

RATING METHODOLOGY

Table of Contents:

INTRODUCTION	1
SCOPE OF THIS METHODOLOGY	2
SECTOR OVERVIEW	2
DISCUSSION OF THE SCORECARD FACTORS	3
OTHER CONSIDERATIONS	12
ASSIGNING ISSUER-LEVEL AND INSTRUMENT-LEVEL RATINGS	16
KEY RATING ASSUMPTIONS	16
LIMITATIONS	17
APPENDIX A: USING THE SCORECARD TO ARRIVE AT A SCORECARD-INDICATED OUTCOME	18
APPENDIX B: HIGHER EDUCATION SCORECARD	20
APPENDIX C: ASSIGNING INSTRUMENT RATINGS TO HIGHER EDUCATION ISSUERS	24
MOODY'S RELATED PUBLICATIONS	34

Analyst Contacts:

NEW YORK +1.212.553.1653

Christopher Collins +1.212.553.7124
Vice President - Senior Analyst
christopher.collins2@moodys.com

Dennis Gephardt +1.212.553.7209
Vice President - Senior Credit Officer
dennis.gephardt@moodys.com

Emily Raimes +1.212.553.7203
Associate Managing Director
emily.raimes@moodys.com

Susan Fitzgerald +1.212.553.6832
Managing Director - Public Finance
susan.fitzgerald@moodys.com

LONDON +44.20.7772.5454

Jeanne Harrison +44.20.7772.1751
Vice President - Senior Credit Officer
jeanne.harrison@moodys.com

» contacts continued on the (second to) last page

Higher Education Methodology

This rating methodology combines and replaces the *Higher Education* methodology published in May 2019 and the *Community College Revenue-Backed Debt* methodology published in June 2018. Key revisions include the use of the same methodology and scorecard for debt issued by colleges and universities and revenue-backed debt issued by US community colleges, the replacement of Spendable Cash and Investments to Operating Expenses with Total Cash and Investments to Operating Expenses, the replacement of Spendable Cash and Investments to Total Debt with Total Cash and Investments to Total Adjusted Debt, the use of an annual debt service coverage ratio as a sub-factor of Leverage and Coverage, the expansion of the number of qualitative sub-factors and an increase in their scorecard weights, the elimination of some quantitative sub-factors from the scorecard and the assignment of issuer ratings to US colleges and universities that reflect their fundamental credit quality. We have also made editorial changes to enhance readability.

Introduction

In this rating methodology, we explain our general approach to assessing credit risk of public and nonprofit private colleges and universities globally, including the qualitative and quantitative factors that are likely to affect rating outcomes in this sector.

We discuss the scorecard used for this sector. The scorecard¹ is a relatively simple reference tool that can be used in most cases to approximate credit profiles in this sector and to explain, in summary form, many of the factors that are generally most important in assigning ratings to issuers in this sector. The scorecard factors may be evaluated 'historical or forward-looking data or both.

We also discuss other considerations, which are factors that are assessed outside the scorecard, usually because the factor's credit importance varies widely among the issuers in the sector or because the factor may be important only under certain circumstances or for a subset of issuers. In addition, some of the methodological considerations described in one or more cross-sector rating methodologies may be relevant to ratings in this sector.² Furthermore, since ratings are forward-looking, we often incorporate directional views of risks and mitigants in a qualitative way.

THIS METHODOLOGY WAS UPDATED ON JULY 27, 2023. WE HAVE UPDATED THE METHODOLOGY REFERENCE ON PAGE 2 FOR DEBT BACKED BY A PLEDGE OF PROPERTY TAXES.

¹ In our methodologies and research, the terms "scorecard" and "grid" are used interchangeably.

² A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

As a result, the scorecard-indicated outcome is not expected to match the actual rating for each issuer.

Our presentation of this rating methodology proceeds with (i) the scope of this methodology; (ii) an overview of the sector; (iii) the scorecard framework; (iv) a discussion of the scorecard factors; (v) other considerations not reflected in the scorecard; (vi) the assignment of issuer-level and instrument-level ratings; (vii) methodology assumptions; and (viii) limitations. In Appendix A, we describe how we use the scorecard to arrive at a scorecard-indicated outcome. Appendix B shows the full view of the scorecard factors, sub-factors, weights and thresholds. Appendix C describes our approach for assigning instrument ratings for US colleges and universities.

Scope of This Methodology

This methodology applies to public sector and private sector nonprofit institutions globally that are primarily engaged in providing post-secondary school educational instruction to students. The entities rated under this methodology include colleges that offer undergraduate degree programs, technical schools that offer vocational training, and universities that offer undergraduate, graduate or post-graduate degree programs and academic research opportunities. This methodology also applies to foundations³ associated with public or private universities, which are typically rated the same or notched up or down from the ratings of the associated university.⁴

This methodology also applies to debt issued by US community colleges that is backed by a pledge of some or all of a community college's operating revenue, even if the community college derives a portion of its revenue from property taxes. Debt issued by US community colleges that is fully backed by a pledge of property taxes is rated using our methodology for general obligation instruments of US special purpose districts. This methodology does not apply to for-profit higher education organizations, which are rated using our methodology for the business and consumer services sector.⁵

Sector Overview

The global higher education sector is broadly divided into public sector institutions and private sector institutions.

Public sector colleges and universities in the US include standalone universities, university systems and community colleges. Public universities typically receive operational and capital support and oversight from the state; community colleges may also receive financial support and oversight from local jurisdictions. Both private and public institutions can benefit from substantial amounts of government research funding and student financial aid.

Private colleges and universities in the US are typically nonprofit organizations with a stated mission to provide post-secondary school education. They typically receive the majority of their funding from tuition and fees, private donations and investments. Public sector higher education institutions typically benefit from a higher level of government financial support and are subject to a greater level of government

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moodys.com> for the most updated credit rating action information and rating history.

³ We use the term "foundations" to mean any support organizations affiliated with a university.

⁴ For more information on our approach to rating US public university foundations, see Appendix C.

⁵ A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

oversight than private sector institutions, which generally allows public sector colleges and universities to operate with somewhat weaker financial performance and metrics than their private sector counterparts.

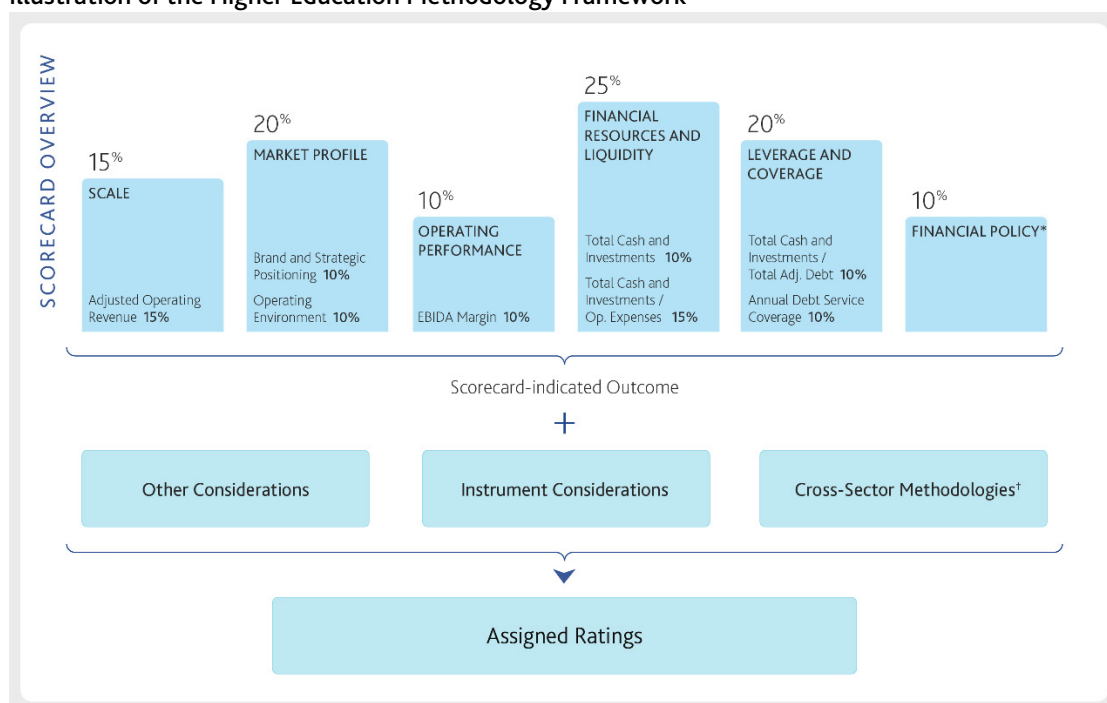
Higher education institutions outside of the US are typically public sector entities with a public policy mandate and strong government links through funding, regulation and policy affecting student demand. Government oversight and influence may be at the sovereign, state or regional government level.

Scorecard Framework

The scorecard in this rating methodology is composed of six factors. Some of the six factors comprise a number of sub-factors.

EXHIBIT 1

Illustration of the Higher Education Methodology Framework



* This factor has no sub-factors.

† Some of the methodological considerations described in one or more cross-sector rating methodologies may be relevant to ratings in this sector. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's related publications" section.

Source: Moody's Investors Service

Please see Appendix A for general information about how we use the scorecard and for a discussion of scorecard mechanics. The scorecard does not include or address every factor that a rating committee may consider in assigning ratings in this sector. Please see the "Other Considerations" and "Limitations" sections.

Discussion of the Scorecard Factors

In this section, we explain our general approach for scoring each scorecard factor or sub-factor, and we describe why they are meaningful as credit indicators.

Consistent with our expectation that public universities typically receive a meaningful level of ongoing government financial support, the majority of thresholds for the quantitative sub-factors are higher for private colleges and universities than for public sector higher education institutions.

Factor: Scale (15% Weight)

Why It Matters

Scale is an important indicator of the overall depth of a college's or university's business and its success in attracting students, donors and faculty, as well as its resilience to shocks, such as sudden shifts in demand or rapid cost increases.

We measure scale using adjusted operating revenue. Higher education institutions with larger scales of operations typically have higher brand recognition, broader diversification of educational programs and revenue sources and a greater ability to take advantage of economies of scale during economically challenging times. A larger scale can also result in greater financial support from donors and government entities, given the economic, social and political importance of large universities.

How We Assess It for the Scorecard

Scoring for this factor is based on one sub-factor: Adjusted Operating Revenue.

ADJUSTED OPERATING REVENUE:

In assessing adjusted operating revenue, we consider a college's or university's revenue from its primary operating activities, such as tuition and fees, and make certain adjustments to provide consistency across the sector. The adjustments are different for public sector and private sector institutions. In all cases, we use a standard percentage of total cash and investments to smooth out spending from endowments, as endowment spending rates can vary from institution to institution. Adjusted operating revenue is calculated or estimated in millions of US dollars.

For private sector higher education issuers, adjusted operating revenue is equal to unrestricted operating revenue and the portion of revenue from restricted sources available for current use. We adjust operating revenue to normalize endowment draws to reflect the industry standard spending rates. Typically, drawdowns have been 5% of the average level of cash and investments for the three prior fiscal years.

For public sector higher education issuers, adjusted operating revenue is equal to unrestricted operating revenue, adjusted to account for pass-through scholarships and fellowship expenses,⁶ plus certain items that are typically considered operating revenues but may be reported as non-operating revenue in certain jurisdictions. These could include government funding, tax revenue, philanthropic gifts, grants and contracts. Endowment and investment income includes the normalized endowment draws to reflect the industry standard spending rates. Typically, drawdowns have been 5% of the average level of cash and investments for the three prior fiscal years.

