Indiana University, IN
Update to credit analysis

Summary
Indiana University’s (IU, Aaa stable) excellent credit profile reflects its ample balance sheet reserves and liquidity, funding from the Aaa-rated State of Indiana for operations and debt service related to the fee-replaced student fee bonds as well as strong student demand and research activities. The credit strength is tempered by expected constrained revenue growth with only moderate operating cash flow margins, and ongoing capital needs and associated debt issuance.

Exhibit 1
Low leverage with state debt service funding for fee-replaced debt

Source: Moody’s Investors Service
Credit strengths

» Strong student and national research market positions
» Manageable leverage, with debt-to-cash flow of 3.0x and approximately one-third of total debt receiving state funding for debt service
» Ample balance sheet reserves and monthly unrestricted liquidity at $1.6 billion or 210 monthly days cash on hand
» Favorable management and governance, including active operating oversight, strategic focus on academic and research missions and balance sheet reserve growth

Credit challenges

» Constrained revenue growth leading to moderating operating cash flow margins
» High competition for sponsored research funding
» Ongoing capital needs for the multi-campus university will lead to additional debt issuance

Rating outlook
The stable outlook reflects expectations of strong student demand and research activity, adequate operating cash flow, ample liquidity and moderate additional debt. The outlook also incorporates the ongoing state fee-replacement appropriations supporting a significant proportion of IU's debt.

Factors that could lead to an upgrade

» Not applicable

Factors that could lead to a downgrade

» Further protracted reduction in operating cash flow generation
» Significant increase in leverage or reduction in either the state's reimbursement of debt service or share of total debt paid by the state

Key indicators

Exhibit 2
INDIANA UNIVERSITY, IN

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<tbody>
<tr>
<td>Total FTE Enrollment</td>
<td>80,912</td>
<td>81,578</td>
<td>81,302</td>
<td>82,093</td>
<td>82,127</td>
<td>82,127</td>
<td>56,725</td>
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<tr>
<td>Operating Revenue ($000)</td>
<td>2,794,909</td>
<td>2,888,904</td>
<td>2,923,819</td>
<td>2,968,866</td>
<td>3,066,114</td>
<td>3,066,114</td>
<td>3,712,137</td>
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<tr>
<td>Annual Change in Operating Revenue (%)</td>
<td>3.1</td>
<td>3.4</td>
<td>1.2</td>
<td>1.5</td>
<td>3.3</td>
<td>3.3</td>
<td>4.5</td>
</tr>
<tr>
<td>Total Cash &amp; Investments ($000)</td>
<td>3,843,450</td>
<td>4,248,316</td>
<td>4,028,897</td>
<td>3,919,918</td>
<td>4,113,946</td>
<td>4,113,946</td>
<td>6,517,200</td>
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<tr>
<td>Total Debt ($000)</td>
<td>943,387</td>
<td>893,573</td>
<td>979,966</td>
<td>940,095</td>
<td>984,741</td>
<td>1,064,605</td>
<td>1,820,133</td>
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<tr>
<td>Spendable Cash &amp; Investments to Total Debt (%)</td>
<td>3.0</td>
<td>3.3</td>
<td>2.8</td>
<td>2.9</td>
<td>2.8</td>
<td>2.6</td>
<td>2.5</td>
</tr>
<tr>
<td>Spendable Cash &amp; Investments to Operating Expenses (%)</td>
<td>1.1</td>
<td>1.1</td>
<td>1.0</td>
<td>1.0</td>
<td>0.9</td>
<td>0.9</td>
<td>1.3</td>
</tr>
<tr>
<td>Monthly Days Cash on Hand (%)</td>
<td>240</td>
<td>240</td>
<td>240</td>
<td>236</td>
<td>210</td>
<td>210</td>
<td>211</td>
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<tr>
<td>Operating Cash Flow Margin (%)</td>
<td>13.5</td>
<td>11.6</td>
<td>11.5</td>
<td>11.0</td>
<td>9.7</td>
<td>9.7</td>
<td>13.4</td>
</tr>
<tr>
<td>Total Debt to Cash Flow (%)</td>
<td>2.5</td>
<td>2.7</td>
<td>2.9</td>
<td>2.9</td>
<td>3.3</td>
<td>3.6</td>
<td>3.5</td>
</tr>
<tr>
<td>Annual Debt Service Coverage (%)</td>
<td>4.6</td>
<td>3.6</td>
<td>3.5</td>
<td>3.2</td>
<td>3.0</td>
<td>3.0</td>
<td>3.7</td>
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2017 Sensitivity includes full $125M CP and fiscal 2018 principal payments
Source: Moody’s Investors Service

