



Strategic Financial Analysis
for Higher Education

Identifying, Measuring &
Reporting Financial Risks

Seventh Edition



PRAGER, SEALY & CO., LLC



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Introduction and Acknowledgments

INTRODUCTION

Since it was first published in 1980, the *Strategic Financial Analysis for Higher Education* (nee: *Ratio Analysis in Higher Education*) series has been acknowledged by leaders in the higher education industry as important financial publications and used extensively by trustees, senior managers, financial analysts, and credit analysts.

Our Point of View

This seventh edition in the series, *Identifying, Measuring & Reporting Financial Risks*, reflects our observations that a paradigm shift has occurred regarding financial management of higher education institutions. It also reflects our conclusion that historical methods of monitoring institutional financial health, mitigating risks, and reporting on those risks need updating. Since we published the sixth edition in 2005, there have been dramatic changes in the economy and financial markets. The scrutiny of boards and senior management has significantly increased, and we expect this higher level of accountability will not abate in the future.

In response to these changes, there has been increased focus on risks affecting business enterprises, including higher education institutions. College and university governing boards are examining core governance and management practices.

An example of the substantial change wrought from the 2008 financial crisis is an emphasis on institutional liquidity. In the past, liquidity was somewhat assumed if there were sufficient expendable net assets to support the institution's financial needs. The industry found that the composition of the resources and the claims on those resources through contingent commitments are as important to the financial operations of the institution as resource levels. In this edition, we have developed liquidity measurements that are intended to help identify, monitor, and report the level of risk associated with liquidity. Although some of the changes in this edition were driven by lessons learned from the recent financial crisis, we do not believe that this book represents a crisis management manual. Rather, we believe that the modifications and approaches suggested herein are appropriate not only in periods of adjustment and stress, but represent a new paradigm for the future under normal but forever-altered situations.

We believe that strategic planning and implementation, institution risk management, and strategic financial analysis are inherently linked. In order to meet its mission, the institution prepares and implements a strategic plan with a series of action steps to attain the plan's goals. Institution risk management is a programmatic view of the potential risks, as well as the assessment of whether inhibitors exist that would make success more or less likely. An institution implements risk management activities to effectively achieve the plan while not creating or increasing risks beyond a tolerable level. Strategic financial analysis provides methods and tools to evaluate financial risks, conditions, and operations, and communicate this information effectively to institutional stewards.

The alignment of strategic financial goals with actions and risk assessment will improve strategic decision making and chances of institutional success. The mission, as articulated in the strategic plan, is the institutional driver; financial capacity and affordability measure the feasibility of the institution's aspirations.

Successful institutions link their strategic risks with operating, compliance, and other risks. Likewise, institutional responses to identify, manage, and monitor these risks should also be linked. Risk management, including financial risk management, is an integral part of everyone's job responsibility. We make this point explicitly because we have often seen risk management thought of as a function apart from the institution's everyday activities.

Our approach to strategic financial analysis applies to all types of public and private institutions, including large research and comprehensive universities, master institutions, liberal arts colleges, community colleges, individual institutions within a public higher education system, and the system itself. Although this book is not written primarily for not-for-profit organizations, we believe these organizations also may find the approaches, concepts, and tools useful in their financial management and planning.

Users of this Publication

While we understand the breadth of the higher education community and the uniqueness of each institution, we believe there are common issues and challenges that almost all institutions face in varying degrees.

We also acknowledge that institutions have varying levels of staff size and skill sets to address these issues. All institutions do not have separate offices or even personnel for treasury, investment, budget, accounting, and financial services operations. In many institutions, these functions are combined into a few offices or even a single office.

The topics covered in this publication are broad and complex, including enterprise risk management, liquidity, transparent internal financial reporting, resource allocation, debt management, and financial analysis and metrics. Some of these topics and their content may not be entirely applicable to all institutions, and some readers of this publication may find the discussion to be “over the top.” Others may consider some of our conclusions and tools radical and difficult to apply to their circumstance. However, we believe that these topics need to be addressed by all institutions and that portions of the concepts should have universal application. For example, although the concept of a central bank may have been implemented only by larger, more decentralized institutions, the issues that a central bank addresses (e.g., prioritizing capital needs and funding, allocating debt service costs, and structuring the debt portfolio to minimize costs) are faced by all institutions.

We have structured this edition differently than prior editions due to the breadth of topics and matters addressed, and the different levels of readers. This edition is written for trustees, senior administrators, chief financial officers, financial managers, and financial analysts. We have divided this publication into three sections:

- Strategic Financial Risks, which is primarily directed to governing boards and senior management
- Strategic Financial Analysis Tools, which is primarily directed to senior management and financial management
- Financial Ratios and Metrics, which is primarily directed to financial management

Much of the Strategic Financial Risks section is new to this edition and contains our latest thought leadership material. The Strategic Financial Analysis Tools and Financial Ratios and Metrics sections have been brought forward from the sixth edition and updated to reflect the current financial environment. We have structured these three sections based upon three levels of readers within institutions – governing board, senior management, and financial management.