⁶ Colleges and universities may receive funds from government entities for student scholarships that exceed what the student owes the college or university. The college or university remits the excess funds to students and recognizes that remittance as an expense. Since these are pass-through funds, we recognize the net amount as revenue, i.e., we exclude the excess cost from operating expenses and make a contra revenue adjustment to operating revenues.

FACTOR

Scale (15%)

Sub-factor	Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Adjusted Operating Revenue (USD Million) - Private ^{*1}	15%	≥ \$2,500	\$500 - \$2,500	\$100 - \$500	\$40 - \$100	\$30 - \$40	\$20 - \$30	\$10 - \$20	< \$10
Adjusted Operating Revenue (USD Million) - Public ^{*2}	15%	≥ \$2,500	\$500 - \$2,500	\$100 - \$500	\$25 - \$100	\$15 - \$25	\$10 - \$15	\$5 - \$10	< \$5

*1 For the linear scoring scale, the Aaa endpoint value is \$3 billion. A value of \$3 billion or better equates to a numeric score of 0.5. The Ca endpoint value is \$5 million. A value of \$5 million or worse equates to a numeric score of 20.5.

*2 For the linear scoring scale, the Aaa endpoint value is \$3 billion. A value of \$3 billion or better equates to a numeric score of 0.5. The Ca endpoint value is \$1 million. A value of \$1 million or worse equates to a numeric score of 20.5.

Source: Moody's Investors Service

Factor: Market Profile (20% Weight)**Why It Matters**

A college's or university's market profile provides important indications of its long-term financial health and its ability to compete effectively for and realize tuition revenue, private gifts, research grants, faculty and staff, and government support. Core aspects of a college's or university's market profile are its brand and strategic positioning and operating environment.

The factor comprises two sub-factors:

Brand and Strategic Positioning

Brand and strategic positioning is important because a strong brand supports a college's or university's market position and helps it consistently generate revenue with low volatility to sustainably fund operations over the long term. Brand and market strength greatly influence an institution's ability to attract and retain students and faculty, and to increase revenue from tuition, donations and government funding.

An educational institution's reputation and demand for its programs and services reflect its strategic positioning. Strategic positioning provides important indications of a college's or university's alignment of programs and capital plans to market and customer demand. A track record of strong research impact can attract students, academic staff and funding in addition to strengthening international reputations. The organizational structure of an educational institution and its affiliated relationships are important because undue complexity can constrain a college or university from achieving its strategic objectives.

Operating Environment

A college's or university's operating environment is an important indicator of the level of funding and predictability of support from federal, state or local governments. The operating environment includes the regulatory and policy framework, which influences the flexibility a college or university has to manage its finances, debt programs, enrollment and other drivers of credit quality.

A college's or university's expense structure provides important indications of its capacity to manage its finances within the operating environment. Expense structures that have minimal or low constraints enable an educational institution to operate more effectively within its operating environment than structures that have substantial constraints.

How We Assess It for the Scorecard

Scoring for this factor is based on two sub-factors: Brand and Strategic Positioning and Operating Environment.

Generally, we do not expect a given college's or university's brand and strategic positioning or operating environment to exactly match each of the attributes listed for a given scoring category. We typically assign each sub-factor score based on the alpha category for which the college or university has the greatest number of characteristics. However, there may be cases in which one characteristic is sufficiently important to a particular institution's credit profile that it has a large influence on the sub-factor score.

Brand and strategic positioning:

We score this sub-factor based on a qualitative assessment of the attributes and strength of a college's or university's brand and its ability to leverage that brand to support its operating stability and growth. . We consider the institution's ability to consistently generate revenue that is sufficient to support its operations. Colleges and universities that have an exceptional ability to consistently generate revenue to sustainably fund operations typically score higher for this sub-factor than institutions that have a weak or inconsistent ability to generate sufficient revenue.

In our assessment of brand and strategic positioning, we consider the breadth and diversity of a college's or university's educational offerings and its sources of revenue, as well as its appeal to local, national and international students (its geographic reach). We also consider how closely the college or university has aligned its academic programs to market and customer demand. Educational institutions with broad, diverse offerings that appeal to students across geographies and are closely aligned with market demand tend to score higher for this sub-factor than colleges or universities with limited diversity of revenue sources, a narrow geographic reach and weak alignment of academic programs to market demand.

We also consider the structure of the educational institution, including its affiliation with other organizations, and whether the organizational structure adds complexity or risk to the fulfillment of its mission. A college or university whose organizational structure adds little to no undue complexity or risk in fostering the fulfillment of its mission typically receives a higher score for this sub-factor than an institution whose overly complex structure adds a high level of risk.

Operating Environment:

In our qualitative assessment of this sub-factor, we consider the regulatory, policy and support framework under which a college or university operates. A college or university that operates in a highly supportive regulatory and policy framework and has ample flexibility in managing its operations and finances tends to receive a higher score for this sub-factor than an institution that operates in a framework that poses challenges to institutional success.

A key consideration is the strength and predictability of financial support, including direct and indirect funding from local, state, regional and sovereign governments. Some community colleges benefit from a local property tax for a significant portion of their operating revenues, providing a consistent, stable source of funding. A college or university that benefits from highly reliable and predictable funding tends to receive a higher score for this sub-factor than an institution that receives funding that is more volatile.

We also consider the level of autonomy a college or university has to manage its academic programs and expenses. We assess the impact of government policy and regulations on an institution's flexibility in managing its operations and revenue drivers, including student enrollment and academic programs, as well as its finances. Additionally, we consider the extent to which a college's or university's expense structure constrains capacity to manage its budgets and debt levels.

FACTOR

Market Profile (20%)

Sub-factor	Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Brand and Strategic Positioning	10%	Exceptional ability to consistently generate stable revenue that sustainably funds operations; exceptional breadth of offerings, revenue diversity and geographic reach, and extremely close alignment of academic programs to market and customer demand; organizational structure and affiliated relationships do not add undue complexity or risk to achieving strategic objectives.	Excellent ability to consistently generate stable revenue that sustainably funds operations; excellent breadth of offerings, revenue, diversity and geographic reach, and extremely close alignment of academic programs to market and customer demand; organizational structure and affiliated relationships add only minimal undue complexity or risk to achieving strategic objectives.	Very good ability to consistently generate stable revenue that sustainably funds operations; very good breadth of offerings, revenue, diversity and geographic reach, and close alignment of academic programs to market and customer demand; organizational structure and affiliated relationships add low undue complexity or risk to achieving objectives.	Good ability to consistently generate stable revenue that sustainably funds operations; good breadth of offerings, revenue, diversity and geographic reach, and adequate alignment of academic programs to market and customer demand; organizational structure and affiliated relationships add moderate undue complexity or risk to achieving strategic objectives.	Inconsistent ability to generate stable revenue that sustainably funds operations; fair breadth of offerings, revenue, diversity and geographic reach, and uneven alignment of academic programs to market and customer demand; organizational structure and affiliated relationships add elevated undue complexity or risk to achieving strategic objectives.	Weak ability to generate stable revenue that sustainably funds operations; poor breadth of offerings, revenue, diversity and geographic reach, and weak alignment of academic programs to market and customer demand; organizational structure and affiliated relationships add high undue complexity or risk to achieving strategic objectives.	Very weak ability to generate stable revenue that sustainably funds operations; very poor breadth of offerings, revenue, diversity and geographic reach, and very weak alignment of academic programs to market and customer demand; organizational structure and affiliated relationships add very high undue complexity or risk to achieving strategic objectives.	Extremely weak ability to generate revenue that sustainably funds operations; extremely poor breadth of offerings, revenue, diversity and geographic reach, and little to non-existent alignment of academic programs to market and customer demand; organizational structure and affiliated relationships add extremely high undue complexity or risk to achieving strategic objectives.
Operating Environment	10%	Very strong and highly predictable direct and indirect governmental funding; regulatory and policy framework that is highly supportive to institutional success and provides full flexibility to manage finances, debt, programs, enrollment and other drivers of credit quality; expense structure provides for minimal constraints and very strong capacity to manage operations.	Strong and predictable direct and indirect governmental funding; regulatory and policy framework that is supportive to institutional success and provides broad flexibility to manage finances, debt, programs, enrollment and other drivers of credit quality; expense structure provides for very low constraints and strong capacity to manage operations.	Very good and mostly predictable direct and indirect governmental funding; regulatory and policy framework that is mostly supportive to institutional success and provides solid flexibility to manage finances, debt, programs, enrollment and other drivers of credit quality; expense structure provides for low constraints and very good capacity to manage operations.	Good direct and indirect governmental funding with moderate volatility; regulatory and policy framework that is generally supportive to institutional success and provides moderate flexibility to manage finances, debt, programs, enrollment and other drivers of credit quality; expense structure provides for moderate constraints and good capacity to manage operations.	Fair direct and indirect governmental funding with elevated volatility; regulatory and policy framework that poses challenges to institutional success and provides limited flexibility to manage finances, debt, programs, enrollment and other drivers of credit quality; expense structure provides for elevated constraints and limited capacity to manage operations.	Poor direct and indirect governmental funding with elevated volatility; regulatory and policy framework that detracts from institutional success and provides very limited flexibility to manage finances, debt, programs, enrollment and other drivers of credit quality; expense structure provides for substantial constraints and very limited capacity to manage operations.	Very poor direct and indirect governmental funding with substantial volatility; regulatory and policy framework that hinders institutional success and provides little to non-existent flexibility to manage finances, debt, programs, enrollment and other drivers of credit quality; expense structure provides for high constraints and little to non-existent capacity to manage operations.	Extremely poor direct and indirect governmental funding with substantial volatility; regulatory and policy framework that prevents institutional success and contains no flexibility to manage finances, debt, programs, enrollment and other drivers of credit quality; expense structure provides for outsized constraints and no capacity to manage operations.

Source: Moody's Investors Service

Factor: Operating Performance (10% Weight)

Why It Matters

Operating performance is an important indicator of a college's or university's ability to repay debt from operating revenue as well as invest in academic programs and facilities to advance its strategic objectives. A core aspect of a college's or university's operating performance is its earnings before interest, depreciation and amortization (EBIDA) margin.

Operating performance is important for the long-term financial health of all higher education institutions, but is especially critical for those that do not have significant financial reserves. As nonprofit and public organizations, colleges and universities face the challenge of advancing their educational missions while generating enough revenue to sustain long-term financial viability.

The factor comprises one sub-factor:

EBIDA Margin⁷

The ratio of EBIDA to adjusted operating revenue (EBIDA margin) is an important indicator of a college's or university's ability to support its operations as well as generate funds to pay for debt service.

How We Assess It for the Scorecard

Scoring for this factor is based on one sub-factor: EBIDA Margin.

EBIDA MARGIN:

The numerator is earnings before interest, depreciation, amortization and other large non-cash expenses, and the denominator is adjusted operating revenue.

FACTOR

Operating Performance (10%)

Sub-factor	Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
EBIDA Margin - Private*3	10%	≥ 25%	17.5 – 25%	10 - 17.5%	5 - 10%	1 - 5%	(2) - 1%	(4) – (2)%	< (4)%
EBIDA Margin – Public*4	10%	≥ 22.5%	15 - 22.5%	8 - 15%	3 - 8%	(1) - 3%	(3.5) – (1)%	(5) – (3.5)%	< (5)%

*3 For the linear scoring scale, the Aaa endpoint value is 40%. A value of 40% or better equates to a numeric score of 0.5. The Ca endpoint value is (6)%. A value of (6)% or worse equates to a numeric score of 20.5.

