

RatingsDirect®

University of Massachusetts Building Authority University of Massachusetts; Public Coll/Univ - Unlimited Student Fees

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University of Massachusetts Building Authority University of Massachusetts; Public Coll/Univ - Unlimited Student Fees

Credit Profile

US\$321.36 mil rfdg rev bnds (University of Massachusetts) ser 2020-4 dtd 04/14/2020 due 06/30/2051

Long Term Rating

AA-/Negative

New

Massachusetts Development Finance Agency, Massachusetts

University of Massachusetts System, Massachusetts

Massachusetts Development Finance Agency (University of Massachusetts System)

Long Term Rating

AA-/Negative

Affirmed

Rating Action

S&P Global Ratings assigned its 'AA-' rating to the University of Massachusetts Building Authority's (UMBA) series 2020-4 revenue bonds, to be issued for the University of Massachusetts (UMass). At the same time, S&P Global Ratings affirmed its 'AA-' long-term rating and underlying rating (SPUR) on the university's revenue bonds previously issued by the authority and other issuers. In addition, we affirmed our 'AA-/A-1' rating on UMass' series 2008-1 bonds. The rating outlook is negative.

The bonds are secured by the system's pledge of all available funds, payable to the authority under the contract for management and services. We consider this equivalent to a general obligation pledge of the university system. While all the system's debt is on parity, we rate only a portion. In addition, we rate the commonwealth-guaranteed bonds, which amount to about \$111.5 million of the system's total debt.

In fiscal 2013, the authority approved a commercial paper (CP) program to help fund the system's capital plan. The program is authorized for \$200 million; as of June 30, 2020, there was outstanding balance on the program. The system plans to continue using this CP program. The rating on the CP program, consisting of the series 2013A-1 tax-exempt CP notes and series 2013A-2 federally taxable CP notes, is based on a State Street Bank and Trust ('AA-/A-1+') liquidity facility, and additional information can be seen in our report published June 16, 2020, on RatingsDirect. The 'AA-/A-1' rating on the series 2008-1 bonds reflects the long-term rating of the system and the short-term rating of Barclays, the liquidity provider.

The system plans to issue approximately \$321.4 million in series 2020-4 taxable bonds to refund about \$193.9 million of outstanding revenue bonds for interest savings and to restructure a roughly \$93.9 million principal payment coming due on Nov. 1, 2020, to create cash flow relief. As of June 30, 2020, the system had outstanding debt (including notes, capital lease, and CP) of approximately \$2.99 billion. Following this issuance, total pro forma debt will be approximately \$3.0 billion, according to the pro forma debt service schedule, and the pro forma maximum annual debt service (MADS) burden will be 6.4% of fiscal 2019 adjusted operating expenses. Based on the latest capital analysis, the system plans to issue up to \$450 million of additional debt in early 2022. We understand that management is still

evaluating the evolving environment and potential market opportunities for the possible debt issuance. Hence, the additional debt has not been incorporated into this analysis, given the lack of a firm timeline and debt issuance details.

Due to the outbreak of the COVID-19 pandemic, UMass transitioned to remote education in March 2020 and issued prorated refunds to students for room and board, resulting in a net impact on auxiliary revenue of approximately \$65.4 million. Auxiliary revenues historically made up approximately 11% of total operating revenues, which we view as manageable. Other lost revenue and increased expenses across campuses and the medical school resulted in an impact of \$48.7 million, bringing the total negative budget impact of COVID-19 to about \$114.1 million in fiscal 2020. Management made a concerted effort to offset \$76.5 million of this negative impact through expense savings and relief funding, and currently projects to end fiscal 2020 with a small full-accrual operating surplus, which we view favorably given the magnitude of the pandemic's effect.

