Using Financial Ratios to Assess Institutional Financial Health

- Did you bring…
  - Printed copies of your institution financial statements for 2 years?
  - Foundation financial statements for two years if you're from a public institution?
  - A laptop or tablet with Excel capability?

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COLLEGE BUSINESS MANAGEMENT INSTITUTE

Using Financial Ratios to Assess Institutional Financial Health

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Agenda

- This Morning
  - Overview of sessions
  - Quick surveys
  - Background
  - Context for utilizing financial ratio analysis
  - Core and secondary ratios of the Composite Financial Index (CFI)
  - Other issues
  - Questions and answers

Agenda *(contd.)*

- Tomorrow Morning
  - Workshop
    - Guidance for completing the CFI calculations
      - *Consider reviewing materials in the app before tomorrow morning—not required but helpful*
    - Individual work on your CFI calculations
      - Work in teams if you have colleagues from the same institution
    - Comparison of CFI results among institutions

Deviations

- Tomorrow is a classroom exercise and some of you lack accounting experience. The process has been streamlined as follows to accommodate this.
  1. Ignoring Net Investment in Plant for FASB Component Units
  2. Ignoring Net Assets / Net Position restricted for plant / capital acquisition
  3. For some FASB Component Units, ignoring net assets with donor restrictions that are permanent

Participant Engagement

Poll #1—Educational Background

- Please select the best response by raising your hand
  - You have some understanding of financial reporting, but you have not taken formal coursework in accounting
  - You took relevant accounting classes in college
  - You majored in accounting in college
  - You're a CPA

Poll #2—Experience

- You have prepared HE financial statements
- You have prepared non-HE financial statements
- You have contributed schedules or other information for HE financial statements
- You have read HE financial statements at least once
- You have no familiarity with HE financial statements

Poll #3—Employment (last one!)

- You work for a public college, university, or system office
- You work for a foundation or similar entity supporting a public college or university
- You work for a private or independent college or university
- You work in public accounting
- Other

BACKGROUND

Background

- US higher education ratio analysis initially relied on data collected through HEGIS—Higher Education General Information Survey (US Department of Education)
- HEGIS began in 1966 and continued until 1987 when it was replaced by IPEDS—Integrated Postsecondary Education Data System
- No *meaningful* utilization of financial statements for ratio analysis until 1995

Background *(contd.)*

- Ratio Analysis in Higher Education, fourth edition (1999) by KPMG and Prager, McCarthy & Sealy, LLC—represented a significant advance
- Introduced
  - Strategic Resource Allocation matrix
  - Composite Financial Index (CFI)
    - Utilizing selected ratios to produce an overall score
      - BUT, relevant only for private institutions

Background *(contd.)*

- Fifth edition (2002) applied CFI to public institutions
- New concepts
- Adaptation of ratios to reflect then-new GASB reporting model
- Inclusion of FASB support organizations—that is, foundations—in ratio calculations

Background *(contd.)*

- Seventh edition (2010)
  - Extended scale for CFI
  - Revisions to ratios
    - Dropped alternative to *net operating revenues ratio* for private institutions
    - Required the establishment of an *operating measure*—even if not reported externally

Background *(contd.)*

- Significant emphasis on liquidity due to impact of Great Recession on higher education—introduced new liquidity ratio
- Encouraged averaging ratios over multiple years to smooth the results
- Deemphasized peer comparison in favor of trend analysis—assess institution over time rather than against others
- Update to 7th edition in 2017 to highlight errors being made and address GASB 68 (pensions)

CONTEXT

Context

- Why calculate financial ratios?
  - From the sixth edition, “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)

Context *(contd.)*

- Shifts focus to a more global level
- Supports strategic decision making
- Demonstrates financial impacts of key decisions
- Assists with performance assessment
  - Creditworthiness
  - Relative liquidity, financial viability, and leverage of resources
  - Financial assets' performance

Context *(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
- Reduces complexity of *GAAP-basis* financial statement analysis

Context *(contd.)*

- Principles
  - Use ratios to measure acquisition and use of resources *in support of mission*
  - Focus on summary information to address key questions
  - Present a select number of ratios to provide answers
    - Add more detail when necessary

Context *(contd.)*

- Focus on trends in ratios
  - Some trends are evident from internal examination / review
  - Other trends arise through comparisons with other institutions
    - Never make decisions based on comparison to other institutions using CFI—only underlying ratios

QUESTIONS?

