Vanderbilt University, Tennessee
Revenue Bonds
New Issue Report

Ratings

New Issue
$140,445,000 The Health and Educational Facilities Board of the Metropolitan Government of Nashville and Davidson County, Tennessee Taxable Revenue Bonds, Series 2016
AAA

Outstanding Debt
$211,450,000 The Health and Educational Facilities Board of the Metropolitan Government of Nashville and Davidson County, Tennessee Revenue Bonds
AAA
$200,000,000 Taxable Commercial Paper Program
F1+

*Amounts preliminary and subject to change. *Upgraded from 'AA+' on Oct. 14, 2016. A portion of the outstanding bonds will be refunded from series 2016 proceeds.

Rating Outlook
Stable

Key Rating Drivers

Reorganization Drives Upgrade: The sale of medical assets and activities to Vanderbilt University Medical Center (VUMC) has dramatically decreased VU's leverage while reducing its exposure to inherently riskier healthcare operations. The ‘AAA’ rating reflects VU's superior balance sheet resources, excellent reputation and market position, solid operating results and very low debt burden.

Substantial Balance Sheet Resources: VU's available funds (cash and investments not permanently restricted) totaled $3.75 billion at June 30, 2016, and equaled 3.3x operating expenses and 6.9x pro forma debt, well exceeding the same metrics of its 'AA' category peers.

Excellent Operating Profile: A leading academic reputation drives very strong student demand, indicated by a national draw, very selective admissions and high student quality.

Solid Financial Performance: VU is expected to continue to post solid operating results (5.6% operating margin in fiscal 2016 including endowment draw). VU's revenue base is better diversified as a result of the reorganization. Contractual payments from VUMC will still account for about one-quarter of VU's revenue (previously was over two-thirds), but will depend less directly on patient care revenue.

Very Low Debt Burden: VU shed approximately $850 million of debt post-reorganization. Pro forma maximum annual debt service (MADS) equals a very low 1.5% of fiscal 2016 operating revenue, and VU generated approximately 9.0x MADS coverage. VU now has a more conservative debt structure with limited capital and debt needs over the next five years.

Liquidity: The 'F1+' rating reflects VU's ability to cover the maximum potential liquidity demands presented by its commercial paper (CP) program by at least 1.25x from its available liquid resources, including cash, dedicated liquidity facilities and highly rated liquid investments.

Rating Sensitivities

VUMC Alignment: VU remains strategically aligned with VUMC; post-reorganization contractual payments from VUMC for infrastructure, services, research and academic initiatives and trademarks/licensing will account for about one-quarter of VU's operating revenue. Fitch believes VU has strong financial flexibility, but severe stress at VUMC could pressure its operating results.

New Issue Details

Sale Information: $140,445,000 The Health and Educational Facilities Board of the Metropolitan Government of Nashville and Davidson County, Tennessee Taxable Revenue Bonds, Series 2016, the week of Oct. 24 via negotiation.

Security: Unsecured general obligation of Vanderbilt University (VU).

Purpose: To refinance a portion of the series 2009A bonds, fund certain capital improvements and pay costs of issuance.

Final Maturity: Oct. 1, 2046.

Related Research

Fitch Upgrades Vanderbilt University (TN) to 'AAA'; Outlook Stable (October 2016)

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Vanderbilt University, Tennessee
October 20, 2016

Rating History — Long-Term Debt

<table>
<thead>
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Rating History — Short-Term Debt

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Rating Sensitivities (continued)

**Internal Liquidity Erosion:** Erosion of available liquid resources that support VU’s CP program to a level where they could no longer provide at least 1.25x coverage of the program’s maximum authorization would cause a downgrade of the short-term rating.

**Credit Profile**

VU is a private comprehensive university located in Nashville, TN. The university consists of 10 schools and colleges, and had total enrollment of 12,587 in fall 2016. VU has an excellent academic reputation and a national draw, with approximately 92% of students coming from outside Tennessee and 68% from outside the Southeast region. VU recently reorganized, and the previously consolidated VUMC, which accounted for over two-thirds of the consolidated entity’s revenue base, became a separate legal entity.

