S&P Global
Ratings

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Massachusetts Institute of Technology; Private Coll/Univ - General Obligation

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Massachusetts Institute of Technology; Private Coll/Univ - General Obligation

Credit Profile		
US$500.0 mil taxable bnds ser H due 04/01/2052		
Long Term Rating	AAA/Stable	New
Massachusetts Institute of Technology PCU_GO		
Long Term Rating	AAA/Stable	Affirmed
Massachusetts Development Finance Agency, Massachusetts		
Massachusetts Inst of Tech, Massachusetts		
Massachusetts Dev Fin Agy (Massachusetts Institute of Technology) PCU_GO		
Long Term Rating	AAA/A-1+/Stable	Affirmed
Massachusetts Dev Fin Agy (Massachusetts Institute of Technology) PCU_GO		
Long Term Rating	AAA/Stable	Affirmed

Rating Action

S&P Global Ratings assigned its 'AAA' rating to $500 million in series H taxable debt issued by the Massachusetts Institute of Technology (MIT). At the same time, S&P Global Ratings affirmed its 'AAA' and 'AAA/A-1+' ratings on MIT's debt outstanding, some of which is issued by MIT or by the Massachusetts Development Finance Agency (formerly known as the Massachusetts Health and Educational Facilities Authority). The outlook, where applicable, is stable.

The 'A-1+' short-term rating reflects our view of MIT's general credit strengths and considerable experience in managing its own liquidity. MIT is providing its own liquidity to support its $250 million of series J-1 (swapped to fixed-rate) and J-2 variable-rate demand bonds (VRDBs). We believe MIT demonstrates sufficient liquid assets of high credit quality--largely in U.S. Treasuries--as well as a bank line that it can use, among other things, to cover the purchase price of VRDBs if any of the bonds are tendered but not successfully remarketed. Availability of liquid assets is sufficient, in our opinion, with same-day liquidity composed of high-quality U.S. government securities and cash. As of Dec. 31, 2021, MIT had $2.3 billion in available cash and cash equivalents, which was more than sufficient to cover the series J-1 and J-2 bonds. In our view, MIT has demonstrated the policies and procedures necessary to provide self-liquidity.

All of MIT's debt is a general obligation of the institution. As of June 30, 2021, MIT had $4.0 billion in debt outstanding and $282 million in operating leases outstanding. MIT has no capital leases outstanding. In addition, subsequent to the close of fiscal 2021, MIT issued in July $225 million in additional taxable debt. With this issuance, and the July 2021 issuance, total debt and leases rises to $5.0 billion on a pro forma basis. Proceeds from this issuance will help fund general corporate purposes. MIT maintains a $500 million line of credit, of which $387 million is currently undrawn.

As a result of the COVID-19 outbreak, MIT transitioned to virtual programs for the spring 2020 semester. For fall 2020 and spring 2021, MIT implemented its own model with a combination of in-person, virtual, and hybrid mode of instruction. Graduate coursework varied by program, but generally involved a combination of in-person and virtual instruction. Faculty and staff continued to work from home to the extent they were able to. As a result, there was no disruption in academic credit activity. For the 2021-2022 academic year, all instruction was in person. The primary impact for fiscal 2020 was a loss of revenue, largely from pro rata refunds on room and board for students who left campus, and from expenses for information technology associated with a rapid transition to remote work and learning. For fiscal 2021, adjusted operating revenues continued to be affected by less on-campus activity. These losses are partially offset by some expense savings due to reduced travel expenditures and the imposition of hiring controls. MIT initially decided not to apply for funds made available from the Higher Education Emergency Relief Fund (HEERF I), but has taken advantage of other provisions of the CARES Act, including the employee retention tax credit, deferral of employer social security taxes, and amendments to its retirement plans. MIT subsequently applied for additional HEERF funding made available through the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) and the American Rescue Plan (ARP) and to date used all federal stimulus funds for student aid. MIT intends to apply for additional funds to support the institution under ARP. If funds are awarded, MIT expects to receive $6.4 million in fiscal 2022 and beyond. Overall, MIT ended fiscal years 2020 and 2021 with a surplus of $35.4 million and $55.8 million, respectively, on a full-accrual basis. In addition, for fiscal years 2020 and 2021 net results were $187.0 million and $216.4 million, respectively, including adjustments for net periodic benefit income. For fiscal 2022, with a return to more normal operations and an anticipated rebound in revenues, operations are expected to continue to result in positive operating results.

