



# Report of the Treasurer

for the year ended

June 30, 2017



Massachusetts  
Institute of  
Technology

# Report of the Treasurer

for the year ended June 30, 2017



Massachusetts  
Institute of  
Technology

# **The Corporation**

## **2016–2017**

as of June 30, 2017

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President: L. Rafael Reif\*

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Nicolas E. Chammas

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Members’ names are listed in chronological order of election to each category.

\* *Member of the Executive Committee*

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# Report of the Treasurer

## To the Members of the Corporation

During fiscal 2017, the Institute further strengthened its financial position, enabling campus renewal and investment in strategic initiatives while securing MIT's future and core mission. MIT closed the year with net assets of \$19,125.1 million and net operating results of \$87.8 million. Pooled investments produced a return of 14.3 percent. We attribute our sound financial condition to the generosity of our donors and friends, the robust performance of MIT's invested assets, and careful management of growth and investment in the years since the financial crisis.

As a result of the growth of MIT's invested assets, support from investments now funds a larger share of Institute operations. This strength has been pivotal in furthering progress in research and education, including investments in financial aid and digital education. However, we are cognizant that the world has become more uncertain and financial markets more volatile. Besides beginning to plan for a sustainable level of academic and capital investments, we have been building a prudent level of financial reserves should a financial downturn diminish investment returns.

This strong financial foundation has made it possible for the Institute to realize a number of significant achievements that together are reshaping MIT's ability to catalyze innovation, and which pave the way for groundbreaking discovery that will extend MIT's positive impact across the world.

On October 26, 2016, MIT announced the creation of The Engine to support startup companies working on breakthrough scientific and technological innovations with the potential for transformative societal impact. Katie Rae, a veteran tech innovator, entrepreneur, and investor, was named president and chief executive officer of The Engine and managing partner of its first investment fund, The Engine Accelerator Fund I, LP. Just months after its launch, The Fund exceeded its goal in raising capital for investments to support startups in The Engine program at its newly renovated headquarters space located at 501 Massachusetts Avenue in Central Square. With funding secured and leadership in place, The Engine is now focused on selecting its first group of investments.

Following Cambridge Planning Board approvals for development of six sites in Kendall Square, enabling work for utilities

and creation of an underground parking structure are now underway. Construction activities spanning the next decade will provide a mix of affordable and market-rate housing, a new graduate student residence, more than 100,000 square feet of retail space, research facilities, innovation space, and generous open spaces. Design is complete for the first building, a graduate student housing tower that will include gathering space on the ground level, MIT childcare services on the second floor, and 454 units of graduate housing. The new location for the MIT Museum in Kendall Square will offer a public introduction to the campus, and an improved MBTA station will provide an engaging entrance to MIT.

In addition, the Institute is investing \$750.0 million to purchase the only remaining undeveloped parcel of land in Kendall Square. On January 18, 2017, MIT and the US federal government signed an agreement creating a path for MIT to redevelop 14 acres of federally owned land now home to the John A. Volpe National Transportation Systems Center. Through a multistep process, MIT will first build a facility to house the new Volpe Center, and once that construction is complete, the Institute will redevelop the excess land. MIT has filed a zoning petition for the redevelopment plan, which includes housing, retail, commercial, laboratory, and connected open space.

As we work to advance the Kendall Square program and increase the vibrancy of MIT's east campus, a number of efforts on the west campus are also taking shape. Planning has begun for a new undergraduate residence hall to be constructed on the current site of the West Garage parking facility on Vassar Street. The new dormitory, slated for occupancy by fall 2020, will provide approximately 450 beds and enable the renovation of other residence halls on campus. And a year after Advanced Functional Fabrics of America (AFFOA) was launched to accelerate innovation in manufacturing involving fibers and textiles, it opened its headquarters at 12 Emily Street and launched a state-of-the-art facility for prototyping advanced fabrics.

Building on MIT's commitment to action on climate change, the Institute joined with Boston Medical Center and the Post Office Square Redevelopment Corporation to enable the Summit Farms solar plant in North Carolina. The 600-acre solar farm, which began operating in March, represents the largest aggregated purchase of renewable energy by non-affiliated parties in the US. MIT's share of the purchase adds carbon-free energy to the grid

### Summary of Key Financial Highlights (10-year trend)

<i>(in millions of dollars)</i>	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Operating Revenues	\$ 2,408	\$ 2,644	\$ 2,663	\$ 2,751	\$ 2,990	\$ 3,187	\$ 3,124	\$ 3,291	\$ 3,427	\$ 3,552
Operating Expenses	2,294	2,461	2,383	2,571	2,744	2,909	2,919	3,111	3,350	3,464
Operating Results	114	183	280	180	246	278	206	180	77	88
Net Assets	12,770	9,946	10,324	12,106	12,495	13,858	16,028	17,507	16,929	19,125
Endowment	9,948	7,880	8,317	9,713	10,150	10,858	12,425	13,475	13,182	14,832
Net Borrowings	1,332	1,730	1,723	2,456	2,449	2,417	2,904	2,905	2,892	3,288

equivalent to 40 percent of MIT's annual campus electric use. The partnership serves as a model for other organizations working to advance climate change mitigation efforts.

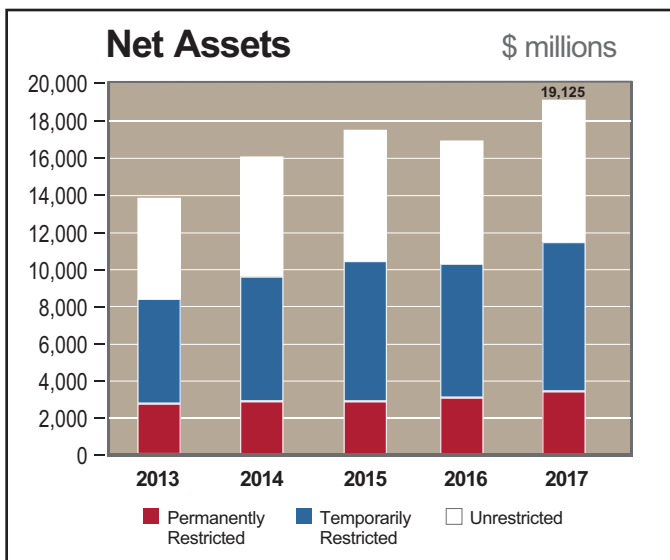
Strong financial results realized in recent years, as depicted in the Summary of Key Financial Highlights table, reflect MIT's commitment to protecting its long-term future through sound planning. Early in the fiscal year, and taking advantage of the unique interest rate environment after Brexit, MIT sold \$500.0 million in Series E taxable bonds, maturing in 2116 and yielding 3.885 percent. This yield marks a modern-era low for the cost of a US-dollar, 100-year bond issued by a college or university. The proceeds from these bonds further bolster the Institute's solid financial foundation, and together with fundraising, will enable execution of the capital plan into 2020.

The following are additional details regarding MIT's fiscal 2017 financial statements: Statements of Financial Position, Statement of Activities, and Statements of Cash Flows.

## Consolidated Statements of Financial Position

The discussion in this section highlights key elements of MIT's financial position—net assets; investments including endowment; land, buildings, and equipment; postretirement benefit assets and liabilities; and borrowings.

### Net Assets



Total net assets increased to \$19,125.1 million, an increase of 13.0 percent from fiscal 2016. Net assets are presented in three distinct categories to recognize the significant ways in which universities are different from profit-making organizations. These categories reflect the nature of the restrictions placed on gifts by donors.

In fiscal 2017, permanently restricted net assets increased \$336.1 million, or 10.9 percent, to \$3,420.3 million, primarily due to new gifts and pledges made and net investment gains on perma-

nently restricted, separately held endowment funds. Temporarily restricted net assets increased \$826.6 million, or 11.5 percent, to \$8,037.4 million, primarily due to investment gains on pooled permanently restricted endowment funds partially offset by endowment gains distributed for spending. The Commonwealth of Massachusetts requires that all universities located within the Commonwealth report accumulated market gains on both permanently and temporarily restricted pooled net assets as temporarily restricted net assets until appropriated for use.

Unrestricted net assets increased \$1,033.3 million, or 15.6 percent, to \$7,667.4 million, primarily due to investment gains on quasi-endowed funds.

## Investments

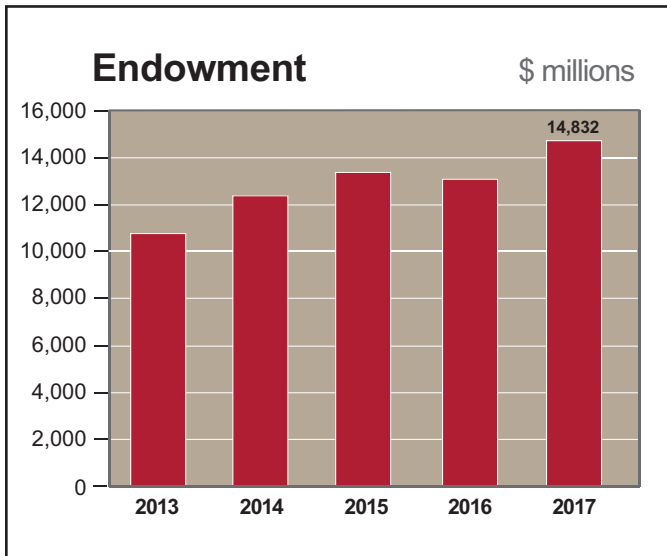
Investments at fair value were \$19,045.3 million as of fiscal year-end 2017, an increase of \$2,056.9 million, or 12.1 percent. The consolidated financial statements include both realized and unrealized gains and losses on investments. These amounts yielded a net gain of \$2,185.9 million in fiscal 2017, and \$254.3 million in fiscal 2016. The increase in the value of investments as of fiscal year-end 2017 was substantially driven by unrealized endowment gains.

MIT's investment policy is based on the primary goal of generating high real rates of return without exceptional volatility. To reduce volatility, the portfolio is broadly diversified. To generate high real rates of return, MIT's investment policy favors equity investments over fixed income instruments and is heavily weighted toward less efficient markets such as private equity, real estate, and real assets. MIT primarily invests through external fund managers, thereby allowing MIT to access the best investment talent globally. By identifying a wide variety of top-tier investment managers with specific competencies, MIT is able to construct a broadly diversified portfolio while accessing deep sector expertise. Decision authority for the selection of managers, direct investments, and asset allocation resides with MIT's Investment Management Company (MITIMCo). The Board of Directors of MITIMCo holds four regularly scheduled meetings during the fiscal year in which investment policy, performance, and asset allocation are reviewed.

## Endowment

Endowment assets, the largest component of total investments, are managed to maximize total investment return relative to appropriate risk. The market value of investments in endowment funds, excluding pledges for endowed purposes, totaled \$14,832.5 million as of fiscal year-end 2017, an increase of 12.5 percent compared to a total of \$13,181.5 million last year.

This year, MIT's pooled investments (Pool A) produced a return of 14.3 percent. Investment income and a portion of gains are distributed for spending in a manner that preserves the long-term purchasing power of the endowment. Endowment funds invested in Pool A, MIT's primary investment pool, receive distributions based on relative ownership, which is valued monthly.



## Land, Buildings, and Equipment

Land, buildings, and equipment had a net book value of \$3,397.1 million as of fiscal year-end 2017, an increase of \$304.6 million, or 9.9 percent, mainly driven by expenditures for research and educational facilities. During fiscal 2017, new construction and major renovation projects placed into service totaled \$211.6 million. For academic buildings, the Institute currently has a total of 123 capital projects under construction with a cumulative cost of \$419.3 million.

MIT continues to demonstrate its commitment to improving housing for both undergraduate and graduate students and their families. As noted above, the construction of the Vassar Street undergraduate residence at the current site of the West Garage (W45), slated for occupancy in the fall of 2020, will enable the sequential renewal of a number of undergraduate residences over time with the provision of approximately 450 beds. Extensive renovations to New House (W70) have just begun, with its six houses to be fully renovated over the next two years, and as previously indicated, design is complete for a new graduate housing tower with 454 units to be constructed in Kendall Square.

Addressing deferred maintenance continues to be prioritized as an integral part of overall campus renewal. Fiscal 2016 was the first year in recent decades that realized a reduction in deferred maintenance, and progress continued in fiscal 2017. For fiscal 2017, MIT's campus-wide facility condition index (FCI), which is the ratio of deferred maintenance to replacement value, decreased from 0.24 to 0.22. A combination of extensive renovations to buildings described below and system renewal projects benefiting more than 70 campus buildings contributed to this continued reduction. At the end of fiscal 2017, the total backlog of deferred maintenance was \$1.6 billion, which is equal to \$126 per square foot, down from a peak of \$150 per square foot in fiscal 2014. There have been reports of increasing deferred maintenance at higher education institutions in the United States, while MIT is experiencing a decline because of concerted efforts to address the situation. The Institute remains on track to meet

its goal of a 0.15 FCI, or \$77 per square foot, by the year 2030.

Following the renovation of Building 2, home to the Department of Mathematics and portions of Chemistry and the first of the main group buildings to undergo major renewal, the Institute is investing in infrastructure renewal for the main group. Work is now underway to renew the façades of Buildings 4, 8, and 10 facing MIT.nano, which continues on schedule for occupancy next summer. This includes replacing windows and restoring the brick and surfaces of the façades. In close proximity to the main group, Building 31 is being fully renovated to modernize mechanical and electrical systems while addressing programming needs for Mechanical Engineering and Aeronautics and Astronautics. The project, which is nearing completion for occupancy this fall, includes a new test space for flying robotics and an updated and relocated wind tunnel.

Nearby, the newly renovated Samuel Tak Lee Building (9) opened in September 2016 for use by the Department of Urban Studies and Planning and the Center for Real Estate. In addition to the overall modernization of its classroom and office spaces, the building received major infrastructure upgrades, including new windows and air handling equipment. The second floor showcases a flexible, interactive workspace supported by cutting-edge presentation technology.

The Atlas Service Center opened in March 2017 in newly renovated space located in E17. The Center complements the systems, services, and resources available through Atlas online with a physical space that brings together the multitude of services where community members can obtain in-person guidance.

On the west campus, the renovation of a brick industrial building at 12 Emily Street (NW98) was completed earlier this year as a new home for the MIT Sea Grant College Program relocated from Kendall Square and for AFFOA, as mentioned earlier. In addition, the renovation of a former warehouse at 345 Vassar Street (W97) for MIT's Theater Arts program was recently completed, providing rehearsal space, costume and scene design shops, and a two-story theater performance space.

The Massachusetts Department of Environmental Protection approved an upgrade to MIT's Central Utilities Plant. Expected to be operational in the spring of 2020, the upgrade will support MIT.nano and future campus needs, improve reliability and resiliency, and help MIT meet greenhouse gas reduction targets while moving forward on our commitment to reduce and eventually eliminate the use of fuel oil. MIT continues to advance sustainability goals, with MIT.nano, Building 31, 12 Emily Street, and the Vassar Street residence all on track to realize LEED Gold certification.

In accordance with MIT 2030, a flexible framework that guides and supports the Institute's ongoing physical and financial stewardship, MIT expects future pressure on operating results due to increasing depreciation and borrowing costs associated with the above and anticipated capital projects that actively address current and future academic needs and opportunities.



## Postretirement Benefit Assets and Liabilities

The defined benefit pension plan had assets of \$3,600.2 million as of fiscal year-end 2017, an increase of \$268.0 million from fiscal year-end 2016. The plan's projected liabilities were \$3,921.7 million as of fiscal year-end 2017, up \$126.4 million from a year earlier. This resulted in a \$141.6 million decrease in net pension liabilities, totaling \$321.5 million as of fiscal year-end 2017.

MIT also maintains a postretirement welfare benefit plan that covers retiree expenses associated with medical and life insurance benefits. This plan had assets of \$623.5 million as of fiscal year-end 2017, an increase of \$74.3 million over fiscal 2016. The plan's projected liabilities were \$570.5 million as of fiscal year-end 2017, down \$11.6 million from fiscal 2016. This resulted in the plan's changing from a \$32.9 million net liability position at fiscal year-end 2016 to a \$53.0 million net asset position at fiscal year-end 2017, an improvement of \$85.9 million.

The changes in asset values of both plans in 2017 were a function of payments made to beneficiaries and investment performance. The change in pension liabilities was driven by higher pension obligations due to one more year of benefits being earned by MIT's employees offset by increases in the discount rates used to discount expected future cash payments to MIT retirees. The discount rates for each plan were derived by identifying a theoretical settlement portfolio of high-quality corporate bonds sufficient to provide for the plan's projected benefit obligations. The year-over-year discount rates increased 6 and 11 basis points as of June 30 for the defined benefit pension plan and retiree welfare benefit plan, respectively, due to the prevailing interest rate environment at fiscal year-end 2017.

On an accounting basis at fiscal year-end 2017, the defined benefit pension plan had a funding level of 91.8 percent, up from 87.8 percent one year earlier. The postretirement welfare benefit plan had a funding level of 109.3 percent at fiscal year-end 2017, an improvement from 94.3 percent one year earlier. There were no designated contributions to the defined benefit plan and a \$17.1 million contribution to the postretirement welfare benefit plan during fiscal 2017. The investments of both plans' assets are managed by MITIMCo.

MIT also offers a 401(k) plan to its employees, which is not reflected in the Consolidated Statements of Financial Position. Assets in this plan are invested at the direction of participants in an array of investment funds. The plan's investment market value was \$4,410.0 million as of fiscal year-end.

