

Higher Education  
New Issue

**University of Massachusetts**  
Massachusetts Health and Educational  
Facilities Authority

**Ratings\***

**New Issues**

\$266,000,000 Massachusetts Health and Educational Facilities Authority Revenue Bonds, University of Massachusetts Issue Series D (2006) ..... A+  
 ?\$? Worcester City Campus Corp Issue Series E (2006).....A+  
 ?\$? Worcester City Campus Corp Issue Series F (2006).....A+

**Outstanding Debt**

Massachusetts Health and Educational Facilities Authority Revenue Bonds, University of Massachusetts Issues, 2001 Series B, 2002 Series C ..... A+  
 Worcester City Campus Corp. Issue (University of Massachusetts Project) Series D (2005), Series C (2002), Series B (2001), Series A (2000) ..... A+  
 University of Massachusetts Building Authority Project Revenue Bonds Series 2000-2, 2003-1, 2004-1, 2005-1, 2005-2, 2006-1, 2006-2 ..... A+

Rating Outlook ..... Stable

\*Underlying ratings. The rating reflects the bonds' credit quality before consideration of any bond insurance policy.

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**See page 2 for Profile.**

**Outlook**

The Stable Rating Outlook for the University of Massachusetts (UMass, or the university) reflects Fitch Ratings' expectation that the Commonwealth of Massachusetts' (the commonwealth) premier public university system will maintain a large and stable enrollment base and diverse revenue base. While UMass has reduced its dependence on state appropriations, the commonwealth's financial support is not expected to decline from current levels.

**Rating Considerations**

The underlying 'A+' rating is supported by UMass' stable enrollment, diversified revenue base, and relatively consistent operating performance. UMass' financial performance reflects the benefits of the improving financial condition of the commonwealth, accounting for one-quarter of the university's unrestricted revenues. Fitch rates the commonwealth's general obligation bonds 'AA'.

For fiscal 2005, tuition and fee revenue represented 19% of UMass' unrestricted revenues. Enrollment determines the level of tuition and fee revenue. The revenue diversity has contributed to the university's relatively stable operating performance. For fiscal years 2002–2005, the average operating margin was 3.2%. The margin for fiscal 2006 is projected to be break-even. Fitch expects public universities to operate at break-even.

The primary credit concerns include modest liquidity and a \$2.14 billion capital program that could lead to a material increase in debt over the next one to five years. Fitch estimates that the university had enough liquidity to cover 20% or slightly more than two months of fiscal 2005 expenses. The Fitch liquidity median for an 'A' rated public university is 37.1%. UMass' current debt burden as measured by maximum annual debt service (MADS) as a percentage of revenues that would be needed to service the debt is 5.1%. Fitch's median for 'A' rated universities is 3.6%. However, UMass expects its debt levels to increase as it funds its capital improvement program.

**Strengths**

- Stable enrollment, with good student draw geographically.
- Improved financial profile from a large and diverse revenue base.
- The commonwealth's improved financial condition bodes well for near-term funding stability.
- Long history of commonwealth contract assistance support for debt.

**Profile**

**Type:** Coeducational multicampus public university system

**Use of Proceeds:** Bond proceeds will be used to refund portions of outstanding bonds, to finance the construction of an Advanced Education and Clinical Practice Center at Worcester and new research and administrative space in support of the Massachusetts Biologics facility in Mattapan in Boston, operated by UMass's medical school, and to pay costs of issuance.

**Locations:** Flagship campus in Amherst; other campuses in Boston, Dartmouth, Lowell, and Worcester; and web-based UMass Online

**Sale Information:** The bonds are scheduled to sell on or about Oct. 2 through negotiation by Merrill Lynch & Co.

■ **Risks**

- Modest liquidity.
- An ambitious capital program that may lead to a 40%–50% increase in debt.
- Competition and a projected decline in the number of high school graduates.

■ **New Issue Details**

The bonds will be issued by the Massachusetts Health and Educational Facilities Authority (Mass HEFA). Bond payments on the Worcester City Campus Corp. (WCCC) bonds are an absolute and unconditional obligation of WCCC pursuant to a loan and trust agreement. WCCC is a tax exempt organization created in 1992 and is considered a subsidiary of UMass. WCCC's payments on its series E bonds are future secured by the obligation of UMass to transfer funds due under the loan and trust agreement not otherwise paid by WCCC. WCCC's payments on its series F bonds are further secured by payments it receives from UMass, under the terms of a lease agreement, of amounts that are sufficient to pay debt service on the series F bonds. As a result, the 'A+' underlying rating is based primarily on UMass' credit strengths.

