SHEEO

STATE HIGHER EDUCATION EXECUTIVE OFFICERS ASSOCIATION

MONITORING AND ASSESSING THE FINANCIAL HEALTH AND RISK OF COLLEGES AND UNIVERSITIES:

RECOMMENDATIONS FOR SHEEO AGENCIES

DAVID A. TANDBERG

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INTRODUCTION

Accelerated by the Great Recession, and later by increased oversight and regulation of the for-profit sector, states have witnessed a wave of institutional closures. These institutional closures have tended to be isolated in the private for-profit and nonprofit sectors. However, there have been a number of examples of institutional mergers and consolidations within the public sector and examples of public institutions risking financial viability via reduced revenues and suffocating debt. In each case, some level of responsibility often falls on the state's higher education executive officer (SHEEO) agency (the state's governing or coordinating board). In the case of the private sectors, once the institution has closed, the SHEEO agency often has responsibility for coordinating teach-out agreements, the transfer of students, and archiving records (e.g., student transcripts and financial records), among other duties. For public colleges and universities, a SHEEO agency's responsibility is far greater and more direct. The agency bears shared responsibility for the success of the institution and its ability to serve its students. Central responsibilities of a SHEEO agency include helping ensure that public institutions are financially viable, that they are good stewards of their public resources, and that they have the resources they need to best serve their students.

Regardless of the sector, SHEEO agencies often have a general obligation to the state to act in the best interests of the state as a whole and for students specifically. This obligation to the public good may motivate, or even obligate, the SHEEO agency to be involved in monitoring an institution's financial viability; taking steps to improve their viability (where appropriate and, in particular, with public institutions); and being aware of (in advance) and responding to potential institutional closures. One action that can facilitate all of these responsibilities is tracking an institution's financial viability. Often called financial risk metrics or stress tests, the financial industry has developed a number of metrics and ratios that attempt to elucidate the financial strength of a college or university. Here we will discuss each of them, suggest some additional data sources and metrics, and then discuss how different SHEEO agencies, depending on their purview and resources, may attempt to more effectively monitor the financial health of their institutions so agencies may better engage the institutions, plan ahead, and serve their states.

FINANCIAL RISK RATIOS

First popularized in the 1980 handbook *Strategic Financial Analysis for Higher Education*, now in its 7th edition and titled *Strategic Financial Analysis for Higher Education: Identifying, Measuring & Reporting Financial Risk* (hereafter referred to as *The Handbook*), the use of finance risk ratios has become the standard in the field.[1] Over time, *The Handbook* has settled on four primary metrics which lead to a consolidated score, with one additional newer metric, that are believed to highlight particular aspects of an institution's financial health and which may help identify institutions at risk of serious financial trouble. These metrics were developed primarily for institutional analysts to help in strategic financial planning and to assess institutional financial risk. However, they can serve similar purposes for state and system level analysts as they attempt to assess institutions' financial health and risks. In this regard, it is essential that these measures are collected over time so that trends may be identified, and decisions made, based on the trend lines and not just the current ratio performance. This will allow for early intervention and planning. In chapter 10 of the most recent *Handbook*, details are provided on how the ratios can be used together to assess institutional health and aid in planning. The four primary ratios are:

1. PRIMARY RESERVE RATIO

This ratio measures the financial strength of the institution by comparing expendable net assets to total expenses.[2] The ratio is meant to explore whether an institution's resources are sufficient, flexible, and liquid enough to support its mission. It provides a financial snapshot of the institution's reserves and an indication of how long the institution could operate using its expendable reserves. Expendable net assets ought to increase at least in proportion to the rate of growth in the institution's operating size. If they are not, an institution may be exposing itself to financial risk. In this regard, the ratio compares the institution's operating commitments (operating size) to its expandable wealth (resources). *The Handbook* recommends a threshold for moderate financial health as 0.4X. The specific ratio is calculated in the following way:

$$\frac{\text{EXPENDABLE NET ASSETS}}{\text{TOTAL EXPENSES}}$$

2. NET OPERATING REVENUES RATIO

This ratio reveals whether the institution is living within its available resources by comparing revenues to expenditures (or more specifically, revenue use). This ratio relates to the other three primary ratios in that a large surplus or a large deficit directly impacts the amount of an institution's available funds. Large unexpected expenditures would be a sign of poor planning. Institutions ought to have some level of a surplus. *The Handbook* recommends 2 percent as a threshold. The specific equations are as follows:

