University of Kentucky

New Issue – Moody’s Assigns Aa2 to University of Kentucky’s Series 2017A&B; Outlook Stable

Summary Rating Rationale

Moody’s Investors Service has assigned a Aa2 to the University of Kentucky’s (UK) proposed fixed rate $38 million Series 2017A (maturing fiscal 2023) and 2017B (maturing fiscal 2025) General Receipts Refunding bonds. We also affirmed the Aa2 on parity bonds and Aa3 on the Agency Fund Revenue Refunding Bonds, Project No. 102, Series A and Taxable Series B. The outlook is stable.

The Aa2 rating reflects UK’s large scope of operations as the flagship university for the Commonwealth of Kentucky (Aa2 stable), with healthy enrollment and net tuition revenue growth, combined with improved student geographic diversification. Favorably, the rating also incorporates solid cash flow, from both the university and its highly integrated academic medical center, to support rising debt service. Leverage is also modest relative to peers. Offsetting challenges include exposure to more volatile healthcare revenue growth, combined with decreased operating appropriation support as the state addresses budgetary balance and a large unfunded pension obligation.

Exhibit 1

Patient Care Is Largest Share of University of Kentucky’s Operating Revenue

Percentage of Moody’s Adjusted Fiscal 2016 Operating Revenues

*Other Sources include gifts, investment income, other, and tax revenue.

Source: Moody’s Investors Service
Credit Strengths

» Kentucky’s flagship, research-intensive university and member of SEC athletics, with fall 2016 enrollment of nearly 30,000 full-time equivalent (FTE) students

» Consistently good operating cash flow (fiscal 2016, 12% margin), driven by sound fiscal management, and profitable, highly integrated healthcare

» Good growth of net tuition revenue, up 29% from fiscal 2012-16, driven by student growth and increased out-of-state enrollment

» Robust increase in spendable cash and investments to $1.8 billion as of FY 2016, due to strong fundraising and favorable operating performance

» Leverage position remains manageable, with no direct exposure to defined benefit pension plan

Credit Challenges

» Heavy reliance on health care for more than half of operating revenue (54%); high Medicaid payor mix exposes operating performance to regulatory and reimbursement changes

» Ongoing capital needs ($240 million new debt expected in fiscal years 2017-18) with debt issuance constrained by commonwealth approval, contributing to use of public-private partnerships

» Flat to decreasing support from Kentucky, as the state grapples with budgetary balances and large pension obligation

Rating Outlook

The stable outlook reflects our expectation that operations will remain positive and that future borrowing will be manageable given careful strategic planning and amortization of existing bonds.

Factors that Could Lead to an Upgrade

» Further improvement in financial reserves relative to debt and operations

» Significant strengthening of UK’s brand and geographic reach

Factors that Could Lead to a Downgrade

» Sustained deterioration of the operating performance of UK HealthCare, particularly if resulting in liquidity reduction

