

# **RatingsDirect**<sup>®</sup>

## University Of Massachusetts Building Authority University Of Massachusetts System; CP; Public Coll/Univ - Unlimited Student Fees

#### **Primary Credit Analyst:**

Jessica H Goldman, Hartford + 1 (212) 438 6484; jessica.goldman@spglobal.com

## Secondary Contact:

Laura A Kuffler-Macdonald, New York + 1 (212) 438 2519; laura.kuffler.macdonald@spglobal.com

## **Table Of Contents**

Credit Highlights

Outlook

Credit Opinion

Enterprise Risk Profile--Extremely Strong

Financial Risk Profile--Strong

Related Research

## University Of Massachusetts Building Authority University Of Massachusetts System; CP; Public Coll/Univ - Unlimited Student Fees

Credit Profile						
US\$150.0 mil proj rev bnds senior series (University of Massachusetts System) ser 2024-1 dtd 05/15/2024 due 11/01/2054						
Long Term Rating	AA-/Stable	New				
Massachusetts Development Finance Agency, Massachusetts						
University of Massachusetts System, Massachusetts						
Massachusetts Dev Fin Agy (University of Massachusetts System)						
Long Term Rating	AA-/Stable	Affirmed				
Unenhanced Rating	NR(SPUR)					
Short Term Rating	NR	Affirmed				

## **Credit Highlights**

- S&P Global Ratings assigned its 'AA-' long-term rating to University of Massachusetts Building Authority's (UMBA) \$150 million senior series 2024-1 bonds issued for University of Massachusetts System.
- S&P Global Ratings affirmed its outstanding 'AA-' long-term rating and underlying rating (SPUR) on University of Massachusetts (UMass) revenue bonds issued by the University of Massachusetts Building Authority (UMBA) and other issuers.
- S&P Global Ratings also affirmed its 'A-1+' rating on the commercial paper (CP) program (series 2013A and 2013B).
- The outlook, where applicable, is stable.

## Security

The bonds are secured by all available funds of the system, payable to the authority under the contract for management and services. We consider this equivalent to a general obligation pledge of the university system. As of June 30, 2023, the system had debt outstanding (including notes, leases, and CP) of approximately \$3.5 billion. While all the system's debt is on parity, we rate only a portion. With the proposed transaction, the pro forma long-term debt is expected to be \$3.7 billion.

The system is engaged in a CP program, which is authorized for \$200 million. As of June 30, 2023, there was about \$37 million in outstanding balance on the program. The series 2013-A and series 2013-B CP programs are rated 'A-1+' based on support by TD Bank's standby liquidity facilities. Each standby liquidity facility expires on Aug. 3, 2025, unless it is extended, replaced, or terminated beforehand according to its terms. The series 2013-A and 2013-B liquidity facilities will cover up to \$100 million and \$100 million, respectively, of principal and up to 270 days' interest accruals at a maximum 12% rate. UMass also maintains about \$661 million in less than 30-day liquidity.

In addition, the system maintains \$150 million line of credit for additional liquidity flexibility.

The series 2024-1 bonds are being issued to support capital projects at the Amherst campus and will go toward an engineering building, computer sciences, Goodell building renovations, and School of Public Health addition.

## Credit overview

We assessed the system's enterprise risk profile as extremely strong, characterized by its role as the leading provider of public higher education in Massachusetts, solid demand with growth in applications the last few years, and sound management and governance oversight, with comprehensive long-term strategic plans. We assessed the system's financial risk profile as strong, with historically positive operating margins, solid support from the state, offset by the system's elevated debt load and significant capital plan, which pressure already-low financial resources for the rating. We believe these credit factors, combined, lead to an anchor of 'aa-' and final rating of 'AA-'.

The ratings reflect our view of the system's:

- Historically healthy support by the Commonwealth of Massachusetts with geographically and academically diverse campuses located throughout the commonwealth;
- Positive operating performance in recent years with a surplus expected for fiscal 2024 and fiscal 2025;
- Overall enrollment and demand trends that are consistent with the rating; and
- 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.