UMass reports 65,669 students on a full-time-equivalent (FTE) basis as of Sept. 16, 2020, a drop of only 0.5% from the prior year's enrollment; we view this result as decent in the current environment. International students make up about 9% of total enrollment, and year-to-date enrollment is consistent with budgeted assumptions. For fall 2020, UMass is teaching most classes remotely, with the exception of some lab-based courses. Students, faculty, and staff accessing campus are regularly tested for COVID-19. Fall sports have a limited or delayed season. (For example, the Amherst football team is playing without spectators.) Based on current assumptions and management's decisive action plan for cost-cutting, the system currently budgets for a very modest operating deficit for fiscal 2021. However, we understand that the trajectory of the pandemic and its effect on operations and appropriations is uncertain, and management is preparing for a range of scenarios. While we recognize that these are unprecedented times, we acknowledge that UMass has taken prudent measures to address the situation. As part of the federal government's Coronavirus Aid, Relief, and Economic Security (CARES) Act stimulus funding, the university was allocated \$46 million, half of which was earmarked as direct aid to students, and the remainder to be used at the university's discretion during fiscal 2020 and 2021 to cover eligible costs. UMass also received an additional \$600,000 through federal funding from the CARES Act and \$3 million through the Governor's Emergency Education Relief Fund of the CARES Act. As of March 31, 2020, UMass has \$650 million in same-day liquid cash and cash equivalent investments, and \$140 million in fixed-income investments that can be liquidated in under 30 days. In addition, the system also has access to additional liquidity managed by the UMass Foundation in Fund 2 (\$330 million market value as of Feb. 29, 2020, with 50% of this available for same day withdrawal). The system has sufficient liquidity, in our view, to offset any short-term disruption. We believe the university system has adequately adopted contingency measures to help combat the spread of COVID-19, and we will continue to monitor the evolving situation.

Credit overview

We assessed the system's enterprise profile as very strong, characterized by growing enrollment despite a dip in fall 2020 driven by COVID-19, solid demand, and sound management and governance oversight, with comprehensive long-term strategic plans. We assessed the system's financial profile as strong, with historically positive and improving operating margins in recent years, although the fiscal 2021 budget currently calls for slightly negative operations due to the impacts of the pandemic, moderate revenue diversity, and growing support from the state, offset by the system's elevated debt load and significant capital plan, which pressure already-low available resources. We believe these credit factors, combined, lead to an indicative stand-alone credit profile of 'a+'. As our criteria indicate, the final rating can be

within one notch of the indicative credit level. In our opinion, the 'AA-' rating on the system's bonds better reflects the system's flagship role in Massachusetts' public higher education and the comprehensive nature of the system, including robust research programs and a strong online presence.

The ratings reflect our view of the system's:

- Leading role in Massachusetts' public higher education system, with geographically and academically diverse campuses located throughout the commonwealth;
- Historically healthy support by the commonwealth of Massachusetts;
- Consistently positive operating performance despite a modest deficit currently budgeted for fiscal 2021;
- Steady trend of enrollment growth with the exception of a small drop in fall 2020, with an acceptance rate at 72% that remains sound compared with our medians;
- Comprehensive program offerings including a law school and medical school, the system's healthy and growing level of research, and expansive and growing online education presence; and
- Experienced management team.

In our opinion, constraining credit factors include the system's:

- Elevated debt levels, which we expect will continue to pressure the balance sheet;
- Substantial remaining capital needs with additional debt plans through the next five fiscal years; and
- Low available resource levels, small endowment, and limited fundraising, though recent efforts have been successful.

The negative outlook reflects our expectation that the system's demand profile and financial operations could be pressured by the ongoing pandemic. In addition, the system's weak available resources provides limited flexibility at the current rating level, in our view, should operational pressures result in further balance sheet declines.

The University of Massachusetts, established in 1863, is a coeducational, state-supported institution with campuses in Amherst, Boston, Dartmouth, Lowell, and Worcester. It also includes UMassOnline. The campuses are geographically dispersed throughout the commonwealth, with complementary missions. The Amherst campus is the system's flagship and the largest based on headcount. UMass Amherst acquired the campus of Mount Ida College in 2018, following the college's closure, with the intent to capitalize on the campus' location to expand university-industry partnership and increase internship and career opportunities for its students in the greater Boston area. The Worcester campus is a graduate and professional campus housing the UMass School of Medicine, Graduate School of Biomedical Science, and the Graduate School of Nursing. The Dartmouth campus also houses the UMass School of Law. The Boston campus has traditionally been commuter only, but in recent years has shifted more toward residential. In June 2020, UMass announced the creation of a strategic partnership with Brandman University to expand its online education services for adult students, with no initial investments from the system. We will closely monitor the progress of the online initiative and evaluate if there will be potential impact to the system's assets and liabilities, general credit profile, and market position.

