Columbia University, NY

New Issue: Moody’s Assigns Aaa to Columbia University’s (NY) $432M Series 2016A and 2016B; outlook stable

Summary Rating Rationale
Moody’s Investors Service assigns a Aaa rating to Columbia University’s proposed $432 million of Revenue Bonds, Series 2016A and 2016B, to be issued in a fixed rate mode with one or more bullet maturities. We also affirm Columbia’s Aaa, Aaa/VMIG 1, and P-1 ratings on $1.2 billion of parity debt outstanding. The outlook is stable.

Columbia University’s Aaa incorporates its global academic reputation as a comprehensive research university, highlighted by exceptional student demand, a large and diversified research program, and very strong fundraising. Columbia’s moderate financial leverage despite a significant capital investment program reflects diversified funding sources and strong fiscal stewardship. The rating also incorporates Columbia’s moderate cushion of liquidity to operating expenses compared to highly rated large universities with multiple business lines.

The Aaa/VMIG 1 rating on the university’s variable rate demand bonds and the P-1 rating on commercial paper reflect the fundamental credit strength of the university and its solid coverage of potential tenders from available daily assets and backup bank liquidity facilities.

Credit Strengths

» Exceptional student demand diversified across undergraduate and graduate programs as a large, research-intensive university located in New York City

» Strong fiscal stewardship and growing profitability of clinical services result in strengthening operating performance, with annual operating margin of 7.8% in FY 2015

» Relatively low financial leverage due to very strong fundraising and good cash flow, spendable cash and investments to pro-forma total debt of 4.4 times

» Highly marketable non-core academic real estate, including residential and office buildings, in New York City

» Strong affiliation and strategic alignment with The New York Presbyterian Hospital (Aa2 Stable) enhances clinical and research reputation
Credit Challenges

- Relatively moderate liquidity compared to operating expenses, with monthly days cash on hand of 267 days compared to the Aaa median of 756 days.
- Material dependence on healthcare revenue and profitability, 25% of operating revenue, with susceptibility to regulatory and government payer changes.
- Significant long-term expansion plan requires careful management of funding sources and expenses.

Rating Outlook

The stable outlook reflects our expectation that Columbia will successfully navigate its continued expansion, without significantly increasing financial leverage, and maintain consistently positive operating performance.

Factors that Could Lead to an Upgrade

- Not applicable.

Factors that Could Lead to a Downgrade

- Material decline in liquidity.
- Significant acceleration of capital plans without achieving fundraising goals.
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Key Indicators

Exhibit 2

<table>
<thead>
<tr>
<th>COLUMBIA UNIVERSITY, NY</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
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<tbody>
<tr>
<td>Total FTE Enrollment</td>
<td>24,562</td>
<td>25,053</td>
<td>25,658</td>
<td>26,258</td>
<td>26,584</td>
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<tr>
<td>Operating Revenue ($000)</td>
<td>3,473,506</td>
<td>3,588,582</td>
<td>3,677,487</td>
<td>3,887,978</td>
<td>4,127,822</td>
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<tr>
<td>Annual Change in Operating Revenue (%)</td>
<td>7.8</td>
<td>3.3</td>
<td>2.5</td>
<td>5.7</td>
<td>6.2</td>
</tr>
<tr>
<td>Total Cash &amp; Investments ($000)</td>
<td>8,212,397</td>
<td>8,039,359</td>
<td>9,007,207</td>
<td>10,013,018</td>
<td>10,458,042</td>
</tr>
<tr>
<td>Total Debt ($000)</td>
<td>1,653,916</td>
<td>1,650,321</td>
<td>1,599,323</td>
<td>1,546,820</td>
<td>1,664,435</td>
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<tr>
<td>Spendable Cash &amp; Investments to Total Debt (%)</td>
<td>3.8</td>
<td>3.7</td>
<td>4.3</td>
<td>5.0</td>
<td>4.8</td>
</tr>
<tr>
<td>Spendable Cash &amp; Investments to Operating Expenses (%)</td>
<td>1.9</td>
<td>1.8</td>
<td>2.0</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Monthly Days Cash on Hand (x)</td>
<td>260</td>
<td>227</td>
<td>273</td>
<td>240</td>
<td>267</td>
</tr>
<tr>
<td>Operating Cash Flow Margin (%)</td>
<td>11.7</td>
<td>11.5</td>
<td>12.7</td>
<td>13.7</td>
<td>14.1</td>
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<tr>
<td>Total Debt to Cash Flow (%)</td>
<td>4.1</td>
<td>4.0</td>
<td>3.4</td>
<td>2.9</td>
<td>2.9</td>
</tr>
</tbody>
</table>

Source: Moody’s Investors Service

Recent Developments
Recent developments are incorporated in Detailed Rating Considerations.

