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Moody's Rating Methodology for U.S. Public Colleges and Universities

Introduction

Moody's currently rates approximately 170 four-year U.S. public universities and university systems based on their own stand-alone credit quality. Since many campuses are part of university systems that borrow on a consolidated basis, this accounts for over 90% of the debt issued in the sector. Public universities are fundamentally strong credits and are likely to remain so in the near future thanks to positive demographic trends, favorable tuition pricing, continued state support, accumulated reserves, and diversified revenue streams. The median rating for the public university sector is A1 by institution and Aa3 by debt outstanding.

Moody's rating methodology for public universities is based on a two-part analysis: first, we evaluate a university's general credit factors; second, we analyze the specific legal and structural elements of a particular transaction.

GENERAL CREDIT FACTORS

- **Market position**, often measured by such indicators as enrollment trends, student demand, success in attracting research funding, and tuition pricing;
- **Relationship with supporting state**, which, taking into account the state's own credit quality, is evaluated primarily based on consistency, level of funding support and degree of administrative control;
- **Balance sheet strength, as measured by levels of financial resource**s, including resources held by closely affiliated foundations, both absolute and relative to debt and annual operating expenditures
- **Ability to accumulate financial resources**, through a combination of successful fundraising, endowment management and retention of annual surpluses;
- **Operating performance**, with an emphasis on operating margins, revenue stream diversity and an evaluation of expense growth drivers;
- **Debt position**, including current debt structure, additional debt capacity and the likely impact of existing capital needs on future leverage levels;
- S**trategy and management**, which although difficult to quantify, can be assessed through a review of an institution's planning processes, response to prior challenges, and ability to achieve desired results.

TRANSACTION-SPECIFIC FACTORS

- **Legal provisions**, including nature of assets or revenues pledged to bondholders and relevant covenants;
- **Debt service coverage**, from assets or revenues pledged to bondholders (historical and projected);
- **Essentiality of project**, to the university and/or supporting state.

There is no specific weighting attached to the individual risk factors according to a uniform formula. Rather, Moody's rating decisions place varying degrees of importance on specific analytical components depending on an individual institution's historical and operating context.

In this special comment, we discuss our rating approach for public colleges and universities, exploring each of the credit factors outlined above and the ratios used to measure performance. We also describe the meaning of our ratings as well as the different types of ratings assigned.

Moody's Investors Service
Global Credit Research

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General Credit Factors

MARKET POSITION

An assessment of an institution's student demand profile remains the bedrock of our market position analysis for public colleges and universities. This is not only because it reflects the perceived quality of a university's core activities of teaching, research and public service, but also because strong demand is likely to translate into stable enrollments, favorable net tuition revenues, and, in the long-term, gifts from satisfied graduates.

Market niche, usually defined by size, location, tuition pricing, program offerings, academic reputation, research focus, athletic accomplishments, or a combination of these aspects, is of great interest to Moody's. In general, a clearly defined niche helps an institution build a reputation and brand name, which in turn can have a positive impact on student demand. Some public universities are state land-grant institutions whose original mission as agricultural and technical/mechanical colleges is still reflected in their curricula and "A&M" denomination. Others function as flagship institutions, offering comprehensive academic and research programs whose prestige is unrivalled in the state. Yet others have a primary mission of serving students within a particular region of a state.

Other examples of secondary or tertiary missions may include extensive distance learning programs, the use of satellite campuses to reach rural or other under-served areas, evening programs designed for non-traditional students, status as a historically black college or university, and so on. In each case, Moody's examines the implications, both positive and negative, of these additional missions on a university's niche and market position.

Some institutions stand out by virtue of a commitment to providing health care services through an academic medical center affiliated with local hospitals. In such cases, Moody's carefully analyzes a university's operational ***exposure to the health care sector***, whether through direct ownership of one or more teaching hospitals, management of a medical faculty clinical practice plan, or some other form. Because hospital operations tend do be more volatile, Moody's closely examines university dependence on health care revenues and the transfer of funds between university and hospital. We also consider the degree of state support for hospital operations as well as any other aspects that may affect university credit quality.

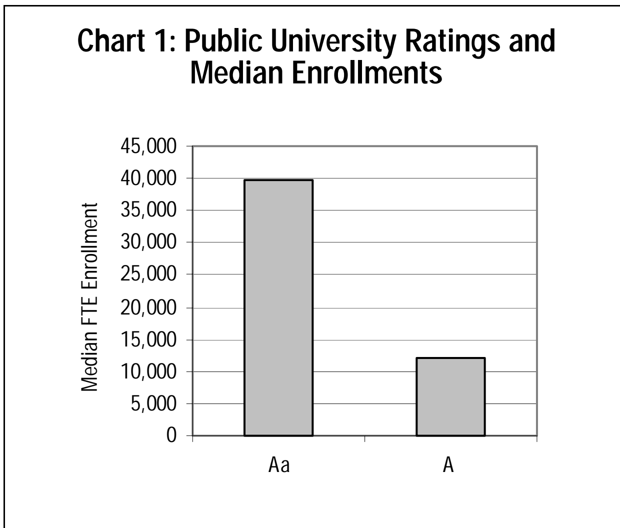
Location, not only in relation to demographics, but also in terms of proximity to essential services and transportation arteries, is also part of an institution's market niche. Whether the university is located in an urban, suburban or rural setting is also significant because it may have an impact on its ability to recruit students. Although we do not favor one type of location over another in our analysis, Moody's realizes that public perceptions about the ideal setting for pursuing higher education can change over time. ***Campus*** attractiveness and safety are increasingly important in an age of ever more savvy customers demanding state-of-the-art academic, research, housing, dining, athletic and recreational facilities.

Once a niche has been identified, Moody's then looks to stability and growth in ***enrollment*** as the fundamental mark of a thriving university. When calculating per student ratios, Moody's uses full-time equivalent (FTE) student numbers rather than headcount figures and analyzes the proportion of students studying on a part-time versus full-time basis. Maintaining stable enrollments is not only a matter of successful recruitment and yield, but also of successful ***retention*** of matriculated students.

The ***geographic diversity*** of the student body is also important in that it shields an institution from fluctuations in local demographic and economic conditions. Tuition rates are almost always much higher for out-of-state residents, who therefore often account for a disproportionately large share of a public university's net tuition revenues. As a result, a demonstrated ability to attract out-of-state students is considered a credit positive. Moody's realizes, however, that political imperatives and the traditional access mission of many public universities may prevent them from fully taking advantage of their appeal. Some states, such as North Carolina for instance, impose caps on out-of-state enrollments. Overall, enrollment size tends to correlate well with public university credit ratings: median enrollments for Aa- and Aaa-rated public institutions approach 40,000 FTE students, but are just over 12,000 for institutions in the A rating category.