Environment, social, and governance (ESG) factors

We believe UMass faces elevated social risk due to the uncertainty surrounding the pandemic's duration and its total impact on the 2020-2021 academic year. We view the risks posed by COVID-19 to public health and safety as a social risk under our ESG factors. Despite elevated social risk, we consider the university system's environment and governance risks in line with our view of the sector as a whole.

Negative Outlook

Downside scenario

We could consider a negative rating action if available resources ratios were to decline materially relative to current levels, if there are sustained material operating deficits, if the system issues a significant amount of additional debt without commensurate growth in available resources, or if there is significant enrollment decline or weakening in demand metrics.

Return to stable scenario

We could revise the outlook to stable if the system maintains stable to growing enrollment and improves its operating margin to historical levels while maintaining available resources ratios at least at the current levels.

Credit Opinion

Enterprise Profile

Economic fundamentals

In our view, the system has moderate geographic diversity and is mostly regional. About 76% of all students hail from within the commonwealth. As a result, our assessment of the system's economic fundamentals is anchored by the Massachusetts GDP per capita.

Market position and demand

We consider the system's enrollment profile solid compared with those of its peers, historical trends, and 'AA' medians. The system's incremental growth both at the undergraduate and graduate levels is in line with prior projections, and management expects the growth to continue. Undergraduate enrollment growth continues to be a strategic priority, primarily at the Boston and Lowell campuses. As of Sept. 16, 2020, the system reported a fall 2020 FTE headcount of 65,669, which is a modest decline of only 0.5% from fall 2019. In fall 2019, undergraduate FTEs represented about 80.4% of FTE students, which was consistent with the past five years, and 17% of fall 2019 undergraduates were from out of state--a cohort the system continues to focus on growing. Amherst is the system's largest campus, with a total headcount of 31,350 students in fall 2019. Lowell is the next-largest campus, with a headcount of 18,338 in fall 2019. The smallest campus is the medical campus at Worcester, which had 1,234 students in fall 2019.

First-year demand weakened slightly this fall after years of stable and solid results relative to category medians, mainly due to the impacts of COVID-19. Applications for fall 2020 fell 4.9% from the prior year to 74,734 from 78,615 in fall 2019. Selectivity weakened moderately in fall 2020 to 72% after remaining generally steady over the past three years.

However, we still view this rate as sound for the rating category given the industry trend this year. The 20% matriculation rate for fall 2020 is slightly weaker than fall 2019's matriculation rate of 22% and reflects New England's highly competitive public and private higher education market. UMass has a strong transfer population, which management intends to maintain. However, UMass saw a significant decline in transfer applications this fall--17.5% from fall 2019--as did many schools. The acceptance rate for transfer applicants was 80%, compared with 70% in fall 2019. However, matriculation held steady at 58%. Approximately 3,953 students transferred to system institutions, which is approximately 6% lower than last year's transfer population. We note that all first-year and transfer/applications/acceptances/matriculation data is preliminary for fall 2020.

The system's admissions are open to residents and nonresidents on a competitive basis. Massachusetts residents accounted for a significant majority of both undergraduate and graduate students. We consider student quality, as measured by SAT scores, good; for fall 2019, incoming freshmen scores were in the 1091 to 1292 range. The retention rate (freshman-to-sophomore year) is not available for fall 2020, but the fall 2019 rate was above average at 83.4%, with some variation across campuses. The six-year graduation rate was also not available for fall 2020, but the fall 2019 rate improved to 70.7%. The system's mission remains access and affordability. For fall 2020, tuition and mandatory fees at the Amherst campus increased modestly to \$16,439 for in-state students and to \$36,427 for out-of-state students. Room and board charges at the Amherst campus were \$13,329. Management expects to maintain moderate tuition increases in the near future.

The system has a large and growing online program, which we believe adds overall revenue and program diversity. UMassOnline had 80,399 course enrollments for the 2018-2019 academic year (up 2.5% from the prior year) that generated tuition revenue of \$116 million, a 2.7% increase from fiscal 2018. In June 2020, UMass announced the creation of a strategic partnership with Brandman University, a nonprofit that specializes in online education for military, veteran, and adult students. We expect the partnership will further strengthen the online offerings by the system.