*4 For the linear scoring scale, the Aaa endpoint value is 30%. A value of 30% or better equates to a numeric score of 0.5. The Ca endpoint value is (7)%. A value of (7)% or worse equates to a numeric score of 20.5.

Source: Moody's Investors Service

Factor: Financial Resources and Liquidity (25% Weight)

Why It Matters

A college's or university's financial resources and liquidity provide important indications of its ability to withstand periods of volatility in its operating and competitive landscape. Core aspects of a higher education institution's financial resources and liquidity are its total cash and investments, and total cash and investments to operating expenses.

⁷ We may also refer to EBIDA margin as the operating cash flow margin.

This factor comprises two sub-factors:

Total Cash and Investments

Total cash and investments is an important indicator of a college's or university's financial flexibility and resilience, and its ability to generate investment income.

Total Cash and Investments to Operating Expenses

The ratio of total cash and investments to operating expenses provides important indications of the extent to which a college or university could use financial reserves to meet expenses over time. This sub-factor is of particular importance during periods of financial stress, where revenue may be subject to volatility or declines.

How We Assess It for the Scorecard

Scoring for this factor is based on two sub-factors: Total Cash and Investments, and Total Cash and Investments to Operating Expenses.

TOTAL CASH AND INVESTMENTS:

Financial resources are measured or estimated by total cash and investments in millions of US dollars. In our assessment of total cash and investments, we include some funds that may have spending restrictions, including funds that are currently available, those that may be accessed over time, and those that may generate income, such as endowment funds. We typically include the cash and investments held by any associated foundations.

TOTAL CASH AND INVESTMENTS TO OPERATING EXPENSES:

The numerator is total cash and investments, and the denominator is operating expenses.

FACTOR									
Financial Resources and Liquidity (25%)									
Sub-factor	Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Total Cash and Investments (USD Million) - Private ^{*5}	10%	≥ \$5,000	\$500 - \$5,000	\$200 - \$500	\$50 - \$200	\$30 - \$50	\$20 - \$30	\$10 - \$20	< \$10
Total Cash and Investments (USD Million) - Public ^{*6}	10%	≥ \$2,500	\$100 - \$2,500	\$25 - \$100	\$10 - \$25	\$2.5 - \$10	\$1 - \$2.5	\$0.5 - \$1	< \$0.5
Total Cash and Investments to Operating Expenses - Private ^{*7}	15%	≥ 6x	3 - 6x	1.5 - 3x	0.75 - 1.5x	0.5 - 0.75x	0.2 - 0.5x	0.15 - 0.2x	< 0.15x
Total Cash and Investments to Operating Expenses - Public ^{*8}	15%	≥ 1.25x	0.75 - 1.25x	0.5 - 0.75x	0.15 - 0.5x	0.1 - 0.15x	0.075 - 0.1x	0.05 - 0.075x	< 0.05x

*5 For the linear scoring scale, the Aaa endpoint value is \$8 billion. A value of \$8 billion or better equates to a numeric score of 0.5. The Ca endpoint value is \$5 million. A value of \$5 million or worse equates to a numeric score of 20.5.

*6 For the linear scoring scale, the Aaa endpoint value is \$5 billion. A value of \$5 billion or better equates to a numeric score of 0.5. The Ca endpoint value is \$0.1 million. A value of \$0.1 million or worse equates to a numeric score of 20.5.

*7 For the linear scoring scale, the Aaa endpoint value is 10x. A value of 10x or better equates to a numeric score of 0.5. The Ca endpoint value is 0.1x. A value of 0.1x or worse equates to a numeric score of 20.5.

*8 For the linear scoring scale, the Aaa endpoint value is 2.5x. A value of 2.5x or better equates to a numeric score of 0.5. The Ca endpoint value is 0.025x. A value of 0.025x or worse equates to a numeric score of 20.5.

Source: Moody's Investors Service

Factor: Leverage and Coverage (20% Weight)

Why It Matters

Leverage and debt service coverage are important indicators of a college's or university's ability to pay annual fixed costs, including debt service obligations, while still fulfilling its mission. Leverage and coverage measures also provide important indications of a higher education institution's capacity to adapt to changes in its economic and business environments or to adapt to changing consumer expectations by investing in new or existing capital assets. Core aspects of leverage and coverage are a college's or university's total cash and investments to total adjusted debt, and annual debt service coverage.

This factor comprises two sub-factors:

Total Cash and Investments to Total Adjusted Debt

The ratio of total cash and investments to total adjusted debt is an important indicator of a college's or university's ability to repay debt and other debt-like obligations, such as pensions, over time. A college or university with a higher ratio for this sub-factor is in a better position to repay its obligations.

Annual Debt Service Coverage

Annual debt service coverage is an important indicator of a college's or university's ability to consistently generate sufficient cash flow to repay debt.

How We Assess It for the Scorecard

Scoring for this factor is based on two sub-factors: Total Cash and Investments to Total Adjusted Debt, and Annual Debt Service Coverage.

Total Cash and Investments to Total Adjusted Debt:

The numerator is total cash and investments, and the denominator is total adjusted debt, net of externally held mandatory sinking funds.⁸

For private and public colleges and universities, we typically include both debt and equity associated with any public-private partnerships (PPPs) the issuer is party to in the adjusted debt calculation if the following three conditions are met: (i) the project is primarily intended for use by university constituents; (ii) the project is located on land owned by the university and falls under a long-term contract; and (iii) ownership of the project reverts to the university at the conclusion of the contractual agreement. In cases where information on the debt and equity of the PPP is unavailable, we typically use available information (including the college or university's disclosures on the PPP payments) to estimate the debt and equity amount, for example by estimating the cost of construction and an annual depreciation amount.

ANNUAL DEBT SERVICE COVERAGE:

The numerator is EBIDA, and the denominator is annual debt service. Annual debt service is interest expense and scheduled principal payments, excluding refundings.

⁸ Debt is adjusted for unfunded pension liabilities, operating leases and guaranteed debt obligations. Please see Appendix A for more details.

FACTOR

Leverage and Coverage (20%)

Sub-factor	Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Total Cash and Investments to Total Adjusted Debt - Private ^{*9}	10%	≥ 7x	3 - 7x	1.5 - 3x	1 - 1.5x	0.5 - 1x	0.25 - 0.5x	0.1 - 0.25x	< 0.1x
Total Cash and Investments to Total Adjusted Debt - Public ^{*10}	10%	≥ 3x	1 - 3x	0.2 - 1x	0.1 - 0.2x	0.075 - 0.1x	0.05 - 0.075x	0.02 - 0.05x	< 0.02x
Annual Debt Service Coverage - Private ^{*11}	10%	≥ 6x	4 - 6x	2.5 - 4x	1.25 - 2.5x	0.75 - 1.25x	0.4 - 0.75x	0.2 - 0.4x	< 0.2x
Annual Debt Service Coverage - Public ^{*12}	10%	≥ 4x	2 - 4x	1.5 - 2x	1 - 1.5x	0.5 - 1x	0.25 - 0.5x	0.1 - 0.25x	< 0.1x

^{*9} For the linear scoring scale, the Aaa endpoint value is 10x. A value of 10x or better equates to a numeric score of 0.5. The Ca endpoint value is 0.05x. A value of 0.05x or worse equates to a numeric score of 20.5.

^{*10} For the linear scoring scale, the Aaa endpoint value is 5x. A value of 5x or better equates to a numeric score of 0.5. The Ca endpoint value is 0.01x. A value of 0.01x or worse equates to a numeric score of 20.5.

^{*11} For the linear scoring scale, the Aaa endpoint value is 8x. A value of 8x or better equates to a numeric score of 0.5. The Ca endpoint value is 0.1x. A value of 0.1x or worse equates to a numeric score of 20.5.

^{*12} For the linear scoring scale, the Aaa endpoint value is 6x. A value of 6x or better equates to a numeric score of 0.5. The Ca endpoint value is 0.05x. A value of 0.05x or worse equates to a numeric score of 20.5.

Source: Moody's Investors Service

Factor: Financial Policy and Strategy (10% Weight)**Why It Matters**

A college's or university's financial strategy and the quality of information available to management and stakeholders provide important indications of the institution's risk appetite, risk management capabilities and ability to execute strategic plans that foster long-term financial viability.

The quality of management, governance, oversight and planning are important indicators of the ability of a college or university to fulfill its mission. Also, the level of resources that an educational institution allocates for reinvestment in infrastructure, academic programs and other strategic priorities provides important indications of its ability to execute on its strategic priorities. Management's ability to manage risks with regard to operating assumptions, asset and treasury management, capital structure, and the broader enterprise is also key to a college's or university's ability to execute on its strategy.

How We Assess It for the Scorecard**FINANCIAL POLICY AND STRATEGY:**

In assessing financial policy and strategy, we qualitatively consider the quality of a college's or university's financial management and strategy, with a focus on its track record of planning, investment and risk management. We assess management's administration and oversight of its financial and treasury operations, including the level of board involvement in, and support for, these functions.

We also assess the institution's financial strategy and its success in providing resources for its priorities, including investment in its programs and reinvestment in infrastructure. We consider management's appetite for risk and its discipline with regard to operating assumptions, asset management, capital structure and the broader enterprise. Colleges and universities that have a high quality of management oversight and credible and detailed forward-looking strategies typically score higher for this sub-factor than institutions that have poor oversight, limited forward planning, and where the financial strategy provides for low levels of resources for reinvestment.

FACTOR

Financial Policy and Strategy (10%)

Sub-factor	Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Financial Policy and Strategy	10%	Exceptionally high quality of management, oversight and planning within financial and treasury operations; financial strategy that provides extremely high levels of resources for reinvestment in infrastructure, programs and other strategic priorities; risk appetite is extremely limited with superior risk management discipline.	Excellent quality of management, oversight and planning within financial and treasury operations; financial strategy that provides very high levels of resources for reinvestment in infrastructure, programs and other strategic priorities; risk appetite is limited with excellent risk management discipline.	Very good quality of management, oversight and planning within financial and treasury operations; financial strategy that provides sufficient levels of resources for reinvestment in infrastructure, programs and other strategic priorities; risk appetite is modest with strong risk management discipline.	Good quality of management, oversight and planning within financial and treasury operations; financial strategy that provides moderate levels of resources for reinvestment in infrastructure, programs and other strategic priorities; risk appetite is moderate with effective risk management discipline.	Fair quality of management, oversight and planning within financial and treasury operations; financial strategy that provides inconsistent levels of resources for reinvestment in infrastructure, programs and other strategic priorities; risk appetite is fairly considerable or increasing with ineffective risk management discipline.	Poor quality of management, oversight and planning within financial and treasury operations; financial strategy that provides low levels of resources for reinvestment in infrastructure, programs and other strategic priorities; risk appetite is considerable and introduces challenges that are difficult to manage with ineffective risk management discipline.	Very poor quality of management, oversight and planning within financial and treasury operations; financial strategy that provides very low levels of resources for reinvestment in infrastructure, programs and other strategic priorities; risk appetite is very considerable or risk management discipline is very ineffective.	Extremely poor quality of management, oversight and planning within financial and treasury operations; financial strategy that provides little to non-existent resources for reinvestment in infrastructure, programs and other strategic priorities; risk appetite is outsized or risk management discipline is extremely ineffective.