## Net Borrowings

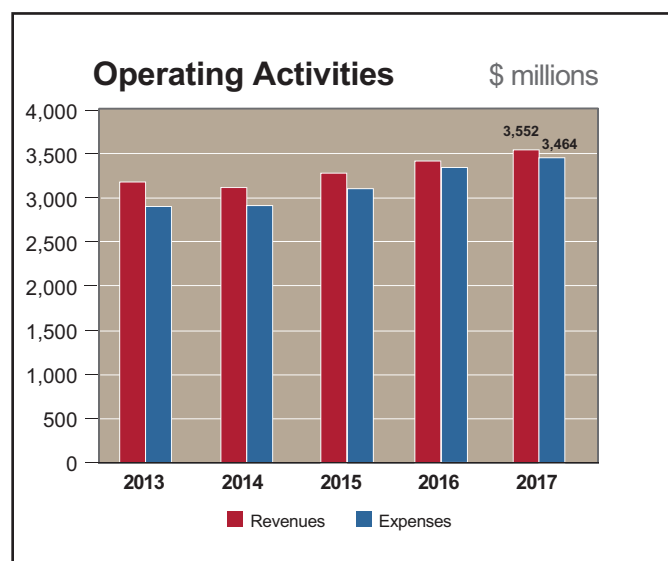
In fiscal year 2017, net borrowings increased \$395.5 million, or 13.7 percent, to \$3,287.5 million. In August 2016, MIT issued \$500.0 million in Series E Taxable Bonds, maturing in 2116 and yielding 3.885 percent. The proceeds from these bonds will be used to advance MIT's ongoing campus renewal and development program, including academic and research capital projects within the MIT 2030 framework. Offsetting the increase in borrowings from Series E were principal payments totaling \$98.1 million made in July of 2016.

MIT's financial strength is reviewed periodically by both Moody's Investors Service and S&P Global Ratings. In July 2016, these agencies rated the most recent bond issuance and reaffirmed MIT's credit as "Aaa" and "AAA," their highest rating levels.

## Consolidated Statement of Activities

### Operating Activities

MIT ended fiscal 2017 with operating results of \$87.8 million. This is \$10.8 million, or 14.1 percent, higher than the fiscal 2016 result. Operating revenues increased \$125.0 million, or 3.6 percent, to \$3,551.8 million, while operating expenses increased \$114.1 million, or 3.4 percent, to \$3,464.0 million. Year-over-year comparisons of operating revenues and expenses are presented on the graph above.

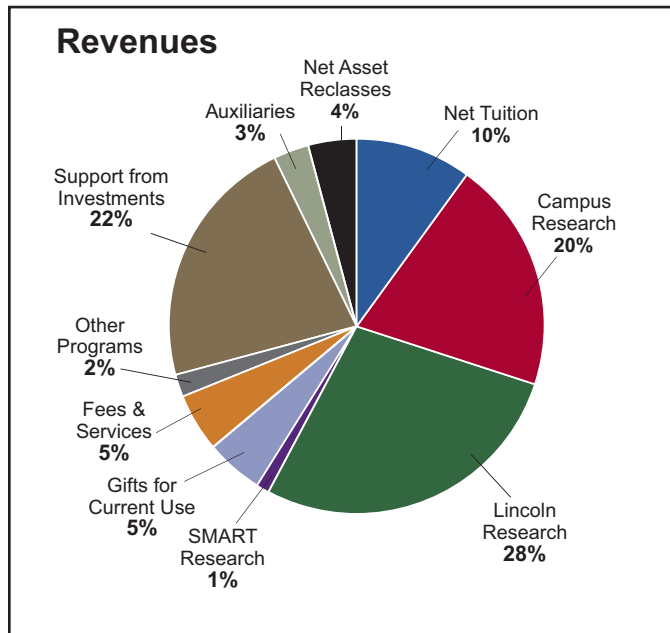


### Operating Revenues

MIT's operating revenues include tuition, research, unrestricted gifts and bequests for current use, fees and services, other programs, endowment distribution and income from other investments, auxiliaries, and payments on pledges for unrestricted purposes (included within net asset reclassifications and transfers).

Tuition revenue for graduate, undergraduate, and non-degree programs net of financial aid grew by \$21.5 million, or 6.3 percent, to \$361.5 million. This growth was driven by an increase in non-degree revenue of \$17.7 million, or 39.3 percent, and an increase of \$3.8 million, or 1.3 percent, in undergraduate and graduate net tuition. The growth in non-degree revenue was driven by Executive Education at Sloan and online courses in the Office of Digital Learning, Media Lab, and Professional Education. Net undergraduate tuition decreased \$4.0 million, or 3.6 percent, as financial aid outpaced growth in gross tuition associated with a 3.7 percent tuition rate increase. Financial aid for undergraduate students increased by 12.0 percent to \$108.9 million. Graduate net tuition grew by \$7.8 million, or 4.3 percent, as increased tuition associated with tuition rates more than offset the increased financial aid. Financial aid for graduate students grew by 5.8 percent to \$209.7 million.

Research revenues for on-campus departments, labs, and centers at MIT increased \$5.5 million, or 0.8 percent, to \$706.9 million in 2017. Research revenues for Lincoln Laboratory increased \$13.3 million, or 1.4 percent, to \$969.3 million, and for the Singapore-MIT Alliance for Research and Technology (SMART), increased \$0.5 million, or 1.4 percent, to \$33.3 million.



Campus indirect research revenue increased \$10.8 million, or 5.8 percent, while campus direct research revenue decreased \$5.3 million, or 1.0 percent, resulting in a \$5.5 million, or 0.8 percent, increase overall. The decrease in MIT's campus direct research revenue is being driven by a decrease in federally sponsored research revenue, which decreased by 3.0 percent compared to the prior fiscal year, with the largest decrease being related to the National Aeronautics and Space Administration. Non-federally sponsored direct research revenue increased by 3.7 percent, primarily driven by industrial and nonprofit sponsorship. The increase in Lincoln Laboratory research is the result of increased federal funding from the Department of Defense. MIT's modified total direct research expenditures, which form the basis for recovery of indirect costs, increased by \$23.6 million, or 2.3 percent, in fiscal 2017.

While research and net tuition comprise more than half of MIT's operating revenue, the Institute also experienced significant growth in support from investments. Support from investments increased \$55.6 million, or 7.6 percent, primarily due to an increase in endowment distribution in support of operations. The effective spending rate on endowed funds was 4.7 percent, or 5.0 percent on a three-year-average basis, in fiscal 2017. Gifts and bequests for current use increased \$25.3 million, or 15.6 percent, as the MIT Campaign for a Better World continued in fiscal 2017.

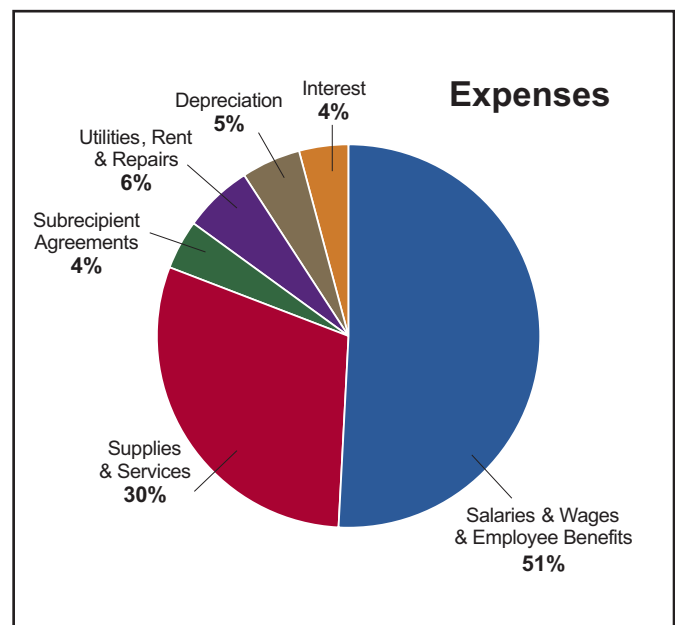
### Operating Expenses

MIT's operating expenses include salaries and wages, employee benefits, supplies and services, subrecipient agreements, utilities,

rent and repairs, depreciation, and interest. Operating expenses grew to \$3,464.0 million, an increase of \$114.1 million, or 3.4 percent.

Overall Institute salary expenses rose 6.0 percent while employee benefits expenses rose 8.2 percent. Average annualized salaries and wages for campus grew by 3.6 percent, while full-time-equivalent employees grew by 3.2 percent. The increase in employee benefits was primarily driven by increases in costs associated with the postretirement benefit plans and medical and dental benefit costs.

During fiscal 2017, expenses related to supplies and services decreased \$25.5 million, or 2.4 percent, to \$1,058.7 million. Lincoln Laboratory was down \$19.3 million, or 5.5 percent, related to reduced expenses for equipment. Campus was down \$7.0 million, or 1.0 percent.



### Non-Operating Revenues, Gains, and Losses Summary

Non-operating activities contributed significantly to a \$2,196.0 million increase in MIT's fiscal 2017 net assets, which totaled \$19,125.1 million. Net appreciation on investments, less the endowment spending distribution, pledge revenue, and changes in retirement plan obligations and assets, were the principal contributors to the net positive non-operating performance. Net appreciation on investments less the endowment spending distribution, totaled \$1,545.0 million. Pledge revenue and changes in retirement plan obligations and assets totaled \$287.2 million and \$256.2 million, respectively.

### Gifts and Pledges

Gifts to MIT support scholarships, fellowships, professorships, research, educational programming, and student life activities, as well as construction and renovation of buildings. Gift and pledge revenue for fiscal 2017 totaled \$573.5 million, an increase of 22.2 percent from the fiscal 2016 total of \$469.2 million.

Gifts from individuals represented 54.7 percent of new gifts and pledges in fiscal 2017, up from 52.4 percent in fiscal 2016. Gifts from foundations represented 32.4 percent of new gifts and pledges in fiscal 2017, down from 37.4 percent in fiscal 2016. Gifts from corporations and other sources represented 12.9 percent of new gifts and pledges in fiscal 2017, up from 10.2 percent in fiscal 2016. New gifts and pledges for research and education were the largest categories of contributions for fiscal 2017.

## Consolidated Statements of Cash Flows

The consolidated statements of cash flows divide cash inflows and outflows into three categories: operating, investing, and financing. Although this division is a requirement of generally accepted accounting principles (GAAP), when reviewing the cash flow of a nonprofit organization such as MIT, it is important to note the investing activities as presented in the cash flow are an integral part of operations, since a large portion of operating activity is funded through distributions from pooled investments.

Net operating cash flow consumed \$230.5 million in fiscal 2017. Net operating cash flow resulted from a total increase in net assets, adjusted for non-cash items (depreciation, net gain on investments, change in retirement plans' net assets, etc.), offset by changes in working capital, excluding cash and debt. The net of pledges receivable, accounts receivable, accounts payable, and other operating assets and liabilities used \$62.8 million of operating cash flow in fiscal 2017. Net investing activities used \$316.9 million in cash due to proceeds from sales of investments to cover the Institute's endowment spending policy, offset by spending on capital projects and purchases of investments, in fiscal 2017. Cash provided by financing activities was \$498.2 million in fiscal 2017, driven primarily by proceeds from borrowings.

MIT's full consolidated financial statements and notes further describing our financial position, activities, and cash flows through June 30, 2017, are included on the following pages.

## Closing Remarks

We begin fiscal 2018 with the financial strength to enable MIT's core mission, the flexibility to pursue strategic initiatives, and the resiliency to respond to economic uncertainty amid pressure on federal research funding and volatile global events. The Institute's ability to successfully steward MIT's future will be further strengthened by the Campaign for a Better World.

The launch of The Engine, redevelopment of the Volpe site, and commencement of construction at the first of six planned sites in Kendall Square are visible and undeniable demonstrations of MIT's commitment to investing in the surrounding innovation ecosystem. We are mindful that these developments have amplified pressures on housing and transportation, and are actively working to alleviate these stresses. Together, we are shaping an environment where our faculty and students, scientists and entrepreneurs can achieve transformational innovations and positively impact the world.

These accomplishments reflect the enduring dedication of our faculty, students, staff, alumni, friends, and members of the MIT Corporation to addressing the world's great challenges, and I am grateful for their generosity and commitment.

Respectfully submitted,



Israel Ruiz  
Executive Vice President and Treasurer  
September 8, 2017

# Massachusetts Institute of Technology

## Consolidated Statements of Financial Position

at June 30, 2017 and 2016

<i>(in thousands of dollars)</i>	2017	2016
<b>Assets</b>		
Cash . . . . .	\$ 399,825	\$ 449,008
Accounts receivable, net . . . . .	225,648	201,012
Pledges receivable, net, at fair value . . . . .	533,227	609,065
Contracts in progress, principally US government. . . . .	82,334	80,803
Deferred charges, inventories, and other assets . . . . .	155,754	136,065
Student notes receivable, net . . . . .	37,021	42,137
Investments, at fair value . . . . .	19,045,347	16,988,407
Net asset position – retiree welfare plan . . . . .	52,986	-
Land, buildings, and equipment (at cost of \$4,990,128 for June 2017; \$4,572,257 for June 2016), net of accumulated depreciation . . . . .	3,397,070	3,092,429
<b>Total assets . . . . .</b>	<b>\$ 23,929,212</b>	<b>\$ 21,598,926</b>
<b>Liabilities and Net Assets</b>		
<b>Liabilities:</b>		
Accounts payable, accruals, and other liabilities . . . . .	\$ 457,514	\$ 528,688
Liabilities due under life income fund agreements, at fair value . . . . .	154,470	145,216
Deferred revenue and other credits . . . . .	126,531	136,426
Advance payments . . . . .	426,562	435,220
Borrowings, net of unamortized issuance costs . . . . .	3,287,545	2,892,093
Government advances for student loans . . . . .	30,015	36,173
Net liability position – defined benefit plan . . . . .	321,517	463,101
Net liability position – retiree welfare plan . . . . .	-	32,928
<b>Total liabilities . . . . .</b>	<b>4,804,154</b>	<b>4,669,845</b>
<b>Net Assets:</b>		
Unrestricted . . . . .	7,667,379	6,634,100
Temporarily restricted. . . . .	8,037,426	7,210,822
Permanently restricted . . . . .	3,420,253	3,084,159
<b>Total net assets . . . . .</b>	<b>19,125,058</b>	<b>16,929,081</b>
<b>Total liabilities and net assets . . . . .</b>	<b>\$ 23,929,212</b>	<b>\$ 21,598,926</b>

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

# Massachusetts Institute of Technology

## Consolidated Statement of Activities

for the year ended June 30, 2017

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

<i>(in thousands of dollars)</i>	2017			Total	
	Unrestricted	Temporarily Restricted	Permanently Restricted	2017	2016
<b>Operating Activities</b>					
<b>Operating Revenues</b>					
Tuition and similar revenues, net of discount of \$318,610 in 2017 and \$295,419 in 2016 . . .	\$ 361,476	\$ -	\$ -	\$ 361,476	\$ 340,005
Research revenues:					
Campus . . . . .	706,939	-	-	706,939	701,417
Lincoln . . . . .	969,257	-	-	969,257	955,994
SMART . . . . .	33,284	-	-	33,284	32,818
Total research revenues . . . . .	1,709,480	-	-	1,709,480	1,690,229
Gifts and bequests for current use . . . . .	187,524	-	-	187,524	162,257
Fees and services . . . . .	168,266	-	-	168,266	183,020
Other programs . . . . .	82,141	-	-	82,141	98,837
Support from investments:					
Endowment . . . . .	628,669	-	-	628,669	588,708
Other investments . . . . .	158,358	-	-	158,358	142,720
Total support from investments . . . . .	787,027	-	-	787,027	731,428
Auxiliary enterprises . . . . .	127,720	-	-	127,720	117,460
Net asset reclassifications and transfers . . . . .	128,154	-	-	128,154	103,601
Total operating revenues . . . . .	\$ 3,551,788	\$ -	\$ -	\$ 3,551,788	\$ 3,426,837
<b>Operating Expenses</b>					
Salaries and wages . . . . .	\$ 1,415,024	\$ -	\$ -	\$ 1,415,024	\$ 1,335,024
Employee benefits . . . . .	337,030	-	-	337,030	311,557
Supplies and services . . . . .	1,058,683	-	-	1,058,683	1,084,219
Subrecipient agreements . . . . .	139,159	-	-	139,159	139,913
Utilities, rent, and repairs . . . . .	213,978	-	-	213,978	204,265
Depreciation . . . . .	168,809	-	-	168,809	158,443
Interest expense . . . . .	131,341	-	-	131,341	116,478
Total operating expenses . . . . .	3,464,024	-	-	3,464,024	3,349,899
Results of operations . . . . .	\$ 87,764	\$ -	\$ -	\$ 87,764	\$ 76,938
<b>Non-Operating Activities</b>					
Pledge revenue . . . . .	\$ -	\$ 181,620	\$ 105,625	\$ 287,245	\$ 197,822
Gifts and bequests . . . . .	-	-	98,746	98,746	109,083
Investment income . . . . .	-	1,157	2,586	3,743	4,765
Net gain on investments . . . . .	875,361	1,201,170	109,389	2,185,920	254,303
Distribution of accumulated investment gains . . . . .	(235,197)	(405,680)	-	(640,877)	(589,402)
Other changes . . . . .	28,252	1,415	15,739	45,406	(23,668)
Postretirement plan changes other than net periodic benefit cost . . . . .	256,184	-	-	256,184	(503,732)
Net asset reclassifications and transfers . . . . .	20,915	(153,078)	4,009	(128,154)	(103,601)
Total non-operating activities . . . . .	945,515	826,604	336,094	2,108,213	(654,430)
Increase (decrease) in net assets . . . . .	1,033,279	826,604	336,094	2,195,977	(577,492)
Net assets at the beginning of the year . . . . .	6,634,100	7,210,822	3,084,159	16,929,081	17,506,573
<b>Net assets at the end of the year . . . . .</b>	<b>\$ 7,667,379</b>	<b>\$ 8,037,426</b>	<b>\$ 3,420,253</b>	<b>\$ 19,125,058</b>	<b>\$ 16,929,081</b>

