Using Financial Ratios to Improve Institutional Health

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Today we’ll explain financial ratio basics with particular attention to the Composite Financial Index (CFI) and how its calculated.
Next week, we’ll discuss how to analyze these calculations to assess and improve financial health.
Why calculate financial ratios?

• “We believe the fundamental concept of assessing financial health by using a limited number of ratios has improved the financial health of colleges and universities.” (emphasis added) from Strategic Financial Analysis for Higher Education, Sixth Edition...

Why calculate ratios? (contd.)

• Ratios are valuable for those who do not understand how to interpret and analyze higher education financial statements
  — Trustees, faculty, students, and other interested parties can use the ratios to gain an understanding of the institution’s financial health...
Understanding the CFI and Calculating Ratios (Session 1 of 2)

Why calculate ratios? (contd.)

Why calculate ratios? (contd.)

- Reduces complexity of GAAP-basis financial statement analysis
- Facilitates peer assessment
- Shifts focus to a more global level
- Enables strategic decision making...

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Why calculate ratios? (contd.)

- Supports a long-term institutional view
- Assists with performance assessment of
  - Creditworthiness
  - Relative liquidity, financial viability, and leverage of resources
  - Financial assets’ performance

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UNDERSTANDING THE CFI AND CALCULATING RATIOS

Principles

• Use ratios to measure acquisition / use of resources in support of mission
• Focus on summary information to address key questions
• Present limited number of key ratios
  – Additional detail when necessary...

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Principles (contd.)

• Focus on trends in ratios
• Some trends evident from internal assessment
  – Other trends arise through comparisons with others
• Never compare with others using CFI—only underlying ratios

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COMPOSITE FINANCIAL INDEX (CFI)

• Published by Prager, Sealy & Co. LLC, KPMG, and BearingPoint in 1999
• Seventh edition of *Strategic Financial Analysis for Higher Education* released summer 2010
  • Revises some secondary ratios; adds others, including liquidity ratio
Understanding the CFI and Calculating Ratios (Session 1 of 2)

USING FINANCIAL RATIOS TO IMPROVE INSTITUTIONAL HEALTH

CFI

• Combines four primary ratios
  – Primary reserve ratio
  – Viability ratio
  – Return on net assets ratio
  – Net operating revenues ratio

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UNDERSTANDING THE CFI AND CALCULATING RATIOS ACADEMIC IMPRESSIONS

CFI (contd.)

• Standard weighting for each ratio, but can be adapted for unique situations
  • Weighting should remain fairly static over time
  • In addition to four primary ratios, seventh edition presents various secondary ratios

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UNDERSTANDING THE CFI AND CALCULATING RATIOS ACADEMIC IMPRESSIONS
Primary Reserve ratio—35 percent

- Indicates the sufficiency of resources and their flexibility
  - Expendable net assets / total expenses
- Unless otherwise specified, expendable net assets restricted for plant purposes are excluded...

Viability ratio—35 percent

- Indicates the capacity to repay total debt through reserves
  - Expendable net assets / long-term debt
Return on Net Assets ratio—20 percent

- Indicates whether the institution is better off financially this year than last
  
  - Change in net assets / beginning net assets

Net operating revenues ratio—10 percent

- Indicates whether institution is living within available resources
  
  - Operating surplus or deficit / operating revenues
Understanding the CFI and Calculating Ratios (Session 1 of 2)

Using Financial Ratios to Improve Institutional Health

Questions?
SECONDARY RATIOS

Primary Reserve secondary ratio

- The primary reserve ratio is the sole component of the CFI that is not supported by secondary ratios
Viability secondary ratios

1. Debt burden ratio
   • Debt service (annual principal and interest payments) / total expenditures (total expenses, less depreciation, plus debt service principal payments)...

Viability secondary ratios (contd.)

2. Debt service coverage ratio
   • Adjusted unrestricted net operating revenues (net unrestricted operating revenues plus depreciation expense) / debt service (annual principal and interest payments)...

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Viability secondary ratios *(contd.)*

3. Interest burden ratio
   - Interest expense / total expenditures (total expenses, less depreciation, plus debt service principal payments)

Return on Net Assets secondary ratios

1. Physical asset reinvestment ratio
   - Capital expenditures / depreciation expense...
Return on Net Assets secondary ratios (contd.)

2. Age of facilities ratio
   • Accumulated depreciation / depreciation expense...

Return on Net Assets secondary ratios (contd.)