Detailed Rating Considerations

Market Profile: Exceptional Academic Reputation as Large, Research Intensive University
Columbia University's exceptional academic reputation across undergraduate and professional programs, large and diversified research enterprise, and location in New York City fuel long-term student demand. Columbia has translated this demand into enrollment and revenue growth, though it does not fully exercise its ample pricing power. Within the last ten years, headcount enrollment has grown to more than 30,300 students, an increase of approximately 23%. Additional growth will be limited due to current capital constraints.

The university's global recognition, in part, comes from its large research enterprise with annual expenses of roughly $540 million. Columbia has not been immune from the challenging federal research funding landscape, experiencing modest declines in recent years. However, management reports a healthy increase in FY 2016. In a constrained environment for government grants, Columbia is supporting research through the profitability of clinical operations, fundraising, and commercialization of research discoveries.

Columbia's strong affiliation and strategic alignment with a highly rated teaching hospital will enhance its research profile over time. While Columbia does not own or operate The New York Presbyterian Hospital (Aa2 Stable), their brands and priorities are closely aligned. The New York Presbyterian Hospital is the university's primary clinical affiliation, with exclusive privileges for Columbia doctors to admit patients at one of its two flagship locations. Columbia's affiliation limits downside financial risk as the university has no legal responsibility for the hospital's financial performance or condition.

Operating Performance: Good Fiscal Stewardship and Healthy Revenue Growth
Annual operating performance continues to strengthen, driven by healthy revenue growth and strong fiscal discipline. In FY 2015, Columbia's annual operating margin was nearly 8%, compared to just 2% in FY 2010. A culture of accountability, with each department responsible for managing to at least a breakeven budget, efficiency initiatives, and strong growth of healthcare and student generated revenue have resulted in an improved bottom line. Management estimates that operating performance in FY 2016 will also be strong.

While remaining highly diversified, Columbia's operations are increasingly reliant on the profitability of its clinical services. Columbia's faculty practice plan of more than 1,700 doctors and nurses generated a nearly 10% annual increase in revenue in FY 2015, primarily from ongoing operations. Expansion of faculty practice affiliations into affluent suburban counties should bolster revenue growth, as the plan continues to outperform general industry trends. Given constrained revenue trends in the healthcare industry, the recent rate of growth will be hard to sustain and management models more conservative trends in out years.
To help sustain healthy operating performance, the university fundraises for operating endowments alongside capital projects. This strategy is particularly important as Columbia redevelops 17 acres north of its historic campus. The development, referred to as Manhattanville, will provide the university with new academic, research, and residential space. The significant expansion will be constructed in phases. The university retains flexibility to adjust scheduling and will only begin a project once funding including documented pledges has been secured.

*Wealth and Liquidity: Solid Financial Cushion Excludes Valuable Real Estate*

Columbia’s financial reserves continue to grow during a prolonged period of heavy capital spending. Strong philanthropic support and solid long-term investment returns have been primary drivers of the total cash and investments increase of more than 50% since FY 2010. Columbia has strong potential for growth in wealth as it prepares to embark on a large fundraising initiative and continues to generate solid operating surpluses.

Our calculations of Columbia’s wealth exclude valuable marketable real estate. The university owns property, including residential and office buildings, apart from its main campus that could be liquidated without interrupting its academic programs. The gross book value of Columbia’s real estate was $4.6 billion in FY 2015. The market value is likely significantly higher. These properties provide significant credit strength for Columbia.

Columbia’s investment performance compares well to peers with large endowments. In FY 2015, Columbia reported a 10-year investment return of 10.1%. This long-term rate of return provides for real growth of the endowment after annual spending to support the university’s operations. Similar to peers, Columbia’s endowment is heavily weighted to less-liquid asset classes with hedge funds and private equity accounting for half of the portfolio. Columbia’s Investment Management Company (IMC) and the Trustees Committee on Finance oversee the endowment. Strong coordination between IMC and the university’s treasury and budget functions help ensure the availability of sufficient liquidity.

Fundraising will play a prominent role in Columbia’s capital strategies. Columbia’s last campaign, which concluded in December 2013 at $6.12 billion, including $1 billion raised for capital. The university has demonstrated the ability to make substantial capital investments without increasing financial leverage. Between fiscal 2010 and 2015, Columbia invested $2.5 billion in property, plant, and equipment while debt rose by only $210 million. We expect that debt will continue to play a modest role in Manhattanville, particularly as the university begins planning for its next fundraising campaign.

*LIQUIDITY*

Columbia’s liquidity, relative to operating expenses, is good but moderate compared to peers. Management’s careful monitoring of cash flow and economic conditions combined with external bank liquidity mitigate lower coverage. At the end of fiscal 2015, unrestricted cash and investments that could be liquidated within one month covered roughly 267 days of operating expenses compared to the Aaa median of 756 days. In addition to the university’s own liquidity, Columbia has a $100 million committed operating line of credit that is currently undrawn and two back-up bank facilities to support its self-liquidity program.