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

# Massachusetts Institute of Technology

## Consolidated Statements of Cash Flows

for the years ended June 30, 2017 and 2016

<i>(in thousands of dollars)</i>	2017	2016
<b>Cash Flow from Operating Activities</b>		
Increase (decrease) in net assets . . . . .	\$ 2,195,977	\$ (577,492)
Adjustments to reconcile change in net assets to net cash used in operating activities:		
Net gain on investments . . . . .	(2,185,920)	(254,303)
Change in retirement plans' net assets . . . . .	(227,498)	442,796
Depreciation . . . . .	168,809	158,443
Donated securities received . . . . .	(39,281)	(37,893)
Proceeds from sale of donated securities . . . . .	33,302	23,448
Net (loss) gain on life income funds . . . . .	(29,824)	8,580
Amortization of bond premiums and discounts and other adjustments . . . . .	13,294	21,351
Change in operating assets and liabilities:		
Pledges receivable . . . . .	75,838	(50,970)
Accounts receivable . . . . .	(24,636)	(28,490)
Contracts in progress . . . . .	(1,531)	(14,363)
Deferred charges, inventories, and other assets . . . . .	(19,689)	210
Accounts payable, accruals, and other liabilities, excluding building and equipment accruals . . . . .	(83,509)	84,768
Liabilities due under life income fund agreements . . . . .	9,254	3,270
Deferred revenue and other credits . . . . .	(9,895)	(15,507)
Advance payments . . . . .	(8,658)	12,545
Reclassify investment income . . . . .	(3,743)	(4,765)
Reclassify contributions restricted for long-term investment . . . . .	(92,767)	(94,638)
Net cash (used in) operating activities . . . . .	<u>(230,477)</u>	<u>(323,010)</u>
<b>Cash Flow from Investing Activities</b>		
Purchase of land, buildings, and equipment . . . . .	(473,134)	(424,543)
Purchases of investments . . . . .	(32,028,007)	(22,221,841)
Proceeds from sale of investments . . . . .	32,186,808	23,001,121
Student notes issued . . . . .	(14,453)	(17,941)
Collections from student notes . . . . .	11,838	12,665
Net cash (used in) provided by investing activities . . . . .	<u>(316,948)</u>	<u>349,461</u>
<b>Cash Flow from Financing Activities</b>		
Contributions restricted for investment in endowment . . . . .	92,767	94,638
Proceeds from sale of donated securities restricted for endowment . . . . .	5,980	14,445
Increase in investment income for restricted purposes . . . . .	3,743	4,765
Proceeds from borrowings . . . . .	500,000	-
Repayment of borrowings . . . . .	(98,090)	(9,585)
Increase in government advances for student loans . . . . .	(6,158)	612
Net cash provided by financing activities . . . . .	<u>498,242</u>	<u>104,875</u>
Net (decrease) increase in cash . . . . .	(49,183)	131,326
Cash at the beginning of the year . . . . .	449,008	317,682
<b>Cash at the end of the year . . . . .</b>	<b><u>\$ 399,825</u></b>	<b><u>\$ 449,008</u></b>

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

# Notes to Consolidated Financial Statements

## A. Accounting Policies

### Basis of Presentation

The accompanying financial statements have been prepared in accordance with generally accepted accounting principles (GAAP) in the United States of America. The consolidated financial statements (financial statements) include MIT and its wholly owned subsidiaries.

Net assets, revenues, expenses, and gains and losses are classified into three categories based on the existence or absence of donor-imposed restrictions. The categories are permanently restricted, temporarily restricted, and unrestricted net assets. Unconditional promises to give (pledges) are recorded as receivables and revenues within the appropriate net asset category.

Permanently restricted net assets include gifts, pledges, trusts and remainder interests, and income and gains that are required by donors to be permanently retained. Pledges, trusts, and remainder interests are reported at their estimated fair values.

Temporarily restricted net assets include gifts, pledges, trusts and remainder interests, and income and gains that can be expended but for which restrictions have not yet been met. Such restrictions include purpose restrictions where donors have specified the purpose for which the net assets are to be spent, or time restrictions imposed by donors or implied by the nature of the gift (e.g., capital projects, pledges to be paid in the future, life income funds), or by interpretations of law (net gains on permanently restricted gifts that have not been appropriated for spending). Gifts specified for the acquisition or construction of long-lived assets are reported as temporarily restricted net assets until the monies are expended and the long-lived assets (i.e., buildings) are put into use, at which point they are reclassified to unrestricted net assets. Net unrealized losses on permanently restricted endowment funds for which the book value exceeds market value are recorded as a reduction to unrestricted net assets.

Unrestricted net assets are all the remaining net assets of MIT. Donor-restricted gifts and distributed restricted endowment income for which the restriction is met within the same year of gift or distribution is reported as unrestricted revenue. Gifts of long-lived assets are reported as unrestricted revenue.

Net asset reclassifications and transfers consist primarily of payments on unrestricted pledges and use of building funds in accordance with donor restrictions for buildings put into use during the year. Expirations of temporary restrictions on net assets, release of permanent restrictions by a donor, and change of restrictions imposed by donors are also reported as reclassifications of net assets among unrestricted, temporarily restricted, and permanently restricted net assets.

MIT administers its various funds, including endowments, funds functioning as endowments, school or departmental funds, and related accumulated gains in accordance with the principles of

Fund Accounting. Gifts are recorded in fund accounts and investment income is distributed to funds annually. Income distributed to funds may be a combination of capital appreciation and yield pursuant to MIT's total return investment and spending policies. Each year, the Executive Committee of the Corporation approves the rates of distribution of investment return to funds from MIT's investment pools. (See Note J for further information on income distributed to funds.)

MIT's operations include tuition, research revenues, unrestricted gifts and bequests for current use, fees and services, other programs, support from investments, net asset reclassifications and transfers, and operating expenditures. Results of operations are displayed in the Consolidated Statement of Activities.

### Tax Status

MIT is a nonprofit organization that is tax-exempt under Section 501(c)(3) of the Internal Revenue Code, originally recognized in October 1926, with the most recent affirmation letter dated July 2001.

US GAAP requires MIT to evaluate tax positions taken by the Institute and recognize a tax liability (or asset) if the Institute has taken an uncertain position that more likely than not would not be sustained upon examination by the IRS. MIT has analyzed the tax positions taken and has concluded that as of June 30, 2017, there are no significant uncertain positions taken or expected to be taken that would require recognition of a liability (or asset) or disclosure in the financial statements.

### Cash

Certain cash balances, totaling \$68.9 million and \$122.3 million at June 30, 2017 and 2016, respectively, are restricted for use under certain sponsored research agreements or are held on behalf of a related party.

The Institute had approximately \$390.2 million and \$432.1 million at June 30, 2017 and 2016, respectively, of its cash accounts with a single institution. The Institute has not experienced any losses associated with deposits at this Institution.

### Advance Payments

Amounts received by MIT from the US government, corporations, industrial sources, foundations, and other non-MIT sponsors under the terms of agreements that generally require the exchange of assets, rights, or privileges between MIT and the sponsor are recorded as advance payments. Revenue is recognized as MIT fulfills the terms of the agreements.

## A. Accounting Policies (continued)

### Land, Buildings, and Equipment

Land, buildings, and equipment are shown at cost when purchased, or at fair value as of the date of a gift when received as a gift, net of accumulated depreciation. When expended, costs associated with the construction of new facilities are shown as construction in progress until such projects are completed and put into use. Depreciation is computed on a straight-line basis over the estimated useful lives of 25 to 50 years for buildings, 3 to 25 years for equipment, and 4 to 6 years for software.

Fully depreciated assets were removed from the financial statements in the amount of \$50.9 million and \$39.4 million during 2017 and 2016, respectively. Land, buildings, and equipment at June 30, 2017 and 2016, are shown in Table 1 below.

	2017	2016
Land . . . . .	\$ 93,407	\$ 83,610
Land improvements . . . . .	72,773	64,434
Educational buildings . . . . .	3,986,375	3,772,199
Equipment . . . . .	292,087	289,980
Software . . . . .	61,730	56,021
Total . . . . .	4,506,372	4,266,244
Less: accumulated depreciation	(1,593,058)	(1,479,828)
Construction in progress . . . .	479,865	301,326
Software projects in progress . .	3,891	4,687
<b>Net land, buildings, and equipment . . . . .</b>	<b>\$ 3,397,070</b>	<b>\$ 3,092,429</b>

Depreciation expense was \$168.8 million in 2017 and \$158.4 million in 2016. Net interest expense of \$10.6 million and \$9.5 million was capitalized during 2017 and 2016, respectively, in connection with MIT's construction projects.

### Tuition and Student Support

Tuition and similar revenues, shown in Table 2 below, include tuition and fees for degree programs as well as tuition and fees for executive and continuing education programs at MIT.

	2017	2016
Undergraduate and graduate programs . . . . .	\$ 617,368	\$ 590,415
Executive and continuing education programs . . . . .	62,718	45,009
Total . . . . .	680,086	635,424
Less: tuition discount . . . . .	(318,610)	(295,419)
<b>Net tuition and similar revenues</b>	<b>\$ 361,476</b>	<b>\$ 340,005</b>

Tuition support is awarded to undergraduate students by MIT based on need. Graduate students are provided with tuition support in connection with research assistance, teaching assistance, and fellowship appointments. Tuition support from MIT sources is displayed as tuition discount. Total student support granted to students was \$555.3 million and \$520.5 million in 2017 and 2016, respectively. Of that amount, \$169.0 million in 2017 and \$163.5 million in 2016 was aid from sponsors. Components of student support are detailed in Table 3 below.

	2017			2016		
	Institute Sources	External Sponsors	Total Student Support	Institute Sources	External Sponsors	Total Student Support
Undergraduate tuition support . . .	\$ 108,930	\$ 18,002	\$ 126,932	\$ 97,262	\$ 15,640	\$ 112,902
Graduate tuition support . . . . .	209,680	60,609	270,289	198,157	60,287	258,444
Fellow stipends . . . . .	23,344	16,174	39,518	22,718	16,013	38,731
Student employment . . . . .	44,301	74,227	118,528	38,876	71,516	110,392
<b>Total . . . . .</b>	<b>\$ 386,255</b>	<b>\$ 169,012</b>	<b>\$ 555,267</b>	<b>\$ 357,013</b>	<b>\$ 163,456</b>	<b>\$ 520,469</b>



## A. Accounting Policies (continued)

### Sponsored Research

Direct and indirect categories of research revenues are shown in Table 4 below.

<i>(in thousands of dollars)</i>	2017	2016
Direct:		
Campus . . . . .	\$ 508,677	\$ 513,991
Lincoln. . . . .	926,871	908,506
SMART . . . . .	32,981	32,416
<b>Total direct. . . . .</b>	<b>1,468,529</b>	<b>1,454,913</b>
Indirect:		
Campus . . . . .	\$ 198,262	\$ 187,426
Lincoln. . . . .	42,386	47,488
SMART . . . . .	303	402
<b>Total indirect . . . . .</b>	<b>240,951</b>	<b>235,316</b>
<b>Total research revenues</b>	<b>\$ 1,709,480</b>	<b>\$ 1,690,229</b>

Revenue associated with contracts and grants is recognized as related costs are incurred. The capital costs of buildings and equipment are depreciated over their estimated life cycle, and the sponsored research recovery allowance for depreciation is treated as indirect research revenue. MIT has recorded reimbursement of indirect costs relating to sponsored research at negotiated fixed billing rates. The revenue generated by the negotiated rates is adjusted each fiscal year to reflect any variance between the negotiated fixed rates and rates based on actual cost. The actual cost rate is audited by the Defense Contract Audit Agency (DCAA) and a final fixed-rate agreement is signed by the US government and MIT. The variance between the negotiated fixed rate and the final audited rate results in a carryforward (over- or under-recovery). The carryforward is included in the calculation of negotiated fixed billing rates in future years. Any adjustment in the rate is charged or credited to unrestricted net assets.

### Gifts and Pledges

Gifts and pledges are recognized when received. Gifts of securities are recorded at their fair value at the date of contribution. Donated securities received totaled \$39.3 million and \$37.9 million in 2017 and 2016, respectively, and are shown separately in the Consolidated Statements of Cash Flows. Gifts of equipment received from manufacturers and other donors are put into use and recorded by MIT at fair value. Gifts of equipment totaled less than \$0.1 million in 2017 and \$0.4 million in 2016. Pledges in the amount of \$533.2 million and \$609.1 million were recorded as receivables at June 30, 2017 and 2016, respectively, with the revenue assigned to the appropriate classification of restriction. Pledges consist of unconditional written promises to contribute to MIT in the future and are recorded after discounting the future cash flows to the present value.

MIT records items of collections as gifts at nominal value. They are received for educational purposes and most are displayed throughout MIT. In general, collections are not disposed of for financial gain or otherwise encumbered in any manner.

### Life Income Funds

MIT's life income fund agreements with donors consist primarily of irrevocable charitable gift annuities, pooled income funds, and charitable remainder trusts for which MIT serves as trustee. Assets are invested and payments are made to donors and other beneficiaries in accordance with the respective agreements. MIT records the assets that are associated with each life income fund at fair value and records as liabilities the present value of the estimated future payments at current interest rates to be made to the donors and beneficiaries under these agreements. A rollforward of liabilities due under life income fund agreements is presented in Table 5 below.

<i>(in thousands of dollars)</i>	2017	2016
Balance at the beginning of the year	\$ 145,216	\$ 141,946
Addition for new gifts . . . . .	8,122	8,592
Termination and payments to beneficiaries . . . . .	(19,671)	(14,993)
Net investment and actuarial gain	20,803	9,671
<b>Balance at end of the year . . . . .</b>	<b>\$ 154,470</b>	<b>\$ 145,216</b>

### Accounts Payable, Accruals, and Other Liabilities

MIT's accounts payable, accruals, and other liabilities totaled \$457.5 million and \$528.7 million at June 30, 2017 and 2016, respectively. These totals included accrued vacation of \$88.2 million at June 30, 2017, and \$81.6 million at June 30, 2016.

### Recently Adopted Accounting Standards

On July 1, 2016, the Institute early adopted new guidance related to how *Not-for-Profit Entities that are a General or Limited Partner Should Consolidate a For-Profit Limited Partnership or Similar Entity*, which impacts consolidation for not-for-profit entities. As a result of adopting this guidance, certain previously consolidated limited liability investment entities are no longer consolidated. The liabilities associated with these investment entities amounted to \$490.0 million in the 2016 Statement of Financial Position and are now netted against investment assets for that year, rather than shown separately as liabilities. In addition, noncontrolling interests are no longer shown as assets, net assets, and changes in net assets in the Statements of Financial Position and in the Statement of Activities. Therefore, the change in net assets attributable to noncontrolling interests of \$27.0 million for fiscal 2016, as well as the noncontrolling interest June 30, 2016 amount of \$205.4 million are no longer shown in the related

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## A. Accounting Policies (continued)

2016 comparative statements. These changes have also been appropriately reflected in the investment notes.

On July 1, 2016, the Institute early adopted new guidance related to *Recognition and Measurement of Financial Assets and Financial Liabilities*. The guidance eliminates the requirement to disclose the fair value of our outstanding debt. The Institute has evaluated the impact of the guidance on the financial statements and accompanying notes and has removed the fair value reference previously included in Note F.

On July 1, 2015, MIT early-adopted new guidance related to *Presentation of Debt Issuance Costs*. This guidance requires MIT to present unamortized debt issuance costs as an offset to borrowings within the liabilities section of the balance sheet, rather than as other assets within the assets section of the balance sheet. The change in presentation has been appropriately reflected in the Statement of Financial Position and in the Net Borrowings table shown in Note F.

### Non-Cash Items

Non-cash transactions excluded from the Consolidated Statements of Cash Flows include \$12.3 million and \$7.6 million of accrued liabilities related to plant and equipment purchases for 2017 and 2016, respectively.

### Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, contingent

assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

### Reclassifications

Certain June 30, 2016, balances and amounts previously reported have been reclassified to conform to the June 30, 2017, presentation.

### Subsequent Events

MIT has evaluated subsequent events through September 8, 2017, the date on which the financial statements were issued. There were no subsequent events that occurred after the balance sheet date that have a material impact on MIT's financial statements.

### Summarized Information

The Consolidated Statements of Activities includes certain prior year summarized comparative information in total but not by net asset class. Such information does not include sufficient detail to constitute a presentation in conformity with accounting principles generally accepted in the United States of America. Accordingly, such information should be read in conjunction with MIT's financial statements for the year ended June 30, 2016, from which the summarized information was derived.