Source: Moody's Investors Service

Other Considerations

Ratings may reflect consideration of additional factors that are not in the scorecard, usually because the factor's credit importance varies widely among the issuers in the sector or because the factor may be important only under certain circumstances or for a subset of issuers. Such factors include financial controls and the quality of financial reporting; legal structure; the quality and experience of management; assessments of governance as well as environmental and social considerations; exposure to uncertain licensing regimes; and possible interference from one or more layers of government. Regulatory, litigation, liquidity, technology and reputational risk as well as changes to consumer and business spending patterns, competitor strategies and macroeconomic trends also affect ratings.

Following are some examples of additional considerations that may be reflected in our ratings and that may cause ratings to be different from scorecard-indicated outcomes.

Multi-Year Trends

The momentum and direction of credit trends are integral to our forward-looking assessment. Prospects for tuition, gifts and other revenue, operating expenses and capital spending are important to a college's or university's credit profile. Trend analysis helps inform our evaluation of the budgets and forecasts provided by issuers, and sometimes reveals underlying credit issues not evident in a point-in-time analysis. The pace at which a trend develops can influence the magnitude of the credit impact. Deterioration of credit quality can occur quickly, particularly if management is slow to react or fails to address a fundamental fiscal imbalance.

Marketable Real Estate

In our calculations of a college's or university's total cash and investments, we exclude the real estate value of property that is related to the educational institution's core mission. We may, however, qualitatively consider the potential value of real estate or unused land that is not related to a college's or university's mission. Colleges and universities vary widely in their capital intensity and real estate needs, and these needs can change over time. In some cases, a college or university owns real estate that it does not need yet has a clear alternative use, i.e., it has demonstrated market value and could be separated from core real estate without affecting ongoing operations. In some cases, colleges and universities own other marketable assets that are not directly related to their missions, such as fine art objects unrelated to an art education program, that may have some impact on credit quality. If these assets are specifically pledged as collateral to support debt, it could impact instrument-level ratings.

Regulatory Considerations

Higher education institutions are subject to varying degrees of regulatory oversight. Effects of these regulations may entail limitations on operations, higher costs, and higher potential for technology disruptions and demand substitution. Regional differences in regulation, implementation or enforcement may advantage or disadvantage particular issuers.

Regulatory considerations also play a role in our assessment of the Operating Environment sub-factor. Our view of future regulations also plays an important role in our expectations of future financial metrics as well as our confidence level in the ability of an issuer to generate sufficient cash flows relative to its debt burden over the medium and longer term. For example, changes in local, state/provincial or federal/national regulations may result in a loss of flexibility for a college or university to manage its programs and finances. In some circumstances, regulatory considerations may also be a rating factor outside the scorecard, for instance when regulatory change is swift.

Environmental, Social and Governance Considerations

Environmental, social and governance (ESG) considerations may affect the ratings of issuers in the higher education sector. For information about our approach to assessing ESG issues, please see our methodology that describes our general principles for assessing these risks.⁹

Within environmental considerations, higher education institutions may be directly exposed to extreme weather events associated with climate change, such as hurricanes, floods and wildfires due to the location of their facilities, and this may affect credit quality. The investments in a college or university's endowment could be affected by physical risks and by other sources of environmental risks, especially if those investments are concentrated and illiquid.

Social risks to higher education issuers include demographics and societal trends, which may reduce student enrollment and curb tuition growth. The amount of student debt and questions about the value proposition of higher education may heighten affordability concerns and may affect demand and pricing power, or it may become a political issue. Government tuition controls may also dampen revenue growth in some instances. Human capital considerations include the structure of the labor force, which in some jurisdictions may introduce rigid work rules or limit the ability of colleges and universities to reduce staff. Highly specialized requirements for some academic and research positions may lead to an escalation in compensation costs. For universities and colleges, management of customer relations includes the need to

⁹ A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

offer a range of services to stakeholders, including students, donors and governments, that have competing demands, that may constrain a college's or university's ability to adapt to a changing competitive landscape.

Some governance considerations are reflected in our qualitative sub-factors, including organizational structure, relationships with governmental and private affiliates, financial strategy and oversight. In terms of governance, the strategy, financial health and credit quality of a college or university are fundamentally driven by the decisions of its board members and leadership team. We may also consider the relationship of a university with its associated foundation in assessing the foundation's credit quality.

Governance considerations are particularly important in cases where a college or university undergoes a period of transition or financial stress. Among the typical areas of focus are the structure and composition of a college's or university's board and its policies and procedures, the quality and track record of senior management, including its ability to develop and execute short- and long-range plans, the customization of enterprise risk management and controls based on business complexity, compliance and reporting, and the institution's ability and willingness to measure its performance and implement policies based on internal objectives or in response to changes in the competitive landscape. We may also consider audit committee financial expertise, the incentives created by executive compensation packages, related-party transactions and interactions with outside auditors.

ESG considerations are not always negative, and they can be a source of credit strength in some instances. For example, ESG considerations may create opportunities for research universities.

Financial Controls

We rely on the accuracy of audited financial statements to assign and monitor ratings in this sector. The quality of financial statements may be influenced by internal controls, including the proper tone at the top, centralized operations, and consistency in accounting policies and procedures. Auditors' reports on the effectiveness of internal controls, auditors' comments in financial reports and unusual restatements of financial statements or delays in regulatory filings may indicate weaknesses in internal controls.

Liquidity

While Financial Resources and Liquidity are considered in the scorecard, when liquidity is very weak, the impact it has on ratings may be much greater than the standard scorecard weight would imply. Liquidity can be particularly important for issuers in highly seasonal operating environments where working capital needs must be considered, and ratings can be heavily affected by extremely weak liquidity. We form an opinion on likely near-term liquidity requirements from the perspective of both sources and uses of cash. For additional insight into general principles for assessing liquidity, please see our liquidity cross-sector methodology.¹⁰

Additional Metrics

The metrics included in the scorecard are those that are generally most important in assigning ratings to higher education issuers; however, we may use additional metrics to inform our analysis of specific issuers. These additional metrics may be important to our forward view of metrics that are in the scorecard or other rating factors.

For example, the percentage of total revenue that the maximum single revenue source contributes (for example, government funding compared with tuition) is not always an important differentiator of credit profiles. Strong higher education issuers typically maintain significant reserves and strong expenditure controls to mitigate high dependence on a single revenue source. Weaker higher education issuers may not

¹⁰ A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

be highly dependent on a single source of revenue, but may have weak expenditure and investment management that leaves them with limited resources. However, in some cases, the percentage of total revenue from the maximum single source can be an important driver of a college's or university's likely ability to manage in cases where there are rapid, severe reductions to that revenue source.

Other metrics that inform our assessment include annual change in operating revenue, which may inform our qualitative assessment of revenue volatility, sustainable funding of operations and the operating environment; monthly days cash on hand and spendable cash and investments to operating expenses, which may inform our forward view of financial resources and liquidity; spendable cash and investments to total adjusted debt, which may provide insights into how restrictions affect leverage liquidity; and total adjusted debt to EBIDA, which may inform our forward view of debt service coverage and affordability.

Event Risk

We also recognize the possibility that an unexpected event could cause a sudden and sharp decline in an issuer's fundamental creditworthiness, which may cause actual ratings to be lower than the scorecard-indicated outcome. Event risks are varied and can include natural disasters, legal judgments, security incidents, and sudden regulatory changes or liabilities. Some other types of event risks include M&A, asset sales, spin-offs, litigation, pandemics or significant cyber-crime events. Event risk analysis for educational institutions typically focuses on the nature of the disruption or damage, the cost of remediation, lost revenue, potential insurance coverage for property damage or business disruption, and plans to pay for the costs of recovery and to respond to changes to the operating model.

Government and Institutional Support

Government or institutional support affects many aspects of both private and public colleges and universities. Government policies and regulations can add to a higher education organization's credit strength if they enhance oversight or financial stability, or constrain credit quality if they limit the college's or university's ability to adapt to changes in the environment. While government policies and regulations are considered in the Operating Environment sub-factor, important strengths or weaknesses related to government interactions may increase the importance of this sub-factor in our credit assessment, or they may be considered outside of the scorecard.

Some colleges and universities receive significant, consistent support from governments or affiliated private organizations. The credit profile of higher education organizations can be affected in cases where government or institutional support changes or becomes politicized. Colleges and universities may also have meaningful relationships with external trusts or foundations that can affect their credit profiles.

Non-US colleges and universities are government-related issuers that may receive ratings uplift due to expected extraordinary government support. Please see our cross-sector methodology that describes how we incorporate support in these cases.¹¹

Healthcare Operations

Universities with material financial or academic linkages with healthcare organizations, such as academic medical centers, can benefit from or be susceptible to the operating performance of their affiliated hospitals. Due to the strategic and reputational risks associated with these relationships, our assessment centers on the ties between the university and affiliated hospital irrespective of the legal structure. We typically re-

¹¹ A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

evaluate these relationships where they change as a result of the financial performance of each entity, new senior leadership teams, or evolving organizational cultures and priorities.¹²

Assigning Issuer-Level and Instrument-Level Ratings

After considering the scorecard-indicated outcome, other considerations and relevant cross-sector methodologies, we typically assign an issuer rating or a senior unsecured rating. Individual debt instrument ratings may be assigned at the same level or higher or lower than the issuer rating or senior unsecured rating to reflect our assessment of differences in expected loss related to an instrument's priority of claim as well as the specific lien or pledge included in the instrument's terms.

For US colleges and universities, we typically assign an issuer rating. Broad guidance on assigning ratings to instruments such as general promises to pay, lease and contingent obligations, and limited revenue obligations, which may be notched up or down from the issuer rating can be found in Appendix C.

For issuers that we designate as government-related issuers (GRIs), we typically assign a Baseline Credit Assessment (BCA) based on the college's or university's intrinsic credit strength.¹³ In assigning ratings, we incorporate the likelihood of the government providing extraordinary support, and we typically assign a senior unsecured rating to a college or university. We may also assign an issuer rating. In assigning ratings to other classes of debt, we consider differences in priority of claim as well as potential differences in the level of extraordinary support.

The senior secured debt rating of a GRI college or university is typically one notch higher than the senior unsecured rating where the latter is investment-grade, and typically one or two notches higher where the senior unsecured rating is below investment grade. Based on priority of claim considerations, subordinated debt or junior subordinated debt is typically rated one or two notches below senior unsecured debt. However, notching related to priority of claim may widen or narrow as an issuer's credit profile deteriorates and the impact of a prospective default on each debt class becomes clearer.

Notching for priority of claim may also be wider where there is an unbalanced capital structure, and it is typically much narrower where we have less confidence that creditors' stated priority of claim will be enforceable.¹⁴ Additionally, as described in our methodology that discusses government-related issuers, we may in some cases take a different view on the likelihood of extraordinary support for a subordinated instrument, which may lead to further downward notching relative to the senior unsecured rating.

Key Rating Assumptions

For information about key rating assumptions that apply to methodologies generally, please see *Rating Symbols and Definitions*.¹⁵

¹² For details, see our methodology for rating not-for-profit healthcare institutions. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

¹³ For more information on the Baseline Credit Assessment, please refer to *Rating Symbols and Definitions* and to our cross-sector methodology for government-related issuers. A link to a list of our sector and cross-sector methodologies and a link to *Rating Symbols and Definitions* can be found in the "Moody's Related Publications" section.

¹⁴ For additional insight into general principles related to notching instrument ratings based on priority of claim, please see our cross-sector methodology that discusses notching corporate instrument ratings based on differences in security and priority of claim. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

¹⁵ A link to *Rating Symbols and Definitions* can be found in the "Moody's Related Publications" section.