Selectivity, meaning the proportion of applicants granted admission, and ***yield***, or the proportion of admitted applicants who enroll, are the rawest measures of student demand. A low selectivity rate and a high yield rate generally indicate strong demand: the university has many more applicants than places in the entering class and it is the first choice for a large number of candidates. A deep applicant pool also means that in times of lagging demand the institution will be able to fill its classes by simply becoming less selective. This option is not available to institutions that routinely admit nearly all applicants.

Strong demand is also a reflection of overall prestige, though it can also reflect healthy regional demographic trends, increases in the college participation rate, or special recruiting efforts by the admissions staff. Economic conditions also matter as demand for higher education, especially for graduate and professional programs, tends to be counter-cyclical to trends in the economy. Furthermore, public universities often benefit at the expense of their private counterparts during recessions due to their significant pricing advantage. Moody's keeps all these factors in mind when examining trends in selectivity and matriculation rates for all relevant academic programs offered by a public college or university.



Tuition pricing is another key component of student market position. This is an area where public universities have traditionally had an important advantage over their private peers, and will continue to do so despite above-average tuition increases in the last two years in response to softening state funding environments. Nevertheless, because tuition-setting power may be controlled by the state legislature or influenced by political or mission-related factors, public universities are rarely able to charge fees that fully reflect their market power. Even where state legislatures do not directly determine tuition levels, they often maintain caps on tuition increases that effectively have the same end result. Therefore, any demonstrated tuition-setting flexibility that a university may have is considered a favorable credit factor. Some universities are not authorized to retain tuition revenues, but must pass them on to the state treasury to be included as part of the state appropriation budget. Typically, we view local control over tuition revenues as being a credit positive.

When assessing a public university's actual pricing power we therefore focus on the concept of ***net tuition per student***. This is obtained by subtracting financial aid spending from gross tuition revenues and then dividing by the number of FTE students. Because tuition and financial aid policies vary widely from state to state and institution to institution, however, net tuition per student is not always correlated to ratings.

Although teaching is the primary mission of any higher education institution, it is rarely the only one, except in the case of purely liberal arts colleges. ***Research*** is often another important activity pursued by a college or university. Moody's believes that high quality research programs will enhance an institution's competitive position, especially with regard to faculty recruitment and graduate education. They can also favorably impact the undergraduate program to the extent that high-profile research activities raise the quality of the academic experience and, ultimately, the university's overall reputation. In analyzing the scope and quality of an institution's research programs, Moody's reviews the ***type of research conducted***, ***diversity of funding sources***, trends in ***indirect cost recovery rates*** negotiated, and ***the number and amount of grant awards***. We view both program size and diversity as positive credit factors that help an institution garner additional research dollars and insulate it from fluctuations in the funding for any one area. Furthermore, a successful research franchise, especially one that generates additional income from the ***commercialization and licensing of technologies*** developed at the university, enables an institution to lessen its dependence on other sources of funding such as state appropriations. It also enhances an institution's political profile in the state by strengthening its role in regional economic development efforts.

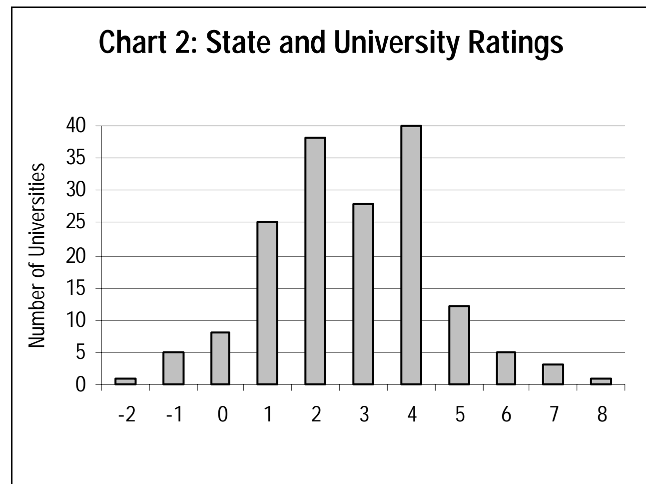
Market Position Analysis

Niche		
• Range of activities	• Health care sector exposure	• Location/Campus
Student Demand		
• Selectivity	• Enrollment	• Geographic diversity
• Yield	• Retention	• Net tuition per student
Research Franchise		
• Number of grants	• Dollar amount of grants	• Funding sources
• Indirect cost recovery rate	• Areas of focus	• Technology licensing

RELATIONSHIP WITH SUPPORTING STATE

A key distinguishing characteristic between public and private universities is that the former receive funding, often both for operations and capital needs, from the state in which they are located. Operating support can be quite significant as a share of a public university's annual budget even though many institutions, especially large, nationally prominent research universities, have successfully lessened their dependence on state appropriations in recent years. Within the group of 170 public institutions and systems rated by Moody's in 2001, the ***level of dependence on state appropriations*** ranged from a median of 26% for Aaa and Aa1-rated universities, to 43% for A3-rated institutions. The higher this level of dependence, the more attention is paid in our analysis to the ***supporting state's own credit quality***. This factor will remain part of our analysis as long as public universities continue to derive a portion of their operating budgets from state funds. It will also be of great importance in rating those transactions where the revenue streams securing the debt being issued include state appropriations.

Since our analysis includes so many other factors, it is impossible to predict most public university ratings based solely on state ratings. For instance, ratings for public university bonds that are secured by specific revenue streams (e.g. housing system revenues) are primarily a function of the institution's own general credit quality as well as debt service coverage and legal provisions, rather that state's credit quality. Moody's distribution of state and public university ratings reveals that university ratings range from two notches above to eight notches below the corresponding state ratings, with 79% of public university ratings falling between one and four notches below the corresponding state ratings. In rare cases, a public university may achieve a higher rating than that of its sponsoring state if it has a strong market position, significant financial resources, and consistently positive operating performance backed by a diverse revenue base.



Given that most Moody's ratings on public universities' debt are not directly linked to the ratings of associated states, a downgrade or upgrade of a state rating may not necessarily trigger rating changes for public universities in that state. State general obligation ratings are based primarily on fundamental economic conditions and their own leverage levels. Support for higher education is usually not a factor in that analysis. In fact, a state may achieve a high rating level precisely because it has a track record of being able to make difficult spending reductions during times of economic stress. Since higher education is one of the largest discretionary components of state budgets, it can be one of the first areas to receive a budget cut. Moody's therefore examines ***trends in state funding for operations***, both overall and on a per student basis. We also seek to understand the ways in which a university may have adjusted to past budget cuts and explore the ways in which it might do so in the future, if necessary.