Partly offsetting the strengths, in our view, are the system's:

- Elevated debt levels, which we expect will continue to pressure the balance sheet;
- Some weakening in enrollment and demand measures such as undergraduate full-time equivalent (FTE) and matriculation;
- Substantial remaining capital needs with additional debt plans through the next five fiscal years; and
- Low relative financial resource levels compared with median levels, and limited fundraising, though recent efforts have been successful.

The University of Massachusetts, established in 1863, is a coeducational, state-supported institution with campuses in Amherst, Boston, Dartmouth, Lowell, and Worcester. 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 intention 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 T.H. Chan School of Medicine, Morningside Graduate School of Biomedical Sciences, and the Tan Chingfen 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 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. The integration has been ongoing and has not had a material impact on credit characteristics to date.

University Of Massachusetts Building Authority University Of Massachusetts System; CP; Public Coll/Univ -Unlimited Student Fees

#### Environment, social, and governance

We analyzed the university's environmental, social, and governance (ESG) credit factors pertaining to its market position, management and governance, and financial performance. We view the university's ESG factors as neutral in our credit rating analysis.

## Outlook

The stable outlook reflects the expected full accrual surpluses, maintenance of its role as the leading provider of higher education in Massachusetts, and relatively consistent balance sheet with some potential addition of debt.

#### Downside scenario

We could consider a negative rating action if the system's enrollment and demand measures weaken materially or if the additional debt strains the balance sheet such that metrics are weaker than historical levels.

## Upside scenario

A higher rating is not likely given the low level of financial resources for the rating category. However, over time a higher rating would be predicated on significant improvement in resource ratios, especially relative to debt, consistent healthy surplus levels, and maintenance of the enterprise profile.

## **Credit Opinion**

## **Enterprise Risk Profile--Extremely Strong**

## Market position and demand

In our view, the system has moderate geographic diversity and is mostly regional. About three-quarters of all students hail from within the commonwealth. The system's FTE was flat in fall 2023 after small decreases in the past two years. Our expectation is for relative stability for fall 2024. Given the declining demographics in the region, management is exploring different trends in the area to determine strategies to maintain the university's position. Given its size and variety of geographic locations throughout the state of Massachusetts, we believe there is some insulation from prolonged declines. For fall 2023, Lowell enrollment was below budget while the other campuses were in line with expectations. Overall undergraduate FTE and law school FTE decreased. In fall 2023, total in-state FTEs represented about 71% of FTE students.

First-year applications grew in the past two years and applications for the fall 2024, applications grew again. Selectivity has weakened moderately in the last few years from historical levels but improved for fall 2023 and remains consistent with the rating category. The matriculation rate has also weakened slightly and reflects New England's highly competitive public and private higher education market. UMass has a healthy transfer population, which management intends to maintain and transfer applications were up for fall 2024. The retention rate (freshman-to-sophomore year) for fall 2023 was in line with the rating at 82%, with some variation across campuses. The system's mission remains access and affordability, and management expects to maintain moderate tuition increases for the near future.

The system has a large and growing online program, which we believe adds overall revenue and program diversity. UMass announced the creation of a strategic partnership with Brandman University, a nonprofit that specializes in online education for military, veteran, and adult students. It first appeared in the consolidated fiscal 2022 results, and overall, we expect it to be neutral in the near term from a credit perspective but will likely strengthen the system's online offerings.

#### Management

Since the last review, the leadership team has remained relatively stable with some internal promotions but overall consistent. The administration structure has a centralized office headed by a president, and each campus has a chancellor. 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 that board membership has been stable over the past year.

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 revenue to allow for 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 as well as its professional management team focused on continuous improvement are credit strengths, but the system's balance sheet is relatively weak for the rating category and its debt load 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.

## Fundraising

The system is building fundraising capacity across the five campuses and intends to enhance its advancement effort. There are ongoing campaigns at the Worcester and Amherst campuses with goals of \$500 million and \$600 million, respectively. There were recently closed campaigns at the Lowell (2020) and Worcester (2019) campuses, raising \$165 million and \$279 million, respectively.

