University of Minnesota, MN

Update to credit analysis

**Summary**

University of Minnesota’s (UM, Aa1 stable) excellent credit profile reflects strong student and research market positions and ample balance sheet reserves, all driving its excellent strategic position. UM receives good support from the State of Minnesota (Aa1 stable), including payment of debt service on $252 million of Special Purpose Revenue Bonds (Aa2 stable). Offsetting challenges are relatively thin operating performance compared to peers and substantial capital plans.

**Exhibit 1**

Ample balance sheet reserves cover pro forma university debt by a still strong 2.3 times

2017 Sensitivity incorporates $400M total CP, Series 2017 bonds issued and debt repayments since June 30, 2017

Source: Moody’s Investors Service
Credit strengths

» Excellent strategic positioning as Minnesota’s flagship research and land grant university and Big Ten conference member

» Ample balance sheet reserves with unrestricted monthly liquidity of $1.6 billion or 179 monthly days cash on hand supporting self-liquidity program and other needs

» Strong fundraising, with $234 million of fiscal 2017 gift revenues

» Conservative debt amortization, with $251 million of principal repayment for fiscal 2019-2021, offsetting much of future debt plans

Credit challenges

» Modest and thinning operating performance compared to Aa1 peers, with only a 6% operating cash flow margin in fiscal 2017

» Ongoing capital plans with up to $210 million of planned new debt through fiscal 2020

» Constrained revenue growth from highly competitive student market and research funding environments pressuring operations

Rating outlook
The stable outlook reflects continued favorable student demand and sponsored research trends, growing tuition revenue, stable to improving operating cash flow and debt service coverage despite additional debt plans.

Factors that could lead to an upgrade

» Substantial growth in balance sheet reserves

» Sustained, notable improvement in operating performance

Factors that could lead to a downgrade

» Sustained weakening of operations and cash flow generation

» Additional net new debt without improved operating performance

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.
Key indicators

Exhibit 2
UNIVERSITY OF MINNESOTA, MN

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total FTE Enrollment</td>
<td>61,481</td>
<td>60,950</td>
<td>60,620</td>
<td>61,121</td>
<td>61,995</td>
<td>61,995</td>
<td>28,405</td>
</tr>
<tr>
<td>Operating Revenue ($000)</td>
<td>3,126,362</td>
<td>3,223,417</td>
<td>3,286,315</td>
<td>3,394,128</td>
<td>3,380,569</td>
<td>3,380,569</td>
<td>1,104,854</td>
</tr>
<tr>
<td>Annual Change in Operating Revenue (%)</td>
<td>2.7</td>
<td>3.1</td>
<td>2.0</td>
<td>3.3</td>
<td>-0.4</td>
<td>-0.4</td>
<td>4.4</td>
</tr>
<tr>
<td>Total Cash &amp; Investments ($000)</td>
<td>4,202,609</td>
<td>4,624,713</td>
<td>4,900,605</td>
<td>4,936,644</td>
<td>5,072,473</td>
<td>5,072,473</td>
<td>1,201,140</td>
</tr>
<tr>
<td>Total Debt ($000)</td>
<td>1,278,745</td>
<td>1,261,057</td>
<td>1,389,443</td>
<td>1,440,148</td>
<td>1,409,404</td>
<td>1,583,729</td>
<td>597,459</td>
</tr>
<tr>
<td>Spendable Cash &amp; Investments to Total Debt (x)</td>
<td>2.3</td>
<td>2.7</td>
<td>2.6</td>
<td>2.5</td>
<td>2.5</td>
<td>2.3</td>
<td>1.3</td>
</tr>
<tr>
<td>Spendable Cash &amp; Investments to Operating Expenses (x)</td>
<td>1.0</td>
<td>1.0</td>
<td>1.1</td>
<td>1.1</td>
<td>1.0</td>
<td>1.0</td>
<td>0.7</td>
</tr>
<tr>
<td>Monthly Days Cash on Hand (x)</td>
<td>180</td>
<td>176</td>
<td>176</td>
<td>179</td>
<td>179</td>
<td>179</td>
<td>162</td>
</tr>
<tr>
<td>Operating Cash Flow Margin (%)</td>
<td>10.4</td>
<td>7.1</td>
<td>7.8</td>
<td>7.8</td>
<td>6.5</td>
<td>6.5</td>
<td>12.0</td>
</tr>
<tr>
<td>Total Debt to Cash Flow (x)</td>
<td>3.9</td>
<td>5.5</td>
<td>5.4</td>
<td>5.4</td>
<td>6.4</td>
<td>7.2</td>
<td>4.4</td>
</tr>
<tr>
<td>Annual Debt Service Coverage (x)</td>
<td>3.0</td>
<td>2.6</td>
<td>2.2</td>
<td>2.0</td>
<td>1.6</td>
<td>1.6</td>
<td>3.0</td>
</tr>
</tbody>
</table>

