



PRAGER, MCCARTHY & SEALY, LLC

RATIO ANALYSIS IN HIGHER EDUCATION:  
NEW INSIGHTS FOR LEADERS  
OF PUBLIC HIGHER EDUCATION

FIFTH EDITION - PUBLIC INSTITUTIONS



## I. Introduction and Acknowledgements

Since KPMG LLP introduced the first edition of *Ratio Analysis in Higher Education* in the 1970s, college and university trustees, senior managers and interested external parties have used financial ratio analysis as a tool to better understand and interpret financial statements. The second edition, published in 1982, added debt-related ratios relating to institutional creditworthiness and represented the beginning of the collaboration with Prager, McCarthy & Sealy, LLC. The third edition, published in 1995, dealt only with private institutions that implemented new accounting and reporting standards caused by the Financial Accounting Standards Board (FASB) Statement of Financial Accounting Standards Nos. 116 and 117.

The fourth edition, *Measuring Past Performance to Chart Future Direction*, published in 1999, significantly advanced financial ratio analysis and introduced several new models and concepts to higher education finance, including the use of financial ratios in strategic planning. Many leaders in higher education view the third and fourth editions as milestone publications in finance for private institutions. Trustees, senior managers, financial analysts and credit agencies use them extensively.

This fifth edition, *Ratio Analysis in Higher Education: New Insights for Leaders of Public Higher Education*, is designed for public colleges, universities and related entities that adopt Governmental Accounting Standards Board (GASB) Statement Nos. 34 and 35. These statements, along with several other related GASB standards, represent a watershed event in accounting and financial reporting that creates both challenges and opportunities for senior managers, governing boards and other stakeholders, including faculty, and legislative and administrative bodies. Although GASB Statement Nos. 34 and 35 significantly change the manner in which financial information is presented and require institutions to depreciate their plant assets, the institution's fundamental financial condition and results have not changed.

Besides this significant change in reporting, leaders of higher education also need to contend with the effects of a turbulent environment: fluctuations in governmental appropriations; increasing demands for greater accountability, access and efficiency; constant changes in technology; and the erosion of traditional geographical boundaries, among many other issues.

These challenges must be addressed by senior managers differently than in the past to enable public higher education to prosper. Senior financial managers must continue to expand their traditional role and become even more involved with strategy, values and vision. They need to employ enhanced communication skills and different models for financial analysis to communicate financial resource availability, needs and allocation decisions to their various stakeholders. To aid their understanding, this publication introduces a financial ratio model and framework and a strategic approach to managing debt.

Several principles guided the earlier editions of *Ratio Analysis*. We have reexamined these principles and have adjusted them to reflect the challenging financial environment facing public higher education. These principles are:

- Use ratios to measure the acquisition and use of resources to achieve the institution's mission,
- Focus on summary information to address key questions raised by stakeholders,
- Present a few key ratios to answer these questions,
- Use readily available information and
- Focus on trends in institutional ratios and establish benchmark comparisons with similar institutions.

We believe that financial ratio analysis can play an integral role in helping each institution achieve its goals by:

- Measuring success factors against institutional strategic objectives,
- Quantifying the status, sources, and uses of resources,
- Assessing the institution's ability to repay current and future debt, including its rationale for creditworthiness,
- Gauging institutional performance and functional effectiveness,
- Identifying financial anomalies and focusing attention on matters that should be of concern to the institution and
- Explaining relative liquidity, financial viability, and leverage attributes.

The basis for effective application of ratio analysis is a clear institutional mission. We believe that every institution should have a clearly articulated mission and that there must be measurement, both financial and non-financial, along the way to help the institution understand the extent to which it is achieving that mission. Mission inspires and guides institutional stewards regarding what and why resources will be used to accomplish their vision. Mission is best activated by a comprehensive strategic plan. Well-managed institutions use their mission to drive success and financial metrics to determine affordability. The strategic plan should always support the mission; it is irrelevant otherwise.

While many public institutions do not have comprehensive strategic plans, all do have a fundamental underlying mission, that is, to serve the people of the sponsoring government unit (e.g., county, state) by providing access to higher education and other skills at a reasonable cost to residents of that unit. Some institutions have more specific missions relating to selectivity, research, public service, medical care and training and employable skills training.

The failure of many public institutions to adopt meaningful and concise strategic plans to help them achieve their mission, or to integrate their various schools' or departments' operating and financial plans into the institution's strategic plan is often not the fault of the institution's senior management. Generally, the failure is caused by a confluence of negative factors related to the variability of governmental funding and conflicting stakeholder goals. In addition, the goals and objectives of individual entities within a state system may not be congruent with the overall vision of the system's administration, or of the legislative and executive branches of the sponsoring government.

Ratio analysis can measure success factors against institution-specific objectives and provide the institution with the tools to improve its financial profile to carry out its mission. We believe there are four key financial questions that public institutions need to ask themselves:

- Are resources sufficient and flexible enough to support the mission?
- Does financial asset performance support the strategic direction?
- Do operating results indicate the institution is living within available resources?
- Is debt managed strategically to advance the mission?

This publication describes four strategic ratios that help answer these questions.

*Why change the way we analyze the financial health of a public college or university?*

Public higher education has undergone and will continue to undergo dramatic changes. Stakeholders' goals and objectives are often in conflict. Budget uncertainties have resulted in the need to identify, enhance and manage other sources of revenue besides tuition and governmental appropriations and have led, in some cases, to increased use of affiliated organizations and off-financial statement transactions. New financial reporting standards have significantly altered financial reporting and measurement methods and will change both the message and the meaning of publicly reported financial statements. These factors have resulted in the development of a new conceptual framework for analyzing the financial information of public colleges and universities and communicating this information to the institutions' stakeholders.

In working with public higher education over many decades, we have determined that there are several common attributes of successful public institutions where success is defined as achieving mission. These include:

- Effective senior leadership,
- Well-defined mission that is executed and measured against clearly articulated objectives,
- Financial resources invested properly,

- Holistic approach in planning, management and measurement,
- Debt used strategically and
- Information effectively communicated to stakeholders.

The attributes listed above and the framework set forth in this publication are applicable to all types of public institutions including community colleges, research institutions, land grant universities, academic medical centers, individual institutions within a system and a system itself. Through our work with institutions of higher education, both public and private, we have found that the key questions asked above apply to all institutions, regardless of their mission, governance structure, tax-exempt status or other attributes.

We will focus our discussion on the financial aspects of these attributes in this publication.

We have enjoyed the opportunity to provide these concepts to the higher education industry. We look forward to the ongoing evolution of these ratios and models and development of additional ratios and models as public institutions adopt the new accounting and reporting standards. We also plan on working with our colleagues in the industry as we use these concepts to chart future direction.

### *Acknowledgements*

*Ratio Analysis in Higher Education: New Insights for Leaders of Public Higher Education* represents the continuing collaboration of two firms dedicated to serving the business of higher education: KPMG LLP, the assurance and tax firm, and Prager, McCarthy & Sealy, LLC, provider of financial services to higher education. The project was led by a team of senior professionals from both firms: Fred Prager and Chris Cowen and the other professionals in the National Higher Education group including Joe Beare, Saul Rosenbaum and Brian Sandquist from Prager, McCarthy & Sealy, LLC; and from KPMG, the Higher Education Leadership Team of John Keenan, Rich McKinless, Lou Mezzina, Terry Simon, Ingrid Stanlis and Mark Thomas, as well as retired partner Phil Tahey.

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## II. Pressures and Challenges Affecting Leaders of Public Higher Education

Public institutions at all levels—state systems, individual colleges and universities, and community colleges—are facing extraordinary challenges: rising costs, value-shopping by consumers, continuous complaints by employers over lack of graduated students’ skills, limited financial flexibility and elected officials questioning spending and demanding greater accountability. These pressures and other challenges also present opportunities to the institution and its senior managers to change, adapt and adopt new methods to prosper.

In many public institutions, the senior business officer, referred to in this publication as the chief financial officer (CFO), is also the chief administrative officer with responsibilities over human resources, facilities, information technology, auxiliary enterprises and security. Often, the CFO is the liaison with the legislative budget committees, system administration and other executive branch departments. The CFO is frequently called upon to balance resource needs with available funds; to make difficult resource allocation decisions when legislative funding is suddenly frozen or decreased during the fiscal year; and to communicate these decisions to stakeholders. In other words, the CFO is not only the chief business officer but also the chief financial communications officer.

CFOs need to become more focused on leading rather than managing. According to Jay Morley and Doug Eadie in *The Extraordinary Higher Education Leader*; “leaders are boundary expanders who go well beyond merely managing and controlling operations; they focus on strategic products as institutional values and vision for the future, the institutional mission and major investments in institutional innovation and growth.” For CFOs to be successful at successful public institutions in the 21st century, they must adapt and adopt new skills and methods. Some of the more significant challenges facing CFOs are balancing stakeholder interests, responding to increased competition, managing financial uncertainties from legislative bodies, allocating limited resources and adapting to and effectively communicating changing reporting standards.

### Stakeholders

Public institutions, with more and more diverse stakeholders than their private counterparts, act and react differently to threats and challenges. These stakeholders include faculty, staff and employees, alumni, legislative bodies, governing boards, system administrators, grantors, local residents, students and government executives, among others. Governing boards are more accountable to the executive and legislative branches of government and are quickly affected by the outcome of elections in those branches. Stakeholders have varying degrees of influence, and often conflicting goals such as:

- Access vs. quality of students and national rankings,
- Affordability vs. appropriation uncertainties or reductions and
- Efficiency vs. local employment and economic development.