Regarding the treatment of state operating appropriations in public university financial statements, the Governmental Accounting Standards Board's (GASB) recent Statement Number 35 calls for the classification of these funds as non-operating revenue. This will result in many public higher education institutions reporting operating losses in their audited financial statements. Yet, state appropriations are likely to remain an essential component of public universities' operating budgets, as well as a key factor that will enable them to preserve relatively low tuition levels in support of their traditional access mission.

Furthermore, under GASB 35, the costs of many of the activities funded from state appropriations are to be reported as operating expenditures on public university financial statements. For these reasons, Moody's will continue to treat state appropriations as operating revenues, regardless of changes in accounting conventions. For more information on the impact of GASB 35 on Moody's rating methodology, please see our June 2002 comment, *Moody's Rolls out Finetuned Ratios for Public Universities to Incorporate New GASB Standards*.

In addition to operating funding, many states support their public university systems with funds for capital improvements. Support mechanisms vary from state to state. Some states, such as Oregon, issue their own general obligation bonds on behalf of public universities for all types of projects, resulting in little or no debt on university balance sheets. Other states, such as Florida and Kentucky also issue their own bonds on behalf of universities, but limit the types of projects for which they will do so, usually to non-revenue generating academic buildings and research facilities. Universities in these states issue debt for auxiliary projects such as student housing and parking, resulting in moderate indebtedness.

Still other states, such as Texas and Indiana, reimburse higher education institutions for debt service payments for certain types of bonds issued directly by the universities. New Jersey, by contrast, offers little capital funding support, resulting in very high leverage levels for public universities in that state. In all cases, Moody's pays close attention to ***trends in state capital funding*** for public universities, while keeping in mind that funding mechanisms vary and that states are rarely under a legal obligation to maintain existing practices in place.

Funding is not the only way in which a state may exercise oversight over a public university. Other mechanisms include: control over tuition-setting, out-of-state enrollment caps, limits on retention of operating surpluses, and borrowing authorization, among others. Consequently, Moody's evaluates the overall ***degree of independence*** a public university enjoys vis-à-vis its associated state in all these and other relevant areas. This includes a look at the extent of political support a public university might have at the state level via well-connected alumni, trustees or donors. Such connections could, for instance, help shield an institution from budget cuts that a less influential organization might be unable to avoid.

Ideally, a university will have significant freedom of action to respond to changes in its operating environment, by raising tuition for instance, while still remaining subject to state oversight and support should problems materialize and persist. For weaker institutions, we also examine the likelihood of state action to "bail out" the university in cases where a default seems possible. Although states rarely have the legal obligation to do so, Moody's might give positive consideration to a state's implicit moral commitment to assist an institution that provides a key public service.

State Relationship Analysis

- Level of university's financial dependence on state appropriations
- State's own credit quality
- Trends in state operating appropriations (overall and per student)
- Trends in state capital appropriations
- Degree of university independence vis-à-vis state, including extent of political support

BALANCE SHEET POSITION

The relative level of a public institution's financial resources is an important credit factor in Moody's rating analysis. Nevertheless, a thin balance sheet does not necessarily preclude a high rating for a public university that enjoys a stable market position, steady state support and consistently positive operating margins.

On the net asset side, significant reserve levels enable institutions to weather prolonged periods of enrollment stagnation or tight state funding, providing heightened security that bondholders will be repaid despite potentially stressed annual operations. On the liability side, an institution's leverage levels are both a function of its strategic capital needs, and the ability the institution has to finance those needs from a variety of sources. Moody's view of balance sheet strength includes both a point in time analysis of levels of financial reserves relative to debt, as well as an understanding of the key drivers of historical and projected resource accumulation and leverage.

When measuring point-in-time financial health, Moody's calculates three absolute levels of available liquidity. ***Unrestricted financial resources*** refer to a university's most liquid funds that are available for immediate expenditure. ***Expendable financial resources*** include, in addition to the unrestricted resources, those funds an institution could access in the intermediate, but not immediate, term due to temporary, usually donor-imposed spending restrictions. Purpose-restricted quasi-endowments, for instance, would fall in this category. Finally, ***total financial resources*** consist of an institution's entire financial reserve base, including the corpus of its permanently restricted and unspendable endowment. While this corpus is theoretically not available to directly support debt service, earned income from these funds, depending on restrictions, can provide a source of revenue to finance operations.

Moody's calculation of these resource levels begins with the information disclosed in an institution's audited financial statements. However, we have found that final determination of the potential liquidity of different assets is often achieved only after conversations with university management. Moody's does not include a college's net investment in physical plant in any of our measures of financial health since this is not a liquid asset that is available for debt repayment. In most cases, however, our calculations do include the ***assets and liabilities of key affiliated foundations***, if material.

Our analysis of absolute financial resource levels is complemented by an examination of key measures of relative liquidity. The ratios of ***unrestricted resources to debt and to operations***, for instance, reflect an institution's most immediate degree of balance sheet strength. Moody's requires no specific level of unrestricted resources to achieve any particular rating category. However, Moody's places more weight on unrestricted resource levels for institutions where state funding has been more volatile or operating performance has been uneven since there is greater likelihood in these cases that such reserves may actually be called upon.

For more financially secure institutions, Moody's focuses more on relative levels of expendable and total resources. For the medium-term, Moody's finds ***expendable financial resources to debt and to operations*** to be meaningful measures of debt cushion and operating flexibility, respectively. To obtain a complete picture of a university's balance sheet strength free of leverage, we sometimes use the additional ratio of ***free expendable financial resources to operations***. This is the same ratio as expendable financial resources to operations, except that the value of an institution's total debt burden is subtracted from its expendable financial resources. ***Total financial resources to debt and total financial resources per student*** provide the broadest view of the reserves contributing to bondholder security and to the institution's ultimate educational mission.

Balance Sheet Strength Analysis

- Unrestricted financial resources
- Expendable financial resources
- Total financial resources
- Unrestricted financial resources to debt and to operations
- Expendable financial resources to debt and to operations
- Total financial resources to debt and per student
- Free expendable financial resources (expandable resources less total debt) to operations

FUNDRAISING

While financial ratios provide a point-in-time picture of an institution's financial health, Moody's analysis also incorporates a longer-term view of a public university's ability to sustain and enhance its balance sheet position. There are three broad methods for accumulating financial resources: fundraising, which is often undertaken by an affiliated foundation, management of accumulated reserves, and retention of operating surpluses.

Moody's believes that in fundraising, a successful ***track record*** can be a powerful indicator of future success due to the importance of building long-term donor relationships. Some public universities have been in the fundraising "business" for several decades, whereas others have only recently started to garner philanthropic support. While a few of the public institutions that have typically not had strong fundraising programs can receive fairly large initial gifts, Moody's believes that it usually takes many years to develop the donor relationships necessary to provide a consistent stream of gift revenue. Furthermore, ***diversity of donors*** is viewed favorably.