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**Profile**

Indiana University, founded in 1820, is one of the state’s flagship universities and a member of the Big Ten Academic Alliance (Big 10 conference). IU has seven campuses, including its main Bloomington campus. It is one of the nation’s largest universities, with over 82,000 full time equivalent (FTE) students, not including about 6,100 IU students at the Fort Wayne campus, which is currently administered by Purdue University. Under a realignment which will take effect on July 1, 2018, the Indiana University Fort Wayne campus will be located on the current Indiana University Purdue University Fort Wayne campus and will share building space with Purdue University Fort Wayne.

**Detailed credit considerations**

**Market profile: favorable student demand as one of two state flagship universities, with stable enrollment and growing research position**

Indiana University’s excellent strategic position reflects its market position as one of Indiana’s public research universities and member of the Big 10 conference, and a prominent research profile. Revenue growth is slowing as IU held tuition for Bloomington campus resident undergraduates for academic years ended 2016 and 2017, although it did implement small tuition increases at its regional campuses. There was a 1.4% increase for Bloomington campus resident undergraduates in academic years ending 2018 and 2019. Favorably, the material number of non-resident students (30% of total enrollment and nearly half of Bloomington) provides the university the ability to grow student charges. This is seen in the 3.3% and 2.2% increase in total net tuition revenues for the past two years, respectively.

IU’s academic reputation is bolstered by its prominent research profile. It reported $500 million in awards in fiscal 2017. While down from the record $613 million in fiscal 2016, IU attributes the decline to timing, and reports year-to-date awards are well above 2017. Under its Grand Challenges program, a part of the Bicentennial Strategic Plan, IU is investing up to $300 million in programs, including hiring new faculty, that it expects will lead to further grant growth. IU’s funding sources are diverse, with nearly half of the awards from non-federal sources.

Indiana University has a medical school in Indianapolis and is affiliated with Indiana University Health (IU Health, Aa2 stable) for its clinical training sites. IU Health announced it will build a replacement hospital in Indianapolis that will also house a medical education building for faculty of IU School of Medicine. IU Health will also construct a new hospital on IU’s Bloomington campus. IU’s board and the State Budget Committee have approved a research teaching and collaboration facility at the new hospital with a $45 million cost. Construction is underway with financing likely over the next 12-24 months.

**Operating performance: positive operating results albeit with moderating cash flow margins**

With its active fiscal oversight, IU will continue to generate positive operating performance, although with only moderate cash flow, that is supported by diverse revenue streams. In fiscal 2017, the operating cash flow margin was less than 10% and continued the downward trend since fiscal 2013. In both fiscal 2016 and 2017, expense growth exceeded that of revenues. IU has implemented various expense management efforts, including restructuring employee benefits. State appropriations for the fiscal 2018-2019 biennium are slightly up from the prior biennium, and fee replacement money for debt service fully appropriated.

**Wealth and liquidity: ample financial reserves and very good liquidity**

Total wealth will remain ample relative to other Aaa-rated public universities. IU reported total cash and investments of $4.1 billion as of June 30, 2017, including $2.2 billion at Indiana University Foundation (IUF) (excluding university funds). IU has good financial flexibility, with spendable cash and investments of $2.7 billion or about 66% of the total.

fundraising will continue to support strategic priorities, with gift revenue of $164 million for fiscal 2017. IU is in the public phase of its Bicentennial Campaign, raising $2.3 billion to data against its now $3 billion goal, increased from the original $2.5 billion goal. The campaign is now extended to June 30, 2021 with the higher goal. The university reported $398 million in total support, including commitments, for fiscal 2018 and 2019, including $1.1 billion in federal awards.

The investment portfolio is well diversified across managers and strategies, with allocations comparable to other large endowments. The fiscal 2017 foundation investment return of about 13% was generally comparable to peers, reflecting portfolio allocations. IUF has seven member investment office staff and uses external investment consultants.
Liquidity
Liquidity is very good and provides a good cushion for operations. For fiscal 2017 IU reported $1.6 billion of unrestricted monthly liquidity, or 210 monthly days cash on hand.