The response by public institutions to balance their stakeholders' needs and communicate with them effectively has been uneven. Successful institutions have developed long-term plans with their stakeholders and effectively communicate information, albeit positive or negative. Other institutions have adopted a "leave me alone" strategy and not actively engaged their stakeholders, hoping that their influence will wane over time. Some institutions are unable to communicate effectively because they do not have a coherent strategic plan. Others that do have a plan are at the mercy of changing funding patterns and levels by the sponsoring government.

### **Competition**

Public institutions are under ever-increasing pressure from a multitude of entities including private institutions, for-profit corporations, other in-state public institutions, out-of-state public institutions and even institutions within the same system. Technology has generally removed traditional geographic boundaries via distance learning. The need to grow revenues and add students has caused private and public institutions to expand their bases of operations and attract different types of students. There is often added pressure to increase student quality to attain higher rankings in national surveys. State boards of higher education have generally failed to monitor individual institution's missions and expansion, causing sister institutions to compete with each other for similar students and scarce resources. For-profit entities are offering market-driven courses at low costs to adult and continuing education markets – areas that historically have been profit centers for public institutions that funded other programs.

Many public institutions have responded by becoming more like private institutions, increasingly becoming involved in fund-raising (development), active student recruitment, research investment and technology transfer with the for-profit sector, targeting financial aid, attracting high profile faculty and financial monitoring (such as profit or responsibility center analysis).

### **Financial Pressures From Legislative Bodies**

Public institutions, unlike private institutions, have to effectively interact with legislative bodies for a significant, yet decreasing percentage of operating funds and capital funds. Appropriations for operating and capital purposes fluctuate dramatically due to changes in governmental revenues and the overall economic environment, and can differ considerably among states. Sudden economic downturns cause many states to reduce subsidies, suspend capital plans or institute mid-year budget freezes. Legislatures demand more accountability by public institutions and mandate access or affordability goals without providing sufficient funding or financial flexibility to attain them. State boards of education encourage competition within their system with the goal of improving education yet legislatures fail to provide adequate and stable long-term funding for transformation and investment, or restrict funding to projects deemed a lower priority by institutions.

Public institutions have responded by increasing their financial reserves, such as endowment funds, to attain more stable sources of funds. Off-financial statement transactions, such as joint ventures with real estate developers to construct and operate student housing, have proliferated as an alternative to traditional capital appropriations or debt issuances.

### **Limited Resources to Allocate**

Institutional stakeholders continue to increase their demands on limited and sometimes decreasing pools of financial resources. Students are demanding and receiving more amenities. Information technology expenditures consume a larger portion of operating budgets with a return that is difficult to measure. Salaries and benefits must be increased to maintain competitiveness. Financial aid and tuition discounting techniques are more commonly used, with many institutions placing a higher priority on institutional grants for undergraduate and graduate students demonstrating need. Infrastructure continues to age and deteriorate while upgrading and deferred maintenance funding is largely dependent on changing legislative priorities. Long-time programs that are not related to mission or are financially viable continue and are not curtailed or eliminated. Research programs are increasingly expensive to grow and operate due to extensive capital needs for facilities and equipment, administrative support to operate and increased competition for proven faculty.

Public institutions have tended to respond to these challenges by continuing traditional practices such as instituting budget freezes, across the board reductions or other short-term solutions like curtailing travel. A number of public institutions have set priorities for funding among departments and eliminated unneeded programs. Many public institutions have not developed and implemented strategic plans that permit growth in areas of excellence and fulfillment of mission, either in periods of financial abundance or difficulty.

### *Changes to Financial Reporting Standards*

Changes to accounting and reporting standards will cause confusion to many users of financial statements and will also increase the difficulty of preparing long-term trend analysis, at least initially. GASB Statement No. 33 requires public institutions to recognize pledges meeting certain conditions. GASB Statement Nos. 34 and 35 will cause significant changes to the format of public institutions' financial statements with net assets replacing fund balances; consolidated totals instead of fund groups; recognition of additional plant assets and depreciation of all plant assets; introduction of a cash flow statement; use of an operating measure; and presentation of governmental appropriations, investment income and interest expense as nonoperating items. GASB Statement No. 39 on affiliated organizations will require the institution's affiliated foundations and certain other affiliates to be reported in the institution's financial statements.

Public institutions should respond by taking advantage of the opportunity to present themselves in a new and totally different manner and not focus on the change itself. Users are demanding more transparency in financial statements and these changes will provide a more

complete financial picture of the entire institution. Finance officers should work with the governing board, president, other senior managers and public affairs personnel to determine how to communicate key financial information to stakeholders so that it is understood and is consistent with other information presented or released. The management's discussion and analysis section presents an opportunity to explain the financial statements in a narrative form, highlighting trends and other important transactions or events. Other messages can be communicated through display or disclosure, such as results of a capital campaign or increases in research funding. For some, these changes permit the institution to improve upon its current financial disclosures while others will need dramatic revisions to their approach and presentation.

### **Conclusion**

To respond to these challenges and effectively communicate with stakeholders about financial resources and needs, business officers need to discard "old-time" financial analysis and adopt new methods and communication tools. Internal, long-term historical trend analysis of revenues and expenditures has limited use in today's fast-paced competitive environment. Using a large number of ratios obscures the ability to deliver a coherent and concise message about financial performance, resources and needs.

Finance officers need to be able to continue to think more strategically, expand their vision to longer time horizons than the current budget cycle, and make important contributions to the institution's strategic plan. They need to articulate a coherent message about resources, the type and amount needed, and where they should be used. They need a framework and tools to allocate resources internally, assign priorities for funding, deal with capital structure and manage debt issuances effectively and fairly among the operating units. And they need communication tools to help them engage their stakeholders regarding these decisions and articulate the institution's message. This publication and our ongoing work with measures of financial performance are aimed at helping meet these challenges.

### III. Rationale for Developing a New Framework for Financial Analysis

For leaders of public institutions to be successful and help their institutions achieve their missions, a new approach to financial analysis of public institutions is needed. Financial analysis of public institutions should:

- Measure financial resources,
- View the institution holistically,
- Measure leverage,
- Measure use of resources to achieve mission and
- Measure importance of programs to mission.

In addition, these measures must be simple to calculate and easy to communicate to stakeholders. Each of these attributes is described more fully below.

#### Measures Financial Resources

A key attribute of a successful public institution is the accumulation of financial resources to deploy in carrying out the mission. Financial resources (expendable reserves) can be used to fund program initiatives, provide student aid and permit greater long-term funding stability for operating and capital needs. Institutions without such financial resources may be unable to achieve their mission without great difficulty in the near term and find that continued achievement over the long term is not attainable.

While in the past, public institutions may have been reluctant to disclose their direct and indirect financial resources, there is a growing need – and an opportunity – to articulate to stakeholders why accumulating, maintaining and using financial resources is critical to carrying out their mission. Besides the reasons that will be specific to each institution, financial resources, in general, can help cushion against unexpected budgetary pressures and support growth in mission-critical areas which, in turn, can increase the overall competitiveness of the institution.

#### Strategic View of the Institution - Holistic Approach

When evaluating the financial performance of an institution in terms of achieving its mission, the institution, including affiliates, subsidiaries, partnerships, etc., should be considered whether or not they are ordinarily included in the institution's financial statements. This holistic approach can help the leaders of the institution and other key constituents assess progress in aligning resources with institutional goals and help them identify their successes and opportunities for improvement.

In addition, rating agencies and investment bankers often consider institutions holistically in determining their debt capacity. They want to understand the institution’s overall debt exposure as part of their analysis. And, while we do not view achieving a specific credit rating as a strategic goal, its influence on the cost of capital may affect the institution’s ability to carry out its mission, especially in less favorable economic environments.

We also recognize that performing this kind of holistic strategic assessment may require combining net assets that are reported on a GASB-basis with those reported according to FASB. However, the differences between the two bases of accounting are not that significant to warrant exclusion while the measurement of financial resources, leverage and operating performance is enhanced by combining them.

**Measures Leverage**

The financial analysis must measure leverage or indebtedness that the institution has incurred. Debt is a permanent part of an institution’s capital structure like endowment funds and physical plant. Debt, used wisely, can assist in achieving mission. Debt levels and capacity need to be monitored continuously. A framework should be established to determine the amount, timing, type and purpose of debt issuances.

Public institutions generally rely more on capital appropriations compared to private institutions that rely more upon tuition, debt and private gifts to fund their capital needs. Unlike private institutions that have the authority to issue debt through a financing agency that is reflected in the institutions’ financial statements, public institutions have different authority and recognition models. Debt issued by a state agency may be reported in that agency, allocated to the system or to the individual institution. Authority to issue debt also varies from individual institutions to system approval to legislative approval to voter approval. Private institutions also often have greater control over the nature, terms and timing of debt issued. However, analysis of, and changes to, capital structures will become more critical to the long-term success of public institutions. It is likely that public institutions in the future will issue more debt more frequently and rely more on private gifts to replace capital appropriations.

**Measures Use of Financial Resources**

Accumulation of financial resources should not be an end in itself. Rather, how an institution uses its resources to achieve mission needs to be measured and communicated. Too many resources may be a sign of not achieving mission as funds are accumulated and not invested in human, technological or physical capital assets. Institutions should strive for a balance on making these investments and retaining reserves to invest in the future. The measures should be at the institution-wide level with the ability for more detailed analysis at lower levels.

