Carnegie Mellon University

2016 Financial Report













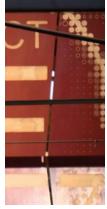




























Contents

- 3 Facts and Figures
- 5 <u>Financial Highlights from the Interim Vice President for Finance</u> and Chief Financial Officer
- 11 Financial Highlights from the Chief Investment Officer
- 17 Report of Independent Auditors and Consolidated Financial Statements
- 18 <u>Report of Independent Auditors</u>
- 19 <u>Consolidated Statements of Financial Position</u>
- 20 <u>Consolidated Statements of Activities</u>
- 22 Consolidated Statements of Cash Flows
- 23 Notes to Consolidated Financial Statements
- 56 2015-16 Board of Trustees

Carnegie Mellon University Facts and Figures

Carnegie Mellon University Facts and Figures

Type of University*

Private, coeducational, research, granting about 4,600 bachelor's, master's and doctoral degrees each year.

Colleges and Schools

College of Engineering College of Fine Arts Dietrich College of Humanities and Social Sciences David A. Tepper School of Business The H. John Heinz III College Mellon College of Science School of Computer Science

Number of Students*

6,362 undergraduates, 5,260 master's and 1,881 doctoral students, and 145 special non-degree students

Number of Employees*

5,575 total employees696 tenure-stream faculty695 non-tenure-stream faculty4,184 staff

Number of Active Alumni 96,051

Carnegie Mellon Faculty and Alumni Award Highlights:

- 19 Nobel Prize Laureates
- 19 Members, American Academy
- of Arts & Sciences
- 49 Members, National Academy of Engineering13 Members, National Academy of Sciences
- 98 Emmy Award Winners
- 37 Tony Award Winners
- 6 Academy Award Winners

Athletics

Team name is "The Tartans;" NCAA Division III classification; founding member of the University Athletic Association; 17 varsity sports; 40 intramural activities; and 20 club sports.

Computers

Carnegie Mellon is one of the most technologically sophisticated campuses in the world. When it introduced its "Andrew" computing network in the mid-1980s, it pioneered educational applications of technology. The "Wireless Andrew" system, developed in the mid-1990s, covers the vast majority of the 147.7-acre Pittsburgh campus.

History

Founded in 1900 by industrialist and philanthropist Andrew Carnegie as a technical school for working-class Pittsburgh; became Carnegie Institute of Technology in 1912; merged with the Mellon Institute in 1967 to become Carnegie Mellon University.

Physical Size

147.7-acre Pittsburgh campus; 107 campus-owned buildings; two branch campuses.

Location

Pittsburgh, Pennsylvania: Five miles east of downtown Pittsburgh, bordered by 500-acre Schenley Park and three culturally active residential neighborhoods.

Additional branch campuses:

Doha, Qatar, and Silicon Valley, California

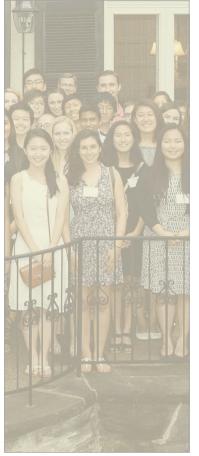
Carnegie Mellon is expanding its international presence with many graduate programs and research partnerships across the globe.

For more information about Carnegie Mellon, please contact:

Office of Media Relations Carnegie Mellon University 5000 Forbes Avenue Pittsburgh, PA 15213-3890 Phone: 412-268-2900 www.cmu.edu www.carnegiemellontoday.com

* Source: Factbook 2015-16, Vol. 30





Financial Highlights from the Interim Vice President for Finance and Chief Financial Officer Angela Blanton



I am pleased to present the audited financial statements of Carnegie Mellon University for the fiscal year ended June 30, 2016. Carnegie Mellon stands among the world's most distinguished and vital educational institutions. Now more than ever, the university is excelling in areas that matter to society, including artificial intelligence, cutting-edge brain science, path-breaking performances, innovative start-ups, driverless cars, big data and technology-enhanced learning.

Strategic Plan

In November 2015, after a comprehensive and collaborative planning process, the university launched its <u>Strategic Plan 2025</u>, which outlines strategies and goals to help ensure a transformative impact on individuals, the campus community and the broader society. The university has already invested time and resources in implementing these strategies, showing demonstrable progress. In what will continue to be a collaborative and iterative process, the Strategic Plan aims to position us for a future of growing excellence and global significance.

Capital Planning and Growth

This year, we broke ground on the <u>David A. Tepper Quadrangle</u> and opened the doors to the Jared L. Cohon University Center expansion, <u>Sherman and Joyce Bowie Scott Hall</u>, and Hamburg Hall renovations. In August 2015, the university announced a <u>\$35.0 million gift from Tata Consultancy Services (TCS)</u>, the largest corporate contribution in CMU history, that will fund construction of a new building and support the Presidential Fellowships and Scholarships program. At the end of the year, <u>CMU and ANSYS</u>, the leader in engineering simulation software, announced a joint partnership that will benefit students, faculty and researchers by fostering a maker ecosystem that promotes collaboration in design and development, supported by a new building on campus.

These facilities are more than brick and mortar — they are strategic, innovative and customized spaces that will not only enhance learning and research, but also foster collaborations among disciplines and with industry partners to take our work to the next level of excellence.

Global Impact

Globally, the university continues to grow and expand its footprint, with more than a dozen degree-granting locations, over 32 research partnerships, and students, alumni and faculty hailing from almost every country. Our academic philosophy of developing students into responsible global leaders and architects of tomorrow drives us to forge international partnerships and to develop solutions with global impacts.

Leadership

This year, Carnegie Mellon's <u>leadership team</u> welcomed several new members. Gina Casalegno, a long-time CMU employee and dean of students in the university, was also named vice president of Student Affairs. <u>Scott Mory</u> joined the university as vice president for University Advancement. <u>Rebecca Doerge</u> was appointed dean of the Mellon College of Science. The university also completed the search for and the appointment of a vice president for Operations, <u>Rodney McClendon</u>, who officially joined us on July 1, 2016. In May, I took on the role as interim vice president and chief financial officer, and in June, Cathy Light, director of the president's office, took on an additional role as interim secretary of the corporation. These individuals join a growing team of strong leaders who are deeply committed to delivering a transformative and innovative educational experience.

A Transformative Experience

Carnegie Mellon is a community that supports the social, physical, mental and spiritual well-being of all its members. In April 2016, President Subra Suresh announced the creation of a <u>President's Advisory Board</u> for the CMU Experience, which is a permanent body of external advisors and experts representing many disciplines. The board will offer insights and best practices to help place our historic drive for excellence within a context that is healthy, resilient and empowering for students, faculty and staff. In addition, a <u>Task</u> Force on the CMU Experience, now involving more than 80 faculty members, staff, students, alumni and senior administrators, was created to generate, refine and prioritize ideas to improve life at Carnegie Mellon.

We are proud of the work done this year to move the university forward, to attract and retain outstanding and diverse talent, to promote comprehensive excellence across all disciplines, and to enhance the CMU experience for all members of our community.

I now direct you to an overview of our financial results, which highlight the performance of the university for the fiscal year ended June 30, 2016.

Overall Results

For fiscal year 2016, the university's operating revenues exceeded its operating expenses, yielding an operating surplus of \$66.6 million. Carnegie Mellon's total net assets increased \$114.7 million or 5.2% from fiscal year 2015 to an ending value of \$2.3 billion at June 30, 2016. The net impact of investment returns, the results of operations, and new restricted gifts and pledges in fiscal year 2016 drove the increase.

Investments

Total university assets at June 30, 2016 were \$3.9 billion, an increase of \$862.8 million, or 28.3% higher than the prior year. Carnegie Mellon's investment portfolio represents 49.0% of total assets and was valued at \$1.9 billion at June 30, 2016, an increase of \$55.5 million, or 3.0% over the prior year. Carnegie Mellon's investment and endowment strategies and performance are discussed in greater detail in the <u>"Highlights from the Chief Investment Officer" on page 11</u>.

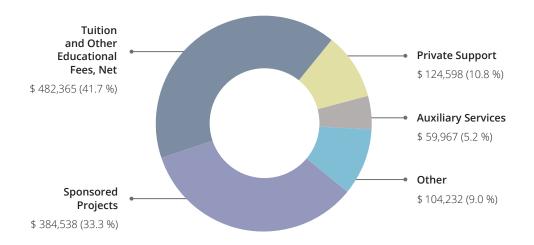
Debt Obligations

In February 2016, Standard & Poor's affirmed the university's AA- debt rating and revised its outlook on the university's debt from stable to positive. Standard & Poor's indicated that the university's strong operating results, demand profile and research presence supports the AA- rating, while the revised outlook is a direct result of the university's recent settlement with Marvell Technology Group Ltd. During fiscal year 2016 Carnegie Mellon and Marvell Technology Group Ltd. <u>reached a settlement</u> in the 2009 patent infringement lawsuit filed by the university. The settlement includes a \$750.0 million payment made to the university, which, after legal fees and related expenses will be shared with the inventors. See Note 19, Subsequent Events, of the consolidated financial statements for additional disclosure of the settlement.

Operating Revenues

Unrestricted operating revenues for fiscal year 2016 were \$1.2 billion, an increase of \$43.3 million, or 3.9% over fiscal year 2015. Carnegie Mellon's primary sources of revenue were tuition and sponsored research activities.

Fiscal Year 2016 Unrestricted Operating Revenue (Dollars In Thousands)

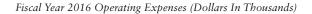


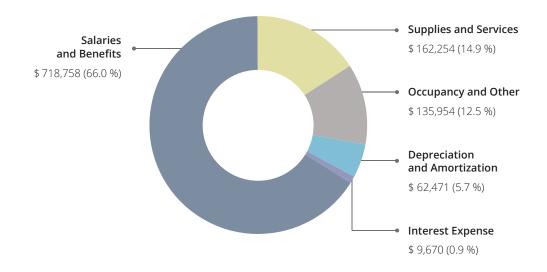
Tuition and other educational fees, net of financial aid, increased \$31.6 million, or 7.0%, to \$482.3 million in fiscal year 2016. Financial aid, which offset tuition and other educational fees revenues, was approximately 21.5% of gross tuition income (undergraduate approximately 23.9% and graduate approximately 18.5%). The increase in undergraduate and graduate gross tuition revenues was primarily due to increases in tuition and enrollments.

Sponsored projects revenue, including indirect cost recoveries, increased \$7.7 million, or 2.1% from the prior year, which was primarily driven by a \$14.6 million increase in funding to the Software Engineering Institute (SEI), a Federally Funded Research and Development Center (FFRDC). That funding increase was offset by a \$6.9 million decrease in funding affecting some areas of the university, driven largely by flat or declining research and development budgets across federal agencies.

Operating Expenses

Operating expenses for fiscal year 2016 totaled \$1.1 billion, a 1.0% or \$10.7 million increase from fiscal year 2015. Personnel costs remained the university's single largest category of expense (66.0%) at \$718.7 million in 2016, representing an increase of \$9.5 million, or 1.4% from the prior year and consist of salaries, wages and employee benefits. Operating expenses increased at a lower rate than the increase in operating revenue as the university continuously makes efforts to contain costs.





Looking Ahead

We are excited to build on our momentum from the past fiscal year as we enter fiscal year 2017, and continue to create, innovate and collaborate to improve the experience of the CMU community and the world at large.

Agila Barton

Angela Blanton Interim Vice President for Finance and Chief Financial Officer October 27, 2016



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|--|---------|
| | |

Financial Highlights from the Chief Investment Officer Charles A. Kennedy





Strategy and Allocation

The university's endowment provides a key contribution to the institution's mission. The endowment is expected to provide Carnegie Mellon with certain perpetual benefits, including: greater independence for the university's leadership to shape the institution's future; a source of financial and operational stability in constantly changing environments; and a means to perpetuate the university's academic and research excellence in an increasingly competitive world.

Accordingly, the endowment portfolio is managed with a long-term, growth-oriented view and evaluated by its effectiveness in achieving, over time, two fundamental objectives: (1) generating steady and substantial financial support for Carnegie Mellon's students, faculty, and programs; and (2) balancing the current needs of our various constituencies with the goal of at least maintaining the endowment's real purchasing power for future generations (i.e., preserving "intergenerational equity").

In order to maximize long-term expected returns within acceptable levels of risk and liquidity, Carnegie Mellon designed its policy asset allocation using a combination of academic theory, quantitative analysis, and informed market judgment.

Fiscal year 2016 marks the 11th anniversary of the university's decision to change the strategic allocation of the portfolio to better position the portfolio to achieve its long-term performance goals by shifting the portfolio from traditional, publicly traded investments to one more focused on global, private investments. Investing through private equity funds encompasses a lengthy process of selecting allocation targets for various asset classes (e.g., venture capital, buyouts, and real assets), evaluating and selecting managers, and ultimately making commitments to long-term private partnerships as fund managers come to market periodically. After a commitment to a fund is made, investors are then called upon to provide capital as the fund managers discover, acquire, and invest in companies during an investment period that generally lasts several years. After fund investments are made, the fund manager, whose own interests are generally well-aligned with fund investors, will seek to add value to the underlying company through several ways, including increasing sales and profitability, improving capital management, and otherwise improving its long-term prospects so that the business can be sold for more than its purchase price. While these acquisition, value-add, and harvesting processes may take several years each, we believe that over the long-term talented fund managers will be able to exceed the return from investing in public securities, thereby, enabling the investment portfolio to better contribute to the university's mission. The typical private partnership is created to exist for 10 years or more while the above-mentioned processes occur. As described, investing in private funds is a lengthy process that takes several years to achieve a target allocation with a mature underlying portfolio of companies. At the marking of the 11th anniversary of the initial commitments to the new strategy, the university's private portfolio is maturing and expected to reach a relatively steady state in the next several years.

In August 2016, the university amended its policy asset allocation targets to incorporate a higher degree of equity exposure in order to increase the likelihood of the university achieving its longer-term return targets. The revised policy targets reflect a greater allocation to private equity with a corresponding reduction in the allocation to hedge funds.