Limitations

In the preceding sections, we have discussed the scorecard factors, many of the other rating considerations that may be important in assigning ratings, and certain key assumptions. In this section, we discuss limitations that pertain to the scorecard and to the overall rating methodology.

Limitations of the Scorecard

There are various reasons why scorecard-indicated outcomes may not map closely to actual ratings.

The scorecard in this rating methodology is a relatively simple tool focused on indicators for relative credit strength. Credit loss and recovery considerations, which are typically more important as an issuer gets closer to default, may not be fully captured in the scorecard. The scorecard is also limited by its upper and lower bounds, causing scorecard-indicated outcomes to be less likely to align with ratings for issuers at the upper and lower ends of the rating scale.

The weights for each factor and sub-factor in the scorecard represent an approximation of their importance for rating decisions across the sector, but the actual importance of a particular factor may vary substantially based on an individual issuer's circumstances.

Factors that are outside the scorecard, including those discussed above in the "Other Considerations" section, may be important for ratings, and their relative importance may also vary from issuer to issuer. In addition, certain broad methodological considerations described in one or more cross-sector rating methodologies may be relevant to ratings in this sector.¹⁶ Examples of such considerations include the following: how sovereign credit quality affects non-sovereign issuers, the assessment of credit support from other entities, and the assignment of short-term ratings.

We may use the scorecard over various historical or forward-looking time periods. Furthermore, in our ratings we often incorporate directional views of risks and mitigants in a qualitative way.

General Limitations of the Methodology

This methodology document does not include an exhaustive description of all factors that we may consider in assigning ratings in this sector. Issuers in the sector may face new risks or new combinations of risks, and they may develop new strategies to mitigate risk. We seek to incorporate all material credit considerations in ratings and to take the most forward-looking perspective that visibility into these risks and mitigants permits.

Ratings reflect our expectations for an issuer's future performance; however, as the forward horizon lengthens, uncertainty increases and the utility of precise estimates, as scorecard inputs or in other rating considerations, typically diminishes. Our forward-looking opinions are based on assumptions that may prove, in hindsight, to have been incorrect. Reasons for this could include unanticipated changes in any of the following: the macroeconomic environment, general financial market conditions, industry competition, disruptive technology, or regulatory and legal actions. In any case, predicting the future is subject to substantial uncertainty.

¹⁶ A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Appendix A: Using the Scorecard to Arrive at a Scorecard-Indicated Outcome

1. Measurement or Estimation of Factors in the Scorecard

In the "Discussion of the Scorecard Factors" section, we explain our analytical approach for scoring each scorecard factor or sub-factor,¹⁷ and we describe why they are meaningful as credit indicators.

The information used in assessing the sub-factors is generally found in or calculated from information in the issuer's financial statements or regulatory filings, derived from other observations or estimated by Moody's analysts. We may also incorporate non-public information.

Our ratings are forward-looking and reflect our expectations for future financial and operating performance. However, historical results are helpful in understanding patterns and trends of an issuer's performance as well as for peer comparisons. Financial ratios, unless otherwise indicated, are typically calculated based on an annual or 12-month period. However, the factors in the scorecard can be assessed using various time periods. For example, rating committees may find it analytically useful to examine both historical and expected future performance for periods of several years or more.

For US public universities and community colleges, we adjust financial statement amounts and related quantitative credit metrics for defined-benefit pension plan assets and liabilities. For private colleges and universities, and where applicable, non-US private and public colleges and universities, we adjust financial statement amounts and related quantitative credit metrics for operating leases and underfunded pension obligations, as well as guarantees of third-party debt, in accordance with our cross-sector methodology that describes our financial statement adjustments in the analysis of non-financial corporations.¹⁸ For clarity, we do not typically make any of the other adjustments that are described in that cross-sector methodology. We may also make other analytical adjustments that are specific to a particular issuer.

2. Mapping Scorecard Factors to a Numeric Score

After estimating or calculating each sub-factor, each outcome is mapped to a broad Moody's rating category (Aaa, Aa, A, Baa, Ba, B, Caa or Ca, also called alpha categories) and to a numeric score.

Qualitative factors are scored based on the description by broad rating category in the scorecard. The numeric value of each alpha score is based on the scale below.

Aaa	Aa	A	Baa	Ba	B	Caa	Ca
1	3	6	9	12	15	18	20

Source: Moody's Investors Service

Quantitative factors are scored on a linear continuum. For each metric, the scorecard shows the range by alpha category. We use the scale below and linear interpolation to convert the metric, based on its placement within the scorecard range, to a numeric score, which may be a fraction. As a purely theoretical example, if there were a ratio of revenue to interest for which the Baa range was 50x to 100x, then the numeric score for an issuer with revenue/interest of 99x, relatively strong within this range, would score closer to 7.5, and an issuer with revenue/interest of 51x, relatively weak within this range, would score closer to 10.5. In the text or table footnotes, we define the endpoints of the line (i.e., the value of the metric that constitutes the lowest possible numeric score, and the value that constitutes the highest possible numeric score).

¹⁷ When a factor comprises sub-factors, we score at the sub-factor level. Some factors do not have sub-factors, in which case we score at the factor level.

¹⁸ A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Aaa	Aa	A	Baa	Ba	B	Caa	Ca
0.5-1.5	1.5-4.5	4.5-7.5	7.5-10.5	10.5-13.5	13.5-16.5	16.5-19.5	19.5-20.5

Source: Moody's Investors Service

3. Determining the Overall Scorecard-Indicated Outcome

The numeric score for each sub-factor (or each factor, when the factor has no sub-factors) is multiplied by the weight for that sub-factor (or factor), with the results then summed to produce an aggregate numeric score. The aggregate numeric score is then mapped back to a scorecard-indicated outcome based on the ranges in the table below.

EXHIBIT 2

Scorecard-Indicated Outcome

Scorecard-Indicated Outcome	Aggregate Numeric Score
Aaa	$x \leq 1.5$
Aa1	$1.5 < x \leq 2.5$
Aa2	$2.5 < x \leq 3.5$
Aa3	$3.5 < x \leq 4.5$
A1	$4.5 < x \leq 5.5$
A2	$5.5 < x \leq 6.5$
A3	$6.5 < x \leq 7.5$
Baa1	$7.5 < x \leq 8.5$
Baa2	$8.5 < x \leq 9.5$
Baa3	$9.5 < x \leq 10.5$
Ba1	$10.5 < x \leq 11.5$
Ba2	$11.5 < x \leq 12.5$
Ba3	$12.5 < x \leq 13.5$
B1	$13.5 < x \leq 14.5$
B2	$14.5 < x \leq 15.5$
B3	$15.5 < x \leq 16.5$
Caa1	$16.5 < x \leq 17.5$
Caa2	$17.5 < x \leq 18.5$
Caa3	$18.5 < x \leq 19.5$
Ca	$19.5 < x \leq 20.5$
C	$x > 20.5$

Source: Moody's Investors Service

For example, an issuer with an aggregate numeric score of 11.7 would have a Ba2 scorecard-indicated outcome.

In general, the scorecard-indicated outcome is oriented to the issuer rating. For issuers that benefit from rating uplift from parental support, government ownership or other institutional support, we consider the underlying credit strength or Baseline Credit Assessment for comparison to the scorecard-indicated outcome. For an explanation of the Baseline Credit Assessment, please refer to *Rating Symbols and Definitions* and to our cross-sector methodology for government-related issuers.¹⁹

¹⁹ A link to a list of our sector and cross-sector methodologies and a link to *Rating Symbols and Definitions* can be found in the "Moody's Related Publications" section.

Appendix B: Higher Education Scorecard

	Factor or Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Factor: Scale (15%)									
Adjusted Operating Revenue (USD Million) - Private *1	15%	≥\$2,500	\$500 - \$2,500	\$100 - \$500	\$40 - \$100	\$30 - \$40	\$20 - \$30	\$10 - \$20	< \$10
Adjusted Operating Revenue (USD Million) - Public *2	15%	≥\$2,500	\$500 - \$2,500	\$100 - \$500	\$25 - \$100	\$15 - \$25	\$10 - \$15	\$5 - \$10	< \$5
Factor: Market Profile (20%)									
Brand and Strategic Positioning	10%	Exceptional ability to consistently generate stable revenue that sustainably funds operations; exceptional breadth of offerings, revenue diversity and geographic reach, and extremely close alignment of academic programs to market and customer demand; organizational structure and affiliated relationships do not add undue complexity or risk to achieving strategic objectives.	Excellent ability to consistently generate stable revenue that sustainably funds operations; excellent breadth of offerings, revenue, diversity and geographic reach, and extremely close alignment of academic programs to market and customer demand; organizational structure and affiliated relationships add only minimal undue complexity or risk to achieving strategic objectives.	Very good ability to consistently generate stable revenue that sustainably funds operations; very good breadth of offerings, revenue, diversity and geographic reach, and close alignment of academic programs to market and customer demand; organizational structure and affiliated relationships add low undue complexity or risk to achieving strategic objectives.	Good ability to consistently generate stable revenue that sustainably funds operations; good breadth of offerings, revenue, diversity and geographic reach, and adequate alignment of academic programs to market and customer demand; organizational structure and affiliated relationships add moderate undue complexity or risk to achieving strategic objectives.	Inconsistent ability to generate stable revenue that sustainably funds operations; fair breadth of offerings, revenue, diversity and geographic reach, and uneven alignment of academic programs to market and customer demand; organizational structure and affiliated relationships add elevated undue complexity or risk to achieving strategic objectives.	Weak ability to generate stable revenue that sustainably funds operations; poor breadth of offerings, revenue, diversity and geographic reach, and weak alignment of academic programs to market and customer demand; organizational structure and affiliated relationships add high undue complexity or risk to achieving strategic objectives.	Very weak ability to generate stable revenue that sustainably funds operations; very poor breadth of offerings, revenue, diversity and geographic reach, and very weak alignment of academic programs to market and customer demand; organizational structure and affiliated relationships add very high undue complexity or risk to achieving strategic objectives.	Extremely weak ability to generate revenue that sustainably funds operations; extremely poor breadth of offerings, revenue, diversity and geographic reach, and little to non-existent alignment of academic programs to market and customer demand; organizational structure and affiliated relationships add extremely high undue complexity or risk to achieving strategic objectives.

	Factor or Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Operating Environment	10%	Very strong and highly predictable direct and indirect governmental funding; regulatory and policy framework that is highly supportive to institutional success and provides full flexibility to manage finances, debt, programs, enrollment and other drivers of credit quality; expense structure provides for minimal constraints and very strong capacity to manage operations.	Strong and predictable direct and indirect governmental funding; regulatory and policy framework that is supportive to institutional success and provides broad flexibility to manage finances, debt, programs, enrollment and other drivers of credit quality; expense structure provides for very low constraints and strong capacity to manage operations.	Very good and mostly predictable direct and indirect governmental funding; regulatory and policy framework that is mostly supportive to institutional success and provides solid flexibility to manage finances, debt, programs, enrollment and other drivers of credit quality; expense structure provides for low constraints and very good capacity to manage operations.	Good direct and indirect governmental funding with moderate volatility; regulatory and policy framework that is generally supportive to institutional success and provides moderate flexibility to manage finances, debt, programs, enrollment and other drivers of credit quality; expense structure provides for moderate constraints and good capacity to manage operations.	Fair direct and indirect governmental funding with elevated volatility; regulatory and policy framework that poses challenges to institutional success and provides limited flexibility to manage finances, debt, programs, enrollment and other drivers of credit quality; expense structure provides for elevated constraints and limited capacity to manage operations.	Poor direct and indirect governmental funding with elevated volatility; regulatory and policy framework that detracts from institutional success and provides very limited flexibility to manage finances, debt, programs, enrollment and other drivers of credit quality; expense structure provides for substantial constraints and very limited capacity to manage operations.	Very poor direct and indirect governmental funding with substantial volatility; regulatory and policy framework that hinders institutional success and provides little to non-existent flexibility to manage finances, debt, programs, enrollment and other drivers of credit quality; expense structure provides for very high constraints and little to non-existent capacity to manage operations.	Extremely poor direct and indirect governmental funding with substantial volatility; regulatory and policy framework that prevents institutional success and contains no flexibility to manage finances, debt, programs, enrollment and other drivers of credit quality; expense structure provides for outsized constraints and no capacity to manage operations.