We also examine the areas for which funds have been raised: operations, endowment, or capital projects. Some colleges and universities have been successful in generating steady support for all three areas, while others have historically concentrated their efforts on only one or two. Moody's further assesses an institution's ***current fundraising goals*** against its proven experience and, if there is a discrepancy, seeks to understand why an institution believes it can shift its historical pattern of philanthropic support. If a capital campaign is underway, we assess the progress made to date and the likelihood of the campaign's successful and timely completion. If no capital campaign is taking place and none has been undertaken for several years, we seek to understand the institution's fundraising strategy and whether or not it relies on major capital campaigns at all.

If fundraising is undertaken not by the university itself, but by an ***affiliated foundation***, we examine the relationship between the organizations, including management overlap, flow of funds, and any debt that the foundation may have issued on its own credit. The establishment of separate fundraising foundations is common practice in the public higher education sector. Reasons include: protecting financial assets from being appropriated by the state; ensuring the kind of donor anonymity that private organizations are in a better position to provide; enhancing investment flexibility; and enabling universities to respond to certain opportunities, such as real estate acquisition, in a more timely manner. For a more detailed analysis of the role played by affiliated foundations in Moody's analysis of public university credit quality, please see our October 2002 comment: *Public University Affiliated Foundations Contribute to Universities' Credit Profile and Increasingly Issue Their Own Debt*.

INVESTMENT MANAGEMENT

Management of accumulated reserves is also key to understanding a public university's future financial position. Here Moody's looks at three broad factors: ***asset allocation***, ***endowment spending***, and ***investment management oversight***. While returns in the financial markets are outside an institution's control, asset allocation decisions can determine the extent to which a particular university or its affiliated foundation benefits from market appreciation or is exposed to market volatility. Similarly, the amount a university chooses to spend from its endowment, as well as the level of investment management oversight, can have a significant impact on the endowment's long-term growth prospects.

Public universities often have less flexibility in managing their own investments than their private counterparts, in that they may be subject to state investment guidelines, or may be required to merge some or all of their investments in statewide pools that are managed by the state treasurer. Furthermore, state investment policies tend to be more conservative, resulting in higher allocations to traditional equity and fixed income securities, with little exposure to alter-

native asset classes such as hedge funds, private equity and venture capital. Nevertheless, many public universities are able to avoid some of these restrictions by placing most of their financial assets in affiliated foundations, which, as private organizations, are not subject to state oversight.

Overall, public universities tend to be much less dependent on investment income than private universities, which, in the absence of governmental financial support, have traditionally focused more heavily on fundraising and investment management. For instance, the 2001 Moody's median value for investment income as a share of a university's operating budget was 1.3% for public institutions and 9.3% for private institutions.

RETENTION OF ANNUAL OPERATING SURPLUSES

Retention of annual operating surpluses is another means for a public college to grow its resource base. We understand that the ability to generate and retain operating surpluses may depend on state policies, with some institutions having more ability to generate positive bottom lines from a policy (as well as economic) standpoint than others. Typically, institutions that achieve positive annual operations invest a portion of their surpluses into renewal and replacement of their facilities, and reinvest the remainder in medium to longer-term reserves.

As a general point, due to their dependence on state appropriations, public universities are subject to certain ***political constraints*** not faced by their private counterparts, and often have less flexibility to retain large surpluses on their balance sheet, lest they attract unwelcome attention from state legislatures. Nevertheless, Moody's has found that most public universities do have some type of ***"rainy day fund"*** that can be tapped in case of unexpected state budget cuts or enrollment fluctuations. While not a requirement for achieving a high rating, Moody's views the ability to maintain such a fund as a definite credit positive.

Financial Resource Accumulation Analysis

Fundraising

• Track record	• Sources of support	• Capital campaign status
• Current goals	• Relationship with affiliated foundation (if any)	

Investment Management

• Asset allocation	• Endowment spending	• Investment management oversight

Retention of operating surpluses

• Management approach	• Political constraints	• Availability of "rainy day fund"

OPERATING PERFORMANCE

The ability to achieve at least a balanced bottom line is important for the long-run financial health of all public universities, but is critical for institutions that do not have significant financial reserves. Recognizing that many institutions experience variable operating performance from year to year, Moody's analysis focuses on medium-term trends in operating results. While a single year of operating deficit may not be a concern, two or more years of weak financial performance usually highlight factors that may be affecting fundamental financial equilibrium. Moody's seeks to understand drivers of operating performance both from the revenue and expense perspective.

Overall, operating performance at public universities tends to fluctuate less than at their private counterparts. This is partly due to the more intense public scrutiny and state supervision, which often includes a requirement to maintain budgets in balance. Furthermore, public universities tend to be less dependent than private universities on investment income and gifts, both of which may vary according to stock market trends, economic climate and other external factors. As a result, slight variations in the operating margin of public universities are less of a concern in our analysis than in the case of private universities.

Moody's analysis uses a variety of measures to evaluate operating performance. An institution's ***annual operating margin*** reflects the college's ability to balance operations in any given year. Due to potential variability in key revenue and expense areas***, average annual operating margin***, which measures a university's operating results over a three-year time period, provides a better measure of an institution's capacity to maintain financial balance. To measure the impact of leverage on operating performance, Moody's looks at the ratio of ***annual and peak debt service to operations***. The median value for this ratio in 2001 for public universities rated by Moody's A3 or above was 3.3%.

Moody's broadest measures of operating performance highlight a public college's ability to increase its overall asset base and the financial resources available to repay bondholders. The ***return on net assets*** shows the extent to which an institution's overall wealth levels increased, including changes in the value of its property and physical plant. At the same time, a more accurate reflection of financial reserve growth is provided by ***return on financial resources***, because it excludes from the calculation plant equity that is unlikely to be available for debt service. Moody's overall view of the

fiscal health of an institution is a combination of these broad measures of financial asset growth and the narrower measures of annual operating performance.

Moody's also believes that institutions with more ***revenue diversity*** are often financially stronger because they are less vulnerable to fluctuations in revenues from any single source. Moody's analyzes each revenue stream (state support, tuition and fees, auxiliary enterprise sales, grants and contracts, private gifts, endowment income, etc.) individually to determine an institution's reliance on any one particular source of income and to note trends in income flow. As noted in a previous section, since state funding continues to be a significant portion of most universities' budgets, we analyze the level and consistency of this funding over time.