The following table details the asset allocation targets as of June 30, 2016, the actual allocation at June 30, 2016, and the amended targets, as of August 24, 2016:

Figure 1 Policy Allocation Targets and June 30, 2016 Allocations

| Revised Policy Target as of June 30, 2016 | Actual as of June 30, 2016 | Target as of August 24, 2016 |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| 14 % | 16 % | 14 % |
| 6 % | 6 % | 6 % |
| 9 % | 10 % | 9 % |
| 10 % | 12 % | 10 % |
| 25 % | 29 % | 30 % |
| 18 % | 12 % | 13 % |
| 15 % | 11 % | 15 % |
| 3 % | 2 % | 3 % |
| 0 % | 2 % | 0 % |
| 100 % | 100 % | 100 % |
| | Target as of June 30, 2016 14 % 6 % 9 % 10 % 25 % 18 % 15 % 3 % 0 % | Target as of June 30, 2016Actual as of June 30, 201614 %16 %6 %6 %9 %10 %10 %12 %25 %29 %18 %12 %15 %11 %3 %2 %0 %2 % |

Investment Performance

The university's investment performance for fiscal year 2016 was -0.9%. This return was impacted by mixed results in the market, in part, based on asset class and geographies.

U.S. public markets outperformed international markets and ended the fiscal year up 2.1%, while developed international markets fell 10.2% and emerging markets fell 12.1%. Indices covering private markets showed a return of 2.0% for the U.S. and 0.8% for emerging markets for the fiscal year. The university will continue to strategically allocate to U.S., other developed markets and emerging markets — both public and private equities — with the goal of realizing strong returns over the long-term investment horizon.

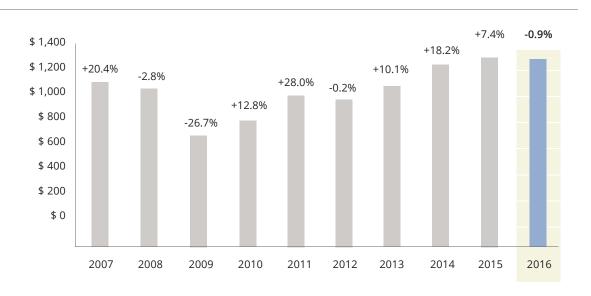
Hedge fund indices declined 5.4% during the fiscal year.

Fixed income markets performed well during the fiscal year, with core U.S. bonds up 6.0% and Treasury Inflation-Protected Securities (TIPS) up 4.4%, resulting in a 50/50 fixed income benchmark return of 5.2%. The university continues to maintain additional fixed income exposure beyond core bonds and TIPS through cash and bank loans.

Carnegie Mellon's portfolio, with its significant allocation to growth-oriented investments and its global focus, performed within the range of these results, generating performance greater than the portfolio's custom benchmarks based on asset allocation. The university's net investment return of -0.9% for fiscal year 2016 followed a net investment return of 7.4% for fiscal year 2015 and 18.2% for fiscal year 2014. (Note: Some institutions report results on a lagged basis reflecting a lag of one quarter for private investment funds. When incorporating this lag into the return for fiscal years 2016, 2015, and 2014, the university returns would have been -0.1%, 7.1%, and 17.7%, respectively.)

Acknowledging that investment returns are inherently difficult to predict, the continued low interest rate environment relative to historical rates, and other changes in the market, may lead to a lower return environment.

Figure 2 Endowment Ending Value and Annual Investment Return



Fiscal Year June 30 (dollars in millions)

Endowment Attribution

The endowment's market value decreased to \$1,305.7 million as of June 30, 2016, from \$1,338.2 million as of June 30, 2015. This net decrease of approximately \$32.5 million reflects the collective impact of \$44.8 million from gifts and other sources, \$18.0 million from investment losses, and \$59.3 million of distributions to support the university's operations.

Cash distributions from the endowment (i.e., the draw) provide a key source of support for the university's various activities and programs, ranging from general operations to specific needs such as scholarships and professorships. At present, the endowment remains significantly smaller, both in absolute terms and on a per student basis, relative to our peer institutions, resulting in heavy reliance by the operating budget on tuition and private support. The historical activities of the endowment, including the draw and its support expressed as a percentage of annual operations, are summarized in Figure 3.

Figure 3 Endowment Attribution

Fiscal Year June 30 (dollars in millions)

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------|---------|---------|---------|--------|---------|---------|---------|---------|---------|---------|
| Opening endowment value | 941.5 | 1,115.7 | 1,067.7 | 754.1 | 815.1 | 1,017.3 | 987.1 | 1,075.6 | 1,250.5 | 1,338.2 |
| Gifts/other additions | 28.6 | 38.1 | 19.5 | 20.3 | 31.6 | 21.7 | 38.2 | 35.0 | 54.4 | 44.8 |
| Draw* | (40.5) | (45.7) | (51.6) | (53.0) | (51.3) | (46.9) | (45.8) | (49.8) | (54.1) | (59.3) |
| Investment performance | 186.1 | (40.4) | (281.5) | 93.6 | 221.9 | (5.0) | 96.1 | 189.7 | 87.4 | (18.0) |
| Closing endowment value | 1,115.7 | 1,067.7 | 754.1 | 815.1 | 1,017.3 | 987.1 | 1,075.6 | 1,250.5 | 1,338.2 | 1,305.7 |
| | | | | | | | | | | |
| Draw Details | | | | | | | | | | |
| Total operations | 761.8 | 807.9 | 852.2 | 874.2 | 909.7 | 966.3 | 1,023.4 | 1,055.5 | 1,078.4 | 1,089.1 |
| Draw % of operations | 5.3% | 5.7% | 6.1% | 6.1% | 5.6% | 4.9% | 4.5% | 4.7% | 5.0% | 5.4% |
| Draw % of beginning value | 4.3% | 4.1% | 4.8% | 7.0% | 6.3% | 4.6% | 4.6% | 4.6% | 4.3% | 4.4% |
| Draw % of ending value | 3.6% | 4.3% | 6.8% | 6.5% | 5.0% | 4.8% | 4.3% | 4.0% | 4.0% | 4.5% |
| Draw policy (%) | 5.0% | 5.0% | 5.0% | 4.9% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |
| | | | | | | | | | | |

* Full value not available to operations due to donor restrictions and reinvestment stipulations

During the last decade, the draw from the endowment has contributed, on average, approximately 5.3% of the university's annual operating budget. For fiscal year 2016, the draw from the endowment provided 5.4% of the university's operating budget. Viewed as a percentage of the annual budget, the relative support from the draw is affected not only by the growth in the endowment and the draw formula (see Note 6 of the consolidated financial statements), but also by the growth in the university's annual operating budget, which has increased by an average of 4.1% annually for the past decade.

The Dietrich Foundation, established by William S. Dietrich II, a Pittsburgh industrialist and longtime university trustee, was created to manage in perpetuity his gift of approximately \$500 million in assets intended to benefit the university and other higher education and charitable institutions. The Dietrich Foundation's assets are not reflected in the university's financial statements (see additional information regarding the foundation in Note 16 to the consolidated financial statements). The university's share of the annual distributions from The Dietrich Foundation is 53.5%. If this percentage is applied to the estimated value of The Dietrich Foundation's assets of \$753.0 million as of June 30, 2016, and the result were added to CMU's endowment of \$1,305.7 million, the combination would total \$1,708.6 million. Annual distributions from The Dietrich Foundation over time equal 3% of the value of The Dietrich Foundation's net assets as measured on January 1st of each year, or an estimated \$10 - \$12 million based on the most recent valuation of The Dietrich Foundation's net assets. Annual gifts from The Dietrich Foundation will be received by the university as endowed gifts. The gift for fiscal year 2016 was \$11.4 million, and cumulative gifts since the initial gift in fiscal year 2013 have totaled \$39.5 million.

With changes designed to enhance the university's investment program and the continued generosity of the university's alumni and friends, we are confident that the prospects for long-term growth of endowment assets remain strong — even in the continuing low interest rate environment in which we find ourselves. We believe the university's investment program — with its long-term focus and global, diversified asset allocation — will enable Carnegie Mellon's endowment to continue to strengthen over time, providing greater ongoing support for the university's operating needs while also preserving purchasing power to support future generations of students, faculty, and programs.

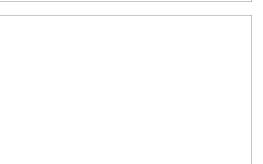
And A. Slamp

Charles A. Kennedy Chief Investment Officer October 27, 2016











Carnegie Mellon University and Subsidiaries

We have audited the accompanying consolidated financial statements of Carnegie Mellon University and its subsidiaries (the "University"), which comprise the consolidated statements of financial position as of June 30, 2016 and June 30, 2015, and the related consolidated statements of activities and of cash flows for the years then ended.

Management's Responsibility for the Consolidated Financial Statements

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

Auditor's Responsibility

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

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

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Carnegie Mellon University and its subsidiaries at June 30, 2016 and June 30, 2015, and the results of their changes in net assets and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Percewaterhours Coopers UP

Pittsburgh, Pennsylvania October 27, 2016

Consolidated Statements of Financial Position

June 30, 2016 and 2015 (dollars in thousands)

| | 2016 | 2015 |
|----------------------------------------------------|-------------|-------------|
| Assets | | |
| Cash and cash equivalents (Note 2 and Note 19) | \$913,250 | \$189,170 |
| Accrued interest and dividends | 919 | 861 |
| Accounts receivable, net (Note 3) | 68,792 | 72,820 |
| Pledges receivable, net (Note 4) | 118,218 | 77,807 |
| Student loans receivable, net (Note 3) | 16,562 | 17,479 |
| Investments (Note 5 and Note 7) | 1,913,664 | 1,858,185 |
| Assets held in trust by others (Note 7) | 10,254 | 10,641 |
| Unexpended bond proceeds (Note 2) | - | 20,466 |
| Prepaid expenses and other assets (Note 2) | 48,710 | 49,706 |
| Land, buildings and equipment, net (Note 9) | 817,396 | 747,839 |
| Total assets | \$3,907,765 | \$3,044,974 |
| Liabilities | | |
| Accounts payable and other liabilities (Note 2) | \$198,354 | \$183,222 |
| Deferred revenue and settlement proceeds (Note 19) | 857,455 | 115,857 |
| Federal student loan funds | 14,744 | 14,623 |
| Present value of split interest agreements payable | 13,854 | 14,301 |
| Debt obligations (Note 10) | 485,222 | 493,498 |
| Total liabilities | \$1,569,629 | \$821,501 |
| Net assets | | |
| Unrestricted | \$935,318 | \$859,574 |
| Temporarily restricted (Note 11) | 690,265 | 700,063 |
| Permanently restricted (Note 11) | 712,553 | 663,836 |
| Total net assets | \$2,338,136 | \$2,223,473 |
| Total liabilities and net assets | \$3,907,765 | \$3,044,974 |
| | | |

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

Consolidated Statements of Activities

Year ended June 30, 2016 (dollars in thousands)

| | Unrestricted | Temporarily Restricted | Permanently Restricted | Total |
|------------------------------------------------------------------------------|------------------------|---------------------------|---------------------------|----------------------------|
| Revenue and other support | | | | |
| Tuition and other educational fees revenue, net of financial aid | \$482,365 | \$- | \$- | \$482,365 |
| Sponsored projects revenue (Note 8) | 384,538 | - | - | 384,538 |
| Investment income (Note 5) | 33,335 | 6,430 | 305 | 40,070 |
| Contributions revenue (Note 4) | 27,593 | 120,486 | 49,183 | 197,262 |
| Auxiliary services revenue | 59,967 | - | - | 59,967 |
| Other sources (Note 2) | 104,232 | 150 | (353) | 104,029 |
| Net assets released from restrictions | 63,670 | (63,670) | - | - |
| Total revenue and other support | \$1,155,700 | \$63,396 | \$49,135 | \$1,268,231 |
| Expenses | | | | |
| Salaries | \$590,378 | \$- | \$- | \$590,378 |
| Benefits | 128,380 | - | - | 128,380 |
| Supplies and services | 162,254 | - | - | 162,254 |
| Occupancy and related expenses | 74,541 | - | - | 74,541 |
| Other operating expenses | 61,413 | - | - | 61,413 |
| Depreciation and amortization | 62,471 | - | - | 62,471 |
| Interest expense | 9,670 | - | - | 9,670 |
| Total expenses | \$1,089,107 | \$- | \$- | \$1,089,107 |
| Increase in net assets before nonoperating activities | \$66,593 | \$63,396 | \$49,135 | \$179,124 |
| Nonoperating activities | | | | |
| Net realized/unrealized gains/(losses) on investments (<i>Note 5</i>) | \$(33,585) | \$(22,923) | \$(418) | \$(56,926) |
| Other (Note 2) | (2,342) | (2,070) | - | (4,412) |
| Post-retirement plan changes other than net periodic benefit costs (Note 15) | (3,123) | - | - | (3,123) |
| Net assets released from restriction for capita | al 48,201 | (48,201) | - | - |
| Total nonoperating activities | \$9,151 | \$(73,194) | \$(418) | \$(64,461) |
| Increase (decrease) in net assets | \$75,744 | \$(9,798) | \$48,717 | \$114,663 |
| Net assets | | | | |
| Beginning of year End of year | \$859,574 \$935,318 | \$700,063 \$690,265 | \$663,836 \$712,553 | \$2,223,473 \$2,338,136 |