**Demand Summary**

(Fall Semester of Fiscal Years Ended June 30)

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<td><strong>Headcount</strong></td>
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<tr>
<td>Undergraduate</td>
<td>6,796</td>
<td>6,835</td>
<td>6,851</td>
<td>6,883</td>
<td>6,871</td>
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<td>Graduate</td>
<td>5,914</td>
<td>5,922</td>
<td>5,835</td>
<td>5,684</td>
<td>5,716</td>
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<td><strong>Total Headcount Enrollment</strong></td>
<td>12,710</td>
<td>12,757</td>
<td>12,686</td>
<td>12,567</td>
<td>12,587</td>
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<tr>
<td>Total Undergraduate / Total Headcount Enrollment (%)</td>
<td>53.5%</td>
<td>53.6%</td>
<td>54.0%</td>
<td>54.8%</td>
<td>54.6%</td>
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<tr>
<td><strong>Full-Time Equivalent (FTE)</strong></td>
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<tr>
<td>Undergraduate</td>
<td>6,753</td>
<td>6,788</td>
<td>6,802</td>
<td>6,842</td>
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<tr>
<td>Graduate</td>
<td>5,418</td>
<td>5,441</td>
<td>5,341</td>
<td>5,218</td>
<td>5,250</td>
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<tr>
<td><strong>Total FTE Enrollment</strong></td>
<td>12,171</td>
<td>12,229</td>
<td>12,143</td>
<td>12,060</td>
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<td><strong>Admissions</strong></td>
<td></td>
<td></td>
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<tr>
<td>Freshman Applications</td>
<td>28,348</td>
<td>31,099</td>
<td>29,518</td>
<td>31,464</td>
<td>32,442</td>
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<td>Freshman Admissions</td>
<td>4,025</td>
<td>3,963</td>
<td>3,865</td>
<td>3,674</td>
<td>3,487</td>
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<td>Acceptance Rate (%)</td>
<td>14.2%</td>
<td>12.7%</td>
<td>13.1%</td>
<td>11.7%</td>
<td>10.7%</td>
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<td>Freshman Matriculants</td>
<td>1,610</td>
<td>1,613</td>
<td>1,605</td>
<td>1,607</td>
<td>1,601</td>
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<td>Matriculation Rate (%)</td>
<td>40.0%</td>
<td>40.7%</td>
<td>41.5%</td>
<td>43.7%</td>
<td>45.9%</td>
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<td>In-State Undergraduate Student (%)</td>
<td>13.0%</td>
<td>12.0%</td>
<td>10.0%</td>
<td>10.0%</td>
<td>8.0%</td>
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<tr>
<td>Out-of-State Undergraduate Student (%)</td>
<td>87.0%</td>
<td>88.0%</td>
<td>90.0%</td>
<td>90.0%</td>
<td>92.0%</td>
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<td><strong>Student Quality</strong></td>
<td></td>
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<tr>
<td>Average SAT (Freshmen)</td>
<td>1454</td>
<td>1466</td>
<td>1475</td>
<td>1485</td>
<td>1483</td>
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<tr>
<td>Freshmen to Sophomore Year Retention Rate (%)</td>
<td>96.0%</td>
<td>97.2%</td>
<td>96.8%</td>
<td>96.9%</td>
<td>97.1%</td>
</tr>
<tr>
<td>Six-Year Graduation Rate (%)</td>
<td>92.2%</td>
<td>92.5%</td>
<td>92.9%</td>
<td>92.0%</td>
<td>92.3%</td>
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<tr>
<td><strong>Annual Undergraduate Cost of Attendance ($ Gross)</strong></td>
<td></td>
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<tr>
<td>Tuition</td>
<td>41,088</td>
<td>41,928</td>
<td>42,768</td>
<td>43,620</td>
<td>44,496</td>
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<td>Mandatory Fees</td>
<td>1,030</td>
<td>1,050</td>
<td>1,070</td>
<td>1,092</td>
<td>1,114</td>
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<td>Room and Board</td>
<td>13,818</td>
<td>14,094</td>
<td>14,382</td>
<td>14,670</td>
<td>14,962</td>
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<tr>
<td><strong>Total</strong></td>
<td>55,936</td>
<td>57,072</td>
<td>58,220</td>
<td>59,382</td>
<td>60,572</td>
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</table>

Source: Vanderbilt University (TN) and Fitch.