CORE RATIOS

Ratios

- Composite Financial Index (CFI)
  - Combines four core ratios
    - Primary reserve ratio
    - Viability ratio
    - Return on net assets ratio
    - Net operating revenues ratio…

Ratios *(contd.)*

- Standard weighting for each ratio, but can be adapted for unique situations
  - Weighting should remain fairly static over time
- In addition to four core ratios, seventh edition presents 13 secondary ratios and one special-purpose ratio

Ratios *(contd.)*

- Primary reserve ratio—35 percent
  - Indicates the sufficiency of resources and their flexibility
    - *Expendable net assets*

      Divided by
    - Expenses

Note: Unless otherwise specified, expendable net assets restricted for plant purposes are excluded

Ratios *(contd.)*

- Viability ratio—35 percent
  - Indicates the capacity to repay total debt through reserves
    - Expendable net assets

      Divided by
    - Debt

Ratios *(contd.)*

- Return on net assets ratio—20 percent
  - Indicates whether the institution is better off financially this year than last
    - Change in *net assets* (or *net position*)
      Divided by
    - Beginning net assets (or net position)
      - Option to use *average* of beginning and ending values instead of just the beginning

Ratios *(contd.)*

- Net operating revenues ratio—10 percent
  - Indicates whether institution is living within available resources
    - *Operating surplus or deficit*

      Divided by
    - *Operating revenues*

SECONDARY RATIOS

Primary Reserve

- The primary reserve ratio is the sole core ratio that is not supported by secondary ratios

Viability secondary ratios

1. Debt burden ratio
   - *Debt service* (annual principal and interest payments)

     Divided by
   - 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)

     Divided by
   - Debt service

Viability secondary ratios *(contd.)*

3. Interest burden ratio
   - Interest expense

     Divided by
   - Total expenditures

Viability secondary ratios *(contd.)*

4. Portfolio principal duration metric
   - The sum of—par outstanding x principal duration term—for each issue outstanding

     Divided by
   - Total par outstanding

Return on Net Assets secondary ratios

1. Physical asset reinvestment ratio
   - *Capital expenditures*

     Divided by
   - *Depreciation* expense

2. Age of facilities ratio
   - *Accumulated depreciation*

     Divided by
   - 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*)

     Divided by
   - Total long-lived physical assets (or total *capital assets*)

Return on Net Assets secondary ratios *(contd.)*

4. *<u>Deferred maintenance</u>* ratio
   - Outstanding deferred maintenance requirements

     Divided by
   - Expendable net assets

Note: this ratio cannot be calculated from information available in the financial statements

Net Operating Revenues secondary ratios

1. Cash income ratio
   - Net cash provided by operating activities

     Divided by
   - Total unrestricted revenues (excluding gains and losses)

Net Operating Revenues secondary ratios *(contd.)*

2. Contribution ratios
   - *Revenue*

     Divided by
   - Total expenses
     - With *revenue* representing the amount of a specific type of revenue (e.g., tuition & fees, investment income)

Net Operating Revenues secondary ratios *(contd.)*

3. Net tuition dependency ratio
   - Net tuition and fees

     Divided by
   - Total unrestricted operating revenues

4. Net tuition dependency per FTE ratio
   - Net tuition and fees

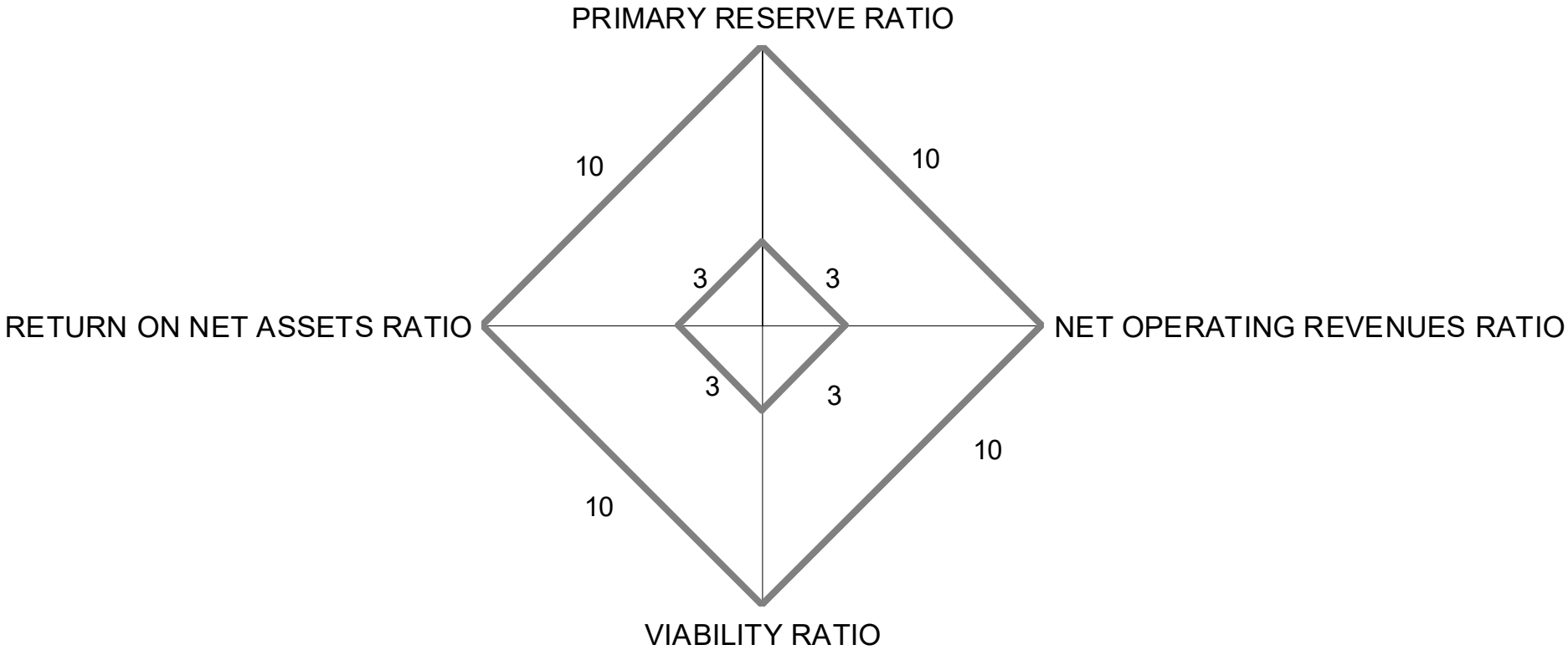
     Divided by
   - Full-time equivalent students