Consolidated Statements of Activities

Year ended June 30, 2015 (dollars in thousands)

| | Unrestricted | Temporarily Restricted | Permanently Restricted | Total |
|------------------------------------------------------------------------------|--------------|---------------------------|---------------------------|-------------|
| Revenue and other support | | | | |
| Tuition and other educational fees revenue, net of financial aid | \$450,673 | \$- | \$- | \$450,673 |
| Sponsored projects revenue (Note 8) | 376,753 | - | - | 376,753 |
| Investment income (Note 5) | 30,161 | 6,675 | 238 | 37,074 |
| Contributions revenue (Note 4) | 24,904 | 72,822 | 38,904 | 136,630 |
| Auxiliary services revenue | 57,929 | - | - | 57,929 |
| Other sources (Note 2) | 110,047 | (37) | (692) | 109,318 |
| Net assets released from restrictions | 61,914 | (61,914) | - | - |
| Total revenue and other support | \$1,112,381 | \$17,546 | \$38,450 | \$1,168,377 |
| Expenses | | | | |
| Salaries | \$579,007 | \$- | \$- | \$579,007 |
| Benefits | 130,156 | - | - | 130,156 |
| Supplies and services | 171,214 | - | - | 171,214 |
| Occupancy and related expenses | 73,251 | - | - | 73,251 |
| Other operating expenses | 55,894 | - | - | 55,894 |
| Depreciation and amortization | 58,855 | - | - | 58,855 |
| Interest expense | 10,011 | - | - | 10,011 |
| Total expenses | \$1,078,388 | \$- | \$- | \$1,078,388 |
| Increase in net assets before nonoperating activities | \$33,993 | \$17,546 | \$38,450 | \$89,989 |
| Nonoperating activities | | | | |
| Net realized/unrealized gains/(losses) on investments (<i>Note 5</i>) | \$8,560 | \$61,214 | \$(336) | \$69,438 |
| Other (Note 2) | 2,797 | (3,991) | - | (1,194) |
| Post-retirement plan changes other than net periodic benefit costs (Note 15) | 3,399 | - | - | 3,399 |
| Net assets released from restriction for capit | al - | - | - | - |
| Changes in donor restrictions | - | (18,267) | 18,267 | - |
| Total nonoperating activities | \$14,756 | \$38,956 | \$17,931 | \$71,643 |
| Increase in net assets | \$48,749 | \$56,502 | \$56,381 | \$161,632 |
| Net assets | | | | |
| Beginning of year | \$810,825 | \$643,561 | \$607,455 | \$2,061,841 |
| End of year | \$859,574 | \$700,063 | \$663,836 | \$2,223,473 |

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

| Cash flows from operating activities | 2016 | 201 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Increase in net assets | \$114,663 | \$161,63 |
| Adjustments to reconcile change in net assets to net cash provided by operating activities: | 4.1.1,000 | + 10 1,00 |
| Realized and unrealized losses (gains) on investments | 32,364 | (90,626 |
| Depreciation and amortization | 62,471 | 58,85 |
| Amortization of bond premium | (2,358) | (3,855 |
| CIC acquisition | - | (9,308 |
| Gifts in kind and gifts of stock | (113) | (394 |
| Loss on asset dispositions | 944 | 29 |
| Receipt of contributed securities | (10,384) | (30,021 |
| Provision for bad debt and other allowances | 2,131 | 2 |
| Contributions held in trust by others | 387 | 16 |
| - | | |
| Contributions for land, buildings, equipment and permanent endowment | (86,453) | (60,349 |
| Proceeds from sales of donated securities | 5,878 | 16,31 |
| (Increase) decrease in assets: | | |
| Accrued interest and dividends | (58) | 13 |
| Accounts receivable, net | 3,576 | 7,42 |
| Pledges receivable, net | (42,095) | 5,32 |
| Other assets | (5,060) | (4,260 |
| Increase (decrease) in liabilities: | | |
| Accounts payable and other liabilities | 9,465 | 15,77 |
| Pensions/post-retirement liability | 3,807 | (2,300 |
| Deferred revenue | 741,598 | 9,58 |
| Present value of split interest agreements | (447) | 23 |
| Net cash provided by operating activities | \$830,316 | \$74,65 |
| Cash flows from investing activities | | |
| Proceeds from sale and maturity of investments | 1,055,206 | 1,079,06 |
| Purchases of investments | (1,143,049) | (1,068,422 |
| Unexpended bond proceeds | 20,466 | 21,60 |
| Purchases of land, buildings and equipment | (130,510) | (85,391 |
| CIC acquisition | - | 3,48 |
| Federal loan programs | 121 | 2 |
| | (2,612) | (2,831 |
| Disbursements of loans to students | | 3,27 |
| Disbursements of loans to students | 3,535 | |
| Disbursements of loans to students Repayments of loans from students | 3,535 | |
| Disbursements of loans to students Repayments of loans from students Net cash used for investing activities | 3,535 \$(196,843) | |
| Disbursements of loans to students Repayments of loans from students Net cash used for investing activities Cash flows from financing activities | · | \$(49,189 |
| Disbursements of loans to students Repayments of loans from students Net cash used for investing activities Cash flows from financing activities Proceeds from issuance of indebtedness | \$(196,843) | \$(49,189 30,00 |
| Disbursements of loans to students Repayments of loans from students Net cash used for investing activities Cash flows from financing activities Proceeds from issuance of indebtedness Repayments of debt obligations | · | \$(49,189 30,00 |
| Disbursements of loans to students Repayments of loans from students Net cash used for investing activities Cash flows from financing activities Proceeds from issuance of indebtedness | \$(196,843) | 30,00 (27,047 8,29 |
| Disbursements of loans to students Repayments of loans from students Net cash used for investing activities Cash flows from financing activities Proceeds from issuance of indebtedness Repayments of debt obligations Proceeds from sales of donated securities restricted for long-term purposes | \$(196,843) (5,918) 10,072 | \$(49,189 30,00 (27,047 8,29 |
| Disbursements of loans to students Repayments of loans from students Net cash used for investing activities Cash flows from financing activities Proceeds from issuance of indebtedness Repayments of debt obligations Proceeds from sales of donated securities restricted for long-term purposes Contributions for land, buildings, equipment and permanent endowment | \$(196,843) (5,918) 10,072 86,453 | \$(49,189 30,00 (27,047 8,29 60,34 |
| Disbursements of loans to students Repayments of loans from students Net cash used for investing activities Cash flows from financing activities Proceeds from issuance of indebtedness Repayments of debt obligations Proceeds from sales of donated securities restricted for long-term purposes Contributions for land, buildings, equipment and permanent endowment Net cash provided by financing activities | \$(196,843) (5,918) 10,072 86,453 \$90,607 | \$(49,189 30,00 (27,047 8,29 60,34 \$71,59 |
| Disbursements of loans to students Repayments of loans from students Net cash used for investing activities Cash flows from financing activities Proceeds from issuance of indebtedness Repayments of debt obligations Proceeds from sales of donated securities restricted for long-term purposes Contributions for land, buildings, equipment and permanent endowment Net cash provided by financing activities Net increase in cash and cash equivalents | \$(196,843) (5,918) 10,072 86,453 \$90,607 \$724,080 | \$(49,189 30,00 (27,047 8,29 60,34 \$71,59 \$97,06 |
| Disbursements of loans to students Repayments of loans from students Net cash used for investing activities Cash flows from financing activities Proceeds from issuance of indebtedness Repayments of debt obligations Proceeds from sales of donated securities restricted for long-term purposes Contributions for land, buildings, equipment and permanent endowment Net cash provided by financing activities Cash and cash and cash equivalents Cash and cash equivalents at beginning of year | \$(196,843) (5,918) 10,072 86,453 \$90,607 \$724,080 189,170 | \$(49,189 30,00 (27,047 8,29 60,34 \$71,59 \$97,06 92,10 |
| Disbursements of loans to students Repayments of loans from students Net cash used for investing activities Cash flows from financing activities Proceeds from issuance of indebtedness Repayments of debt obligations Proceeds from sales of donated securities restricted for long-term purposes Contributions for land, buildings, equipment and permanent endowment Net cash provided by financing activities Met increase in cash and cash equivalents Cash and cash equivalents at beginning of year Cash and cash equivalents at end of year | \$(196,843) (5,918) 10,072 86,453 \$90,607 \$724,080 | \$(49,189 30,00 (27,047 8,29 60,34 \$71,59 \$97,06 92,10 |
| Disbursements of loans to students Repayments of loans from students Net cash used for investing activities Cash flows from financing activities Proceeds from issuance of indebtedness Repayments of debt obligations Proceeds from sales of donated securities restricted for long-term purposes Contributions for land, buildings, equipment and permanent endowment Net cash provided by financing activities Net increase in cash and cash equivalents Cash and cash equivalents at beginning of year Cash and cash equivalents at end of year Noncash transactions: | \$(196,843) (5,918) 10,072 86,453 \$90,607 \$724,080 189,170 \$913,250 | \$(49,189 30,00 (27,047 8,29 60,34 \$71,59 \$97,06 92,10 \$189,17 |
| Disbursements of loans to students Repayments of loans from students Net cash used for investing activities Cash flows from financing activities Proceeds from issuance of indebtedness Repayments of debt obligations Proceeds from sales of donated securities restricted for long-term purposes Contributions for land, buildings, equipment and permanent endowment Net cash provided by financing activities Cash and cash and cash equivalents Cash and cash equivalents at beginning of year Cash and cash equivalents at end of year Noncash transactions: Additions to land, buildings and equipment | \$(196,843) (5,918) 10,072 86,453 \$90,607 \$724,080 189,170 \$913,250 \$1,658 | \$(49,189 30,00 (27,047 8,29 60,34 \$71,59 \$97,06 92,10 \$189,17 \$10,76 |
| Disbursements of loans to students Repayments of loans from students Net cash used for investing activities Cash flows from financing activities Proceeds from issuance of indebtedness Repayments of debt obligations Proceeds from sales of donated securities restricted for long-term purposes Contributions for land, buildings, equipment and permanent endowment Net cash provided by financing activities Net increase in cash and cash equivalents Cash and cash equivalents at beginning of year Cash and cash equivalents at end of year Noncash transactions: | \$(196,843) (5,918) 10,072 86,453 \$90,607 \$724,080 189,170 \$913,250 | \$(49,189 30,00 (27,047 8,29 60,34 \$71,59 \$97,06 92,10 \$189,17 |

Consolidated Statements of Cash Flows

Year Ended June 30, 2016 and 2015 (*dollars in thousands*)

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

Notes to Consolidated Financial Statements

1. Carnegie Mellon

Carnegie Mellon University ("Carnegie Mellon" or "the university") is a private, not-for-profit educational and research institution. Carnegie Mellon currently enrolls about 13,600 students and granted approximately 4,600 bachelor's, master's and doctoral degrees in the last academic year. Approximately 78% of undergraduate students are from the United States of America. International students comprise approximately 22% of undergraduate, 63% of master's, and 56% of Ph.D. students.

2. Summary of Significant Accounting Policies

Basis of Accounting and Reporting

The accompanying consolidated financial statements have been prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America ("GAAP") and include the accounts of Carnegie Mellon and other majority-owned entities. The consolidated entities are Benjamin Garver Lamme Scholarship Fund, Jack G. Buncher Charitable Fund for Carnegie Mellon, iCarnegie, Inc., and Carnegie Innovations, LLC. All significant inter-entity transactions and balances have been eliminated in consolidation. Carnegie Mellon is a joint sponsor with the University of Pittsburgh in MPC Corporation (MPC), a beneficiary of The Dietrich Foundation, and an owner as a tenant in common of the Bellefield Boiler Plant. The activities of MPC, The Dietrich Foundation, and the Bellefield Boiler Plant are not consolidated or recorded in Carnegie Mellon's consolidated financial statements (see Note 16).

Carnegie Mellon's net assets and revenue, expenses, gains and losses are classified based on the existence or absence of donor-imposed restrictions. Accordingly, net assets and changes therein are classified and reported as follows:

Unrestricted Net Assets

Net assets that are not subject to donor-imposed stipulations.

Temporarily Restricted Net Assets

Net assets subject to specific donor-imposed or legal stipulations that can be fulfilled by actions of Carnegie Mellon pursuant to those stipulations or that expire by the passage of time.

Permanently Restricted Net Assets

Net assets subject to donor-imposed stipulations requiring the assets be maintained permanently. Generally, the donors of these assets permit Carnegie Mellon to use all or part of the income earned on the related investments for general or specific purposes.

Revenues are reported as increases in unrestricted net assets unless use of the related assets is limited by donor-imposed restrictions. Expenses are reported as decreases in unrestricted net assets. Gains and losses on investments and other assets or liabilities are reported as increases or decreases in unrestricted net assets unless their use is restricted by the donor or by law. Expiration or satisfaction of temporary restrictions on net assets are reported as net assets released from restrictions.

Income and net gains and losses on investments are reported as follows:

- As changes in permanently restricted net assets, if so restricted by donor;
- As changes in temporarily restricted net assets, if the terms of the gift or relevant state law impose restrictions on the use of the income or gains and losses; and
- · As changes in unrestricted net assets, in all other cases.

Reclassifications

Certain prior year amounts have been reclassified to conform with current year's presentation.

Cash Equivalents

Cash equivalents include highly liquid investments with original maturities of three months or less.

Investments

Debt and equity securities held by Carnegie Mellon are carried at fair value as established by the major securities markets with gains and losses reported in the Consolidated Statements of Activities. The alternative investments are carried at estimated fair value. Carnegie Mellon reviews and evaluates the values provided by the investment managers and agrees with valuation methods and assumptions used in determining the fair value of the alternative investments. Those estimated fair values may differ significantly from the values that would have been used had a ready market for these securities existed. Note 7- Fair Value provides additional information about inputs used to determine fair value for investments. Investments received as a gift are reflected as contributions at their fair value at the date of the gift.

Carnegie Mellon utilizes various investment instruments. Investment securities, in general, are exposed to various risks, such as interest rate, credit and overall market volatility. Due to the level of risk associated with certain investment securities, changes could materially affect the amounts reported in the Consolidated Statements of Financial Position.

Endowment

Investment policy for endowment assets is the responsibility of the Investment Committee of the Board of Trustees. Substantially all endowment assets are managed by outside investment managers and are held by an outside custodian.

Unrestricted endowment net assets include Carnegie Mellon funds, unrestricted gifts from donors, and any accumulated income and appreciation thereon, which is intended to remain in the endowment for the long-term support of Carnegie Mellon activities, but may be expended under trustee authorization. Also included is interest and dividend income on permanently restricted endowment assets where the distribution is unrestricted.

Temporarily restricted endowment net assets include cumulative gains and losses on permanent endowment assets and cumulative interest and dividend income on permanent endowment assets where the distribution/ spending is restricted by the donor. The Trustees of Carnegie Mellon must annually authorize release of endowment gains according to Pennsylvania law. This classification also includes term endowments and endowment gifts whereby the donor permits distributions of the principal amount of the gift and accumulated appreciation.

Permanently restricted endowment net assets include contributions, contributed stock gains and losses, and donor stipulated income and appreciation that must be invested in perpetuity to provide a permanent source of income.