Proceeds will be used to refund a portion of various outstanding bonds. Proceeds of the series D (2006) bonds will refund a portion of the Mass HEFA University of Massachusetts bonds, series B and series C; proceeds of the series E (2006) bonds to refund a portion of the WCCC series B bonds; and proceeds of the series E (2006) bonds to refund a portion of WCCC bonds, series C. In addition, approximately \$125 million

of bond proceeds will be used to finance the construction of an Advanced Education and Clinical Practice Center at Worcester and new research and administrative space in support of the Massachusetts Biologics facility in Mattapan in the city of Boston, operated by UMass' medical school.

■ **Background**

UMass is the leading public higher coeducational system in Massachusetts. Its flagship campus in Amherst was established in 1863 under the Morrill Land Grant Act and became the University of Massachusetts in 1947. UMass opened its Boston campus in 1965 and its Worcester campus medical school in 1970. The medical school is one of 28 freestanding, university-based academic health sciences campuses in the U.S. and admits only Massachusetts residents. The university's Lowell and Dartmouth campuses previously operated independently, becoming part of the system via a 1991 state legislative act.

The university is governed by a board of trustees under the coordinating authority of Massachusetts' Board of Higher Education. The university's board is composed of 19 voting and three nonvoting members. The governor appoints 17 voting members, including five who are alumni, one representing organized labor, and two full-time students. Nonstudent trustees generally serve for five-year staggered terms.

■ **Student Demand**

Total fall 2005 enrollment for the five campuses (Amherst, Boston, Dartmouth, Lowell, and Worcester) equaled 57,178, up 1% over the fall 2004 level. The increase is largely due to enrollment growth at Amherst, Boston, Dartmouth, and Worcester campuses, which offset a decline at the Lowell campus. Fall 2004 combined enrollment declined from 59,968 in fall 2001 to 56,587 in fall 2004. The decline was due in part to the elimination of duplicate headcount in fall 2004 for continuing education and state-supported programs. In addition, beginning in fall 2002, the Boston campus raised the minimum grade point average for both freshmen and transfer admissions. Increases in the number of first-year applicants, acceptances, and matriculating students in 2005 and the university's out-of-state draw bodes well for stable student demand in the near term.

Prior to fall 2005, applications for undergraduate admissions to UMass were relatively stable, ranging from 29,630 for fall 2001 to 31,200 for fall 2004.

**Demand and Enrollment Data**

Fall Term

	2001	2002	2003	2004	2005
<b>Selectivity for First-Year Applicants (All Campuses)</b>					
Applications Received	29,630	32,730	29,543	31,200	34,571
Number of Acceptances	20,829	19,720	21,920	22,835	25,904
Acceptance Rate (%)	70.3	60.3	74.2	73.2	74.9
Number of Matriculants	7,080	6,458	7,099	7,129	7,840
Matriculation Rate (%)	34.0	32.7	32.4	31.2	30.3
<b>Transfer Student Enrollments (All Campuses)</b>					
Number of Transfer Matriculants	3,893	3,782	3,706	3,588	3,601
<b>Total Fall Semester Enrollment</b>					
Amherst Campus	24,816	24,129	24,312	24,646	25,093
Boston Campus	14,000	13,352	13,106	11,682	11,862
Dartmouth Campus	7,817	8,411	8,776	8,299	8,549
Lowell Campus	12,649	12,348	12,034	11,089	10,666
Worcester Campus	686	732	775	871	1,008
Total Headcount Enrollment	59,968	58,972	59,003	56,587	57,178
Total Full-Time Equivalent Enrollment	46,809	46,759	47,148	46,937	47,915
<b>Total In-State Undergraduate Mandatory Fees and Tuition (\$)</b>					
Amherst Campus	5,707	6,482	8,232	9,008	9,278
Boston Campus	4,572	5,222	6,972	8,023	8,265
Dartmouth Campus	4,129	5,129	6,878	7,802	8,036
Lowell Campus	4,605	5,213	6,964	7,891	8,166
Worcester Campus (Medical School)	10,857	11,352	13,602	14,005	14,037

Fall 2005 applications were up 10.8%. The fall 2005 acceptance rate of 75% increased from 70% in fall 2001. The matriculation rate has also been relatively steady, ranging from 34%–30% for the past five years. While the system’s overall matriculation rate of 30% is below Fitch’s median for ‘A’ rated public universities, the absolute number of matriculating students increased by 10% in 2005. Fitch believes that this statistic may reflect the university’s relatively high tuition and fee structure, which management is taking steps to moderate.

