MOODY'S
INVESTORS SERVICE

CREDIT OPINION
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New Issue

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Board of Regents of the University of Hawai'i

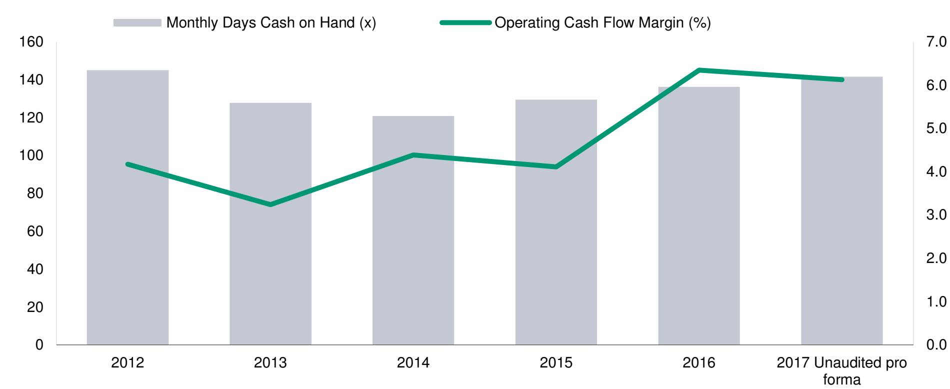
New Issue - Moody's assigns Aa2 to University of Hawaii's Series 2017A-G bonds; outlook stable

Summary Rating Rationale

Moody's Investors Service has assigned Aa2 ratings to University of Hawaii's approximately $107 million of University Revenue Bonds Series 2017A through Series 2017G, to be issued through the Board of Regents of the University of Hawaii. We maintain a Aa2 issuer rating on the university and Aa2 ratings on outstanding debt. The outlook is stable.

UH's Aa2 rating reflects its essential role in the State of Hawaii (Aa1 stable) as the sole provider of public higher education and an economic driver within the state. The importance of this role is underscored by steady state operating and capital support. UH's rating also incorporates the university's large scale and scope of operations, with unique programming and research, and well-diversified revenues. The rating is tempered by significant expense pressures across the 10-campus system, declining enrollments, and extensive capital needs with a large backlog of deferred maintenance.

Exhibit 1
Stronger fiscal oversight is yielding operating stability and liquidity growth



Pro forma 2017 includes $4 million of additional new debt
Source: Moody's Investors Service

Credit Strengths

- Dominant provider of higher education and important economic development driver in the state with strategically important research enterprise in the US Pacific
- State operating support is strong and growing, at 44% of total operating revenue
- Trend of improving leverage with growing cash and investments cushion to debt (1.5x)
- Over 40% of outstanding revenue bonds have an additional pledge of revenue from the State equal to debt service

Credit Challenges

- Substantial pension and other post-retirement health benefit (OPEB) liabilities
- Extensive capital needs with high deferred maintenance across 10-campus system
- Highly unionized faculty and staff reduces expense flexibility
- Weak enrollment trends due to countercyclical nature of community college enrollment

Rating Outlook

The stable outlook incorporates expectations of stabilized or slowly improving operating cash flow, with resumption of modest wealth growth.

Factors that Could Lead to an Upgrade

- Substantial growth of reserves relative to debt and operations
- Sustained and material improvement to operating cash flow

Factors that Could Lead to a Downgrade

- Reduction of state support, capital or funding of fringe benefit payments
- Weakening operating cash flow
- Deterioration of monthly liquidity