All endowment funds participate in a Carnegie Mellon investment pool. The investment pool provides income to its respective participants. Such income is used for the specific purpose prescribed by the donor or, if the purpose was not prescribed by the donor, the income is deemed to be unrestricted and used for general purposes. New endowment funds or additions to existing funds are assigned shares in the investment pool based upon the per share market value at the end of the previous month. Income distributions from the investment pool are based upon the number of shares held by each participant and the approved spending rate (see Note 6). Income distributions from the investment pool are based upon the investment pool includes interest and dividends and could include a portion of the accumulated capital gains. Any capital gains not distributed currently are reinvested in the investment pool and are available for distribution from the endowment assets in future years.

Unexpended Bond Proceeds

Unexpended bond proceeds represent proceeds from the issuance of the 2013 bonds which were held by a trustee under the bond indenture for capital expenditures. Unexpended bond proceeds were \$20.5 million as of June 30, 2015. The remaining bond proceeds were expended during the fiscal year ended June 30, 2016.

Assets Held in Trust by Others

Assets held in trust by others include the value of Carnegie Mellon's beneficial interest in perpetual trusts and irrevocable trusts held by outside trustees. The present value of the perpetual trusts' estimated future cash receipts, which were measured by the fair value of the assets contributed to the trust, are recognized as assets and contribution revenues at the dates the trusts are established. The assets are adjusted periodically for changes in market values.

Various donors have established irrevocable trusts whereby Carnegie Mellon holds a remainder interest in the trust or is entitled to distributions over the life of the trusts. The present value of the portion of the trusts estimated to be distributable to Carnegie Mellon over the life of the trusts or upon the termination of the trusts are recorded as assets and contribution revenues at the dates the trusts are established. The assets are adjusted periodically for changes in market value.

Prepaid Expenses and Other Assets

Prepaid expenses represent items such as prepaid insurance, prepaid rentals and other contractual payments made in advance of their use or consumption. Amounts are expensed and amortized over the periods to which the charges relate.

Other assets include debt issuance costs, deferred compensation plan assets, swap assets and other costs incurred that will result in benefits to future periods.

Land, Buildings and Equipment

Land, buildings and equipment are recorded at cost at the date of acquisition or, if acquired by gift, at the estimated fair value as of the date of the gift. Additions to plant assets are capitalized while scheduled maintenance and minor renovations are expensed to operations. Buildings and equipment are reflected net of accumulated depreciation which is calculated on a straight-line basis over the estimated useful lives. Carnegie Mellon capitalizes interest during periods of construction. Carnegie Mellon reviews its land, buildings, equipment and other long-lived assets for impairment whenever events or circumstances indicate that the carrying amount may not be recoverable. Useful lives are as follows:

- Buildings 35-50 years
- Renovations 20 years
- Land improvements 15 years
- Movable assets 5-20 years

Donated works of art, historical treasures and similar assets have been recognized at their estimated fair value based upon appraisals or similar valuations at the date of acquisition or donation. If purchased, the assets are recognized at cost. The assets are depreciated over 99 years.

Accounts Payable and Other Liabilities

Accounts payable and other liabilities include accounts payable, accrued payroll and benefits, swap liabilities, and other accrued expenses.

Federal Student Loan Funds

This liability represents Perkins loan funds provided to students by the federal government through Carnegie Mellon. Carnegie Mellon is required to collect the loans on behalf of the federal government. The amount due from the students is reported in the Consolidated Statements of Financial Position as a component of student loans receivable, net.

Present Value of Split Interest Agreements Payable

Carnegie Mellon's split interest agreements with donors consist primarily of gift annuities, unitrusts, lead trusts, charitable remainder annuity trusts and life income agreements. Assets held under these agreements are included in investments. Generally, contribution revenues are recognized at the dates the agreements are established, after recording liabilities for the present value of the estimated future payments to be made to the beneficiaries. The liabilities are adjusted during the term of the trusts for changes in the value of the assets, accretion of the discount and other changes in the estimates of future benefits. The discount rates utilized for split interest agreements range from 1.2% to 6.2%. Distributions from the trusts are recorded in accordance with the donor's stipulations as contributions and the carrying value of the assets are adjusted for changes in the fair value of the trust assets.

Operating Activities

Carnegie Mellon's measure of unrestricted operations as presented in the Consolidated Statements of Activities includes revenue from tuition and other educational fees, sponsored projects, investment return distributed according to Carnegie Mellon's spending policy, unrestricted contributions, revenues from auxiliary services and other sources, and net assets released from restriction. Operating expenses are reported by natural classification.

Tuition and Other Educational Fees Revenue, Net of Financial Aid

Revenues from tuition and other educational fees are reported in the fiscal year in which they are earned, including pro-rata adjustments for educational programs crossing over fiscal years. Tuition and other educational fees are reported net of student financial aid. Student financial aid amounted to \$131.8 million and \$128.3 million for the years ended June 30, 2016 and 2015, respectively. Student receivables are not collateralized; however, credit risk is minimized as a result of the diverse nature of the university's student base. The university establishes an allowance for doubtful accounts based on historical trends and other information.

Sponsored Projects Revenue

Sponsored projects revenue includes research and other programs sponsored by government, industrial, and other sources. Direct sponsored projects revenue represents reimbursement of costs incurred in direct support of sponsored projects. Such revenue is recognized when the direct costs are incurred. In addition, sponsored projects normally provide for the recovery of indirect costs supporting the project. Indirect sponsored projects revenue is recorded at rates established in advance by Carnegie Mellon through negotiations with the United States Government and other sponsors. Amounts received from sponsors under agreements that require the exchange of assets, rights or other privileges between Carnegie Mellon and the sponsor are recorded as deferred revenue until the contract terms are fulfilled. For the years ended June 30, 2016 and 2015, respectively, 52% and 48% of sponsored projects revenue is generated from two federal agencies.

Contributions Revenue

Contributions include gifts, grants and unconditional promises to give that are recognized as revenues in the period such commitments are received. Conditional promises to give are recognized when the conditions on which they depend are substantially met. Unconditional promises to give to be received in future years are discounted, as of the date of the gift, at a rate commensurate with the pledge payment schedule. Prior to the adoption of Fair Value Measurement provisions of Accounting Standards Codification (ASC) Topic 820, a risk-free rate was used. For pledges recorded subsequent to the adoption, a discount rate commensurate with fair value is used. An allowance is estimated for uncollectible contributions based upon historical patterns and any known uncollectible accounts or accounts in arrears.

Contributions with Restrictions Met in the Same Year

Contributions received with donor-imposed restrictions that are met in the same year as received are reported as revenues of the temporarily restricted net asset class, and a release of restriction is made to unrestricted net assets to reflect the satisfaction or expiration of such restrictions.

Capital Contributions

Donors' contributions to fund construction projects are classified as temporarily restricted net assets and are released from restriction through nonoperating activities when the facility is placed in service. \$48.2 million of capital contributions were released from restriction during fiscal year 2016, and were reclassified from temporarily to unrestricted net assets through nonoperating activities. There were no capital contributions released from restriction during fiscal year 2015.

Contributions received after the asset is placed in service are classified as temporarily restricted net assets and are released from restriction through operating activities in the same fiscal year. \$0.3 million and \$1.5 million of capital contributions were released from restriction during fiscal years 2016 and 2015, respectively, and were reclassified from temporarily to unrestricted net assets through operating activities.

Auxiliary Services Revenue

Carnegie Mellon's auxiliaries exist primarily to furnish goods and services to students, faculty and staff. Managed as essentially self-supporting activities, Carnegie Mellon's auxiliaries consist principally of housing services, dining services, telecommunications, parking, printing and publications, retail and other external services. Auxiliary revenues and expenses are reported as changes in unrestricted net assets.

Other Sources

Other sources revenues are comprised of funding received for Carnegie Mellon's international locations, royalty income, licensing revenue, affiliate/membership revenue and other miscellaneous revenues.

Nonoperating Activities — Other

Nonoperating activities - other presented in the Consolidated Statements of Activities include:

- Loss in the fair value of the interest rate swap agreements of \$10.0 million for the period ended June 30, 2016 (*Note 12*);
- Swap interest expense of \$5.6 million and \$5.7 million for periods ended June 30, 2016 and 2015, respectively (*Note 12*);
- Gain on sale of Carnegie Innovations, LLC subsidaries of \$18.0 million for the period ended June 30, 2016;
- Loss on adjustment of pledges receivable of \$2.1 million and \$4.0 million for the periods ended June 30, 2016 and 2015, respectively;
- Other losses of \$4.7 million and \$0.8 million for the periods ended June 30, 2016 and June 30, 2015, respectively.
- Gain on CIC acquisition of \$9.3 million for the period ended June 30, 2015 (see Note 10).

Income Taxes

Carnegie Mellon is a nonprofit organization as described in Section 501(c)(3) of the Internal Revenue Code (the "Code") and is generally exempt from income taxes on related income pursuant to Section 501(a) of the Code.

The university accounts for uncertainties in income taxes in accordance with authoritative guidance, which prescribes a recognition threshold of more-likely-than-not to be sustained upon examination by the appropriate taxing authority. Measurement of the tax uncertainty occurs if the recognition threshold has been met. Management determined there were no tax uncertainties that met the recognition threshold at June 30, 2016 and 2015.

The university's federal Exempt Organization Business Income Tax Returns remain subject to examination by the Internal Revenue Service for the years subsequent to June 30, 2012.

The university's policy is to recognize interest related to unrecognized tax benefits in interest expense and penalties in operating expenses.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported consolidated financial statements and related accompanying footnote disclosures. Actual results could differ from those estimates and these differences could be material. Carnegie Mellon's significant estimates include: allowance for doubtful accounts, asset retirement obligations, legal contingencies, accrued post-retirement liability, and valuation of investments.

Recent Accounting Pronouncements

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers. This standard implements a single framework for recognition of all revenue earned from customers. This framework ensures that entities appropriately reflect the consideration to which they expect to be entitled in exchange for goods and services by allocating transaction price to identified performance obligations and recognizing revenue as performance obligations are satisfied. Qualitative and quantitative disclosures are required to enable users of financial statements to understand the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. The standard is effective for fiscal years beginning after December 15, 2017. The university is evaluating the impact this will have on the consolidated financial statements beginning in fiscal year 2019.

In April 2015, the FASB issued ASU 2015-03, Imputation of Interest: Simplifying the Presentation of Debt Issuance Costs. This standard requires all costs incurred to issue debt to be presented in the balance sheet as a direct deduction from the carrying value of the associated debt liability. The standard is effective for fiscal years beginning after December 15, 2016. The university is evaluating the impact this will have on the consolidated financial statements beginning in fiscal year 2018.

In May 2015 the FASB issued ASU 2015-7, Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent). The amendments in ASU 2015-7 remove the requirement to categorize within the fair value hierarchy all investments for which fair value is measured using the net asset value per share practical expedient. The amendments also remove the requirement to make certain disclosures for all investments that are eligible to be measured at fair value using the net asset value per share practical expedient. Rather, those disclosures are limited to investments for which the entity has elected to measure the fair value using that practical expedient. ASU 2015-7 is effective for Carnegie Mellon's fiscal year ending June 30, 2018. Earlier application is permitted. Carnegie Mellon adopted ASU No. 2015-7 for the fiscal year ended June 30, 2015. See Note 7, Fair Value.

In January 2016, the FASB issued ASU 2016-1, Financial Instruments- Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities. ASU 2016-1 addresses certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. The standard is effective for

fiscal years beginning after December 15, 2018, and interim periods within fiscal years beginning after December 15, 2019. The guidance allows early adoption of certain provisions of the standard that eliminate the requirement to disclose the fair value of financial instruments measured at cost. However, adoption of the other provisions is not permitted earlier than for fiscal years beginning after December 15, 2017. Carnegie Mellon adopted the provisions of the standard that eliminate the requirement to disclose the fair value of financial instruments measured at cost for the fiscal year ended June 30, 2016 and is evaluating the impact the other provisions of the standard will have on the consolidated financial statements beginning in fiscal year 2020.

In February 2016, the FASB issued ASU 2016-2, Leases (Topic 842). The main difference between previous GAAP and Topic 842 is the recognition of lease assets and lease liabilities by lessees for those leases classified as operating leases under previous GAAP. The guidance aims to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The standard is effective for fiscal years beginning after December 15, 2018 and should be applied on a retrospective basis in the year it is first applied. Carnegie Mellon is evaluating the impact the adoption of this standard will have on the consolidated financial statements beginning in fiscal year 2020.

In August 2016, the FASB issued ASU 2016-14, Not-for-Profit Entities (Topic 958): Presentation of Financial Statements of Not-for-Profit Entities. This guidance replaces the three existing classes of net assets for not-for-profit entities with two classes, net assets with donor restrictions and net assets without donor restrictions. The guidance also requires enhanced disclosures about governing board designations and appropriations, composition of net assets with donor restrictions and other qualitative and quantitative information regarding liquid resources and the availability of financial assets. The standard is effective for annual financial statements issued for fiscal years beginning after December 15, 2017. Early adoption is permitted, and the standard is required to be applied on a retrospective basis in the year of adoption. Carnegie Mellon is evaluating the impact the adoption of this standard will have on the consolidated financial statements beginning in fiscal year 2019.

3. Accounts and Student Loans Receivable

Accounts receivable at June 30, 2016 and 2015, consist of the following (dollars in thousands):

| | 2016 | 2015 |
|------------------------------------------------|-----------------|-----------------|
| Sponsored project grants and contracts Federal | \$43,066 | \$36,232 |
| Other | 6,686 | 11,684 |
| Total sponsored projects and contracts | \$49,752 | \$47,916 |
| Student accounts Other | 4,009 17,838 | 4,635 23,429 |
| Total student accounts and other | \$21,847 | \$28,064 |
| Allowance for doubtful accounts | (2,807) | (3,160) |
| Net accounts receivable | \$68,792 | \$72,820 |
| | | |

Other accounts receivable consists primarily of Carnegie Mellon's international programs, affiliate and membership agreements, license agreements and other miscellaneous revenue sources.

Student Loans Receivable

Net student loans receivable of approximately \$16.6 million and \$17.5 million, as of June 30, 2016 and 2015, respectively, primarily represent student loans made under the Perkins federal loan program. These loans are reported net of an allowance for doubtful accounts of approximately \$0.5 million as of June 30, 2016 and 2015.

