. generally accepted accounting principles; 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 these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' 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, the auditor considers internal control relevant to the entity'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 entity'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 Duke University as of June 30, 2018 and 2017, and the changes in its net assets and its cash flows for the years then ended in accordance with U.S. generally accepted accounting principles.

Emphasis of Matter

As discussed in Note 2 to the consolidated financial statements, Duke University adopted Accounting Standards Update 2016-14, *Not-for-Profit Entities (Topic 958): Presentation of Financial Statements of Not-for-Profit Entities,* during the year ended June 30, 2018. Our opinion is not modified with respect to this matter.

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The supplementary information included in schedules 1 through 3 is presented for the purposes of additional analysis and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated, in all material respects, in relation to the consolidated financial statements as a whole.

KPMG LLP

October 2, 2018

Atrium in the newly renovated Chesterfield building in downtown Durham, which is home to several of Duke's academic and research programs.

Consolidated Balance Sheets

JUNE 30, 2018 AND 2017
(DOLLARS IN THOUSANDS)

	2018	2017
Assets:		
Cash and cash equivalents	$ 664,249	$ 639,393
Accounts receivable, net	725,660	644,025
Prepaid expenses, inventories, and other assets	221,282	205,656
Contributions receivable, net	395,797	429,353
Investments	13,752,144	12,702,248
Deposits with bond trustees	2,521	29,331
Land, buildings, and equipment, net	4,207,510	3,966,033
Interests in perpetual trusts held by others	871,514	807,341
Total assets	$ 20,840,677	$ 19,423,380
Liabilities:		
Accounts payable and accrued payroll	$ 800,262	$ 728,603
Deferred revenues and deposits	219,245	212,015
Notes and bonds payable	3,887,685	3,932,719
Annuity and other split-interest obligations	59,747	60,369
Accrued postretirement/postemployment and other benefit obligations	599,459	794,479
Other liabilities	269,598	271,855
Total liabilities	5,835,996	6,000,040
Net Assets:		
Without donor restrictions	8,671,700	7,566,743
With donor restrictions	6,332,981	5,856,597
Total net assets	15,004,681	13,423,340
Total liabilities and net assets	$ 20,840,677	$ 19,423,380

See accompanying notes to consolidated financial statements.

Consolidated Statements of Activities

YEARS ENDED JUNE 30, 2018 AND 2017
(DOLLARS IN THOUSANDS)

	2018	2017
Net assets without donor restrictions:		
Operating revenues:		
Tuition and fees	$ 830,929	$ 773,540
Less student aid	(323,921)	(294,544)
Tuition and fees, net	507,008	478,996
Grants and contracts	1,223,585	1,209,078
Contributions	147,214	132,352
Investment return designated for current operations:		
The Duke Endowment	12,500	12,500
Endowment spending	416,440	411,103
Other investment income	177,716	117,539
Total investment return designated for operations	606,656	541,142
Auxiliary enterprises	253,345	234,641
Patient service revenue, net	3,394,589	3,168,100
Other	253,114	245,605
Net assets released from restrictions	61,316	72,775
Total operating revenues	6,446,827	6,082,689
Operating expenses:		
Salaries and wages	2,639,400	2,493,627
Employee benefits	642,282	604,259
Student aid	44,956	43,897
Other operating expenses	2,312,133	2,166,456
Interest expense	150,155	126,703
Depreciation expense	397,348	368,017
Total operating expenses	6,186,274	5,802,959
Operating surplus	260,553	279,730

Consolidated Statements of Activities (CONTINUED)

	2018	2017
Nonoperating activities:		
Net assets released from restrictions	$ 54,017	$ 83,815
Investment return in excess of amounts designated for current operations, net	560,832	515,204
Nonperiodic changes in defined benefit plans	227,901	130,351
Other, net	1,654	8,723
Change in net assets without donor restrictions from nonoperating activities	844,404	738,093
Change in net assets without donor restrictions	1,104,957	1,017,823
Net assets with donor restrictions:		
Contributions	179,753	237,768
Net assets released from restrictions	(115,333)	(156,590)
Investment return in excess of amounts designated for current operations, net	351,495	300,006
Gains on interests in perpetual trusts held by others	64,173	32,921
Other, net	(3,704)	5,895
Change in net assets with donor restrictions	476,384	420,000
Change in total net assets	1,581,341	1,437,823
Net assets at beginning of year	13,423,340	11,985,517
Net assets at end of year	$ 15,004,681	$ 13,423,340
Certain amounts disaggregated above are presented below in the aggregate:		
Contributions	$ 326,967	$ 370,120
Investment return	1,518,983	1,356,352

See accompanying notes to consolidated financial statements.

Consolidated Statements of Cash Flows

YEARS ENDED JUNE 30, 2018 AND 2017
(DOLLARS IN THOUSANDS)

	2018	2017
Cash flows from operating activities:		
Change in net assets	$ 1,581,341	$ 1,437,823
Adjustments to reconcile change in net assets to net cash provided by operating activities:		
Depreciation and amortization	388,348	368,017
Nonperiodic changes in defined benefit plans	(227,901)	(130,351)
Provision for bad debt	77,136	30,201
Change in fair value of swap instruments	(24,590)	(36,536)
Loss on extinguishment of debt	–	33,887
Loss on disposals of land, buildings, and equipment	1,808	2,159
Restricted contributions received for long-term investment and capital projects	(213,309)	(250,120)
Investment return with donor restrictions	(882)	2,003
Net realized and unrealized gains on investments	(1,368,120)	(1,197,104)
Gains on interests in perpetual trusts held by others	(64,173)	(32,921)
Change in:		
Accounts receivable	(165,243)	(60,538)
Prepaid expenses, inventories, and other assets	(15,626)	(11,682)
Contributions receivable, net	36,447	28,269
Accounts payable and accrued payroll	39,690	30,642
Deferred revenues and deposits	7,230	9,427
Annuity and other split-interest obligations	(622)	6,997
Accrued postretirement/postemployment and other benefit obligations	32,881	42,445
Other liabilities	22,333	(22,796)
Net cash provided by operating activities	106,748	249,822

Consolidated Statements of Cash Flows (CONTINUED)

	2018	2017
Cash flows from investing activities:		
Purchases of investments	(16,113,806)	(14,502,293)
Proceeds from sales and maturities of investments	16,432,030	13,900,575
Purchases of land, buildings, and equipment	(608,664)	(658,079)
Disbursements for loans to students	(2,592)	(3,832)
Repayments of loans by students	6,173	6,941
Change in deposits with bond trustees	26,810	17,711
Net cash used in investing activities	(260,049)	(1,238,977)
Cash flows from financing activities:		
Restricted contributions received for long-term investment and capital projects	213,309	250,120
Investment return with donor restrictions	882	(2,003)
Principal payments on notes and bonds payable	(36,034)	(812,191)
Proceeds from borrowings	–	1,625,309
Net cash provided by financing activities	178,157	1,061,235
Net change in cash and cash equivalents	24,856	72,080
Cash and cash equivalents at beginning of year	639,393	567,313
Cash and cash equivalents at end of year	$ 664,249	$ 639,393
Supplemental disclosure of cash flow information:		
Change in accounts payable for land, buildings, and equipment	$ 31,961	$ (10,331)
Cash paid for interest (net of amounts capitalized)	141,079	112,701

See accompanying notes to consolidated financial statements.

Notes to Consolidated Financial Statements

(DOLLARS IN THOUSANDS)

1. Overview of Duke University

Duke University, a North Carolina nonprofit corporation, is a private, coeducational institution located primarily in Durham, North Carolina, which owns and operates educational and research facilities (the University). Duke University Health System, Inc. (DUHS), a North Carolina nonprofit corporation, is a controlled affiliate of the University. Collectively, the University and DUHS are referred to herein as "Duke." The University is governed by a Board of Trustees (the Board) with thirty-seven members, consisting of the President of the University and thirty-six members representing private, public, and community interests.

The University's programs include undergraduate and graduate programs in Arts and Sciences, Engineering, Nursing, and Public Policy and professional schools in Business, Divinity, Environment, Law, Medicine, and Nursing, as well as programs in Allied Health.

DUHS operates a health care system consisting principally of:

- **Duke University Hospital** – a quaternary care teaching hospital located on the campus of Duke in Durham, North Carolina, licensed for 957 acute care and specialty beds, providing patient care and serving as a site for medical education and clinical research provided by the Duke University School of Medicine (School of Medicine).
- **Duke Regional Hospital** – a full-service community hospital located in Durham, North Carolina, licensed for 369 acute care beds. Duke Regional is owned by Durham County, North Carolina and leased to the Durham County Hospital Corporation which has in turn subleased Duke Regional Hospital to DUHS for the identical duration under a forty (40) year automatically renewing "evergreen" lease.
- **Duke Raleigh Hospital** – a community hospital located in Raleigh, North Carolina, licensed for 186 acute care beds, and providing patient care.
- **Duke University Affiliated Physicians, Inc. (DUAP)** – a North Carolina nonprofit corporation, doing business as Duke Primary Care, consisting of twenty-six (26) primary care physician practices located in Alamance, Chatham, Durham, Granville, Orange, Vance, and Wake Counties, seven (7) urgent care centers located in Durham, Orange, and Wake Counties, and a pediatric practice with two (2) locations in Durham County.
- **Durham Casualty Company, Ltd. (DCC)** – a wholly owned subsidiary of DUHS, domiciled in Bermuda, insuring a portion of the medical malpractice risks and patient general liability risks of DUHS clinical providers and The Private Diagnostic Clinic, PLLC (PDC) (see Note 13).

The consolidated financial statements include the University, DUHS and all other operating entities over which Duke has control.

All significant intercompany balances and transactions have been eliminated in consolidation.

2. Summary of Significant Accounting Policies

Basis of Presentation

The consolidated financial statements of Duke have been prepared on the accrual basis in conformity with U.S. generally accepted accounting principles (GAAP) and with the provisions of the Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 958, *Not-for-Profit Entities.*

Based on the existence or absence of donor-imposed restrictions, Duke classifies resources into two categories: without donor restrictions and with donor restrictions.

Net assets without donor restrictions are free of donor-imposed restrictions. All revenues, gains, and losses that are not restricted by donors are included in this classification. All expenses are reported as decreases in net assets without donor restrictions.