Key Indicators

Exhibit 2
University of Hawaii

	2012	2013	2014	2015	2016	2017 Unaudited pro forma	Median: Aa Rated Public Universities
Total FTE Enrollment	40,991	40,392	39,237	38,460	36,701	35,608	28,405
Operating Revenue ($000)	1,437,039	1,435,715	1,500,521	1,479,004	1,530,302	1,537,421	1,104,854
Annual Change in Operating Revenue (%)	2.8	-0.1	4.5	-1.4	3.5	0.5	4.4
Total Cash & Investments ($000)	794,661	756,704	774,049	821,912	844,873	931,889	1,201,140
Total Debt ($000)	623,791	625,892	620,841	595,965	579,815	564,990	597,459
Spendable Cash & Investments to Total Debt (x)	1.0	0.9	0.9	1.0	1.1	1.2	1.3
Spendable Cash & Investments to Operating Expenses (x)	0.4	0.3	0.3	0.4	0.4	0.4	0.7
Monthly Days Cash on Hand (x)	145	128	121	130	136	142	162
Operating Cash Flow Margin (%)	4.2	3.2	4.4	4.1	6.3	6.1	12.0
Total Debt to Cash Flow (x)	10.4	13.5	9.4	9.8	6.0	6.0	4.4
Annual Debt Service Coverage (x)	1.7	1.2	1.6	1.4	2.3	2.0	3.0

Fiscal 2017 is based on unaudited draft financials, includes $4 million of new debt issuance
Source: Moody's Investors Service

Detailed Rating Considerations

Market Profile: Very good strategic positioning as sole public higher education provider with unique research profile

University of Hawaii's role as the sole provider of public higher education for the State of Hawaii is a key component of its credit strength, including geographically and programmatically diverse enrollment, growing net tuition, strong partnership with the State of Hawaii and a unique research enterprise. These factors, combined with the state's strong and growing operating and capital support and improved long term strategic and capital planning contribute to the university's very good strategic positioning.

The diversity of UH's programming and campus types bolster long-term student demand despite expected continue enrollment volatility. The university reported a 3.3% enrollment decline in fall 2017, with about 35,600 full-time equivalent students across its ten campuses located on the islands, with nearly half at the seven two-year community colleges and over 40% at the Manoa flagship research campus. Recent enrollment declines are due primarily to declining community college enrollment with strong economic indicators and employment rates at the state. Improved graduation rates at the four-year campuses over the last few years also contribute modestly to enrollment declines.

Over the longer term, the university expects enrollment to stabilize with growth at the newer West O'ahu campus and with a continued focus on greater participation rates for Hawaiian high school graduates. Prospects are good for stabilization and modest growth at the four-year campuses with projections for slow growth of the number of graduating high school students in the state over the next ten years.

Net tuition per student growth is projected to slow in fiscal 2018 and beyond, with the university and board focused on affordability. The tuition rate increase was 0% in fiscal 2018, and is expected to remain in the low single digits, after multiple years of relatively high 5-8% tuition rate increases. Continued growth of state appropriations will help to offset the lack of net tuition revenue growth.

Hawaii's strategic Pacific location for certain federal research activities and unique scientific research is a key competitive advantage and will help the university maintain a solid core of research despite federal funding fluctuations. The university manages a significant research enterprise, with $387 million of research awards in fiscal 2017. UH's research funding is largely from diverse federal agencies at over 60% of awards, with large awards from the National Science Foundation, Departments of Defense and Commerce and Department of Education. UH's designation as a Naval University Affiliated Research Center helps to create a stronger pipeline to future awards.

Operating Performance: Stronger operational oversight & direct and on-behalf state support help offset expense pressures

The university will continue to face operational challenges with high labor costs and slow financial improvement at the flagship Manoa campus. Expenses spiked in fiscal 2017 due to negotiated labor increases, as well as high pension costs. Both of these factors are mitigated by the state's direct and on behalf funding for fringe benefits and pension contributions for the university. We expect operating cash flow to improve modestly over the next few years as the system's efforts to help the Manoa campus return to breakeven operations gain traction.