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

<table>
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<tbody>
<tr>
<td>Total FTE Enrollment</td>
<td>27,545</td>
<td>28,112</td>
<td>28,815</td>
<td>29,351</td>
<td>29,441</td>
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<tr>
<td>Operating Revenue ($000)</td>
<td>2,407,459</td>
<td>2,439,620</td>
<td>2,564,849</td>
<td>2,898,178</td>
<td>3,071,463</td>
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<tr>
<td>Annual Change in Operating Revenue (%)</td>
<td>4.9</td>
<td>1.3</td>
<td>5.1</td>
<td>13.0</td>
<td>6.0</td>
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<tr>
<td>Total Cash &amp; Investments ($000)</td>
<td>1,423,226</td>
<td>1,665,656</td>
<td>1,939,731</td>
<td>2,218,385</td>
<td>2,426,973</td>
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<td>Total Debt ($000)</td>
<td>679,422</td>
<td>647,790</td>
<td>830,579</td>
<td>930,444</td>
<td>1,043,655</td>
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<td>Spendable Cash &amp; Investments to Total Debt (%)</td>
<td>1.3</td>
<td>1.7</td>
<td>1.6</td>
<td>1.8</td>
<td>1.7</td>
</tr>
<tr>
<td>Spendable Cash &amp; Investments to Operating Expenses (%)</td>
<td>0.4</td>
<td>0.5</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
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<tr>
<td>Monthly Days Cash on Hand (x)</td>
<td>106</td>
<td>134</td>
<td>149</td>
<td>177</td>
<td>175</td>
</tr>
<tr>
<td>Operating Cash Flow Margin (%)</td>
<td>8.9</td>
<td>11.1</td>
<td>11.6</td>
<td>15.7</td>
<td>12.0</td>
</tr>
<tr>
<td>Total Debt to Cash Flow (%)</td>
<td>3.2</td>
<td>2.4</td>
<td>2.8</td>
<td>2.0</td>
<td>2.8</td>
</tr>
<tr>
<td>Annual Debt Service Coverage (%)</td>
<td>2.4</td>
<td>3.2</td>
<td>3.7</td>
<td>5.9</td>
<td>4.7</td>
</tr>
</tbody>
</table>

FTE enrollment for fall semester.

Source: Moody’s Investors Service

### Recent Developments

Incorporated in Detailed Rating Considerations.

### Detailed Rating Considerations

#### Market Profile: Growing Brand Recognition Bolsters Enrollment Growth

The university’s position as the Commonwealth of Kentucky’s flagship and land-grant university, with an academic medical center and sizeable research activity, support long-term student demand. Improved out of state enrollment (38% of fall 2016 freshman compared to 30% in fall 2013) highlight the university’s growing brand recognition, and favorably mitigate weak regional demographics and commonwealth limitations on in-state undergraduate tuition increases. Total fall 2016 FTE enrollment of 29,441 was up 7% over fall 2012.

Healthcare education, including a college of medicine and clinical research, are key components of UK’s academic profile and are enhanced by UK HealthCare (UKH). UKH operates two hospitals in Lexington (Chandler, including the Kentucky Children’s Hospital, and Good Samaritan) which have a combined 901 licensed beds and a network of outpatient sites and clinics. Mitigating UK’s healthcare exposure is UKH’s leading market share.

UK HealthCare continues to demonstrate strong growth. Total admissions and observations in FY 2016 of 46,151 were up 16% over FY 2012. Outpatient visits across the health system have also grown materially; outpatient visits of 501,943 are up 40% over FY 2012. FY 2016 reported hospital occupancy was 82.5%. A rising case mix index (2.00 in FY 2016, up from 1.78 in FY 2012 for Chandler Hospital) demonstrates UKHs progress in its goal to become an essential tertiary and quaternary provider in Kentucky.

UK has a moderate research enterprise for a university of its size, particularly with such a large healthcare component. In FY 2016, research expenses totaled $256 million or 9% of operating expenses. Research funding is relatively diverse compared to peers, due to its established schools for healthcare, engineering, and agriculture. Research funding will continue to remain pressured as the university competes for a nearly stagnant pool of federal funding. Favorably, construction is underway for a new $265 million research building for which the state has funded $132.5 million of the Phase I cost of $165 million. The balance will be funded with institutional sources (federal, private and agency funds). The additional space is important to establish new research activity.
Operating Performance: Stable Margins From Both University and UKH Operations; Vulnerabilities to Healthcare and State Cuts

UK’s prudent budgeting practices, combined with solid healthcare operations, will support continued cash flow margins above 10% per year. Revenue increases are derived from robust growth in net tuition revenue, 29% over fiscal 2012-16 period, and patient care revenue, 46% over the same time frame. Operating cash flow margins averaging 11-12% annually are providing strong debt service coverage of over 3 times.