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## B. Investments

MIT performs ongoing due diligence to determine that investment fair value is reasonable as of June 30, 2017 and 2016. In particular, to ensure that the valuation techniques for investments that are categorized within the fair value hierarchy are fair, consistent, and verifiable, MIT has established a Valuation Committee (the "Committee") that oversees the valuation processes and procedures and ensures that the policies are fair and consistently applied. The Committee is responsible for conducting annual reviews of the valuation policies, evaluating the overall fairness and consistent application of the valuation policies, and performing specific reviews of certain reported valuations. The Committee performs due diligence over the external managers and, based on this review, substantiates Net Asset Value (NAV) as a practical expedient for estimates of fair value of its investments in external managers. The Committee is composed of senior personnel and contains members who are independent of investment functions. The Committee meets annually, or more frequently as needed. Members of the Valuation Committee report annually to MIT's Risk and Audit Committee. The methods described in this note may produce a fair value

that may not be indicative of net realizable value or reflective of future fair values. While MIT believes its valuation methods are appropriate and consistent with those of 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.

Exchange and over-the-counter investment transactions are accounted for on the trade date. Dividend income is recorded on the ex-dividend date. Realized gains and losses are recorded by MIT using the average cost basis. For limited partnerships, the realized gain/loss is calculated once the entire cost basis is distributed back to MIT or using information provided by managers with respect to the character of a distribution as being a gain, loss, income, or return of capital.

MIT may enter into short sales whereby it sells securities that may or may not be owned by MIT in anticipation of a decline in the price of such securities or in order to hedge portfolio positions. Cash collateral and certain securities owned by MIT may be held at counterparty brokers to collateralize these positions and

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## B. Investments (continued)

are included in investments on the Consolidated Statements of Financial Position.

MIT values its investments in accordance with the principles of accounting standards which establish a hierarchy of 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. Unobservable inputs reflect the entity's own assumptions about how market participants would value an asset or liability based on the best information available. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. MIT follows a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last is unobservable.

The following describes the hierarchy of inputs used to measure fair value and the primary valuation methodologies used by MIT for financial instruments measured at fair value on a recurring basis. The three levels of inputs are as follows:

- Level 1 – Valuations based upon observable inputs that reflect quoted prices in active markets for identical assets and liabilities.
- Level 2 – Valuations based upon: (i) quoted market prices for similar assets or liabilities in active markets; (ii) quoted prices for identical or similar assets or liabilities in markets that are not active; or (iii) other significant market-based inputs, which are observable, either directly or indirectly.
- Level 3 – Valuations based upon unobservable inputs that are significant to the overall fair value measurements.
- N/A – Investments managed by external managers in fund structures are not readily marketable and are reported at Fair Value utilizing the most current information provided by the external manager, subject to assessments that the information is representative of fair value and in consideration of any factors deemed pertinent to the Fair Value measurement.

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. Market information is considered when determining the proper categorization of the investment's fair value measurement within the fair valuation hierarchy.

Table 6 presents MIT's investments at fair value as of June 30, 2017 and 2016, respectively, grouped by the valuation hierarchy as defined earlier in this note.

Transfers between levels are recognized at the beginning of the reporting period. The 2017 transfers from Level 1 to Level 2 totaled \$0.9 million, and transfers from Level 2 to Level 1 totaled \$25.6 million. The 2016 transfers from Level 1 to Level 2 totaled \$60.0 million, and transfers from Level 2 to Level 1 totaled \$10.4 million.

Cash and cash equivalents include cash, money market funds, repurchase agreements, and negotiable certificates of deposit and are valued at cost, which approximates fair value. Instruments listed or traded on a securities exchange are valued at the last quoted price on the primary exchange where the securities are traded.

Investments in non-exchange-traded debt are primarily valued using independent pricing sources that use broker quotes or models using observable market inputs. Investments managed by external managers include investments in (i) absolute return; (ii) domestic, foreign, and private equity; (iii) real estate; and (iv) real asset commingled funds. The fair value of securities held in external investment funds that do not have readily determinable fair values are determined by the external managers based upon industry-standard valuation approaches that require varying degrees of judgment, taking into consideration, among other things, the cost of the securities, valuations and transactions of comparable public companies, the securities' estimated future cash flow streams, and the prices of recent significant placements of securities of the same issuer. Using these valuations, most of these external managers calculate MIT's capital account or NAV in accordance with, or in a manner consistent with, GAAP's fair value principles.

As a practical expedient, MIT is permitted under GAAP to estimate the fair value of its investments with external managers using the external managers' reported NAV without further adjustment unless MIT expects to sell the investment at a value other than NAV or the NAV is not calculated in accordance with GAAP.

Level 3 investments are valued by MIT based upon valuation information received from the relevant entity, which may include last trade information, third-party appraisals of real estate, or valuations prepared in connection with the administration of an employee stock ownership plan. MIT may also utilize industry standard valuation techniques, including discounted cash flow models. The significant unobservable inputs used in the fair value measurements of MIT's direct investments may include their cost of capital, and equity and industry risk premiums. Significant increases or decreases in these inputs in isolation may result in a significantly lower or higher fair value measurement, respectively. Split-interest agreements are generally valued at the present value of the future distributions expected to be received over the term of the agreement.

Over-the-counter positions, such as interest rate and total return swaps, credit default swaps, options, exchange agreements, and interest rate cap and floor agreements, are valued using broker quotes or models using market observable inputs. Because the swaps and other over-the-counter derivative instruments have inputs that can usually be corroborated by observable market data, they are generally classified within Level 2.

## B. Investments (continued)

**Table 6. Investments**

<i>(in thousands of dollars)</i>	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	NAV as Practical Expedient (NAV)	Total Fair Value
<b>Fiscal Year 2017</b>					
Cash and cash equivalents . . . . .	\$ 1,289,440	\$ -	\$ -	\$ -	\$ 1,289,440
US Treasury . . . . .	983,110	-	-	-	983,110
US government agency . . . . .	-	68,972	-	-	68,972
Domestic bonds . . . . .	11,085	827,798	112,325	-	951,208
Foreign bonds . . . . .	21	218,676	-	-	218,697
Common equity:					
Long domestic . . . . .	122,824	-	199,643	-	322,467
Long foreign . . . . .	522,712	934	-	-	523,646
Equity:**					
Absolute return . . . . .	-	-	-	1,948,414	1,948,414
Domestic . . . . .	-	-	-	1,860,682	1,860,682
Foreign . . . . .	-	-	-	3,939,887	3,939,887
Private . . . . .	-	-	-	3,352,743	3,352,743
Real estate* . . . . .	8,885	-	2,094,523	711,635	2,815,043
Real assets** . . . . .	-	-	205	667,986	668,191
Split-interest agreements . . . . .	-	-	142,499	-	142,499
Other . . . . .	2,796	200	3,881	-	6,877
Derivatives . . . . .	32	(46,561)	-	-	(46,529)
<b>Investments, at fair value . . . . .</b>	<b>\$ 2,940,905</b>	<b>\$ 1,070,019</b>	<b>\$ 2,553,076</b>	<b>\$ 12,481,347</b>	<b>\$ 19,045,347</b>
<b>Fiscal Year 2016</b>					
Cash and cash equivalents . . . . .	\$ 939,555	\$ -	\$ -	\$ -	\$ 939,555
US Treasury . . . . .	890,588	-	-	-	890,588
US government agency . . . . .	-	169,007	-	-	169,007
Domestic bonds . . . . .	12,004	308,817	104,048	-	424,869
Foreign bonds . . . . .	21	68,384	-	-	68,405
Common equity:					
Long domestic . . . . .	221,868	-	95,120	-	316,988
Long foreign . . . . .	423,747	60,044	-	-	483,791
Equity:**					
Absolute return . . . . .	-	-	-	1,816,975	1,816,975
Domestic . . . . .	-	-	-	1,561,519	1,561,519
Foreign . . . . .	-	-	-	3,521,507	3,521,507
Private . . . . .	-	-	-	3,190,794	3,190,794
Real estate* . . . . .	6,446	-	2,005,145	840,443	2,852,034
Real assets** . . . . .	-	-	275	680,566	680,841
Split-interest agreements . . . . .	-	-	126,832	-	126,832
Other . . . . .	4,925	-	2,809	-	7,734
Derivatives . . . . .	33	(63,065)	-	-	(63,032)
<b>Investments, at fair value . . . . .</b>	<b>\$ 2,499,187</b>	<b>\$ 543,187</b>	<b>\$ 2,334,229</b>	<b>\$ 11,611,804</b>	<b>\$ 16,988,407</b>

\* Real estate includes direct investments and investments held through commingled vehicles.

\*\* Real assets and equity categories include commingled vehicles that invest in these types of investments.

## B. Investments (continued)

Table 7 below is a rollforward of the investments classified by MIT within Level 3 of the fair value hierarchy defined earlier in this note at June 30, 2017 and 2016.

<i>(in thousands of dollars)</i>	Fair Value Beginning	Realized Gains (Losses)	Unrealized Gains (Losses)	Purchases	Sales	Other Changes and Transfers*	Fair Value Ending
<b>Fiscal Year 2017</b>							
Domestic bonds . . . . .	\$ 104,048	\$ -	\$ -	\$ 16,306	\$ (8,029)	\$ -	\$ 112,325
Common equity:							
Long domestic . . . . .	95,120	601	104,736	5,927	(6,741)	-	199,643
Short domestic . . . . .	-	-	-	-	-	-	-
Real estate . . . . .	2,005,145	14,320	244,061	170,833	(52,611)	(287,225)	2,094,523
Real assets . . . . .	275	-	(70)	-	-	-	205
Split-interest agreements . . .	126,832	1,120	7,135	11,308	(3,896)	-	142,499
Other . . . . .	2,809	-	60	1,012	-	-	3,881
<b>Investments, at fair value. . .</b>	<b>\$ 2,334,229</b>	<b>\$ 16,041</b>	<b>\$ 355,922</b>	<b>\$ 205,386</b>	<b>\$ (71,277)</b>	<b>\$ (287,225)</b>	<b>\$ 2,553,076</b>
<b>Fiscal Year 2016</b>							
Domestic bonds . . . . .	\$ 101,763	\$ -	\$ -	\$ 12,040	\$ (9,755)	\$ -	\$ 104,048
Common equity:							
Long domestic . . . . .	67,096	-	28,024	7	(7)	-	95,120
Short domestic . . . . .	-	-	-	119	(119)	-	-
Real estate . . . . .	1,765,487	33,254	381,977	184,991	(90,924)	(269,640)	2,005,145
Real assets . . . . .	1,260	(13,070)	12,085	-	-	-	275
Split-interest agreements . . .	146,405	5,329	(10,750)	17,214	(31,366)	-	126,832
Other . . . . .	3,956	179	32	-	(1,358)	-	2,809
<b>Investments, at fair value. . .</b>	<b>\$ 2,085,967</b>	<b>\$ 25,692</b>	<b>\$ 411,368</b>	<b>\$ 214,371</b>	<b>\$ (133,529)</b>	<b>\$ (269,640)</b>	<b>\$ 2,334,229</b>
*Other Changes and Transfers include cash received and paid related to the real estate financings described earlier in Note B. There were no transfers in or out of Level 3 for fiscal years 2017 and 2016.							

MIT, through some of its direct and indirect subsidiaries, leverages certain real estate investments to optimize the use of invested capital in support of the Institute's mission. The liabilities associated with these financings are presented, on a net basis, with the investment balances on the associated real estate asset found in Table 6. MIT's subsidiaries are separate legal entities, whose assets and credit are not available to satisfy the liabilities of MIT as a stand-alone entity. Also, the liabilities of MIT's subsidiaries do not constitute obligations of MIT as a stand-alone entity.

All net realized and unrealized gains and losses relating to financial instruments held by MIT shown in Table 6 are reflected in the Consolidated Statement of Activities. Cumulative unrealized gains related to Level 3 investments totaled \$1,716.2 million and \$1,360.3 million as of June 30, 2017 and 2016, respectively. The net change in unrealized gains (losses) related to Level 3 investments held by MIT at June 30, 2017, and June 30, 2016, are disclosed in Table 7.

## B. Investments (continued)

Table 8 below sets forth a summary of valuation techniques and quantitative information utilized in determining the fair value of MIT's Level 3 investments as of June 30, 2017 and 2016.

<i>(in thousands of dollars)</i>	Fair Value at June 30, 2017	Fair Value at June 30, 2016	Valuation Technique	Unobservable Input	2017 Rates	2016 Rates
Real estate . . . . .	\$ 2,094,523	\$ 2,005,145	Discounted cash flow; capitalization rate	Discount rate; capitalization rate	4.5-8.5%; 4.5-7.0%	5-8.5%; 4.75-7.0%
Equity securities . . . . .	180,654	78,727	Discounted cash flow	Discount rate	13.2%	13.5%
Split-interest agreements	105,581	81,268	Net present value	Discount rate	2.65-4.5%	2.05-4.5%
Real assets . . . . .	205	275	Discounted cash flow	Discount	25.0%	25.0%
Other illiquid assets . . . . .	882	505	Varies	Varies	Varies	Varies
<b>Total assets . . . . .</b>	<b>\$ 2,381,845</b>	<b>\$ 2,165,920</b>				

*\* Certain Level 3 assets totaling \$171,231 and \$168,309 as of June 30, 2017 and June 30, 2016, respectively, have been valued using unadjusted third party quotations and thus have been excluded from this table.*

Certain investments in real estate, equities, and private investments may be subject to restrictions that (i) limit MIT's ability to withdraw capital after such investment; and (ii) may limit the amount that may be withdrawn as of a given redemption date. Most absolute return, domestic equity, and foreign equity commingled funds limit withdrawals to monthly, quarterly, or other periods, and may require notice periods. In addition, certain of these funds are able to designate a portion of the investments as illiquid in "side-pockets," and these funds may not be available for withdrawal until liquidated by the investing fund. Generally,

MIT has no discretion as to withdrawal with respect to its investments in private equity and real estate funds. Distributions are made when sales of assets are made within these funds and the investment cycle for these funds can be as long as 15 to 20 years. These restrictions may limit MIT's ability to respond quickly to changes in market conditions. MIT does have various sources of liquidity at its disposal, including cash, cash equivalents, marketable debt and equity securities, and lines of credit.

Details on the current redemption terms and restrictions by asset class and type of investment are provided in Table 9 below.

Asset Class <i>(in thousands of dollars)</i>	2017		2016		Redemption Terms	Redemption Restrictions
	Unfunded Commitments	Fair Value	Unfunded Commitments	Fair Value		
Equity:						
Absolute return . . . . .	\$ 153,487	\$ 1,948,414	\$ 125,866	\$ 1,816,975	Redemption terms range from 45 days with 2 months' notice to closed-end funds not available for redemption	Lock-up provisions range from none to not available for redemption
Domestic . . . . .	1,790	1,860,682	1,789	1,561,519	Redemption terms range from 2 months with 2 months' notice to 25 months with 3 months' notice and 2 closed-end funds not available for redemption	Lock-up provisions range from none to 33 months; 2 funds are not available for redemption
Foreign . . . . .	36,200	3,939,887	36,200	3,521,507	Redemption terms range from daily with 1 day's notice to 38 months with 6 months' notice and 1 closed-end fund not available for redemption	Lock-up provisions range from none to 11 months; 1 fund is not available for redemption
Private . . . . .	1,517,659	3,352,743	1,567,427	3,190,794	Closed-end funds not available for redemption	Closed-end funds not available for redemption
Real estate . . . . .	563,739	711,635	574,443	840,443	Closed-end funds not available for redemption	Closed-end funds not available for redemption
Real assets . . . . .	102,689	667,986	156,591	680,566	Redemption terms range from 1 month with 7 days' notice to closed-end funds not available for redemption	Lock-up provisions range from none to not available for redemption
<b>Total . . . . .</b>	<b>\$ 2,375,564</b>	<b>\$ 12,481,347</b>	<b>\$ 2,462,316</b>	<b>\$ 11,611,804</b>		

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## C. Derivative Financial Instruments and Collateral

MIT maintains an interest rate swap agreement to manage the interest cost and risk associated with a portion of its variable rate debt, described in Note F. Under the agreement, MIT pays a fixed rate of 4.91 percent and receives a payment indexed to the Securities Industry and Financial Market Association (SIFMA) on a notional amount of \$125.0 million. At June 30, 2017, the swap agreement had a total fair value of (\$47.1) million and at June 30, 2016 had a fair value of (\$63.4) million. This swap had a total net gain for 2017 of \$16.3 million and a total net loss of \$15.3 million for 2016. The notional amount of this derivative is not recorded on MIT's Consolidated Statements of Financial Position.

For its investment management, MIT uses a variety of financial instruments with off-balance sheet risk involving contractual or optional commitments for future settlement. MIT uses these instruments primarily to manage its exposure to extreme market events and fluctuations in asset classes or currencies. Instruments utilized include futures, total return and credit default swaps, and interest rate cap and swaption agreements. The futures are exchange-traded, and the swap, swaptions, and cap agreements are executed over the counter.

Total return swaps involve commitments to pay interest in exchange for a market-linked return based on notional amounts. To the extent the total return of the security or index underlying the transaction exceeds or falls short of the offsetting interest rate obligation, MIT will respectively receive a payment from or make a payment to the counterparty.