**Reorganization Is Credit Positive**

In April 2016, VU transferred all assets and operations related to the medical center to VUMC, which is a separate legal entity neither controlled nor backstopped by VU. VU retained its medical school, nursing school, clinical master’s programs and all other medical educational/academic activities. In exchange for VU’s medical center assets and operations, VUMC paid VU $1.1 billion in cash, primarily from VUMC’s own debt proceeds, and other
consideration. VU used a portion of the proceeds to pay down approximately $850 million of debt.

The reorganization is a credit positive to VU, materially reducing both its leverage and exposure to operating risk from VUMC’s clinical enterprise. Under several permanent agreements, VUMC will continue to make payments to VU, accounting for about one-quarter of VU’s total operating revenue, well below the university’s pre-reorganization dependence on medical center activities for over two-thirds of operating revenue. In addition, continuing payments from VUMC are tied largely to infrastructure and central services provided by VU or to academic and research initiatives. Only about one-third of ongoing VUMC payments will directly reflect patient care revenues or VUMC’s overall operating performance.

Substantial Balance Sheet Resources

VU’s very strong financial profile is primarily supported by its improved and substantial level of balance sheet resources relative to debt and expenses. Available funds totaled $3.75 billion at June 30, 2016, covering operating expenses ($1.13 billion) by a very strong 3.3x and pro forma debt ($542 million, including operating leases and $100 million of new debt expected from the series 2016 bonds and near-term CP issuance) by a superior 6.9x, well in excess of ‘AA’ category peers rated by Fitch.

VU’s $3.80 billion endowment ($1.18 billion permanently restricted) provides consistent operating support through a sustainable spending policy. Like other institutions with large endowments, VU maintains significant (>50%) exposure to alternative and illiquid assets as part of its long-term investment strategy. However, a sophisticated investment management team, detailed oversight from the board and sound liquidity mitigate related risks.

Excellent Operating Profile

VU has a leading academic reputation evidenced by very strong student demand and highly ranked undergraduate and graduate/professional programs. Continued application growth, very selective admissions (about 11% for freshmen) and strong matriculation rates (46%) also demonstrate deep student demand.

About 55% of VU’s 12,587 students are undergraduates (mostly full time), and overall enrollment remains stable. VU has no plans for significant growth, focusing instead on academic quality. The average SAT score of incoming freshmen was 1483 for fall 2016, far exceeding the national average. A freshman-sophomore retention rate of 97% and a six-year graduation rate of 92% further indicate academic strength. Tuition discounting is nominally high at 43.5% in fiscal 2016, as VU has need-blind admissions and commits to meeting all demonstrated need. However, a large portion of institutional aid is funded from endowment support dedicated to student aid.

VU also benefits from a track record of fundraising to support operations, capital investment and endowment growth. Its last campaign concluded in 2011, raising $1.94 billion versus a goal of $1.75 billion. Gifts and pledges have averaged approximately $150 million annually over the past five years.

Solid Financial Performance

VU’s operating results are solid on a stand-alone basis, even though VUMC has been generally profitable. VU posted an adjusted operating margin of 5.6% in fiscal 2016, including endowment support, and management expects to generate 3%–5% operating margins going
forward. While VU and VUMC remained consolidated for the first 10 months of fiscal 2016, Fitch’s analysis is based on the fiscal 2016 audit showing activities as if the two entities had been separated for the entire year.

VU’s operating revenues are now more diverse, including net student fees (34.5%), grants and contracts (19.6%, reflecting significant research activity), and investment returns (10.1%, including endowment support and release of temporarily restricted net assets for operations). While healthcare exposure has declined significantly from over two-thirds prior to the reorganization, VU remains exposed to VUMC’s performance through contractual payments that make up about 24% of VU’s total operating revenue.

However, approximately two-thirds of ongoing payments from VUMC reflect reimbursement for specific infrastructure and central services provided by VU to VUMC, or VUMC’s contributions to support research and academic projects from which it benefits. These portions correspond to previously internal transfers that generally occurred pre-reorganization. Approximately one-third of ongoing payments will reflect new revenue to VU and will depend directly on patient care revenues and the overall performance of VUMC.