3. Facilities burden ratio
   • Facilities-related expenses (depreciation expense, interest expense, and plant operations & maintenance expense) / total property, plant, and equipment (or total capital assets)...

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UNDERSTANDING THE CFI AND CALCULATING RATIOS

ACADEMIC IMPRESSIONS
Return on Net Assets secondary ratios (contd.)

4. Deferred maintenance ratio
   • Outstanding deferred maintenance requirements / expendable net assets

   *Note: this ratio cannot be calculated from information presented in the audited financial statements*

Net Operating Revenues secondary ratios

1. Cash income ratio
   • Net cash provided by operating activities / total unrestricted revenues excluding gains and losses...
Net Operating Revenues secondary ratios (contd.)

2. Contribution ratios
   • Revenue / total expenses
     – With revenue representing the amount of a specific type of revenue (e.g., tuition & fees, investment income)...

3. Net tuition dependency ratio
   • Net tuition and fees / total unrestricted operating revenues...
Net Operating Revenues secondary ratios (*contd.*)

4. Demand ratios
   • \( \text{Expense} / \text{total unrestricted operating revenues} \)
     - With *expense* representing the amount of a specific type of expense (e.g., instruction, compensation)
**SOURCING THE DATA**

**USING FINANCIAL RATIOS TO IMPROVE INSTITUTIONAL HEALTH**

**Private Institutions**

- Audited financial statements (FASB model)
  - Statement of financial position
  - Statement of activities
  - Statement of cash flows
  - Notes to the financial statements...
Private Institutions (contd.)

- Most items referenced in ratios are clearly labeled in one of the financial statements
  - Exception is net investment in plant
  - Frequently buried in unrestricted net assets
- Net property, plant & equipment less long-term debt...

Private Institutions (contd.)

- No requirement for classified statement of financial position—may combine current with noncurrent
  - If not, you should combine them
- No requirement for operating measure
  - You should calculate one
Public Institutions

- More complicated than private institutions
- Most public institutions have component units
  - These are affiliated entities (e.g., foundations) reported with the college and university financial statements
  - If present, their data must be included...

Public Institutions (contd.)

- Potential for double counting some items
  - Foundation revenues ultimately remitted to institution represent revenue to institution
  - Foundation expenses remitted to institution and subsequently expended by institution represent expense for both...
Public Institutions (contd.)

- Two acceptable approaches for reporting component units
- Combined—totals are added across resulting in double counting
- Consolidated—duplicate items are eliminated
- Consolidated is best but may not be available

Public Institutions (contd.)

- Audited financial statements (GASB model)
  - Statement of net assets
  - Statement of revenues, expenses, and changes in net assets
  - Statement of cash flows
  - Notes to the financial statements...
Public Institutions (contd.)

– Component unit’s audited financial statements
  - May be same format as institution (GASB) or similar format to that of private institution (FASB)...

Public Institutions (contd.)

– GASB reporting model requires that some revenues supporting operations be reported as nonoperating revenues
– As a result, adjustments are required for operating appropriations, non-endowment gifts, and investment income
CALCULATING THE RATIOS

Templates

• There are two pages of instructions followed by two pages of primary templates
  – Page 1 is for private institutions / component units following the FASB model
  – Page 2 is for public institutions / component units following the GASB model...
Templates *(contd.)*

- If the institution reports more than one component unit, complete separate primary templates for each unit
  - Then combine the amounts from all templates and carry it forward to page 4...

Templates *(contd.)*

- Page 3 is the adjustments page which likely will apply to everyone due to restricted amounts for plant purposes...
Templates *(contd.)*

- Page 4 is used to calculate the primary ratios which comprise the CFI
  - It relies on data that is carried forward from pages 1 and/or 2

Templates *(contd.)*

- Information from page 4 is carried forward to page 5 and is used to calculate the CFI
  - This is where the CFI weights are adjusted for institutions that do not have material amounts of outstanding debt or capital lease obligations
Next Steps

• Complete the CFI calculation using the appropriate primary template(s)
• Submit all completed templates to larry.goldstein@campus-strategies.com asap but not later than Friday, November 12
• Contact Larry via email with any questions...

Next Steps (contd.)

• Completion and submission of the templates is essential to obtaining full value during next week’s session
• The session will be highly interactive and you will join with others during a breakout to discuss your results