1. For those who plan to begin conducting financial ratio analysis, we recommend reviewing the most recent version of *The Handbook* as it contains important technical details on the ratios and their calculations and recommendations for their use that are beyond the scope of this paper.
2. Some institutions and state offices calculate this metric using operating expenses rather that total expenses.

For public institutions:

$$\frac{\text{OPERATING INCOME (LOSS) PLUS NET NONOPERATING REVENUES (EXPENSES)}}{\text{OPERATING REVENUES PLUS NONOPERATING REVENUES}}$$

For private institutions:[3]

$$\frac{\text{EXCESS (DEFICIENCY) OF UNRESTRICTED OPERATING REVENUES OVER UNRESTRICTED OPERATING EXPENSES}}{\text{TOTAL UNRESTRICTED OPERATING REVENUES}}$$

3. RETURN ON NET ASSETS RATIO

This metric examines how well the institution's asset performance and management (for example, investment returns) support its strategic direction. Specifically, it helps determine if the institution is financially better off than in previous years by examining changes in economic return. An improving trend line would indicate that an institution is increasing its net assets. *The Handbook* recommends a threshold of 6 percent as a rate of return in excess of growth in total expenses. Institutions may desire to use a three-year rolling average to smooth year-to-year volatility in the market. This ratio is calculated in the following way:

$$\frac{\text{CHANGE IN NET ASSETS}}{\text{TOTAL NET ASSETS}}$$

4. VIABILITY RATIO

This metric assesses how strategically the institution's financial resources, including debt, are managed to advance the institution's mission. Specifically, it examines the availability of expendable net assets to cover its debt should those debts need to be settled.[4] This ratio looks specifically at what is most often the largest debt category: plant-related debt (facilities, etc.). *The Handbook* recommends setting the threshold at 1.25:1. The ratio is calculated in the following way:

$$\frac{\text{EXPENDABLE NET ASSETS}}{\text{PLANT-RELATED DEBT}}$$

3. The differences in the equations for public and private institutions are the result of different accounting standards and categories between GASB (for publics) and FASB (for privates).
4. Some institutions and state offices use all long-term debt rather than only plant-related debt.

COMPOSITE FINANCIAL INDEX

The four primary ratios can be combined into what *The Handbook* calls the *Composite Financial Index* (CFI). This index provides an assessment of an institution's overall financial health and financial risk. To calculate the index, the following steps need to be followed (for the specifics, please see chapters 10 and 14 in *The Handbook*):

1. Values for the four primary ratios are computed.
2. The values are converted into strength factors (a common scale).
3. The strength factors are then multiplied by specific weights.
4. The resulting figures are then totaled to equal the Composite Financial Index values.

While there is some flexibility in how the CFI is calculated, the general range of scores runs from -4 to 10. *The Handbook* recommends a general threshold value of 3. Scores at or close to -4 would indicate that an institution is in serious trouble and financial exigency likely exists.

The result is a single overall metric of an institution's financial health and risk that can be tracked over time. However, *The Handbook* argues that the CFI only measures the financial component of an institution's health and that other factors must be considered to assess the institution's overall well-being (some of those potential factors and measures are discussed later).

ADDITIONAL RATIO – THE LIQUIDITY RATIO

SHEEO agencies may also want to consider the *Liquidity Ratio* as recommended by the authors of *The Handbook*. The financial crisis revealed that sufficient liquidity (more than many institutions believed necessary) is a critical component of an institution's financial health.