MIT's portfolio of interest rate caps and swaptions is designed for protection from significant increases in interest rates. An interest rate swaption is an option to enter into an interest rate swap agreement on pre-set terms at a future date. The purchaser and seller of the swaption agree on the expiration date, option type, exercise style, the terms of the underlying swap, and the type of settlement. As the expiration date approaches, the swaption

holder can either notify the seller of its intention to exercise or let the option expire. An interest rate cap places a ceiling on a floating rate of interest on a specified notional principal amount for a specific term. The buyer of the cap uses the cap contract to limit its maximum interest rate exposure. If the buyer's floating rate rises above the cap strike, the cap contract provides for payments from the seller to the buyer of the cap for the difference between the floating rate and the cap strike. If the floating rate remains below the cap strike, no payments are required. The cap buyer is required to pay an upfront fee or premium for the cap. The cap premium charged by the seller depends upon the market's assessment of the probability that rates will move through the cap strike over the time horizon of the deal. The payoff is expected to occur in extreme market conditions that would negatively impact MIT's other assets.

Table 10 summarizes the notional exposure and net ending fair value relative to the financial instruments with off-balance sheet risk as of June 30, 2017 and 2016 related to MIT's investment management. Derivatives held by limited partnerships and commingled investment vehicles pose no off-balance sheet risk to MIT due to the limited liability structure of these investments. To manage the counterparty credit exposure of MIT's direct off-balance sheet financial instruments, MIT requires collateral to the maximum extent possible under normal trading practices. Collateral is moved on a daily basis as required by fluctuations in the market. The collateral is generally in the form of debt obligations issued by the US Treasury or cash. In the event of counterparty default, MIT has the right to use the collateral to offset the loss associated with the replacement of the agreements. MIT enters into arrangements only with counterparties believed to be creditworthy. On June 30, 2017, cash collateral and certain securities owned by MIT were held at counterparty brokers to collateralize these positions and are included in investments in the Consolidated Statements of Financial Position.

## C. Derivative Financial Instruments and Collateral (continued)

<i>(in thousands of dollars)</i>	Notional Exposure		Net Ending Fair Value *	Net Gain (Loss)**
	Long	Short		
<b>Fiscal Year 2017</b>				
Fixed income instruments:				
Fixed income futures . . . . .	\$ 1,900	\$ (9,200)	\$ 32	\$ -
Options on interest rate exchange agreements . . .	1,039,000	-	1,818	(139)
Equity options . . . . .	134	-	11	-
Interest rate caps and floors . . . . .	-	-	-	-
<b>Total fixed income instruments . . . . .</b>	<b>1,041,034</b>	<b>(9,200)</b>	<b>1,861</b>	<b>(139)</b>
Commodity and index instruments:				
Equity index swaps . . . . .	-	(79,332)	744	(32,183)
<b>Total commodity and index instruments . . . . .</b>	<b>-</b>	<b>(79,332)</b>	<b>744</b>	<b>(32,183)</b>
Credit instruments . . . . .	-	(76,119)	(2,032)	(973)
<b>2017 Total . . . . .</b>	<b>\$ 1,041,034</b>	<b>\$ (164,651)</b>	<b>\$ 573</b>	<b>\$ (33,295)</b>
<b>Fiscal Year 2016</b>				
Fixed income instruments:				
Fixed income futures . . . . .	\$ 14,100	\$ (3,100)	\$ 33	\$ -
Options on interest rate exchange agreements . .	1,532,000	-	1,956	(6,844)
Equity options . . . . .	-	-	-	-
Interest rate caps and floors . . . . .	1,000,000	-	-	(96)
<b>Total fixed income instruments . . . . .</b>	<b>2,546,100</b>	<b>(3,100)</b>	<b>1,989</b>	<b>(6,940)</b>
Commodity and index instruments:				
Equity index swaps . . . . .	-	(83,563)	351	44,083
<b>Total commodity and index instruments . . . . .</b>	<b>-</b>	<b>(83,563)</b>	<b>351</b>	<b>44,083</b>
Credit instruments . . . . .	-	(102,494)	(1,990)	126
<b>2016 Total . . . . .</b>	<b>\$ 2,546,100</b>	<b>\$ (189,157)</b>	<b>\$ 350</b>	<b>\$ 37,269</b>
<p>* The fair value of all derivative financial instruments is reflected in investments at fair value in the Consolidated Statements of Financial Position.</p> <p>** Net gain (loss) from the derivative financial instruments is located in the non-operating section as net gain (loss) on investments in the Consolidated Statement of Activities.</p>				



## C. Derivative Financial Instruments and Collateral (continued)

Table 11 below provides further details related to MIT's credit instruments and summarizes the notional amounts and fair value of the purchased credit derivatives, classified by the expiration terms and the external credit ratings of the reference obligations at June 30, 2017 and 2016.

The act of entering into a credit default swap contract is often referred to as "buying protection" or "selling protection" on an underlying reference obligation. The buyer is obligated to make premium payments to the seller over the term of the contract in return for a contingent payment upon the occurrence of a credit event with respect to the underlying obligation. The seller bears the obligation to "protect" the buyer in the event of default of

the underlying issuer. Upon this event, the cash payment that the buyer receives is equal to the clearing price established by an auction of credit default swap claims, which is designed to approximate the recovery value of an unsecured claim on the issuer in default. The swap will last for a predetermined amount of time, typically five years. Upon termination of the swap, the buyer is no longer obligated to make any premium payments, and there is no other exchange of capital.

**Table 11. Credit Derivative Instruments**

	Purchased Protection			
	Purchased Notional Amounts	Purchased Fair Value*	Years to Maturity	
			< 5 Years	5-10 Years
<i>(in thousands of dollars)</i>				
<b>Fiscal Year 2017</b>				
Credit rating on underlying or index:				
A- to AAA . . . . .	\$ 25,000	\$ 474	\$ 25,000	\$ -
BBB- to BBB+ . . . . .	51,119	1,558	51,119	-
<b>2017 Total</b> . . . . .	<b>\$ 76,119</b>	<b>\$ 2,032</b>	<b>\$ 76,119</b>	<b>\$ -</b>
<b>Fiscal Year 2016</b>				
Credit rating on underlying or index:				
A- to AAA . . . . .	\$ 37,499	\$ 785	\$ 37,499	\$ -
BBB- to BBB+ . . . . .	64,995	1,205	64,995	-
<b>2016 Total</b> . . . . .	<b>\$ 102,494</b>	<b>\$ 1,990</b>	<b>\$ 102,494</b>	<b>\$ -</b>

\* The fair value of all credit derivative instruments is reflected in investments at fair value in the Consolidated Statements of Financial Position.

## C. Derivative Financial Instruments and Collateral (continued)

Counterparty risk may be partially or completely mitigated through master netting agreements included within an International Swap and Derivatives Association, Inc. (“ISDA”) Master Agreement between MIT and each of its counterparties. The ISDA Master Agreement allows MIT to offset with the counterparty certain derivative instruments’ payables and/or receivables with collateral held with each counterparty. To the extent amounts due from the counterparties are not fully

collateralized contractually or otherwise, there is the risk of loss from counterparty non-performance. As of June 30, 2017, MIT has elected not to offset recognized assets and liabilities in the Statements of Financial Position. The following tables, 12 and 13, summarize the effect that offsetting of recognized assets and liabilities could have in the Statements of Financial Position.

**Table 12. Offsetting of Financial and Derivative Assets and Liabilities**

	2017			2016		
	Gross Amount	Cash/Treasury Collateral Posted/ (Received)	Net Amount	Gross Amount	Cash/Treasury Collateral Posted/ (Received)	Net Amount
<i>(in thousands of dollars)</i>						
<b>Assets</b>						
Counterparty A . . . . .	\$ 720	\$ (880)	\$ (160)	\$ 820	\$ (726)	\$ 94
Counterparty B . . . . .	27,000	(27,663)	(663)	50,000	(51,052)	(1,052)
Counterparty C . . . . .	-	-	-	-	-	-
Counterparty D . . . . .	-	-	-	-	-	-
Counterparty E . . . . .	-	-	-	-	-	-
Counterparty F . . . . .	-	-	-	6	-	6
Counterparty G . . . . .	18,528	(18,916)	(388)	18,753	(19,143)	(390)
Counterparty H . . . . .	-	-	-	-	-	-
Counterparty I . . . . .	-	-	-	-	-	-
Counterparty J . . . . .	-	-	-	-	-	-
Counterparty K . . . . .	1,843	7,183	9,026	1,488	(1,925)	(437)
Counterparty L . . . . .	-	-	-	-	-	-
<b>Total assets . . . . .</b>	<b>48,091</b>	<b>(40,276)</b>	<b>7,815</b>	<b>71,067</b>	<b>(72,846)</b>	<b>(1,779)</b>
<b>Liabilities</b>						
Counterparty A . . . . .	(59)	60	1	(396)	410	14
Counterparty B . . . . .	-	-	-	-	-	-
Counterparty C . . . . .	(527)	550	23	(43)	70	27
Counterparty D . . . . .	(1,052)	1,091	39	(533)	721	188
Counterparty E . . . . .	-	-	-	(47)	-	(47)
Counterparty F . . . . .	-	-	-	-	-	-
Counterparty G . . . . .	(33)	60	27	-	-	-
Counterparty H . . . . .	(47,103)	-	(47,103)	(63,382)	-	(63,382)
Counterparty I . . . . .	(6)	-	(6)	(342)	420	78
Counterparty J . . . . .	(355)	340	(15)	(448)	680	232
Counterparty K . . . . .	-	-	-	-	-	-
Counterparty L . . . . .	-	-	-	(189)	400	211
<b>Total liabilities . . . . .</b>	<b>(49,135)</b>	<b>2,101</b>	<b>(47,034)</b>	<b>(65,380)</b>	<b>2,701</b>	<b>(62,679)</b>
<b>Total assets and liabilities, net</b>	<b>\$ (1,044)</b>	<b>\$ (38,175)</b>	<b>\$ (39,219)</b>	<b>\$ 5,687</b>	<b>\$ (70,145)</b>	<b>\$ (64,458)</b>

Maximum risk of loss from counterparty credit risk on over-the-counter derivatives is generally the aggregate unrealized appreciation in excess of any collateral pledged by the counterparty. ISDA Master Agreements allow MIT or the

counterparties to an over-the-counter derivative to terminate the contract prior to maturity in the event either party fails to meet the terms in the ISDA Master Agreements. This would cause an accelerated payment of net liability, if owed to the counterparty.

## C. Derivative Financial Instruments and Collateral (continued)

Table 13 below reconciles the net recognized assets and liabilities, as shown in Table 12, to derivative financial instruments as shown in Table 6.

	2017	2016
Derivatives from Table 6 . . . . .	\$ (46,529)	\$ (63,032)
Repurchase agreements . . . . .	45,528	68,752
Fixed income futures . . . . .	(32)	(33)
Equity options . . . . .	(11)	-
<b>Total</b> . . . . .	<b>\$ (1,044)</b>	<b>\$ 5,687</b>

## D. Pledges Receivable

Table 14 below shows the time periods in which pledges receivable at June 30, 2017 and 2016 are expected to be realized.

	2017	2016
In one year or less . . . . .	\$ 239,548	\$ 239,245
Between one year and five years . . . . .	266,586	407,825
More than five years . . . . .	86,103	29,415
Less: allowance for unfulfilled pledges . . . . .	(59,010)	(67,420)
<b>Pledges receivable, net</b> . . . . .	<b>\$ 533,227</b>	<b>\$ 609,065</b>

A review of pledges is periodically made with regard to collectability. As a result, the allowance for unfulfilled pledges is adjusted, and some pledges have been cancelled and are no longer recorded in the financial statements.

Pledges are discounted in the amount of \$64.6 million and \$22.7 million in 2017 and 2016, respectively. MIT has gross conditional pledges, not recorded, for the promotion of education and research of \$80.6 million and \$82.8 million in 2017 and 2016, respectively.

Pledges receivable are classified as Level 3 under the valuation hierarchy described in Note B.

Table 15 below is a rollforward of the pledges receivable at June 30, 2017 and 2016.

	2017	2016
Balance at beginning of the year . . . . .	\$ 609,065	\$ 558,095
New pledges . . . . .	320,750	190,641
Pledge payments received . . . . .	(363,083)	(146,852)
Change in pledge discount . . . . .	(41,915)	12,811
Change in reserve for unfulfilled pledges . . . . .	8,410	(5,630)
<b>Balance at the end of the year</b> . . . . .	<b>\$ 533,227</b>	<b>\$ 609,065</b>

## E. Student Notes Receivable

Table 16 below details the components of student notes receivable at June 30, 2017 and 2016.

<i>(in thousands of dollars)</i>	2017	2016
Institute-funded student notes receivable. . . . .	\$ 12,540	\$ 12,627
Perkins student notes receivable. . . . .	27,481	32,510
Total student notes receivable . . . . .	40,021	45,137
Less: allowance for doubtful accounts . . . . .	(3,000)	(3,000)
<b>Student notes receivable, net. . . . .</b>	<b>\$ 37,021</b>	<b>\$ 42,137</b>

Perkins student notes receivable are funded by the US government and by MIT. Those funds advanced by the US government for this program are ultimately refundable to the US government and are classified as liabilities in US government advances for student loans in the Consolidated Statements of Financial Position. Due to the nature and terms of the student loans, which are subject to significant restrictions, it is not feasible to determine the fair value of such loans.

### Allowance for Credit Losses

Management regularly assesses the adequacy of the allowance for credit losses by performing ongoing evaluations of the student loan portfolio, including such factors as the differing economic risks associated with each loan category, the financial condition of specific borrowers, the economic environment in which the borrowers operate, the level of delinquent loans, the value of any collateral, and, where applicable, the existence of any guarantees or indemnifications. MIT's Perkins loans receivable represents the amounts due from current and former students under the Federal Perkins Loan Program. Loans disbursed under the Federal Perkins Loan Program are able to be assigned to the US government in certain non-repayment situations. In these situations, the federal portion of the loan balance is guaranteed.

Factors also considered by management when performing its assessment, in addition to general economic conditions and the other factors described above, included, but were not limited to, a detailed review of the aging of the student loan receivable and a review of the default rate by loan category in comparison to prior years. The level of the allowance is adjusted based on the results of management's analysis.

Loans less than 120 days delinquent are deemed to have a minimal delay in payment and are generally not written off but are reserved in accordance with the terms discussed above. Loans more than 120 days delinquent are subject to standard collection practices, including litigation. Only loans that are deemed uncollectible are written off and this only occurs after several years of unsuccessful collection, including placement at more than one external collection agency.

Considering the other factors already discussed herein, management considers the allowance for credit losses at June 30, 2017 and 2016 to be prudent and reasonable. Furthermore, MIT's allowance is general in nature and is available to absorb losses from any loan category. Management maintains an allowance of \$3.0 million for credit losses and is confident that this is sufficient to absorb credit losses inherent in the portfolio as of that date.

## F. Net Borrowings

MIT's outstanding borrowings at June 30, 2017 and 2016, are shown in Table 17 below.

<b>Table 17. Net Borrowings</b>	2017	2016
<i>(in thousands of dollars / due dates are calendar based / par values as of 2017)</i>		
<b>Educational plant</b>		
Massachusetts Development Finance Agency (MassDevelopment)		
Series I, 5.20%, due 2028, par value \$30,000 . . . . .	\$ 30,606	\$ 30,665
Series J-1, variable rate, due 2031, par value \$125,000 . . . . .	125,000	125,000
Series J-2, variable rate, due 2031, par value \$125,000 . . . . .	125,000	125,000
Series K, 5.375%-5.5%, due 2017-2032, par value \$203,500 . . . . .	211,590	212,317
Series L, 5.0%-5.25%, due 2018-2033, par value \$141,670 . . . . .	148,950	149,668
Series M, 5.25%, due 2019-2030, par value \$102,325 . . . . .	108,866	119,750
Series O, 4.0%-5.0%, due 2017 . . . . .	-	88,000
<b>Total MassDevelopment</b> . . . . .	<u>750,012</u>	<u>850,400</u>
Medium Term Notes Series A, 7.125%, due 2026, par value \$17,415 . . . . .	17,379	17,375
Medium Term Notes Series A, 7.25%, due 2096, par value \$45,604 . . . . .	45,459	45,455
Taxable Bonds, Series B, 5.60%, due 2111, par value \$750,000* . . . . .	747,082	747,050
Taxable Bonds, Series C, 4.68%, due 2114, par value \$550,000* . . . . .	550,000	550,000
Taxable Bonds, Series D, 2.051-3.959%, due 2019-2038, par value \$522,410	522,410	522,410
Taxable Bonds, Series E, 3.885%, due 2116, par value \$500,000* . . . . .	500,000	-
Notes payable to bank, variable rate, due 2020 . . . . .	113,033	113,033
<b>Total taxable</b> . . . . .	<u>2,495,363</u>	<u>1,995,323</u>
<b>Total educational plant</b> . . . . .	<u>3,245,375</u>	<u>2,845,723</u>
<b>Other</b>		
Notes payable to bank, variable rate, due 2020 . . . . .	63,476	63,476
<b>Total borrowings</b> . . . . .	<u>3,308,851</u>	<u>2,909,199</u>
Unamortized bond issuance costs . . . . .	(21,306)	(17,106)
<b>Total borrowings net of unamortized debt issuance cost</b> . . . . .	<u>\$ 3,287,545</u>	<u>\$ 2,892,093</u>
* <i>The proceeds of recent taxable bonds were in the process of being invested in physical assets in 2016 and 2017, with unused balances held as investments.</i>		

## F. Net Borrowings (continued)

The aggregate amounts of debt payments and sinking fund requirements for each of the next five fiscal years are shown in Table 18 below.