**Very Low Debt Burden**

VU’s debt burden will be dramatically lower since the university shed the majority of its debt in the reorganization. Pro forma MADS accounts for a very low 1.5% of fiscal 2016 operating revenues, and VU generated approximately 9.0x MADS coverage from operating cash flow. The series 2016 bonds will result in a level debt structure; all outstanding debt is either fixed rate or hedged by fixed-payor swaps.

Series 2016 new money will fund on-campus student housing, expanding VU’s residential college system to accommodate more upperclassmen. An additional $25 million of taxable CP issuance is expected to reimburse certain capital expenses for a recently completed academic project. Capital and debt needs over the next five years are limited and very manageable. VU will likely issue additional debt over the next five years for additional residential college student housing, but Fitch expects VU’s balance sheet ratios and debt metrics to remain generally steady over that period due to solid operating cash flow, continued debt amortization and strong fundraising.

**Liquidity Supports Short-Term Debt**

The ‘F1+’ rating is based on the availability of liquid resources, including cash, dedicated liquidity facilities and highly liquid, highly rated securities to cover the maximum liquidity demands presented by VU’s CP program. As of Sept. 30, 2016, VU maintained at least $1.16 billion of available liquid resources (discounted per Fitch’s criteria), sufficient to cover its maximum potential liquidity requirements of $200 million by more than 1.25x.

As part of the reorganization, VU lowered the maximum authorization for its taxable and tax-exempt CP program to $200 million from $675 million. To minimize potential calls on its liquidity, the university limits the amount of CP notes that can come due on a given day to $50 million and in a given week to $100 million. VU maintains up-to-date liquidation procedures detailing the process by which a need for internal liquidity would be managed.
## Financial Summary