The *Liquidity Ratio* helps answer the question of whether the institution has sufficient liquidity. If the institution does not have sufficient liquidity to conduct its operations, the other aspects of its financial health (discussed above) matter very little. A score of less than 1.0 indicates significant vulnerability that could jeopardize the institution's ability to fulfill its mission and successfully react to adverse conditions. The authors recommend setting a prescribed threshold above 1.0 at which corrective action would be required (perhaps 1.10 or 1.25). The specific equation for this ratio is:

$$\frac{\text{INSTITUTIONAL LIQUIDITY SOURCES (SPECIFIED TERM)}}{\text{INSTITUTIONAL LIQUIDITY USES (SAME SPECIFIED TERM)}}$$

Unlike the other ratios, the elements of the liquidity ratio are flexible and may depend on the specific institution and the intended uses for the ratio. Nevertheless, the authors of *The Handbook* make recommendations for which budget items analysts may want to include as "sources" and "uses." For those specifics, please refer to chapter 13 in *The Handbook*.

OTHER RATIOS AND CALCULATION NOTE

The Handbook also includes a number of other ratios a SHEEO agency might consider, including the debt burden ratio, return on net assets ratio, deferred maintenance ratio, and cash income ratio, among others.

One item to note in the calculation of the ratios discussed in this white paper is that in FY 2015 the Governmental Accounting Standards Board (GASB) began requiring public institutions of higher education to recognize net pension liability, pension expense, and pension-related deferred inflows and outflows of resources (see: *GASBE - Statement Number 68 - Accounting and Financial Reporting for Pensions*). This significantly alters an institution's expenses and liabilities. Currently, some institutions and SHEEO agencies have adopted the practice of calculating the ratios with and without GASB 68 (see the *Ohio Department of Higher Education* for example). Additionally, beginning with FY 2018, *GASB 75* requires the recognition of Other Post-Employment Benefits (OPEB), with similar implications as GASB 68.

OTHER FINANCIAL INFORMATION SOURCES

The context, structure, resources, scope of responsibility, and authority of each SHEEO agency will influence and, in some cases, determine its ability to collect the necessary financial data to calculate the ratios discussed above. The required level and detail of data and analysis to make use of these specific ratios may not be feasible or appropriate for all SHEEO agencies. Likewise, the necessary data may be more easily accessed for some institutions and sectors than for others. In order to use the ratios, a SHEEO agency will either have to collect the institutions' audited financial statements and calculate the ratios themselves, or they may have the institutions calculate the ratios and report the ratios to the SHEEO agency. If possible, collecting the financial statements may be the preferred method and, in that regard, the private for-profit and nonprofit institutions are already sending their audited financial statements to the U.S. Department of Education (USDE).[5] Another option is to calculate or collect the ratios for some institutions and then rely on various other sources of data and metrics for other institutions. If collecting the audited financial statements or collecting the ratios themselves from all or some of the institutions is not possible, then a SHEEO agency may want to rely on other sources of data and other metrics. Here we discuss some additional data sources and metrics.

IPEDS

The USDE's *Integrated Postsecondary Education Data System* (IPEDS) administers an annual *finance survey*. The purpose of the IPEDS finance survey is to collect basic financial information from items associated with the institution's General Purpose Financial Statements. The data are reported by the institutions to the USDE. The IPEDS data are publicly available and easily accessible. IPEDS provides a number of different finance variables, including data on institutional revenues and expenditures, which are then broken down into various levels of detail. While IPEDS does not necessarily include all of the specific data points needed to construct the ratios discussed earlier, the data they do include are extremely valuable.[6] A SHEEO agency would need to review what is available and decide which data points to consider and what metrics and ratios they may want to construct from the data. An obvious metric might be total revenues versus total expenditures. However, a SHEEO agency may also want to look at specific revenue and expenditure items. The most current IPEDS data tend to be two years old.