2018 .....	\$	26,500
2019 .....		26,000
2020 .....		77,030
2021 .....		11,180
2022 .....		11,765

MIT maintains a line of credit with a major financial institution for an aggregate commitment of \$500.0 million. As of June 30, 2017, \$323.5 million was available under this line of credit (see "Notes payable" on Table 17). The line of credit expires on March 31, 2020.

Cash paid for interest on long-term debt in 2017 and 2016 was \$137.7 million and \$131.0 million, respectively.

Variable interest rates at June 30, 2017 are shown in Table 19 below.

	Amount	Rate
MassDevelopment Series J-1 ..	\$ 125,000	0.85%
MassDevelopment Series J-2 ..	125,000	0.92%
Notes payable to bank. ....	176,509	1.73%

In the event that MIT receives notice of any optional tender on its Series J-1 and Series J-2 variable-rate bonds, or if these bonds become subject to mandatory tender, the purchase price of the bonds will be paid from the remarketing of such bonds. However, if the remarketing proceeds are insufficient, MIT will be obligated to purchase the bonds tendered at 100 percent of par on the tender date.

## G. Commitments and Contingencies

### Federal Government Funding

MIT receives funding or reimbursement from federal agencies for sponsored research under government grants and contracts. These grants and contracts provide for reimbursement of indirect costs based on rates negotiated with the Office of Naval Research (ONR), MIT's cognizant federal agency. MIT's indirect cost reimbursements have been based on fixed rates with carryforward of under- or over-recoveries. At June 30, 2017 and 2016, MIT recorded a net over-recovery of \$15.4 million and \$24.7 million, respectively.

The DCAA is responsible for auditing indirect charges to grants and contracts in support of ONR's negotiating responsibility. MIT has final audited rates through 2009. MIT's 2017 research revenues of \$1,709.5 million include reimbursement of indirect costs of \$241.0 million, which includes the adjustment for the variance between the indirect cost income determined by the fixed rates and actual costs for 2017. In 2016, research revenues were \$1,690.2 million, which included reimbursement of indirect costs of \$235.3 million.

### Leases

At June 30, 2017, there were no capital lease obligations. MIT has commitments under certain operating (rental) leases. Rent expense incurred under operating lease obligations was \$44.0 million and \$40.0 million in 2017 and 2016, respectively. Future minimum payments under operating leases are shown in Table 20 below.

2018 .....	\$	46,786
2019 .....		44,476
2020 .....		42,995
2021 .....		40,878
2022 .....		32,685

### Investments

As of June 30, 2017, \$13.1 million of investments were pledged as collateral to various suppliers and government agencies.

### Future Construction

At June 30, 2017, MIT had contractual obligations of approximately \$316.0 million in connection with educational plant construction projects. It is expected that the resources to satisfy these commitments will be provided from unexpended plant funds, anticipated gifts, bond proceeds, and unrestricted funds.

MIT has also made commitments related to the development of its commercial real estate holdings in Kendall Square and to the enhancement of its east campus gateway. At June 30, 2017, these commitments included approximately \$250.0 million of contractual obligations related to the Kendall Square Initiative. In addition, MIT and the federal government have entered into

## G. Commitments and Contingencies (continued)

an agreement whereby MIT will construct a new transportation center on four of the fourteen acres of federally owned land located at the John Volpe National Transportation System Center site in Kendall Square in exchange for the fee, interest to, and the right to redevelop the adjacent ten acres of land. The exchange will be executed upon completion of the construction of the new facility. MIT is committed to investing \$750.0 million in the exchange phase of the project.

### Related Entities

MIT has entered into agreements, including collaborations with third-party not-for-profit and for-profit entities, for education, research, and technology transfers. Some of these agreements involve funding from foreign governments. These agreements

subject MIT to greater financial risk than do its normal operations. In the opinion of management, the likelihood of realization of increased financial risks by MIT under these agreements is remote.

### General

MIT is subject to certain other legal proceedings and claims that arise in the normal course of operations. In the opinion of management, the ultimate outcome of these actions will not have a material effect on MIT's financial position.

## H. Functional Expense Classification

MIT's expenditures on a functional basis are shown in Table 21 below.

**Table 21. Expenditures by Functional Classification**

<i>(in thousands of dollars)</i>	2017	2016
General and administrative . . . . .	\$ 865,337	\$ 858,441
Instruction and unsponsored research . . . . .	928,448	854,595
Sponsored research . . . . .	1,498,790	1,479,158
Auxiliary enterprises . . . . .	154,289	141,437
Operation of Alumni Association . . . . .	17,160	16,268
<b>Total operating expenses . . . . .</b>	<b><u>\$ 3,464,024</u></b>	<b><u>\$ 3,349,899</u></b>

## I. Retirement Benefits

MIT offers a defined benefit plan and a defined contribution plan to its employees. The plans cover substantially all MIT employees.

MIT also offers a postretirement welfare benefit plan (certain healthcare and life insurance benefits) for retired employees. Substantially all MIT employees may become eligible for those benefits if they reach a qualifying retirement age while working for MIT. The healthcare component of the welfare plan is paid for in part by retirees, their covered dependents, and beneficiaries. Benefits are provided through various insurance companies whose charges are based either on the claims and administrative expenses paid during the year or annual insured premiums. The life insurance component of the welfare plan includes basic life insurance and supplemental life insurance. The basic life insurance plan is non-contributory and covers the retiree only. The supplemental life insurance plan is paid for by the retiree. MIT maintains a trust to pay for postretirement welfare benefits.

MIT contributes to the defined benefit plan amounts that are

actuarially determined to provide the retirement plan with sufficient assets to meet future benefit requirements. There were no designated contributions to the defined benefit plan for 2017. In 2016, there was a designated contribution of \$83.0 million. MIT also designated contributions of \$17.1 million and \$13.9 million to the postretirement welfare benefit plan in 2017 and 2016 respectively. The current health care cost trend rate decreased from 6.0 percent in 2016 to 5.5 percent in 2017.

For the defined contribution plan, the amount contributed and expenses recognized during 2017 and 2016 were \$58.6 million and \$55.2 million, respectively.

For purposes of calculating net periodic benefit cost, plan amendments for the defined benefit plan are amortized on a straight-line basis over the average future service of active participants at the date of the amendment. Plan amendments to the postretirement welfare benefit plan are amortized on a straight-line basis over the average future service to full eligibility of active participants at the date of amendment.

## I. Retirement Benefits (continued)

Cumulative gains and losses (including changes in assumptions) in excess of 10 percent of the greater of the projected benefit obligation or the market-related value of assets for both the defined benefit plan and the postretirement welfare benefit plan are amortized over the average future service of active participants. The annual amortization shall not be less than the total amount of unrecognized gains and losses up to \$1.0 million.

### Components of Net Periodic Benefit Cost

Table 22 below summarizes the components of net periodic benefit cost recognized in operating activity and other amounts recognized in non-operating activity in unrestricted net assets for the years ended June 30, 2017 and 2016.

**Table 22. Components of Net Periodic Benefit Cost**

<i>(in thousands of dollars)</i>	Defined Benefit Plan		Postretirement Welfare Benefit Plan	
	2017	2016	2017	2016
<b>Components of net periodic benefit cost recognized in operating activity:</b>				
Service cost . . . . .	\$ 106,097	\$ 85,464	\$ 27,963	\$ 25,097
Interest cost . . . . .	155,368	158,983	24,060	25,478
Expected return on plan assets . . . . .	(262,479)	(243,615)	(37,558)	(34,703)
Amortization of net actuarial loss (gain) . . . . .	33,183	20,088	1,000	1,000
Amortization of prior service cost (credit) . . . . .	953	953	(2,801)	(2,801)
<b>Net periodic benefit cost recognized in operating activity</b>	<b>33,122</b>	<b>21,873</b>	<b>12,664</b>	<b>14,071</b>
<b>Other amounts recognized in non-operating activity in unrestricted net assets:</b>				
Current year actuarial loss (gain) . . . . .	(140,569)	492,083	(83,280)	30,889
Amortization of actuarial (loss) gain . . . . .	(33,183)	(20,088)	(1,000)	(1,000)
Amortization of prior service (cost) credit . . . . .	(953)	(953)	2,801	2,801
<b>Total other amounts recognized in non-operating activity</b>	<b>(174,705)</b>	<b>471,042</b>	<b>(81,479)</b>	<b>32,690</b>
<b>Total recognized. . . . .</b>	<b>\$ (141,583)</b>	<b>\$ 492,915</b>	<b>\$ (68,815)</b>	<b>\$ 46,761</b>

The estimated net actuarial loss and prior service cost for the defined benefit plan that will be amortized from unrestricted net assets into net periodic benefit cost during the next fiscal year are \$23.6 million and \$0.3 million, respectively. The estimated

net actuarial gain and prior service credit for the postretirement welfare benefit plan that will be amortized from unrestricted net assets into net periodic benefit cost during the next fiscal year are \$1.0 million and \$2.8 million, respectively.



## I. Retirement Benefits (continued)

Cumulative amounts recognized as non-operating changes in unrestricted net assets are summarized in Table 23 below for the years ended June 30, 2017 and 2016.

<i>(in thousands of dollars)</i>	Defined Benefit Plan		Postretirement Welfare Benefit Plan	
	2017	2016	2017	2016
Amounts recognized in unrestricted net assets consist of:				
Net actuarial loss (gain) . . . . .	\$ 611,010	\$ 787,874	\$ (44,766)	\$ 39,515
Prior service cost (credit) . . . . .	3,132	973	(7,813)	(10,615)
<b>Total cumulative amounts recognized in unrestricted net assets</b>	<b>\$ 614,142</b>	<b>\$ 788,847</b>	<b>\$ (52,579)</b>	<b>\$ 28,900</b>

### Benefit Obligations and Fair Value of Assets

Table 24 below summarizes the benefit obligations, plan assets, and amounts recognized in the Consolidated Statements of Financial Position for MIT's retirement benefit plans. MIT uses a June 30 measurement date for its defined benefit and postretirement welfare benefit plans.

<i>(in thousands of dollars)</i>	Defined Benefit Plan		Postretirement Welfare Benefit Plan	
	2017	2016	2017	2016
Change in projected benefit obligations:				
Projected benefit obligations at beginning of year	\$ 3,795,334	\$ 3,431,688	\$ 582,084	\$ 548,965
Service cost . . . . .	106,097	85,464	27,963	25,097
Interest cost . . . . .	155,368	158,983	24,060	25,478
Retiree contributions . . . . .	-	-	6,192	5,543
Net benefit payments, transfers, and other expenses	(140,253)	(138,464)	(31,710)	(28,396)
Employer Group Waiver Plan (EGWP) reimbursement	-	-	5,701	5,053
Assumption changes and actuarial net loss (gain)	5,192	257,663	(43,778)	344
<b>Projected benefit obligations at end of the year</b>	<b>3,921,738</b>	<b>3,795,334</b>	<b>570,512</b>	<b>582,084</b>
Change in plan assets:				
Fair value of plan assets at beginning of the year	3,332,233	3,378,500	549,156	548,920
Actual return on plan assets . . . . .	408,241	9,197	77,059	4,160
Employer contributions . . . . .	-	83,000	17,100	13,876
Employer Group Waiver Plan (EGWP) reimbursement	-	-	5,701	5,053
Retiree contributions . . . . .	-	-	6,192	5,543
Net benefit payments, transfers, and other expenses	(140,253)	(138,464)	(31,710)	(28,396)
<b>Fair value of plan assets at end of the year</b>	<b>3,600,221</b>	<b>3,332,233</b>	<b>623,498</b>	<b>549,156</b>
<b>(Unfunded) funded status at end of the year</b>	<b>(321,517)</b>	<b>(463,101)</b>	<b>52,986</b>	<b>(32,928)</b>
Amounts recognized in the Consolidated Statements of Financial Position consist of:				
<b>Net (liabilities) assets . . . . .</b>	<b>\$ (321,517)</b>	<b>\$ (463,101)</b>	<b>\$ 52,986</b>	<b>\$ (32,928)</b>

## I. Retirement Benefits (continued)

The accumulated benefit obligation for MIT's defined benefit plan was \$3,740.2 million and \$3,608.5 million at June 30, 2017 and 2016, respectively.

MIT provides retiree drug coverage through an Employer Group Waiver Plan (EGWP). Under EGWP, the cost of drug coverage is offset through direct federal subsidies, brand-name drug discounts, and reinsurance reimbursements.

### Assumptions and Healthcare Trend Rates

Table 25 below summarizes assumptions and healthcare trend rates. The expected long-term rate of return assumption represents the expected average rate of earnings on the funds invested or to be invested to provide for the benefits included in the benefit obligation. The long-term rate of return assumption is determined based on a number of factors, including historical market index returns, the anticipated long-term asset allocation of the plans, historical plan return data, plan expenses, and the potential to outperform market index returns.

Table 25. Assumptions <i>(in thousands of dollars)</i>	Defined Benefit Plan		Postretirement Welfare Benefit Plan	
	2017	2016	2017	2016
<b>Assumptions used to determine benefit obligation as of June 30:</b>				
Discount rate . . . . .	4.12%	4.06%	4.14%	4.03%
Rate of compensation increase* . . . . .	4.00%	4.00%		
<b>Assumptions used to determine net periodic benefit cost for the year ended June 30:</b>				
Discount rate . . . . .	4.06%	4.62%	4.03%	4.54%
Expected long-term return on plan assets . . . . .	8.00%	8.00%	7.00%	7.00%
Rate of compensation increase* . . . . .	4.00%	4.00%		
<b>Assumed health care cost trend rates:</b>				
Healthcare cost trend rate assumed for next year . . . . .			5.50%	6.00%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate) . . . . .			4.75%	4.75%
Year the rate reaches the ultimate trend rate . . . . .			2021	2021

\* The average rate of salary increase is assumed to be 4.00% for 2018 and thereafter.

As an indicator of sensitivity, a one percentage point change in the assumed healthcare cost trend rate would affect 2017 as shown in Table 26 below.

Table 26. Healthcare Cost Trend Rate Sensitivity <i>(in thousands of dollars)</i>	1% Point Increase	1% Point Decrease
Effect on 2017 postretirement service and interest cost . . . . .	\$ 9,939	\$ (7,854)
Effect on postretirement benefit obligation as of June 30, 2017 . . . . .	83,563	(68,648)

### Plan Investments

The investment objectives for the assets of the plans are to minimize expected funding contributions and to meet or exceed the rate of return assumed for plan funding purposes over the long term. The nature and duration of benefit obligations, along with assumptions concerning asset class returns and return correlations, are considered when determining an appropriate asset allocation to achieve the investment objectives.

Investment policies and strategies governing the assets of the plans are designed to achieve investment objectives within prudent risk parameters. Risk management practices include the use of external investment managers, the maintenance of a portfolio diversified by asset class, investment approach, security holdings, and the maintenance of sufficient liquidity to meet benefit obligations as they come due.

## I. Retirement Benefits (continued)

Tables 27A and 27B present investments at fair value of MIT's defined benefit plan and postretirement welfare benefit plan, which are included in plan net assets as of June 30, 2017 and 2016, grouped by the valuation hierarchy detailed in Note B. The investment values in these tables exclude certain items included in the assets shown in Table 24. There were no transfers in and out of Level 1 and Level 2 fair value measurements in 2017. The 2016 transfers from Level 1 to Level 2 totaled \$21.8 million and \$3.5 million for the defined benefit plan and postretirement benefit plan, respectively. The 2016 transfers from Level 2 to Level 1 totaled \$2.4 million and \$0.3 million for the defined benefit plan and the postretirement benefit plan, respectively.

**Table 27A. Defined Benefit Plan Investments**

<i>(in thousands of dollars)</i>	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	NAV as Practical Expedient [NAV]	Total Fair Value
<b>Fiscal Year 2017</b>					
Cash and cash equivalents . . . . .	\$ 256,999	\$ -	\$ -	\$ -	\$ 256,999
US Treasury . . . . .	352,736	-	-	-	352,736
US government agency . . . . .	-	6,351	-	-	6,351
Domestic bonds . . . . .	-	45,598	-	-	45,598
Foreign bonds . . . . .	-	6,120	-	-	6,120
Common equity:					
Long domestic . . . . .	1,769	-	74	-	1,843
Long foreign . . . . .	88,625	-	-	-	88,625
Equity:*					
Absolute return . . . . .	-	-	-	375,354	375,354
Domestic . . . . .	-	-	-	494,196	494,196
Foreign . . . . .	-	-	-	909,020	909,020
Private . . . . .	-	-	-	719,867	719,867
Real estate* . . . . .	2,037	-	-	220,914	222,951
Real assets* . . . . .	-	-	-	106,646	106,646
Other . . . . .	5,220	-	433	-	5,653
Derivatives . . . . .	19	202	-	-	221
<b>Total plan investments . . . . .</b>	<b>\$ 707,405</b>	<b>\$ 58,271</b>	<b>\$ 507</b>	<b>\$ 2,825,997</b>	<b>\$ 3,592,180</b>
<b>Fiscal Year 2016</b>					
Cash and cash equivalents . . . . .	\$ 154,852	\$ -	\$ -	\$ -	\$ 154,852
US Treasury . . . . .	304,281	-	-	-	304,281
US government agency . . . . .	-	8,701	-	-	8,701
Domestic bonds . . . . .	-	13	-	-	13
Foreign bonds . . . . .	-	6,973	-	-	6,973
Common equity:					
Long domestic . . . . .	42,147	-	53	-	42,200
Long foreign . . . . .	80,573	21,844	-	-	102,417
Equity:*					
Absolute return . . . . .	-	-	-	352,188	352,188
Domestic . . . . .	-	-	-	407,180	407,180
Foreign . . . . .	-	-	-	792,305	792,305
Private . . . . .	-	-	-	661,125	661,125
Real estate* . . . . .	1,492	-	-	277,671	279,163
Real assets* . . . . .	-	-	-	119,031	119,031
Other . . . . .	9,420	-	589	-	10,009
Derivatives . . . . .	44	777	-	-	821
<b>Total plan investments . . . . .</b>	<b>\$ 592,809</b>	<b>\$ 38,308</b>	<b>\$ 642</b>	<b>\$ 2,609,500</b>	<b>\$ 3,241,259</b>

\* Equity, real estate, and real assets categories include commingled vehicles that invest in these types of investments.