Net assets with donor restrictions are subject to donor-imposed restrictions that will be met either by actions of Duke or the passage of time. These net assets include donor restricted endowments, unconditional pledges, split interest agreements, and interests in perpetual trusts held by others. Generally, the donors' imposed restrictions of these assets permit Duke to use all or part of the income earned on related investments only for certain general or specific purposes.

Expirations of donor restrictions on net assets (i.e., the donor stipulated purpose has been fulfilled and/or the stipulated time period has elapsed) are reported as net assets released from restrictions in the consolidated statements of activities. Contributions, including unconditional promises to give, are recognized as revenue in the period received. Contributions for acquisition or construction of plant facilities are released from restrictions in the period in which the assets are placed in service within the nonoperating section on the statements of activities. Contributions which impose restrictions that are met in the same fiscal year they are received are reported as increases in net assets without donor restrictions.

Operating results (change in net assets without donor restrictions from operating activity) in the consolidated statements of activities reflect all transactions that change net assets without donor restrictions, except for contributions for plant facilities (released), investment return in excess of or less than amounts designated for current operations, nonperiodic changes in defined benefit plans, changes in the fair value of derivative financial instruments, losses on the extinguishment of debt, and certain nonrecurring items.

Fair Value Measurements

Fair value measurements reflected in the consolidated financial statements represent the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. GAAP provides a hierarchy that prioritizes the inputs to fair value measurements based on the extent to which inputs to valuation techniques are observable in the marketplace. The hierarchy assigns a higher priority to observable inputs that reflect verifiable information obtained from independent sources, and a lower priority to unobservable inputs that would reflect Duke's assumptions about how market participants would value an asset or liability based on the best information available. Fair value measurements must maximize the use of observable inputs and minimize the use of unobservable inputs.

The three levels of the hierarchy of inputs used to measure fair value are described briefly as follows:

Level 1 – Unadjusted quoted prices in active markets for identical assets or liabilities that are available at the measurement date.

Level 2 – Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly at the measurement date.

Level 3 – Unobservable inputs for the asset or liability, used in situations in which little or no market activity exists for the asset or liability at the measurement date.

The categorization of fair value measurements by level of the hierarchy is based upon the lowest level input that is significant to the overall fair value measurement for a given asset or liability.

In the event that changes in the inputs used in the fair value measurement of an asset or liability result in a transfer of the fair value measurement to a different categorization (e.g., from Level 3 to Level 2), such transfers between fair value categories are recognized at the end of the reporting period.

Cash and Cash Equivalents

Cash equivalents include assets invested in the Short Term Account (STA), all of which can be liquidated within thirty (30) days. Duke utilizes the STA to fund daily cash needs, and such assets, reported at fair value, primarily consist of short-term U.S. Treasury securities, other short-term, highly-liquid investments, and certain fixed income securities. Cash and cash equivalents that are managed as part of Duke's investments are reported within investments, as these funds are not used for operating needs.

Prepaid Expenses, Inventories, and Other Assets

Prepaid expenses, inventories, and other assets primarily represent inventories of DUHS, which are valued at the lower of average cost or net realizable value.

Contributions Receivable

Pledges that represent unconditional promises to give are recognized at fair value as contributions with donor restrictions in the period such promises are made by donors. Contributions are discounted at a risk-adjusted rate commensurate with the duration of the donor's payment plan. Amortization of the discounts is recorded as contribution revenue. Allowance is made for uncollectible contributions based upon the administration's expectations regarding collection of outstanding promises to give and past collection experience.

The methodology for calculating the allowance for uncollectible contributions is based on the administration's review of individually significant outstanding pledges, analysis of the aging of payment schedules for all outstanding pledges, as well as other factors including current economic conditions.

In contrast to unconditional promises as described above, conditional promises are not recorded until donor conditions are substantially met.

Investments

DUMAC, Inc. (DUMAC), a separate nonprofit support corporation organized and controlled by the University, is responsible for managing investment assets for Duke, The Duke Endowment (see Note 13) and the Employees' Retirement Plan of Duke University (the ERP).

Valuation – Investments are recorded at estimated fair value. For investments made directly by Duke whose values are based on quoted market prices in active markets, the market price of the investment is used to report fair value. For shares in mutual funds, fair values are based on share prices reported by the funds as of the last business day of the fiscal year. Duke's interests in alternative investment funds such as fixed income, equities, hedged strategies, private capital, and real assets are generally reported at the net asset value (NAV) reported by the fund managers. Unless it is probable that all or a portion of the investment will be sold for an amount other than NAV, Duke has concluded, as a practical expedient, that the NAV approximates fair value.

Risks – Duke's investments are exposed to several risks, including liquidity, currency, interest rate, credit, and market risks.

Duke attempts to manage these risks through diversification, ongoing due diligence of fund managers, and monitoring of economic conditions. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in Duke's consolidated financial statements.

Derivatives are used by Duke and external investment managers to manage market risks. The most common derivative strategies engaged in are total return swaps, credit default swaps, futures and forward contracts, and options. These derivative instruments are recorded at their respective fair values (see Note 12).

Investment Pools – Duke utilizes investment pools known as the University's Long Term Pool (LTP) and the Health System Pool (HSP) to make University and DUHS investments in diversified portfolios of debt, equity, and other investments. The HSP is structured to provide more liquidity for DUHS than is available within the LTP. Both the LTP and HSP are included in investments on the consolidated balance sheets.

Reporting – Income and realized gains (losses) on investments of working capital are reported as investment return included in operating revenues. Any excess (deficit) of income and realized and unrealized gains (losses) earned on investments above (below) the spending rate (see Note 8), including split-interest agreements, are reported as nonoperating revenues. Investment management fees are netted against investment returns.

Deposits with Bond Trustees

Deposits with bond trustees consist of the unexpended proceeds of certain bonds payable, which will be used for construction of certain facilities or payment of debt service. These funds are reported at fair value and are invested by the trustee in short-term, highly liquid securities considered Level 2 in the fair value hierarchy.

Land, Buildings, and Equipment

Land, buildings, and equipment are stated at cost at the date of acquisition or fair value at the date of donation. Property and equipment under capital leases are initially valued and recorded based on the present value of minimum lease payments. Useful lives range from 5 to 25 years for land improvements, 10 to 80 years for buildings and utilities, 5 to 10 years for computer software, 3 to 20 years for equipment, motor vehicles, furniture and vessels, and 1 year for library acquisitions. Depreciation is calculated on a straight-line basis over the assets' estimated useful lives, except for leasehold improvements and property and equipment held under capital leases, which are amortized over the shorter of the expected useful life of the asset or term of the related lease. Depreciation is not calculated on purchases of land, art collections, rare books, and construction in progress.

Conditional asset retirement obligations related to legal requirements to perform certain future activities associated with the retirement, disposal, or abandonment of assets are accrued utilizing site specific surveys to estimate the net present value for applicable future costs (e.g., asbestos abatement or removal). Duke reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. An impairment charge is recognized when the fair value of the asset or group of assets is less than the carrying value.

Interests in Perpetual Trusts Held by Others and Split-Interest Agreements

Duke is the beneficiary of certain perpetual trusts held and administered by outside trustees, including The Duke Endowment (see Note 13). These trust interests are reported at fair value, based on the value of the underlying assets, which approximates the present value of future income from these trusts. As such, these assets fall within Level 3 of the hierarchy of fair value inputs. Distributions from these trusts are recorded as investment return designated for current operations.

Duke's split-interest agreements with donors consist primarily of irrevocable charitable remainder trusts for which Duke serves as trustee. Assets held in these trusts are included in investments. Contribution revenues are recognized at the date the trusts are established after recording liabilities for the present value of the estimated future payments to be made to the donors or other beneficiaries. Annuity and other split-interest liabilities are recorded at their present value.

Debt-Related Derivative Instruments

Duke utilizes derivative instruments in a limited manner outside of its investment portfolio. As described in Note 12, interest rate swap agreements are used to manage interest rate risk associated with variable rate bond obligations. These instruments are reported in other liabilities on the consolidated balance sheets at fair value. Fair value is estimated based on pricing models that utilize significant observable inputs, such as relevant interest rates, that reflect assumptions market participants would use in pricing the instruments. As such, these liabilities fall within Level 2 of the hierarchy of fair value inputs. The change in fair value is included as a gain or loss in other nonoperating activities on the consolidated statements of activities. The net settlement amount incurred on the swaps is included in interest expense on the consolidated statements of activities.

Refundable Federal Student Loans

Funds provided by the United States Government (U.S. Government) under the Federal Perkins, Nursing, and Health Professions Student Loan programs are loaned to qualified students and may be reloaned after collection. These funds are ultimately refundable to the U.S. Government. The related balances of $29,787 and $36,338 at June 30, 2018 and 2017, respectively, are included in other liabilities on the consolidated balance sheets.

Revenue Recognition

Duke's significant revenue recognition policies are:

Tuition and fees, net – Student tuition and fees are recorded as revenue during the year that the related academic services are rendered. Student tuition and fees received in advance of services to be rendered are recorded as deferred revenue. Student aid provided by Duke for tuition and fees is reflected as a reduction of gross tuition and fee revenue. Student aid does not include payments made to students for services rendered to Duke.

Grants and contracts – Revenues from sponsored grants and contracts, including facilities and administrative (F&A) cost recovery, are recognized when allowable expenditures are incurred under such agreements. F&A cost recovery represents reimbursement, primarily from the federal government, of F&A costs on sponsored activities. Duke's federal F&A cost recovery rate for research was 59.0% in fiscal 2018 and 2017.

Patient service revenue (net of contractual allowances and discounts) – Patient service revenue is recognized in the period in which services are rendered. DUHS has agreements with third-party payors that provide for payments to DUHS at amounts that are generally less than its established rates. Payment arrangements include prospectively determined rates per discharge, reimbursed costs, discounted charges and per diem payments. Accordingly, net patient service revenue is reported at the estimated net realizable amounts from patients, third-party payors, and others, including estimated retroactive adjustments under reimbursement agreements with third-party payors. Adjustments are accrued on an estimated basis in the period the related services are rendered and retroactively adjusted in future periods as changes to estimates become known and tentative and final settlement adjustments are identified.