## **Financial Risk Profile--Strong**

## **Financial performance**

The system has a long history of positive operating surpluses, though results were compressed and closer to breakeven in fiscal years 2020 and 2021. 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. The recent improvement in adjusted operating results reflects management's concerted efforts to reduce expenses. The fiscal 2024 projection is for a surplus reflecting increased state appropriations and above-budget enrollment at Amherst, Boston, and Dartmouth. In the next few years, management is targeting surpluses and is focused on revenue and expense items to maintain operating performance despite industry pressures. 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. Appropriations have increased in recent years and a modest increase is expected for fiscal 2024. We view the history of strong funding from the state as positive from a credit standpoint and believe substantial support will continue.

In our view, the system's revenue is further diversified by its strong research presence, with \$813 million in total grants and contracts for fiscal 2023--an increase from the prior year. 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 growth of its research capacity.

## **Financial resources**

In our view, the system's cash and investments relative to operating expenses are relatively light for the rating category though improved from historical levels after the fiscal 2021 market gains and asset growth. Cash and investments relative to debt is fairly consistent with historical levels despite the additional debt. We view the system's liquidity as sufficient with \$661 million in cash and investments that can be liquidated within thirty days as of June 30, 2023. We expect the system's financial resource ratios to remain steady or slightly weaker in the near term, with the expectation of continued, though modest, operating surpluses and plans for limited additional debt--about \$142 million remaining in likely debt issuances (after the issuance of the series 2024-1 bonds) to support the capital plan.

The endowment, held by the foundation, had a market value of \$1.29 billion as of June 30, 2023. Management reports little change to asset allocation or liquidity in the near term. 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. Draws have been consistent with policy and we do not anticipate any extraordinary draws or changes to the policy.

## Debt and contingent liquidity

UMass' debt burden remains elevated compared with that of similarly sized and comprehensive universities, and is higher than our medians for the rating category. Maximum annual debt service (MADS) is in 2024 and above average at almost 7% of fiscal 2023 adjusted operating expenses. We understand that about \$240 million of principal will be amortized in fiscal 2024 and fiscal 2025 providing some capacity for the potential debt that we expect in the next two to four years.

In our opinion, the high debt and elevated MADS burden remain a challenge, particularly as the system handles enrollment challenges and the significant capital plans that will continue to limit balance sheet growth. Nevertheless, we believe that overall debt will remain manageable at the rating because of university trustee policies that limit debt service to 8% of operating expenses (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. Contingent debt risk outstanding is the commercial paper and series A (\$20 million). In fiscal 2013, the authority approved a CP program to help fund the system's capital plan. The program is authorized for \$200 million. The university's capital plan for fiscal years 2022 through 2026 includes 100 projects and

## University Of Massachusetts Building Authority University Of Massachusetts System; CP; Public Coll/Univ -Unlimited Student Fees

totals about \$2 billion of projects. Funding sources include about \$789 billion total debt (including \$482 million in debt already issued), \$346 million of state funding, with the remaining from other internal and external sources. Based on the capital plan, we expect debt to remain elevated compared with that of the system's peers and the rating medians. The plan currently has about \$142 million of additional debt (after the series 2024-1) to complete the current capital plan.

The system built a 1,000-bed freshman housing facility on time and within budget, through a 501(c)(3) ownership structure on its Boston campus. In addition, UMass Dartmouth engaged into a 1,210-bed housing facility project through a 501(c)(3) ownership structure. The associated debt for the two projects was approximately \$260 million, which is not included in the calculation of resources to debt ratios. We understand that the system entered into a service concession agreement with a developer for an undergraduate and graduate housing project at UMass Amherst. As part of the deal, UMass received a \$20 million up front payment and will retain ownership of the property.

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 in fiscal 2023 was approximately 71%, which we view as sufficient. UMass' contributions were what we consider manageable, for fiscal 2023.