### **Measures Importance of Programs to Mission**

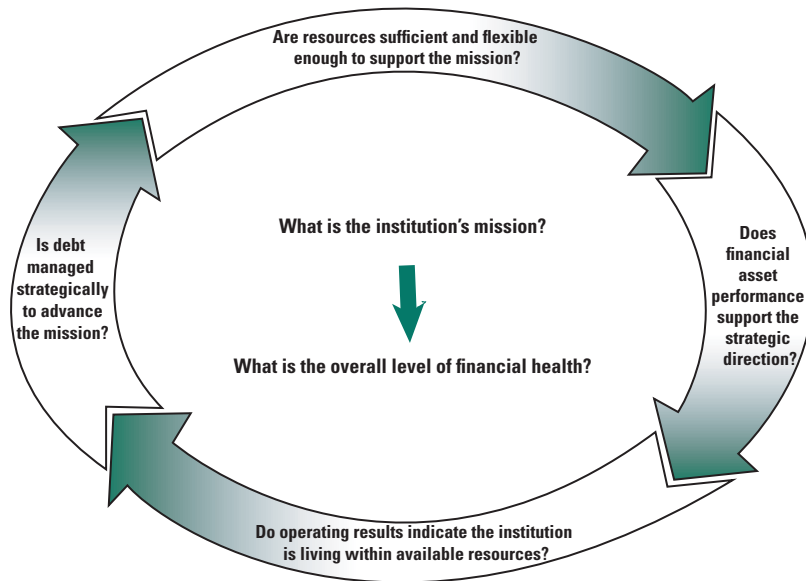
The financial analysis must be able to measure the importance of individual programs to mission. Programs have to be aligned with institutional objectives and goals, otherwise resources are diffused and institutional clarity is decreased. Periodically, programs or units should be evaluated against criteria regarding their importance to mission. Measures employed should be flexible and adaptable to conform to the unique nature of the institution and should help senior managers determine where allocation of resources should be increased or decreased.





#### IV. A New Framework for Financial Analysis of Public Institutions

Most colleges and universities are transforming themselves to cope with significant external pressures and to position themselves for success in the 21st century. To analyze and measure the financial and operational success of an institution, leaders and interested observers should ask a number of high-order questions. The schematic below depicts the interrelationship of these questions. A discussion of each question follows.



Central to all questions about change and transformation is mission. In the world of higher education, then, the most important question is, *What is the institution's mission?* Mission should inform all decisions made by institutional stewards regarding what and why resources will be used to accomplish their vision.

The preceding schematic emphasizes the concept that all resource decisions, as represented by the outer ring of questions, should be driven by mission, shown in the inner circle. Mission is best activated through a strategic plan. A few high-level measures — financial and non-financial — are essential to understand the institution's performance in accomplishing its mission. Whatever measures are chosen, they should be maintained in a strategic plan and assessed periodically. Well-managed institutions use mission to drive success and *financial metrics* to determine affordability. The strategic plan should always support the mission; it is irrelevant otherwise.

Measuring overall financial health is an essential first step when assessing the impact of transformation on the institution, and serves as a gateway to the four other high-level questions.

*What is the overall level of financial health?*

This question focuses attention on two levels of financial health: first, the institution's financial capacity to successfully carry out its current programs, and second, the institution's continuing financial capacity to carry out its intended programs.

The institution's answer to this question is critical if it wishes to thrive in the 21st century. Adequate capacity to create resources will not ensure successful completion of mission because issues critical to institutional mission are often non-financial, and the existence of resources does not guarantee they will be invested strategically. However, insufficient resources will create a barrier to achieving institutional goals.

*Are resources sufficient and flexible enough to support the mission?*

This question is concerned with helping policymakers assess the status of the institution's financial resources. Flexibility in making decisions about future institutional transformation will depend upon the institution's fiscal performance and financial base. Understanding this flexibility will help stewards and external parties determine institutional risk tolerance in the transformation process.

Two related questions address financial sufficiency and resulting flexibility:

- Is the institution clearly financially healthy as of the balance sheet date, or not?
- Is the institution financially better off at the end of the fiscal year than it was at the beginning, or not?

A simple and direct answer to each of these questions provides baseline information for further analysis and action.

*Does financial asset performance support the strategic direction?*

The long-term financing of an institution is a daunting challenge facing leaders of public institutions and is an issue for external parties, including parents, accrediting bodies, donors and grantors, government agencies, investors, and rating agencies. Because the long-term future of the institution depends on its ability to replace and enhance its capital base, managing its resource inflow streams is essential to achieving the institution's mission. Stewards must, therefore, be wary of diversions that subvert progress toward achieving the mission.

*Do operating results indicate the institution is living within available resources?*

The allocation of scarce resources is a critical function of leaders in achieving institutional mission. Many colleges and universities are undergoing significant self-examination to improve academic and support services while lowering costs. These activities will accelerate in the years ahead as institutions direct resources to selected programs that enhance their success, rather than spread insufficient resources over many programs.

There is no organization that can succeed in all areas, regardless of the amount of resources retained, because the successful organization must be a superior performer in every area in which it chooses to participate. This will require targeted and increasingly larger investments. It is, therefore, critical to identify which programs, research opportunities and other activities represent core, mission-related activities and those that do not. By determining a limited number of areas in which the institution has or desires to have a competitive advantage, and then strengthening programs within those areas, the institution will be able to improve that advantage, distinguish itself internally as well as to the potential student, and stave off competition.

Continuing to invest in non-core activities absorbs limited resources, including money, management time and institutional focus. Weak areas in an institution present opportunities for the competition. Historically, it was not possible for many other organizations to take advantage of an institution's perceived or real weaknesses, since geography and access to students created a natural barrier to entry. With the growth of technology and use of distance learning channels, competition from both traditional and nontraditional organizations represents both an increased threat and an opportunity.

Strengthening core programs and making necessary investments focus activities on the mission, prioritize projects methodically and appropriately build sustainable competitive advantages. A conceptual model is introduced later that provides institutions with a mechanism to allocate scarce resources effectively across these competing priorities.

### *Is debt managed strategically to advance the mission?*

Debt is a tool used to achieve the desired long-term strategies of the institution, and as such, a debt policy should be linked to the mission and strategic objectives of the institution. A formal debt policy provides the framework through which the institution can evaluate the use of debt to achieve strategic goals. Since management is best able to evaluate its needs, the institution — and not the credit-rating agencies— should determine debt policy. The ratios presented can help set targets for evaluating and managing the amount of debt at an institution. An institution will be stronger financially and programmatically if it develops an appropriate debt policy, articulates this policy to the stakeholders and periodically measures attainment.

The policy should achieve the following objectives:

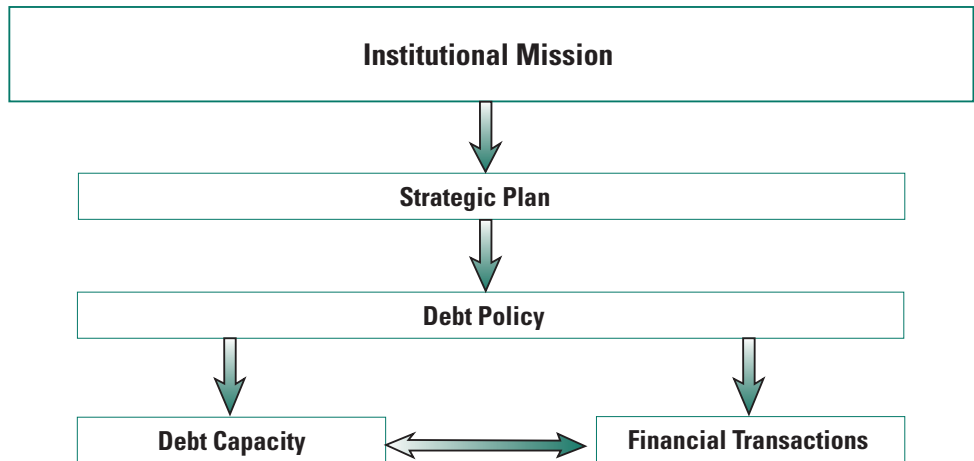
- First, it should provide management with control over the institution's entire debt portfolio. (This includes not only direct obligations issued by the institution, but any additional transactions that impact the institution's credit and debt capacity such as debt issued by affiliated foundations or special purpose entities.)
- Second, the policy should establish broad guidelines that are reported on and reevaluated regularly to ensure that the institution is continuing to meet its strategic objectives and to respond to any changes in the market.

- Third, the policy should have the objective of providing additional funds to support the institution’s capital needs and achieve the lowest overall cost of capital consistent with strategic objectives.
- Finally, the policy should encourage the maintenance of the highest acceptable credit rating for the institution that will permit the institution to continue to issue debt and finance capital projects at favorable interest rates.

It should be noted that achievement or maintenance of a specific bond rating should not be a goal of the policy.

Following is a schematic that demonstrates how debt policy links to the strategic plan and, ultimately, to the institutional mission. Without this linkage, it is difficult to create a cohesive operating environment. In creating a debt policy, the focus is on debt as a perpetual portion of the capitalization of the institution, similar to endowment funds. Furthermore, debt should be viewed as part of a process and not as individual transactions.

*Linking Debt Policy to the Mission*



To realize institutional goals, the mission must be clearly articulated throughout the institution and resources must be deployed strategically. Institutions that remain focused on their mission and deploy resources to achieve mission-guided results will be positioned to achieve long-term success. Institutions that fail to link their resources to their core mission will find it difficult to sustain a competitive advantage in deteriorating markets. Interestingly, it is not the absolute level of resources that dictates sufficiency, but the deployment of resources against stated long-term objectives.

### *Description of Strategic Ratios*

As previously discussed, we believe that a limited number of informative ratios are desirable to help provide a clear, high level assessment of the overall financial health of the institution. We think that four strategic ratios, when considered together and over time historically and in the future, will be the most informative in helping answer the question about the overall financial health of the institution.