CREDIT AGENCIES

Other potential indicators of an institution's financial health may be credit ratings from Moody's, Standard and Poor's, or the Fitch Ratings. An example of the factors considered by credit agencies and the types of rankings they provide are available *here*. Each agency uses its own ratios and metrics. A downgrade can significantly impact an institution's ability to borrow, its interest rates, and the public's perception of its viability because the ratings are often publicized. However, some colleges do not have credit ratings.

5. Public institutions also submit statements, however they are not used for monitoring purposes in the same way that they are used for private colleges and universities.

6. Such as total expenses and expenses on instruction, research, public service, academic support, operation maintenance of plant, auxiliary enterprises, and more. They also include total revenues and revenues from tuition and fees, state appropriations, capital appropriations, sales and services, gifts, and more. Further, they have data on assets and liabilities, pension information, plant property and equipment, endowment assets, and the like.

USDE FINANCE AND MONITORING METRICS

In order to safeguard students, and the public's investment in federal student financial aid, the USDE collects a number of financial metrics from institutions and has implemented several accountability rules that impact an institution's eligibility to participate in the federal student aid program. Loss of eligibility often means that the institution can no longer operate. These may be helpful metrics to collect regardless of what other data a SHEEO agency can collect, and may be particularly helpful if a SHEEO agency is unable to collect the data needed to calculate the risk ratios discussed earlier.

FINANCIAL RESPONSIBILITY COMPOSITE SCORES

As mentioned earlier, the USDE collects the audited financial statements from all for-profit and nonprofit private institutions that participate in the federal student financial aid program. They use the statements to calculate their *Financial Responsibility Composite Scores*. The composite scores are calculated based on three ratios: the primary reserve ratio, an equity ratio, and a net income ratio (details on how the ratios are calculated are available *here*). The composite score reflects the overall relative financial health of institutions along a scale from negative 1.0 to positive 3.0. A score greater than or equal to 1.5 indicates the institution is considered financially responsible. A composite score lower than 1.5 is considered failing. The USDE provides the composite scores on its website. However, the scores are not up-to-date (several years old) and two of the ratios are no longer commonly used (the equity ratio and the net income ratio).

The National Association of College and University Budget Officers (NACUBO) and others have criticized the composite scores and how they are calculated (see *here* and *here*). Nevertheless, the composite scores have meaning and impact, and if a SHEEO agency is unable to collect the audited financial statements or the ratios discussed above from either the private for-profit or the private nonprofit institutions in their state, the USDE's *Financial Responsibility Composite Scores* are a good option. Regardless, it is likely in the SHEEO agency's best interest to review the institutions' scores to be aware of any institutions in their state that are failing or near failing.

USDE MONITORING METRICS

A SHEEO agency ought to be aware of three different USDE fiscal accountability mechanisms. The first is *Heightened Cash Monitoring (HCM)*. A SHEEO agency should track any colleges or universities in their state that are subject to HCM. HCM means an institution is subject to additional oversight of its cash management regarding student financial aid dollars, including when and how an institution draws down their financial aid disbursements. Without reconciliation and correction, an institution may eventually lose financial aid eligibility. Being subject to heightened cash monitoring is not necessarily an indicator of poor financial health or increased financial risk (although those factors may contribute to an institution being placed on HCM). Institutions may become subject to heightened cash monitoring as a result of "compliance issues including but not limited to accreditation issues, late or missing annual financial statements and/or audits, outstanding liabilities, denial of re-certifications, concern around the school's administrative capabilities, concern around a school's financial responsibility, and possibly severe findings uncovered during a program review" (USDE, 2018). Even though HCM provides SHEEO agencies with another accountability mechanism, this accountability measure has received numerous *criticisms*.

The second accountability mechanism that SHEEO agencies should monitor is the *cohort default rate* for the institutions authorized in their respective states. Under USDE regulations, cohort default rates have been used as an accountability metric. Colleges posting default rates of over 40 percent in a given year lose access to federal student loans for a two-year period, and colleges with rates above 30 percent in three consecutive years lose access to all federal financial aid for two years. Losing access to federal financial aid often results in institutional closure. The rates are available *online*. The use of cohort default rates as an accountability mechanism has received *criticism*.