DUHS receives supplemental Medicaid payments from the State of North Carolina through a federally approved disproportionate share program (Medicaid DSH). The Medicaid DSH payments are part of the Medicaid Program and are designed to offset a portion of the Medicaid losses. Amounts recognized in net patient service revenue related to fiscal 2018 and 2017 were $196,090 and $155,168, respectively. The Medicaid assessment payments recorded in other operating expenses were $81,215 and $72,412 for fiscal 2018 and 2017, respectively. There can be no assurance that DUHS will continue to qualify for future participation in this program or that the program will not be discontinued or materially modified.

Auxiliary enterprises – Auxiliary enterprises include athletics, residence halls, dining services, parking, and retail stores, which furnish goods and services to students, faculty, staff, and in some cases, the general public. Fee charges are directly related to the costs of goods provided or services rendered and are recognized accordingly.

Charity Care

DUHS provides services at no charge or at a substantially discounted rate to patients who are approved under the guidelines of its financial assistance policy. DUHS does not pursue collection of amounts determined to qualify as charity care. Services qualifying for charity care consideration include emergent and medically necessary services as determined by a DUHS physician. Patient household income in relation to the federal poverty guidelines is included in the determination for charity care qualification. While charity care is excluded from net patient service revenue and receivables, DUHS maintains records to identify and monitor the level of charity care it provides. These records include the amount of charges foregone and estimated costs incurred for services and supplies furnished under its financial assistance policy and other equivalent service statistics. Costs incurred are estimated based on the ratio of total operating expenses to gross charges applied to charity care charges.

Income Taxes

Duke is tax-exempt as described in Section 501(c)(3) of the Internal Revenue Code of 1986, as amended (the Code). As such, Duke is exempt from federal income taxes to the extent provided under Section 501 of the Code. Accordingly, no provision for income taxes is made in the consolidated financial statements. As of June 30, 2018 and 2017, there were no material uncertain tax positions.

In December 2017, the Tax Cuts and Jobs Act (the Act) was approved by the U.S. Congress. Duke is currently evaluating the impact of the Act.

New Accounting Pronouncements

In August 2016, the FASB issued Accounting Standards Update (ASU) 2016-14, *Not-for-Profit Entities (Topic 958): Presentation of Financial Statements of Not-for-Profit Entities*. ASU 2016-14 reduces the number of net assets from three to two: net assets without donor restrictions, previously reported as unrestricted net assets, and net assets with donor restrictions, previously reported as temporarily restricted net assets of $2.9 billion and permanently restricted net assets of $3.0 billion for 2017. Additionally, it increases the quantitative and qualitative disclosures regarding liquidity and availability of resources, and requires expenses to be reported by both their natural and functional classification in one location. Duke early adopted ASU 2016-14 in fiscal 2018, and applied the changes retrospectively.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*. ASU 2014-09 requires an entity to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration that the entity expects to be entitled to in exchange for those goods or services. Additional disclosure is required to enable users of the financial statements to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. ASU 2014-09 is effective for fiscal 2019.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. ASU 2016-02 requires recognition of rights and obligations arising from lease contracts as assets and liabilities on the balance sheet. ASU 2016-02 is effective for fiscal 2020.

In March 2017, the FASB issued ASU 2017-07, *Compensation – Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. ASU 2017-07 requires the service cost component of net periodic benefit cost for pension and other postretirement benefits be presented as a component part of employee benefit expense. The other components of net periodic benefit cost, such as interest, expected return on plan assets, and amortization of other actuarially determined amounts, are required to be presented as a nonoperating change in net assets without donor restrictions. ASU 2017-07 is effective for fiscal 2020.

Use of Estimates

The preparation of the consolidated financial statements in accordance with GAAP requires the use of estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, and expenses during the reporting period as well as the disclosure of contingent assets and liabilities. Actual results ultimately could differ from the administration's estimates.

Subsequent Events

Duke has evaluated subsequent events from the balance sheet date through October 2, 2018, the date on which the consolidated financial statements were issued. No material subsequent events were identified for recognition or disclosure.

3. Liquidity and Availability

Financial assets available for general expenditure within one year of June 30 are as follows:

		2018
Total assets	$	20,840,677
Less:		
Endowment funds – including perpetual trusts		8,524,846
Annuities, trusts and other illiquid investments		5,457,683
Land, buildings and equipment, net		4,207,510
Contributions receivable and other assets		595,354
Financial assets available within one year	$	2,055,284

Duke manages its financial assets to be available as its operating expenditures, liabilities and other obligations come due. In addition, Duke invests cash in excess of daily requirements in short-term investments or fixed income securities. To supplement working capital and investment commitments, Duke had line of credit agreements totaling $275,000 as of June 30, 2018, with no outstanding borrowings under these agreements. The line of credit agreements have varying expiration dates through fiscal 2023. As of June 30, 2018, the amounts available through Duke's tax-exempt and taxable commercial paper program are $300,000 and $200,000, respectively. The outstanding amount was $94,022 as of June 30, 2018. Additionally, Duke has board-designated endowments of $2,724,843 as of June 30, 2018. Although Duke does not intend to spend from its board-designated endowment funds, other than amounts appropriated for general expenditure as part of its annual budget approval and appropriation process, amounts from its board-designated endowment funds could be made available if necessary.

4. Accounts Receivable, net

Accounts receivable consists of the following at June 30:

		2018		2017
Patient receivables	$	420,981	$	365,185
Student loan receivables		33,418		38,211
Other receivables		271,261		240,629
Accounts receivable, net	$	725,660	$	644,025

Patient receivables are reported net of allowances for contractual adjustments and uncollectible accounts of $937,242 and $877,657 at June 30, 2018 and 2017, respectively.

Concentration of Credit Risk

DUHS grants credit without collateral to its patients, most of whom are insured under third-party payor agreements. The related gross receivables at June 30, 2018 included approximately 41% and 48% from commercial payors and U.S. Government sources, respectively, and at June 30, 2017 included approximately 39% and 50%, respectively.

5. Contributions Receivable, net

Contributions receivable are summarized as follows at June 30:

	2018	2017
Unconditional promises expected to be collected in:		
Less than one year	$ 151,138	$ 203,411
Between one year and five years	247,768	255,715
More than five years	27,072	32,267
Gross contributions receivable	425,978	491,393
Allowance for uncollectible amounts	(12,353)	(47,125)
Unamortized discount at rates ranging from 0.1% to 7.5%	(17,828)	(14,915)
Contributions receivable, net	$ 395,797	$ 429,353

At June 30, 2018 and 2017, the 10 largest outstanding donor pledge balances represented 47% and 42%, respectively, of Duke's gross contributions receivable.

At June 30, 2018, Duke had also received bequest intentions and conditional promises to give of $255,381. These intentions and conditional promises to give are not recognized as assets or revenues in the consolidated financial statements.

6. Investments

The fair value of investments consists of the following at June 30:

	2018	2017
Short-term investments	$ 769,063	$ 792,152
Fixed income	1,581,967	1,787,035
Equities	2,215,320	2,040,715
Hedged strategies	3,520,357	3,260,216
Private capital	3,332,471	2,691,195
Real assets	2,083,320	1,947,162
Other	249,646	183,773
Total investments	$ 13,752,144	$ 12,702,248

The composition of Duke's investments are as follows:

	2018	2017
LTP	$ 9,824,392	$ 9,097,394
HSP	3,205,240	2,736,773
Nonpooled[1]	722,512	868,081
Total investments	$ 13,752,144	$ 12,702,248

At June 30, 2018 and 2017, $65,144 and $17,885, respectively, was posted as collateral for derivatives and thus not readily available for use. Collateral held is included in short-term investments.

Duke's investment classes are described in further detail below. Classes include direct holdings, which are generally marketable securities, and interests in funds for which the related investment strategies are described.

Short-term investments includes cash collateral, money market funds, and other highly liquid debt securities with an aggregate duration of less than a year.

Fixed income includes U.S. Treasury and agency debt, as well as non-government domestic and international fixed income securities, funds holding similar securities, and debt-based derivatives.

Equities includes domestic and international stocks, equity-based derivatives and interests in funds that invest predominantly long but also short stocks. Exposure by market is approximately: 20% domestic, 25% developed international, 35% emerging international, and 20% global.

[1] Includes $204,589 of unspent proceeds from the issuance of the 2017 taxable bonds described in Note 11.

Hedged strategies primarily includes interests in funds that invest both long and short in U.S. and non-U.S. stocks, credit-oriented securities, and arbitrage strategies. Approximately 75% of the hedged strategies portfolio is invested through equity oriented strategies with the balance split between multi-strategy (15%) and credit strategies (10%) funds and accounts. Virtually all of Duke's investments in these funds are redeemable, and the underlying assets of the funds are predominately marketable securities and derivatives.

Private capital primarily includes interests in funds or partnerships that hold illiquid investments in venture capital, buyouts, and credit. These funds typically have periods of 10 or more years during which committed capital may be drawn. Distributions are received through liquidation of the underlying assets of the funds, which are anticipated to occur over the next 4 to 10 years. Certain private placement securities may also be held.

Real assets includes interests in funds or partnerships that hold illiquid investments in residential and commercial real estate, oil and gas production, energy, other commodities, and related services businesses. These funds typically have periods of 10 or more years during which committed capital may be drawn. Distributions are received through liquidations of the underlying assets of the funds, which are anticipated to occur over the next 5 to 12 years. Additionally, certain liquid commodity- and real estate-related equities, private placement securities and related derivatives are included.

Other primarily includes other derivative instruments.