	Factor or Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Factor: Operating Performance (10%)									
EBIDA Margin - Private ^{*3}	10%	≥ 25%	17.5 – 25%	10 - 17.5%	5 - 10%	1 - 5%	(2) - 1%	(4) – (2)%	< (4)%
EBIDA Margin – Public ^{*4}	10%	≥ 22.5%	15 - 22.5%	8 - 15%	3 - 8%	(1) - 3%	(3.5) – (1)%	(5) – (3.5)%	< (5)%
Factor: Financial Resources and Liquidity (25%)									
Total Cash and Investments (USD Million) - Private ^{*5}	10%	≥ \$5,000	\$500 - \$5,000	\$200 - \$500	\$50 - \$200	\$30 - \$50	\$20- \$30	\$10 - \$20	< \$10
Total Cash and Investments (USD Million) - Public ^{*6}	10%	≥ \$2,500	\$100 - \$2,500	\$25 - \$100	\$10 - \$25	\$2.5 - \$10	\$1 - \$2.5	\$0.5 - \$1	< \$0.5
Total Cash and Investments to Operating Expenses - Private ^{*7}	15%	≥ 6x	3 - 6x	1.5 - 3x	0.75 - 1.5x	0.5 - 0.75x	0.2 - 0.5x	0.15 - 0.2x	<0.15x
Total Cash and Investments to Operating Expenses - Public ^{*8}	15%	≥ 1.25x	0.75 - 1.25x	0.5 - 0.75x	0.15 - 0.5x	0.1 - 0.15x	0.075 - 0.1x	0.05 - 0.075x	< 0.05x
Factor: Leverage and Coverage (20%)									
Total Cash and Investments to Total Adjusted Debt - Private ^{*9}	10%	≥ 7x	3 - 7x	1.5 - 3x	1 - 1.5x	0.5 – 1x	0.25 - 0.5x	0.1 - 0.25x	< 0.1x
Total Cash and Investments to Total Adjusted Debt - Public ^{*10}	10%	≥ 3x	1 - 3x	0.2 - 1x	0.1 - 0.2x	0.075 - 0.1x	0.05 - 0.075x	0.02 - 0.05x	< 0.02x
Annual Debt Service Coverage - Private ^{*11}	10%	≥ 6x	4 - 6x	2.5 - 4x	1.25 - 2.5x	0.75 - 1.25x	0.4 - 0.75x	0.2 - 0.4x	< 0.2x
Annual Debt Service Coverage - Public ^{*12}	10%	≥ 4x	2 - 4x	1.5 - 2x	1 - 1.5x	0.5 - 1x	0.25 - 0.5x	0.1 - 0.25x	< 0.1x

	Factor or Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Factor: Financial Policy and Strategy (10%)									
Financial Policy and Strategy	10%	Exceptionally high quality of management, oversight and planning within financial and treasury operations; financial strategy that provides extremely high levels of resources for reinvestment in infrastructure, programs and other strategic priorities; risk appetite is extremely limited with superior risk management discipline.	Excellent quality of management, oversight and planning within financial and treasury operations; financial strategy that provides very high levels of resources for reinvestment in infrastructure, programs and other strategic priorities; risk appetite is limited with excellent risk management discipline.	Very good quality of management, oversight and planning within financial and treasury operations; financial strategy that provides sufficient levels of resources for reinvestment in infrastructure, programs and other strategic priorities; risk appetite is modest with strong risk management discipline.	Good quality of management, oversight and planning within financial and treasury operations; financial strategy that provides moderate levels of resources for reinvestment in infrastructure, programs and other strategic priorities; risk appetite is moderate with effective risk management discipline.	Fair quality of management, oversight and planning within financial and treasury operations; financial strategy that provides inconsistent levels of resources for reinvestment in infrastructure, programs and other strategic priorities; risk appetite is fairly considerable or increasing with ineffective risk management discipline.	Poor quality of management, oversight and planning within financial and treasury operations; financial strategy that provides low levels of resources for reinvestment in infrastructure, programs and other strategic priorities; risk appetite is considerable and introduces challenges that are difficult to manage with ineffective risk management discipline.	Very poor quality of management, oversight and planning within financial and treasury operations; financial strategy that provides very low levels of resources for reinvestment in infrastructure, programs and other strategic priorities; risk appetite is very considerable or risk management discipline is very ineffective.	Extremely poor quality of management, oversight and planning within financial and treasury operations; financial strategy that provides little to non-existent resources for reinvestment in infrastructure, programs and other strategic priorities; risk appetite is outsized or risk management discipline is extremely ineffective.

*1 For the linear scoring scale, the Aaa endpoint value is \$3 billion. A value of \$3 billion or better equates to a numeric score of 0.5. The Ca endpoint value is \$5 million. A value of \$5 million or worse equates to a numeric score of 20.5.

*2 For the linear scoring scale, the Aaa endpoint value is \$3 billion. A value of \$3 billion or better equates to a numeric score of 0.5. The Ca endpoint value is \$1 million. A value of \$1 million or worse equates to a numeric score of 20.5.

*3 For the linear scoring scale, the Aaa endpoint value is 40%. A value of 40% or better equates to a numeric score of 0.5. The Ca endpoint value is (6)%. A value of (6)% or worse equates to a numeric score of 20.5.

*4 For the linear scoring scale, the Aaa endpoint value is 30%. A value of 30% or better equates to a numeric score of 0.5. The Ca endpoint value is (7)%. A value of (7)% or worse equates to a numeric score of 20.5.

*5 For the linear scoring scale, the Aaa endpoint value is \$8 billion. A value of \$8 billion or better equates to a numeric score of 0.5. The Ca endpoint value is \$5 million. A value of \$5 million or worse equates to a numeric score of 20.5.

*6 For the linear scoring scale, the Aaa endpoint value is \$5 billion. A value of \$5 billion or better equates to a numeric score of 0.5. The Ca endpoint value is \$0.1 million. A value of \$0.1 million or worse equates to a numeric score of 20.5.

*7 For the linear scoring scale, the Aaa endpoint value is 10x. A value of 10x or better equates to a numeric score of 0.5. The Ca endpoint value is 0.1x. A value of 0.1x or worse equates to a numeric score of 20.5.

*8 For the linear scoring scale, the Aaa endpoint value is 2.5x. A value of 2.5x or better equates to a numeric score of 0.5. The Ca endpoint value is 0.025x. A value of 0.025x or worse equates to a numeric score of 20.5.

*9 For the linear scoring scale, the Aaa endpoint value is 10x. A value of 10x or better equates to a numeric score of 0.5. The Ca endpoint value is 0.05x. A value of 0.05x or worse equates to a numeric score of 20.5.

*10 For the linear scoring scale, the Aaa endpoint value is 5x. A value of 5x or better equates to a numeric score of 0.5. The Ca endpoint value is 0.01x. A value of 0.01x or worse equates to a numeric score of 20.5.

*11 For the linear scoring scale, the Aaa endpoint value is 8x. A value of 8x or better equates to a numeric score of 0.5. The Ca endpoint value is 0.1x. A value of 0.1x or worse equates to a numeric score of 20.5.

*12 For the linear scoring scale, the Aaa endpoint value is 6x. A value of 6x or better equates to a numeric score of 0.5. The Ca endpoint value is 0.05x. A value of 0.05x or worse equates to a numeric score of 20.5.

Source: Moody's Investors Service

Appendix C: Assigning Instrument Ratings to Higher Education Issuers

In this appendix, we describe our general principles for assessing how an instrument's particular characteristics affect its credit risk, more specifically, the instrument's probability of default and loss upon an event of default. Credit risk of individual debt instruments of US colleges and universities and their related units may be different from what is reflected in the issuer rating.

We also provide guidance for assigning individual debt instrument ratings relative to the issuer rating based on these considerations.²⁰ These differences may arise from the specific pledge included in the instrument's terms, the instrument's priority of claim, and the nature of the instrument (e.g., whether it is a contingent or a non-contingent obligation). As a result, instrument considerations may lead to the application of upward or downward notches from the issuer rating.

US University Foundations

US university foundations, while typically legally separate organizations, often perform a variety of core functions for their affiliated universities. These functions include acting as a university's primary fundraising and endowment management vehicle, acquiring and managing real estate for the benefit of the university, investing in research infrastructure and development, supporting athletic programs and operating auxiliary functions such as housing.

Since university foundations are created to support an affiliated university, the organizations are often closely linked from a financial and strategic perspective. In assigning a rating to a university foundation, we typically assess the degree of financial, strategic and governance linkages between the foundation and its affiliated university, as well as the foundation's independent financial strength and the security features of the particular instrument the foundation is issuing. The typical alignment of a foundation and its affiliated university results in foundation ratings that tend to be one or two notches higher or lower than the issuer rating of the affiliated university.

In cases where a foundation is largely independent of the university, financially and operationally, we may assign a separate issuer rating to the foundation.

General Approach for Assigning Instrument Ratings to US Colleges and Universities

In this section, we describe some of the analytic elements of the typical structural features of debt instruments in the sector, and why they are important. Individual instruments may include permutations of these analytic elements.

For each instrument type, we evaluate the instrument's security features, including whether the debt obligation is contingent or non-contingent. We also consider whether the pledge, if any, is active or passive. We typically also assess the characteristics of the revenue base, debt service coverage and other factors. We consider the aggregate (typically cumulative)²¹ effect of these structural analytic elements to arrive at the assigned instrument rating.

²⁰ For clarity, the guidance for assigning instrument ratings also refers to situations where we assign a debt instrument rating at the same level as the issuer rating.

²¹ In most cases, notching for the various analytic elements is cumulative; however, there may be circumstances where one analytic element mitigates or exacerbates the credit effect of another analytic element.

Non-contingent General Promises to Pay or Broad Revenue Pledge and Contingent Obligations

Debt issued by US colleges and universities may include a general promise to pay, where general operating revenue is available for the payment of debt service, but the issuer has not pledged a specific, material revenue stream. For other obligations, the issuer may have pledged a broad array of specific revenue streams, but they are not contingent. The college or university may also issue contingent obligations, as described below.

Some obligations represent a general (non-contingent) promise to pay, using the college's or university's available revenue,²² or most or all of its main operating revenue. Many obligations in this group contain broad language describing the promise, but do not include a specific pledge of revenue; others specifically pledge a broad subset of the college or university's main operating revenue. Because these pledges are non-contingent, we consider them to be a promise of a college's or university's general revenues. In other cases, the pledged revenues are limited to narrow revenues from specific operations and may be subordinated to other debt. As there is wide variation in the language used to describe the promise to pay, we look at the substance of the issuer's obligation.