The third mechanism is the USDE's *90/10 rule* for for-profit colleges. Under this rule, to be eligible for federal student financial aid participation, a for-profit college must derive at least 10 percent of its revenues for each fiscal year from sources other than federal financial aid programs or be subject to sanctions (including loss of financial aid eligibility). SHEEO agencies may download the data on the institutions within their state *here*, although the data are several years old.

CONTEXTUAL, TREND, AND LEADING MEASURES

Regardless of which data sources and metrics (like those described above) a SHEEO agency decides to use, we argue that they ought to be used in conjunction with a number of other metrics to provide context and greater understanding. An institution's financial health may be impacted by a number of factors. These may include shifting revenue streams, trends in enrollments, and shifts in spending patterns. Collecting data on these factors and others over time, and then viewing them in conjunction with the metrics discussed above, will allow for a fuller picture, may provide explanations for an institution's performance on the ratios and metrics, and may preview future problems. For example, collecting data on a public institution's reliance on tuition and fees versus state appropriations may reveal that the institution is becoming increasingly reliant on tuition and fees. If that same institution is facing stagnant or declining enrollments, its revenue situation may not be sustainable. Potential metrics a SHEEO agency may consider calculating as a component of the institutional financial assessments include:

1. Total Enrollment (or full-time equivalent [FTE] enrollment)
2. Expenditures
    a. Total expenditures
    b. Total expenditures per FTE
    c. Education and related spending[7]
    d. Education and related spending per FTE
3. Revenue
    a. Total revenue
    b. Total revenue per FTE
    c. Total revenue from tuition and mandatory fees
    d. Total revenue from tuition and mandatory fees per FTE
    e. Total revenue from tuition and mandatory fees as a percentage of total revenue

    Additional revenue items for public institutions:

    f. State and local appropriations
    g. State and local appropriations per FTE
    h. State and local appropriations as a percentage of total revenue
    i. State and local appropriations relative to tuition and mandatory fee revenue
4. Expenditures vs. revenues (at a minimum, total revenue vs. total expenditures and possibly by various components)

Each of these metrics may be calculated using a SHEEO agency's own data system, from IPEDS, or collected specifically from the institutions for this purpose. The data points ought to be calculated annually and viewed as a time series.

7. Using the GASB reporting categories from IPEDS, education and related spending is often made up of expenses related to instruction, academic support, and student services. However, each SHEEO agency should feel free to define it in its own way.

RECOMMENDATIONS

We recommend that SHEEO agencies engage in some way to monitor the fiscal health and risk of the institutions within their states. This will mean different things to different agencies, and many are already doing this. We make the following recommendations for SHEEO agencies looking to begin or improve a monitoring process:

1. Decide on what data will be collected, from what sources, and on which institutions.
2. Decide on what metrics will be calculated from the data.
3. Calculate the metrics on an annual basis.
4. Establish metric thresholds and associated outcomes (e.g., financial monitoring, corrective action).
5. Create an institutional financial health and risk report(s) that displays the metrics as a time series. An agency may want to have separate reports for the public institutions, for the private nonprofit institutions, and for the private for-profit institutions.
6. Hold an annual meeting of the SHEEO agency leadership to discuss the results of the analysis and make any necessary decisions and plans.

As indicated, various SHEEO agencies are already tracking a number of the ratios and metrics recommended in this report. One coordinating board doing this is the *Ohio Department of Higher Education*. The Department calculates and reports the viability, net income, and primary reserve ratios, plus the composite score for each of their public colleges and universities. They also include additional metrics regarding institutions' assets, debt, revenues, and expenses.

