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CREDIT OPINION

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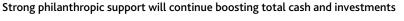
Case Western Reserve University, OH

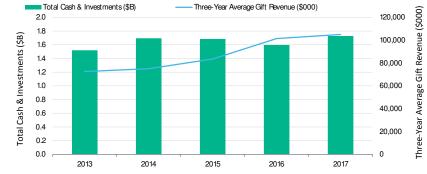
Update to credit analysis

Summary

Exhibit 1

Case Western Reserve University's (CWRU; A1, stable) very good credit quality is supported by its significant wealth and continued strong philanthropy, as well as modest debt for an institution of its size. Furthermore, the university's strengthening national reputation as a large, comprehensive research university is driving higher enrollment and solid net tuition growth, increasing an already sizeable revenue base. Offsetting challenges include limited financial flexibility, as a significant portion of CWRU's wealth is permanently restricted and available liquid reserves provide only moderate protection against unforeseen expenses. Other credit considerations include the university's consistent, albeit slightly lower than peers, operating performance, and competitive operating environment for students and federal research awards.





Source: Moody's Investors Service

Credit strengths

- » Considerable wealth of over \$1.7 billion in total cash and investments in fiscal 2017
- » Strong donor support averaging \$105 million in gift revenue from fiscal 2015 through fiscal 2017
- » Continued strength in student demand, evidenced by enrollment growth of over 13% and net tuition revenue growth of over 30% since fiscal 2013
- » Sizeable scope of operations of nearly \$880 million

Credit challenges

- » Limited financial flexibility, with a large portion of CWRU's wealth permanently restricted
- » Only moderate operational support from unrestricted monthly liquidity, with university reliance on a line of credit to bridge seasonal cash flow needs
- » Highly competitive student market and significant competition for federal research funding, which are the university's two key revenue streams
- » Thinner operating performance relative to peers

Rating outlook

The stable outlook reflects our expectation CWRU will enjoy continued donor support for strategic endeavors while generating at least balanced operating performance and no material deterioration of liquid reserves.

Factors that could lead to an upgrade

- » Substantial growth in unrestricted balance sheet reserves and operating liquidity
- » Sustained strengthening of operating cash flow

Factors that could lead to a downgrade

- » Material contraction of liquidity
- » Multi-year weakening of operating performance

Key indicators

Exhibit 2

CASE WESTERN RESERVE UNIVERSITY, OH

	2013	2014	2015	2016	2017	Median: A Rated Private Universities
Total FTE Enrollment	9,621	10,130	10,586	10,820	10,917	4,526
Operating Revenue (\$000)	767,459	785,208	805,129	836,428	878,052	196,259
Annual Change in Operating Revenue (%)	0.0	2.3	2.5	3.9	5.0	3.4
Total Cash & Investments (\$000)	1,519,129	1,694,480	1,683,882	1,595,496	1,726,918	359,875
Total Debt (\$000)	594,952	565,243	564,856	560,603	506,918	132,260
Spendable Cash & Investments to Total Debt (x)	1.5	1.9	1.8	1.7	2.0	1.6
Spendable Cash & Investments to Operating Expenses (x)	1.2	1.4	1.3	1.1	1.2	1.3
Monthly Days Cash on Hand (x)	165	191	180	177	176	321
Operating Cash Flow Margin (%)	9.9	11.2	11.8	12.2	11.8	15.3
Total Debt to Cash Flow (x)	7.8	6.4	6.0	5.5	4.9	4.6
Annual Debt Service Coverage (x)	2.0	2.9	2.9	2.8	3.0	3.0

Source: Moody's Investors Service

Profile

Case Western Reserve University is the largest comprehensive private research university in <u>Ohio</u>, with sizeable operations of nearly \$880 million and enrollment of almost 11,000 full-time equivalent students (FTEs). The university is located in University Circle, a

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550-acre concentration of more than 50 educational, medical, cultural, religious, and social service institutions at the eastern edge of <u>Cleveland</u> (A1).

Detailed credit considerations

Market profile: comprehensive research university with a strong graduate reputation, rising undergraduate reputation, and sizeable operations

CWRU's strategic positioning is very good, anchored by a market position that will continue to strengthen as it expands partnerships and leverages a prominent graduate reputation to bolster its research and academic profile nationally. CWRU has successfully increased enrollment by parlaying its reputation in the sciences, technology, engineering, and math (STEM) graduate programs to grow its undergraduate student market. Since fall 2010, total enrollment is up an impressive 22% to 10,917 FTEs in fall 2017. This growth occurred while many other institutions, particularly in the Midwest, suffered declines. Enrollment growth is expected to taper, as CWRU has met its undergraduate class size goal. However, its prominent graduate and professional degree programs will remain a solid growth market, particularly given continued high demand for STEM programs.

CWRU bolsters its educational programs and research by collaborating with nearby medical institutions, including <u>University Hospitals</u> <u>Health System Inc. (UH)</u> (A2 stable) and the <u>Cleveland Clinic Health System</u> (Aa2 stable). The relationship with Cleveland Clinic will continue strengthening, as the two agreed on constructing a jointly owned Health Education Campus that is expected to open in the summer of 2019. The campus will include two buildings and will house multiple health science education programs. Both organizations are fundraising jointly for the project, which is estimated at \$500 million, with over \$260 million raised to date.

CWRU has a sizeable scope of operations and maintains a large research profile with significant federally sponsored research. The university reported total operating revenue of nearly \$880 million and research expenditures of over \$250 million in fiscal 2017. We expect operating revenue to continue increasing due to continued growth in net tuition revenue and research funding.