4. Pledges Receivable and Contributions

Pledges as of June 30, 2016 and 2015 are due as follows (dollars in thousands):

| | Temporarily Restricted | Permanently Restricted | Total |
|---------------------------------------------------|---------------------------|---------------------------|-----------|
| 2016 | | | |
| In one year or less | \$19,395 | \$3,676 | \$23,071 |
| Between one year and five years | 57,242 | 36,238 | 93,480 |
| More than five years | 12,203 | 3,056 | 15,259 |
| Pledges receivable, gross | \$88,840 | \$42,970 | \$131,810 |
| Unamortized discount | (4,875) | (3,791) | (8,666) |
| Allowance for unfulfilled pledges | (3,359) | (1,567) | (4,926) |
| Pledges receivable, net of discount and allowance | \$80,606 | \$37,612 | \$118,218 |

| | Temporarily Restricted | Permanently Restricted | Total |
|---------------------------------------------------|---------------------------|---------------------------|-----------|
| 2015 | | | |
| In one year or less | \$ 3,481 | \$5,068 | \$ 8,549 |
| Between one year and five years | 44,606 | 30,906 | 75,512 |
| More than five years | 1,012 | 3,155 | 4,167 |
| Pledges receivable, gross | \$ 49,099 | \$ 39,129 | \$ 88,228 |
| Unamortized discount | (3,040) | (4,139) | (7,179) |
| Allowance for unfulfilled pledges | (1,842) | (1,400) | (3,242) |
| Pledges receivable, net of discount and allowance | \$ 44,217 | \$ 33,590 | \$ 77,807 |

Pledges receivable, as of June 30, 2016 and 2015, net of allowances, are intended for the endowment in the amounts of \$37.6 million and \$33.6 million, respectively, and other donor restricted and unrestricted purposes in the amounts of \$80.6 million and \$44.2 million, respectively.

Contributions revenue includes gifts, grants, and unconditional pledges to give and is recorded in the appropriate net asset category based upon donor stipulations. Contributions for the fiscal years ended June 30, 2016 and 2015 are as follows (dollars in thousands):

| | 2016 | 2015 |
|------------------------|-----------|-----------|
| Unrestricted | \$27,593 | \$24,904 |
| Temporarily restricted | 120,486 | 72,822 |
| Permanently restricted | 49,183 | 38,904 |
| Total | \$197,262 | \$136,630 |

Conditional promises to give, which depend on the occurrence of a specified future and uncertain event, such as matching gifts from other donors, are recognized as contributions revenue when the conditions are substantially met. Total combined conditional pledges for Carnegie Mellon were approximately \$39.9 million and \$51.6 million as of June 30, 2016 and 2015, respectively, primarily related to raising matching funds and meeting construction milestones related to the David A. Tepper Quadrangle, a new university gateway and interactive hub, which includes a new building that will serve as the home for the Tepper School of Business. These amounts were not recognized as contributions revenue during the respective fiscal year as the conditions had not been met.

5. Investments

Investments by major category at June 30, 2016 and 2015 are as follows (dollars in thousands):

| | 2016 | 2015 |
|-------------------------------------|-------------|-------------|
| Uninvested cash | \$154,383 | \$116,296 |
| Fixed income | 232,387 | 223,661 |
| Short term fixed income investments | 154,942 | 105,673 |
| Common stock | 530,859 | 537,737 |
| Alternative investments | 841,093 | 874,818 |
| Total investments | \$1,913,664 | \$1,858,185 |

Investments are held for the following purposes (dollars in thousands):

| | 2016 | 2015 |
|-----------------------------------------------------|-------------|-------------|
| Endowment | \$1,288,197 | \$1,318,050 |
| Reserves for working capital and plant - short term | 291,740 | 220,143 |
| Reserves for working capital and plant - long term | 277,818 | 264,801 |
| Split interest agreements | 22,729 | 23,624 |
| Other investments | 33,180 | 31,567 |
| Total investments | \$1,913,664 | \$1,858,185 |

Nearly all fixed income securities are United States Treasury and Agency obligations, investment grade corporates, and asset backed securities. Common stock investments at June 30, 2016 are composed of approximately 51.7% domestic equities and 48.3% international and emerging market equities. Common stock investments at June 30, 2015 were composed of approximately 50.4% domestic equities and 49.6% international and emerging market equities. Alternative investments are largely investments in buyout funds, venture capital, real estate, natural resources and hedge funds.

The allocation to each major category in the previous table represents the actual allocation of the shortterm and long-term investment pools, split interest agreements, and other miscellaneous investments on a combined basis. Each investment pool maintains a unique investment strategy. Actual allocations on a combined basis should not be interpreted as an investment allocation policy for a particular investment pool. In addition, the asset category allocations do not reflect the effective allocation exposures resulting from investment strategies that include derivatives.

The following schedule summarizes the investment return for the fiscal years ended June 30, 2016 and 2015 (*dollars in thousands*):

| | 2016 | 2015 |
|----------------------------------------------|------------|-----------|
| Dividends and interest (net of \$5.4 million | | |
| and \$4.5 million of investment fees) | \$15,508 | \$15,886 |
| Net realized gains on sale of investments | 72,172 | 84,687 |
| Net unrealized (losses)/gains on investments | (104,536) | 5,939 |
| Total return on investments | \$(16,856) | \$106,512 |
| | | |

Operating investment income as reported in the Consolidated Statements of Activities includes dividends and interest earned on unrestricted funds as well as unrestricted accumulated gains utilized for current operations in the amounts of \$24.6 million and \$21.2 million for the years ended June 30, 2016 and 2015, respectively. The accumulated gains are reclassified from net realized gains to dividends and interest income. This reclassification is not reflected in the table above.

Certain of Carnegie Mellon's outside investment managers, including alternative asset managers, are authorized and do, in fact, purchase and sell derivative instruments in order to manage interest rate risks, foreign currency fluctuations and other market positions.

Carnegie Mellon's international portfolios maintain market benchmarks, for performance evaluation and risk control purposes that are unhedged with respect to foreign currencies. Unhedged benchmarks reflect the full impact of foreign currency fluctuations stemming from the benchmarks' foreign currency positions. Investment managers of these international portfolios have the discretion to, and certain do in fact, manage foreign currencies through foreign exchange contracts to protect the portfolios from potential foreign currency losses and to benefit from potential gains. Carnegie Mellon's investment managers understand that they are assuming active management risks to the extent that they assume foreign currency exposures that differ from the foreign currency exposures in their relevant market benchmarks (as documented in the formal investment guidelines for each manager).

Gains or losses from derivative instruments are reported as realized and unrealized gains or losses in the Consolidated Statements of Activities. The fair value of all derivative instruments is included in the fair value of the investments.

Under the terms of certain limited partnership agreements, Carnegie Mellon is obligated to periodically advance additional funding for venture capital, buyout, real estate, and natural resources fund investments. At June 30, 2016 and 2015, Carnegie Mellon had unfunded commitments of approximately \$377.0 million and \$313.3 million, respectively, for which capital calls had not been exercised. Such commitments generally have fixed expiration dates or other termination clauses. Carnegie Mellon maintains sufficient liquidity in its investment portfolio to cover such calls.

Alternative investments are less liquid than Carnegie Mellon's other investments. The following tables summarize these investments by strategy type at June 30, 2016 and 2015 (dollars in thousands):

| Alternative Investment Strategy | 2016 Number of Funds | Fair Value |
|---------------------------------|----------------------------|---------------|
| Hedge funds | 20 | \$180,381 |
| Natural resources | 25 | 99,232 |
| Private equity (buyout) funds | 50 | 133,747 |
| Real estate | 20 | 75,271 |
| Venture capital | 117 | 327,288 |
| Other | 15 | 25,174 |
| Total | 247 | \$841,093 |
| Total investments | \$1,913,644 | |
| % Alternative | 44.0% | |
| Alternative Investment Strategy | 2015 Number of Funds | Fair Value |
| Hedge funds | 22 | \$224,726 |
| Natural resources | 22 | 87,068 |
| Private equity (buyout) funds | 49 | 145,011 |
| Real estate | 18 | 66,468 |
| Venture capital | 103 | 332,665 |
| Other | 15 | 18,880 |
| Total | 229 | \$874,818 |
| Total investments | \$1,858,185 | |
| % Alternative | 47.1% | |

6. Endowments

The following tables provide a summary of the changes in value of the endowment net assets excluding pledges for the years ended June 30 (dollars in thousands):

| 2016 | Unrestricted | Temporarily Restricted | Permanently Restricted | Total |
|---------------------------------------------------------------------|--------------|---------------------------|---------------------------|--------------------------|
| Endowment net assets, beginning of year | \$246,137 | \$477,454 | \$614,633 | \$1,338,224 |
| Gifts and other additions | | | | |
| Contributions (excluding pledges) and changes in donor restrictions | 11 | 1 | 44,301 | 44,313 |
| Terminated life income trusts, income and gains reinvested | - | - | 531 | 531 |
| Total gifts and other additions | \$11 | \$1 | \$44,832 | \$44,844 |
| Investment income | | | | |
| Interest and dividends | \$4,062 | \$5,590 | \$36 | \$9,688 |
| Net realized gains on sale of securities | 10,643 | 47,037 | 186 | 57,866 |
| Net unrealized losses | (15,779) | (69,769) | - | (85,548) |
| Total investment income | \$(1,074) | \$(17,142) | \$222 | \$(17,994) |
| Income distributed | | | | |
| Cash and accrued interest and dividends | \$(4,070) | \$(5,601) | \$(36) | \$(9,707) |
| Accumulated realized investment gains | (20,797) | (28,621) | (186) | (49,604) |
| Total income distributed | \$(24,867) | \$(34,222) | \$(222) | \$(59,311) |
| Endowment net assets, end of year | \$220,207 | \$426,091 | \$659,465 | \$1,305,763 ¹ |

¹Includes \$17,566 of endowment gifts and other transfers pending investment and other accruals.

| 2015 | Unrestricted | Temporarily Restricted | Permanently Restricted | Total |
|---------------------------------------------------------------------|--------------|---------------------------|---------------------------|--------------------------|
| Endowment net assets, beginning of year | \$249,511 | \$440,679 | \$560,348 | \$1,250,538 |
| Gifts and other additions | | | | |
| Contributions (excluding pledges) and changes in donor restrictions | 88 | 1 | 54,019 | 54,108 |
| Terminated life income trusts, income and gains reinvested | - | - | 266 | 266 |
| Total gifts and other additions | \$88 | \$1 | \$54,285 | \$54,374 |
| Investment income | | | | |
| Interest and dividends | \$4,501 | \$5,898 | \$44 | \$10,443 |
| Net realized gains on sale of securities | 14,059 | 56,222 | 182 | 70,463 |
| Net unrealized gains | 1,319 | 5,235 | - | 6,554 |
| Total investment income | \$19,879 | \$67,355 | \$226 | \$87,460 |
| Income distributed | | | | |
| Cash and accrued interest and dividends | \$(4,501) | \$(5,898) | \$(44) | \$(10,443) |
| Accumulated realized investment gains | (18,840) | (24,683) | (182) | (43,705) |
| Total income distributed | \$(23,341) | \$(30,581) | \$(226) | \$(54,148) |
| Endowment net assets, end of year | \$246,137 | \$477,454 | \$614,633 | \$1,338,224 ² |

² Includes \$20,174 of endowment gifts and other transfers pending investment and other accruals.

| 2016 | Unrestricted | Temporarily Restricted | Permanently Restricted | Total |
|-------------------------------------------------|---------------------|---------------------------|---------------------------|-----------------------------|
| Donor-restricted endowment funds | \$- | \$426,091 | \$659,465 | \$1,085,556 |
| Board-designated funds | 220,207 | - | - | 220,207 |
| Total funds | \$220,207 | \$426,091 | \$659,465 | \$1,305,763 |
| | | | | |
| 2015 | Unrestricted | Temporarily Restricted | Permanently Restricted | Total |
| 2015 Donor-restricted endowment funds | Unrestricted \$- | | , | Total \$1,092,087 |
| | | Restricted | Restricted | |

The following tables outline the endowment net asset composition by type of fund for fiscal years 2016 and 2015 (*dollars in thousands*):

Unless the donor specifies that only a certain amount of the endowment may be spent, Pennsylvania Act 141 allows organizations to choose a total return spending policy strategy, whereby the board of trustees may annually elect to spend between 2% and 7% of the fair market value of the endowment. Carnegie Mellon maintains a total return spending policy. Endowment income distributions can consist of dividend and interest income and a withdrawal of accumulated capital gains, when necessary. The main objective of the total return spending policy is to separate spending policy from investment policy. This approach permits asset allocation decisions to be made independently of the need for current income. Carnegie Mellon targets a diversified asset allocation to achieve its long-term objectives with prudent risk constraints. The endowment spending rate is determined annually pursuant to a smoothing formula whereby an approved spending rate percentage is applied to the trailing thirty-six month average of endowment market values at December 31. For fiscal years 2016 and 2015, the approved spending rate was set at 5.0%. As a result of the spending rate formula, the effective spending rate (defined as the endowment draw totals for the fiscal years ended 2016 and 2015 divided by the June 30 endowment market values for the those fiscal years) was 4.5% and 4.0% respectively.

7. Fair Value

Accounting Standards Codification Topic 820, Fair Value Measurement, establishes a hierarchy to prioritize valuation inputs based on the extent to which the inputs are observable in the marketplace. Observable inputs reflect market data obtained from sources independent of the reporting entity and unobservable inputs reflect the entities own assumptions about how market participants would value an asset or liability based on the best information available.

The following is a description of the university's valuation methodologies for assets and liabilities measured at fair value:

Level 1

Based upon quoted prices in active markets that the university has the ability to access for identical assets and liabilities. Market price data is generally obtained from exchange or dealer markets. The university does not adjust the quoted price for such assets and liabilities, which include active listed equities, mutual funds, government supported obligations and cash equivalents.

Level 2

Based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active or assets subject to transfer restrictions. Inputs are obtained from various sources including market participants, dealers, and brokers.