Revenue diversity is limited by the considerable 54% revenue reliance on patient care revenue (Exhibit 1). UKH continues to strategically partner with rural Kentucky hospitals, adding specialty physicians to bolster its position as a leading healthcare provider in the state. Operating performance in fiscal 2016 (roughly 6% operating margin) was more in line with years prior to FY 2015 (FY 2015 of 14%, FY 2012-14 average of 3.5%), due to higher acuity revenue growth, offset by rising costs associated with physician recruitment, nursing shortages and pharmaceuticals. Bottom line favorable operating performance is attributable to solid patient volume growth, higher acuity cases, and lower bad debt charity care. Increased Medicaid reliance (31% of gross revenue) reflects a shift from charity care and bad debt related to the 2014 expansion of the Kentucky Medicaid program under the Affordable Care Act (ACA).

UK continues to experience ongoing cuts to its biennial appropriations since 2009. There is no expectation for a rebound over the next several years as the state attempts to balance its budget and grapple with a large unfunded pension liability. UK’s appropriations in FY 2017 and expected for FY 2018 of $267 million are down 4.5% from FY 2016 and down a total 10% since fiscal 2012. Performance funding will be implemented beginning in FY 2018. Funding of $42.9 million, derived from university operating budgets (except Kentucky State University) will be allocated based on achievement of selected performance goals and metrics.

Wealth And Liquidity: Retained Operating Cash Flow and Strong Fundraising Bolster Reserves

UK’s total cash and investments will continue to rise due to retained operating cash flow and ongoing philanthropic success. Total cash and investments of $2.4 billion at FYE 2016 are up 70% over FY 2012 and provide flexibility for investment in strategic priorities going forward. Spendable cash and investments of $1.8 billion at FY-end 2016 were 0.6 times expenses, nearly on par with the Aa2 median of 0.7 times.

Over time, we expect UK’s reserves to grow as the system prepares for a comprehensive capital campaign. The FY 2016, UK reported gift revenue of $307 million was up from $140 million in FY 2012, reflecting investment in advancement infrastructure.

The university’s endowment of $1.2 billion endowment at FY-end 2016 was down 1.5% for the one year period, reflecting the challenging capital markets. Improved market conditions for the first four months of FY 2017 brought returns of 2.0% through October 31, 2016. The UK Board of Trustees Investment Committee, treasurer, and a chief investment officer oversee the endowment, with an external investment consultant.

LIQUIDITY

Given limited calls on liquidity from its all fixed rate debt structure, relatively low investment leverage, and healthy operations, UK has a good liquidity position. Monthly liquidity of $1.3 billion at fiscal year-end 2016 translates to 175 monthly days cash on hand. Improvement in UKH’s days cash on hand to 203 days in fiscal 2016 from 95 days in fiscal 2012, bolsters overall liquidity.

Leverage: Moderate Leverage Due to Growing Reserves and Use of Capital Funding Partnerships; No Exposure to a DB Pension Plan

The university’s leverage will remain manageable as future debt plans moderate following multiple years of sizeable capital investments. Though debt has increased 54% over the last four years, from $679 million in 2012 to $1 billion in 2016, concurrent strong increases in cash and investments have mitigated rising debt burden. Debt to operating revenue of 0.3 times and spendable cash and investments to debt of 1.7 times remain stronger than the Aa2 medians of 0.6 times and 1.4 times, respectively.
UK is facing modernization needs within the core of its campus and will rely on recent state authorized debt financings to cover construction costs. UK has also been authorized by the state for up to a total of $240 million in new debt. The university anticipates issuing the debt at multiple times to preserve its authorization, remaining strategic in its use. Authorizations have been received for: a $30 million bridge financing for construction of the UK College of Law (the state will be providing $35 million of the $65 million law school building cost); $60 million for modernization and deferred maintenance of core campus facilities; and $150 million for renovation and upgrade of healthcare facilities. Issuances are expected to be staggered over the 2017 and 2018 calendar years, allowing for manageable leverage and debt burden support.

UK continues to expand its partnerships for housing and dining services with private entities, while limiting its direct financial obligation to these projects.