## I. Retirement Benefits (continued)

**Table 27B. Postretirement Welfare Benefit Plan Investments**

<i>(in thousands of dollars)</i>	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Measured at Net Asset Value [NAV]	Total Fair Value
<b>Fiscal Year 2017</b>					
Cash and cash equivalents	\$ 73,779	\$ -	\$ -	\$ -	\$ 73,779
Domestic bonds . . . . .	-	76,842	-	-	76,842
Foreign bonds . . . . .	-	437	-	-	437
Common equity:					
Long domestic . . . . .	275	-	-	-	275
Long foreign . . . . .	10,783	-	-	-	10,783
Equity:*					
Absolute return . . . . .	-	-	-	52,616	52,616
Domestic . . . . .	-	-	-	93,018	93,018
Foreign . . . . .	-	-	-	212,104	212,104
Private . . . . .	-	-	-	73,644	73,644
Real estate* . . . . .	278	-	-	21,381	21,659
Real assets* . . . . .	-	-	-	7,211	7,211
Other . . . . .	373	-	-	-	373
Derivatives . . . . .	-	15	-	-	15
<b>Total plan investments . . .</b>	<b>\$ 85,488</b>	<b>\$ 77,294</b>	<b>\$ -</b>	<b>\$ 459,974</b>	<b>\$ 622,756</b>
<b>Fiscal Year 2016</b>					
Cash and cash equivalents	\$ 29,733	\$ -	\$ -	\$ -	\$ 29,733
Domestic bonds . . . . .	-	76,019	-	-	76,019
Foreign bonds . . . . .	-	498	-	-	498
Common equity:					
Long domestic . . . . .	15,771	-	-	-	15,771
Long foreign . . . . .	10,356	3,524	-	-	13,880
Equity:*					
Absolute return . . . . .	-	-	-	67,327	67,327
Domestic . . . . .	-	-	-	75,578	75,578
Foreign . . . . .	-	-	-	180,830	180,830
Private . . . . .	-	-	-	60,008	60,008
Real estate* . . . . .	204	-	-	22,968	23,172
Real assets* . . . . .	-	-	-	4,574	4,574
Other . . . . .	695	-	-	-	695
Derivatives . . . . .	-	-	-	-	-
<b>Total plan investments . . .</b>	<b>\$ 56,759</b>	<b>\$ 80,041</b>	<b>\$ -</b>	<b>\$ 411,285</b>	<b>\$ 548,085</b>

\* Equity, real estate, and real assets categories include commingled vehicles that invest in these types of investments.

## I. Retirement Benefits (continued)

Table 28 below is a rollforward of the investments classified by MIT's defined benefit plan within Level 3 of the fair value hierarchy defined in Note B as of June 30, 2017 and 2016.

<b>Table 28. Rollforward of Level 3 Investments</b>							
<i>(in thousands of dollars)</i>	Fair Value Beginning	Realized Gains (Losses)	Unrealized Gains (Losses)	Purchases	Sales	Transfers	Fair Value Ending
<b>Defined Benefit Plan</b>							
<b>Fiscal Year 2017</b>							
Common equity:							
Long domestic . . . . .	\$ 53	\$ -	\$ 21	\$ -	\$ -	\$ -	\$ 74
Real assets . . . . .	-	-	-	-	-	-	-
Other . . . . .	589	-	(156)	-	-	-	433
<b>Total . . . . .</b>	<b>\$ 642</b>	<b>\$ -</b>	<b>\$ (135)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 507</b>
<b>Fiscal Year 2016</b>							
Common equity:							
Long domestic . . . . .	\$ 74	\$ -	\$ (21)	\$ -	\$ -	\$ -	\$ 53
Real assets . . . . .	261	(3,438)	3,177	-	-	-	-
Other . . . . .	760	-	(171)	-	-	-	589
<b>Total . . . . .</b>	<b>\$ 1,095</b>	<b>\$ (3,438)</b>	<b>\$ 2,985</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 642</b>

## I. Retirement Benefits (continued)

The plans have made investments in various long-lived partnerships, and in other cases have entered into contractual arrangements that may limit their ability to initiate redemptions due to notice periods, lock-ups, and gates. Details on estimated remaining life and current redemption terms and restrictions by asset class and type of investment for both the defined benefit plan and postretirement welfare benefit plan are provided in Table 29 below as of June 30, 2017 and 2016.

**Table 29. Unfunded Commitments**

<i>(in thousands of dollars)</i>	2017		2016		Redemption Terms	Redemption Restrictions
	Unfunded Commitments	Fair Value	Unfunded Commitments	Fair Value		
<b>Defined Benefit Plan</b>						
Equity:						
Absolute return . . . . .	\$ 41,983	\$ 375,354	\$ 39,851	\$ 352,188	Redemption terms range from 4 months with 30 days' notice to closed-end funds which are not available for redemption	Lock-up provisions range from none to not available for redemption
Domestic . . . . .	403	494,196	403	407,180	Redemption terms range from 4 months with 60 days' notice to 25 months with 3 months' notice and 1 closed-end fund not available for redemption	Lock-up provisions range from none to 33 months; 1 fund is not available for redemption
Foreign . . . . .	54,781	909,020	54,781	792,305	Redemption terms range from 45 days with 10 days' notice to 2 years with 3 months' notice	Lock-up provisions range from none to 15 months
Private . . . . .	289,447	719,867	318,779	661,125	Closed-end funds not available for redemption	Closed-end funds not available for redemption
Real estate . . . . .	140,114	220,914	150,325	277,671	Closed-end funds not available for redemption	Closed-end funds not available for redemption
Real assets . . . . .	25,265	106,646	38,282	119,031	Redemption terms range from 8 months with 45 days' notice for 1 fund with all other funds being closed-end not available for redemption	Closed-end funds not available for redemption except for 1 fund with no lock-up provisions
<b>Total . . . . .</b>	<b>\$ 551,993</b>	<b>\$ 2,825,997</b>	<b>\$ 602,421</b>	<b>\$ 2,609,500</b>		
<b>Postretirement Welfare Benefit Plan</b>						
Equity:						
Absolute return . . . . .	\$ 4,589	\$ 52,616	\$ 3,852	\$ 67,327	Redemption terms range from 4 months with 30 days' notice to closed-end funds which are not redeemable	Lock-up provisions range from none to not redeemable
Domestic . . . . .	44	93,018	45	75,578	Redemption terms range from 4 months with 60 days' notice to 25 months with 3 months' notice and 1 closed-end fund not available for redemption	Lock-up provisions range from none to 33 months; 1 fund is not redeemable
Foreign . . . . .	8,269	212,104	8,269	180,830	Redemption terms range from 45 days' with 10 days' notice to 2 years with 3 months' notice	Lock-up provisions range from none to 15 months
Private . . . . .	43,592	73,644	46,563	60,008	Closed-end funds not available for redemption	Closed-end funds not available for redemption
Real estate . . . . .	18,182	21,381	19,460	22,968	Closed-end funds not available for redemption	Closed-end funds not available for redemption
Real assets . . . . .	3,721	7,211	5,586	4,574	Closed-end funds not available for redemption	Closed-end funds not available for redemption
<b>Total . . . . .</b>	<b>\$ 78,397</b>	<b>\$ 459,974</b>	<b>\$ 83,775</b>	<b>\$ 411,285</b>		

## I. Retirement Benefits (continued)

Target allocations and weighted-average asset allocations of the investment portfolio for MIT defined benefit plan and postretirement welfare benefit plan at June 30, 2017 and 2016 are shown in Table 30 below.

	Defined Benefit Plan			Postretirement Welfare Benefit Plan		
	2017 Target Allocation	2017	2016	2017 Target Allocation	2017	2016
Cash and cash equivalents . . . . .	0-15%	7%	5%	0-15%	12%	6%
Fixed income . . . . .	3-13%	11%	10%	10-20%	12%	14%
Equities . . . . .	33.5-83.5%	62%	62%	37-87%	63%	63%
Marketable alternatives . . . . .	7.5-17.5%	11%	11%	9.5-19.5%	9%	12%
Real assets . . . . .	1-11%	3%	4%	0-5.5%	1%	1%
Real estate . . . . .	5-15%	6%	8%	0-8%	3%	4%
<b>Total . . . . .</b>		<b>100%</b>	<b>100%</b>		<b>100%</b>	<b>100%</b>

Table 31 below summarizes the notional exposure and net ending fair value of derivative financial instruments held by the MIT defined benefit plan at June 30, 2017 and 2016. Refer to Note C for a detailed discussion regarding derivative financial instruments.

<i>(in thousands of dollars)</i>	Notional Exposure		Net Ending Fair Value	Net Gain (Loss)
	Long	Short		
<b>Fiscal Year 2017</b>				
Equity instruments:				
Equity options . . . . .	\$ 75	\$ -	\$ 6	\$ -
Total equity instruments . . . . .	75	-	6	-
Fixed income instruments:				
Fixed income futures . . . . .	600	(5,400)	19	-
Total fixed income instruments . . . . .	600	(5,400)	19	-
Commodity and index instruments:				
Equity index swaps . . . . .	-	(20,865)	196	(9,160)
Total commodity and index instruments . . . . .	-	(20,865)	196	(9,160)
<b>2017 Total . . . . .</b>	<b>\$ 675</b>	<b>\$ (26,265)</b>	<b>\$ 221</b>	<b>\$ (9,160)</b>
<b>Fiscal Year 2016</b>				
Equity instruments:				
Equity options . . . . .	\$ 24	\$ -	\$ 4	\$ -
Total equity instruments . . . . .	24	-	4	-
Fixed income instruments:				
Fixed income futures . . . . .	5,900	(900)	44	-
Total fixed income instruments . . . . .	5,900	(900)	44	-
Commodity and index instruments:				
Equity Index swaps . . . . .	-	(28,043)	773	12,736
Total commodity and index instruments . . . . .	-	(28,043)	773	12,736
<b>2016 Total . . . . .</b>	<b>\$ 5,924</b>	<b>\$ (28,943)</b>	<b>\$ 821</b>	<b>\$ 12,736</b>

## I. Retirement Benefits (continued)

Counterparty risk may be partially or completely mitigated through master netting agreements included within an International Swap and Derivatives Association, Inc. (ISDA) Master Agreement between the plan and each of its counterparties. The ISDA Master Agreement allows the plan to offset with the counterparty certain derivative instruments' payables and/or receivables with collateral held with each counterparty.

To the extent amounts due from the counterparties are not fully collateralized contractually or otherwise, there is the risk of loss from counterparty non-performance. As of June 30, 2017, the defined benefit plan has elected not to offset recognized assets and liabilities. The following tables, 32 and 33, summarize the effect that offsetting of recognized assets and liabilities could have on the investments held by the defined benefit plan.

**Table 32. Offsetting of Financial and Derivative Assets and Liabilities**

<i>(in thousands of dollars)</i>	2017			2016		
	Gross Amount	Cash/Treasury Collateral Posted/ (Received)	Net Amount	Gross Amount	Cash/Treasury Collateral Posted/ (Received)	Net Amount
<b>Assets</b>						
Counterparty A.....	\$ 196	\$ 2,116	\$ 2,312	\$ 773	\$ (974)	\$ (201)
<b>Total assets.....</b>	<b>\$ 196</b>	<b>\$ 2,116</b>	<b>\$ 2,312</b>	<b>\$ 773</b>	<b>\$ (974)</b>	<b>\$ (201)</b>
<b>Liabilities</b>						
Counterparty A.....	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total liabilities.....</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total assets and liabilities, net..</b>	<b>\$ 196</b>	<b>\$ 2,116</b>	<b>\$ 2,312</b>	<b>\$ 773</b>	<b>\$ (974)</b>	<b>\$ (201)</b>

Maximum risk of loss from counterparty credit risk on over-the-counter derivatives is generally the aggregate unrealized appreciation in excess of any collateral pledged by the counterparty. ISDA Master Agreements allow the plan or the counterparties to an over-the-counter derivative to terminate the contract prior to maturity in the event either party fails to meet

the terms in the ISDA Master Agreements. This would cause an accelerated payment of net liability, if owed to the counterparty.

Table 33 below reconciles the net recognized assets and liabilities, as shown in Table 32, to derivative financial instruments as shown in Table 27A.

**Table 33. Reconciliation of Financial and Derivative Assets and Liabilities**

<i>(in thousands of dollars)</i>	2017	2016
Derivatives from Table 27A.....	\$ 221	\$ 821
Fixed income futures.....	(19)	(44)
Equity options.....	(6)	(4)
<b>Total.....</b>	<b>\$ 196</b>	<b>\$ 773</b>



**I. Retirement Benefits (continued)**

**Expected Future Benefit Payments**

In fiscal 2018, MIT expects to make contributions of \$18.6 million and \$6.5 million to its defined benefit pension plan and postretirement welfare benefit plan, respectively. These contributions have been estimated based on the same assumptions used to measure MIT's benefit obligations at June 30, 2017.

Table 34 below reflects total expected benefit payments for the defined benefit and postretirement welfare benefit plans over the next ten years. These payments have been estimated based on the same assumptions used to measure MIT's benefit obligations at June 30, 2017.

	Pension Benefits		Other Benefits*	
2018 .....	\$	145,054	\$	25,470
2019 .....		157,873		27,365
2020 .....		165,925		29,004
2021 .....		173,812		30,559
2022 .....		182,000		32,083
2023-2027 .....		1,030,883		182,805

\* *Other Benefits reflects the total net benefits expected to be paid from the plans (e.g., gross benefit reimbursement offset by retiree contributions).*

## J. Components of Net Assets and Endowment

Table 35 below presents the total net assets composition as of June 30, 2017. The amounts listed in the unrestricted category under endowment funds are those gifts and other funds received over the years that MIT designated as funds functioning as

endowment and invested with the endowment funds. A large component of temporarily restricted net assets in other invested funds is pledges, the majority of which will be reclassified to unrestricted net assets when cash is received.

<i>(in thousands of dollars)</i>	2017				2016 Total
	Unrestricted	Temporarily Restricted	Permanently Restricted	Total	
<b>Endowment Funds</b>					
General purpose . . . . .	\$ 961,101	\$ 1,181,516	\$ 244,321	\$ 2,386,938	\$ 2,171,701
Departments and research . . . . .	670,010	1,183,944	854,243	2,708,197	2,276,200
Library . . . . .	12,668	29,511	21,564	63,743	57,215
Salaries and wages . . . . .	584,338	2,857,965	762,484	4,204,787	3,810,449
Graduate general . . . . .	93,863	171,460	109,479	374,802	339,295
Graduate departments . . . . .	163,780	407,997	310,321	882,098	766,634
Undergraduate . . . . .	241,268	1,221,889	386,828	1,849,985	1,676,758
Prizes . . . . .	9,162	35,196	20,838	65,196	59,597
Miscellaneous . . . . .	1,223,700	228,987	448,491	1,901,178	1,660,840
Investment income held for distribution	395,559	-	-	395,559	362,826
Endowment funds before pledges . . . . .	4,355,449	7,318,465	3,158,569	14,832,483	13,181,515
Pledges . . . . .	-	-	135,500	135,500	251,521
<b>Total endowment funds . . . . .</b>	<b>4,355,449</b>	<b>7,318,465</b>	<b>3,294,069</b>	<b>14,967,983</b>	<b>13,433,036</b>
<b>Other Invested Funds</b>					
Student loan funds . . . . .	19,941	-	18,673	38,614	38,320
Building funds . . . . .	57,563	39,306	-	96,869	111,983
Designated purposes:					
Departments and research . . . . .	382,603	-	-	382,603	344,951
Other purposes . . . . .	355,326	13,488	-	368,814	425,260
Life income funds . . . . .	5,306	37,743	107,511	150,560	142,225
Pledges . . . . .	-	397,727	-	397,727	357,544
Other funds available for current expenses	1,723,380	230,697	-	1,954,077	1,390,907
Funds expended for educational plant . . . . .	767,811	-	-	767,811	684,855
<b>Total other invested funds . . . . .</b>	<b>3,311,930</b>	<b>718,961</b>	<b>126,184</b>	<b>4,157,075</b>	<b>3,496,045</b>
<b>Total net assets . . . . .</b>	<b>\$ 7,667,379</b>	<b>\$ 8,037,426</b>	<b>\$ 3,420,253</b>	<b>\$ 19,125,058</b>	<b>\$ 16,929,081</b>

## J. Components of Net Assets and Endowment (continued)

MIT's endowment consists of approximately 3,900 individual funds established for a variety of purposes and includes both donor-restricted endowment funds and funds that function as endowment, as shown in Table 36 below. As required by GAAP, net assets associated with endowment funds, including funds designated to function as endowments, are classified and reported based on the existence or absence of donor-imposed restrictions.