Level 3

Based on valuation techniques that use significant inputs that are unobservable as they trade infrequently or not at all.

| 2016 | Significant Other Quoted Prices in Active Markets (Level 1) | Significant Observable Inputs (Level 2) | Unobservable Inputs (Level 3) | Total Fair Value |
|---------------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------|---------------------|
| Assets | | | | |
| Deferred compensation plan assets | \$7,397 | \$4,952 | \$1,559 | \$13,908 |
| Investments | | | | |
| Uninvested cash ^a | \$37,725 | \$116,658 | \$- | \$154,383 |
| Common Stock | | | | |
| U.S equity | 220,467 | - | 4,980 | 225,447 |
| International — developed | 2,255 | - | - | 2,255 |
| International — emerging | 94,760 | - | - | 94,760 |
| Short term fixed income investments | - | 154,942 | - | 154,942 |
| Fixed income and securities ^a | 232,201 | 186 | - | 232,387 |
| | \$587,408 | \$271,786 | \$4,980 | \$864,174 |
| Investments measured under the NAV practical expedient ^b | | | | \$1,049,490 |
| Total investments | | | | \$1,913,664 |
| Beneficial interests held by third party | _ | - | \$2,612 | \$2,612 |
| Perpetual trusts held by third party | - | - | \$7,642 | \$7,642 |
| Total assets held in trust by others | \$- | \$- | \$10,254 | \$10,254 |
| Interest rate swap receivable | - | 2,791 | - | 2,791 |
| Total assets at fair value | \$594,805 | \$279,529 | \$16,793 | \$1,940,617 |
| Liabilities | | | | |
| Interest rate swaps payable | | 46,966 | - | 46,966 |
| Total liabilities at fair value | \$- | \$46,966 | \$- | \$46,966 |

There were no significant transfers between Level 1 and Level 2 for the fiscal year ended 2016.

(a) Presentation as a single class is appropriate based on the nature and risks of these investments. This includes commingled funds of \$102.2 million reclassified from investments measured under the NAV practical expedient to Level 1 fixed income and securities. These funds have daily published NAV and can be redeemed within one to three business days.

(b) In accordance with ASC Subtopic 820-10, certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified 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 Statements of Financial Position. This includes commingled funds of \$208.4 million, and hedge and private equity funds of \$841.1 million as of June 30, 2016.

| 2015 | Significant Other Quoted Prices in Active Markets (Level 1) | Significant Observable Inputs (Level 2) | Unobservable Inputs (Level 3) | Total Fair Value |
|---------------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------|---------------------|
| Assets | | | | |
| Deferred compensation plan assets | \$ 6,402 | \$ 4,659 | \$ 1,440 | \$ 12,501 |
| Unexpended bond proceeds | \$ 20,466 | \$ - | \$ - | \$20,466 |
| Investments | | | | |
| Uninvested cash ^a | \$ 36,169 | \$ 80,127 | \$ - | \$ 116,296 |
| Common Stock U.S. equity | 214,551 | | 4,681 | 219,232 |
| International — developed | 2,332 | _ | 4,001 | 2,332 |
| International — emerging | 100,078 | - | - | 100,078 |
| Short-term fixed income investments | - | 105,673 | - | 105,673 |
| Fixed income and securities ^a | 223,419 | 242 | - | 223,661 |
| | \$ 576,549 | \$ 186,042 | \$ 4,681 | \$ 767,272 |
| Investments measured under the NAV practical expedient ^b | | | | \$1,090,913 |
| Total investments | | | | \$ 1,858,185 |
| Beneficial interests held by third party | - | - | 2,648 | 2,648 |
| Perpetual trusts held by third party | - | - | 7,993 | 7,993 |
| Total assets held in trust by others | \$- | \$- | \$10,641 | \$10,641 |
| Interest rate swap receivable | - | 754 | - | 754 |
| Total assets at fair value | \$ 603,417 | \$ 191,455 | \$ 16,762 | \$ 1,902,547 |
| Liabilities | | | | |
| Interest rate swaps payable | | 34,882 | - | 34,882 |
| Total liabilities at fair value | \$ - | \$34,882 | \$ - | \$34,882 |

(a) Presentation as a single class is appropriate based on the nature and risks of these investments. This includes commingled funds of \$89.2 million reclassified from investments measured under the NAV practical expedient to Level 1 fixed income and securities. These funds have daily published NAV and can be redeemed within one to three business days.

(b) In accordance with ASC Subtopic 820-10, certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified 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 Statements of Financial Position. This includes commingled funds of \$216.1 million, and hedge and private equity funds of \$874.8 million as of June 30, 2015.

As a practical expedient, the university is permitted under the authoritative guidance on fair value measurements to estimate fair value of an investment at the measurement date using the reported NAV without further adjustment unless the entity expects to sell the investment at a value other than NAV or if the NAV is not calculated in accordance with GAAP. Investments measured under the net asset value practical expedient primarily consist of the university's ownership in alternative investments (principally limited partnership interests in private equity, real estate, natural resources, and hedge funds) and certain investments in fixed income (including commingled funds).

The fair values of the securities held by limited partnerships that do not have readily determinable fair values are determined by the general partner and are based on appraisals, or other estimates that require varying degrees of judgment. If no public market exists for the investment securities, the fair value is determined by the general partner taking into consideration, among other things, the cost of the securities, prices of recent significant placements of securities of the same issuer, completed or pending third party transactions in comparable issues, recapitalizations and other transactions across the capital structure and subsequent developments concerning the companies to which the securities relate. The university has well established controls surrounding investment valuation and has performed due diligence regarding these investments to ensure NAV is an appropriate measure of fair value as of June 30. Management's internal controls surrounding the review of third party provided NAV include frequent communication with fund managers, review of audited financial statements and fund valuation policies, and continuous monitoring of existing investments.

Deferred compensation plan assets are valued using market quotations or prices obtained from independent pricing services (Level 1), market quotations or prices obtained from independent pricing sources who may employ various pricing methods (Level 2), and at contract value (Level 3).

Unexpended bond proceeds are valued at the net asset value of the money market fund.

Beneficial remainder and lead trusts held by third parties are valued at the present value of the future distributions expected to be received upon termination of the trust or over the term of the trust agreement and approximate fair value. Perpetual trusts are valued based upon the university's percentage interest in the fair value of the underlying trust assets.

Interest rate swaps are valued using observable inputs, such as quotations received from the counterparty, dealers or brokers, whenever available and considered reliable. In instances where models are used, the value of the interest rate swap depends upon the contractual terms of, and specific risks inherent in, the instrument as well as the availability and reliability of observable inputs. Such inputs include market prices for reference securities, yield curves, credit curves, measures of volatility, prepayment rates, assumptions for nonperformance risk, and correlations of such inputs. The interest rate swap arrangements have inputs which can generally be corroborated by market data and are therefore classified within Level 2.

The valuation methods described above may produce fair value calculations that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the university believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

The guidance also requires additional disclosures to enable users of the financial statements to understand the nature and risk of the university's investments.

The following table clarifies the nature and risk of the university's investments and liquidity for financial instruments classified by the university as alternative investments as of June 30, 2016 (dollars in thousands):

| | Fair Value | Unfunded Commitments | Redemption Frequency ^a | Redemption Notice Period ^a |
|------------------------------------|------------|-------------------------|--------------------------------------|------------------------------------------|
| Hedge funds | | | Semi-annual | |
| Absolute return strategies | \$72,365 | \$- | and Annually | 30-90 days |
| Directional return strategies | 108,016 | - | | |
| Natural resources | 99,232 | 55,282 | | |
| Private equity and venture capital | 461,035 | 241,363 | | |
| Real estate | 75,271 | 56,306 | | |
| Other | 25,174 | 24,003 | | |
| Total investments | \$841,093 | \$376,954 | | |

(a) Hedge fund investments held by the university may be subject to restrictions related to the initial investment that limit the university's ability to redeem capital from such investments during a specified period of time subsequent to the university's investment of capital in such funds, typically known as a lock-up period. Capital available for redemption after the lock-up period has expired may also be subject to limits which restrict the available redemption period to monthly, quarterly, semi-annually or annually, and require 30 — 90 days prior written notice, potentially limiting the university's ability to respond quickly to changes in market conditions.

Other alternative investments, including classifications of natural resources, private equity, and real estate, cannot be redeemed upon request. Instead, the nature of these investments in this category is that distributions are received through the liquidation of the underlying assets of the fund. It is estimated that the underlying assets of these funds would be liquidated over approximately four to eight years.

The following table includes a roll forward of the Consolidated Statements of Financial Position amounts for financial instruments classified by the university within Level 3 of the fair value hierarchy *(dollars in thousands)*:

| | Deferred Compensation | Common Stock | Trusts Held by Others | Total |
|---------------------------|--------------------------|-----------------|--------------------------|----------|
| Fair value, July 1, 2015 | \$1,440 | \$4,681 | \$10,641 | \$16,762 |
| Realized gains (losses) | - | | | |
| Unrealized gains (losses) | 35 | 299 | (387) | (53) |
| Purchases | 129 | - | - | 129 |
| Sales | - | - | - | - |
| Issuances | - | - | - | - |
| Transfers in (out) | (45) | - | - | (45) |
| Fair value, June 30, 2016 | \$1,559 | \$4,980 | \$10,254 | \$16,793 |

| | Deferred Compensation | Common Stock | Trusts Held by Others | Total |
|---------------------------|--------------------------|-----------------|--------------------------|----------|
| Fair value, July 1, 2014 | \$1,341 | \$4,544 | \$10,807 | \$16,692 |
| Realized gains (losses) | - | - | - | - |
| Unrealized gains (losses) | 29 | 137 | (161) | 5 |
| Purchases | 129 | - | - | 129 |
| Sales | - | - | - | - |
| lssuances | - | - | - | - |
| Transfers in (out) | (59) | - | (5) | (64) |
| Fair value, June 30, 2015 | \$1,440 | \$4,681 | \$10,641 | \$16,762 |

All net realized and unrealized gains (losses) in the tables above are reflected in nonoperating activities in the accompanying Consolidated Statements of Activities. Net unrealized gains (losses) relate to those financial instruments held by the university at June 30.

8. Sponsored Projects Revenue

The major components of sponsored projects revenue for the years ended June 30, 2016 and 2015 are as follows (*dollars in thousands*):

| | 2016 | 2015 |
|-----------------------------------|-----------|-----------|
| Federal | | |
| Direct | \$287,829 | \$273,246 |
| Indirect | 49,450 | 52,325 |
| Total federal | \$337,279 | \$325,571 |
| State, industrial and other | | |
| Direct | \$39,023 | \$43,019 |
| Indirect | 8,236 | 8,163 |
| Total state, industrial and other | \$47,259 | \$51,182 |
| Total sponsored projects revenue | \$384,538 | \$376,753 |
| | | |

Included in other sponsored projects revenue for the fiscal years ended June 30, 2016 and 2015 are amounts from private sources (foundation grants) which amounted to \$8.8 million and \$8.3 million, respectively.

9. Land, Buildings and Equipment

Land, buildings and equipment at June 30 consist of the following (dollars in thousands):

| | 2016 | 2015 |
|----------------------------------------|-------------|-------------|
| Buildings | \$1,140,255 | \$993,482 |
| Moveable equipment | 256,717 | 241,953 |
| Utilities and building-related assets | 69,646 | 62,832 |
| Land improvements | 12,866 | 12,866 |
| Leasehold improvements | 19,755 | 19,108 |
| Subtotal | \$1,499,239 | \$1,330,241 |
| Accumulated depreciation | (779,150) | (725,451) |
| Subtotal | \$720,089 | \$604,790 |
| Land | 48,361 | 46,774 |
| Construction and equipment in progress | 48,946 | 96,275 |
| Land, buildings and equipment, net | \$817,396 | \$747,839 |
| | | |

Carnegie Mellon accquired \$12.7 million and \$10.8 million in equipment through grants for the years ended June 30, 2016 and 2015, respectively.

Also included in movable equipment is the unamortized computer software cost of \$22.4 million and \$26.1 million for the years ended June 30, 2016 and 2015, respectively. Software amortization expense of \$5.1 million and \$4.3 million was charged to expense for the years ended June 30, 2016 and 2015, respectively.

10. Debt Obligations

Debt obligations consist of the following as of June 30, 2016 and 2015, including unamortized premiums of \$14.0 million and \$16.4 million, respectively *(dollars in thousands)*:

| | Interest % | 2016 | 2015 |
|----------------------------------------------------------------------------------------------------------|------------|-----------|-----------|
| Allegheny County Higher Education Building Authority, Variable Rate Revenue Bonds, Series A 2008 | Variable | \$120,820 | \$120,820 |
| Pennsylvania Higher Education Facilities Authority, Fixed University Revenue Bonds, Series 2009 | 3.5-5.0% | 175,818 | 176,903 |
| Allegheny County Higher Education Building Authority, Fixed Revenue Refunding Bonds, Series A 2012 | 2.5-5.0% | 37,418 | 38,019 |
| Allegheny County Higher Education Building Authority, Variable Revenue Refunding Bonds, Series B 2012 | Variable | 50,000 | 50,000 |
| Allegheny County Higher Education Building Authority, Variable Revenue Bonds, Series 2013 | 4.0-5.0% | 58,291 | 58,963 |
| Collaborative Innovation Center Tax Increment Financing | 7.5-8.5% | 2,235 | 2,480 |
| Collaborative Innovation Center Mortgage Obligation | 6.78% | 15,640 | 16,313 |
| Taxable Commercial Paper | Various | 25,000 | 30,000 |
| Total debt obligations | | \$485,222 | \$493,498 |

Series 2008 Bonds

On April 10, 2008, Carnegie Mellon issued, through the Allegheny County Higher Education Building Authority (ACHEBA), Variable Rate University Revenue Bonds, Series A 2008 Bonds, with a face value of \$120.8 million (the "2008 Bonds"). The proceeds of the 2008 Bonds were used to finance the cost of refunding all of the outstanding 2006 Bonds and the 2007 Bonds. The 2006 and 2007 Bonds were called for optional redemption, at a redemption price of 100% of the principal amount plus accrued interest, pursuant to the optional redemption provisions. The 2008 Bonds are subject to a mandatory sinking fund redemption as follows: \$5.1 million in fiscal year 2027, \$30.0 million in fiscal years 2035 through 2037, and \$25.7 million in fiscal year 2038. The 2008 Bonds currently pay interest at a variable market rate determined daily by the Bonds' remarketing agent. Average interest rates on the 2008 Bonds were 0.10% and 0.04% during fiscal years 2016 and 2015, respectively.