**(2000, Audited Fiscal Years Ended June 30)**

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<tr>
<td><strong>Unrestricted Operating Revenues</strong></td>
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<tr>
<td>Gross Tuition and Fees</td>
<td>449,437</td>
<td>475,862</td>
<td>478,320</td>
<td>489,018</td>
<td>495,330</td>
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<td>Less: Student Aid</td>
<td>199,300</td>
<td>209,900</td>
<td>213,543</td>
<td>216,815</td>
<td>215,563</td>
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<td><strong>Net Tuition and Fees</strong></td>
<td><strong>250,137</strong></td>
<td><strong>265,962</strong></td>
<td><strong>264,777</strong></td>
<td><strong>272,203</strong></td>
<td><strong>279,767</strong></td>
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<td>Sales and Services of Auxiliary Enterprises</td>
<td>109,733</td>
<td>112,929</td>
<td>111,925</td>
<td>115,698</td>
<td>132,500</td>
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<td>Other Grants and Contracts</td>
<td>202,574</td>
<td>204,323</td>
<td>69,466</td>
<td>26,497</td>
<td>31,087</td>
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<td>Healthcare Operations</td>
<td>2,461,830</td>
<td>2,394,341</td>
<td>2,608,475</td>
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<td>Gifts and Contributions</td>
<td>25,861</td>
<td>37,940</td>
<td>38,182</td>
<td>18,646</td>
<td>17,418</td>
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<td>Dividend and Interest Income</td>
<td>19,831</td>
<td>19,675</td>
<td>18,264</td>
<td>12,274</td>
<td>15,685</td>
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<td>Net Assets Released from Restrictions for Operations</td>
<td>21,459</td>
<td>14,322</td>
<td>10,202</td>
<td>69,428</td>
<td>86,394</td>
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<td>Affiliated Entity and TML Revenue</td>
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<td></td>
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<td>297,404</td>
<td>262,524</td>
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<td>Other Operating Revenue</td>
<td>39,068</td>
<td>53,285</td>
<td>63,483</td>
<td>31,635</td>
<td>62,520</td>
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<td><strong>Total Unrestricted Operating Revenue</strong></td>
<td><strong>3,528,048</strong></td>
<td><strong>3,480,616</strong></td>
<td><strong>3,683,457</strong></td>
<td><strong>1,049,155</strong></td>
<td><strong>1,091,301</strong></td>
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<td>Unrealized and Realized Gains Portion of Endowment Payout</td>
<td>136,883</td>
<td>144,801</td>
<td>149,905</td>
<td>86,369</td>
<td>105,152</td>
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<td><strong>Adjusted Total Unrestricted Operating Revenue</strong></td>
<td><strong>3,664,931</strong></td>
<td><strong>3,625,417</strong></td>
<td><strong>3,833,362</strong></td>
<td><strong>1,135,524</strong></td>
<td><strong>1,196,433</strong></td>
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<td><strong>Unrestricted Operating Expenses</strong></td>
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<td>Instruction</td>
<td>457,642</td>
<td>467,098</td>
<td>471,379</td>
<td>316,781</td>
<td>330,614</td>
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<td>Academic Support</td>
<td>139,420</td>
<td>149,007</td>
<td>129,590</td>
<td>103,358</td>
<td>104,852</td>
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<td>Institutional Support</td>
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<td>174,919</td>
<td>174,031</td>
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<td>Student Services</td>
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<td>120,456</td>
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<td>41,298</td>
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<td>Research</td>
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<td>Auxiliary Enterprises</td>
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<td>112,374</td>
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<td>Healthcare Operations</td>
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<td>2,269,107</td>
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<tr>