The system's fundraising efforts, like those of other New England public universities, have continued to lag those of the nation's other prominent public and private competitors. The system is building fundraising capacity across the five campuses and intends to enhance its advancement effort. UMass Amherst concluded a successful capital campaign in June 2016, raising \$379 million and surpassing its goal of \$300 million. UMass Boston also raised \$115 million at the end of its recent campaign, exceeding the goal of \$100 million. In addition, the Lowell and Worcester campuses recently closed their campaigns, which raised \$165 million and \$279 million respectively. The system collected gift commitments of about \$133.5 million in fiscal 2019, in line with recent years.

Management

On July 1, 2015, the system welcomed its 27th president, following a national search process. Marty Meehan is the first undergraduate alumnus to lead the system and most recently served as chancellor of UMass Lowell, following 14 years as a congressman in the U.S. House of Representatives. We understand that the transition was smooth, given President Meehan's familiarity with the system, and that the system's strategic vision continues to be very mission driven around access and affordability. The administration structure has a centralized office headed by a president, and each campus has a chancellor. Katherine Newman was named system chancellor for academic programs and senior vice president (SVP) of economic development in February 2020, after previously serving as the interim chancellor of

UMass Boston, SVP of the UMass system, and the provost of UMass Amherst. In addition, UMass Boston named a new chancellor, and UMass Dartmouth named a new chief operating officer and interim chancellor. UMBA also welcomed a new chief financial officer in 2020.

A board of trustees governs the system under the coordinating effort and authority of the commonwealth. The board has 22 members including three nonvoting members and 17 members appointed by the governor. Management reports board membership has been stable over the past year.

In light of the COVID-19 pandemic, the system has paid careful attention to oversight, internal controls, transparency, and risk management while pursuing a wide range of measures to control expenses. The system remains engaged in a number of strategic initiatives including a focus on operational efficiencies and lowering the cost of education delivery. The system has focused heavily on maintaining adequate liquidity in cash and investments, and has controlled expenses and generated revenues that have allowed for consistent operating surpluses for the past several years. The system is also enhancing the capital investment approval process, and is tracking and reporting on key performance metrics. In our opinion, the system's historical operating performance, good enrollment, and demand metrics, and professional management team focused on continuous improvement are credit strengths, but the system's balance sheet is weak and its debt load is aggressive, which remain offsetting rating factors.

The UMBA is the statutory entity through which the University of Massachusetts system finances its debt issuance and provides project management oversight until facilities are available for occupancy. The authority is an independent entity and has an 11-member board appointed by the governor.

Financial Profile

Financial management policies

The system has formal policies for endowment, investments, reserves, and debt. It operates according to actively managed strategic plans for each campus, as well as a systemwide centralized plan, which guides strategies around enrollment and programs, while emphasizing the unique qualities of each campus. The system meets standard annual disclosure requirements. The financial policies assessment reflects our opinion that, while there may be some areas of risk, the system's overall financial policies are not likely to weaken its future ability to pay debt service. Our analysis of financial policies includes a review of the system's financial reporting and disclosure, investment allocation and liquidity, debt profile, contingent liabilities, and legal structure, and a comparison of these policies with those of comparable institutions.

Operating performance

The system has a long history of positive operating surpluses. Fiscal 2019 operations resulted in an adjusted operating surplus of \$93.2 million (representing an operating margin of 2.5%), consistent with the fiscal 2018 surplus of \$74.9 million (operating margin of 2.1%), but in line with results from the previous few years. Our revenue adjustment includes audited operating revenue, state support, federal support, and gifts and endowment income, but excludes investment income. Our adjusted expenses include audited operating expenses and interest expense. Due to a reduction in revenues and unexpected expenses due to the pandemic, management projects a smaller operating surplus for fiscal 2020, compared with that of fiscal 2019, after implementing various cost containment measures. The

fiscal 2021 budget currently calls for break-even operations following management's concerted efforts to reduce expenses. However, management acknowledges that the pandemic's effect on operations for the remainder of the fiscal year remains highly uncertain.

The system participates in Massachusetts' fringe benefits programs, including health insurance, other postemployment benefits, and pension. Included in the system's financial statements and state-funded appropriation is an allocation to cover fringe benefit costs, which we view as a positive credit factor. In our view, the system has a strong research presence, with \$593 million in total grants and contracts for fiscal 2019, which increased from the prior year despite pressure on federal funding sources. Supporting research growth is a strategic priority of the system. The system's Amherst campus and medical school campus in Worcester have been the primary catalysts in the system's research funding growth. In addition, facility and computing capacity has been added at all the campuses, and the system plans future growth of its research capacity. The system has a partnership with Harvard, Massachusetts Institute of Technology, Northeastern, Boston University, and the private sector as part of a high-performance computing center that provides infrastructure to grow research capacity at the system.