These ratios compare the institution's operating commitments (*Primary Reserve Ratio*) and its outstanding long-term obligations (*Viability Ratio*) against its expendable financial resources. They measure the ability of the institution to generate overall return against all net resources (*Return on Net Assets Ratio*) and on a short-term basis to live within its means (*Net Operating Revenues Ratio*).

These ratios were selected because they represent measurement of key components in relation to institutional risk that must be consistently addressed. As an example, outstanding debt, by itself, is not a particularly informative number. But within the context of useable retained financial resources, the relative debt level becomes informative, allowing an understanding of the institution's capital structure and the affordability of its debt. Expendable net assets provide insight into whether the institution's operating size is reasonable in the context of useable, retained financial resources. The return that the institution has been able to achieve, both in terms of current operating size and in terms of total resources, is a key indicator of overall financial performance.

Two basic concepts are emphasized in this analysis: First, that a few measures can effectively provide insight to financial health; and second, that the ratios are most useful if the information is obtainable and the calculations repeatable. These four ratios provide powerful information on the financial health of the institution. Note that these ratios deal only with the financial aspects of the institution and must be blended with key performance indicators in other areas such as academics, infrastructure and student and faculty satisfaction to understand a more complete measure of institutional strength.

We believe that everyone in an institution should have key performance metrics to drive mission and assess performance. Other leaders in higher education finance may choose different ratios for their analysis and provide additional insight into the questions previously discussed. Since public institutions have significantly different operating characteristics, other financial ratios may be employed to evaluate financial health and management performance.

As stated above, it is important to measure the public institution's entire financial resources, debt and financial performance. This will include the institution itself, its affiliated foundations used for fund-raising, research or real estate and other special purpose entities used to construct and/or operate institution-related assets such as student housing. Due to the nature of the relationships between the institution and its affiliated foundations and other affiliated special purpose entities, it may be difficult to obtain financial information about all

affiliates. Materiality should be considered in determining which affiliated entities' financial information is necessary so that exclusion does not result in the analysis being materially incomplete or misleading. Immaterial affiliates may not be necessary to include in the analysis.

The financial ratios described below combine entities that follow accounting practices issued by both the GASB and the FASB. Generally, affiliated foundations and special purpose entities will follow FASB practices. Even though there are differences between the GASB and FASB practices, these differences are fewer after adoption of GASB Statement Nos. 33, 34 and 35 by public institutions and are not significant enough to warrant exclusion of the affiliated entities. In addition, since the majority of a public institution's financial resources in many cases, as well as a significant portion of debt in some cases, resides in the affiliated entities, exclusion of these entities from financial analysis of the public institution would result in the analysis being misleading or incomplete.

The financial information required to calculate the ratios is contained in the financial statements of the institution or the separate financial statements of the affiliates, if the affiliate information or statements are not presented with the institution's statements. Information concerning net assets and debt is generally contained on the face of the statement of net assets (GASB basis) and statement of financial position or balance sheet (FASB basis) or in the notes.

GASB and FASB net asset class captions are generally similar. GASB unrestricted and restricted expendable net assets, excluding those invested or to be invested in plant, are used for the institution. FASB unrestricted and temporarily restricted net assets, excluding those invested or to be invested in plant, are used for the affiliated entities. Information about changes in net assets and expenses is reported in either the GASB statement of revenues, expenses and changes in net assets, or the FASB statement of activities; additional information that may be needed is generally reported in the notes. In evaluating the net assets of affiliated fundraising foundations following FASB practices, the foundation's funds held for the benefit of the institution that are reported as liabilities should be adjusted so that these funds are reported as net assets.

### *Primary Reserve Ratio*

The *Primary Reserve Ratio* measures the financial strength of the institution by comparing expendable net assets to total expenses. Expendable net assets represent those assets that the institution can access quickly and spend to satisfy its obligations. This ratio provides a snapshot of financial strength and flexibility by indicating how long the institution could function using its expendable reserves without relying on additional net assets generated by operations. Trend analysis indicates whether an institution has increased its net worth in proportion to the rate of growth in its operating size. Expenses, rather than revenues, are a better indicator of operating size since they are typically less volatile and under greater management control.

It is reasonable to expect expendable net assets to increase at least in proportion to the rate of growth in operating size. If they do not, the same dollar amount of expendable net assets will provide a smaller margin of protection against adversity as the institution grows in dollar level of expenses. The trend of this ratio is important. A negative ratio or a decreasing trend over time indicates a weakening financial condition.

The *Primary Reserve Ratio* also serves as a counterpoint to the *Viability Ratio* discussed below. An institution may have insignificant expendable net assets and little or no debt and therefore produce an acceptable value for the *Viability Ratio*. But low expendable net assets in relation to operating size may signal a weak financial condition. In these cases, the *Primary Reserve Ratio* will be a much more valid measure of financial strength.

The *Primary Reserve Ratio* is calculated as follows:

$$\frac{\text{GASB Expendable Net Assets plus FASB Expendable Net Assets}}{\text{GASB Total Expenses plus FASB Total Expenses}}$$

The numerator includes all unrestricted net assets and all expendable restricted net assets, excluding those to be invested in plant, on a GASB basis plus unrestricted and temporarily restricted net assets on a FASB basis, excluding net investment in plant and those temporarily restricted net assets that will be invested in plant. GASB nonexpendable restricted net assets and FASB permanently restricted net assets are not included because they may not be used to extinguish liabilities incurred for operating or plant expenses without special legal permission. Although using total net assets in the numerator provides an informative ratio as to the overall net wealth of the institution, the ratios that exclude nonexpendable net assets provide a more accurate picture of the funds available to the institution.

The denominator comprises all expenses on a GASB basis in the statement of revenues, expenses and changes in net assets including operating expenses and nonoperating expenses such as interest expense, plus FASB total expenses in the statement of activities.

The carrying value of plant equity (i.e., GASB invested in capital assets, net of related debt net assets) is not included because the plant will not normally be sold to produce cash except in the most extreme circumstances since it presumably will be needed to support ongoing programs.

### *Return on Net Assets Ratio*

The *Return on Net Assets Ratio* determines whether the institution is financially better off than in previous years by measuring total economic return. A temporary decline in this ratio may be appropriate and even warranted if it reflects a strategy to better fulfill the institution's mission. On the other hand, an improving trend in this ratio indicates that the institution is increasing its net assets and is likely to be able to set aside financial resources to strengthen its future financial flexibility.

The *Return on Net Assets Ratio*, like all the others, is better applied over an extended period so that the results of long-term plans are measured. Single-year events, such as a substantial gift or extreme investment performance, can introduce significant year-to-year volatility to this ratio. When interpreting the *Return on Net Assets Ratio* (as with all ratios) causes of significant fluctuations need to be identified and evaluated. Some institutions prefer to calculate a two to three year moving average to reduce the volatility of specific significant events.

Long-term returns may be quite volatile and vary significantly based on the prevailing level of inflation in the economy. Therefore, establishing fixed nominal return targets is not possible. Rather, institutions should establish a real rate of return target in the range of approximately three to four percent. The real return plus the actual inflation index, either the Consumer Price Index (CPI) or the Higher Education Price Index (HEPI) (published by Research Associates, Washington, D.C.), will produce the nominal rate of return. However, as with each ratio, there are no absolute measures. For example, if an institution’s strategic plan calls for activities that will consume substantial resources, such as program expansion, a high return on net assets may be required in order to maintain a properly capitalized institution.

The *Return on Net Assets Ratio* is calculated as follows:

$$\frac{\text{GASB Change in Net Assets plus FASB Change in Net Assets}}{\text{GASB Total Net Assets plus FASB Total Net Assets}}$$

The numerator is the change in GASB total net assets plus the change in FASB total net assets regardless of whether they are expendable or nonexpendable, restricted or unrestricted. This information can be found in the GASB statement of revenues, expenses and changes in net assets and the FASB statement of activities. The denominator is the beginning of the year total net assets that can also be found in the GASB statement of revenues, expenses and changes in net assets and the FASB statement of activities.

### *Net Operating Revenues Ratio*

The *Net Operating Revenues Ratio* indicates whether total operating activities resulted in a surplus or deficit, answering the question posed earlier, “Do operating results indicate the institution is living within available resources?” This ratio is a primary indicator, explaining how the surplus from operating activities affects the behavior of the other three strategic ratios. A large surplus or deficit directly impacts the amount of funds an institution adds to or subtracts from net assets, thereby affecting the *Primary Reserve Ratio*, the *Return on Net Assets Ratio*, and the *Viability Ratio*.

The *Net Operating Revenues Ratio* is calculated as follows:

$$\frac{\text{GASB Operating Income (Loss) plus Net Nonoperating Revenues (Expenses) plus FASB Change in Unrestricted Net Assets}}{\text{GASB Operating Revenues plus Nonoperating Revenues plus FASB Total Unrestricted Income}}$$



The numerator is available from the GASB statement of revenues, expenses and changes in net assets and the FASB statement of activities. The numerator includes nonoperating revenues and expenses, including governmental appropriations, investment income, interest expenses on plant debt and operating gifts since these items support operating activities of the institution. Plant and endowment gifts and capital appropriations are excluded since these are not for operating activities. For FASB related entities, the numerator includes the total change in unrestricted assets from the statement of activities.

The numerator includes depreciation expense. We believe that inclusion of depreciation expense reflects a more complete picture of operating performance as it reflects use of physical assets.

The denominator is equal to GASB total operating revenues plus total nonoperating revenues, excluding capital appropriations and gifts and additions to permanent endowments, plus FASB total unrestricted revenues, gains, and other support including net assets released from restrictions.