Credit overview

The 'AAA' rating reflects our view of MIT's extremely strong enterprise profile, characterized by incredible demand for its programs, exceptional student quality, a geographically diverse student body, and impressive management and governance oversight. We assessed the institute's financial profile as very strong, with a substantial endowment and a track record of excellent operating performance. We also note MIT's relatively high debt burden compared with that of peers, and the substantial capital plans for deferred maintenance, including infrastructure and renewal. Combined, these factors lead to an indicative standalone credit profile of 'aa+.' In accordance with our criteria, the final rating can be within one notch of the indicative credit level. In our opinion, the 'AAA' rating on the institute's bonds better reflects MIT's exceptional cash and investments relative to its debt outstanding.

The 'AAA' rating is further supported by the institute's:

- Status as a pre-eminent research institute, with almost $2.0 billion in research revenues in fiscal 2021;
- Very large and growing endowment of $27.4 billion (excluding pledges) as of June 30, 2021;
- Impressive demand, excellent student quality, and increasingly competitive admissions;
- Healthy financial resource ratios, with expendable resources of $31.9 billion in fiscal 2021, equal to 7.5x operations and 6.4x pro forma debt; and
- History of positive operating performance, supported by good revenue diversity and the demonstrated ability to raise funds.

Offsetting factors include our view of MIT's:

- Manageable debt burden over the near term, with an average annual pro forma debt burden of 5.8% over the next 30 years; however, given the back-loaded debt service schedule, the debt burden rises over time and is high; and
- Substantial capital and strategic plans and ongoing deferred maintenance needs, although additional debt is not expected in the medium term.

MIT's bonds are eligible to be rated above the sovereign because we believe the institution can maintain better credit characteristics than the U.S. under a stress scenario. Under our criteria, "Ratings Above The Sovereign: Corporate And Government Ratings--Methodology And Assumptions," published Nov. 19, 2013, U.S. colleges and universities are considered to have moderate sensitivity to country risk. MIT's revenues are the sole source of security on the bonds. The institutional framework in the U.S. is predictable, with institutions like MIT having significant autonomy, independent treasury management, and no history of government intervention. Financial flexibility is supported by the institute's large endowment, which has a substantial market value and is invested globally, and diverse revenue sources.

The stable outlook reflects our expectation that in the near term, MIT will maintain its excellent demand characteristics, still-positive operating performance, and robust fundraising results. The outlook also reflects our expectation that any debt issuance will be balanced with commensurate growth in resources.

Environmental, social, and governance

In our view, higher education entities face elevated social risk due to the uncertainty on the duration of the COVID-19 pandemic. We believe MIT has taken prudent steps regarding the health and safety of its students, faculty, and staff through its transition to remote learning and the actions taken, including mandating vaccines, but risks remain, given the highly contagious nature of the pandemic. Vaccine progress has helped alleviate some of the health and safety social risks stemming from the pandemic; however, we believe the higher education sector remains at a greater risk than other sectors, given the importance of the resumption of pre-pandemic activities and the corresponding influence on operating revenues. We view the risks posed by COVID-19 to public health and safety as a social risk under our environmental, social, and governance factors. Despite the elevated social risk, we believe environment and governance risk at MIT are in line with our view of the sector as a whole.

Stable Outlook

Downside scenario

Credit factors that could lead us to lower the rating within the outlook period include an unexpected and significant deterioration in MIT's demand profile, operating performance, or financial resource measures.

Credit Opinion

Enterprise Profile

Market position and demand

MIT is a private, nonsectarian, co-educational, nonprofit institution of higher education. The institute is organized into five schools: architecture and planning; engineering; humanities, arts, and social sciences; management; and science. In October 2018, MIT announced plans to create a new college, the Stephen A. Schwarzman College of Computing, an interdisciplinary hub for work in computer science, artificial intelligence, data science, and related fields. The college opened in fall 2019 with plans to hire 50 new faculty positions--25 appointed in advanced computing at the college and 25 appointed in the college and other departments across MIT. The college's inaugural dean was also appointed. The college received a $350 million foundational gift from Mr. Schwarzman and the institute has committed $1 billion toward the new college.