Senior management is responsible for carrying out the directives of the governing board and its committees and reports to, and interacts with, the governing board's members. We consider senior management to comprise the institution's president and other senior executives, and would include at least the provost, chief financial officer, general counsel, chief budget officer, chief investment officer, chief risk officer and head of development at either the system, central or school levels. It may also include deans of schools or significant divisions (e.g., hospital, auxiliaries, athletics, etc.).

Financial management would include those responsible for budgeting, finance, treasury, accounting, compliance, insurance and risk management, and similar functions, regardless of whether they work in system, central, or school administrative units. They are responsible for executing directives of senior management and are generally responsible for day-to-day activities of the institution.

We have added selected examples to provide additional utility to the information in this publication. These examples are at three levels of higher education institutions—large research, doctoral or comprehensive, and liberal arts- yet reflect issues that all institutions may face.

Background

Since predecessor firms of KPMG introduced the first edition of *Ratio Analysis in Higher Education* in 1980, college and university trustees, senior managers, and interested external parties have used financial ratios 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 of KPMG and Prager, Sealy & Co., LLC. Subsequent editions were published in 1995, 1999, and 2002 to reflect changes in financial matters affecting higher education and to introduce various approaches and financial tools.

The sixth edition, *Strategic Financial Analysis for Higher Education*, published in 2005, combined ratios and models for private and public institutions. Recombining the financial analysis framework for public and private institutions was appropriate because changes in the financial accounting and reporting model for public institutions made the financial statements more similar to their private counterparts. In addition, public and private institutions increasingly competed with each other in the marketplace for students, faculty, contributions, research support, and debt funding. Further, institutions needed to understand how financial analysts viewed the entire industry so that individual institutions could better manage themselves.

This seventh edition includes the participation of Attain LLC, a provider of advisory services to the public sector. Also, KPMG's participation in this edition is under the sponsorship of the KPMG Government Institute, which was established to serve as a strategic resource to help governments and higher education and other non-profit organizations achieve high standards of accountability, transparency, and performance.

Authors

Since the second edition published in 1982, the *Strategic Financial Analysis for Higher Education* series has been jointly developed by professionals at KPMG LLP and Prager, Sealy & Co., LLC. After KPMG's consulting practice, including higher education consulting, was separated from KPMG in 2000, previous KPMG authors continued their involvement with these publications and higher education consulting. All of the authors have designed and developed the concepts in this edition based on their experiences serving colleges and universities and not-for-profit organizations, and have contributed to several prior editions.

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We have enjoyed the opportunity to develop, provide, and refine these concepts to the higher education industry. We look forward to the ongoing evolution of our financial models and tools, and we look forward to working with our colleagues in the industry as we use these concepts to advance risk management and financial analysis for higher education.

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SECTION I

STRATEGIC FINANCIAL RISKS

SECTION I

STRATEGIC FINANCIAL RISKS

SECTION OVERVIEW

This section updates our strategic financial analysis framework and approach since the sixth edition in this series was published in 2005. Since then, dramatic shifts in the economy have precipitated significant changes in the way risk is measured and managed within the institution and have caused governing bodies to examine the institution's core governing and management practices. We believe this will be a permanent change to and for higher education institutions, representing a paradigm shift in higher education management. As a result, we have updated our approach to more clearly articulate a key underlying concept of strategic financial analysis—identifying, measuring, monitoring and reporting of institutional risks.

This section is structured into seven chapters:

- Chapter 1 – Reasons to Update Strategic Financial Analysis
- Chapter 2 – Achieving Mission through Implementing the Strategic Plan
- Chapter 3 – Framework to Address Strategic Financial Risks
- Chapter 4 – Measuring Liquidity and Related Risks
- Chapter 5 – Managing Debt Strategically
- Chapter 6 – Identifying, Measuring and Monitoring Financial Operating Risks
- Chapter 7 – Identifying, Measuring and Monitoring Financial Capital Risks

The first three chapters summarize significant events that have occurred since 2005, higher education's responses to those events and our observations. As in prior editions, we continue to believe the recent events have reinforced our point of view that to be best positioned for success, institutions need a clearly defined mission articulated in a strategic plan and business activities. Institution risk assessment activities are part and parcel to strategic planning, and we present a framework to address strategic financial risks.

The remaining chapters in this section address common strategic financial risks such as liquidity and debt management. Another significant financial risk relates not only to the acceptance of an activity, but also to how information related to the activity is reported internally to senior management and the governing board. Reporting that is not clear, concise and consistent may contribute to misunderstanding of financial operations, risks and condition among key parties. We offer some suggestions on internal financial reporting that are intended to help ensure transparency and effectiveness.