<td>Depreciation</td>
<td>172,718</td>
<td>174,330</td>
<td>175,779</td>
<td>74,478</td>
<td>76,909</td>
</tr>
<tr>
<td>Interest Expense</td>
<td>67,977</td>
<td>68,108</td>
<td>65,478</td>
<td>16,769</td>
<td>14,839</td>
</tr>
<tr>
<td><strong>Total Unrestricted Operating Expense</strong></td>
<td><strong>3,507,400</strong></td>
<td><strong>3,669,100</strong></td>
<td><strong>3,754,481</strong></td>
<td><strong>1,113,538</strong></td>
<td><strong>1,129,553</strong></td>
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<tr>
<td>Change in Unrestricted Net Assets from Operations</td>
<td>20,648</td>
<td>(188,484)</td>
<td>(71,024)</td>
<td>(64,383)</td>
<td>(38,252)</td>
</tr>
<tr>
<td><strong>Adjusted Change in Unrestricted Net Assets from Operations</strong></td>
<td><strong>157,531</strong></td>
<td><strong>43,683</strong></td>
<td><strong>78,881</strong></td>
<td><strong>21,986</strong></td>
<td><strong>66,880</strong></td>
</tr>
<tr>
<td>Unrestricted Non-Operating Revenues/(Expenses)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Net Assets Released from Restrictions for Capital Purposes</td>
<td>24,210</td>
<td>49,262</td>
<td>6,405</td>
<td>17,153</td>
<td>7,827</td>
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<td>Realized and Unrealized Gain/(Loss) on Investments</td>
<td>(33,047)</td>
<td>101,400</td>
<td>155,686</td>
<td>(12,441)</td>
<td>(177,618)</td>
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<tr>
<td>Changes in FMV of Derivatives</td>
<td>(180,551)</td>
<td>106,844</td>
<td>6,352</td>
<td>(27,728)</td>
<td>(41,408)</td>
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<tr>
<td>Capital Grants and Gifts</td>
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<td>3,757</td>
<td>3,235</td>
<td>2,714</td>
<td>3,213</td>
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<td>Income/(Loss) on Discontinued Operations</td>
<td></td>
<td></td>
<td></td>
<td>143,990</td>
<td>(132,307)</td>
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<tr>
<td>Other Non-Operating Expenses</td>
<td>(11,414)</td>
<td>(8,934)</td>
<td>(42,563)</td>
<td>(46,848)</td>
<td>(107,197)</td>
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<tr>
<td><strong>Total Unrestricted Non-Operating Revenue/(Expense)</strong></td>
<td><strong>198,989</strong></td>
<td><strong>254,329</strong></td>
<td><strong>129,115</strong></td>
<td><strong>76,840</strong></td>
<td><strong>447,490</strong></td>
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<td>Change in Unrestricted Net Assets</td>
<td>(41,458)</td>
<td>210,646</td>
<td>207,996</td>
<td>98,826</td>
<td>(380,610)</td>
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<tr>
<td><strong>Adjusted Change in Unrestricted Net Assets from Operations</strong></td>
<td><strong>157,531</strong></td>
<td><strong>43,683</strong></td>
<td><strong>78,881</strong></td>
<td><strong>21,986</strong></td>
<td><strong>66,880</strong></td>
</tr>
<tr>
<td>Add Back: Depreciation, Amortization and Other Non-Cash Items</td>
<td>172,718</td>
<td>174,330</td>
<td>175,779</td>
<td>74,478</td>
<td>76,909</td>
</tr>
<tr>
<td>Add Back: Interest Expense</td>
<td>67,977</td>
<td>68,108</td>
<td>65,478</td>
<td>16,769</td>
<td>14,839</td>
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<tr>
<td><strong>Adjusted Net Income Available for Debt Service</strong></td>
<td><strong>398,226</strong></td>
<td><strong>198,755</strong></td>
<td><strong>320,138</strong></td>
<td><strong>113,233</strong></td>
<td><strong>158,628</strong></td>
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<td>Current Debt Service</td>
<td>93,052</td>
<td>101,298</td>
<td>114,786</td>
<td>105,617</td>
<td>111,970</td>
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<td>Pro Forma Maximum Annual Debt Service (MADS)</td>
<td>380,435</td>
<td>380,435</td>
<td>380,435</td>
<td>17,556</td>
<td>17,556</td>
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<td>MADS Fiscal Year</td>
<td>2019</td>
<td>2019</td>
<td>2019</td>
<td>2030</td>
<td>2030</td>
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<tr>
<td>Pro Forma Average Annual Debt Service (AADS)</td>
<td>64,189</td>
<td>64,189</td>
<td>64,189</td>
<td>14,085</td>
<td>14,085</td>
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</table>