2017 Sensitivity incorporates $400M total CP, Series 2017 bonds issued and debt repayments since June 30, 2017, total FTE Enrollment for fall of indicated year. Source: Moody’s Investors Service

Profile

University of Minnesota, founded in 1851, has a national market position as the state’s flagship and land grant university and member of the Big Ten Academic Alliance. One of the nation’s largest research universities, total revenues were nearly $3.4 billion with $744 million of research awards for fiscal 2017. A multi-campus university, enrollment was nearly 68,000 headcount students for fall 2017 at its Twin Cities, Duluth, Morris, Crookston, and Rochester campuses.

Detailed credit considerations

Market profile: strong student demand and major research role

The University of Minnesota will maintain its excellent strategic positioning reflected in strong student demand as the state’s flagship and land grant institution and member of the Big Ten Academic Alliance (Big 10 conference). Fall 2017 enrollment was nearly 62,000 FTEs, with 32% non-resident and international students system-wide. Included within the non-resident population is 20% of non-resident non-reciprocity (NRNR) students for fall 2017 freshmen at the Twin Cities campus. This student group provides UM tuition flexibility from higher tuition than resident undergraduate students. UM has increased tuition at all campuses in fall 2017 and plans another increase in fall 2018. The university looks for modest enrollment growth in the STEM (science, technology, engineering and mathematics) academic areas.

UM is one of the nation’s leading comprehensive research universities, demonstrating success in growing its sponsored awards. It received $744 million of research awards in fiscal 2017, down slightly from the prior year. UM reports year-to-date awards for fiscal 2018 are higher than the same period last year.

Although it has a medical school, UM does not own a hospital and is not directly exposed to challenges in the health care sector. The University of Minnesota Medical Center (UMMC), now owned and operated by Fairview Health Services (FHS, A2 stable), is the clinical training site for UMs medical school students and its research partner.

Operating performance: thin cash flow generation, with well-diversified revenue base

University of Minnesota is expected to generate balanced, but not strong, operating performance in 2018 that is comparable or slightly better than the 6% operating cash flow margin in fiscal 2017. Fiscal 2017’s cash flow margin is weaker than the 8% generated for both fiscal 2015 and 2016. The thin operations reflect program investments and other one-time expenses. UM is working to reduce administrative and other costs under a six-year program through fiscal 2019 in an effort let by its president. Failure to stabilize or improve operations with rising debt service could result in negative rating or outlook pressure.

Although the university’s revenue base is diverse and provides operating stability, fiscal 2017 operating revenue actually showed a very small 0.4% or $14 million decrease from fiscal 2016. Although net tuition revenue did grow, most of other revenue sources were down. The state approved a net $22 million recurring or 3.5% appropriation increase for the current fiscal 2018-2019 biennium. Tuition revenues should also increase from board-approved tuition increases.
Wealth and liquidity: ample balance sheet reserves and liquidity
UM's balance sheet profile will remain strong, helping support debt and operations. Fiscal 2017 total cash and investments of $5.1 billion includes $2.6 billion held by University of Minnesota Foundation and is up slightly from fiscal 2016. The university's investments of over $2.6 billion at June 30, 2017 were primarily comprised of the Consolidated Endowment Fund (CEF, $1.35 billion) and the short-term reserves (TIP, $1.11 billion). The university reports higher cash and investments at December 31, 2017 and projects a further increase for June 30, 2018 fiscal year-end.