Undergraduate in-state tuition varies by the institutions within UMass. For fall 2005, the average undergraduate in-state tuition and mandatory fees at Amherst were \$9,278, up 3% from fall 2004 levels. Nonresident tuition and mandatory fees were \$18,006 and also up 3% from the prior year’s level.

UMass historically has been one of the most expensive public institutions. After reductions in tuition and fees from 1995–2001, UMass was forced to implement increases in mandatory fees, partially to offset declines in state appropriations. The UMass board has adopted a policy of not increasing tuition and mandatory fees by a rate greater than estimated inflation. The policy was not mandated by the state, and Fitch believes that the recent moderation of tuition and fee increases

should enhance the university’s tuition flexibility relative to other New England public universities.

**Financial Performance**

The financial statements of UMass include the five campuses and the blended components including the authority?Mass HEFA?, the WCCC, and the University of Massachusetts Amherst Foundation. Discrete related organizations include the University of Massachusetts Foundation and the University of Massachusetts Dartmouth Foundation.

For fiscal 2005, the university’s unrestricted revenues totaled \$2.07 billion, up \$315.7 million, or 18%, over the fiscal 2004 level. Fiscal 2005 was the second consecutive year of double-digit revenue growth, and included approximately \$190 million of nonrecurring Medicaid revenues for increased public service activities by the medical school, which yielded a \$10 million contribution margin to overhead costs. The medical school also received 1.7 years of payment for prior billing arrears. Consequently, revenues from public service activities increased to nearly \$400 million in fiscal 2005, a four-fold rise over fiscal 2002 levels. Net tuition and fee revenues were up 7.5% in fiscal 2005. Government and private grant and contract revenue

**Financial Summary**

(\$000, Fiscal Years Ended June 30)