A positive ratio indicates that the institution experienced an operating surplus for the year. Generally, the larger the surplus, the stronger the institution's financial performance from the year's activities. However, as a note of caution, if surpluses are obtained by under-spending on mission-critical investments, then the surplus achieved should be questioned. A negative ratio indicates a loss for the year. A small deficit in a particular year may be relatively unimportant if the institution is financially strong, is aware of the causes of the deficit, and has an active plan in place that cures the deficit. As discussed in the *Return on Net Assets Ratio*, the volatility that may be present in this ratio should be considered and a two to three year average may be calculated.

Large deficits and structural deficits are almost always a bad sign, particularly if the leaders have not identified initiatives to reverse the shortfall. A pattern of large deficits can quickly sap an institution's financial strength to the point where it may have to make major adjustments to programs. A continuing decline or a pattern of deficits is a warning signal that management and the governing board should focus on restructuring the institution's income and expense streams to return to an acceptable *Net Operating Revenues Ratio*.

## VIABILITY RATIO

The *Viability Ratio* measures one of the most basic determinants of clear financial health: the availability of expendable net assets to cover debt should the institution need to settle its obligations as of the balance sheet date. The formula for this ratio is:

$$\frac{\text{GASB Expendable Net Assets plus FASB Expendable Net Assets}}{\text{GASB Long-Term Debt plus FASB Long-Term Debt}}$$

The numerator is the same as the numerator for the *Primary Reserve Ratio*.

The denominator is defined as all amounts borrowed for long-term purposes from third parties and includes all notes, bonds, and capital leases payable that impact the institution's credit, whether or not the institution directly owes the obligation. This would include debt of the institution's affiliated foundations, partnerships and other special-purpose entities. It would also include amounts owed to a system or state-financing agency as it represents debt issued on the institution's behalf. It includes both the current and non-current portions of debt used for long-term purposes; it does not include debt whose related assets are cash or assets convertible to cash in the normal course of business, such as unexpended bond proceeds for plant purposes and amounts borrowed for student loan programs.

Although a ratio of 1:1 or greater indicates that, as of the balance sheet date, an institution has sufficient expendable net assets to satisfy debt obligations, this value should not serve as an objective since most institutions would find this relationship unacceptable. However, the level that is "right" is institution-specific. The institution should develop a target for this ratio and other ratios that balances its financial, operating, and programmatic objectives.

There is no absolute threshold that will indicate whether the institution is no longer financially viable. However, the *Viability Ratio*, along with the *Primary Reserve Ratio* discussed earlier, can help define an institution's "margin for error." As the *Viability Ratio*'s value falls below 1:1, the institution's ability to respond to adverse conditions from internal resources diminishes, as does its ability to attract capital from external sources and its flexibility to fund new objectives.

Most debt relating to plant assets is long-term and does not have to be paid off at once. Payments of other liabilities may similarly be delayed. Higher education institutions often show a remarkable resiliency that permits them to continue long beyond what appears to be their point of financial collapse. In fact, colleges and universities have been known to survive for a time with high debt levels and no expendable net assets — or even negative net asset balances. Frequently, this means living with no margin for error and meeting severe cash flow needs by obtaining short-term loans.

A scenario such as that just described will only exacerbate the institution's delicate financial condition. Ultimately, such a financial condition will impair the ability of an institution to fulfill its mission and meet its service obligations to students, since resources must be diverted to fulfill financial covenants and debt service requirements. An institution in a continually fragile financial condition will find itself driven by fiscal rather than programmatic issues and short-term rather than long-term objectives.

Based on the different debt issuance and reporting models used by states and other governmental units, an institution may report significant plant assets with no corresponding debt used to acquire or construct these assets as those liabilities are the legal obligation of another entity. This may result in the assets recorded at the institutional level while the debt is recorded at the system or other governmental unit level. Under these circumstances, the *Viability Ratio* may not be applicable to the individual institution since it has no associated

long-term debt. However, the *Viability Ratio* would be significant for analysis of the system. If information is available, “pushing-down” the debt from the system to the institution for purposes of a more complete analysis may be appropriate.

The institution should develop and adopt a formal debt policy, in part to articulate specific targets for several key ratios. Please refer to “Strategic Management of Debt,” page 27, for further elaboration of this point.

The four strategic ratios can be also used in shorter term planning and budgeting. Public institutions, as they develop strategic plans, should also prepare corresponding financial plans. Some institutions already prepare two to three-year operating budgets. Few, however, develop an “all-funds” budget and even fewer perform balance sheet modeling where projected balance sheets are calculated. These practices are common to for-profit entities and are becoming more common with private institutions.

As part of the budgeting and planning process, institutions should coordinate budgeting with the institution’s affiliated organizations to arrive at an institution-wide budget. These budgets should also include goals for the selected ratios. Projected budgets and statements of net assets should be prepared and the resulting ratios compared with the goals to determine if there are any gaps.

Public institutions have generally used the KPMG LLP financial ratios developed for their fund accounting based financial statements in internal trend analysis where sources and uses of funds are reported for long periods of time. While these analyses are useful in determining historical sources and uses of funds, they do not answer the important question, “How did we do compared to our competition?” Peer analysis of the selected ratios should become a critical part of the institution’s year-end reporting process to certain stakeholders and for next year’s budget planning. Over time and with the implementation of GASB Statement Nos. 34 and 35 and related other pronouncements, availability of peer information will increase and there should be a reduction in the variability in financial information among public institutions. In addition, comparison with private institutions will become easier as the differences between the GASB and FASB reporting models narrow.

The comparative analysis may be calculated using an institution’s historical peer group such as other in-state institutions, other institutions it competes with for students or research funds or a group to which the institution aspires. Differences among peer institutions, both public and private, must be understood and considered before making any conclusions from the information.



## V. Strategic Management of Debt

Capital for land, buildings, and equipment generally comes from four primary sources: internally generated funds, government appropriations, contributed funds and borrowed funds. While the appropriate amount and use of debt differ across institutions, all leaders should ask the same fundamental question: *Has the institution managed debt (and other sources of capital) strategically to advance the mission?*

Focusing on this broad concept will also help the institution understand how analysts, lenders and purchasers of debt evaluate its ability to assume and repay the debt. If the debt is incurred to support the mission, the institution will be in a better position to achieve its long-term goals and build long-term competitive advantages. In contrast, if the debt is used to fund activities that do not enhance its competitive strengths, its financial situation is likely to erode as debt capacity covers too broad a range of activities. Thus, the institution will probably be farther away from having the resources needed to achieve its strategic objectives, and more likely to have lost ground in competing for students, faculty and financial support. If the institution remains focused on its mission, it can use leverage effectively to deploy additional resources to achieve its long-term goals.

### *How much debt can an institution afford?*

While debt may provide a significant source of additional funding, it is also a burden for future generations that are forced to assume responsibility for principal and interest payments. Planning for new debt must be done with care since the cost of a new facility is not only its debt service, but also the maintenance, depreciation and programmatic costs, which may actually represent a greater burden on institutional resources.

Too often, institutions focus on debt capacity from a balance sheet perspective, although debt affordability is governed more by the institution's ability to absorb all incremental costs within its operating budget. The greater flexibility that the institution has to control the allocation of budget resources to specific activities, the greater will be its flexibility to manage debt and other obligations. However, this flexibility does not reduce the need to allocate repayment obligations internally and to demand a feasible plan for repayment from the affected internal department before any debt is incurred.

When debt is viewed on a portfolio rather than project-specific basis, there is greater flexibility to structure its terms for the institution's long-term advantage. This may include a slightly longer average life for debt in certain interest rate environments, which offers institutions more flexibility to allocate internal resources more efficiently. In contrast, managing capital on a project-specific basis can lead to less favorable debt utilization for the institution as a whole. Accordingly, we usually recommend that institutions employ "general obligation" bonds when possible. Some public institutions, however, may not be able to manage their debt externally on a consolidated basis but may be required to allocate funds to specific projects, or to pledge certain revenues to the repayment of certain debt (e.g., student housing bonds, indirect cost recovery bonds, etc.).

To the extent that funds are fungible, we recommend that public institutions view their sources of capital funding and repayment as broadly as possible, and manage their obligations as an institutional credit, both externally and internally. When debt is being used strategically, we think that an institution is unlikely to “walk away” from an obligation if the expected revenue stream proves insufficient to repay the debt service but will find ways of reallocating other legally available resources. If the institution is willing to make this kind of commitment, it should receive credit from the marketplace because structuring obligations to be paid from all legally available resources tends to decrease the costs of the debt service. On the other hand, if the institution is unwilling to back the project with all of its resources, the institution should question why the project is being undertaken in the first place.

In order to manage debt, we recommend that institutions adopt a formal debt policy that provides a framework to help determine priorities and the most appropriate funding sources. In fact, debt management should be an ongoing internal process that includes all stakeholders, rather than a periodic activity focused solely on new debt issuances and the current market perception of institutional credit. We have found that an institutional process, which helps build trust among the managers and the users of debt, can be even more valuable than the actual policy that is adopted because it builds a foundation for linking capital budgeting, financial management, facilities planning and debt utilization to strategic planning. (See page 32 for more extensive discussion.)

Of the four strategic ratios, the *Viability Ratio*, which focuses on the statement of net assets, is generally regarded as governing the institution’s ability to assume new debt. We also recommend that the institution focus on affordability by examining budget-related debt ratios as well. In interpreting these (or any) ratios, a decrease in one ratio or an increase in another does not, by itself, determine whether debt financing is available or appropriate. Other matters are important in assessing creditworthiness, such as the quality of management, the specific legal security and historic governmental support. Institutions with similar financial ratios may possess substantially different levels of debt capacity. There is, therefore, no simple answer to the question, “How much debt can an institution afford?”