MIT is one of the pre-eminent research institutes in the world, composed of major interdisciplinary organizations as well as three off-campus research facilities in Massachusetts: Lincoln Laboratory in Lexington, Haystack Observatory in Tyngsborough, and the Bates Linear Accelerator Center in Middleton. MIT operates Lincoln Laboratory as a federally funded research and development center focused on advanced electronics. In fiscal 2021, MIT's research activities accounted for approximately $2 billion in revenue, including the campus, Lincoln Laboratory, and the Singapore-MIT Alliance for Research and Technology.

MIT has an impressive enrollment and demand profile, characterized by flat enrollment in recent years, with a decline for fall 2020 attributed to the pandemic and a healthy rebound for fall 2021. In our view, the institute is highly selective, student quality is exceptional, and the geographical draw is diverse, with 82% of students coming from out of state. The institute has significant admissions flexibility, admitting just 4.1% of its more than 33,240 freshman applicants in fall 2021. Its matriculation rate remains strong, at about 86.3%, and student quality is excellent, with an average freshman SAT score of 1538 (excluding the writing test) and an ACT score of 35.0, both of which are well above national averages. Due to the pandemic, MIT suspended its SAT/ACT test requirement, and management attributes the increase in applications to this suspension. The yield also increased for fall 2021 as a result of higher deferrals from the previous year due to the pandemic and we expect freshmen enrollment will return to levels seen in previous years. The freshman-to-sophomore retention rate is outstanding, in our view, at 99%. The six-year graduation rate is also excellent, at 96%.

The institute's headcount skews slightly toward graduate and professional students. In fall 2021, graduate students accounted for 61% of total full-time equivalent (FTE) enrollment. Graduate applications have been steadily increasing for several years. There were 37,798 applications in fall 2021, with just 10.1% of applicants accepted and 61% matriculated, which we believe is evidence of the high regard for many of the institute's graduate programs. Overall graduate enrollment increased this past year as a result of the pandemic, partially due to extended time to completion from related delays in research as well as deferrals from the previous year. We expect MIT will maintain its impressive demand and enrollment profile for the foreseeable future, which supports the current rating, in our view.

Total tuition for the 2021-2022 academic year was $55,510. MIT gave undergraduate students a $5,000 one-time grant to offset the cost of attending MIT for the previous academic year. We consider the tuition discount rate high, at 53.8%, and reflective of the institute's need-blind policy. It is also manageable given that it is a small percentage of the overall institution's budget, at 9.4%.

In our view, MIT has an exceptional fundraising history in terms of successful campaigns and annual giving. The institute's most recent campaign, "Campaign for a Better World," announced in May 2016, has raised $6.2 billion toward its $6 billion goal. The campaign closed in fiscal 2021. In 2018, MIT revised its fundraising goal to $6 billion from $5 billion. This revision was the result of its newly announced $1 billion commitment to the creation of the College of Computing. Overall, the campaign raised funds for education, research, and innovation. We expect that annual giving and fundraising will remain strong. We expect fundraising to remain robust in fiscal 2022 despite it being a non-campaign year.

Management and governance

MIT's senior management team has been very stable, and has been led by President L. Rafael Reif since 2012. However, President Reif announced this month that he would be stepping down at the end of calendar 2022 and a search for a new president will begin shortly. In addition, Cynthia Barnhart has been selected to become Provost of MIT, replacing Martin Schmidt who is leaving MIT to become President of Rensselaer Polytechnic Institute. Dr. Barnhart previously was chancellor of MIT. We expect the transition in leadership to be smooth.

The MIT Corp., a 75-member board composed of national leaders in science, engineering, industry, education, and public service, governs the institute. The institute also has an executive committee, which is a subset of the corporation and is responsible for general administration. The committee meets frequently and oversees MIT's strategic and capital plans.