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Source: Vanderbilt University (TN) and Fitch.
### Financial Summary (continued)

($000, Audited Fiscal Years Ended June 30)

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<tr>
<th></th>
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<tbody>
<tr>
<td><strong>Balance Sheet</strong></td>
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<td></td>
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<tr>
<td><strong>Assets</strong></td>
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<tr>
<td>Cash and Cash Equivalents</td>
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<td>845,472</td>
<td>1,244,720</td>
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<td>963,001</td>
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<td>Investments</td>
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<td>4,141,408</td>
<td>4,179,606</td>
<td>4,500,040</td>
<td>4,073,287</td>
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<tr>
<td><strong>Total Cash and Investments</strong></td>
<td><strong>4,784,433</strong></td>
<td><strong>4,986,880</strong></td>
<td><strong>5,424,326</strong></td>
<td><strong>5,367,021</strong></td>
<td><strong>5,036,288</strong></td>
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<td>% Total Investments Classified as Alternative Assets Per Audit</td>
<td>72</td>
<td>70</td>
<td>62</td>
<td>61</td>
<td>56</td>
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<tr>
<td>Property, Plant and Equipment, Net</td>
<td>1,727,611</td>
<td>1,781,293</td>
<td>1,765,244</td>
<td>881,487</td>
<td>943,984</td>
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<td><strong>Liabilities</strong></td>
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<td>Fixed-Rate Bonds Payable</td>
<td>850,625</td>
<td>970,590</td>
<td>932,125</td>
<td>891,885</td>
<td>180,220</td>
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<td>Hedged Variable-Rate Bonds Payable</td>
<td>255,300</td>
<td>134,000</td>
<td>134,000</td>
<td>67,000</td>
<td>34,230</td>
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<td><strong>Total Bonds Payable</strong></td>
<td><strong>1,105,925</strong></td>
<td><strong>1,104,590</strong></td>
<td><strong>1,066,125</strong></td>
<td><strong>958,885</strong></td>
<td><strong>214,450</strong></td>
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<td>Notes Payable</td>
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<td>—</td>
<td>—</td>
<td>—</td>
<td>1,000</td>
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<tr>
<td>Capital Leases</td>
<td>1,989</td>
<td>527</td>
<td>29</td>
<td>—</td>
<td>—</td>
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<tr>
<td>Non-Cancellable Operating Leases</td>
<td>173,967</td>
<td>191,333</td>
<td>225,567</td>
<td>329,027</td>
<td>134,149</td>
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<tr>
<td>Commercial Paper</td>
<td>264,075</td>
<td>214,011</td>
<td>209,845</td>
<td>263,454</td>
<td>84,530</td>
</tr>
<tr>
<td>Other Obligations</td>
<td>9,115</td>
<td>22,341</td>
<td>17,131</td>
<td>12,530</td>
<td>8,305</td>
</tr>
<tr>
<td><strong>Total Long-Term Debt</strong></td>
<td><strong>1,555,071</strong></td>
<td><strong>1,532,802</strong></td>
<td><strong>1,518,697</strong></td>
<td><strong>1,563,896</strong></td>
<td><strong>442,434</strong></td>
</tr>
<tr>
<td>Total Pro Forma Debt</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A.</td>
<td>542,434</td>
</tr>
<tr>
<td>Unfunded Capital Commitments</td>
<td>632,800</td>
<td>555,300</td>
<td>530,300</td>
<td>472,100</td>
<td>552,700</td>
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<tr>
<td><strong>Net Assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unrestricted Net Assets</td>
<td>2,761,188</td>
<td>2,971,834</td>
<td>3,179,830</td>
<td>3,278,656</td>
<td>2,898,046</td>
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<tr>
<td>Temporarily Restricted Net Assets</td>
<td>1,191,216</td>
<td>1,235,068</td>
<td>1,467,482</td>
<td>1,461,162</td>
<td>1,224,134</td>
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<tr>
<td>Permanently Restricted Net Assets</td>
<td>1,067,144</td>
<td>1,132,419</td>
<td>1,196,434</td>
<td>1,235,191</td>
<td>1,283,567</td>
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<tr>
<td><strong>Total Net Assets</strong></td>
<td><strong>5,019,548</strong></td>
<td><strong>5,339,319</strong></td>
<td><strong>5,843,746</strong></td>
<td><strong>5,975,009</strong></td>
<td><strong>5,405,747</strong></td>
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<tr>
<td><strong>Balance Sheet Resources and Liquidity</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Available Funds (AF)</td>
<td>3,717,289</td>
<td>3,854,461</td>
<td>4,227,892</td>
<td>4,131,830</td>
<td>3,752,721</td>
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<td>Adjusted Available Funds (AAF)</td>
<td>1,705,636</td>
<td>1,758,399</td>
<td>2,384,888</td>
<td>2,146,802</td>
<td>2,185,735</td>
</tr>
</tbody>
</table>

**Notes:** Fitch may have reclassified certain financial statement items for analytical purposes. N.A. – Not available. Fiscal years 2015 and 2016 statements are restated to reflect separation of VU and VUMC effective April 29, 2016.

Source: Vanderbilt University (TN) and Fitch.
## Financial Ratios
(Audited Fiscal Years Ended June 30)