### *Debt Burden Ratio*

Although not a strategic ratio, the *Debt Burden Ratio* is an important tool in managing debt at public institutions. The *Debt Burden Ratio* examines the institution’s dependence on borrowed funds as a source of financing and the cost of borrowing relative to overall expenditures. It compares the level of current debt service with the institution’s total expenditures. Debt service includes both interest and principal payments on all obligations.

The *Debt Burden Ratio* is calculated as follows:

$$\frac{\text{GASB Debt Service plus FASB Debt Service}}{\text{GASB Total Expenditures plus FASB Total Expenditures}}$$

The numerator of this ratio includes interest on all indebtedness, which is calculated by interest paid, plus the current year's principal payments; both generally are available from the GASB and FASB statements of cash flows. However, if an institution or affiliate has refinanced debt, the statement of cash flows would reflect a large principal repayment amount. In this case, the contractual principal amount, which can usually be found in the notes to the financial statements, would be more appropriate to use.

The denominator is total GASB operating and non-operating expenses less depreciation expense plus debt service principal payments plus FASB total expenses less depreciation expense plus debt service principal payments.

We believe it is important to calculate the *Debt Burden Ratio* for the institution as a whole, since it provides a clearer picture of the overall flexibility available for the institution and to assist the institution if it needs to make budgetary tradeoffs in order to finance additional capital expenditures. This ratio helps show that all financial decisions made by the institution have an impact on its ability to make other choices and, therefore, must be viewed in this context.

### *Perpetual Debt and the Interest Burden Ratio*

An emerging trend among leading research universities is to alter their capital structure to incorporate "perpetual debt." Under this debt structure, the obligation has a single, long-term, bullet maturity and no external principal amortization. The institution's annual debt service obligation is only interest. However, for internal budgeting and cost allocation purposes, the projects that are financed initially repay principal, which is recycled to new projects, rather than to immediately retire outstanding debt. For institutions which use a perpetual debt structure, a more useful ratio would be to calculate the interest burden, that is, interest expense divided by total expenditures.

Although many private institutions have chosen perpetual debt, we do not necessarily recommend it for all public institutions because of the nature of their funding. We do, however, recommend that the concept of perpetual debt be considered in decision-making at public institutions since debt will remain an important, long-term, low-cost source of capital and is no longer viewed as an obligation to retire as quickly as possible.

### **FINANCIAL RATIOS: ONE COMPONENT OF CREDIT ANALYSIS**

Financial ratios provide a useful guide for evaluating the credit of educational institutions; however, it is important to remember that an institution's current and projected financial health represents only one criterion necessary to evaluate credit and debt capacity. In fact, in many instances, institutions with "weaker" financial ratios actually enjoy higher credit ratings and access to capital. In certain cases, incurring debt actually improves long-term credit despite

causing a short-term negative effect on specific ratios. The institution should evaluate many components of its operational and programmatic characteristics, including financial ratios, in determining its true credit profile.

### *Determinants of Credit Profile*



By developing financial plans and analyzing projected ratios, the institution is better positioned to deal with problems, capitalize on opportunities, and adjust costs. Furthermore, although projected financial statements provide a beneficial guide to future performance, there certainly will be changes to budgets and priorities as the years unfold. The ratios here serve as a tool to provide the institution with the flexibility to respond to the future, which is of significant worth. It is vital to preserve flexibility, including financial flexibility, despite the inability to accurately quantify future value. Nevertheless, a focus on preserving future options is critical to achieving mission objectives.

When bond issues are structured, it is also important to analyze the potential impact of covenants and pledges of collateral. For example, the decision to use credit enhancement for a bond transaction is generally based on a cost-benefit analysis of the cost of the insurance and the present value of debt service savings. However, insurance policies and other financial contracts frequently contain operating covenants and security provisions. Although these may not appear particularly burdensome when the bonds are issued, years later they could limit the institution's ability to take advantage of important opportunities.

## **TRENDS IN PUBLIC UNIVERSITY FINANCING**

### *Definition of Debt—Including “Off Balance Sheet Financing”*

At one time it was relatively easy to answer the question, *What is the amount of institutional debt?* One simply looked at the bonds and notes payable in the financial statements. Today public institutions use many financing structures. In addition to traditional bonds, notes and leases, an institution may have used an affiliated foundation, entered into directed transactions, executed long-term leases, guaranteed an affiliate's debt or employed off-balance sheet structures.



In considering debt, particularly in terms of assessing an institution's long-term ability to achieve its mission, all obligations that use an institution's debt capacity, even if these transactions are not reported on the balance sheet, should be included.

The ultimate test of what constitutes outstanding debt is not the legal structure nor the accounting treatment; rather, it is the essentiality of the related asset. The greater the essentiality of the asset to an institution's mission, the greater the likelihood it is "on-credit."

As with any financial decision, we encourage leaders to ask why a specific financial structure is being considered and to understand its objectives, expected benefits and potential risks. For example, choosing a third party developer may help reduce the cost of financing buildings, such as off-campus graduate housing, research or parking facilities. However, if the sole motivation for a particular financing structure is to keep a transaction off-balance sheet and away from the credit analysts, it is not as desirable since it is the transaction, rather than the institution's mission, driving the decision.

### *External Versus Internal Management of Debt*

Typically, public institutions and other borrowers have issued debt on a project-by-project basis and individual projects are allocated funding from a specific funding source. Thus, a project's debt service cost is based on luck, prevailing market conditions and the type of financing employed (e.g., equity, gifts, tax-exempt debt, taxable debt, third-party loans, fixed or variable rate obligations, etc.).

This project-by-project financing structure makes budgeting and project planning extremely difficult and can lead to inequities among various institutional divisions. Increasingly, institutions (including some public ones) have approached the issue of internal management of debt by having the institution function as a central bank and lend debt proceeds to individual departments to finance projects at a common repayment rate. This method of disbursement can help alleviate the problem of funding timing and produce benefits such as reduced year-to-year budget variances; external debt that can be structured to optimize prevailing market conditions (subject to tax law, federal reimbursement requirements and state or donor restrictions), and reduced administrative burden. The internal repayment rate is reviewed regularly although we recommend that the actual rates should be adjusted infrequently.

Implementing an enterprise-wide structure can be a challenge, as historical budgets and costs must be considered. However, managing debt on a portfolio basis with the objective of lowering overall institutional costs and risks and providing a predictable funding cost has a number of advantages. Depending upon the size of the institution, a bank line of credit or commercial paper program can further assist in managing a source of available funds while minimizing the frequency of, and dependency on, bond transactions.

The decisions regarding fixed and variable rate debt highlight this point. For most institutions, it is desirable to maintain a portion of the debt at variable rates. If debt is managed on a transaction basis with the actual interest expense passed through to users, these users have probably enjoyed substantial cost savings (at least in the late 1990s and early 2000s), but may not have evaluated the significant risk they assumed and their projects may encounter substantial difficulty if short-term rates rise. Also, a less favorable allocation between fixed and variable rate debt may be employed. By managing debt on a portfolio basis, the institution is better positioned to bear the interest rate risk than on an individual project, and benefit from exposure to variable rates.

### PROCESS OF DEVELOPING AN INSTITUTIONAL DEBT POLICY

To ensure that debt is used most effectively to advance institutional mission and strategic objectives, every institution should adopt a formal debt policy regarding both the external management of debt as well as internal guidelines and allocation processes.

Although debt policy statements are generally short (usually no more than five pages plus supporting schedules), the process is often intensive because each policy must be institution-specific and the finance officers with responsibility for leading the process need to enlist broad support and acceptance across the institution for the process and policy to be truly effective.

The process for developing a debt policy requires both analytic and “soft skills” including:

- Understanding the historic relationships, decision-making processes and institutional culture,
- Overcoming any resistance and skepticism (which may necessitate the intervention of an external party),
- Evaluating existing debt structures and obligations,
- Developing a policy that fits the institution’s business needs and culture,
- Ensuring that all debt-funded projects have an approved internal repayment plan,
- Determining how to incorporate prior decisions and structures into the new framework (without unintended negative results) and whether existing financial relationships must be re-evaluated and
- Communicating throughout the process with external stakeholders about the benefits and the output of the ongoing process.

The debt policy must be helpful to management, regularly communicated, and periodically reviewed. In addition to the substantial internal benefits mentioned above, this articulated discipline has gained wide recognition and support among external stakeholders.

Because the policy should reflect the institution's unique needs and strategic objectives, there is no one model debt policy that fits all institutions. However, in developing a debt policy, the following guidelines should be considered:

- *Articulate the institution's philosophy about debt that governs all commitments of the institution.* This should explain why the debt policy is being created, how it will be used to govern the incurrence of debt to achieve strategic objectives and where deviations are acceptable. It provides criteria for management and the governing board to interpret the other components of the policy.
- *Select the few key ratios and establish specific financial targets for the desired financial boundaries of the institution's operations.* Generally, no more than three or four ratios are used to represent the overall health of the institution and to keep the evaluation at a high, strategic level. The ratios might be the four strategic ratios identified here or other ratios that the institution finds useful from a management perspective.
- *Develop a policy for the prioritization of capital projects with input at the department and other operating levels of the institution.* Guidelines should be broad enough to allow management flexibility; however, the policy should prioritize projects that (a) are mission-related and (b) have a related revenue stream for repayment.
- *Consider the mix of variable and fixed debt as well as permissible (or prohibited) debt structures and covenants.* Targets should be established for fixed and variable rate debt percentages.
- *Contemplate the use of derivative products and establish guidelines regarding their evaluation, as well as any other type of off-balance sheet debt.*
- *State that the institution will interact with the rating agencies and strive to attain the highest acceptable credit rating.* The institution should **not** specify the attainment of a specific rating as part of the policy.
- *Include the methodology and calculations to support the items contained in the policy, as well as a calculation of the ratios (including projections), as appendices.*
- *Establish a policy regarding the internal utilization, management and repayment of debt.*



## VI. Communicating Financial Decisions

The goal of our efforts in this publication is to help leaders of public institutions derive greater insights from financial information and help communicate the information and its implications to its stakeholders.