The university's endowment is managed by its Office of Investments and Banking in conjunction with external managers. The university's CEF produced a nearly 11% positive return for fiscal 2017, in the range of returns reported by peer institutions. The CEF portfolio allocation is diversified and consistent with that of comparably sized endowments. The TIP portfolio is held in cash and treasuries and agency bonds.

Fundraising is strong, with $235 million of three-year average gift revenues for fiscal years 2015-2017 and $234 million for fiscal 2017 alone, as reported in the financial statements. UM reports $337 million in gifts and commitments for fiscal 2017, the second highest total in the university's history. UM publicly launched its $4 billion "Driven" comprehensive campaign in September 2017. Reporting $2.5 billion raised as of June 30, 2017 the campaign is targeted to end in June 2021.

Liquidity
Unrestricted liquidity is ample at $1.58 billion, translating to 179 monthly days cash on hand. Unrestricted liquidity provides a strong 535% cushion to demand debt, including $33 million of University Gateway Corporation's (UGC) variable rate bonds supported by bank SBPAs and guaranteed by University of Minnesota Foundation.

UM's maturing commercial paper is supported by its own liquidity. At March 31, 2018 the university had $652 million of discounted daily liquidity, largely treasuries with some deposits at P-1 rated banks. The internal daily liquidity provides a strong 3.7x coverage of its commercial paper excluding the largest money market investment with one sponsor. The calculation is based on the limitation of $175 million of commercial paper that can mature in a 5 business day period that is included in its Amended and Restated Issuing and Paying Agency Agreement, not on the maximum $400 million authorized by the university's board.

Leverage: moderate direct leverage, with significant other long-term liabilities
University of Minnesota's leverage for direct debt relative to its balance sheet reserves and cash flow is moderate, but higher when including the adjusted net pension liability for the state pension plans. Fiscal 2017 spendable cash and investments cushion pro forma total debt (including the full $400 million authorized CP) 2.3x, with pro forma debt-to-cash flow a more leveraged 7.2x due to the relatively weaker cash flow.

Pro forma debt includes $49 million of University Gateway Corporation debt (Aa1 based on a guarantee of the University of Minnesota Foundation) and $252 million of Special Purpose debt paid by the State of Minnesota and secured by a pledge of specified debt service transfers to university from a standing state general fund appropriation. Removing the state-supported debt materially reduces leverage to with 2.7x spendable cash and investments-to-debt and 6.1x debt-to-cash flow.

UM has significant debt plans over the next two to three years that include about $190 million of debt through fiscal 2020. This includes its contribution to costs of three projects approved by the state for funding. The borrowings are subject to construction timing, expected gifts and UM's use of its own reserves for the projects. UM expects to use CP to provide the initial funding of the projects until taken out by long-term debt. Offsetting this is $223 million of scheduled debt repayment from 2018 through 2020, excluding the Special Purpose debt paid by the state, that results in a much lower net debt increase. Moody's will assess the impact of new debt issuance in light of operating performance trends and project funding sources.
Debt structure
Currently UM’s only variable rate debt is its commercial paper, current with $288 million outstanding. UGC has three variable rate bonds with the tender feature supported by a Standby Bond Purchase Agreement from Wells Fargo Bank, N.A. expiring on 8/31/2018.

The Board of Regents authorized the $400 million CP program as a revolving commercial paper facility, including previously issued and outstanding CP. Under previous CP issuances, including the current Series A, B, C, D, E and F, each series was for a specific project debt issuance that would have a scheduled annual repayment until paid in full. Final maturities range from 2021 for Series A to 2041 for Series F. Under the new program, UM will issue CP for capital funding purposes that will be repaid through long-term debt issuance and freeing up issuing availability in the program.