While the commonwealth appropriations have increased in recent years, we expect a potential reversal of this trend in the near term because of state budgetary pressures due to the impacts of COVID-19. Management is conservatively budgeting for a 10% reduction in state appropriations in fiscal 2021. We view the history of strong funding as positive from a credit standpoint.

The system's fiscal 2019 revenue stream was moderately diverse, in our view, with commonwealth appropriations accounting for 20.7% of total adjusted revenue, grants and contracts accounting for 15.7%, and tuition, fees, and auxiliary enterprises accounting for 44.0%.

Available resources

In our view, the system's available resources relative to operating expenses are moderate for the rating category, but are low relative to pro forma debt. Fiscal 2019 Adjusted unrestricted net assets (UNA) of \$1.12 billion (which includes \$1.08 billion of system UNA, adjusted for the pension and other postemployment benefit liabilities, and \$37 million in foundation UNA) were equal to 30.5% of fiscal 2019 adjusted operating expenses. Fiscal 2019 adjusted UNA are low for the rating category from a debt perspective, at 34.8% of pro forma debt. Cash and investments of \$1.47 billion were equal to 39.8% of adjusted operating expenses and 45.5% of pro forma debt. In addition, we view the system's liquidity as sufficient with \$596 million (as of June 30, 2019) held in same-day cash or cash equivalents and additional cash of \$524 million available within one to 60 days. We expect the system's financial resource ratios to remain steady in the near term, with the expectation of continued, though modest, operating surpluses and limited plans for additional debt.

The endowment, held by the foundation, has a market value of \$1.04 billion as of June 30, 2020, based on unaudited fiscal 2020 financial results. For fiscal 2020, the system endowment return was 3.3%. Management reports there was little change to fiscal 2019's asset allocation, which was approximately 32.4% in equities, 55.4% in alternative investments, 6.8% in fixed income, and 2.6% in cash, and 2.8% in other. The spending policy for the foundation endowment fund is 4% of the endowment's average market value for the prior 12 quarters, with an actual spend rate typically below this level.

Debt and contingent liquidity

UMass' debt burden remains elevated compared with that of similarly sized and comprehensive universities, and it is higher than our medians for the rating category. Pro forma MADS in 2031 of \$234 million is above average, at 6.4% of fiscal 2019 adjusted operating expenses.

In our opinion, the high debt levels and elevated MADS burden remain a challenge, particularly as the system handles the impacts of the COVID-19 pandemic. Management reports no plan to issue debt again until January 2022, but is also carefully monitoring the market for opportunities. We believe the system's additional capital plans will continue to limit balance sheet growth. Nevertheless, we believe overall debt levels will remain manageable at the current rating because of university trustee policies that limit debt service to 10% of available revenues and internal policies that require the system debt burden to stay lower than 8% (including the Build America Bonds subsidy). In addition, debt service is conservatively somewhat front loaded, which we believe provides some flexibility.

Most of the system's debt is fixed rate. Approximately 13% of the system's debt is variable rate including the series 2008-A, 2008-1, 2011-1, 2011-2 bonds, and the Health and Education Facilities Authority/Massachusetts Development Finance Authority's series A bonds. The series 2008-A bonds, guaranteed by the state, are enhanced by a Barclays Bank PLC standby bond purchase agreement (SBPA), expiring July 6, 2022, and the bonds have been swapped through maturity. The series 2008-1 bonds are also enhanced by a Barclays Bank PLC SBPA, expiring July 6, 2022, and the bonds have been swapped through maturity. An SBPA with Wells Fargo Bank for the full amount enhances the series 2011-1 bonds, expiring Aug. 12, 2022, and the bonds have been swapped through maturity. The total notional amount of the three swaps is \$376 million, with UBS AG, Deutsche Bank AG, and Citibank NA serving as counterparties. The fair market value as of June 30, 2019, was \$34.3 million, though the authority has not had to post any collateral. The series 2011-2 bonds are seven-month window bonds, guaranteed by the state, that are not required to have liquidity support due to their structure; however, management considers the bonds supported by self-liquidity (the self-liquidity is not rated by S&P Global Ratings).