Net Operating Revenues secondary ratios *(contd.)*

5. Demand ratios
   - *Expense*

     Divided by
   - Total unrestricted operating revenues
     - With *expense* representing the amount of a specific type of expense (e.g., instruction, compensation)

GRAPHIC FINANCIAL PROFILE



Threshold Values

- ~~Financial health~~ *Minimal survivability* pegged at 3, equating to
  - Primary Reserve: 140 days of operations
    - Technically more due to depreciation
  - Viability: 1.25 times total debt owed
  - Return on Net Assets: 6% return on combined financial / nonfinancial assets
  - Net Operating Revenues: 2% net surplus to increase reserves

Guessing Your CFI

Expected Results

- Let’s explore your expectations about your institution’s CFI
- Knowing that the maximum score is 10, and survivability is 3, will your CFI be…
  - Less than 3
  - Higher than 3 and less than 7
  - 7 or higher

QUESTIONS?

OTHER ISSUES

Affiliated Entities

- What about affiliated entities?
  - Include them!
    - Necessary for a complete picture of the institution
  - GASB Statement No. 39 (component units) requires it under certain circumstances
    - Resources must be (1) held for use by institution, (2) significant, and (3) accessible by institution
    - What about omitted entities—due to criteria or significance?
      - Include them if information is available

Affiliated Entities *(contd.)*

- Double counting of revenues / expenses
  - Initial receipt by foundation is revenue
  - Disbursement from foundation to institution is expense for foundation and revenue for institution
  - Disbursement by institution is expense
  - Consolidation would address this through elimination, but not always available

Comparisons with Other Institutions

- Comparisons between institutions
  - Very risky due to inconsistencies
    - Especially between public and private
  - Helps if institutions have similar mission
  - Optimal comparison occurs within affinity groups
    - Examples include SEC, ACS, etc.

Impact of Changed Accounting Standards

- Impact of GASB 68 (pensions) and GASB 75 (*OPEB*)
  - Both standards dramatically reduced the CFI scores for most public colleges and universities because of liability recognition
  - The numbers change but the underlying financial picture remains the same
  - Based on past experience, the numbers will rise over time

Impact of Changed Accounting Standards *(contd.)*

- The recommended approach to transition the CFI from the previous standards to the current standards is to present the CFI with and without pension and OPEB liabilities
    - Over time, the numbers will migrate toward each other and, after ten years, the calculation without pension and OPEB liabilities can be dropped
    - GASB 68's tenth year was last year, FY 2025
    - GASB 75's tenth year will be FY 2028

Cautions

- Limitations / pitfalls of financial ratio analysis
  - It is not a substitute for understanding the financial statements themselves; it shines a light on the statements' content but can't tell the entire story
  - It should not be used to mask poor financial performance
  - It is but one quantitative measure

Comprehensive Assessment

- Appropriate assessment—financial or otherwise—requires both quantitative and qualitative analysis
  - Financial ratios should not be used as a substitute for qualitative judgments
    - It should be supplemented with other factors

Comprehensive Assessment *(contd.)*

- Peer comparisons without longitudinal analysis can be misleading
- Longitudinal analysis without peer comparisons can be misleading
  - Ten-year periods seem to work well when examining performance or comparing to other institutions
    - Consistently applied ratio analysis is essential

Resources

- *Strategic Financial Analysis for Higher Education*, seventh edition, by Prager, Sealy & Co., LLC, KPMG LLP, and Attain LLC
- Update to the seventh edition of *Strategic Financial Analysis for Higher Education*
  - Both available through KPMG or NACUBO

Seating Instructions for Thursday Morning

- You are *encouraged* to sit in teams if more than one person is present from the same institution
- This is especially valuable if one or more of the participants is an experienced accountant but maybe even more so if no one from the team is an experienced accountant
- Let's quickly identify the institutions present in the session

Questions, Comments, and Reactions

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