The following is a summary of the levels within the fair value hierarchy for Duke's investments at June 30:

Fair Value as of June 30, 2018	Level 1	Level 2	Level 3	Investments reported at NAV[1]	Total
Short-term investments	$ 427,633	$ 341,430	$ –	$ –	$ 769,063
Fixed income	387,352	1,146,082	–	48,533	1,581,967
Equities	1,294,757	31,205	86,382	802,976	2,215,320
Hedged strategies	177,349	–	–	3,343,008	3,520,357
Private capital	2,462	–	315,898	3,014,111	3,332,471
Real assets	51,584	1,349	42,743	1,987,644	2,083,320
Other	60,704	179,962	–	8,980	249,646
Total investments	$ 2,401,841	$ 1,700,028	$ 445,023	$ 9,205,252	$ 13,752,144

Fair Value as of June 30, 2017	Level 1	Level 2	Level 3	Investments reported at NAV[1]	Total
Short-term investments	$ 123,896	$ 668,256	$ –	$ –	$ 792,152
Fixed income	77,384	1,658,053	–	51,598	1,787,035
Equities	1,104,751	62,709	72,660	800,595	2,040,715
Hedged strategies	44,510	6,792	–	3,208,914	3,260,216
Private capital	2,482	–	236,816	2,451,897	2,691,195
Real assets	129,998	(1,935)	28,173	1,790,926	1,947,162
Other	38,577	136,647	–	8,549	183,773
Total investments	$ 1,521,598	$ 2,530,522	$ 337,649	$ 8,312,479	$ 12,702,248

[1] Certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient have not been categorized in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the consolidated balance sheets.

As of June 30, 2018 and 2017, redemption frequency and the corresponding notice period for all investments are as follows:

Asset Class	Redemption frequency (in days) (if currently eligible)[1]	Redemption notice period (in days)
Short-term investments	daily	1
Fixed income	1 to 30	1 to 30
Equities	1 to 90	1 to 90
Hedged strategies	30 to >365	2 to 100
Private capital	N/A	N/A
Real assets	N/A	N/A
Other	N/A	N/A

The following tables present additional information about Level 3 investments. Both observable and unobservable inputs may be used to determine the fair value of positions that Duke has classified within the Level 3 category. As a result, the unrealized gains and losses for assets within the Level 3 category in the table below may include changes in fair value that were attributable to both observable and unobservable inputs.

	Balance as of June 30, 2017	Net realized and unrealized gains	Purchases	Sales	Net transfers out	Balance as of June 30, 2018
Equities	$ 72,660	$ 13,722	$ –	$ –	$ –	$ 86,382
Private capital	236,816	62,257	62,498	(45,323)	(350)	315,898
Real assets	28,173	243	15,744	(1,417)	–	42,743
Total Level 3 investments	$ 337,649	$ 76,222	$ 78,242	$ (46,740)	$ (350)	$ 445,023

	Balance as of June 30, 2016	Net realized and unrealized gains	Purchases	Sales	Net transfers out	Balance as of June 30, 2017
Equities	$ 61,637	$ 11,023	$ –	$ –	$ –	$ 72,660
Private capital	218,645	4,540	40,985	(27,354)	–	236,816
Real assets	28,180	7,841	8,867	(16,180)	(535)	28,173
Total Level 3 investments	$ 308,462	$ 23,404	$ 49,852	$ (43,534)	$ (535)	$ 337,649

7. Net Assets

The following is a summary of net assets at June 30, 2018:

	Without donor restrictions	With donor restrictions[2]	Total
DUHS operations	$ 3,616,058	$ –	$ 3,616,058
University operations	1,884,982	–	1,884,982
Endowment funds	2,724,843	5,800,003	8,524,846
Investment in plant, net	445,817	–	445,817
Donor pledges and gifts	–	453,923	453,923
Annuity and other split-interest agreements	–	65,767	65,767
Student loan funds	–	13,288	13,288
Total net assets	$ 8,671,700	$ 6,332,981	$ 15,004,681

[1] Based on current terms, it is possible that these redemption rights may be restricted or eliminated by the funds in the future in accordance with the underlying fund agreement.
[2] Purpose includes instruction, research and student aid.

The following is a summary of net assets at June 30, 2017:

	Without donor restrictions	With donor restrictions[1]	Total
DUHS operations	$ 2,854,804	$ –	$ 2,854,804
University operations	1,750,255	–	1,750,255
Endowment funds	2,618,989	5,292,186	7,911,175
Investment in plant, net	342,695	–	342,695
Donor pledges and gifts	–	489,943	489,943
Annuity and other split-interest agreements	–	62,676	62,676
Student loan funds	–	11,792	11,792
Total net assets	$ 7,566,743	$ 5,856,597	$ 13,423,340

8. Endowment

Duke's endowment consists of over 5,200 individual funds established for a variety of purposes including donor-restricted endowment funds, funds designated by the Board to function as endowments, as well as interests in perpetual trusts held by others. Net assets associated with endowment funds are classified and reported based on the existence or absence of donor-imposed restrictions.

Interpretation of Relevant Law

The Board has decided to continue to require the preservation of the historic dollar value of endowment funds absent explicit donor stipulations to the contrary. Duke therefore classifies as net assets with donor restrictions the sum of (a) the original value of gifts donated to the donor-restricted endowment, (b) the original value of subsequent gifts to the donor-restricted endowment, (c) additions to the donor-restricted endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund, and (d) the appreciation on donor-restricted endowment funds until those amounts are appropriated for expenditure by Duke in a manner consistent with the standard of prudence prescribed by the Uniform Prudent Management of Institutional Funds Act (UPMIFA). The amounts appropriated for expenditure are based on the endowment spending rate per unit and the number of units for each fund. The spending rate is approved by the Board as part of Duke's operating budget.

Endowment net assets consist of the following at June 30, 2018:	Without Donor Restrictions	With Donor Restrictions	Total
Donor-restricted endowment funds:			
Historical value	$ –	$ 2,081,789	$ 2,081,789
Appreciation	–	2,846,700	2,846,700
Total donor-restricted endowment funds	–	4,928,489	4,928,489
Board-designated endowment funds	2,724,843	–	2,724,843
Interests in perpetual trusts held by others	–	871,514	871,514
Total endowed net assets	$ 2,724,843	$ 5,800,003	$ 8,524,846

Endowment net assets consist of the following at June 30, 2017:	Without Donor Restrictions	With Donor Restrictions	Total
Donor-restricted endowment funds:			
Historical value	$ –	$ 1,982,993	$ 1,982,993
Appreciation	–	2,501,852	2,501,852
Total donor-restricted endowment funds	–	4,484,845	4,484,845
Board-designated endowment funds	2,618,989	–	2,618,989
Interests in perpetual trusts held by others	–	807,341	807,341
Total endowed net assets	$ 2,618,989	$ 5,292,186	$ 7,911,175

[1] Purpose includes instruction, research and student aid.

The purposes of endowed net assets as of June 30, 2018 are as follows:	Without Donor Restrictions	With Donor Restrictions	Total
Instruction	$ 1,670,264	$ 3,306,583	$ 4,976,847
Student aid	86,892	1,699,593	1,786,485
Program support	967,687	793,827	1,761,514
Total endowed net assets	$ 2,724,843	$ 5,800,003	$ 8,524,846

The purposes of endowed net assets as of June 30, 2017 are as follows:	Without Donor Restrictions	With Donor Restrictions	Total
Instruction	$ 1,586,914	$ 3,014,388	$ 4,601,302
Student aid	81,414	1,550,141	1,631,555
Program support	950,661	727,657	1,678,318
Total endowed net assets	$ 2,618,989	$ 5,292,186	$ 7,911,175

Spending Policy

Duke utilizes the total return concept (income yield and appreciation) in the management of its endowment. Duke has implemented a spending policy designed to stabilize annual spending levels and preserve the real value of the endowment over time. In accordance with Duke's policy, a predetermined endowment spending rate consistent with Duke's total return objective has been established and approved by the Board. Should endowment returns prove to be insufficient to support this policy, the balance is provided from accumulated capital gains. Should endowment returns exceed the amounts necessary to attain this objective, the balance is reinvested. The effective spending rates for fiscal 2018 were 5.5% for financial aid endowments and 4.1% for non-financial aid endowments. The effective spending rates for fiscal 2017 were 5.9% for financial aid endowments and 4.6% for non-financial aid endowments. The annual distribution under the spending policy described above is reported as investment return included in operating revenues. Additionally, the Board authorizes the use of specific amounts of previously reinvested income, capital gains, and principal related to Board-designated endowment funds for special academic development initiatives and to support the operations and maintenance of certain facilities. The amounts reported in the consolidated statements of activities include supplemental endowment distributions totaling $181,655 and $235,748 in fiscal 2018 and 2017, respectively.

Return Objectives and Risk Parameters

Under the policy approved by the Board, endowment assets are invested in a manner that is intended to produce results that exceed the price and yield results of a benchmark composed of 70% of the MSCI All Country World Index and 30% of the Bloomberg Barclays U.S. Aggregate Bond Index. Duke expects its endowment funds, over long time periods, to provide an average annual real rate of return of approximately 5.0%. Actual returns in any given year may vary from this amount.

Funds with Deficiencies

From time to time, the fair value of endowment assets may fall below the fund's original value. Deficiencies of this nature are reported in net assets with donor restrictions. As of June 30, 2018 and 2017, there were no endowment funds with market values below the original gift amount.

Changes in endowment net assets for the years ended June 30, 2018 and 2017 are as follows:

	Without Donor Restrictions	With Donor Restrictions	Total
Balance as of June 30, 2016	$ 2,020,207	$ 4,819,573	$ 6,839,780
Investment return, net	303,227	534,696	837,923
Contributions	–	139,003	139,003
New Board-designated endowment funds	581,679	–	581,679
Appropriations for expenditure	(210,017)	(201,086)	(411,103)
Appropriations for capital	(76,107)	–	(76,107)
Balance as of June 30, 2017	$ 2,618,989	$ 5,292,186	$ 7,911,175
Investment return, net	303,034	616,212	919,246
Contributions	–	98,795	98,795
New Board-designated endowment funds	26,498	–	26,498
Appropriations for expenditure	(209,250)	(207,190)	(416,440)
Appropriations for capital	(14,428)	–	(14,428)
Balance as of June 30, 2018	$ 2,724,843	$ 5,800,003	$ 8,524,846

9. Pension and Other Postretirement Benefit Plans

Defined Contribution Retirement Savings Plan

Faculty and staff members of Duke are eligible to participate in a defined contribution plan. Faculty and exempt staff members are eligible to receive employer-provided contributions in this plan. For fiscal 2018 and 2017, Duke contributed $164,286 and $152,164, respectively, to this plan. Duke expects to contribute $174,324 to this plan in fiscal 2019.