The system recently built a 1,000-bed freshman housing facility on time and within budget, through a 501c3 ownership structure on its Boston campus. In addition, UMass Dartmouth engaged into a 1,210-bed housing facility project through a 501c3 ownership structure. The associated debt for the two projects was approximately \$260 million, which we consider contingent debt of the system. The university's five-year capital plan from fiscal 2019 through fiscal 2023 totals about \$2.1 billion of projects, of which only approximately \$400 million remains to be financed and 81% is already underway. Based on the capital plan, we expect debt levels to remain elevated compared with those of the system's peers and the rating medians in the future, with potential for another issuance of \$400 million-\$450 million in early 2022. We expect that the system can absorb modest additional debt at the current rating level barring a significant decline in available resources or a material deterioration in the system's enterprise profile or operating performance.

UMass contributes to the Massachusetts state employees' retirement system, a cost sharing, multiple-employer, defined benefit pension plan administered by the state of Massachusetts. We understand that the pension plan funded status is approximately 66.3% in fiscal 2019, which we view as sufficient. Massachusetts sets its annual pension contribution based on its own methodology under state statute; it has not fully funded its annual required contribution since fiscal 2011, but currently plans to increase pension contributions 8.9% per year to fully amortize the unfunded

liability by 2036. UMass' contributions are currently at 1.68% of total adjusted operating expenses, which we believe is currently manageable. For more information on the plan, please see the state report published Feb. 14, 2020.

	--Fiscal year ended June 30--					Medians for 'AA' rated public colleges & universities
	2020	2019	2018	2017	2016	2018
Enrollment and demand						
Headcount	75,065	74,705	74,572	74,496	73,744	MNR
Full-time equivalent	66,003	65,346	64,530	63,978	63,333	35,846
Freshman acceptance rate (%)	67.3	66.7	64.8	62.3	61.5	67.8
Freshman matriculation rate (%)	21.8	21.8	21.4	21.4	22.5	MNR
Undergraduates as a % of total enrollment (%)	76.4	76.4	76.2	76.3	76.3	78.6
Freshman retention (%)	N.A.	84.3	85.8	85.4	85.5	86.0
Graduation rates (six years) (%)	N.A.	68.8	65.5	63.7	63.1	MNR
Income statement						
Adjusted operating revenue (\$000s)	N.A.	3,774,267	3,722,478	3,615,463	3,496,375	MNR
Adjusted operating expense (\$000s)	N.A.	3,681,032	3,647,614	3,547,308	3,477,974	MNR
Net adjusted operating income (\$000s)	N.A.	93,235	74,864	68,155	18,401	MNR
Net adjusted operating margin (%)	N.A.	2.53	2.05	1.92	0.53	1.50
Estimated operating gain/loss before depreciation (\$000s)	N.A.	369,873	336,281	313,455	259,266	MNR
Change in unrestricted net assets (UNA; \$000s)	N.A.	74,471	(766,837)	67,286	(41,967)	MNR
State operating appropriations (\$000s)	N.A.	780,221	751,894	720,817	669,748	MNR
State appropriations to revenue (%)	N.A.	20.7	20.2	19.9	19.2	19.2
Student dependence (%)	N.A.	44.1	43.0	42.5	41.6	39.7
Health care operations dependence (%)	N.A.	N.A.	N.A.	N.A.	N.A.	MNR
Research dependence (%)	N.A.	15.7	15.1	15.5	15.1	MNR
Endowment and investment income dependence (%)	N.A.	2.0	1.7	1.6	1.5	1.4
Debt						
Outstanding debt (\$000s)	N.A.	2,857,203	2,937,026	2,927,970	2,855,741	828,692
Proposed debt (\$000s)	N.A.	890,635	N.A.	N.A.	N.A.	MNR
Total pro forma debt (\$000s)	N.A.	3,257,758	N.A.	N.A.	N.A.	MNR
Pro forma MADS	N.A.	234,344	N.A.	N.A.	N.A.	MNR
Current debt service burden (%)	N.A.	6.54	6.09	6.64	5.52	MNR
Current MADS burden (%)	N.A.	6.13	6.25	6.52	6.41	3.50
Pro forma MADS burden (%)	N.A.	6.37	N.A.	N.A.	N.A.	MNR
Financial resource ratios						
Endowment market value (\$000s)	N.A.	948,195	842,858	792,278	707,246	990,083

University of Massachusetts--Enterprise And Financial Statistics (cont.)