Operating performance: solid revenue growth will continue to outpace moderate expense growth driving consistent operating performance

CWRU's operating performance will improve moderately due to continued solid revenue growth outpacing moderate expense growth. The university reported operating cash flow of 11.8% in fiscal 2017, in line with recent results between 11% and 12%. Fiscal 2017 operating cash flow provided solid annual debt service coverage of 3.0x.

The university's revenue grew solidly in fiscal 2017, up 5% from fiscal 2016, continuing an upward trajectory started in fiscal 2014. Improved revenue growth stems mainly from brisk growth in net tuition revenue over recent years. Overall, net tuition revenue grew by over 30% since the end of fiscal 2013, driven primarily by the university's growth in enrollment.

The university will continue to grapple with containing expenses due to increased enrollment and growing research. After a period of low expense growth, expenses have begun climbing, driven by increasing salary and wages and research-related expenses. In fiscal 2017, the university reported overall expense growth of 4.7%. In comparison, the university averaged expense growth of just 2% from fiscal 2013 through fiscal 2016.

Wealth and liquidity: substantial wealth driven by strong fundraising success, although relatively modest unrestricted liquidity

The university's considerable wealth will continue rising over the coming years through excellent fundraising. The university maintains has over \$1.7 billion of total cash and investments at the end of fiscal 2017. The university's three-year average gift revenue (fiscal 2015 through fiscal 2017) is approximately \$105 million, significantly above A1-rated peers.

The university has already surpassed its current \$1.5 billion comprehensive fundraising campaign with over \$1.6 billion raised to date. The campaign focuses on four areas for fundraising: programmatic support; capital support; faculty support; and, student financial aid. The campaign is ongoing and is scheduled to conclude on December 31, 2018.

To manage the university's large investment portfolio, with a market value of \$1.4 billion at June 30, 2017, CWRU has an in-house investment office staffed with six people. The university does not utilize a consultant to select its managers and the board's investment committee remains active in overseeing the function. At the end of fiscal 2017, the university reported a 12.4% investment gain, comparable to returns for other similarly-sized endowments.

Liquidity

CWRU's monthly liquidity will remain thin compared to peers, as the university's high proportion of restricted assets and allocation to alternative investments (including hedge funds and private equity) will continue to place limitations on liquidity. In fiscal 2017, the university reported available monthly liquidity of \$383 million, translating to 176 days of cash on hand. (In fiscal 2016, the A1-median for private colleges and universities was 321 days of cash on hand.) Mitigating the university's thinner liquidity, is an uncommonly high level of research expenses, which is generally matched by sponsored research funding.

Supplementing internal liquidity, the university has two unsecured external bank lines with two counterparties totaling \$100 million. At the end of fiscal 2017, the university had drawn \$14 million, down from \$33 million in fiscal 2016.

Leverage: affordable and manageable debt burden

CWRU's financial leverage will remain manageable given an amortizing debt structure and no near-term plans to increase debt. The university's debt has favorably decreased by 15% since fiscal 2013, down to \$507 million in fiscal 2017 from \$595 million in fiscal 2013. Spendable cash and investments of \$1.0 billion cushioned debt in fiscal 2017 by over 2.0x. Debt affordability is ample, with fiscal 2017 debt to cash flow of 4.9x.

Debt structure

Over recent years, university management has made a concerted effort to revise its debt structure and lessen its liquidity risks, which is a credit positive. After refunding the Series 2015B private placement with proceeds of the Series 2018 refunding bonds, the university will have one outstanding private placement. The remaining private placement is variable rate with a tender date of April 1, 2019. It does not have financial covenants, and the university has a healthy cushion before hitting any rating triggers. Therefore, the potential for payment acceleration is remote. Overall, the majority of the university's current debt is fixed rate and amortizing. The university does have several medium-term bullets which it plans to refinance at maturity.

Historically, the university has also run a commercial paper program (CP), which will be fully refunded and closed with the Series 2018 bond issuance. The university does not have current plans to start a new CP program, but may decide to do so at a later date.

Debt-related derivatives

CWRU currently has four floating-to-fixed interest rate swap agreements with a total notional amount of \$73 million. At its current rating level, the university posts collateral if the liability to CWRU exceeds \$20 million. As of March 19, 2018, the liability was \$12 million, well below the collateral posting threshold, and down from the fiscal 2016 liability of \$23 million.

Pensions and OPEB

The university has both defined benefit (DB) and defined contribution (DC) plans. Having a DB plan is highly uncommon in the private higher education sector. Total expenses for both plans in fiscal 2017 totaled \$37 million, a manageable 4% of overall expenses. Overall, the liabilities associated with the plan surpass assets held for the plan by \$102 million, down from \$114 million in fiscal 2016.

Favorably, the university does not have other post-employment benefits (OPEB) expenses.

Governance and management: successfully growing reputation and strategic partnership while producing consistent operations and lowering debt structure and liquidity risks

CWRU's management team has led the university through a period of strengthening reputation and consistent operations. Through successful marketing of its nationally known graduate STEM programs, the university has increased its undergradate reputation markedly. Management has also cultivated its preexisting relationship with the Cleveland Clinic, allowing the university to achieve strategic initiatives while stewarding resources. Additionally, the university's financial team has made a concerted effort to lower debt structure and liquidity risks through strategic refinancings, lowering credit risks.

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