One of the most important issues that leaders continuously face is allocating limited or reduced financial resources. These decisions often have the capacity to impede the achievement of the institution's mission or to result in abandonment of its strategic plan. According to Morley and Eadie, in *The Extraordinary Higher Education Leader*, “ In these constantly changing, always challenging, and frequently threatening times, the race will be won by the most creative, innovative, nimble and flexible institutions that are able to lead their own change, turning challenges into opportunities, while also preserving their core values and sacred traditions. In other words, the winners will be those institutions that are well led, not just well managed.” Leaders face significant obstacles in communicating resource allocation decisions and their rationale for making these decisions to stakeholders, many who will not agree with either the decision or rationale or both. We believe that the two models presented below will assist leaders confronted with these issues.

### *Allocating Financial Resources to Mission*

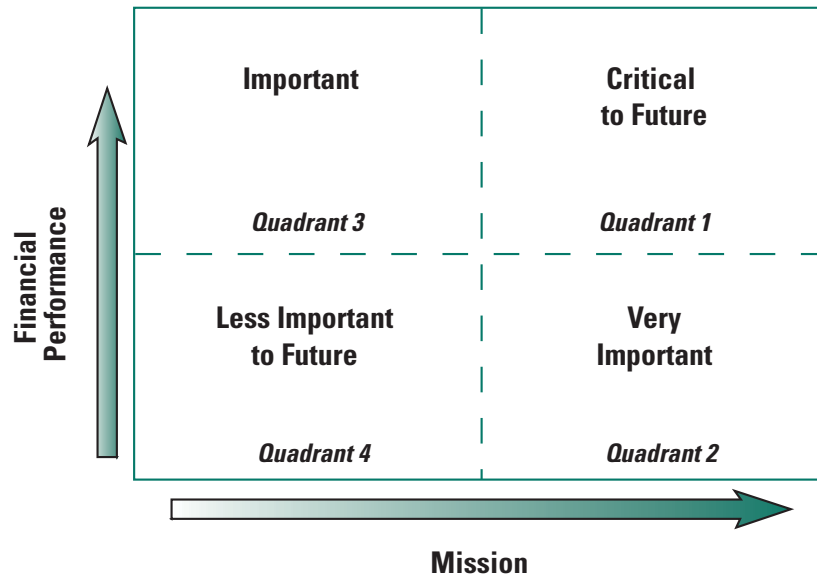
Public educational institutions face a difficult task: they must focus resources on a band of activities broad enough to fit the traditional and historic definitions of “university” or “college” and satisfy their various stakeholders, yet narrow enough to ensure the quality of their program initiatives. Anytime a decision on resource allocation is made outside the context of mission, the institution risks diffusion of its resources. Sometimes resource decisions are made in reaction to other events (e.g., sudden reduction in state appropriations, legislative mandate for access, investment in new technology, unexpected facility maintenance or security requirements), rather than a planned progression toward a previously defined goal. These issues must be dealt with effectively. However, the challenge for leaders is how to deal with these issues in a context that provides a consistent and repeatable basis so that resources are aligned with institutional goals.

Presented following is a model that matches resource allocation decisions to institutional mission. Some notes on the context of this model are important:

- To ensure effectiveness, this model should be implemented as part of the strategic planning process.
- The model requires selecting the specific unit level to be measured. For a university or university system, it might be the school or division level. For a school, it might be the division or department level. For purposes of this discussion, the defined units will be departments.
- The model entails ranking each department in two independent dimensions: importance to the mission and financial performance. It does not consider activities within the unit.

- The model does not suggest an amount of resources to allocate to a unit or among the units. Rather, it provides guidance on setting priorities for allocating resources among the units and suggests courses of action when certain circumstances arise.

*Relationship of Resource Allocation to Mission*



Although this model is best suited when additional investments are made or resources allocated, it can also be applied when “disinvestments” must be made or reductions in financial resources have occurred. Management drives this model, and its successful application is directly proportional to the ability of management to: (a) focus on a clearly defined mission, and (b) make decisions within the framework of the model once implemented. Deviations from the model are not harmful if a business case for the deviation is supportable. In fact, the ability to monitor and measure institutional success may be improved because the deviation is supported by a specific business case.

**FINANCIAL PERFORMANCE AXIS**

The vertical axis represents financial performance. The definition of financial performance will depend on what the institution views as critical, and may be a combination of items such as operating results, budget size, return on net assets, etc. The departmental financial performances are ordered — highest financial performance receiving the highest score, lowest financial performance receiving the lowest score. Because each institution must select its key performance indicators, a diagnostic to develop the indicators should be performed. This diagnosis should consider not only the current financial situation of the institution, but, more importantly, its expectation for the future and the ability to accumulate relevant data at the measurable unit level.

The selection of institution-specific criteria for financial success is critical to implementing this model. Each institution confronts unique circumstances, which should be reflected in the selection of these criteria. As an example, an institution with little operating margin and limited retained resources may select departmental net financial operations as the key measure because there is little resource to allocate to others. Institutions with little debt capacity or ability to borrow may use expected departmental capital requirements over the next several years as the key measure. Institutions may also use a selected number of criteria, blended together, to produce more informed results. This would require a selection process, conversion to a common scale, and a weighting plan. A key to using this measurement is to convert the calculated department score to a ranking. If there are 20 departments, the scores will be 1 through 20.

### MISSION AXIS

The horizontal axis represents the relative position that each department occupies in relation to the institutional mission. For this model to be useful, each department must be ordered again. The critical, and most difficult, first step is to rank the departments in relation to importance to institutional mission. This ranking does not mean a discipline is not valuable. Rather, it recognizes that the institution is identified in the marketplace and among its key constituencies, or desires to be identified, by its highest rated activities. Again, an institution-specific diagnostic is required that focuses on the external view of the institution today, the institution's aspirations, and the existing internal capabilities. Determining the mission-critical activities or departments and ranking them on the mission axis is critical to the successful implementation of this model.

Many institutions would define their mission as multifaceted. Some would apply this along broad lines of business, such as instruction, public service, research, and patient care. Others may define their mission along broad disciplines such as arts and sciences, business, education, graduate programs, etc. Whatever model is used requires a scoring system that takes into account all of the components of the mission.

### APPLYING THE MODEL

Arranging the departments by combining financial performance and mission helps focus the institution when making its next decisions. The following summarizes the meaning of each quadrant and some of the suggested actions that may evolve:

- **Quadrant 1 — Critical to the Future.** Departments in this quadrant are the highest performing departments in terms of both institutional mission and financial performance. They can generally afford some of their own reinvestment, but should be considered among the higher priorities on requests for institutional resources. Departments in this quadrant will most often represent the portion of the institution that will be the focus of the institutional debt policy, additional state appropriations or fundraising.

The institution should establish benchmarks of expected results for investments made in these departments before the investments are made. The benchmarks are both non-financial (as drivers) and financial (to determine affordability). The institution must measure success against those benchmarks at regular intervals. It is critical to measure institutional progress against mission because these are the departments most likely to advance the institutional mission. If the investments are not achieving benchmark goals, there needs to be a plan redefining continuing investments.

Quadrant 1 departments may be candidates for creation of alliances and partnerships, but on a basis that allows the institution to drive the relationship. Otherwise, the institution will bear the risk of dilution of its response in the areas most critical to completion of its mission.

- **Quadrant 2 — Very Important to the Future.** Departments in this quadrant are key to achievement of institutional mission but are weaker on financial performance. The first step may well be to assess what the institution can do to enhance financial performance, such as analyzing space allocations, capital equipment needs and personnel. Departments in this quadrant should not be likely candidates for budgetary cuts to improve financial performance because of the potential impact on achievement of mission. As with Quadrant 1, there needs to be close monitoring of investments made against predetermined benchmarks. That process may be more critical to departments in this quadrant because they have not demonstrated strong historical performance against key financial success factors.

These departments are the primary candidates for partnerships and alliances because well-structured relationships would allow advancement of institutional mission, with potential sharing of financial risk.

- **Quadrant 3 — Important to the Future.** Departments in this quadrant have relatively higher financial performance but score lower on mission. If departments in this grouping request institutional resources, the response of a focused institution may well be negative with the suggestion that these departments fund investments out of their own returns; or, the institution may request that the department fund some portion of the investment from its own resources. In most institutions, these departments tend to be highly productive. The institutional challenge is to find meaningful ways of retaining faculty members and keeping them fully motivated as new resources are allocated to other areas.

When an institution thinks about potential growth opportunities, Quadrant 3 departments may be candidates for alliances and partnerships. However, these would most likely be done within the context of limited institutional resource allocation. The institution would encourage program expansion and added personnel, but would expect the business case for this to include financial return, since institutional resources would not be a primary source of funding for these activities.



- **Quadrant 4 — Less Important to the Future.** Departments in this quadrant produce the lowest results on financial performance indicators and are scaled relatively lower on assisting the institution in fulfilling its mission. Possible actions may well be that these departments become “service” departments over some defined time and that requests for additional institutional resources would likely be denied. In planning change, the institution must first determine the “service cycle” that it has committed to the affected constituency since the institution has commitments to students, faculty and staff that tend to be longer than a year. Factors affecting this decision include years to graduation, tenure issues, capital investments and external partners (e.g., athletic leagues, research associates, third-party contractors, etc.).