	--Fiscal year ended June 30--					Medians for 'AA' rated public colleges & universities
	2020	2019	2018	2017	2016	2018
Related foundation market value (\$000s)	N.A.	615,356	587,055	548,451	449,966	688,435
Cash and investments (\$000s)	N.A.	1,465,536	1,356,594	1,167,620	1,058,908	MNR
UNA (\$000s)	N.A.	(75,609)	(150,080)	616,757	549,471	MNR
Adjusted UNA (\$000s)	N.A.	1,122,955	1,015,333	966,703	843,821	MNR
Cash and investments to operations (%)	N.A.	39.8	37.2	32.9	30.4	54.0
Cash and investments to debt (%)	N.A.	51.3	46.2	39.9	37.1	168.3
Cash and investments to pro forma debt (%)	N.A.	45.0	N.A.	N.A.	N.A.	MNR
Adjusted UNA to operations (%)	N.A.	30.5	27.8	27.3	24.3	35.3
Adjusted UNA plus debt service reserve to debt (%)	N.A.	39.3	34.6	33.0	29.5	97.8
Adjusted UNA plus debt service reserve to pro forma debt (%)	N.A.	34.5	N.A.	N.A.	N.A.	MNR
Average age of plant (years)	N.A.	11.9	11.8	11.6	11.2	13.0
OPEB liability to total liabilities (%)	N.A.	13.8	15.6	N.A.	N.A.	MNR

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. Adjusted UNA = Unrestricted net assets + unrestricted net assets of the foundation. 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

Ratings Detail (As Of October 2, 2020)

Massachusetts Development Finance Agency, Massachusetts

University of Massachusetts System, Massachusetts

Massachusetts Development Finance Agency (University of Massachusetts) (FGIC) (National)

Unenhanced Rating AA-(SPUR)/Negative Affirmed

Massachusetts Dev Fin Agy (University of Massachusetts System)

Long Term Rating AA-/Negative Affirmed

Unenhanced Rating NR(SPUR) Current

Short Term Rating NR Current

University of Massachusetts Bldg Auth proj rev bnds sr (University of Massachusetts System) (Federally Tax)

Long Term Rating AA-/Negative Affirmed

Univ of Massachusetts Bldg Auth, Massachusetts

University of Massachusetts System, Massachusetts

University of Massachusetts Bldg Auth (University of Massachusetts System) proj and rfdg rev bnds

Ratings Detail (As Of October 2, 2020) (cont.)

<i>Long Term Rating</i>	AA-/Negative	Affirmed
University of Massachusetts Bldg Auth (University of Massachusetts System) (AGM)		
<i>Unenhanced Rating</i>	AA-(SPUR)/Negative	Affirmed
Univ of Massachusetts Bldg Auth (University of Massachusetts System) rfdg rev bnds ser 2020-4 dtd 04/14/2020 due 11/01/2044		
<i>Long Term Rating</i>	NR	Current
Univ of Massachusetts Bldg Auth (University of Massachusetts System) PCU_USF		
<i>Long Term Rating</i>	AA-/Negative	Affirmed
Univ of Massachusetts Bldg Auth (University of Massachusetts System) PCU_USF		
<i>Long Term Rating</i>	AA-/Negative	Affirmed
Univ of Massachusetts Bldg Auth (University of Massachusetts System) PCU_USF		
<i>Long Term Rating</i>	AA-/Negative	Affirmed
Univ of Massachusetts Bldg Auth (University of Massachusetts System) PCU_USF		
<i>Long Term Rating</i>	AA-/Negative	Affirmed
Univ of Mass Bldg Auth (Univ of Mass Sys)		
<i>Long Term Rating</i>	AA-/A-1/Negative	Affirmed
<i>Unenhanced Rating</i>	NR(SPUR)	Current
Univ of Mass Bldg Auth (Univ of Mass Sys) PCU_USF		
<i>Long Term Rating</i>	AA-/Negative	Affirmed

Many issues are enhanced by bond insurance.

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