Defined Benefit Pension and Postretirement Medical Benefit Plans

Duke has a noncontributory defined benefit pension plan for substantially all non-exempt employees. The benefit for this plan is based on years of service and the employee's compensation during the last 10 years of employment. Duke expects to contribute $22,889 to the plan in fiscal 2019.

At June 30, 2018 and 2017, the accumulated benefit obligation for the pension benefits was $1,840,391 and $1,892,596, respectively. At June 30, 2018 and 2017, the plan was under funded in relation to accumulated benefits by $47,821 and $240,543, respectively.

Duke also sponsors an unfunded defined benefit postretirement medical plan that covers all full-time employees who elect coverage and satisfy the plan's eligibility requirements when they retire. The plan is contributory with retiree contributions established as a percentage of the total cost of medical care for retirees and their dependents. Duke pays all benefits on a current basis. DUHS employees hired after June 30, 2002 are not eligible for DUHS contributions to the cost of this benefit and must bear the full cost themselves if elected at retirement. As a healthcare provider, Duke utilizes an incremental cost approach to determine its liability for the postretirement medical plan. The total liability reflects estimated additional costs to provide medical benefits to retirees within DUHS facilities plus the full cost to provide medical benefits to retirees at facilities other than DUHS.

The measurement date for both the defined benefit pension plan and the postretirement medical benefit plan is June 30. Duke recognizes the full funded status of its defined benefit pension and other postretirement benefit plans in the consolidated balance sheets. Accordingly, the liability for pension benefits as recognized in the consolidated balance sheets represents the actuarially determined projected benefit obligation (PBO) in excess of the fair value of plan assets at year end. The liability for other postretirement benefits as recognized in the consolidated balance sheets represents the actuarially determined accumulated postretirement benefit obligation at year end.

The following tables provide a reconciliation of the plans' PBO and fair value of assets:

	Pension Benefits		Postretirement Benefits	
	2018	2017	2018	2017
Reconciliation of benefit obligation				
PBO at beginning of year	$ 2,051,151	$ 2,028,803	$ 233,041	$ 206,968
Service cost	78,998	83,077	4,293	3,869
Interest cost	75,776	69,962	8,562	7,088
Amendments	10,858	–	–	–
Actuarial (gain) loss	(173,335)	(71,229)	2,022	24,007
Benefit payments	(60,230)	(56,462)	(9,436)	(8,891)
Administrative expenses (estimated)	(3,400)	(3,000)	–	–
PBO at end of year	$ 1,979,818	$ 2,051,151	$ 238,482	$ 233,041
Reconciliation of fair value for plan assets				
Fair value of plan assets at beginning of year	$ 1,652,053	$ 1,510,136	$ –	$ –
Actual return on plan assets	181,434	180,357	–	–
Employer contributions	22,319	21,057	–	–
Participant contributions	204	186	–	–
Benefit payments	(60,230)	(56,462)	–	–
Administrative expenses	(3,210)	(3,221)	–	–
Fair value of plan assets at end of year	$ 1,792,570	$ 1,652,053	$ –	$ –
Funded status				
Net accrued benefit liability	$ (187,248)	$ (399,098)	$ (238,482)	$ (233,041)

The following table provides the components of net periodic benefit cost (reported as employee benefits in the consolidated statements of activities) for the plans for fiscal 2018 and 2017:

	Pension Benefits		Postretirement Benefits	
	2018	2017	2018	2017
Service cost	$ 78,998	$ 83,077	$ 4,293	$ 3,869
Interest cost	75,776	69,962	8,562	7,088
Expected return on plan assets	(125,031)	(118,507)	–	–
Amortization of prior-service cost	1,814	1,814	–	–
Expected participant contributions	(190)	(178)	–	–
Recognized actuarial loss (gain)	9,025	19,758	–	(80)
Net periodic benefit cost	$ 40,392	$ 55,926	$ 12,855	$ 10,877

The prior-service costs are amortized on a straight-line basis over the average remaining service period of active participants. The expected amortization of prior-service cost for fiscal 2019 is $2,485 and $0 for the pension and postretirement benefits, respectively. The expected amortization of actuarial losses for fiscal 2019 is $0 for the pension and postretirement benefits. Unrecognized prior-service costs were $15,749 and $0 and unrecognized actuarial losses were $88,237 and $4,519 for the pension and postretirement benefits, respectively, as of June 30, 2018. Unrecognized prior-service costs were $6,705 and $0 and unrecognized actuarial losses were $327,204 and $2,497 for the pension and postretirement benefits, respectively, as of June 30, 2017.

The assumptions used in the measurement of Duke's benefit obligation and benefit cost are shown in the following table:

	Pension Benefits				Postretirement Benefits			
	2018		2017		2018		2017	
Weighted average assumptions as of measurement date	Obligation	Cost	Obligation	Cost	Obligation	Cost	Obligation	Cost
Discount rate	4.25%	3.75%	3.75%	3.50%	4.25%	3.75%	3.75%	3.50%
Expected return on plan assets	N/A	7.50%	N/A	7.50%	N/A	N/A	N/A	N/A
Rate of compensation increase	3.00%/2.00%[1]	2.50%	2.50%	2.50%	N/A	N/A	N/A	N/A

In order to determine the benefit obligation as of June 30, 2018, the per capita costs of covered health care benefits was assumed to increase 8.0% for non-Medicare eligible employees and 8.3% for Medicare eligible employees, declining to an ultimate annual rate of increase of 5.0% by 2033 for non-Medicare and 2028 for Medicare eligible employees. The benefit expense for fiscal 2018 was driven by the rates used to determine the obligation at June 30, 2017, which were 7.5% for non-Medicare eligible employees and 8.7% for Medicare eligible employees declining to an ultimate annual rate of increase of 5.0% by 2028 for non-Medicare and Medicare eligible employees.

Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plans. A 1.0% change in assumed health care cost trend rates would have the following effect:

	1.0% Increase	1.0% Decrease
Effect on total of service and interest cost components of net periodic postretirement health care benefit cost	$ 2,209	$ (1,786)
Effect on the health care component of the accumulated postretirement benefit obligation	$ 33,401	$ (26,030)

The projected payments to beneficiaries under the respective plans for each of the five fiscal years subsequent to June 30, 2018 are as follows:

	Pension Benefits	Postretirement Benefits
2019	$ 66,668	$ 10,954
2020	69,600	11,771
2021	73,782	12,562
2022	78,558	13,225
2023	84,256	13,820

Projected aggregate payments for pension and postretirement benefits for the five year period ending June 30, 2028 are $514,568 and $76,852, respectively.

[1] Compensation increase for first 20 years of service/thereafter.

Defined Benefit Pension Plan Assets

The pension plan's investment strategy focuses on maximizing total return and places limited emphasis on liability matching and no emphasis on generating income. Over the long term, the plan's average exposure target is 48% equity (public and private investments in companies), 15% credit (investment-grade bonds, corporate bonds, bank debt, asset backed securities, etc.), 13% absolute return oriented strategies, 9% commodity (direct commodity exposure, commodity related equities, and private investments in energy, power, infrastructure and timber), 9% real estate (private real estate and REITs), 4% rates (public obligations including treasuries and agencies), and 2% U.S. Treasury Inflation Protected Securities.

The expected return on pension plan assets is established at an amount that reflects the targeted asset allocation and expected returns for each component of the plan assets. The expected return was developed using a stochastic forecast model of long-term expected returns for each asset class. The rate is reviewed periodically and adjusted, as appropriate, to reflect changes in the expected market performance or in targeted asset allocation ranges.

The following is a summary of the levels within the fair value hierarchy for Duke's plan assets at June 30:

Fair value as of June 30, 2018	Level 1	Level 2	Level 3	Investments reported at NAV[1]	Total
Short-term investments	$ 36,894	$ 64,945	$ –	$ –	$ 101,839
Fixed income	49,857	178,267	–	–	228,124
Equities	193,974	2,170	–	114,693	310,837
Hedged strategies	31,288	–	–	408,264	439,552
Private capital	339	–	40,465	380,168	420,972
Real assets	7,075	187	–	268,310	275,572
Other	(7,400)	23,074	–	–	15,674
Total investments	$ 312,027	$ 268,643	$ 40,465	$ 1,171,435	$ 1,792,570

Fair value as of June 30, 2017	Level 1	Level 2	Level 3	Investments reported at NAV[1]	Total
Short-term investments	$ (154)	$ 101,546	$ –	$ –	$ 101,392
Fixed income	5,833	212,932	–	–	218,765
Equities	176,310	7,561	–	126,863	310,734
Hedged strategies	3,104	999	–	415,738	419,841
Private capital	389	–	30,062	306,053	336,504
Real assets	17,850	(284)	–	238,678	256,244
Other	(7,870)	16,443	–	–	8,573
Total investments	$ 195,462	$ 339,197	$ 30,062	$ 1,087,332	$ 1,652,053

[1] Certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient have not been categorized in the fair value hierarchy. Plan investments reported at NAV have the same strategies as those in Duke's investment pools described in Note 6.

The following tables present additional information about Level 3 plan assets. Both observable and unobservable inputs may be used to determine the fair value of positions that the Plan has classified within the Level 3 category. As a result, the unrealized gains and losses for assets within the Level 3 category in the table below may include changes in fair value that were attributable to both observable and unobservable inputs.

	Balance as of June 30, 2017	Net realized and unrealized gains	Purchases	Sales	Balance as of June 30, 2018
Private capital	$ 30,062	$ 8,454	$ 7,698	$ (5,749)	$ 40,465

	Balance as of June 30, 2016	Net realized and unrealized losses	Purchases	Sales	Balance as of June 30, 2017
Private capital	$ 27,855	$ (306)	$ 5,082	$ (2,569)	$ 30,062

10. Land, Buildings, and Equipment

Land, buildings, and equipment, net, are summarized as follows at June 30:

	2018	2017
Land and land improvements	$ 447,694	$ 355,273
Buildings and utilities	5,767,082	5,360,704
Computer software	410,505	402,712
Equipment, furniture and vessels	1,618,969	1,535,744
Library and art collections	512,087	485,221
Construction in progress	421,834	440,970
Land, buildings and equipment, gross	9,178,171	8,580,624
Accumulated depreciation	(4,970,661)	(4,614,591)
Land buildings and equipment, net	$ 4,207,510	$ 3,966,033

Interest on borrowings to finance facilities is capitalized during construction, net of any investment income earned through the temporary investment of project borrowings on tax-exempt debt. Total net interest cost of $3,191 and $4,547 was capitalized in fiscal 2018 and 2017, respectively.