	Fiscal year ended June 30					Medians for 'AA' category rated public colleges and universities
	2024	2023	2022	2021	2020	2022
Enrollment and demand						
Full-time-equivalent enrollment	64,855	64,578	64,785	66,070	66,010	41,783
Undergraduates as a % of total enrollment	76.9	77.7	78.3	79.7	80.4	80.2
First-year acceptance rate (%)	70.6	73.7	72.7	69.6	67.3	73.2
First-year matriculation rate (%)	17.0	17.7	17.4	19.7	21.8	27.0
First-year retention rate (%)	82.4	82.4	83.6	83.6	83.4	86.8
Six-year graduation rate (%)	70.0	71.4	70.9	70.4	70.7	71.0
Income statement						
Adjusted operating revenue (\$000s)	N.A.	4,552,144	4,325,598	3,805,067	3,804,825	2,148,374
Adjusted operating expense (\$000s)	N.A.	4,402,361	4,195,611	3,789,501	3,801,804	2,030,534
Net adjusted operating margin (%)	N.A.	3.4	3.1	0.4	0.1	3.2
Estimated operating gain/loss before depreciation (\$000s)	N.A.	494,655	460,702	334,394	291,688	MNR
Tuition discount (%)	N.A.	28.2	26.9	27.1	27.2	28.2
Student dependence (%)	N.A.	42.4	41.9	37.8	43.1	37.0
State appropriations to revenue (%)	N.A.	22.2	20.3	22.2	21.3	17.3
Health care operations dependence (%)	N.A.	N.A.	N.A.	N.A.	N.A.	MNR
Research dependence (%)	N.A.	16.4	16.6	17.5	15.3	13.4

#### University Of Massachusetts System--enterprise and financial statistics (cont.)

						Medians for 'AA' category rated public colleges and
	Fiscal year ended June 30			universities		
	2024	2023	2022	2021	2020	2022
Debt						
Foundation debt (\$000s)	N.A.	N.A.	N.A.	259,800	262,300	MNR
Total debt with foundation (\$000s)	N.A.	3,516,756	3,659,719	3,446,557	3,253,414	1,142,825
Proposed debt (\$000s)	N.A.	148,175	N.A.	N.A.	N.A.	MNR
Total pro forma debt (\$000s)	N.A.	3,664,931	N.A.	N.A.	N.A.	MNR
Current debt service burden (%)	N.A.	5.8	5.4	6.1	6.2	MNR
Current MADS burden (%)	N.A.	6.4	6.5	6.2	6.2	3.4
Pro forma MADS burden (%)	N.A.	6.5	N.A.	N.A.	N.A.	MNR
Average age of plant (years)	N.A.	12.4	12.2	11.3	12.3	13.5
Financial resource ratios						
Endowment market value (\$000s)	N.A.	1,291,622	1,101,885	1,204,034	1,013,070	1,102,535
Related foundation market value (\$000s)	N.A.	992,278	816,452	825,294	621,079	945,352
Cash and investments including foundation (\$000s)	N.A.	3,193,887	2,940,758	2,646,818	1,918,909	2,837,567
Cash and investments including foundation to operations (%)	N.A.	72.5	70.1	69.8	50.5	115.3
Cash and investments including foundation to debt (%)	N.A.	90.8	80.4	76.8	59.0	278.4
Cash and investments including foundation to pro forma debt (%)	N.A.	87.1	N.A.	N.A.	N.A.	MNR

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 MADS burden = 100\*(maximum annual debt service expense/adjusted operating expenses). Cash and investments = cash + short-term and long-term investments. Average age of plant = accumulated depreciation/depreciation and amortization expense. N.A.--Not available. MNR--Median not reported. MADS--Maximum annual debt service.