Similar to highly rated peers with large endowments, Columbia’s endowment carries potential liquidity risks. In FY 2015, unfunded capital commitments totaled $2.4 billion or roughly 25% of the endowment’s value (excludes operating funds). In recent years, distributions from private equity funds have exceeded calls. A material and sustained decline in Columbia’s liquidity could adversely affect the outlook or rating.

The combination of internal reserves and external bank facilities provide strong coverage of Columbia’s limited demand debt obligations. Columbia currently has $147 million of variable rate demand bonds in a weekly mode and $29.7 million of VRDO’s in a CP mode (Series 2002 and 2002C bonds). In the Issuing and Paying Agreement and Dealer Agreements for Columbia’s taxable and tax-exempt commercial paper programs, only $25 million from each program can mature within five business days. Given the legal limitations on what can mature within five business days and Columbia’s history of limited use of CP, we evaluate coverage relative to the narrower view of liabilities (instead of the authorized amount of CP).

As of December 31, 2015, Columbia’s discounted daily liquidity of $686 million was comprised of US Treasuries and deposits at P-1 banks. In addition to internal reserves, Columbia had $200 million in bank facilities from two separate banks with staggered expiration dates.
Leverage: Moderate Leverage and Limited Borrowing Plans
Columbia’s financial leverage and coverage are expected to remain sound compared to peers due to the university’s limited borrowing plans, strengthened cash flow, and use of amortizing debt. Spendable cash and investments at the end of fiscal 2015 would cover pro-forma debt by 4.4 times and pro-forma debt to cash flow was a relatively low 3.2 times. Our rating action incorporates the potential for borrowing within the next two years which will likely be more than offset by the approximately $100 million of scheduled debt amortization.

DEBT STRUCTURE
Columbia’s debt structure is predominately amortizing, fixed rate debt. Following the planned issuance of the Series 2016 with one or more bullet maturities, approximately half of Columbia’s debt will be amortizing. Columbia’s debt structure allows it to create debt capacity at a faster rate than peers that are more heavily reliant on bullet maturities.

DEBT-RELATED DERIVATIVES
With a historically limited use of variable rate debt, Columbia only has one debt-related interest rate agreement. The swap has a notional amount of $200 million. Columbia could be required to post collateral if the rating fell to A1 and the market valuation exceeded negative $20 million. As of June 30, 2015, the market to market valuation was negative $68 million.

PENSIONS AND OPEB
Columbia has limited exposure to pension and other post-employment benefits, having closed almost all of its plans and introduced defined contribution plans. In FY 2015, Columbia had five pension plans primarily for unionized staff members, with a reported funding status around 80%, or a liability of $38 million. In FY 2015, assets reserved for post-employment health benefits exceeded projected benefit obligations by $17 million.

Governance and Management: Strong Oversight of Well-Integrated Vision and Financial Plan
Columbia’s careful planning, ongoing monitoring, and system of accountability drive improvement in the bottom line and brand. While the university has a well-articulated vision tied into its capital and financial plans, management retains flexibility and nimbleness to adjust to changes in the environment. Columbia’s development of Manhattanville exemplifies this conservative management culture, steadily progressing without placing a burden on budget or balance sheet. Management’s deliberate approach contributes to generally lower volatility than peers with greater risk appetites.

Legal Security
Bond payments are an unsecured general obligation of the university.

Use of Proceeds
The Series 2016A bond proceeds will be used to finance various capital improvements and the cost of issuance. The Series 2016B bonds will be used to refund the Series 2006A and 2006B bonds.

Obligor Profile
Columbia University is an elite research-intensive university located in New York City with an enrollment of nearly 27,000 full-time equivalent students. The large scale of the university’s operations, $4.1 billion, incorporates its academic, research, and clinical care revenue. Columbia’s wealth, totaling $10.6 billion (excluding highly marketable real estate) reflects a history of strong fundraising and investment returns.

Methodology
The principal methodology used in this rating was Global Higher Education published in November 2015. An additional methodology used in the short term rating was Rating Methodology for Municipal Bonds and Commercial Paper Supported by a Borrower’s Self-Liquidity published in January 2012. Please see the Ratings Methodologies page on www.moodys.com for a copy of these methodologies.
Ratings

Exhibit 3

**Columbia University, NY**

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<th>Issue</th>
<th>Rating</th>
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<td>Revenue Bonds, Series 2016A</td>
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<td>Rating Type</td>
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<td>Expected Sale Date</td>
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<td>Rating Description</td>
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*Source: Moody’s Investors Service*
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