Duke has identified conditional asset retirement obligations primarily related to the costs of asbestos removal and disposal that will result from future remediation activity. The liability was estimated using inflation rates ranging from 3.4% to 5.0% and discount rates ranging from 2.7% to 4.6%. Conditional asset retirement obligations recognized at June 30, 2018 and 2017 were $53,505 and $53,117, respectively, and are reported in other liabilities on the consolidated balance sheets.

11. Notes and Bonds Payable

Notes and bonds payable at June 30 consist of the following:

	Fiscal year of maturity	Effective interest rate	Outstanding principal 2018	Outstanding principal 2017
University Tax-Exempt Bonds:				
Variable-rate bonds				
Series 1987A	2018	0.8%	$ –	$ 6,900
Series 1991B	2022	1.0%	32,000	40,000
Series 1992A	2027	1.1%	35,240	35,240
Fixed-rate bonds				
Series 2006A	2018	4.3%	–	1,830
Series 2014A	2042	5.0%	119,115	119,115
Series 2014B	2045	5.0%	84,710	84,710
Series 2014C	2043	5.0%	33,000	33,000
Series 2015B	2056	5.0%	368,905	368,905
Series 2016B	2045	4.7%	328,605	328,605
University Taxable Bonds:				
Fixed-rate bonds				
Series 2007A	2037	5.9%	200,000	200,000
Series 2015A	2049	4.1%	175,865	175,865
Series 2016A	2047	3.2%	528,780	528,780
DUHS Tax-Exempt Bonds:				
Variable-rate bonds				
Series 2005A and B	2028	2.1%	113,415	123,530
Series 2006A, B, and C (see Note 12)	2039	1.8%	121,620	121,620
Series 2012B (see Note 12)	2023	2.2%	28,650	28,650
Series 2016B	2042	2.0%	90,000	90,000
Series 2016C	2042	2.0%	90,000	90,000
Fixed-rate bonds				
Series 2012A	2042	4.7%	277,280	278,305
Series 2016A	2028	2.0%	143,520	155,720
Series 2016D	2042	3.5%	125,100	125,100
DUHS Taxable Bonds:				
Fixed-rate bonds				
Series 2017	2047	3.9%	600,000	600,000
Tax-exempt commercial paper	<1 year	1.1%	33,860	33,860
Taxable commercial paper	<1 year	1.5%	60,162	60,162
Other notes payable	Various	Various	12,959	12,922
Capital lease obligations (see Note 16)	Various	Various	132,951	128,952
Unamortized premium			169,946	179,661
Debt issuance costs			(17,998)	(18,713)
Notes and bonds payable			$ 3,887,685	$ 3,932,719

The aggregate annual maturities for Duke's outstanding debt at June 30, 2018 are as follows:

Fiscal Year	Principal Payments
2019	$ 125,782
2020	32,925
2021	33,970
2022	35,120
2023	35,350
Thereafter	3,339,639
Total principal payments	$ 3,602,786

Duke capitalizes and amortizes the original issue premium and issue costs related to applicable bond issues in a manner that approximates the interest method. Total amortization for issue costs and premiums was $8,842 and $8,683 for fiscal 2018 and 2017, respectively, and is included in interest expense in the consolidated statements of activities.

In October 2016, the University issued Series 2016A taxable bonds in the amount of $528,780, the proceeds of which were used to retire the Series 2009B bonds ($247,090) as well as fund various projects. The issuance includes $21,683 of debt extinguishment costs.

In November 2016, the University issued Series 2016B tax-exempt bonds in the amount of $328,605 the proceeds of which were used to refund the Series 2006A bonds ($281,905) and 2006B bonds ($95,435). The bonds were issued at a premium of $52,038.

In August 2016, DUHS issued Series 2016D tax-exempt bonds in the amount of $125,100 to fund an escrow account that was irrevocably placed with a trustee to meet the principal and interest payments of the Series 2010A bonds ($120,000). The refunding transaction resulted in a loss on extinguishment of debt of $18,328 representing the write-off of the unamortized bond issue costs and the escrow funding requirements for principal and interest payments in excess of the face value of the 2010A refunded bonds. The refunding meets the requirements of derecognition of the bond liability for fiscal year 2017.

In June 2017, DUHS issued Series 2017A taxable bonds in the amount of $600,000, the proceeds of which will be used to finance various capital additions and improvements at healthcare facilities and pay certain expenses of issuing the bonds. DUHS executed a forward treasury rate lock agreement to hedge against potential rising interest rates during the period leading up to the issuance of the bonds. A rate lock payment of $7,889 is included in debt issuance costs.

Trust indentures underlying the DUHS Revenue Bonds contain certain covenants and restrictions. DUHS was in compliance during fiscal 2018 and 2017.

12. Derivative and Other Financial Instruments

Investment strategies employed by DUMAC and investment managers retained by DUMAC incorporate the use of various derivative financial instruments. DUMAC uses these instruments for a number of investment purposes, including hedging or altering exposure to certain asset classes and cost-effectively adding exposures to portions of the portfolio. Positions are expected to create gains or losses that, when combined with the applicable portion of the total investment portfolio, provide an expected result.

During fiscal 2018 and 2017, Duke, or external investment managers on Duke's behalf, entered into swap agreements, futures contracts, or forward contracts, and acquired warrants or rights to increase, reduce or otherwise modify investment exposures. These instruments expose Duke to risk of an unexpected movement in the fair value of the underlying security, a counterparty failing to meet its obligations, and, in certain circumstances, not being able to unwind a position at current fair market value due to market illiquidity. Duke has established procedures to monitor and manage these risks.

Duke's investment related derivative exposures, categorized by primary underlying risk, are as follows:

Primary underlying risk as of June 30, 2018	Long Notional	Short Notional	Derivative assets	Derivative liabilities	Gain (loss)
Equity Price[1]	$ 2,495,328	$ 1,036,925	$ 35,482	$ (59,335)	$ 25,818
Interest Rate[2]	1,717,589	1,245,611	1,905	(1,054)	3,593
Commodity Price[3]	540,621	93,027	7,304	(5,910)	69,900
Credit[4]	3,237,695	1,148,320	133,828	(32,157)	(20,230)
Foreign currency exchange rate[5]	232,060	1,391,300	26,925	(7,868)	(15,478)
Total	$ 8,223,293	$ 4,915,183	$ 205,444	$ (106,324)	$ 63,603

[1] Includes options, swaps, and futures contracts.
[2] Includes options, swaps, swaptions, and futures contracts.
[3] Includes options and futures contracts.
[4] Includes credit default swaps, swaptions, and credit total return swaps.
[5] Includes options and forward contracts.

Primary underlying risk as of June 30, 2017	Long Notional	Short Notional	Derivative assets	Derivative liabilities	Gain (loss)
Equity Price[1]	$ 3,286,057	$ 2,010,648	$ 77,764	$ (57,946)	$ 174,003
Interest Rate[2]	2,223,674	2,786,999	3,468	(2,607)	2,156
Commodity Price[3]	434,008	105,294	9,272	(3,586)	(63,764)
Credit[4]	5,142,806	2,069,005	127,750	(35,553)	(15,337)
Foreign currency exchange rate[5]	294,548	1,493,946	5,191	(24,983)	3,424
Total	$ 11,381,093	$ 8,465,892	$ 223,445	$ (124,675)	$ 100,482

As part of relative value strategies, Duke and investment managers on Duke's behalf entered into credit default swap derivative transactions on investment grade and high yield securities which typically have terms of five years or less to buy and sell credit protection. At June 30, 2018 and 2017, the notional of protection sold was $3,021,239 and $4,955,891 and the notional of protection bought with identical underlying assets was $677,157 and $890,669, respectively. These instruments are included in the credit line of the preceding tables.

Duke's investment related derivative assets and liabilities at June 30, by counterparty, are as follows:

	2018			2017		
	Assets	Liabilities	Cash Collateral Pledged (Held)	Assets	Liabilities	Cash Collateral (Held) Pledged
Counterparty A	8,065	(6,749)	11,260	$ 45,931	$ (28,053)	$ (11,626)
Counterparty B	32,566	(24,810)	(3,071)	50,903	(23,464)	(28,721)
Counterparty C	49,590	(33,824)	85,150	42,443	(12,508)	39,473
Counterparty D	71,929	(23,685)	(38,280)	40,192	(15,091)	(20,670)
Counterparty E	13,835	(2,427)	(9,140)	12,074	(9,873)	–
Counterparty F	8,924	(2,340)	333	5,124	(2,323)	(3,270)
All Others	20,535	(12,489)	15,954	26,778	(33,363)	20,863
Total	$ 205,444	$ (106,324)	$ 62,206	$ 223,445	$ (124,675)	$ (3,951)

In addition, Duke has executed derivative financial instruments in the normal course of managing its debt portfolio using long term strategies. Duke has interest rate swap agreements that are designed to synthetically decrease the variable rate exposure associated with its portfolio of debt. In addition, Duke has a swap agreement designed to reduce the interest rate risk on variable rate indebtedness by utilizing the spread between the yield curves for taxable debt securities and tax-exempt municipal debt securities.

The following table summarizes the general terms for each of DUHS' swap agreements:

Effective date	Associated debt series	Maturity date	Current notional amount	Rate Duke pays	Rate Duke receives
Interest rate:					
August 12, 1993	2012B	June 2023	$ 28,650	5.09%	SIFMA
May 19, 2005	N/A	June 2028	$ 257,030	3.60%	61.52% of one-month LIBOR plus 0.28%
April 1, 2009	Portfolio[6]	June 2039	$ 127,505	3.80%	67.0% of one-month LIBOR
Basis:					
July 6, 2001	N/A	July 2021	$ 400,000	SIFMA	72.13% of one-month LIBOR

[1] Includes options, swaps, and futures contracts.
[2] Includes options, swaps, swaptions, and futures contracts.
[3] Includes options and futures contracts.
[4] Includes credit default swaps, swaptions, and credit total return swaps.
[5] Includes options and forward contracts.
[6] Notional amount of the April 2009 Interest Rate Swap declines coincident with the principal schedules for the Series 2006A/B/C bonds. The residual portion is $5,885.