Student charges, which include tuition, fees, and auxiliary revenues, comprise another significant revenue source. To the extent that a public university's enrollment is diversified across a variety of sectors, such as undergraduate, graduate, and continuing education, this particular revenue stream may itself be diversified in a way that could enhance credit quality. Furthermore, since research can add a significant degree of revenue diversification as well as enhance an institution's reputation and market position, Moody's tracks the ratio of ***research expenses to total operating expenses*** as a measure of the importance of a public university's research franchise to its overall activities.

In addition to looking at the composition and growth in an institution's revenue stream, Moody's seeks to understand the major drivers of a public university's expense base. Moody's then ties increases in expenses to recent and projected growth in revenues. Faculty and staff compensation typically constitutes over two-thirds of a public university's annual operating expenses. Therefore, Moody's pays particular attention to the level of ***flexibility to reduce expenses*** in this area, if necessary. Low compensation levels relative to peer institutions, for instance, may point to an upcoming need for larger than average annual salary increases in order to remain competitive in attracting desirable faculty and staff members. Similarly, recent and projected trends in salaries can highlight to what extent this portion of an institution's expense base is likely to grow in the future.

Operating Performance Analysis

- Annual and average operating margin
- Actual and average debt service coverage
- Return on net assets/financial resources
- Revenue diversity
- Flexibility in reducing key expenses
- Research expenses to total operating expenses

DEBT POSITION

In looking at a public university leverage levels, Moody's analyzes its ***current debt profile***, as well as additional debt capacity in light of any potential further borrowings. Although many colleges and universities measure their ability to absorb new debt by focusing primarily on incremental cash flow available to support debt service, Moody's view of debt position includes a balance sheet focus as well as an income statement analysis. Strong cash flow and good debt service coverage, as reflected by the relevant operating performance ratios mentioned earlier, may be sufficient to garner an investment grade rating. Highly rated institutions, however, provide additional bondholder security through reserve levels that would cushion debt service payments through an extended period of operating stress. In the **Aa** and **Aaa** rating categories, it is primarily the relative level of these reserves, combined with an analysis of student market position and state relationships, that leads to rating distinctions. Ratios used at this point in the analysis include the familiar financial resources to debt ratios described in the section on balance sheet strength, as well as additional ratios such as ***total debt per student***.

Regarding the ***mix of variable and fixed rate debt***, colleges with a high portion of debt in a variable rate mode could be exposed to increasing debt service costs in a rising interest rate environment. Moody's does not have any specific benchmarks for variable versus fixed rate debt, or for how debt should amortize. Each situation is analyzed on a case by case basis. However, in Moody's opinion, institutions with stronger credit profiles typically have more flexibility to use debt structures that are different than the traditional fixed-rate, level debt-service configuration, without adversely affecting the rating on their long-term debt. These include unenhanced variable rate demand obligations and commercial paper where the institution provides its own short-term liquidity.

In analyzing an institution's ability to absorb additional debt, Moody's also looks ***to annual and peak debt service coverage*** from current operations as well as from pledged revenues. Some institutions with weak operations issue debt with deferred principal payments or escalating debt service, relying on future growth in revenues in order to pay debt service. Moody's views this as an added risk element, since the ability to achieve such future objectives is uncertain. Where bonds are secured by a specific revenue pledge, we examine projected and historical debt service coverage offered by those revenues.

Debt capacity is not a static concept, but rather changes as an institution's fundamental credit factors, other than leverage levels, evolve over time. Depending on a variety of factors, increased leverage may or may not have an impact

on an institution's credit quality. Debt capacity is also a function of institutional risk tolerance, so that a university may have very limited additional capacity at its current rating level but significantly more at a lower rating level. Furthermore, a borrowing used to fund revenue-generating projects, residence halls for instance, may use up less debt capacity than an equal borrowing for other, non-revenue generating purposes. As to "off-balance sheet" borrowings used by some public universities to fund "privatized" student housing projects, Moody's usually treats them as "on-credit" due to the strategic and economic considerations that often link these projects to the university. Moody's has published a series of articles on this topic that are available on request.

In general, a public university's ***future borrowing plans*** are scrutinized for their impact on the institution's long-term market position. For example, debt-financed facilities that improve a public university's ability to attract students or research dollars are likely to result in an improved market position. If Moody's believes that an institution's strategic position will be significantly enhanced by debt-financed projects, and if it is clear that the institution will comfortably be able to service debt, then a rating downgrade becomes less likely. However, because of Moody's dual focus on balance sheet and income statement factors, there may be a point when additional leverage could result in declining credit quality despite other favorable fundamental credit factors. In such cases, Moody's often believes that the level of financial reserves relative to debt may no longer be consistent with the risk profile of a particular rating. Alternatively, Moody's may be concerned about reduced long-term financial flexibility due to additional expenses in the form of debt service and maintenance costs. For more information on our view of debt capacity, please see our August 2002 comment: *Debt Capacity in Higher Education is a Strategic Concept*.

Debt Position Analysis

- Unrestricted/expendable/total financial resources to debt
- Total debt per student
- "Off-balance sheet" debt usually on credit
- Debt structure (mix of variable and fixed rate debt, use of bullet maturities, amortization schedule)
- Annual/peak debt service coverage
- Extent of future borrowing plans
- Impact of borrowing debt financial projects on market position

STRATEGY AND MANAGEMENT

Perhaps one of the most critical credit factors, though difficult to measure, is the quality of an institution's management team. There are no purely quantitative ratios that can be used to ascertain the strength of an institution's management, other than the university's track record in maintaining operating surpluses and meeting budgets. In assessing management, Moody's looks to such things as the existence of a coherent long-term strategic plan, clearly articulated debt and investment management policies, disciplined budgeting practices, track record of successfully dealing with past difficulties, and an ability to achieve favorable results such as stable enrollment and balanced operations. In addition to evaluating a public university's senior administrative staff, Moody's pays a great deal of attention to the role of its governing board.

Moody's views a ***coherent long-term strategic plan*** as one sign that management is proactively assessing the potential issues facing the institution. The most complete strategic plans typically tie together a review of the university's academic programs with needed operating support and capital improvements. These plans may or may not take the form of a written document. Even with the best plans, however, Moody's includes a subjective assessment of management's ability to implement desired policies given organizational and environmental constraints.

Clear policies on debt and investment management also provide confidence that management is focused on the financial condition of the institution. In Moody's experience, while many universities have some form of investment management policy, only a few have undertaken a comprehensive review of their debt management policies. Some universities appear to take a project by project approach (i.e. this project will generate sufficient cash flow to cover its own debt service), rather than broadly assessing appropriate leverage levels given financial resources, additional long-term capital needs, and potential future operating constraints.