	2002	2003	2004	2005
<b>Statements of Revenues, Expenses, and Changes in Net Assets</b>				
Gross Tuition and Fees	326,373	340,962	424,947	455,272
Net Scholarship Allowances	44,231	51,521	63,185	66,887
Net Tuition and Fees	282,142	289,441	361,762	388,385
Federal Grants and Contracts	223,767	256,579	277,166	289,527
State Grants and Contracts	58,189	55,294	53,788	59,142
Local Grants and Contracts	2,918	3,240	3,123	3,266
Private Grants and Contracts	61,421	61,895	67,673	72,249
Sales and Service, Educational	11,133	14,454	15,978	17,284
Auxiliary Enterprises	124,149	143,715	163,894	172,745
Sales and Service, Independent Operations	32,457	51,595	61,245	66,346
Sales and Service, Public Service Activities	97,381	143,115	249,950	399,958
Federal Appropriations	5,900	5,139	6,849	7,016
State Appropriations	465,040	447,437	398,154	478,813
Gifts	11,130	11,905	16,731	25,289
Investment Income	17,703	20,660	26,806	35,072
Endowment Income	743	1,202	1,047	1,661
Other	47,711	41,807	48,735	51,846
Total Unrestricted Revenues	1,441,784	1,547,478	1,752,901	2,068,599
Instruction	391,988	374,386	401,307	452,409
Research	245,027	275,838	276,595	301,422
Public Service	66,978	64,169	59,581	63,327
Academic Support	97,613	94,414	86,976	103,803
Student Services	74,061	70,648	70,848	75,724
Institutional Support	100,325	114,174	116,043	132,776
Operation and Maintenance of Plant	110,282	98,135	121,698	132,940
Depreciation and Amortization	82,142	103,981	101,465	118,649
Scholarships and Fellowships	19,346	15,401	26,743	29,832
Auxiliary Enterprises	124,059	131,577	126,602	151,113
Independent Operations	20,385	26,777	25,757	37,329
Public Service Activities	89,450	115,981	207,967	327,416
Interest on Indebtedness	26,116	27,145	30,230	37,077
Adjusted Operating Expenses	1,447,772	1,512,626	1,651,812	1,963,817
Adjusted Operating Gain/(Loss)	(5,988)	34,852	101,089	104,782
Capital Appropriations	63,633	30,491	19,135	27,417
Capital Grants and Contracts	93	30,800	0	?/?
Additions to Permanent Endowments	0	0	?/?	?/?
Other Additions/(Deductions)	3,394	2,337	(6,292)	(9,300)
Total Increase/(Decrease) in Net Assets	61,132	98,480	113,932	122,899
Funds Available for Debt Service	102,270	165,978	232,784	260,508
Principal and Interest Paid, Bonds and Capital Leases	27,162	60,386	64,134	89,706
MADS on Bonds and Capital Leases	88,778	88,778	88,778	88,778
Pro Forma MADS and Lease Payments	97,247	97,247	97,247	104,476
<b>Statements of Net Assets</b>				
Total Cash and Investments	715,522	744,477	1,130,346	1,107,460
Estimated Available Funds	289,339	321,947	336,313	392,886
Available Funds Including Restricted Expendable Net Assets	?/?	?/?	460,585	547,887
Net Investment in Plant	1,032,092	1,109,079	1,163,700	1,330,410
Total Bonds and Capital Lease Obligations	660,889	646,598	1,009,095	1,024,163
Pro Forma Debt	1,163,228	1,163,228	1,163,228	1,163,228
Net Assets Invested in Capital Assets	653,755	685,514	713,903	701,446
Restricted Net Assets, Nonexpendable	14,306	14,390	14,433	15,095
Restricted Net Assets, Expendable	73,872	96,174	124,272	154,801
Unrestricted Net Assets	214,285	258,620	316,022	420,187
Total Net Assets	956,218	1,054,698	1,168,630	1,291,529

MADS – Maximum annual debt service.

**Financial Ratios**

(Fiscal Years Ended June 30)

	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
<b>Operating Ratios</b>				
Operating Margin Excluding Capital Funds (%)	(0.4)	2.3	5.8	5.1
Pro Forma MADS Burden (without ?Operating Lease?) as % of Revenues	6.2	5.7	5.1	4.3
Pro Forma MADS Burden as % of Revenues	6.7	6.3	5.5	5.1
Coverage of Debt Service Paid in Fiscal Year (x)	3.8	2.7	3.6	2.9
Coverage of Pro Forma MADS (x)	3.8	2.7	3.6	2.9
Coverage of Pro Forma MADS with ?Non-Cancelable Operating Lease? (x)	1.2	2.0	2.7	3.0
<b>Flexibility Ratios</b>				
Net Tuition and Fee Dependency (as % of Revenues)	19.6	18.7	20.6	18.8
State Aid Dependency (as % of Revenues)	32.3	28.9	22.7	23.1
Tuition Discounting (%)	13.6	15.1	14.9	14.7
<b>Liquidity Ratios</b>				
Estimated Available Funds as % of Expenditures	20.0	21.3	20.4	20.0
Available Funds to Pro Forma Debt ?(x)?	24.9	27.7	28.9	33.8
MADS – Maximum annual debt service.				

increased 5.6% to \$424 million in fiscal 2005, and state appropriations increased by 20.2%.

**State Appropriations**

State appropriations were 23.1% of revenues in fiscal 2005 and remain the largest single source of revenues despite prior significant annual appropriation cuts. UMass received approximately 45% of the state appropriation for higher education. State funds are primarily used for salary and fringe benefit costs. In July 2005, Fitch upgraded the rating of the commonwealth’s \$14.4 billion of full faith and credit general obligation bonds to ‘AA’ from ‘AA-’. The upgrade, which affected the guaranteed bonds of UMass, reflected the commonwealth’s recent economic recovery, operating surpluses, and the rebuilding of reserves to strong levels, offset by Massachusetts’ high and increasing debt levels.

In fiscal 2005, state appropriations increased to \$478.8 million, or by \$80.7 million over fiscal 2004 levels. From fiscal years 2001–2004, net state appropriations for UMass (adjusted for fringe benefit costs and remitted tuitions) declined by \$130.6 million, or 25%. A return to stable funding from the state is anticipated in the near term and critical to the rating, given the university’s modest level of liquidity.