Carnegie Mellon has entered into a Standby Bond Purchase Agreement (SBPA) with a financial institution that will purchase the 2008 bonds if they cannot be remarketed. This SBPA was renewed on January 12, 2015 for a three year term ending January 12, 2018. If the Bank does not renew the agreement, it must provide notification at least 60 days prior to the expiration date. See the Aggregate Maturities section of this Note 10 for additional discussion of the SBPA.

Series 2009 Bonds

On August 5, 2009, Carnegie Mellon issued through the Pennsylvania Higher Educational Facilities Authority (PHEFA), Fixed Rate Revenue Bonds, Series 2009 Bonds, with a face value of \$172.4 million (the "2009 Bonds"). The proceeds of the 2009 Bonds, including an original issue premium of \$10.8 million, were used to finance the cost of refunding all the outstanding 1995 Bonds, to fund certain capital acquisitions and projects, and to pay certain costs of issuance of the Bonds. The 2009 Bonds mature at \$52.4 million in fiscal year 2018, \$60.0 million each in fiscal years 2020 and 2022. The 2009 Bonds maturing on or after August 1, 2019 are subject to optional redemption prior to their scheduled maturity on or after February 1, 2019. The 2009 Bonds bear fixed rates of interest, and the effective interest rate on the 2009 Bonds, including the effect of the original issue premium, was 4.10% during fiscal years 2016 and 2015.

Series 2012 Bonds

On March 1, 2012, Carnegie Mellon issued ACHEBA, Revenue Refunding Bonds, Series A 2012 Bonds, with a face value of \$58.1 million, and Series B 2012 Bonds, with a face value of \$50.0 million (the "2012 Bonds"). The proceeds of the 2012 Bonds, including an original issue premium of \$10.2 million, were used to finance the cost of refunding the 1998 Bonds and the 2002 Bonds, and to pay certain costs of issuance of the 2012 Bonds.

In fiscal year 2015, \$25.3 million of the Series A 2012 Bonds matured, and were refinanced with the university's commercial paper program. In March 2024, \$32.8 million of the Series A 2012 Bonds mature and are subject to optional redemption prior to their scheduled maturity on or after March, 2022. The Series A 2012 Bonds bear fixed rate interest and the effective rates, including the effect of the original issue premium were 3.10% and 2.28% during fiscal years 2016 and 2015, respectively.

All \$50.0 million of the Series B 2012 Bonds mature in the fiscal year 2019. The Series B 2012 Bonds bear variable rates of interest based on one month LIBOR. Average interest rates on the Bonds were 0.90% and 0.78% during fiscal years 2016 and 2015, respectively.

Series 2013 Bonds

On March 1, 2013, Carnegie Mellon issued through the ACHEBA, Revenue Bonds, Series 2013 Bonds, with a face value of \$52.3 million (the "2013 Bonds"). The proceeds of the 2013 Bonds, including an original issue premium of \$8.3 million, were used to finance a portion of the costs of construction of Scott Hall and to pay certain costs of issuance of the 2013 Bonds. The 2013 Bonds mature at \$10.0 million in fiscal year 2021, \$22.3 million in fiscal year 2028 and \$20.0 million in fiscal year 2043. The 2013 Bonds maturing on or after March 1, 2028 are subject to optional redemption prior to maturity on or after March 1, 2023. The 2013 Bonds bear fixed rates of interest and the effective interest rate including the effect of the original issue premium was 3.33% during fiscal years 2016 and 2015.

Collaborative Innovation Center

On September 30, 2014 Carnegie Mellon acquired the Collaborative Innovation Center (CIC) from the Regional Industrial Asset District (RIDC) when Carnegie Mellon and RIDC agreed to terminate the long term ground lease for the land on which the CIC building was built. The CIC building was originally built and owned by the Regional Industrial Development Corporation (RIDC) on land owned and leased by Carnegie Mellon to RIDC pursuant to a long-term ground lease. Prior to the termination of the ground lease, the CIC was recorded as a capital lease by Carnegie Mellon.

As part of the agreement to terminate the ground lease, Carnegie Mellon assumed a \$16.8 million mortgage note. The mortgage note requires monthly principal and interest payments, bears interest at a fixed rate of 6.78% and matures on March 1, 2025. The mortgage note is secured by the CIC building (carrying value of \$27.0 million), the land where CIC is located, and rents derived from the operation of CIC.

Carnegie Mellon also assumed the sole responsibility to make semi-annual payments of any shortfall between the amount of real estate and parking taxes collected and pledged under a Tax Increment Financing (TIF)) agreement, and the debt service and annual cost of the TIF. Carnegie Mellon is obligated to timely fund that shortfall until the TIF is satisfied in full on October 5, 2022. The balance of the outstanding TIF note was \$2.2 million and \$2.5 million at June 30, 2016 and 2015, respectively. The TIF note bears interest at a rate of 7.5% through April 30, 2016 and 8.5% from May 1, 2016 through maturity.

Taxable Commercial Paper

In February 2015, Carnegie Mellon instituted a taxable commercial paper program which allows the university to issue in aggregate up to \$70.0 million in commercial paper notes. Proceeds from the issuance of commercial paper may be used to refund outstanding debt, to finance capital projects, and to otherwise support operations.

On February 24, 2015 the university issued \$30.0 million of commercial paper, primarily to refund \$25.3 million of the Series A 2012 Bonds that matured on March 1, 2015, and to cover costs of issuances. The notes outstanding at June 30, 2016 of \$25.0 million bear a fixed rate of interest ranging from 0.42% to 0.45%, payable upon maturity, with maturities from 7 to 30 days.

Interest Expense

Cash paid for interest on financing obligations for the fiscal years ended June 30, 2016 and 2015 totaled \$14.1 million and \$15.8 million, respectively. The university utilizes interest rate swaps to synthetically adjust its exposure to variable rates. Including the swap expense, cash paid for interest for the fiscal years ended June 30, 2016 and 2015 was \$19.6 million and \$21.6 million, respectively. For the fiscal years ended June 30, 2016 and 2015, interest expense of \$2.2 million and \$1.1 million, respectively, was capitalized related to construction in progress.

Aggregate Maturities

Aggregate maturities of bonds and other debt instruments for each of the next five years ending June 30, excluding commercial paper, are as follows (*dollars in thousands*):

| Total | \$446,180 |
|------------|-----------|
| Thereafter | 268,060 |
| 2021 | 11,309 |
| 2020 | 61,212 |
| 2019 | 51,139 |
| 2018 | 53,485 |
| 2017 | \$ 975 |
| | |

The university has outstanding variable rate demand bonds in the amount of \$120.8 million which are subject to daily optional tender by the bondholders. These bonds are reflected in the table above based on original scheduled maturities. In the event that a bondholder tenders these variable rate demand bonds, the purchase price will be repaid from the remarketing of the bonds to a new investor. However, in the unlikely event that none of the bonds could be remarketed, the Standby Bond Purchase Agreement (SBPA) provider would purchase the bonds. The bonds would then become amortizing five-year bank bonds, payable back to the liquidity provider per the terms of the agreement. See the Series 2008 Bonds section of this Note 10 for additional discussion of the SBPA terms.

Line of Credit

The university has a \$50.0 million unsecured line of credit agreement that expired on October 19, 2016. This line of credit was extended on October 12, 2016 through October 19, 2017. No advances have been made to date.

11. Temporarily and Permanently Restricted Net Assets

Temporarily restricted net assets are available for the following purposes as of June 30 (dollars in thousands):

| | 2016 | 2015 |
|--------------------------------------------|-----------|-----------|
| Endowment earnings | \$426,091 | \$477,454 |
| Capital and other donor designations | 173,633 | 170,370 |
| Pledges and assets held in trust by others | 80,964 | 44,583 |
| Split interest agreements | 3,554 | 4,209 |
| Term endowments | 4,860 | 2,449 |
| Loan funds | 1,163 | 998 |
| Total | \$690,265 | \$700,063 |
| | | |

Permanently restricted net assets as of June 30 are comprised of (dollars in thousands):

| | 2016 | 2015 |
|--------------------------------------------------------|-----------|---------------------------------------|
| Endowment | \$659,465 | \$614,633 |
| Pledges and assets held in trust by others | 47,508 | 43,865 |
| Split interest agreements and other donor designations | 5,580 | 5,338 |
| Total | \$712,553 | \$663,836 |
| | | · · · · · · · · · · · · · · · · · · · |

12. Derivative Instruments and Hedging Activities

Carnegie Mellon has entered into the following interest rate swap agreements to adjust the exposure to variable interest rates *(dollars in thousands)*:

| SWAP Agreement | Counterparty Effective Date | Notional Amount | Interest Rate paid | Interest Received | Term (in years) | Termination Date | Cancellation Option |
|-------------------|-----------------------------------|--------------------|-----------------------|----------------------|--------------------|---------------------|------------------------|
| Oct 2004 | Oct 2004 | \$ 50,000 | 3.0 % | 67% of 1M LIBOR | 15 | Oct 2019 | Oct 2014* |
| Apr 2006 | Dec 2006 | \$ 100,000 | 3.4 % | 67% of 1M LIBOR | 22 | Dec 2028 | Dec 2016 |
| May 2007 | Jun 2007 | \$ 5,125 | 3.8 % | 67% of 1M LIBOR | 20 | Mar 2027 | N/A |
| May 2007 | Mar 2012 | \$ 40,325 | 3.8 % | 67% of 1M LIBOR | 20 | Mar 2032 | N/A |
| Mar 2012 | Mar 2012 | \$ 38,000 | SIFMA | 1.92% | 12 | Mar 2024 | N/A |

* Counterparty cancellation option is monthly after October 1, 2014.

The following fair values of the swap agreements were recorded as accounts payable and other liabilities and other assets in the Consolidated Statements of Financial Position for the years ended June 30, 2016 and 2015 (dollars in thousands):

| | Derivatives Reported as Assets/(Liabilities) | | |
|------------------------|-------------------------------------------------|------------|--|
| Date of Swap Agreement | 2016 | 2015 | |
| Oct 2004 | \$(4,126) | \$(4,299) | |
| Apr 2006 | (27,731) | (19,513) | |
| May 2007 | (1,455) | (1,112) | |
| May 2007 | (13,654) | (9,958) | |
| Mar 2012 | 2,791 | 754 | |
| Total | \$(44,175) | \$(34,128) | |

The fair value of these agreements is estimated to be an amount that Carnegie Mellon would receive (receivable) or pay (liability) to voluntarily terminate the agreement. Based upon the university's credit rating, the university is required to post collateral equal to the amount by which the liability value exceeds \$25.0 million for each of its counterparties. Additional collateral in the amount of \$1.3 million was required to be posted during the year ended June 30, 2016 and is included within investments in the Consolidated Statements of Financial Position. No such collateral was required as of June 30, 2015.

The following interest expense and mark to market gains/(losses) were recorded as other sources under nonoperating activities in the Consolidated Statements of Activities for the years ended June 30, 2016 and 2015 (dollars in thousands):

| | Interest (Expense) | | Fair Value (Loss) Gain | | otal s) Gain |
|-----------|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| \$(1,406) | \$(1,457) | \$173 | \$768 | \$(1,233) | \$(689) |
| (3,214) | (3,318) | (8,218) | (1,290) | (11,432) | (4,608) |
| (182) | (188) | (343) | (33) | (525) | (221) |
| (1,435) | (1,476) | (3,696) | (666) | (5,131) | (2,142) |
| 682 | 711 | 2,037 | 1,197 | 2,719 | 1,908 |
| \$(5,555) | \$(5,728) | \$(10,047) | \$(24) | \$(15,602) | \$(5,752) |
| | (Exp 2016 \$(1,406) (3,214) (182) (1,435) 682 | 2016 2015 \$(1,406) \$(1,457) (3,214) (3,318) (182) (188) (1,435) (1,476) 682 711 | (Expense) (Loss) 2016 2015 2016 \$(1,406) \$(1,457) \$173 (3,214) (3,318) (8,218) (182) (188) (343) (1,435) (1,476) (3,696) 682 711 2,037 | (Expense) (Loss) Gain 2016 2015 2016 2015 \$(1,406) \$(1,457) \$173 \$768 (3,214) (3,318) (8,218) (1,290) (182) (188) (343) (33) (1,435) (1,476) (3,696) (666) 682 711 2,037 1,197 | (Expense) (Loss) Gain (Loss) Gain 2016 2015 2016 2015 2016 \$(1,406) \$(1,457) \$173 \$768 \$(1,233) (3,214) (3,318) (8,218) (1,290) (11,432) (182) (188) (343) (33) (525) (1,435) (1,476) (3,696) (666) (5,131) 682 711 2,037 1,197 2,719 |

Carnegie Mellon utilizes energy forward contracts, which are physically settled, to hedge against the future changes in the cost of electricity and natural gas. These contracts limit Carnegie Mellon's exposure to higher rates; however, they could also limit the benefit of decreases in rates. These contracts qualify for normal purchases and sales exemptions and are not required to be recognized on the balance sheet at fair value because Carnegie Mellon takes physical delivery of the electricity and natural gas and the gains and losses are already recognized in the cost.

13. Expenses by Functional Category

Operating expenses by functional category for the years ended June 30, 2016 and 2015 are as follows *(dollars in thousands):*

| | 2016 | 2015 |
|------------------------------------------|-------------|-------------|
| Instruction and departmental research | \$370,356 | \$367,109 |
| Sponsored projects | 345,584 | 336,793 |
| Administration and institutional support | 122,989 | 135,424 |
| Academic support | 149,470 | 141,790 |
| Student service | 51,671 | 48,337 |
| Auxiliary services and activities | 49,037 | 48,935 |
| Total | \$1,089,107 | \$1,078,388 |
| | | |

Total fundraising expense of \$19.0 million and \$17.4 million (\$17.4 million and \$15.4 million in administration and institutional support) is included above for the years ended June 30, 2016 and 2015, respectively.

14. Commitments and Contingencies

Carnegie Mellon is a defendant in a number of legal actions seeking damages and other relief. While the final outcome of each action cannot be determined at this time, management records a reserve in operating activities for those cases in which the loss is both probable and estimable. For the other legal actions that are not reserved, legal counsel and management are of the opinion that the liability, if any, will not have a material effect on Carnegie Mellon's consolidated financial statements.