Moody's also seeks to understand an institution's ***budgeting practices***, including the assumptions being used and the monitoring methods employed to track performance. Many well-run public universities build some type of flexibility into the budget that can be used to cushion operations in the event of unexpected revenue shortfalls or expense increases. These may take the form of budgeting for fewer students than are actually expected to enroll, establishing in a contingency reserve fund equal to some portion of the budget, and so on. Moody's also focuses on the extent to which institutions budget for renewal and replacement of capital facilities and how this compares to funding levels suggested by depreciation accounting.

Moody's ratings are essentially an attempt to predict the relative security of future debt service payments. While Moody's ratings are therefore forward looking, we believe that past performance can at times be a useful indicator of future behavior. Accordingly, we look to ***management's track record in dealing with past difficulties*** as a measure,

albeit imperfect, of its ongoing ability to do so. Difficulties can include declining enrollments, cuts in state appropriations or any other events that challenge the financial stability of an institution.

A public university's governing board of trustees is ultimately responsible for ensuring the financial health of the institution under its guidance. Moody's analysts therefore seek to understand the expertise represented on the board and, more specifically, the ***governing board's role*** in such areas as setting strategic direction, fundraising, investment management, and debt policies. A high-profile governing board is a favorable credit factor to the extent Moody's believes the board is committed to the institution and is willing to support it financially if necessary. Providing final oversight of a public university's management has historically been one of the most important functions undertaken by the board. Furthermore, in recent years, the boards of public university foundations have taken on added importance due to their fundraising and investment management roles.

In general, the ***composition of public university governing boards*** is determined by the governor with the approval of the state legislature. Political priorities and state government turf battles inevitably play a role in this process. Furthermore, public university board membership is usually confined to state residents only. In addition, depending on the structure of the higher education system in a particular state, some individual public university boards can be overshadowed by the presence of university system-wide boards that retain key decision-making powers. Overall, public university boards tend to be less independent and less powerful than their private counterparts, which are much less constrained by political agendas and regional loyalties.

Management Assessment

- Evidence of long-term strategic planning
- Clear investment and debt management policies
- Budgeting practices
- Track record in dealing with past difficulties
- Governing board's role, composition, fundraising capability and level of management oversight

Transaction-Specific Factors

Once we have assessed a public university's general credit quality, we then look to legal provisions, revenue pledges, debt service coverage and project essentiality to arrive at a rating for a specific transaction.

LEGAL PROVISIONS

Because Moody's ratings are ultimately statements about the likelihood of full and timely debt repayment, the ***legal provisions*** of a debt transaction are critical insofar as they determine how debt service payments are to be made. Here Moody's analysis focuses on the types of ***revenues and assets pledged for bond repayment***. The strongest credit provisions, which are relatively rare for public universities, would include a general obligation of the university to repay bondholders, and a security interest in a key revenue stream, such as student tuition or other mandatory fees. General obligation pledges commit a university to repay bondholders from all legally available financial resources. Because universities have no taxing powers, these financial resources do not include tax revenues that are usually part of the "full faith and credit" pledged under the general obligation of a governmental entity, such as a county or state.

DEBT SERVICE COVERAGE

While private universities often borrow under a general obligation pledge, public universities rarely do so. This is because legislation often prohibits them from pledging certain revenue streams, state appropriations for instance, to bondholders. Instead, a public university will typically pledge a narrower stream of revenues, for example, solely revenues from a parking system or housing system, for debt repayment. Because of the narrower pledge, in these cases Moody's pays close attention to the assets and revenues pledged for debt service and to the ***debt service coverage ratios*** that result.

Where pledges are made on the gross revenues of an auxiliary system such as housing or dining, Moody's always considers net revenues as well as gross when calculating these ratios. Furthermore, we compare ***historical and projected net revenues to maximum annual debt service requirements***, not just annual requirements in any given year. We also examine the ***revenue and expense growth assumptions*** that govern projected debt service coverage ratios and, where the potential exists for construction delays, the adequacy of capitalized interest funding.

Once coverage from pledged revenues has been considered, Moody's looks to provisions for ***debt service reserve funds*** and ***additional bonds tests*** that must be passed in order to issue additional debt, as the source of additional bondholder security. Moody's believes that these provisions become an increasingly important credit factor in the lower rating categories or for debt securities where coverage is thin or pledged revenues are potentially more volatile. For

public institutions rated in the **A** category or higher, Moody's believes the likelihood of the need to ever call on debt service reserve funds or to look to other legal provisions is very small.

PROJECT ESSENTIALITY

In a transaction featuring a pledge on a specific revenue stream, the rating may be lower than the institution's imputed general obligation rating by one or more notches. In such cases, the deciding factors would often be the strength of debt service coverage ratios and the perceived ***essentiality of the project*** being funded to the university. If the project being funded is deemed by Moody's to be of high essentiality to the institution, a parking garage at a predominantly commuter institution in a crowded urban area, for instance, the rating on the bonds is likely to approach the institution's imputed general obligation credit quality.

Some public universities have been able to achieve high ratings for auxiliary system borrowings by pledging, in addition to the system's net income, revenues from a mandatory fee that is often collected along with tuition and is paid by all students, regardless of whether, or how often, they use system facilities. Under this structure, debt service is linked directly to enrollment, which, especially for institutions with high student demand in demographically vibrant states, significantly enhances bondholder security. As a result, most debt securities that feature a mandatory student fee as a significant component of the pledged revenues can achieve a rating level that is equivalent to the institution's imputed general obligation credit qaulity.

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Transaction-Specific Factors

- Nature of assets and/or revenues pledged for debt service, other covenants
- Debt service coverage (using net pledged revenues and maximum annual debt service requirements)
- Revenue and expense growth assumptions
- Essentiality of the project to the university

Conclusion

Our methodology has been refined over time to keep pace with market innovations and changes in accounting practices, but the broad focus has remained unchanged. We expect this general framework to form the basis of our analysis of credit quality in the public higher education sector for the foreseeable future.

Appendix 1: The Credit Rating Process

RATINGS PRODUCTS AND SERVICES

The rating process typically begins with a request for a rating by the institution, its financial advisor, or its underwriter. For institutions that are contemplating issuing rated debt for the first time, Moody's offers three basic levels of rating service: Estimated Ratings, Preliminary Indicators, and Public Ratings. Moody's also offers an Institutional Financial Strength Assessment service that offers a confidential, independent assessment of an institution's financial strength and is not tied to the issuance of debt. This service is available for institutions that seek an in-depth benchmarking assessment of their credit and financial position for the purpose of strategic planning or establishing debt policies.

What is a Rating?

A Moody's credit rating is an independent opinion about the future ability and willingness, as well as legal obligation, of an issuer of debt to make full and timely payments of principal and interest. If an institution does not have any outstanding public debt, Moody's will assign an issuer rating, which reflects the institution's broad credit strength and is akin to an unsecured general obligation rating.