Good revenue diversity and exceptional operating and capital support from the Aa1-rated State of Hawaii help anchor the university at the Aa2 rating despite weaker cash flow than Aa rated peers. In addition to general operating funds (almost $471 million in fiscal 2017, up from $441 million in fiscal 2016), the state pays annual debt service on general obligation bonds issued for the university's capital appropriations, and covers almost all pension, OPEB contributions and fringe benefits on behalf of the university – together, these funds represent approximately 44% of total operating revenue. Student charges and grants and contracts revenue are the second and third largest contributors, at 25% and 24%.

Wealth and Liquidity: Adequate cushion expected to grow slowly

Improved operating cash flow, a focus on building reserves and fundraising will drive the resumption of slow growth of cash and investments for UH. Spendable cash and investments of $684 million provide a solid 1.2 times coverage of debt, and a weaker, but adequate 0.4 times coverage of operations. The university continues to focus on building philanthropic support, and had a very strong year in fiscal 2017 with $140 million of gifts.

The board's recent implementation of conservative debt and capital plans that are focused on bringing down deferred maintenance at each campus, with very limited debt plans and healthy state capital support are credit positive. The university's six year capital plan calls for limited new construction, primarily to be funded by the state, with a potential for up to $100 million of university bonds.

UH instituted a moratorium on new construction on campuses that have continued deferred maintenance issues. The majority of planned capital projects will be for repair, renovation and repurposing existing space, and will likely be funded through state capital appropriations.

LIQUIDITY

Reserves have begun to grow modestly with concentrated expense control measures and strict reserve policies. Monthly liquidity of $570 million at June 30, 2017 provided a thin, but adequate 138 monthly days cash on hand. UH's improved campus reserve oversight and all fixed rate debt structures are important mitigants to thinner monthy days cash relative to Aa2 peers. In fiscal 2015, the university implemented a minimum reserve requirement at each campus, which will stabilize their monthly liquidity in the future.

The university's endowment had a solid 11.8% investment return in fiscal 2017. The endowment is managed at the foundation, with investment oversight provided by the foundation board and an external advisor.

Leverage: Robust state support helps UH maintain stable leverage

UH manages a relatively stable debt burden due to healthy state capital support and regular amortization. Debt to operations is 0.4 times, compared to the Aa2 median of 0.6. Debt affordability is weaker than peers due to still thin operations, with high debt to cash flow of 6x. The state pays debt service on roughly 41% of the university's total debt, providing significant operating relief relative to many public university peers. The university has limited additional debt plans, but is seeking $100 million of bond authorization from the state for the next two to three years. Debt capacity at the current rating level will depend upon continued growth of cash flow.

DEBT STRUCTURE

Positively, the university's outstanding debt is all fixed rate with regular long-term amortization schedules. Debt service is at its peak through fiscal 2019 at just under $46 million annually, and then is level at around $40 million through 2033, and begins to more rapidly decline through 2045. The only variable rate debt is a $17 million note with Hawai'i Regional Center, with semi-annual interest payments, and principal due in April 2018.

DEBT-RELATED DERIVATIVES

None

PENSIONS AND OPEB

The university's large and growing defined benefit pension (the Hawaii Employees' Retirement System) and post-retirement healthcare obligations and expenses present heightened long-term credit risk due to their size and scope relative to the university's operations. In the near-term, however, these risks are mitigated by the state's demonstrated commitment to pay the university's portion of fringe benefit (pension and OPEB) costs, as well as the state's active approach to improving funding to both programs. Both pension and OPEB contributions are growing at a fast pace, with pension and OPEB contributions growing rapidly, especially as the state is working to fully fund the annual required contribution (ARC) by fiscal 2019.

The university's pension liability is very large relative to peers, with a $2.4 billion three-year average Moody's adjusted net pension liability (ANPL) in both fiscal years 2015 and 2016. Cash and investments cover just 0.3 times of total adjusted debt (including the ANPL and capitalized operating leases), compared to the Aa-rated public university median of 0.5 times. While contribution requirements are projected to grow over the long-term at 3% annually, contribution rates are not yet sufficient to cover both service cost and interest on the reported unfunded liability.