Carnegie Mellon receives significant financial assistance from the federal government, including the sponsorship of federal research projects. Research grants and contracts normally provide for the recovery of direct and indirect costs. Entitlement to the recovery of the applicable direct and related indirect costs is generally conditional upon compliance with the terms and conditions of the grant agreements and applicable federal regulations, including the expenditure of the resources for eligible purposes. Substantially all grants and Carnegie Mellon's indirect cost rate are subject to financial and compliance reviews and audits by the grantors. In management's opinion, the likelihood of an adverse material outcome upon its financial position from those reviews and audits is remote.

Lease expense primarily related to facilities was \$19.2 million and \$19.5 million (excluding international donated space of \$8.9 million and \$9.0 million) for the years ending June 30, 2016 and 2015, respectively. Future minimum operating lease payments at June 30, 2016 are as follows (*dollars in thousands*):

| Total | \$43,262 |
|------------|----------|
| Thereafter | 1,554 |
| 2021 | 1,569 |
| 2020 | 5,015 |
| 2019 | 5,842 |
| 2018 | 9,846 |
| 2017 | \$19,436 |
| | |

At June 30, 2016 and 2015 Carnegie Mellon had contractual obligations of approximately \$33.8 million and \$74.9 million, respectively, in connection with major construction projects.

15. Retirement Plans and Other Post-Employment Benefits

Carnegie Mellon sponsors two defined contribution retirement plans for eligible faculty and staff, healthcare plans for retirees, and participates in a multi-employer pension fund for union staff. During the fiscal year ended June 30, 2015 the university consolidated two of its three defined contribution retirement plans. Retirement plan expense for the years ended June 30, 2016 and 2015 totaled \$34.8 million and \$34.3 million, respectively. Carnegie Mellon contributed \$0.5 million per year to the Central Pension Fund of the International Union of Operating Engineers, a multi-employer plan in fiscal years 2016 and 2015. See below for a discussion of the assets held in trust to fund post-retirement healthcare and other post-employment benefits.

Carnegie Mellon provides certain health care benefits for eligible retired employees. The liability for postretirement benefit obligations is recorded in the Consolidated Statements of Financial Position in accounts payable and other liabilities. Cumulative amounts recognized within post-retirement benefit obligations and not yet recognized as components of net periodic benefit cost consist of the following at June 30 (dollars in thousands):

| Total | \$(6,962) | \$(10,085) |
|----------------------|-----------|------------|
| Prior service credit | (110) | (513) |
| Net actuarial gain | \$(6,852) | \$(9,572) |
| | 2016 | 2015 |
| | | |

The components of net periodic benefit costs and other changes in benefit obligations recognized in the Consolidated Statements of Activities for the years ended June 30, 2016 and 2015 are as follows *(dollars in thousands)*:

| | 2016 | 2015 |
|-------------------------------------------------------------------------------|---------|-----------|
| Components of net periodic benefit cost | | |
| Service cost | \$1,078 | \$1,216 |
| Interest cost | 899 | 983 |
| Amortization of prior service credit | (403) | (403) |
| Amortization of net gain | (544) | (276) |
| Net periodic benefit cost | \$1,030 | \$1,520 |
| | | |
| Other changes in benefit obligation recognized in the statement of activities | | |
| Assumption changes and actuarial loss/(gain) | \$2,176 | \$(4,078) |
| Amortization of prior service credit | 403 | 403 |
| Amortization of net gain | 544 | 276 |
| Total recognized in nonoperating activities | \$3,123 | \$(3,399) |
| Total recognized in net periodic benefit cost and nonoperating activities | \$4,153 | \$(1,879) |
| | | |

During fiscal year 2017, amortization of \$0.1 million prior service credit and \$0.3 million actuarial gain is expected to be recognized as components of net periodic benefit cost. The discount rate used in determining the net periodic benefit cost was 4.5% and 4.4% for the years ended June 30, 2016 and 2015, respectively.

The reconciliation of the accumulated benefit obligation and funded status at June 30 is as follows *(dollars in thousands):*

| | 2016 | 2015 |
|------------------------------------------------|----------|----------|
| Benefit obligation, beginning of year | \$19,059 | \$21,307 |
| Service cost | 1,078 | 1,216 |
| Interest cost | 899 | 983 |
| Assumption changes and actuarial gain/(losses) | 2,176 | (4,078) |
| Benefit payments | (317) | (369) |
| Benefit obligation, end of year | \$22,895 | \$19,059 |
| Fair value of plans' assets | - | - |
| Funded status | \$22,895 | \$19,059 |

The assumed discount rate used for calculating the benefit obligation for the fiscal years ended June 30, 2016 and 2015 was 3.7% and 4.5%, respectively. An annual rate of increase in the per capita cost of covered health care benefits for the fiscal years ended June 30, 2016 and 2015 of 7.0% and 6.8%, respectively, was assumed. For the fiscal years ended June 30, 2016 and 2015, the rate was assumed to decrease gradually to 5.0% by 2026 and 2022, respectively, and remain at 5.0% thereafter.

The health care cost trend rate assumption has a significant effect on the amounts reported. Increasing the assumed healthcare cost trend rate by 1.0% in each year would increase the benefit obligation as of June 30, 2016 and 2015 by \$4.3 million and \$3.4 million, respectively, and increase the aggregate service cost and interest cost components for 2016 and 2015 by \$0.4 million and \$0.5 million, respectively. Decreasing the assumed health care cost trend rate by 1.0% in each year would decrease the benefit obligation as of June 30, 2016 and 2015 by \$3.4 million and \$2.7 million, respectively, and decrease the aggregate service cost and interest cost components for 2016 and 2015 by \$0.3 million and \$2.7 million, respectively.

Expected benefits to be paid in future fiscal years are as follows (dollars in thousands):

| Benefit June 30 | Retiree Contributions | Employer Payments | Total Expected Benefit Payments |
|-----------------|--------------------------|----------------------|------------------------------------------|
| 2017 | \$628 | \$360 | \$988 |
| 2018 | 901 | 512 | 1,413 |
| 2019 | 1,178 | 665 | 1,843 |
| 2020 | 1,454 | 789 | 2,243 |
| 2021 | 1,737 | 894 | 2,631 |
| 2022 - 2026 | 13,293 | 5,855 | 19,148 |

In conjunction with an agreement made with the federal government, Carnegie Mellon has established a separate trust, which is available to general creditors only in the event of insolvency. Assets in the trust to fund post-retirement health care and other post-employment benefits are \$21.6 million for both June 30, 2016 and 2015. These assets are reflected as investments in the accompanying Consolidated Statements of Financial Position.

16. Related Party Transactions

Sponsored projects revenue for fiscal years 2016 and 2015 includes \$4.4 million and \$4.7 million, respectively, received from MPC, a nonprofit related entity of Carnegie Mellon and the University of Pittsburgh. The revenue primarily represents federal funding from various contracts received by MPC, for which MPC has subcontracted to Carnegie Mellon for support of a supercomputer and related activities.

Carnegie Mellon is an owner as a tenant in common of the Bellefield Boiler Plant ("Bellefield") for the purpose of sharing of the steam produced by the plant. Bellefield operates such that all of the operating costs of the plant are passed to the owners in the form of steam prices. Carnegie Mellon is obligated for a percent of liabilities based upon use of steam produced by Bellefield. As of June 30, 2016 and 2015, Carnegie Mellon's percentage obligation was 15.2%. Included in other assets at June 30, 2016 and 2015 are \$0.4 million and \$0.6 million of advances, respectively, resulting primarily from operating surpluses. Included in occupancy and related expenses is \$4.1 million, for steam costs paid to Bellefield for the years ended June 30, 2016 and 2015, respectively.

Carnegie Mellon is one of fifteen designated institutions of higher learning and other charitable organizations named as beneficiaries of The Dietrich Foundation (the "Foundation") created by William S. Dietrich II pursuant to an Amended and Restated Declaration of Trust dated August 23, 2011. The Foundation came into existence as a Pennsylvania charitable trust on October 6, 2011 and was granted exemption from Federal income tax under section 501(c)(3) of the Internal Revenue Code, specifically as a Type I charitable supporting organization under section 509(a)(3). The Foundation's primary mission is to provide ongoing and increasing financial support to a number of educational institutions, largely in the greater Pittsburgh area, including Carnegie Mellon. The Foundation is governed by a Board of nine (9) Trustees. Five (5) of the Trustees are Educational Institutions Trustees, of which two (2) are appointed by Carnegie Mellon.

The Foundation is expected to make annual distributions that will be allocated among the pre-specified supported organizations, which are divided into two primary groups: (a) six (6) educational institutions which collectively shall receive 90% of the annual distribution amount, and (b) nine (9) other charitable organizations or component funds of such charitable organizations which collectively shall receive 10% of the annual distribution amount. Carnegie Mellon is included in the 90% group. As of June 30, 2016, Carnegie Mellon's distribution share remained at 53.5%.

The distributions to Carnegie Mellon have been recorded as permanently restricted contribution revenue as received and held in a permanently restricted endowment funds designated as Dietrich Foundation Endowment Funds. The endowed funds will be managed in accordance with Carnegie Mellon's generally applicable investment and disbursement policies in effect for its other permanently restricted endowments. Distributions made from the endowed funds will be used for the purposes authorized by the Foundation's Trustees. Distributions of \$11.4 million and \$10.1 million were received in fiscal years 2016 and 2015, respectively.

17. Conditional Asset Retirement Obligations

Conditional asset retirement obligations of \$5.2 million and \$5.0 million are included within accounts payable and other liabilities in the Consolidated Statements of Financial Position as of June 30, 2016 and 2015 respectively. These obligations primarily relate to asbestos abatement and other environmental remediation costs and are discounted to the present value of future cash flows as of the date of expected abatement.

The following table reconciles the asset retirement obligations as of June 30, 2016 and 2015 *(dollars in thousands):*

| | 2016 | 2015 |
|--------------------------------------------|---------|---------|
| Asset retirement obligations as of July 1 | \$5,042 | \$4,981 |
| Accretion expense | 202 | 218 |
| Liabilities assumed | - | - |
| Liabilities settled or disposed | (62) | (157) |
| Asset retirement obligations as of June 30 | \$5,182 | \$5,042 |

The discount rates used range from 3.3% to 5.1%. The expected aggregate undiscounted amount is \$7.4 million. The majority of the obligation will be paid out over the next 5 to 15 years.

18. Guarantees

In the ordinary course of business, Carnegie Mellon engages in transactions with third parties involving the provision of goods and/or services. The contracts for these transactions may require Carnegie Mellon to indemnify the third party or others under certain circumstances. The terms of indemnity vary from contract to contract. The amount of the liability associated with such indemnification obligations, if any, is not expected to be material.

Carnegie Mellon has contractually agreed to indemnify its trustees and officers, and in some cases its employees and agents, against certain liabilities incurred as a result of their service on behalf of or at the request of Carnegie Mellon and also advances, on behalf of those indemnified, the costs incurred by them in defending certain claims. Carnegie Mellon carries insurance that limits its exposure for this indemnification obligation. The amount of the liability associated with any known pending or threatened claims covered by this indemnification obligation, if any, is not expected to be material.

Carnegie Mellon has contractually agreed to indemnify specified parties in connection with bond offerings in which it has been involved. The indemnification obligation covers losses, claims, damages, liabilities and other expenses incurred by the underwriters as a result of any untrue statements or material omissions made by Carnegie Mellon in connection with the bond offerings. The amount of the liability associated with any known pending or threatened claims covered by this indemnification obligation, if any, is not expected to be material.

19. Subsequent Events

The university has performed an evaluation of subsequent events through October 27, 2016, the date on which the consolidated financial statements were issued.

In August 2016 the university accepted a \$20.0 million foundation grant. The grant is payable in three installments, \$2.5 million in fiscal year 2017, \$10.0 million in fiscal year 2018, and \$7.5 million in fiscal year 2019. Payment of the grant funds is contingent upon the university meeting certain conditions outlined in the grant agreement.

Marvell Litigation Settlement

On March 6, 2009, Carnegie Mellon instituted an action against Marvell Technology Group Ltd. ("MTGL") and Marvell Semiconductor, Inc. ("MSI") (collectively, "Marvell") alleging infringement of two patents owned by the university. On February 16, 2016, Carnegie Mellon and Marvell reached a settlement in the 2009 patent infringement lawsuit, entering into a Settlement Agreement and Patent License and a Release Agreement (collectively, the "Settlement Agreements") that include a mutual release of claims, covenant not to sue and a patent license. Under the Settlement Agreements, MTGL agreed to make a \$750.0 million payment to the university, which, after legal fees and related expenses, will be shared with the inventors in accordance with Carnegie Mellon's Intellectual Property Policy.

The final settlement proceeds were subject to clawback and certain related legal fees, expenses and payment to the inventors were contingent should there have been a Marvell bankruptcy prior to final dismissal of the action. At June 30, 2016, the \$750.0 million settlement payment received is reflected in cash and cash equivalents and deferred revenue and settlement proceeds in the Consolidated Statements of Financial Position. The net amount retained by the university (after legal fees and related expenses and distribution to the inventors in accordance with Carnegie Mellon's Intellectual Property Policy) of approximately \$271.0 million is expected to be recognized as a non-operating gain in future periods after dismissal of the action in the second quarter of fiscal year 2017.

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Hans W. Lange Deceased July 17, 2016

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W. Lowell Steinbrenner Retired Chairman, Contours, Ltd.

James M. Walton President Emeritus, Carnegie Institute

Konrad M. Weis Former President and CEO, Bayer Corporation

Opening Photography

- A Tartan Women's Basketball advances to Sweet 16
- B Student-designed water barrels
- C Project RE_ Reusing, Recycling and Re-envisioning building materials
- D CMU Rwanda joins Mastercard Foundation
- E Studio for Creative Inquiry, Security Blanket
- F CMU's Balance Recovery Technology for prosthetics
- G Chihully gift to the university
- H Presidential Scholars with Dr. Suresh
- I Drama faculty win TDF-Irene Sharaff Awards
- J Alumni Awards, Beverly R. Wheeler (H, 1976)
- K Boeing establishes analytics lab with CMU
- L The New Cohon Center Expansion
- M Student-created Inflatable Martian Greenhouse
- N How the brain does math neurology study
- O CMU beats national average of women in computer science
- P Greeks: service for philanthropy
- **Q** Cohon Center ribbon cutting ceremony

Cover: Sherman and Joyce Bowie Scott Hall

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