Moody's rating scale represents a consistent framework for ranking and comparing the relative risks of many debt issues, including the debt of colleges and universities. It typically includes a rating outlook of stable, positive, negative, or developing, indicating the likelihood of a change in the rating over the medium term of eighteen to thirty-six months.

An ***estimated rating*** provides institutions that do not have existing ratings with quick feedback regarding an expected rating range and potential factors of credit focus. This can also be used by institutions that have ratings on debt issued under fundamentally different security structures. Typically, the lead analyst assigned to the credit reviews one to three years of audited financial statements, three to five years of enrollment and student demand data, and any other readily available information regarding the school's mission, strategic plan, etc. The analyst will also review the strength of the particular revenue/asset pledge and the proposed structure of the debt. At this point in the rating process we typically do not have extensive contact with management, although some clarification of unusual factors may be helpful. Estimated ratings often assist the institution and its financial advisor in determining how to proceed with the financing. They can be used to make an informed decision between issuing the debt on an unenhanced basis, or using credit support such as municipal bond insurance or a bank letter of credit.

A ***preliminary indicator rating*** provides a precise indication of a rating level based on a full review of financial and student demand information, extensive conversations with management (either in face-to-face meetings or over the telephone), and a review of draft legal documents. Preliminary indicators are confidential, and Moody's opinion is shared only with the institution and its investment banker or financial advisor.

A ***public rating*** reflects full dissemination of Moody's rating, including a report detailing key credit factors supporting the rating. It can be made public on an unenhanced basis, or as an underlying rating in conjunction with a form of credit support such as bond insurance or bank letter of credit. The rating is usually delivered via electronic means such as Bloomberg, and is also available on Moody's website, www.moodys.com, and other subscription-based services. If there is significant market interest, Moody's may issue a press release on the assignment of the rating. We also respond to questions by potential investors who are subscribers to Moody's services, including most major participants in the public finance bond market.

Once a rating has become public, we generally maintain its currency and accuracy for the life of the bonds because debt securities are often traded on the secondary market well after the initial issue. We request financial statements and other supplemental information from the institution on an annual basis. The rating may be updated and changed following review of this information or upon the occurrence of a material event affecting the institution's credit quality. For more information on this topic please see our March 2001 comment: *Frequent Credit Reviews Help Maintain Timeliness of Moody's Higher Education and Not-For-Profit Organization Ratings*.

An ***institutional financial strength assessment*** is an independent, confidential evaluation of an institution's credit quality that can be used in formulating an organization's strategic or capital plan. It includes, in addition to our usual analysis, benchmarking against peers and competitors and an overview of broad industry and market factors affecting the institution. A detailed report or, upon request, a presentation is provided to university management and/or its Board outlining key strengths and weaknesses. A Board member or top-level administrator of a college or university typically contacts Moody's to initiate an institutional financial assessment.

THE RATING SCALE

Moody's ratings for long-term fixed-rate bonds range from **Aaa** for the highest "gilt edge" quality to **C** for the lowest speculative-grade quality. In the Aa through Caa rating categories, numerical modifiers of 1, 2 and 3 are used for a more precise differentiation of credit quality within a rating category, with 1 indicating the strongest position within the category and 3 the weakest. Ratings for investment grade short-term obligations range from **MIG1** to **MIG3**, with **SG** denoting speculative grade quality. Commercial paper ratings range from **P-1** to **P-3** for investment grade notes and **NP** for speculative grade "non-prime" notes. Variable-rate demand obligation ratings have two components, one on the regular long-term scale that reflects general credit risk, and a second that represents an evaluation of the risk associated with the demand feature of the obligations. The second component is rated on a scale ranging from **VMIG1** to **VMIG3** (e.g. Aa1/VMIG1). A more detailed description of our ratings may be found in Appendix II.

Table 1

Moody's Rating Scale

	Long-Term Debt	Variable Rate Demand Obligations[1]	Notes	Commercial Paper
Investment Grade	Aaa	Long-Term Rating/VMIG-1	MIG-1	Prime-1
	Aa1, Aa2, Aa3	Long-Term Rating/VMIG-2	MIG-2	Prime-2
	A1, A2, A3	Long-Term Rating/VMIG-3	MIG-3	Prime-3
	Baa1, Baa2, Baa3			
Speculative Grade	Ba1, Ba2, Ba3	SG	MIG-4	Not Prime
	B1, B2, B3			
	Caa1, Caa2, Caa3			
	Ca, C			

Note: Variable rate demand obligations receive a dual rating combining the long-term debt (Aaa-C) rating and the VMIG 1-3 rating, which represents an evaluation of the risk associated with the demand feature of the bonds.

COMMITTEE APPROACH

Moody's rating decisions are made by a committee comprising several members of the higher education ratings team. The committee approach is utilized as a means to ensure consistency and efficiency, as well as to ensure that the integrity of the rating process is maintained. Because it is forward-looking, a credit rating inevitably retains a degree of subjectivity, and it is the role of the committee structure to introduce as much objectivity and impartiality as possible into the process.

Where appropriate, the committee also includes representatives from other rating teams at Moody's such as health care, housing, or state governments. For instance, if Moody's were rating a high-profile flagship public university with significant exposure to the health care sector via major hospital operations, the rating committee might include:

1. Lead analyst from the higher education team
2. Backup analyst from the higher education team
3. Managing director of higher education, health care and housing sectors
4. Health care analyst
5. Lead analyst for the state in which the university is located

In preparation for committee, the lead analyst assigned to the institution prepares a thorough report featuring financial and market indicators, median and comparable ratios for peer institutions, and a synopsis of the legal structure of the transaction at hand. This report, which includes a rating recommendation, forms the basis of group discussion and, ultimately, of the rating decision. The decision-making process is issuer-specific and not formulaic. Beyond the quantitative and legal analyses, committee also considers various qualitative issues, such as market niche, nature of the relationship with state, institutional strategy, and overall management quality and sophistication. The final decision is reached either by consensus or, if necessary, by majority vote. While consensus is desirable, it may not always be possible.

Rating decisions are then communicated to the issuer, who has an opportunity to briefly review the rating report that will be publicly disseminated. Issuers also have the opportunity to appeal the rating. Appeals are very infrequent and typically occur only when Moody's rating committee becomes aware of new information or developments that are material to an institution's credit quality. Because extensive conversations with an institution's management are an integral part of the rating process, however, such cases are rare.

Appendix 2: Moody's US Municipal Rating Definitions

Municipal Ratings are opinions of the investment quality of issuers and issues in the US municipal and tax-exempt markets. As such, these ratings incorporate Moody's assessment of the default probability and loss severity of these issuers and issues.