Actions such as strengthening these departments through alliances and partnerships would appear inconsistent because, regardless of financial improvements, the institutional mission would only be improved on a limited basis. Departments in this quadrant are likely candidates for contained operating and capital budgets, because these constraints will have the least negative effect on achievement of mission. Significant investments made to units in this quadrant are not likely to result in greater return or mission accomplishment in the short-term or even long-term and may drain needed investments elsewhere. Also, the reallocation of resources from these departments to Quadrants 1 and 2 will provide the greatest returns to the institution from a mission perspective.

Applying this conceptual model requires several steps and decisions. The institution must select a time period for applying the financial axis of the model; for many institutions, the past three years may make the most sense (with some weighting emphasis on the most current year). Institutions that have created reasonable predictive models may also wish to apply this to the next three years.

## BALANCING THE BUDGET STRATEGICALLY

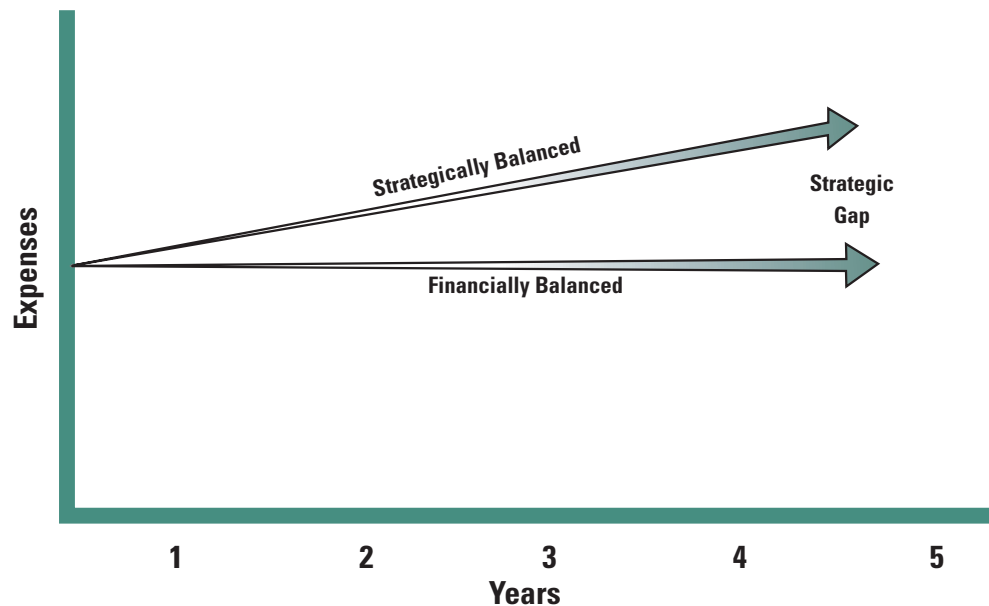
Institutions are often faced with the dilemma of how to create a “balanced budget” in higher education. This is especially true for public institutions that have to deal with significant and often unpredictable changes to state appropriations. This balancing activity has tended to focus on an “accounting balance” of the budget without necessarily focusing on whether the budget is balanced from a strategic perspective. The distinction, which is critical to the long-term success of the institution, relates to the types of annual investments and reinvestments required by the institution to meet its mission.

The question of whether a budget is strategically balanced is answered by the ways that the spending patterns implied by the operating budget indicate progress toward strategic objectives. If the operating plan tends to be incremental in nature while the strategic plan represents substantive change, then the board, senior managers and other interested parties should understand that a strategic gap exists in balancing the budget. Generally speaking, this represents a type of deferred obligation that the institution will be forced to make up at a later date, or an increased risk may exist that key strategic initiatives will not be met.

The typical budgetary process provides limited information about meeting strategic objectives. Budgets are generally prepared consistent with reporting lines, usually by departments, and do not capture information according to activity, which is the way most strategic investments are made, particularly in new initiatives. This is a reasonable budgetary methodology, since it aligns accountability and responsibility. A supplement to the budget should present institutional investments, by special investment, in three categories: physical capital, human capital and new program initiatives. The investment in human capital, in this context, is rarely salary support. It often represents the activities necessary for faculty and staff to create new skills that are required by the institution’s strategic plan.

The following chart presents two lines identifying strategic gaps. The top line represents the expenses of an institution that is reinvesting in itself at a rate sufficient to meet the objectives of its strategic plan. If repeatable revenues meet or exceed this amount, the budget is strategically balanced. The second line represents a budget that “gets the job done” but includes little investment in strategic initiatives. If revenue sources meet this line, the budget is financially balanced. Over a period of years, a strategic gap between costs needed to achieve the strategic plan and those funded in a balanced budget develops. The strategic gap is cumulative in nature, and the institution should track the size of that gap, if any, over the period covered by the strategic plan.

*Identifying Strategic Gaps*



## VII. Next Steps

This publication introduces a new financial ratio model and framework for public institutions and offers leaders of public institutions new perspectives and approaches to debt management and resource allocations, with a focus on the use of ratio analysis in formulating financial planning and debt policy for the institution. KPMG LLP and Prager, McCarthy & Sealy, LLC will continue to develop these methodologies and frameworks after review of public institutions' financial statements issued under GASB Statement Nos. 34 and 35. We expect to consider additional ratios which may provide additional insights to answer the key strategic questions and to explore ways of combining ratios to help communicate the overall financial health of the institution.

Strategic management of debt practices continues to develop and evolve, especially for public institutions. Rating agencies are developing new methodologies to take into account the new reporting standards that may affect credit analysis. We will continue to monitor trends in higher education finance and develop additional tools for the benefit of public institutions.

We also recognize that this specific framework and the selection of these strategic ratios may prove controversial. Full implementation of GASB Nos. 34 and 35 may reveal issues for organizations that are not currently anticipated. We welcome discussion with other higher education leaders and look forward to developing the next phase of *Ratio Analysis for Higher Education*.

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*Prager, McCarthy & Sealy, LLC is a full-service financial services firm specializing in providing comprehensive debt management services and advice to higher educational institutions. We help our clients by first developing a thorough understanding of their unique strategic objectives and assisting in the development and maintenance of internal practices and financing programs that support achievement of long-term competitive advantages. Our Web site is <http://www.prager.com>.*

### Contact Information

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## Appendix: Ratio Calculations

### *Primary Reserve Ratio*

Numerator: GASB Expendable Net Assets plus FASB Expendable Net Assets  
 + GASB Unrestricted Net Assets  
 + GASB Expendable Restricted Net Assets (excluding those to be invested in plant)  
 + FASB Unrestricted Net Assets  
 + FASB Temporarily Restricted Net Assets  
 - FASB Property, Plant and Equipment, net  
+FASB Long-term Debt invested in plant  
 Numerator: Expendable Net Assets

Denominator: GASB Total Expenses plus FASB Total Expenses  
 +GASB Operating Expenses  
 + GASB Nonoperating Expenses  
+FASB Expenses  
 Denominator: Total Expenses

### *Return on Net Assets Ratio*

Numerator: GASB Change in Net Assets plus FASB Change in Net Assets  
 + GASB Increase in Net Assets  
 + FASB Increase in Unrestricted Net Assets  
 + FASB Increase in Temporarily Net Assets  
+ FASB Increase in Permanently Restricted Net Assets  
 Numerator: Change in Net Assets

Denominator: GASB Total Net Assets plus FASB Total Net Assets:  
 +GASB Total Net Assets (beginning of year)  
+ FASB Total Net Assets (beginning of year)  
 Denominator: Total Net Assets

### *Net Operating Revenues Ratio*

Numerator: GASB Operating Income (Loss) plus Net Nonoperating Revenues (expenses)  
 plus FASB Change in Unrestricted Net Assets

+ GASB Operating Income (loss)  
 + GASB Nonoperating Appropriations  
 + GASB Nonoperating Gifts  
 + GASB Nonoperating Investment Income  
 + GASB Other Nonoperating Revenues  
 - GASB Nonoperating Expenses  
+FASB Increase in Unrestricted Net Assets  
 Numerator: Adjusted Net Operating Revenues

Denominator: GASB Operating Revenues plus Nonoperating Revenues plus FASB Total Unrestricted Income

- + GASB Operating Revenues
- + GASB Nonoperating Appropriations
- + GASB Nonoperating Gifts
- + GASB Nonoperating Investment Income
- + GASB Other Nonoperating Revenues\
- +FASB Total Unrestricted Revenues and Gains
- +FASB Net Assets Released from Restrictions

Denominator: Adjusted Total Income

### *Viability Ratio*

Numerator : GASB Expendable Net Assets plus FASB Expendable Net Assets

- + GASB Unrestricted Net Assets
- + GASB Expendable Restricted Net Assets (excluding those to be invested in plant)
- + FASB Unrestricted Net Assets
- + FASB Temporarily Restricted Net Assets
- FASB Property, Plant and Equipment, net
- +FASB Long-term Debt invested in plant

Numerator: Expendable Net Assets

Denominator: GASB Long-Term Debt plus FASB Long-Term Debt

- + GASB Long-term Liabilities – current portion
- + GASB Long-term Liabilities – non-current portion
- + FASB Long-term Debt

Denominator: Total Long-term Debt

### *Debt Burden Ratio*

Numerator: GASB Debt Service plus FASB Debt Service

- + GASB Interest Expense
- + GASB Principal Payments
- + FASB Interest Expense
- + FASB Principal Payments

Numerator: Debt Service

Denominator: GASB Total Expenditures plus FASB Total Expenditures

- + GASB Operating Expenses
- + GASB Nonoperating Expenses
- GASB Depreciation Expense
- + GASB Principal Payments
- +FASB Total Expenses
- FASB Depreciation Expense
- + FASB Principal Payments

Denominator: Total Expenditures



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