The fair value of each swap is the estimated amount DUHS would receive or pay to terminate the swap agreement at the reporting date, taking into account current interest rates and the current creditworthiness of the swap counterparties. The fair value is included in other liabilities on the consolidated balance sheets. The change in fair value is included as a gain or loss in other nonoperating activities on the consolidated statements of activities. The net settlement amount incurred on the swaps is included in interest expense on the consolidated statements of activities. The collateral to support the related swaps is included in short-term investments within investments on the consolidated balance sheets. The debt derivative instruments contain cross-collateralization provisions that require each counterparty to post collateral if the fair value meets certain thresholds.

DUHS derivative instruments contain provisions requiring long-term, unsecured debt to be maintained at specified credit ratings from Moody's Investor Service and Standard & Poor's Rating Service. If the ratings of DUHS' debt were to fall below certain benchmarks, the counterparty could request immediate payment on derivatives in net liability positions. At June 30, 2018 and 2017, DUHS' long-term debt ratings exceeded these requirements. The aggregate fair value of all derivative instruments with credit-risk related contingent features that were in a net liability position on June 30, 2018 and 2017 was $56,746 and $80,651, respectively, for which DUHS has posted collateral of $2,954 and $13,675, respectively, in the normal course of business. If the credit-risk related features underlying these agreements were triggered on June 30, 2018 and 2017, DUHS would have been required to post an additional $53,792 and $66,976, respectively, of collateral to its counterparties.

Financial Information Related to Swap Agreements	2018 Fair Value	2018 Gain	2017 Fair Value	2017 Gain
August 1993 Interest Rate Swap	$ (2,546)	$ 1,491	$ (4,037)	$ 2,097
May 2005 Interest Rate Swap	(22,422)	12,100	(34,522)	18,347
April 2009 Interest Rate Swap	(31,778)	9,171	(40,949)	15,493
July 2001 Basis Swap	685	1,828	(1,143)	599
Total	$ (56,061)	$ 24,590	$ (80,651)	$ 36,536

The April 2009 Interest Rate Swap is subject to a mandatory early termination right on June 1, 2020. When this right is exercised, DUHS may revoke it, at which time DUHS' collateral threshold reduces to $0 for the remainder of the swap agreement.

DUHS is exposed to financial loss in the event of nonperformance by a counterparty to any of the financial instruments described above. General market conditions could impact the credit standing of the counterparties and, therefore, potentially impact the value of the instruments on the consolidated balance sheets. DUHS controls this counterparty credit risk by considering the credit rating, business risk, and reputation of any counterparty before entering into a transaction, monitoring for any change in the credit standing of its counterparty during the life of the transaction, and requiring collateral be posted when predetermined thresholds are crossed. DUHS is also exposed to interest rate risk driven by factors influencing the spread between the taxable and tax-exempt market interest rates on its basis swap.

13. Affiliated Organizations

The Private Diagnostic Clinic, PLLC (the PDC)

The PDC is a professional limited liability company consisting of physicians practicing primarily within DUHS facilities and PDC clinics. The purpose of the PDC is to provide a structure separate from Duke in which the members of the physician faculty of the School of Medicine may engage in the private practice of medicine and still serve as members of the faculty of the University conducting clinical teaching and medical research. Under multiple agreements between the PDC and Duke, the PDC: (1) makes payments for professional services supplied by Duke to the PDC; (2) pays rent for the PDC's use of space; and (3) makes payments for the goodwill and other benefits derived from the PDC's association with Duke. A substantial portion of the payments is used by Duke to support academic programs in the clinical departments of the School of Medicine. These payments totaled $137,018 and $76,758 for fiscal 2018 and 2017, respectively, and are recognized as revenue in grants and contracts in the consolidated statements of activities.

The Duke Endowment

Established in 1924 by James Buchanan Duke, The Duke Endowment is a charitable trust created to promote philanthropic purposes by making grants for educational, health care, child care, and religious purposes within North Carolina and South Carolina. The University is a named beneficiary of The Duke Endowment and receives substantial support from The Duke Endowment in the forms of unrestricted operating support and discretionary grants.

While Duke and The Duke Endowment have a common heritage, each having been founded through the generosity of James Buchanan Duke, they are two separate entities, each with its own purposes, office, officers, and trustees. The Duke Endowment has been required by its indenture to distribute certain amounts of income to Duke from the Original Corpus, Corpus Item VIII, and Corpus Item XI, subject to a limited right to withhold by The Duke Endowment trustees. Through June 30, 2018, this right to withhold has never been exercised.

The Duke Endowment trustees now invest for total return in accordance with current investment practices, with the result that (a) the distinction between "principal" and "income" in the traditional sense can no longer be readily identified, if at all, and (b) the traditional "income" that can be identified is often inadequate to meet beneficiary needs. Accordingly, by an Order dated December 15, 2009, the Superior Court of Mecklenburg County, North Carolina further broadened the authority of The Duke Endowment trustees to distribute principal to its beneficiaries.

Unrestricted operating support from The Duke Endowment was $12,500 for fiscal 2018 and 2017. Such amounts are reflected in investment return designated for current operations in the consolidated statements of activities.

Duke received discretionary grant payments from The Duke Endowment of $36,213 and $34,046 for fiscal 2018 and 2017, respectively.

At June 30, 2018 and 2017, the portion of The Duke Endowment's net assets included in net assets with donor restrictions on Duke's consolidated balance sheets, and from which Duke derives unrestricted operating support, had a fair value of $759,303 and $702,855 respectively. Duke has no equity interest in the principal of The Duke Endowment trust, which had a fair value of approximately $3.8 billion at June 30, 2018.

14. Functional Expenses

Expenses are presented by functional classification in accordance with the overall service mission of Duke. Duke's primary program services are academic instruction and research, and health care services. Expenses for auxiliary enterprises, library, and student services are incurred in support of academic instruction and research, and as such are included therein. Plant operation and maintenance expense is allocated to program and supporting activities based upon periodic assessment of facilities usage. Other natural expenses attributable to more than one functional expense category are allocated using a variety of cost allocation techniques such as square footage and time and effort. Total amounts allocated in fiscal 2018 and 2017 were $149,465 and $144,509, respectively.

Expenses are reported in the consolidated statements of activities in natural categories. Functional expenses were categorized as follows:

For the year ended June 30, 2018:	Academic instruction & research	Health care services	General administration	Total
Salaries and wages	$ 1,174,592	$ 873,766	$ 591,042	$ 2,639,400
Employee benefits	284,410	211,039	146,833	642,282
Student aid	44,956	–	–	44,956
Other operating expenses[1]	800,302	1,297,674	214,157	2,312,133
Interest expense	53,577	70,233	26,345	150,155
Depreciation expense	225,453	136,729	35,166	397,348
Total	$ 2,583,290	$ 2,589,441	$ 1,013,543	$ 6,186,274

For the year ended June 30, 2017:	Academic instruction & research	Health care services	General administration	Total
Salaries and wages	$ 1,105,453	$ 828,768	$ 559,406	$ 2,493,627
Employee benefits	260,308	189,506	154,445	604,259
Student aid	43,897	–	–	43,897
Other operating expenses[1]	797,202	1,185,559	183,695	2,166,456
Interest expense	50,139	51,957	24,607	126,703
Depreciation expense	204,441	129,846	33,730	368,017
Total	$ 2,461,440	$ 2,385,636	$ 955,883	$ 5,802,959

[1] Other operating expenses primarily includes payments to subrecipients for research, supplies and professional services.

15. Managing Conflicts of Interest

Members of Duke's governing boards and senior administration may, from time to time, be associated, either directly or indirectly, with companies doing business with Duke.

Written conflict of interest policies are maintained for members of the governing boards of the University, DUHS, and DUMAC that require, among other things, that no member of a governing board may participate in any decision in which he or she (or an immediate family member) has a material financial interest. Each governing board member is required to certify compliance with the conflict of interest policy on an annual basis and indicate whether Duke does business with an entity in which that member (or an immediate family member) has a material financial interest. When such relationships exist, measures, including written management plans, are taken to mitigate any actual or perceived conflict, including requiring that such transactions be conducted at arm's length, for good and sufficient consideration, based on terms that are fair and reasonable to and in the best interests of Duke, and in accordance with applicable conflict of interest laws and policies in effect. No such associations that have been disclosed are considered to be material to the consolidated financial statements.

For members of the senior administration, Duke requires annual disclosure of significant financial interests in, or employment or consulting relationships with, entities doing business with Duke. These annual disclosures cover members of the senior administration and their immediate family members. When such relationships exist, measures are taken to appropriately manage the actual or perceived conflict in the best interests of Duke. No such associations that have been disclosed are considered to be material to the consolidated financial statements.

16. Commitments and Contingencies

Construction and Purchase Commitments

At June 30, 2018, open contracts for the construction of physical properties amounted to $819,341 and outstanding purchase orders for normal operating supplies and equipment amounted to $19,405.

Leases

Duke leases various machinery, equipment and buildings under operating and capital leases expiring at various dates through 2034. Total rental expense in fiscal 2018 and 2017 for all operating leases was $96,848 and $90,625, respectively.

Future minimum lease payments under noncancelable capital and operating leases as of June 30, 2018 are as follows:

Year	Capital Leases	Operating Leases	Total
2019	$ 10,597	$ 113,678	$ 124,275
2020	9,473	115,108	124,581
2021	9,717	101,248	110,965
2022	9,971	97,182	107,153
2023	9,883	87,723	97,606
Thereafter	259,373	459,384	718,757
Total minimum lease payments	309,014	974,323	1,283,337
Less sublease rentals by the PDC	–	(19,149)	(19,149)
Total minimum payments less subleases	309,014	$ 955,174	$ 1,264,188
Less: Interest portion	(176,063)		
Capital lease obligations	$ 132,951		

Medical Malpractice Coverage

DCC (see Note 1) insures a portion of the medical malpractice risks and patient general liability risks of DUHS clinical providers and the PDC. The assets, liabilities, and results of operations for DCC have been reflected in the net assets without donor restrictions of Duke. Policy limits for the years ended June 30, 2018 and 2017 were $110,000 per incident and $145,000 in the aggregate. DCC limits its exposure to loss through reinsurance and excess loss agreements.