An example of a governing board already engaged is the *North Dakota University System*. North Dakota has created a clear report that utilizes a number of the ratios and metrics recommended in this white paper, plus several additional ratios and metrics. Five years' worth of data are presented to identify trends, and they are presented in easy to understand charts and tables. Likewise, for each ratio and metric, a benchmark has been established and explanations are provided.

Particularly for coordinating boards, SHEEO agencies may also benefit from monitoring the fiscal health of private nonprofit and for-private institutions. SHEEO agencies have some leverage over private institutions (state student financial aid, licensure, approval to operate, degree/credential approval, etc.) that may be used to require the financial data (financial statements or the metric/ratios themselves). Alternatively, agencies can collect data and metrics on private institutions from the USDE (for example, from IPEDS and the Financial Responsibility Composite Scores).

CONCLUSION

As indicated earlier, SHEEO agencies often have a general obligation to the state to act in the best interests of the state as a whole and students specifically. Institutions can only advance the public good if they are financially sound. Likewise, taking a reactive stance to institutional financial crises and closures does not allow SHEEO agencies to best act in the public interest. Monitoring, on an annual basis, institutions' financial health and risks may allow SHEEO agencies to become aware of problems in advance, potentially act to improve institutions' financial health, and, when needed, plan for and respond to potential institutional closures.

RESOURCES

SHEEO agency chief financial officers and financial analysts may want to make use of the following resources:

Bunsis, H. (2015). Analyzing university and college financial statements. *Journal of Collective Bargaining in the Academy*, (10), 7. Available at: *https://thekeep.eiu.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1468&context=jcba*

This is an excellent basic introduction to college and university financial statements, financial analysis, and also the use of IPEDS for institutional financial analysis. This is a great place to start.

Examples of SHEEO agency financial reports:

Maine: *http://www.maine.edu/pdf/09RAums.pdf*

Mississippi: *http://www.mississippi.edu/finance/downloads/ihl_systems_ratios_and_trends_(2012_-_2017).pdf*

North Dakota: *http://ndus.edu/uploads/resources/8662/campus-financial-review.pdf*

Ohio: *https://www.ohiohighered.org/campus-accountability*

Hanover Research (2014). Financial reporting in higher education. Washington, DC: Author. Available at: *https://www.hanoverresearch.com/media/Financial-Reporting-in-Higher-Education.pdf*

This is an excellent resource for understanding financial reporting and planning in higher education. Provides details on the metrics discussed in this paper, plus details on additional metrics and ratios, including the Higher Learning Commission ratios and NACUBO's key performance indicators.

Salluzzo, R. E., Tahey, P., Prager, F. J., & Cowen, C. J. (1999). *Ratio analysis in higher education: Measuring past performance to chart future direction*. USA: KPMG LLP and Prager, McCarthy & Sealy, LLC. Available at: *https://www.prager.com/Public/raihe4.pdf*

Similar to *The Handbook* but focused specifically on independent institutions.

Tahey, P., Salluzzo, R., Prager, F., Mezzina, L., & Cowen, C. (2010). *Strategic financial analysis for higher education: Identifying, measuring & reporting financial risks*. USA: KPMG, Prager, Sealy, & Co., LLC, and Attain.

Tahey, P., Salluzzo, R., Prager, F., Mezzina, L., & Cowen, C. (2016). *Update to the 7th edition of strategic financial analysis for higher education*. USA: KPMG, Prager, Sealy, & Co., LLC, and Attain.

These two (the Tahey et al publications) together represent *The Handbook* and provide the most thorough and detailed explanation of the ratios, their calculation, and their uses. They also provide details on strategic financial planning and analysis. *The Handbook* should be on every CFO's bookshelf.

USDE (1997). *Methodology for regulatory test of financial responsibility using financial ratios*. Washington, DC: Author. Available at: *https://www2.ed.gov/finaid/prof/resources/finresp/finalreport/execsummary.html*

Explanation of the ratios used to construct the USDE's composite score.

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3035 CENTER GREEN DRIVE, SUITE 100, BOULDER, COLORADO, 80301
303.541.1600 • **SHEEO.org**