MIT maintains strategic themes that drive capital and fundraising priorities. The institute's strategic priorities are assessed and updated regularly, and contain measurable deliverables that the executive committee oversees. The executive committee also approves and monitors the budget in the context of a multiyear strategic financial plan. One of MIT's strengths, in our opinion, is its financial management, with a demonstrated ability to fundraise and to provide effective oversight and management of its budget, which has led to consistent operating surpluses. In our view, the management team manages the institute's financial profile prudently and efficiently to maximize operating outcomes. MIT has been proactive in planning institutional changes in the case of a recession or other institutional system shock, which we view as a credit positive in terms of managing current and future plans in light of the current pandemic. Management prepares interim, full-accrual results on a quarterly basis, which the corporation's risk and audit committee reviews regularly throughout the year. We view the preparation and review of interim financial statements as a best practice for the industry. We also consider the institute's budgeting to be conservative, and we note that financial performance metrics are evaluated based on budgets submitted by each of the institute's academic and administrative departments.

Financial Profile

Financial performance

MIT's financial performance is consistently positive on a full-accrual basis, which we consider a credit strength and believe is a function of high demand, financial controls, and the payout of its endowment. MIT generated an operating surplus of $35.4 million (0.8% margin) in fiscal 2020. Margins improved in fiscal 2021 due to expense reductions and the surplus was $55.8 million or a 1.3% margin. Since fiscal 2016, unrestricted margins have been in the 1%-2% range, lower than in previous years. This is partially due to higher depreciation expenses from increased investment in facilities. However, operations have been consistently positive for several years and are expected to remain positive in the current range of 1%-2%. As previously noted, MIT was affected in fiscal 2020 by lower auxiliary revenues and increased expenses due to COVID-19. Similarly, 2021 was also affected for the full fiscal year by increased social distancing and health and safety measures due to the pandemic. As a result, net tuition revenues declined in fiscal 2021 due to a one-time $5,000 grant given to students. Auxiliary revenues also declined due to less on-campus activities. These revenue declines were offset by increased gifts and contributions as well as grant revenue, which resulted in adjusted operating revenue being flat for the year. Management had increased pandemic-related expenses but also implemented a variety of cost reductions. Expense savings came largely from a salary freeze, decreased expenditures for work-related travel, employee medical care and supplies, and services and other spending controls. The institute elected not to accept Higher Education Emergency Relief Fund funding under the CARES Act, but did apply for such funding made available in subsequent federal legislation and has used these funds for student aid. MIT intends to apply for additional funds under ARP. We believe that with a return to more normal operations and an anticipated rebound in revenues, operations should continue to improve in fiscal 2022 and beyond.

The unrestricted operating revenue base in fiscal 2021 was $4.3 billion. We view the institute's revenues as diverse, and in fiscal 2021, they included 19% from student tuition and fees and auxiliaries, 45% from research (including Lincoln Laboratory), 21% from investment support, and 10% from gifts. In fiscal 2021, the spending rate on endowed funds was 2.7% of the end-of-year value.

Available resources

MIT's available resources are in line with current fiscal 2020 medians and sound for the rating. Overall available resources increased significantly in fiscal 2021 due to substantial market returns. Fiscal 2021 expendable resources of $31.9 billion equaled 7.5x adjusted operating expenses and 6.4x pro forma long-term debt. With new Financial Accounting Standards Board (FASB) presentation standards, the balance sheet lists net assets as either with or without donor restrictions. To calculate expendable resources, we used net assets without donor restrictions, rather than the formerly classified unrestricted net assets. Management identified $16.7 billion of net assets with donor restrictions; old FASB standards would have classified this as temporarily restricted net assets. Therefore, we used that amount in our expendable-resource calculation for comparability. Total cash and investments of $35.1 billion as of fiscal 2021 equaled 8.2x adjusted operating expenses and 7.1x pro forma long-term debt. We expect these ratios will be maintained or improved, and we expect any increase in debt will be commensurate with an increase in resources, such that financial resource measures remain consistent with the 'AAA' category.

MIT Investment Management Co. (MITIMCo) manages the institute's investment assets under the supervision of a separate MITIMCo board. MIT's endowment assets totaled $27.4 billion as of June 30, 2021, with investments in MIT's unitized long-term pool producing an exceptional 55.5% return for the year. Management reports that MIT's asset allocation has been stable and is tracking close to the policy.