Although the university has been a beneficiary of debt guaranteed by the commonwealth, state capital appropriations have moderated to the \$20 million–\$30 million range for the past three

fiscal years from more than \$60 million in fiscal 2002. Appropriations have not kept pace with funding requests.

**Operating Margin**

As a measure of financial performance, Fitch calculates operating margins by dividing the change in net assets from operations by total revenues. From the financial statements, Fitch adjusts the operating revenues by including state appropriations, investment income, and gifts. The university’s fiscal 2005 operating margin of 5.1% was comparable with fiscal 2004 performance and consistent with Fitch’s prior expectations. An operating margin of 2.5%–3.0% is expected for fiscal 2006, and a 4%–6% margin is expected for fiscal 2007 based on the ?commonwealth’s? improved financial condition.

Tuition and fee increases, growth in research funding and other revenue sources, expenditure reductions, and profitable auxiliary operations contributed to positive operating margins since fiscal 2003. The fiscal 2005 surplus was largely attributed to strong operating results at the medical school (including the benefit of one-time revenues), and the moderating operating surplus at the Amherst campus. Operating surpluses showed some year-to-year deterioration at the Amherst, Boston, Dartmouth, and Lowell campuses. Part of the downturn is attributed to higher depreciation expenses and increased faculty costs.

**Debt Burden**

UMass has broad access to the capital markets with its ability to issue revenue debt and commonwealth-guaranteed debt (up to \$200 million) through the

University of Massachusetts Building Authority and revenue bonds through Mass HEFA. As of June 30, 2005, UMass' outstanding bonds and capital leases totaled \$1.02 billion, up \$380 million from fiscal 2003 levels. The June 30, 2005 balance does not reflect the prior issuance of the series 2005-2 bonds, which partially refunded the series 2000-1, 2000-2, 2003-1, and 2004-1 bonds, and the Massachusetts-guaranteed bonds including fifth series A and 2004-A bonds.

Management has extended and increased its five-year capital improvement plan (CIP) to \$2.14 billion. Part of the increase in issuance is due to the board of trustees' 1996 initiation of a program to address deferred maintenance needs. The capital plan identifies an additional \$525 million of deferred maintenance needs that may be funded with recent and forthcoming bond issuances.

UMass' debt burden remains moderate following the issuance of the series D, E, and F (2006) bonds. MADS, including capital lease payments, is estimated to be \$104 million (based on an assumed interest rate of 3.5% for the series 2006-1 variable-rate bonds). Pro forma MADS coverage of 2.9 times is consistent with Fitch's 'A' medians for public universities. MADS would consume approximately 5.1% of fiscal 2005 revenues.

### **Liquidity**

An institution's liquidity is measured by calculating its level of available funds, which are defined as cash and investments that are not restricted. Fitch estimated UMass' available funds for fiscal 2005 to total

\$392.9 million. Available funds exclude \$545 million of cash held by bond trustees (proceeds from recent debt issuances), and adjusted balances for about \$170 million of expendable and non-expendable restricted assets at the university, and an additional \$210 million at two related foundations. Based on these adjustments, Fitch estimates that the university had enough liquidity to cover 20%, or slightly more than two months, of fiscal 2005 expenses and 33.8% of pro forma debt; the Fitch liquidity medians for an 'A' rated public university are 37.1% and 130%, respectively. Fitch notes that the university's investment policy is very conservative with asset allocation targets of 20% equities, 57% fixed income, and 23% cash. As of June 30, 2005, fixed-income investments were heavily weighted toward short duration securities with an average credit quality of 'AA'.

Despite a fiscal 2005 increase and conservative investment practices, UMass' liquidity is modest. An increase in liquidity is required for UMass' rating to remain stable as it executes its ambitious CIP.

### **Endowment**

As of June 30, 2005, the market value for the university and foundation endowment totaled \$252.5 million (approximately \$231.0 million is held by the foundation). The combined endowment is up 59% over the fiscal 2001 level. The university raised more than \$90 million in 2005. Fund raising is expected to benefit from the formation of a new alumnus dining club and the launch of a fund-raising campaign for the Amherst campus.

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