The university has had a partnership with a housing developer, Education Reality Trust (EdR), to replace and expand its campus student housing since 2012. EdR is currently building housing at a third campus location. Total beds to date of 5,733 beds are 80% of UK’s overall housing stock, and will rise to 84% of overall beds (6,850 beds) once the 771-bed University Flats and 346-bed Lewis Hall come on line in fall 2017. The university receives annual ground rent payments from the developer and the projects revert to the university at the end of 75 years, assuming renewals at years 50 and 65.

The university’s partnership with Aramark for dining services and facility investments ($250 million total) is under a 15 year contract, with annual dining commissions paid to UK. Aramark built a comprehensive new dining facility, with additional classroom space and a state of the art emergency operations center, that opened in FY 2016.

If the EdR housing project cost, currently at $449 million inclusive of current project underway were included in the university’s leverage profile, debt to revenues would rise to 0.5 times, compared with the current 0.3 times and Aa2-median of 0.6 times.

The strategic importance of the housing/dining facilities and reputational risk create strong incentives for involvement should the projects not perform as expected. Currently, the housing projects are performing well, with 99% occupancy as of fall 2016, and helping to enhance UK’s brand.

DEBT STRUCTURE
UK’s conservative debt structure of all amortizing debt provides predictability in annual debt service payments and creates debt capacity as principal is reduced each year.

DEBT-RELATED DERIVATIVES
None
PENSIONS AND OPEB
The university has relatively modest contingent liabilities compared to peers as it does not participate in a defined benefit pension plan and has modest expenses associated with retirement healthcare benefits. For FY 2016, UK contributed $23.7 million for post-employment benefits, which was less than 1% of operating expenses.

Governance and Management: Excellent Strategic Positioning Reflects Cohesive University and Healthcare Activity
UK’s excellent strategic positioning reflects management’s demonstrated ability to implement a significant campus and healthcare transformation, bolstering brand, recognition and reputation. Management of both standalone university and healthcare operations work synchronously to position UK for ongoing growth, in research partnerships and philanthropic support. Though healthcare issues in Kentucky and nationally will continue to remain a challenge, UKH’s strategy to providing tertiary and quaternary care in the state, with strong affiliations in its service area, underlies its competitive strengths.

Heighted scrutiny of board governance at all Kentucky public education institutions is on the slate of the bills currently being reviewed by the new legislative session. The bill would permit the governor to appoint or replace board members to comply with statutory requirements or if board members are unable to perform duties.

Legal Security
UK’s general receipts bonds are secured by student tuition and fees, housing and dining revenues, hospital revenues (excluding professional clinical fees), state operating appropriations, non-restricted gifts and non-governmental grants and contracts, investment income indirect cost recoveries from research activity, and Department of Intercollegiate Athletics revenues. FY 2016 pledged revenues of $2.3 billion cover maximum annual debt service of $111 million by 20 times.

The university’s bonds benefit from the presence of a state intercept program. If the university fails to make debt service payments 10 days in advance of the debt service payment date, the Secretary of the Finance and Administration Cabinet of the Commonwealth is obligated to use any funds that have been appropriated to the university but not yet expended to make debt service payments.

Use of Proceeds
Bonds proceeds will be used to refund all or portions of the Series 2006A and 2010A bonds, and pay costs of issuance.

Obligor Profile
The University of Kentucky is the flagship and land-grant public higher education institution for the Commonwealth of Kentucky, and includes UK HealthCare and the associated academic medical center and clinics. The university and the UK HealthCare hospitals are located in Lexington. In FY 2016, the university recorded operating revenue of $3.1 billion and enrolled a fall 2016 FTE of 29,441 students.

Methodology
The principal methodology used in this rating was Global Higher Education published in November 2015. An additional methodology used in rating the agency fund bonds was Lease, Appropriation, Moral Obligation and Comparable Debt of US State and Local Governments published in July 2016. Please see the Credit Policy page on www.moodys.com for a copy of these methodologies.
Ratings

Exhibit 4

UNIVERSITY OF KENTUCKY, KY

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Source: Moody’s Investors Service
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