Estimated professional liability costs include the estimated cost for reported claims incurred in the DCC program. DCC evaluates its estimated professional liability on a discounted actuarial basis. The discount rate at June 30, 2018 and 2017 is 3.5%. Accrued professional liability costs as of June 30, 2018 and 2017 amounted to $38,408 and $38,710, respectively. Cash, investments, and other receivables in this amount have been designated by DUHS to settle these claims. Also included in estimated professional liability costs are estimated claims incurred but not reported related to DUHS in the amounts of $7,000 and $6,588 as of June 30, 2018 and 2017, respectively.

The estimated liability for professional and general liability claims may be significantly affected if current and future claims differ from historical trends. While the administration monitors reported claims closely and considers potential outcomes as estimated by its actuaries when determining its professional and patient general liability accruals, the complexity of the claims, the extended period of time to settle the claims, and the wide range of potential outcomes complicate the estimation. In the opinion of the administration, adequate provision has been made for this related risk.

Self-Insurance

Duke provides employee healthcare benefits, long-term disability benefits, unemployment benefits, and workers' compensation benefits primarily though employer contributions, participant contributions, and excess loss insurance, and manages those programs through third-party administrators. In the opinion of the administration, adequate

provision has been made for the related risks within accounts payable and accrued payroll or accrued postretirement/postemployment and other benefit obligations on Duke's consolidated balance sheets.

Partnership Investment Commitments

There were $1.7 billion of commitments to private capital and real asset investments as of June 30, 2018. These funds may be drawn down over the next several years upon request by the general partners. Duke expects to finance these commitments with available cash and expected proceeds from the sales of securities.

Contingencies

Duke is involved in various legal actions occurring in the normal course of activities. While the final outcomes cannot be determined at this time, the administration is of the opinion that the resolution of these matters will not have a material adverse effect on Duke's financial position.

Duke has been named as a defendant in three lawsuits, alleging false claims, antitrust, and ERISA violations. The administration currently believes that the resolution of these cases will not result in a material impact on the consolidated financial statements.

Laws and regulations governing Medicare, Medicaid, and other federal programs are complex and subject to interpretation. Duke, in part through its compliance program, seeks to ensure compliance with such laws and regulations, and to rectify instances of noncompliance with governmental program rules. Duke believes that it is in compliance with all applicable laws and regulations and is not aware of any pending or threatened investigations involving allegations of potential wrongdoing that would have a material effect on Duke's consolidated financial statements. Compliance with such laws and regulations is subject to future government review and interpretation as well as significant regulatory action, including fines, penalties and exclusion from the Medicare, Medicaid, and other Federal programs.

Trinity House residence hall on East Campus, which was completed in January 2018.

Balance Sheets SCHEDULE 1

THE UNIVERSITY (SUPPLEMENTARY INFORMATION)
JUNE 30, 2018 AND 2017
(DOLLARS IN THOUSANDS)

	2018	2017
Assets:		
Cash and cash equivalents	$ 373,407	$ 443,535
Accounts receivable, net	265,432	244,052
Prepaid expenses, inventories, and other assets	70,163	61,962
Contributions receivable, net	395,107	428,559
Investments	10,044,690	9,290,625
Deposits with bond trustees	1,286	28,601
Land, buildings, and equipment, net	2,635,284	2,479,606
Interests in perpetual trusts held by others	869,680	805,474
Total assets	$ 14,655,049	$ 13,782,414
Liabilities:		
Accounts payable and accrued payroll	$ 384,541	$ 356,081
Deferred revenues and deposits	212,257	204,619
Notes and bonds payable	2,128,521	2,148,917
Annuity and other split-interest obligations	59,747	60,369
Accrued postretirement/postemployment and other benefit obligations	282,795	340,141
Other liabilities	202,236	179,164
Total liabilities	3,270,097	3,289,291
Net Assets:		
Without donor restrictions	5,110,600	4,693,704
With donor restrictions	6,274,352	5,799,419
Total net assets	11,384,952	10,493,123
Total liabilities and net assets	$ 14,655,049	$ 13,782,414

The supplementary information in this schedule presents the balance sheets of the University, exclusive of DUHS.
See accompanying Independent Auditors' Report.

Statements of Activities SCHEDULE 2

THE UNIVERSITY (SUPPLEMENTARY INFORMATION)
YEARS ENDED JUNE 30, 2018 AND 2017
(DOLLARS IN THOUSANDS)

	2018	2017
Net assets without donor restrictions:		
Operating revenues:		
Tuition and fees	$ 828,520	$ 771,103
Less student aid	(323,921)	(294,544)
Tuition and fees, net	504,599	476,559
Grants and contracts	1,144,937	1,133,507
Contributions	153,903	137,956
Investment return designated for current operations:		
The Duke Endowment	12,500	12,500
Endowment spending	415,415	410,054
Other investment income	170,443	111,239
Total investment return designated for operations	598,358	533,793
Auxiliary enterprises	253,345	234,641
Operating support from DUHS	87,444	102,271
Other	144,765	140,553
Net assets released from restrictions	61,316	72,775
Total operating revenues	2,948,667	2,832,055
Operating expenses:		
Salaries and wages	1,368,683	1,292,757
Employee benefits	325,277	297,712
Student aid	44,956	43,897
Other operating expenses	806,603	777,238
Interest expense	79,922	74,745
Depreciation expense	236,721	212,930
Total operating expenses	2,862,162	2,699,279
Operating surplus	86,505	132,776

Statements of Activities SCHEDULE 2 (CONTINUED)

	2018	2017
Nonoperating activities:		
Net assets released from restrictions	$ 53,384	$ 83,297
Investment return in excess of amounts designated for current operations, net	230,110	239,361
Nonperiodic changes in defined benefit plans	72,789	39,259
Other, net	(25,892)	(12,832)
Change in net assets without donor restrictions from nonoperating activities	330,391	349,085
Change in net assets without donor restrictions	416,896	481,861
Net assets with donor restrictions:		
Contributions	177,450	236,996
Net assets released from restrictions	(114,700)	(156,072)
Investment return in excess of amounts designated for current operations, net	348,387	297,221
Gains on interests in perpetual trusts held by others	64,206	32,921
Other, net	(410)	9,571
Change in net assets with donor restrictions	474,933	420,637
Change in total net assets	891,829	902,498
Net assets at beginning of year	10,493,123	9,590,625
Net assets at end of year	$ 11,384,952	$ 10,493,123
Certain amounts disaggregated above are presented below in the aggregate:		
Contributions	$ 331,353	$ 374,952
Investment return	1,176,855	1,070,375

The supplementary information in this schedule presents the statements of activities of the University, exclusive of DUHS.
See accompanying Independent Auditors' Report.

Statements of Cash Flows SCHEDULE 3

THE UNIVERSITY (SUPPLEMENTARY INFORMATION)
YEARS ENDED JUNE 30, 2018 AND 2017
(DOLLARS IN THOUSANDS)

	2018	2017
Cash flows from operating activities:		
Change in net assets	$ 891,829	$ 902,498
Adjustments to reconcile change in net assets to net cash used in operating activities:		
Depreciation and amortization	233,028	212,930
Nonperiodic changes in defined benefit plans	(72,789)	(39,259)
Provision for bad debt	(2,891)	(15,917)
Loss on extinguishment of debt	–	15,559
Loss on disposals of land, buildings and equipment	1,153	1,277
Restricted contributions received for long-term investment and capital projects	(210,902)	(248,306)
Investment (gain) loss with donor restrictions	(899)	1,945
Net realized and unrealized gains on investments	(1,060,235)	(938,838)
Gains on interests in perpetual trusts held by others	(64,206)	(32,921)
Change in:		
Accounts receivable, net	(24,961)	(14,545)
Prepaid expenses, inventories, and other assets	15,442	(1,955)
Contributions receivable, net	36,343	27,227
Accounts payable and accrued payroll	33,791	32,124
Deferred revenues and deposits	7,638	10,931
Annuity and other split-interest obligations	(622)	6,997
Accrued postretirement/postemployment and other benefit obligations	(8,200)	8,414
Other liabilities	23,072	4,608
Net cash used in operating activities	(203,409)	(67,231)

Statements of Cash Flows SCHEDULE 3 (CONTINUED)

	2018	2017
Cash flows from investing activities:		
Purchases of investments	(12,964,808)	(11,758,100)
Proceeds from sales and maturities of investments	13,270,978	12,046,104
Purchases of land, buildings, and equipment	(398,883)	(466,899)
Disbursements for loans to students	(2,592)	(3,832)
Repayments of loans by students	6,173	6,941
Change in deposits with bond trustees	27,315	16,722
Net cash used in investing activities	(61,817)	(159,064)
Cash flows from financing activities:		
Restricted contributions received for long-term investment and capital projects	210,902	248,306
Investment gain (loss) with donor restrictions	899	(1,945)
Principal payments on notes and bonds payable	(16,703)	(648,322)
Proceeds from borrowings	–	897,443
Net cash provided by financing activities	195,098	495,482
Net change in cash and cash equivalents	(70,128)	269,187
Cash and cash equivalents at beginning of year	443,535	174,348
Cash and cash equivalents at end of year	$ 373,407	$ 443,535
Supplemental disclosure of cash flow information:		
Change in accounts payable for land, buildings, and equipment	$ (5,331)	$ (3,085)
Noncash transfer from DUHS	–	501,417

The supplementary information in this schedule presents the statements of cash flows of the University, exclusive of DUHS.
See accompanying Independent Auditors' Report.

2018 Duke men's basketball senior night game at Cameron Indoor Stadium.


NCAA
WOMEN'S
FINAL FOUR
2006
WOMEN'S
FINAL FOUR
2003
FERRY
35
DukeHealth
UNC
PERIOD
ASKETBALL
Vantage TV
GEICO
GEICO
20:00
30
ACC
COURT

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