## **Related Research**

Through The ESG Lens 3.0: The Intersection Of ESG Credit Factors And U.S. Public Finance Credit Factors, March 2, 2022

Ratings Detail (As Of April 23, 2024)					
Massachusetts Development Finance Agency, Massachusetts					
University of Massachusetts System, Massachusetts					
Massachusetts Development Finance Agency (University of Massachusetts System)					
Long Term Rating	AA-/Stable	Affirmed			
Massachusetts Development Finance Agency (University of Massachusetts) (FGIC) (National)					
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed			
University of Massachusetts Bldg Auth (University of Massachusetts System)					
Long Term Rating	AA-/Stable	Affirmed			

## Ratings Detail (As Of April 23, 2024) (cont.)

	,					
University of Massachusetts Building Autho	ority, Massachusetts					
University of Massachusetts System, Massachuse	etts					
University of Massachusetts Bldg Auth (Universit	y of Massachusetts System) proj and rf	dg rev bnds				
Long Term Rating	AA-/Stable	Affirmed				
University of Massachusetts Bldg Auth (Universit	y of Massachusetts System) (AGM)					
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed				
Univ of Massachusetts Bldg Auth rfdg rev bnds						
Long Term Rating	AA-/Stable	Affirmed				
Univ of Massachusetts Bldg Auth (University of M	Aassachusetss System)					
Long Term Rating	AA-/Stable	Affirmed				
Univ of Massachusetts Bldg Auth (University of M	Aassachusetts System)					
Long Term Rating	AA-/Stable	Affirmed				
Univ of Massachusetts Bldg Auth (University of M	Aassachusetts System) cml pap nts rmk	td 8/3/2022 ser 2013A				
Short Term Rating	A-1+	Affirmed				
Univ of Massachusetts Bldg Auth (University of Massachusetts System) cml pap nts rmktd 8/3/2022 ser 2013B						
Short Term Rating	A-1+	Affirmed				
Univ of Massachusetts Bldg Auth (University of M	Aassachusetts System) proj rev bnds (ta	axable) ser 2022-3 due 11/01/2044				
Long Term Rating	AA-/Stable	Affirmed				
Univ of Massachusetts Bldg Auth (University of N 2021-2 due 11/01/2021	/lassachusetts System) rfdg rev bnds (U	niversity of Massachusetts System) ser				
Long Term Rating	AA-/Stable	Affirmed				
Univ of Massachusetts Bldg Auth (University of M	lassachusetts System) PCU_USF					
Long Term Rating	AA-/Stable	Affirmed				
Univ of Massachusetts Bldg Auth (University of M	lassachusetts System) PCU_USF					
Long Term Rating	AA-/Stable	Affirmed				
Univ of Massachusetts Bldg Auth (University of M	lassachusetts System) PCU_USF					
Long Term Rating	AA-/Stable	Affirmed				
Univ of Massachusetts Bldg Auth (University of M	lassachusetts System) PCU_USF					
Long Term Rating	AA-/Stable	Affirmed				
Univ of Massachusetts Bldg Auth (University of M	Aassachusetts System) PCU_USF					
Long Term Rating	AA-/Stable	Affirmed				
Univ of Massachusetts Bldg Auth (University of N 04/14/2020 due 06/30/2051	/lassachusetts) rfdg rev bnds (Universit	y of Massachusetts) ser 2020-4 dtd				
Long Term Rating	AA-/Stable	Affirmed				
Univ of Mass Bldg Auth (Univ of Mass Sys) PCU_	USF					
Long Term Rating	AA-/Stable	Affirmed				
Many issues are enhanced by bond insurance.						

Many issues are enhanced by bond insurance.

Copyright © 2024 by Standard & Poor's Financial Services LLC. All rights reserved.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P's opinions, analyses and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives. Ratingrelated publications may be published for a variety of reasons that are not necessarily dependent on action by rating committees, including, but not limited to, the publication of a periodic update on a credit rating and related analyses.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw or suspend such acknowledgment at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.spglobal.com/ratings (free of charge), and www.ratingsdirect.com (subscription), and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.spglobal.com/usratingsfees.

STANDARD & POOR'S, S&P and RATINGSDIRECT are registered trademarks of Standard & Poor's Financial Services LLC.