Legal Security
All General Obligation bonds and commercial paper are unconditional, direct and general obligations of the university. There are no debt service reserve funds for the bonds.

Debt-related derivatives
None

Pensions and OPEB
UM has substantial debt-like liabilities through pensions, and its unfunded share of the state’s defined benefit plans could pressure operations if longer-term pension funding needs emerge. UM employees participate in federal and state defined benefit pension plans (DBP), including the State Employees Retirement Fund (SERF). UM also offers defined contribution plans.

During fiscal 2017 several of the actuarial assumptions of the DBPs were revised, particularly the reduction of the discount rate and a revision in the mortality rate used in one of the plans. Consequently the pension liability reported on UM’s balance sheet jumped to $1.9 billion at June 30, 2017 from the $246 million for 2016. Moody’s adjusted net pension liability (ANPL) at June 30, 2017, using a standard discount rate, is $1.6 billion, bringing total adjusted pro forma debt to $3.3 billion. UM’s total adjusted debt remains manageable, although total adjusted debt to operating revenues of 1.0x is moderately higher than the 0.7x median for Aa1-rated public universities.

UM also provides retiree healthcare benefits, funding on a pay-as-you-go basis with a $6 million contribution in fiscal 2017. It reported a $157 million OPEB liability at June 30, 2017.

Governance and management: good fiscal oversight
University of Minnesota’s Board of Regents and leadership team display good fiscal oversight reflected in the strengthened unrestricted liquidity and balance sheet reserves. The leadership team has good tenure diversity between long-serving and recently appointed management. Board members are elected biennially to six year terms.
MOODY'S INVESTORS SERVICE

RANGEING FROM JPY200,000 TO APPROXIMATELY JPY350,000,000.

STOCK RATED BY MJKK OR MSFJ (AS APPLICABLE) HAVE, PRIOR TO ASSIGNMENT OF ANY RATING, AGREED TO PAY TO MJKK OR MSFJ (AS APPLICABLE) FOR APPRAISAL AND RATING SERVICES RENDERED BY IT FEES WITH THE JAPAN FINANCIAL SERVICES AGENCY AND THEIR REGISTRATION NUMBERS ARE FSA COMMISSIONER (RATINGS) NO. 2 AND 3 RESPECTIVELY.

RECOGNIZED STATISTICAL RATING ORGANIZATION (“NRSRO”). THEREFORE, CREDIT RATINGS ASSIGNED BY MSFJ ARE NON-NRSRO CREDIT RATINGS. NON-NRSRO CREDIT RATINGS ARE ASSIGNED BY AN ENTITY THAT IS NOT A NRSRO AND, CONSEQUENTLY, THE RATED OBLIGATION WILL NOT QUALIFY FOR CERTAIN TYPES OF TREATMENT UNDER U.S. LAWS. MJKK AND MSFJ ARE CREDIT RATING AGENCIES REGISTERED UNDER THE JAPAN FINANCIAL SERVICES AGENCY AND THEIR REGISTRATION NUMBERS ARE FSA COMMISSIONER (RATINGS) NO. 2 AND 3 RESPECTIVELY.

ADDITIONAL TERMS FOR JAPAN ONLY: MOODY'S JAPAN K.K. (“MJKK”) IS A WHOLLY-OWNED CREDIT RATING AGENCY SUBSIDIARY OF MOODY'S CORPORATION (“MCO”), HEREBY DISCLOSES THAT MOST ISSUERS OF DEBT SECURITIES (INCLUDING CORPORATE AND MUNICIPAL BONDS, DEBENTURES, NOTES AND COMMERCIAL PAPER) AND PREFERRED STOCK RATED BY MOODY'S INVESTORS SERVICE, INC. HAVE, PRIOR TO ASSIGNMENT OF ANY RATING, AGREED TO PAY TO MOODY'S INVESTORS SERVICE, INC. FOR APPRAISAL AND RATING SERVICES RENDERED BY IT FEES RANGING FROM JPY200,000 TO APPROXIMATELY JPY350,000,000.