The Executive Committee has interpreted the Massachusetts-enacted version of the Uniform Prudent Management of Institutional Funds Act (UPMIFA) as allowing MIT to appropriate for expenditure or accumulate so much of an endowment fund as MIT determines is prudent for the uses, benefits, purposes, and duration for which the endowment fund is established, subject to the intent of the donor as expressed in the gift instrument. Unless stated otherwise in the gift instrument, the assets in an endowment fund shall be donor-restricted assets until appropriated for expenditure by the Executive Committee. As a result of this interpretation, MIT has not changed the way permanently restricted net assets are classified. (See Note A for further infor-

mation on net asset classification.) The remaining portion of the donor-restricted endowment fund that is not classified in permanently restricted net assets is classified as temporarily restricted net assets until those amounts are appropriated for expenditure in a manner consistent with the standard of prudence prescribed by UPMIFA. In accordance with UPMIFA, the Executive Committee considers the following factors in making a determination to appropriate or accumulate endowment funds:

- i. the duration and preservation of the fund
- ii. the purposes of MIT and the endowment fund
- iii. general economic conditions
- iv. the possible effects of inflation and deflation
- v. the expected total return from income and the appreciation of investments
- vi. other resources of MIT
- vii. the investment policies of MIT

**Table 36. Endowment Net Asset Composition by Type of Fund**

<i>(in thousands of dollars)</i>	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
<b>Fiscal Year 2017</b>				
Donor-restricted endowment funds . . . . .	\$ 395	\$ 7,318,465	\$ 3,294,069	\$ 10,612,929
Board-designated endowment funds . . . . .	4,355,054	-	-	4,355,054
<b>Total endowment funds . . . . .</b>	<b><u>\$ 4,355,449</u></b>	<b><u>7,318,465</u></b>	<b><u>3,294,069</u></b>	<b><u>14,967,983</u></b>
<b>Fiscal Year 2016</b>				
Donor-restricted endowment funds . . . . .	\$ (395)	\$ 6,511,079	\$ 2,960,741	\$ 9,471,425
Board-designated endowment funds . . . . .	3,961,611	-	-	3,961,611
<b>Total endowment funds . . . . .</b>	<b><u>\$ 3,961,216</u></b>	<b><u>\$ 6,511,079</u></b>	<b><u>\$ 2,960,741</u></b>	<b><u>\$ 13,433,036</u></b>

### Underwater Endowment Funds

From time to time, the fair value of assets associated with individual donor-restricted endowment funds may fall below the value of the initial and subsequent donor gift amounts (underwater). When underwater endowment funds exist, they are classified as a reduction of unrestricted net assets. There were no underwater endowment funds reported in unrestricted net assets as of June 30, 2017. Total underwater endowment funds reported in unrestricted net assets were \$0.4 million as of June 30, 2016.

## J. Components of Net Assets and Endowment (continued)

Table 37 below reflects changes in unrestricted, temporarily restricted, and permanently restricted endowment net assets for fiscal year 2017 and 2016, respectively.

<b>Table 37. Changes in Endowment Net Assets</b>				
<i>(in thousands of dollars)</i>	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
<b>Fiscal Year 2017</b>				
Endowment net assets, July 1, 2016 . . . . .	\$ 3,961,216	\$ 6,511,079	\$ 2,960,741	\$ 13,433,036
Investment return:				
Investment income . . . . .	15,522	32,678	17,275	65,475
Net appreciation (realized and unrealized) . . . . .	<u>525,183</u>	<u>1,199,048</u>	<u>109,389</u>	<u>1,833,620</u>
Total investment return . . . . .	540,705	1,231,726	126,664	1,899,095
Contributions . . . . .	-	-	319,718	319,718
Appropriation of endowment assets for expenditure . . . . .	(187,982)	(425,999)	(14,688)	(628,669)
Other changes:				
Underwater gain adjustment . . . . .	395	(395)	-	-
Net asset reclassifications and transfers to create board-designated endowment funds . . . . .	<u>41,115</u>	<u>2,054</u>	<u>(98,366)</u>	<u>(55,197)</u>
<b>Endowment net assets, June 30, 2017 . . . . .</b>	<b><u>\$ 4,355,449</u></b>	<b><u>\$ 7,318,465</u></b>	<b><u>\$ 3,294,069</u></b>	<b><u>\$ 14,967,983</u></b>
<b>Fiscal Year 2016</b>				
Endowment net assets, July 1, 2015 . . . . .	\$ 4,043,530	\$ 6,889,791	\$ 2,754,618	\$ 13,687,939
Investment return:				
Investment income . . . . .	20,731	43,822	11,093	75,646
Net appreciation (realized and unrealized) . . . . .	<u>4,586</u>	<u>(22,820)</u>	<u>22,442</u>	<u>4,208</u>
Total investment return . . . . .	25,317	21,002	33,535	79,854
Contributions . . . . .	-	-	140,012	140,012
Appropriation of endowment assets for expenditure . . . . .	(178,367)	(402,378)	(7,963)	(588,708)
Other changes:				
Underwater gain adjustment . . . . .	(395)	395	-	-
Net asset reclassifications and transfers to create board-designated endowment funds . . . . .	<u>71,131</u>	<u>2,269</u>	<u>40,539</u>	<u>113,939</u>
<b>Endowment net assets, June 30, 2016 . . . . .</b>	<b><u>\$ 3,961,216</u></b>	<b><u>\$ 6,511,079</u></b>	<b><u>\$ 2,960,741</u></b>	<b><u>\$ 13,433,036</u></b>

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## J. Components of Net Assets and Endowment (continued)

### Endowment Investment and Spending Policies

MIT's investment policy is based on the primary goal of maximizing return relative to appropriate risk such that performance exceeds appropriate benchmark returns at the total pool, asset class, and individual manager levels. To achieve its long-term rate-of-return objectives, MIT relies on a total return strategy in which investment returns are realized through both capital appreciation (realized and unrealized gains) and current yield (interest and dividends). MIT targets a diversified asset allocation that places greater emphasis on equity-based investments to achieve its long-term objectives within prudent risk constraints.

The Institute's primary investment pool, Pool A, is principally for endowment and funds functioning as endowment. Pool A operates as a mutual fund with units purchased and redeemed based on the previous month's unit market value. The total market value of Pool A was \$16,115.3 million at June 30, 2017, and \$14,448.3 million at June 30, 2016. Pool A included non-endowed operating and life income funds totaling \$1,616.8

million at June 30, 2017, and \$1,479.2 million at June 30, 2016. Certain endowed assets are also maintained in separately invested funds. These separately invested funds totaled \$334.0 million and \$214.5 million at June 30, 2017 and 2016, respectively.

MIT has adopted spending policies designed to provide a predictable stream of funding to programs supported by its investments while maintaining the purchasing power of assets. For pooled investments, the Executive Committee of the Corporation votes to distribute funds for operational support from general investments. In accordance with MIT's spending policy, these distributions are funded from both investment income and market appreciation. The distribution rates were \$72.20 and \$69.29 per Pool A unit as of June 30, 2017 and 2016, respectively. For separately invested endowment funds, only the annual investment income generated is distributed for spending.



## Report of Independent Auditors

To the Members of the Corporation of the  
Massachusetts Institute of Technology:

We have audited the accompanying consolidated financial statements, as listed in the accompanying table of contents, of the Massachusetts Institute of Technology (the "Institute"), which comprise the consolidated statements of financial position as of June 30, 2017 and 2016 and the related consolidated statement of activities for the year ended June 30, 2017, and statements of cash flows for the years ended June 30, 2017 and 2016.

### ***Management's Responsibility for the Consolidated Financial Statements***

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

### ***Auditors' Responsibility***

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Institute'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 Institute'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, as listed in the accompanying table of contents, present fairly, in all material respects, the financial position of the Massachusetts Institute of Technology at June 30, 2017 and 2016 and the changes in its net assets for the year ended June 30, 2017 and its cash flows for the years ended June 30, 2017 and 2016 in accordance with accounting principles generally accepted in the United States of America.

### ***Emphasis of Matter***

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

### ***Other Matter***

We previously audited the consolidated statement of financial position as of June 30, 2016, and the related consolidated statement of activities, and cash flows for the year then ended (not presented herein), and in our report dated September 9, 2016, we expressed an unmodified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying summarized financial information as of June 30, 2016 and for the year then ended is consistent, in all material respects, with the audited consolidated financial statements from which it has been derived.

September 8, 2017

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# Massachusetts Institute of Technology

## Five-Year Trend Analysis (Unaudited) – Financial Highlights

<i>(in thousands of dollars)</i>	2017	2016	2015	2014	2013
<b>Financial Position</b>					
Investments, at fair value . . . . .	\$ 19,045,347	\$ 16,988,407	\$ 17,533,764	\$ 16,228,756	\$ 13,830,100
Land, buildings, and equipment, at cost less accumulated depreciation . . . . .	3,397,070	3,092,429	2,822,312	2,624,271	2,516,264
Borrowings, net of unamortized issuance costs	3,287,545	2,892,093	2,904,559	2,903,586	2,417,483
Total assets . . . . .	23,929,212	21,598,926	21,652,768	20,055,657	17,434,445
Total liabilities . . . . .	4,804,154	4,669,845	4,146,195	4,027,990	3,576,234
Unrestricted net assets . . . . .	7,667,379	6,634,100	7,071,258	6,467,131	5,500,955
Temporarily restricted net assets . . . . .	8,037,426	7,210,822	7,553,447	6,718,225	5,644,291
Permanently restricted net assets . . . . .	3,420,253	3,084,159	2,881,868	2,842,311	2,712,965
Total net assets . . . . .	19,125,058	16,929,081	17,506,573	16,027,667	13,858,211
Total endowment funds before pledges . . . . .	14,832,483	13,181,515	13,474,743	12,425,131	10,857,976
<b>Principal Sources of Revenues</b>					
Tuition and similar revenues . . . . .	\$ 680,086	\$ 635,424	\$ 612,101	\$ 595,801	\$ 568,957
Research revenues:					
Campus direct . . . . .	508,677	513,991	482,563	475,382	473,220
Campus indirect . . . . .	198,262	187,426	183,020	188,136	188,742
Lincoln Laboratory direct . . . . .	926,871	908,506	844,588	791,292	860,190
Lincoln Laboratory indirect . . . . .	42,386	47,488	34,739	37,367	30,783
SMART direct . . . . .	32,981	32,416	31,620	31,519	47,332
SMART indirect . . . . .	303	402	117	98	193
Gift, bequests, and pledges . . . . .	573,515	469,162	493,690	452,655	325,018
Net gain on investments . . . . .	2,185,920	254,303	1,693,141	2,158,011	1,163,433
Investment income and distributions . . . . .	790,770	736,193	675,744	634,454	604,753
<b>Principal Purposes of Expenditures</b>					
Total operating expenditures . . . . .	\$ 3,464,024	\$ 3,349,899	\$ 3,111,119	\$ 2,918,517	\$ 2,908,577
General and administrative . . . . .	865,337	858,441	763,680	713,103	681,505
Instruction and unsponsored research . . . . .	928,448	854,595	811,495	777,382	692,032
Direct cost of sponsored research current dollars . . . . .	1,498,790	1,479,158	1,386,334	1,283,189	1,397,857
Direct cost of sponsored research constant dollars (2013 = 100) . . . . .	1,428,959	1,436,179	1,355,148	1,263,455	1,397,857

# Massachusetts Institute of Technology

## Five-Year Trend Analysis (Unaudited) – Financial Highlights (continued)

<i>(in thousands of dollars)</i>	2017	2016	2015	2014	2013
<b>Research Revenues</b>					
<b>Campus</b>					
Federal government sponsored:					
Health and Human Services . . . . .	\$ 111,835	\$ 113,522	\$ 116,469	\$ 115,075	\$ 119,908
Department of Defense . . . . .	130,372	131,625	125,854	122,761	127,967
Department of Energy . . . . .	82,157	84,419	81,528	88,451	88,988
National Science Foundation . . . . .	80,410	82,161	78,953	78,979	79,255
National Aeronautics and Space Administration	39,809	49,664	41,740	32,062	29,835
Other federal . . . . .	17,043	15,738	15,435	17,610	19,994
Total federal . . . . .	<u>461,626</u>	<u>477,129</u>	<u>459,979</u>	<u>454,938</u>	<u>465,947</u>
Non-federally sponsored:					
State/local/foreign governments . . . . .	25,686	28,495	27,951	28,967	33,429
Nonprofits . . . . .	86,753	84,015	78,667	72,118	58,227
Industry . . . . .	132,914	128,309	119,238	112,379	106,447
Total non-federal . . . . .	<u>245,353</u>	<u>240,819</u>	<u>225,856</u>	<u>213,464</u>	<u>198,103</u>
Total federal and non-federal . . . . .	706,979	717,948	685,835	668,402	664,050
F&A and other adjustments . . . . .	(40)	(16,531)	(20,252)	(4,884)	(2,088)
Total campus . . . . .	<u>706,939</u>	<u>701,417</u>	<u>665,583</u>	<u>663,518</u>	<u>661,962</u>
<b>Lincoln Laboratory</b>					
Federal government sponsored . . . . .	965,830	920,272	886,637	809,011	882,462
Non-federally sponsored . . . . .	5,437	6,355	3,609	2,333	1,622
F&A and other adjustments . . . . .	(2,010)	29,367	(10,919)	17,315	6,889
Total Lincoln Laboratory . . . . .	<u>969,257</u>	<u>955,994</u>	<u>879,327</u>	<u>828,659</u>	<u>890,973</u>
<b>SMART <sup>(A)</sup></b>					
Non-federally sponsored . . . . .	33,284	32,818	31,737	31,617	47,525
Total SMART . . . . .	<u>33,284</u>	<u>32,818</u>	<u>31,737</u>	<u>31,617</u>	<u>47,525</u>
<b>Total research revenues . . . . .</b>	<b><u>\$ 1,709,480</u></b>	<b><u>\$ 1,690,229</u></b>	<b><u>\$ 1,576,647</u></b>	<b><u>\$ 1,523,794</u></b>	<b><u>\$ 1,600,460</u></b>

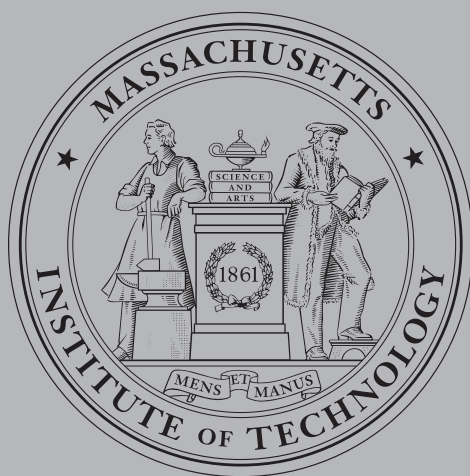
<sup>(A)</sup> The amounts represent research that has predominantly taken place in Singapore.



# Massachusetts Institute of Technology

## Five-Year Trend Analysis (Unaudited) – Financial Highlights (continued)

	2017	2016	2015	2014	2013
<b>Students</b>					
Undergraduate:					
Full-time .....	4,476	4,492	4,476	4,499	4,480
Part-time .....	48	35	36	29	23
Undergraduate applications:					
Applicants .....	19,020	18,306	18,356	18,989	18,109
Accepted .....	1,511	1,519	1,447	1,548	1,620
Acceptance rate .....	8%	8%	8%	8%	9%
Enrolled .....	1,110	1,106	1,043	1,115	1,135
Yield .....	73%	73%	72%	72%	70%
Freshmen ranking in the top 10% of their class	97%	98%	97%	99%	98%
Average SAT Scores (math and verbal) ..	1,505	1,493	1,500	1,492	1,481
Graduate:					
Full-time .....	6,707	6,689	6,630	6,639	6,537
Part-time .....	145	115	177	134	149
Graduate applications:					
Applicants .....	26,463	23,750	24,468	24,029	22,588
Accepted .....	3,480	3,307	3,718	3,320	3,504
Acceptance rate .....	13%	14%	15%	14%	16%
Enrolled .....	2,277	2,165	2,441	2,163	2,229
Yield .....	65%	65%	66%	65%	64%
<b>Tuition (in dollars)</b>					
Tuition and fees .....	\$ 48,452	\$ 46,704	\$ 45,016	\$ 43,498	\$ 42,050
Average room and board .....	14,210	13,730	13,224	12,744	12,188
<b>Student Support (in thousands of dollars)</b>					
Undergraduate tuition support .....	\$ 126,932	\$ 112,902	\$ 107,148	\$ 103,076	\$ 101,831
Graduate tuition support .....	270,289	258,444	247,361	240,022	226,158
Fellowship stipends .....	39,518	38,731	38,759	38,792	36,173
Student loans .....	4,726	7,263	8,348	9,095	9,669
Student employment .....	118,528	110,392	105,261	99,890	96,446
<b>Total student support .....</b>	<b>\$ 559,993</b>	<b>\$ 527,732</b>	<b>\$ 506,877</b>	<b>\$ 490,875</b>	<b>\$ 470,277</b>
<b>Faculty and Staff (including unpaid appointments)</b>					
Faculty .....	1,040	1,036	1,021	1,030	1,022
Staff and fellows .....	15,077	14,732	14,307	13,787	13,416



# Report of the Treasurer

for the year ended

June 30, 2017



Massachusetts  
Institute of  
Technology