This section is focused on financial matters, perspectives and issues as they relate to strategic objectives, goals and measures, and is directed primarily to the governing board and senior management.

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CHAPTER 1

Reasons to Update Strategic Financial Analysis

CHAPTER SUMMARY

This chapter discusses several significant events affecting the higher education industry since our sixth edition of *Strategic Financial Analysis for Higher Education* was published in 2005. We have observed higher education's responses to these challenges and believe that to be effective, many of the changes will need to become part of an institution's processes and procedures. In certain cases, this will require reexamining policies to ensure a continued vigilance about managing financial risk, overall financial health and key issues such as liquidity.

Introduction

Many negative events affecting the overall economy and higher education have occurred in the past several years. We will summarize some of the major events and some of the responses made by higher education institutions, our observations about those actions and further steps that should be considered. We expect that the impact of the "Great Recession" will abate over time, and do not want the seventh edition to be regarded solely as a primer to manage through this crisis. Rather, we believe that many recent events, which themselves represent the culmination of longer trends, will impact the management of higher education institutions for years and decades to come. We do not foresee a quick return to "business as usual" practices in use prior to 2008.

Debt and related liquidity

Prior to 2008, for many institutions, liquidity needs related to the debt portfolio were an afterthought, as liquidity was abundant and cheap. However, beginning in 2008, the environment changed quickly and dramatically, and liquidity available to institutions from a variety of sources was reduced significantly. The auction rate security market failed beginning in February 2008, resulting in some issuers having great difficulty refinancing this type of debt. Later in the year, several storied Wall Street names that had weathered the Great Depression ceased to exist, forcing many organizations to quickly seek replacement firms to remarket outstanding obligations. Short-term debt—often for the first time—was put or was threatened to be put to liquidity providers, with short-term rates rising to their highest levels in history, only to fall to their lowest observed levels as the severity of the economic downturn became apparent. Despite persistently low short-term interest rates, the liquidity needed to support such instruments became scarcer and more expensive.

Decline in value of endowment investments and related investment liquidity

Following a lengthy period of substantial investment returns, equity markets generally reached their peak in October 2007, when most markets began their breathtaking decline, resulting in dramatic reductions in asset values. A growing trend over the prior five years saw many institutions decrease their investments in publicly traded securities and increase their investments in alternative asset classes, including hedge funds, private equity and venture capital funds, either in search of higher returns or reduced investment risks. Many of these investment vehicles contained redemption restrictions and no robust secondary market for trading, which further contributed to liquidity challenges for some. The downturn in the equity markets could not have come at a worse time as it followed a dramatic increase in asset valuations and resulting congressional pressure for institutions to spend more from their endowment funds, resulting in an unsustainable level of spending. The abnormal investment returns immediately followed by abnormal investment losses caused severe fluctuations to endowment-reliant institutions that further reduced liquidity, forced major reductions in spending and exposed the industry's inability to deal with return volatility even with a smoothed payout rate formula. While the impact of the investment losses was more painful, arguably it was no more destabilizing to the institutional budget than the gains in the prior periods.

Adding to the liquidity challenges facing certain asset classes, money market funds' net asset values broke the \$1 value, the Commonfund's short-term fund suffered liquidity problems and other unprecedented occurrences further exacerbated the liquidity challenges at numerous organizations.



SECTION II

STRATEGIC FINANCIAL ANALYSIS TOOLS



SECTION III

FINANCIAL RATIOS & METRICS

SECTION III

FINANCIAL RATIOS & METRICS

SECTION OVERVIEW

This section, which addresses financial ratios and metrics, is more focused on the methods to calculate these metrics and, accordingly, may be of greater interest to financial managers in private and public institutions. This section is comprised of four chapters:

- Chapter 11 – Updates and Changes to Financial Ratio Approach and Calculations
- Chapter 12 – Framework for Financial Analysis Using Ratios and Metrics
- Chapter 13 – Calculating Financial Ratios and Metrics
- Chapter 14 – Calculating the Composite Financial Index

We have updated our framework to reflect changes in the financial markets and economic conditions. We have also made revisions to the ratios, adding some, deleting others and revising some calculations.

We believe there are many factors and complexities in financial operations and financial agreements that may result in significant changes to the ratios. As a result, we have added flexibility in calculating certain ratios, but stress that financial management must clearly articulate to senior management and governing boards what is included and excluded from the metric or ratio calculations, as well as the rationale. This flexibility will render peer group comparisons not meaningful, or perhaps even misleading. We believe that ratios are best used to measure institutional financial matters when measured over an extended period of time.

We have also stressed ranges for the thresholds in certain ratios due to the flexibility as well as reflecting changes in usage.



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