MIT generally uses a Tobin rule endowment distribution policy, based 80% on the previous year's spending and 20% on the endowment's market value. Endowment spending for operations in fiscal 2021 was $749 million, or approximately 2.7% of the endowment's year-end value. The annual endowment draw equaled approximately 17% of the institute's adjusted operating revenues for fiscal 2021, which is less than that of some of its peers.

As of June 30, 2021, MIT had total unfunded capital calls of approximately $3.8 billion. The unfunded commitment amount represents a moderate 14% of market value of the endowment, which is lower than those of some of MIT's peers and manageable, given the significant liquidity available to MIT. Of its $34.8 billion of total long-term investments as of June 30, 2021, $4.2 billion, or 12.0%, were considered level 1, or active market securities, which we consider to be the most liquid. As of Dec. 31, 2021, MIT has self-reported $4.6 billion in discounted assets that could be liquidated on a daily basis.

Debt and contingent liabilities

Total long-term debt for the institute was approximately $4.0 billion in fiscal 2021. As noted, MIT also has $282 million in operating leases but no capital leases outstanding. In July 2021, MIT issued $225 million in taxable debt and will issue $500 million with this issue. As a result, pro forma debt is $5.0 billion. MIT also has a $500 million line of credit that currently has $387 million available. We understand, however, that the institute also uses this line opportunistically and periodically for various funding purposes.

Overall, the institute has completed a significant number of projects associated with investment in its infrastructure and its campus. In fall 2018, the institute opened its MIT.nano lab, a 214,000-square-foot facility that will more than double MIT's shared fabrication and imaging capabilities. Some projects were delayed in 2020 due to the pandemic, but MIT opened new residence halls in 2021 as well as renovating the central utility plant. The institute's ongoing capital program includes the continued development of Kendall Square, construction of the Stephen A Schwarzman College of Computing building, and a continued focus on deferred maintenance of the campus. MIT is in the initial phases of a new comprehensive capital plan that will focus on continued renewal of its facilities, and needs relating to enterprise systems, digital and research computing infrastructure, and shared research equipment. Bond proceeds from this issue will help fund some of the above-mentioned projects.

MIT remains conservative in its use of variable-rate debt, compared with its peers. Of the total debt, a small portion is variable-rate (9%, or $363 million), with the remainder fixed-rate. In our opinion, MIT has sufficient liquidity to fund its VRDBs. MIT has one interest rate swap with US Bank. The agreement is a $125 million, floating-to-fixed rate swap that synthetically fixes the series J-1 bonds at 4.91%, with MIT receiving a rate equal to the Securities Industry and Financial Markets Assn. index less 15 basis points; the agreement terminates on maturity in 2031. As of June 30, 2021, this swap had a notional amount and fair value of $125 million and negative $48 million, respectively.

MIT's pro forma debt burden is manageable over the near term, with an average pro forma annual debt burden of 5.8% over the next 30 years; however, given MIT's issuance of century bonds, the debt burden rises over time and if smoothed over 30 years is over 10%, which we consider high.

MIT has defined-benefit and defined-contribution retirement plans for employees. The institute also offers a postretirement health care benefit plan. Both plans are overfunded.