Security Features

Why It Matters

Security features set the framework for our overall debt instrument analysis because these features may enhance or weaken the instrument's credit risk relative to the credit risk indicated by the issuer rating. Security features include the specific revenue pledge that a college or university grants to bondholders.

A fundamental security consideration is whether the pledge is contingent or non-contingent. Contingent obligations are weaker than a non-contingent general promise to pay or broad revenue pledge (as described below) for US colleges and universities. Contingent debt is an obligation where the stated promise to pay does not extend for the life of the obligation because it is dependent upon additional action or the availability of the asset.²³ A typical contingency requires a college or university to appropriate funds to pay debt service annually; each appropriation renews the pledge for another year. There are other types of contingencies, such as a requirement for a leased asset to remain available for a college's or university's use or occupancy in order for the institution to remain obligated to make lease payments.²⁴ It is important to look through the nominal debt type to the underlying characteristics of the pledge to understand whether the debt is a contingent or non-contingent obligation.

There may be features of a debt instrument that provide meaningful additional collateral or security that results in upward notching from the college's or university's issuer rating. One relatively common instrument type in this sector is debt that is secured by specific collateral beyond pledged revenue, such as a mortgage on real property. Other security features, such as revenue collected directly by a third party, could provide physical and legal separation of pledged revenue from the issuer's control to a degree that enhances recovery prospects in the event of default, compared with other debt. The presence of such collateral or security features could result in the assignment of instrument ratings that are higher than the issuer rating.

We note that the collateral and security features described above are different from whether there is a specific pledge or promise to pay, which we discuss below.

²² Available revenue is typically revenue that has not been pledged to pay other obligations.

²³ Examples of contingent debt include lease transactions and certificates of participation.

²⁴ Typically, from a statutory perspective, contingent obligations are not considered debt, which is often a reason why these instruments are employed; they also do not typically require voter approval. Please see *Rating Symbols and Definitions* for more information on what we consider to be a default.

Active or Passive Pledges

Why It Matters

The active or passive nature of a pledge is important because it can differentiate whether the college or university has meaningful ability to manage its operations to ensure pledged revenues are sufficient to pay debt. In most cases, colleges and universities actively manage their operations to the extent that we view the pledge as active. Where the issuer does not have the statutory or legal ability to increase or supplement pledged revenue, we view the pledge as passive. We view such limitations as distinct from a college's or university's willingness and ability to manage pledge revenues, and from economic constraints, which are addressed in the "Characteristics of the Revenue Base" section below.

Characteristics of the Revenue Base

Why It Matters

The promise to pay and the revenue pledge, if any, embedded in the instrument delineate the relationship between the issuer's total revenue base, which is considered in its issuer rating, and the revenue that is available to pay debt service of a specific instrument.

The breadth, stability and diversity of the pledged revenue base relative to the issuer's revenue provide important indications of the strength or weakness of the revenue pledged to meet debt service. If a pledge is more limited or less stable than the broad operating revenue that is reflected in the issuer rating, particularly if the pledge is passive in nature, the bondholder may face more risk than is indicated in the issuer rating.

Where the pledged revenue base is narrow, bondholders may have limited recourse if the specific pledged revenue is insufficient to meet debt service on the related obligations. However, in some cases, a nominally narrower pledge can still be robust.

Debt Service Coverage

Why It Matters

Annual debt service coverage is a sub-factor in the assignment of issuer ratings to US colleges and universities. For some pledge types, debt service coverage for an individual instrument is an also important indicator of the sufficiency of the pledged revenue to meet debt service payments, e.g., where the dedicated revenue stream is limited or passive.

We therefore consider debt service coverage for the individual instrument, separate and distinct from a US college's or university's enterprise-wide debt service coverage. This assessment incorporates any revenue covenants as defined in the indenture that governs the instrument.²⁵ If there is material excess revenue above required debt service and covenant levels, the relevant bonds have lower exposure to potential variations in the revenue stream.

Other Factors

Why It Matters

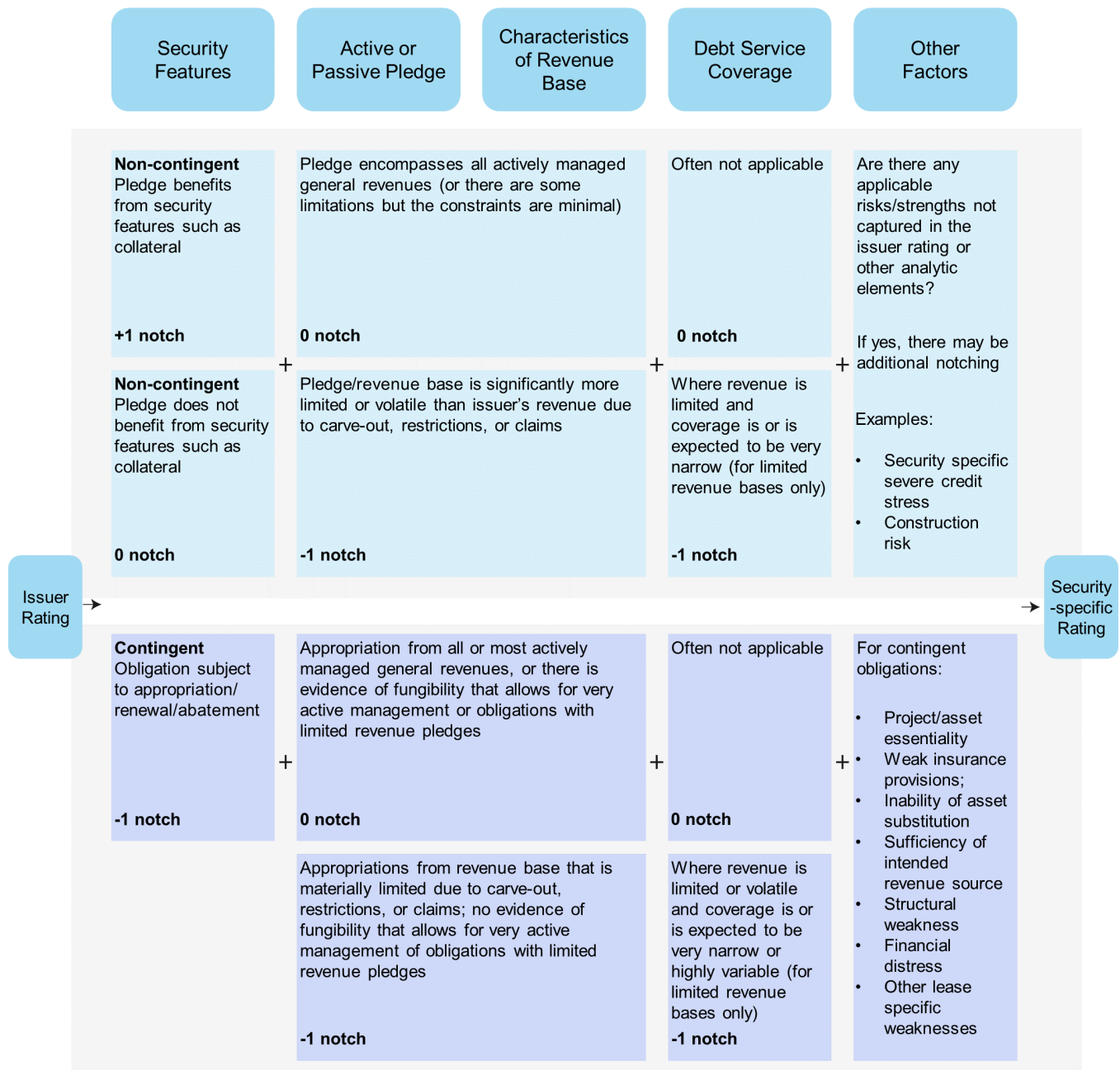
Additional factors, some of which vary by pledge or security type, may also affect the risk of a given debt instrument relative to the credit strength of the issuer. Following are some examples:

²⁵ A typical form of covenant is a requirement to maintain revenues at a level to achieve a minimum debt service coverage ratio.

- » The essentiality of the leased asset underlying a contingent obligation is important because it can indicate the likelihood that an issuer will choose to appropriate funds to pay the lease, or, for an abatement lease, whether it will continue to have use of the leased asset.
- » In some instruments, there may be a sunset provision in the pledge that precedes the maturity of the debt obligation.
- » Where a pledge type is subject to unanticipated legal challenges, an individual debt instrument may be vulnerable to non-payment even if the issuer is not undergoing stress.

EXHIBIT 3

Illustrative Placement Guidance for Higher Education



Source: Moody's Investors Service

Non-contingent General Promises to Pay or Broad Revenue Pledge

How We Assess It

SECURITY FEATURES:

We assess the security features of each transaction in order to determine if they provide material benefit to creditors.

For a non-contingent pledge that has security features, such as collateral, there may be upward notching for this analytic element.

Depending on the nature and value of the security feature, the rating differential between debt benefitting from that feature and debt that does not benefit from that feature may widen if the college's or university's credit profile weakens.

ACTIVE OR PASSIVE PLEDGE AND CHARACTERISTICS OF THE REVENUE BASE:

We consider these two analytic elements together, because even narrowly constrained pledges can be offset by the fungibility and management of broader revenue. Conversely, the unrestricted ability to increase pledged revenues—such as from a campus housing system, for example—may be practically constrained by market economics, including student demand for housing and off-campus alternatives.

There is no upward adjustment for this analytic element. Where the general promise to pay or broad revenue pledge encompasses all or most actively managed general revenue or where the relevant revenue (i.e., the revenue that relates to the pledge) is subject to some limitations but the constraints are minimal, there is no notching for these analytic elements. Where the revenue is subject to stricter constraints, but the college or university has the ability to manage its operations so that revenues are sufficient to cover debt service, there is also typically no notching for these analytic elements.

Where the relevant revenue is significantly more limited than the issuer's revenue base (e.g., it is limited by carve-outs of certain restricted funds or the exclusion of certain significant portions of operating revenue that are subject to priority claims), or where the relevant revenue is significantly more volatile than the issuer's revenue base, there may be one or more downward notches for these analytic elements. For example, pledges that are limited to housing and dining revenue that is subject to changes in demand or usage may be constrained while the university remains in operation.

However, if there is evidence of that management has the ability and willingness to take actions that will increase revenue available to pay debt service of obligations with narrow revenue pledges, or if the instrument has significant dedicated reserves, there may be no notching for these analytic elements. In general, where the more limited revenue base is still robust and is not significantly volatile, there is no downward notching for this analytic element.

DEBT SERVICE COVERAGE:

There is no upward notching for this analytic element. Where the pledged revenue for debt service is more limited or more volatile than the issuer's revenue base, we typically assess instrument-specific debt service coverage on a current and forward-looking basis. In these cases, we typically apply downward notching for this analytic element where there are material revenue carve-outs and debt service coverage is expected to be near or below 1.2x. More than one downward notch is likely to be applied where there are material revenue carve-outs and debt service coverage is expected to be below 1.0x, in the absence of other mitigants, or where the general trajectory of the issuer's credit quality is weakening.

OTHER FACTORS:

We also consider strengths or risks in the structural features of the pledge that are not already reflected in the issuer rating or other analytic elements. If the strengths are material, they may offset downward notching related to other analytic elements. If the risks are material, cumulative notching may reflect one or more additional downward notches, depending on the severity of the risks. For example, security-specific severe credit stress or a transaction structure or security type with a poor track record in default could lead to downward notching for this analytic element. A project may also face construction risk. In addition, a serious legal challenge to the validity of a non-contingent general promise to pay could lead to downward notching for this analytic element.