Indiana University will soon launch a board authorized $125 million CP program, supported by self liquidity, with issuance intended to fund capital projects. The university has a limit of no more than $25 million of CP maturing during a five business day period. IU reports consistently strong coverage from its self liquidity. Daily liquidity, excluding the largest money market fund, cushions the $25 million of weekly maturing CP from 16x to 25x for the past 12 months. Daily liquidity is largely comprised of Moody’s Aaa-mf rated money market funds and US treasuries and Aaa-rated agencies.

Leverage: modest leverage with manageable debt plans
IU should continue to have low financial leverage, with spendable cash and investments to total debt (including fee-replaced debt) of 2.6x, while total debt-to-cash flow is only 3.6x. The effective ratio is even lower when factoring that one-third of the total debt is fee-replaced, with the state providing the full annual debt service through appropriations. This support has never been reduced even during years when direct operating support was cut.

Capital and debt plans through fiscal 2019 are higher than prior years, with IU expecting to issue about $308 million in debt, including $79 million of fee-replaced student fee bonds, subject to receiving all requisite approvals. Assuming the full debt issuance as outlined and scheduled principal repayments, the fee-replaced student fee bonds still remain a significant one-third of pro forma debt.

Debt Structure
If all of the $125 million authorized commercial paper is issued, variable rate debt would represent about 12% of total debt. Most of IU’s debt is fixed rate with fairly rapid amortization with over a third repaid through fiscal 2022.

Legal security
The Commercial Paper Notes are general obligations of the university and payable from Available Funds of $1.8 billion for fiscal 2017. These include all legally available funds, including unrestricted fund balances at Indiana University Foundation (IUF), excluding student fee and other pledged revenues, and state appropriations authorized for other purposes or restricted by law. Other designated repayment sources are proceeds from notes issuances or refunding bonds and any proceeds from any bank facility used for liquidity support of maturing commercial paper if added in the future. The board authorized a program size of $125 million but initially only $100 million could be outstanding.

The Consolidated Revenue Bonds (rated Aaa) are payable from Available Funds.

The Student Fee Bonds (rated Aaa) are secured by pledged revenues including student fee revenue and not including the state’s debt service reimbursement for the bonds. There is a fee covenant to set student fees to provide at least two times coverage of annual debt service. Fiscal 2017 pledged revenues of $1.5 billion are excluded from Available Funds.

The Lease Purchase Obligations were previously issued as Certificates of Participation and all are on parity (rated Aaa). They are secured by IU’s lease with Indiana University Building Corporation (IUBC). The leases cannot be terminated except for IU’s lack of available funds. The leases are not subject to abatement or reduction. IU has the option to purchase the facilities in an amount sufficient to refund the facilities’ related outstanding indebtedness. There is no debt service reserve fund.

Debt-related derivatives
None

Pensions and OPEB
IU’s post-retirement obligations are manageable with total pension and Other Postemployment Benefit Plans (OPEB) about 4% of operating expenses. The university offers defined contribution retirement plans, with certain staff hired prior to July 1, 2013 participating in the state’s defined benefit Public Employees Retirement Fund (PERF). For fiscal 2017 IU had a $264 million Moody’s Adjusted Net Pension Liability (ANPL) for PERF. Spendable Cash and Investments to Adjusted Proforma Debt (including the ANPL) and Adjusted Proforma Debt to Operating Revenue are both very favorable at 2.4x and 0.4x, respectively. IU’s funding requirement is limited to the required annual contribution to the plan.
IU offers OPEB benefits through its single-employer defined benefit plan. It reported a $37 million liability for fiscal 2017.

**Governance and management: strong central oversight and governance practices**
Indiana University demonstrates good management and governance that, with its market position, anchors its excellent strategic position. IU has substantial formal disclosure practices, including a special Investor Disclosure site. Leadership has very active system governance using an integrated strategic and capital planning process including debt management. It is a national leader in its use of responsibility center management, a decentralized budget model moving financial responsibility of revenues and expenses to the schools. IU continues to conduct extensive university-wide expense management initiatives to manage expense growth to support its goals of containing the cost of attendance particularly for in-state students.
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