Municipal Long-Term Rating Definitions

Rating	Definition
Aaa	Issuers or issues rated Aaa demonstrate the strongest creditworthiness relative to other US municipal or tax-exempt issuers or issues.
Aa	Issuers or issues rated Aa demonstrate very strong creditworthiness relative to other US municipal or tax-exempt issuers or issues.
A	Issuers or issues rated A present above-average creditworthiness relative to other US municipal or tax-exempt issuers or issues.
Baa	Issuers or issues rated Baa represent average creditworthiness relative to other US municipal or tax- exempt issuers or issues.
Ba	Issuers or issues rated Ba demonstrate below-average creditworthiness relative to other US municipal or tax-exempt issuers or issues.
B	Issuers or issues rated B demonstrate weak creditworthiness relative to other US municipal or tax- exempt issuers or issues.
Caa	Issuers or issues rated Caa demonstrate very weak creditworthiness relative to other US municipal or tax-exempt issuers or issues.
Ca	Issuers or issues rated Ca demonstrate extremely weak creditworthiness relative to other US municipal or tax-exempt issuers or issues.
C	Issuers or issues rated C demonstrate the weakest creditworthiness relative to other US municipal or tax-exempt issuers or issues.

Modifiers for Municipal Ratings

Moody's applies numerical modifiers 1, 2, and 3 in each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category.

Appendix 3: Key to Moody's Public College and University Ratios

Market Demand

Ratio	Definition
Selectivity (%)	Number of acceptances Divided by number of applicants
Marticulation (%)	Number of students enrolling Divided by number of acceptances
Net tuition per student ($)	The sum of: Gross tuition and fees revenue Less Scholarship discount and allowances Less Scholarship expense Divided by total FTEs
State appropriation per student ($)	State appropriations Divided by total FTEs
Educational expenses per student ($)	Total Operating expenses Divided by total FTEs
Educational expenses w/o research per student ($)	The sum of: Total Operating expenses Less Research expenses Divided by total FTEs
Total tuition discount (%)	The sum of: Scholarship discount and allowances Plus Scholarship expense Divided by gross tuition and fee revenue

Capital

Ratio	Definition
Unrestricted financial resources to direct debt (x)	Unrestricted net assets Divided by direct debt
Expendable financial resources to direct debt (x)	The sum of: Unrestricted net assets Plus restricted expendable net assets Plus foundation unrestricted / temporarily restricted net assets less foundation net investment in plant Divided by direct debt
Total financial resources to direct debt (x)	The sum of: Unrestricted net assets Plus restricted expendable net assets Plus restricted nonexpendable net assets Plus foundation total net assets less foundation net investment in plant Divided by direct debt
Unrestricted financial resources to comprehensive debt (x)	Unrestricted net assets Divided by comprehensive debt
Expendable financial resources to comprehensive debt (x)	The sum of: Unrestricted net assets Plus restricted expendable net assets Plus foundation unrestricted / temporarily restricted net assets less foundation net investment in plant Divided by comprehensive debt
Total financial resources to comprehensive debt (x)	The sum of: Unrestricted net assets Plus restricted expendable net assets Plus restricted nonexpendable net assets Plus foundation total net assets less foundation net investment in plant Divided by comprehensive debt

Direct debt per student ($)	Direct debt Divided by FTEs
Direct debt to cash flow (x)	The sum of: Direct debt Divided by the sum of: Operating surplus (deficit) Plus Depreciation Plus Interest
Direct debt to total capitalization (x)	Direct debt Divided by the sum of: Total net assets Plus Direct debt
Direct debt to total revenues (x)	Direct debt Divided by total operating revenues
Actual debt service to operations (%)	Actual annual debt service Divided by total operating expenses
Peak debt service to operations (%)	Peak annual debt service Divided by total operating expenses
Capital expense to operations (%)	The sum of: Depreciation expense Plus Interest expense Divided by total operating expenses
Age of plant (number of years)	Accumulated depreciation Divided by depreciation expense

Balance Sheet Ratios

Unrestricted financial resources to operations (x)	Unrestricted net assets Divided by total operating expenses
Expendable financial resources to operations (x)	The sum of: Unrestricted net assets Plus restricted expendable net assets Plus foundation unrestricted / temporarily restricted net assets less foundation net investment in plant Divided by total operating expenses
Free expendable financial resources to operations (x)	The sum of: Unrestricted net assets Plus restricted expendable net assets Plus foundation unrestricted / temporarily restricted net assets less foundation net investment in plant Less direct debt Divided by total operating expenses
Expendable financial resources to total net assets (%)	The sum of: Unrestricted net assets Plus restricted expendable net assets Plus foundation unrestricted / temporarily restricted net assets less foundation net investment in plant Divided by total univeristy and foundation net assets less foundation net investment in plant
Total financial resources per student ($)	The sum of: Unrestricted net assets Plus restricted expendable net assets Plus restricted nonexpendable net assets Plus foundation total net assets less foundation net investment in plant Divided by total FTEs

Operating Ratios

Annual operating margin (%)	Operating surplus (deficit) Divided by total operating revenue
Average operating margin (%)	Three year average of annual operating margin
Operating margin excluding gifts (%)	The sum of: Operating surplus (deficit) Less gifts and pledges Divided by the sum of: Total adjusted operating revenues Less gifts and pledges
Research expenses to total operating expenses (%)	Research expenses Divided by total adjusted operating expenses
Total gifts per student ($)	The sum of: Gifts and pledges Plus capital grants & gifts Plus gifts for endowments Divided by total FTEs
Actual debt service coverage (x)	The sum of: Annual operating surplus (deficit) Plus depreciation expense Plus interest expense Divided by total of principal and interest payments
Average actual debt service coverage (x)	Three year average of actual debt service coverage
Average peak debt service coverage (x)	Three year average of: The sum of: Annual operating surplus (deficit) Plus depreciation expense Plus interest expense Divided by peak principal and interest payments
Return on net assets (%)	Increase (decrease) in total net assets Divided by average total net assets (the sum of beginning and ending net assets divided by 2)
Return on financial resources (%)	Increase (decrease) in sum of: Unrestricted net assets Plus restricted expendable net assets Plus restricted nonexpendable net assets Plus foundation total net assets less foundation net investment in plant Divided by average total financial resources (the sum of the beginning and ending total financial resources divided by two)

Definitions:

Direct debt *- institution's obligations (e.g. bonds, notes, commercial paper, capital lease, bank loans, and draws upon lines of credit*

Comprehensive debt *- includes direct debt and indirect debt (I.e. instruments not on the institution's statement of net assets, but because of the nature of the institution's commitment, the debt is considered a possible use of the institution's financial resources (e.g. debt issued through closely affiliated organizations, private developer-financed borrowings for projects including student loans; non-cancelable operating leases, and non-recourse project leases.*

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