Contingent Obligations

Examples of contingent obligations include appropriation lease-backed obligations, abatement lease-backed obligations, non-lease annual appropriation obligations and moral obligations.²⁶

For US colleges and universities, a typical contingent obligation is an appropriation lease-backed instrument. The college or university may or may not pledge specific revenue to the lease but instead annually appropriate funds to pay debt service. The institution obligates itself to make lease payments pursuant to a capital lease between itself (as lessee) and, usually, a special purpose entity lessor created and controlled by the lessee. This lease payment revenue is used to pay debt service on the lease-backed instrument.

In the case of an appropriation lease, the college or university has a legal right to choose not to appropriate the funds, thereby not renewing the lease and severing the legal obligation to repay the instrument. The college or university generally covenants to take proactive steps to make the annual lease payment and lease renewal, although with the explicit recognition that it is legally entitled to choose not to appropriate funds for the lease payment, or renew the lease. The same kind of appropriation structure can exist without a lease or leased asset. In the US municipal market, appropriation-backed instruments are often issued as certificates of participation.

Another common type of contingent obligation is an abatement lease, where the lease payment is contingent upon the continued availability of the leased asset for use or occupancy. If the use of the asset is compromised (e.g., a building is partially destroyed by an earthquake), the lessee would be required to abate or reduce the lease payment in proportion to the reduction in availability.

Colleges and universities may also provide a moral obligation pledge to the debt instrument. A moral obligation pledge is a declaration of intent to support the debt instrument under certain circumstances by, for example, making appropriations to provide funding or to replenish a debt service reserve. A moral obligation pledge is neither a guarantee to pay debt service nor a promise to replenish a debt service reserve nor a legally enforceable obligation to pay.²⁷ Based on these contingencies, such obligations are not typically defined as debt under state law and would therefore be excluded from statutory and constitutional restrictions on debt issuance that apply to public colleges and universities. However, we consider such obligations to be the debt of the obligor.

Contingent obligations are typically weaker from a legal perspective than debt secured by a general promise to pay or broad revenue pledge, due to the contingent nature of the obligation itself through appropriation or abatement features and creditors' consequently limited legal recourse in the event of default.

²⁶ Not all leases are contingent obligations. Non-contingent leases are rated based on the long-term pledge.

²⁷ We use this methodology when the moral obligation is made by the college or university. We would use another methodology where the moral obligation is made by an entity other than a college or university, such as the state or other government entity.

In all cases, contingent debt includes a legal means for the issuer to discontinue payments, either through failure to appropriate or abatement, and therefore lacks a firm pledge of revenue over the life of the debt. Even in cases where an issuer plans to use certain revenue flows for contingent lease payments or debt service, unless they are pledged for the life of the instrument, this intention does not improve credit quality. However, where the issuer signals an intention to use limited revenue to pay the contingent obligation, this may indicate additional risk for the lease bonds. An example is where the issuer intends to pay from expected project revenue (e.g., athletic fees), as opposed to general revenue.

We notch down from the issuer rating for contingent obligations in the US higher education sector. The number of downward notches for leases is usually limited to one or two, depending on our assessment of the essentiality of the pledged asset or financed project to the college's or university's operations. In most cases, there is a leasehold interest in an essential, financed asset, or there is a fundamental connection between the financed asset and the fundamental operations of the college or university, providing a strong incentive for the institution to appropriate funds for debt service payments.

The exhibit below shows the typical notching seen between the college's or university's issuer rating and non-contingent lease-backed obligations, contingent obligations and moral obligations.

EXHIBIT 4

Typical Downward Notching from the Issuer Rating

For non-contingent lease-backed obligations, contingent obligations and moral obligations

Security Type	Non-Contingent Lease-Backed Obligations	Contingent Lease-Backed and Annual Appropriation Obligations		Moral Obligations	
		Essentiality	Notches from Issuer Rating:	More*	Less
Essentiality	N/A	More	Less	More*	Less
Notches from Issuer Rating:					
Zero	X				
One		X			
Two			X	X	
Three or more				X	X

*For moral obligations, we may apply two or three downward notches from the issuer rating for more essential assets, depending upon the legal structure.

Source: Moody's Investors Service

How We Assess It

SECURITY FEATURES:

A contingent pledge is notched downward for security features.

A contingent pledge subject to appropriation, renewal or abatement typically leads to one downward notch for this analytic element.

Where the contingent pledge is a moral obligation, there are typically two or more downward notches for this analytic element. The greater notching for moral obligations, relative to leases and appropriation obligations reflects several characteristics of moral obligations, including that they are typically contingent upon legislative approval and are only called upon if the underlying revenue streams are insufficient.

ACTIVE OR PASSIVE PLEDGE AND CHARACTERISTICS OF THE REVENUE BASE:

We consider these two analytic elements together, and there is typically no downward notching for these analytic elements.

Where all or most actively managed general revenue is available for annual appropriation, including cases where the general revenue is subject to some limitations but those constraints are minimal, or if there is evidence of fungibility that allows for very active management of applicable revenues and expenditures, there is typically no downward notching for these analytic elements.

However, there would typically be one downward notch for these analytic elements where the available revenue is materially limited, such as by the exclusion of certain significant operating revenue, meaningful limitations on revenue or other priority claims on material revenue, and there is no evidence of fungibility that allows for very active management of applicable revenues and expenditures.

DEBT SERVICE COVERAGE:

For contingent pledges, there is no upward notching for this analytic element. Where the pledged revenue for debt service is more limited or more volatile than the issuer's revenue base, we typically assess instrument-specific debt service coverage on a current and forward-looking basis. In these cases, we typically apply downward notching for this analytic element where debt service coverage is expected to be near or below 1.2x. More than one downward notch is typically applied where debt service coverage is expected to be below 1.0x, in the absence of other mitigants, or where the general trajectory of the issuer's credit quality is weakening.

OTHER FACTORS:

We also consider risks in the structural features of the obligation that are not already reflected in the issuer rating or other analytic elements. If the risks are material, cumulative notching may reflect one or more additional downward notches, depending on the severity of the risks.

Essentiality

For contingent leases and moral obligation pledges, the essentiality of the underlying assets or financed project to the college's or university's core operations is a major consideration. We consider essentiality to be a strong indicator of a college's or university's incentive to appropriate funds for lease payments, in part because the college or university may have to surrender the underlying asset or financed project in the event of non-appropriation or lease termination.

While essentiality falls on a continuum, we typically classify it in two categories: more essential and less essential. We generally consider an asset or project that is critical to a college's or university's core

operations or administration as more essential (e.g., construction of campus buildings, capital improvements on campus buildings and financing of equipment that directly supports operations). In these cases, the asset or project also cannot be separated from the college or university (is not severable) and has limited commercial or enterprise risk. With more essential assets, there is no notching for the essentiality consideration.

Less essential assets or projects are not critical to a college's or university's core operations or administration, are severable, or have significant commercial or enterprise risk, for example, vacant land or a project that depends on vendor performance. In these cases, the administration may no longer choose to support the project, appropriate funds for debt service or repair the asset following an abatement event. In these cases, there are typically one or more downward notches for the essentiality consideration.

The exhibit below provides a summary of typical notching for the essentiality consideration. Actual notching is based on our view of the circumstances of the college or university, the terms and conditions of the obligation and the institution's incentives or disincentives to honor the obligation. If there is a mix of more and less essential assets associated with an individual instrument or master lease structure, we generally characterize the essentiality of the entire asset pool by the single most essential asset.

EXHIBIT 5

Typical Notching for Essentiality

More Essential	Less Essential
Asset or project is critical to a college's or university's core operations or administration, is not severable, and has no commercial or enterprise risk.	Asset or project is not critical to a college's or university's core operations or administration, is severable, or has commercial or enterprise risk.
Examples (Illustrative; categorization could vary based on specific circumstances)	
» Core operational buildings	» Projects dependent on commercial/vendor performance ²⁸
» Facilities (athletic, arts, parking, etc.) or improvements not severable from core operations	» Facilities (athletic, arts, parking, etc.) or improvements severable from core operations
» Administrative buildings	» Vacant land
Typical Notching for Essentiality	
No notching	One or more downward notches

Source: Moody's Investors Service

Insurance and Asset Substitution

For abatement leases, the leased asset's availability for a college's or university's use or occupancy is a precondition for lease payment. We typically consider sufficient property insurance procured by the lessee or the ability to substitute a new asset for a compromised asset to be an important structural feature. In the absence of both the ability to substitute an asset and standard insurance provisions, such as title insurance and renters' interruption insurance, there may be one downward notch for the insurance consideration.

Intended Revenue Source

In some cases, a college or university may have an intended source of revenue to support contingent obligations, even if the pledge is to pay these obligations with all available revenue. The intention to use a specified revenue source, however stable, does not offset the contingent nature of the obligation. In these cases, there is typically no upward notching for this analytic element. Where the intended revenue source is

²⁸ Vendors are not the lessors or owners of projects, but their performance may affect the anticipated impact of the lease payments on a college's or university's budget. An institution's payment obligation is not explicitly conditioned on vendor performance.

unproven or volatile, the college or university may not expect or be prepared to pay debt service from other sources. In these cases, we may apply one or more downward notches for this analytic element.

Structural Weakness

For any contingent pledge where there is a material structural weakness, such as lack of clarity in the transaction documents regarding the provisions of the pledge and its mechanics, or if there is insufficient timing between the college's or university's expected appropriation date and the debt service payment dates, cumulative notching may reflect one or more additional downward notches, depending on the severity of the risks. In addition, a serious legal challenge to the validity of a contingent pledge could lead to downward notching for this analytic element.

Financial Distress

Where a college or university is undergoing financial distress, we may widen or narrow the rating differentials between the issuer rating and the rating of any contingent obligations, based on our view of the relative probabilities of default and relative loss rates upon default. Our views of relative expected loss would generally be informed by state law, case law within the relevant jurisdiction and other meaningful issuer-specific risk factors that may indicate the college's or university's relative willingness and ability to pay various types of obligations. For example, in an insolvency proceeding, the essentiality of a leased asset to the college or university could affect whether the lease is maintained, renegotiated or terminated, and the market value of the asset could affect creditors' recovery in the event of termination.

In these instances, the specific, anticipated recovery rate for an obligation would be a more important rating consideration than our general principles for assigning instrument-level ratings.

Moody's Related Publications

Credit ratings are primarily determined through the application of sector credit rating methodologies. Certain broad methodological considerations (described in one or more cross-sector rating methodologies) may also be relevant to the determination of credit ratings of issuers and instruments. A list of sector and cross-sector credit rating methodologies can be found [here](#).

For data summarizing the historical robustness and predictive power of credit ratings, please click [here](#).

For further information, please refer to *Rating Symbols and Definitions*, which is available [here](#).

» contacts continued from page 1

Analyst Contacts:

TORONTO +1.416.214.1635

Adam Hardi +1.416.214.3636
Vice President - Senior Analyst
adam.hardi@moodys.com

Michael Yake +1.416.214.3865
Associate Managing Director
michael.yake@moodys.com

MADRID +34.91.768.8200

Sebastien Hay +34.91.768.8222
Associate Managing Director
sebastien.hay@moodys.com

Report Number: 1257002

Author
Geordie Thompson

Production Associate
Sivaraj Chandran T

© 2021 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing its Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$5,000,000. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody's.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY550,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.