Massachusetts Institute of Technology--Enterprise And Financial Statistics

	--Fiscal year ended June 30--					--Medians for 'AAA' rated private colleges and universities--
	2022	**2021**	**2020**	**2019**	**2018**	**2020**
Enrollment and demand						
Headcount	11,934	11,254	11,520	11,574	11,466	MNR
Full-time equivalent	11,837	11,084	11,415	11,459	11,275	9,883
Freshman acceptance rate (%)	4.1	7.3	6.7	6.7	7.2	6.5
Freshman matriculation rate (%)	86.3	73.6	77.2	76.2	75.7	MNR
Undergraduates as a % of total enrollment (%)	38.9	38.8	39.3	39.8	39.7	49.6
Freshman retention (%)	99.0	98.0	99.0	99.0	99.0	97.9
Graduation rates (six years) (%)	96.0	96.0	94.0	94.0	94.0	MNR
Income statement						
Adjusted operating revenue ($000s)	N.A.	4,321,012	4,314,384	4,278,771	3,973,681	MNR
Adjusted operating expense ($000s)	N.A.	4,265,178	4,279,022	4,210,293	3,924,916	MNR
Net operating income ($000s)	N.A.	55,834	35,362	68,478	48,765	MNR
Net operating margin (%)	N.A.	1.31	0.83	1.63	1.24	1.30
Change in unrestricted net assets ($000s)	N.A.	6,143,704	406,082	376,108	1,132,459	MNR
Tuition discount (%)	N.A.	53.8	50.8	48.8	49.5	49.9
Tuition dependence (%)	N.A.	17.3	17.7	17.5	17.6	MNR
Student dependence (%)	N.A.	19.1	20.4	20.7	21.0	30.7
Health care operations dependence (%)	N.A.	N.A.	N.A.	N.A.	N.A.	MNR
Research dependence (%)	N.A.	45.3	43.2	42.8	42.9	MNR
Endowment and investment income dependence (%)	N.A.	21.1	21.1	20.5	20.9	MNR
Debt						
Outstanding debt ($000s)	N.A.	4,236,113	3,969,587	3,188,705	3,280,179	2,772,416
Proposed debt ($000s)	N.A.	725,000	N.A.	N.A.	N.A.	MNR
Total pro forma debt ($000s)	N.A.	4,961,113	N.A.	N.A.	N.A.	MNR
Pro forma MADS	N.A.	246,528	N.A.	N.A.	N.A.	MNR
Current debt service burden (%)	N.A.	4.09	5.03	4.13	4.42	MNR
Current MADS burden (%)	N.A.	5.04	3.86	3.84	4.05	6.00
Pro forma MADS burden (%)	N.A.	5.78	N.A.	N.A.	N.A.	MNR
Financial resource ratios						
Endowment market value ($000s)	N.A.	27,527,204	18,495,905	17,569,328	16,529,432	14,876,553

Massachusetts Institute of Technology--Enterprise And Financial Statistics (cont.)

	--Fiscal year ended June 30--					--Medians for 'AAA' rated private colleges and universities--
	2022	**2021**	**2020**	**2019**	**2018**	**2020**
Cash and investments ($000s)	N.A.	35,138,957	24,937,116	22,488,834	21,194,578	MNR
Unrestricted net assets ($000s)	N.A.	15,725,732	9,582,028	9,175,946	8,799,838	MNR
Expendable resources ($000s)	N.A.	31,945,068	20,102,659	18,210,663	17,553,657	MNR
Cash and investments to operations (%)	N.A.	823.9	582.8	534.1	540.0	855.4
Cash and investments to debt (%)	N.A.	829.5	628.2	705.3	646.1	813.0
Cash and investments to pro forma debt (%)	N.A.	708.3	N.A.	N.A.	N.A.	MNR
Expendable resources to operations (%)	N.A.	749.0	469.8	432.5	447.2	632.7
Expendable resources to debt (%)	N.A.	754.1	506.4	571.1	535.1	658.3
Expendable resources to pro forma debt (%)	N.A.	643.9	N.A.	N.A.	N.A.	MNR
Average age of plant (years)	N.A.	10.4	10.1	9.5	9.7	12.7

N.A.--Not available. MNR--Median not reported. MADS--Maximum annual debt service. Total adjusted operating revenue = unrestricted revenue less realized and unrealized gains/losses and financial aid. Total adjusted operating expense = unrestricted expense plus financial aid expense. Net operating margin = 100*(net adjusted operating income/adjusted operating expense). Student dependence = 100*(gross tuition revenue + auxiliary revenue) / adjusted operating revenue. Current debt service burden = 100*(current debt service expense/adjusted operating expenses). Current MADS burden = 100*(maximum annual debt service expense/adjusted operating expenses). Cash and investments = cash + short-term and long-term investments. Expendable resources = net assets without donor restrictions + net assets available for appropriation - (net property, plant, and equipment - outstanding debt). Average age of plant = accumulated depreciation/depreciation and amortization expense.

Related Research

- Through The ESG Lens 2.0: A Deeper Dive Into U.S. Public Finance Credit Factors, April 28, 2020