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue Diversity (% Adjusted Total Unrestricted Operating Revenues)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Student Fees (Tuition and Auxiliary Revenues)</td>
<td>9.8</td>
<td>10.5</td>
<td>9.8</td>
<td>34.2</td>
<td>34.5</td>
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<tr>
<td>Total Grants and Contracts</td>
<td>16.4</td>
<td>16.1</td>
<td>14.8</td>
<td>20.4</td>
<td>19.6</td>
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<tr>
<td>Healthcare Operations</td>
<td>67.2</td>
<td>66.0</td>
<td>68.1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Gifts and Contributions</td>
<td>0.7</td>
<td>1.1</td>
<td>1.0</td>
<td>1.6</td>
<td>1.5</td>
</tr>
<tr>
<td>Total Investment Return</td>
<td>4.3</td>
<td>4.5</td>
<td>4.4</td>
<td>8.7</td>
<td>10.1</td>
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<tr>
<td>Net Assets Released From Restrictions for Operations</td>
<td>0.6</td>
<td>0.4</td>
<td>0.3</td>
<td>6.1</td>
<td>7.2</td>
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<td><strong>Expense Ratios (% Total Unrestricted Operating Expenses)</strong></td>
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<tr>
<td>Instruction</td>
<td>13.1</td>
<td>12.7</td>
<td>12.6</td>
<td>28.5</td>
<td>29.3</td>
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<td>11.3</td>
<td>10.8</td>
<td>14.8</td>
<td>14.3</td>
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<tr>
<td>Healthcare Operations</td>
<td>58.8</td>
<td>60.1</td>
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<td>0.0</td>
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<td><strong>Financial Aid Ratios</strong></td>
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<tr>
<td>Tuition Discounting (%)</td>
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<td>44.1</td>
<td>44.6</td>
<td>44.3</td>
<td>43.5</td>
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<td>Net Tuition and Fees ($000)</td>
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<td>265,962</td>
<td>264,777</td>
<td>272,203</td>
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<td>6.3</td>
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<td>2.8</td>
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<td><strong>Operating Performance Ratios (%)</strong></td>
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<tr>
<td>Operating Margin</td>
<td>0.6</td>
<td>(5.4)</td>
<td>(1.9)</td>
<td>(6.1)</td>
<td>(3.5)</td>
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<td>Adjusted Operating Margin</td>
<td>4.3</td>
<td>(1.2)</td>
<td>2.1</td>
<td>1.9</td>
<td>5.6</td>
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<td><strong>Balance Sheet Ratios</strong></td>
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<td></td>
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</tr>
<tr>
<td>Available Funds / Total Unrestricted Operating Expense (%)</td>
<td>105.98</td>
<td>105.05</td>
<td>112.61</td>
<td>371.05</td>
<td>332.23</td>
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<tr>
<td>Available Funds / Total Long-Term Debt (%)</td>
<td>239.0</td>
<td>251.5</td>
<td>278.4</td>
<td>264.2</td>
<td>848.2</td>
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<td>Available Funds / Total Pro Forma Long-Term Debt (%)</td>
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<td>N.A.</td>
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<td>N.A.</td>
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<td>Available Funds / MADS (x)</td>
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<td>10.1</td>
<td>11.1</td>
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<td>Adjusted Available Funds / Total Unrestricted Operating Expense (%)</td>
<td>48.6</td>
<td>47.9</td>
<td>63.5</td>
<td>192.8</td>
<td>193.5</td>
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<tr>
<td>Adjusted Available Funds / Total Long-Term Debt (%)</td>
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<td>114.7</td>
<td>157.0</td>
<td>137.3</td>
<td>494.0</td>
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<tr>
<td>Adjusted Available Funds / Total Pro Forma Long-Term Debt (%)</td>
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<td>N.A.</td>
<td>N.A.</td>
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<td>Adjusted Available Funds / MADS (x)</td>
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<td>4.6</td>
<td>6.3</td>
<td>122.3</td>
<td>124.5</td>
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<tr>
<td>Unfunded Capital Commitments / Available Funds (%)</td>
<td>17.0</td>
<td>14.4</td>
<td>12.5</td>
<td>11.4</td>
<td>14.7</td>
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<tr>
<td>Unfunded Capital Commitments / Adjusted Available Funds (%)</td>
<td>37.1</td>
<td>31.6</td>
<td>22.2</td>
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<td>25.3</td>
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<td><strong>Leverage Ratios</strong></td>
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<tr>
<td>Current Debt Service Coverage (x)</td>
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<td>1.4</td>
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<tr>
<td>Current Debt Burden (%)</td>
<td>2.5</td>
<td>2.8</td>
<td>3.0</td>
<td>9.3</td>
<td>9.4</td>
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<td>Pro Forma MADS Coverage (x)</td>
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<td>Pro Forma MADS Burden (%)</td>
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<td>10.5</td>
<td>9.9</td>
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<td>Pro Forma AADS Coverage (x)</td>
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<td>Pro Forma AADS Burden (%)</td>
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<td>1.7</td>
<td>1.2</td>
<td>1.2</td>
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<td>Variable-Rate Bonds as % of Total Bonds</td>
<td>23.1</td>
<td>12.1</td>
<td>12.6</td>
<td>7.0</td>
<td>16.0</td>
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Source: Vanderbilt University (TN) and Fitch.
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