UH's retiree health benefit expense and obligations (OPEB), are growing rapidly. The total OPEB liability was $788 million in fiscal 2017. The liability will continue to grow in the near term until the state and the university make sufficient headway in fully funding the OPEB ARC (anticipated for FY 2019).

Governance and Management: Improved oversight and internal controls; close alignment with state

Strengthened oversight and budgetary controls are contributing to financial stabilization. The university and the board now regularly reconcile and consolidate campus financials, providing opportunity for tighter expense controls and midyear adjustments. Guidelines around minimum reserve requirements at each campus and long-term strategic planning and prioritization will help stabilize the university continue its trend of stabilizing operations and liquidity. As the primary higher education provider for the state, the university has built long-term capital and strategic plans around the needs and priorities of the state.

After multiple high-level turnovers and politically charged governance moves, management has begun to stabilize over the last two years. However, leadership at the flagship Manoa will remain a challenge. The president of the system, has been serving as interim chancellor over the last year and a half and will continue to serve in that capacity as the Board and president urgently address financial and enrollment challenges at the campus.

Legal Security

All university revenue bonds are secured by a first lien on the Network revenue, including System revenues consisting of various housing and auxiliary activities, a subordinate lien on Legislative Appropriations in special and revolving funds appropriated or allocated to the Board of Regents, the university, the System or the Network, to the extent permitted by law, which includes tuition and fees.

Fiscal 2017 system gross revenues of $102 million provided debt service coverage of 2.3 times. The special and revolving beginning funds balance is approximately $159 million for fiscal 2017.

Use of Proceeds

Proceeds of the bonds will be used to: provide funds to renovate the Gregg M. Sinclair Library basement; refund a portion of the University Bonds Refunding Series 2006A, and University Revenue Bonds, Series 2009A; and to pay costs of issuance.

Obligor Profile

The University of Hawaii is a large multi-campus system with three university campuses, seven community college campuses and nine educational centers distributed across six islands throughout the State. The scope and scale of the university is reflected in its $1.5 billion operating revenue and over 35,600 FTE students. The university has a strong and unique research profile, particularly in earth and marine sciences.

Methodology

The principal methodology used in this rating was Global Higher Education published in November 2015. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

Ratings

Exhibit 3

University of Hawaii, HI

Issue	Rating
University Revenue Bonds Series 2017A	Aa2
Rating Type	Underlying LT
Sale Amount	$4,310,000
Expected Sale Date	12/14/2017
Rating Description	Revenue: Public University Broad Pledge
University Revenue Bonds Series 2017B (Refunding)	Aa2
Rating Type	Underlying LT
Sale Amount	$10,120,000
Expected Sale Date	12/14/2017
Rating Description	Revenue: Public University Broad Pledge
University Revenue Bonds Series 2017C (Taxable Refunding)	Aa2
Rating Type	Underlying LT
Sale Amount	$4,115,000
Expected Sale Date	12/14/2017
Rating Description	Revenue: Public University Broad Pledge
University Revenue Bonds Series 2017D (Refunding)	Aa2
Rating Type	Underlying LT
Sale Amount	$11,050,000
Expected Sale Date	12/14/2017
Rating Description	Revenue: Public University Broad Pledge
University Revenue Bonds Series 2017E (Taxable Refunding)	Aa2
Rating Type	Underlying LT
Sale Amount	$4,455,000
Expected Sale Date	12/14/2017
Rating Description	Revenue: Public University Broad Pledge
University Revenue Bonds Series 2017F (Refunding)	Aa2
Rating Type	Underlying LT
Sale Amount	$52,350,000
Expected Sale Date	12/14/2017
Rating Description	Revenue: Public University Broad Pledge
University Revenue Bonds Series 2017G (Taxable Refunding)	Aa2
Rating Type	Underlying LT
Sale Amount	$20,825,000
Expected Sale Date	12/14/2017
Rating Description	Revenue: Public University Broad Pledge

Source: Moody's Investors Service

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