

An abstract background featuring a complex, low-poly geometric pattern in shades of blue, yellow, and purple, resembling a crystalline or molecular structure.

# Welcome to Today's NACUBO Webcast

Our program will begin shortly with a brief introduction on how to use the desktop interface.

The top half of the slide features a decorative banner with an abstract, low-poly geometric pattern. The colors are primarily shades of blue, teal, and yellow, creating a modern, crystalline effect.

# Composite Financial Index

Measuring, Reporting and  
Monitoring

# *Strategic Financial Analysis For Higher Education*

Identifying, Measuring, and Reporting Financial Risks

*Presented by:*

**KPMG**

PRAGER, SEALY & CO., LLC

**ATTAIN**





# Strategic Financial Analysis for Higher Education

## The Composite Financial Index Measuring, Reporting, and Monitoring

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# The Composite Financial Index Measuring, Reporting, and Monitoring

Today's faculty:

Leading the presentation:

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Supporting the presentation:

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# The Composite Financial Index Measuring, Reporting, and Monitoring

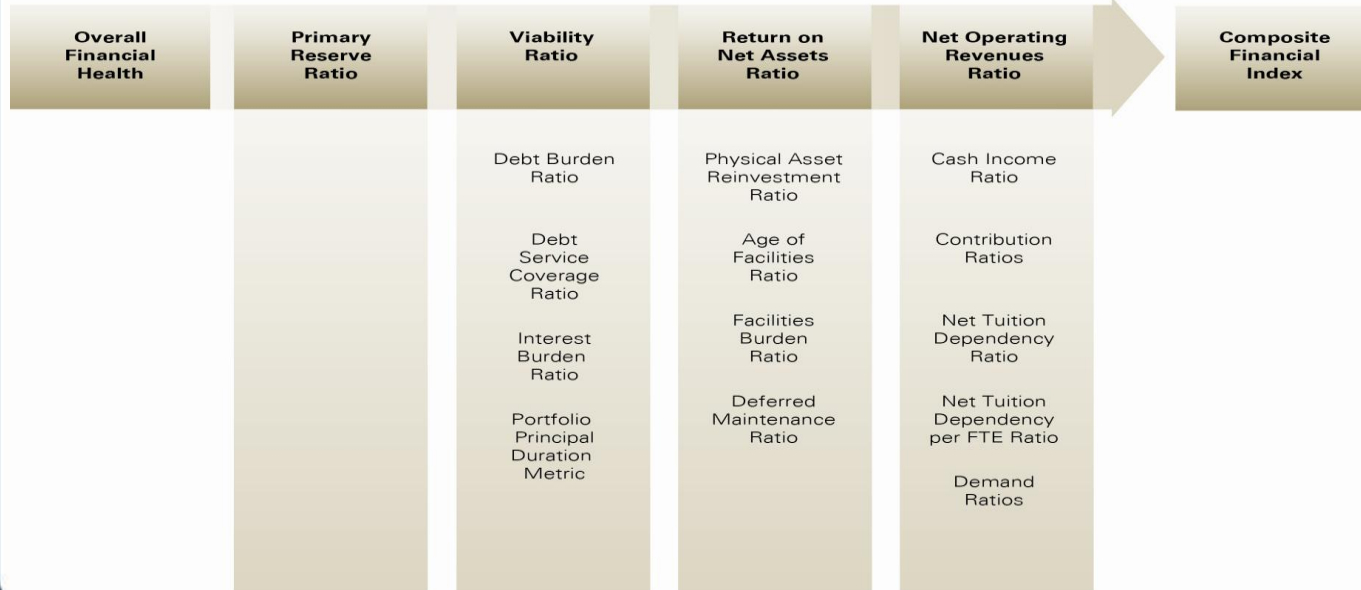
DOES THE INSTITUTION HAVE SUFFICIENT LIQUIDITY?  
LIQUIDITY RATIO

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

*Are resources, including debt, managed strategically to advance the mission?*

*Does asset performance and management support the strategic direction?*

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



This Webinar is focused on the CFI – a “horizontal”. Last Webinar was a “vertical” on the ratios.

# The Composite Financial Index

## Measuring, Reporting, and Monitoring

### Purpose of the CFI:

To provide overall assessment of the Institutional financial health

### Why the CFI for your Institution?

- Provides a single number representing a holistic means of measuring institutional financial health
- Provides a means of monitoring progress against targets
- Allows concise communication of overall financial health to key stakeholders
- Simplifies and combines key financial ratios into one metric (e.g.; Student GPA)

# The Composite Financial Index

## Measuring, Reporting, and Monitoring

The CFI is established by first answering **four key** questions in context of mission:

- Are resources sufficient and flexible enough? *Primary Reserve Ratio*
- Are debt resources managed strategically? *Viability Ratio*
- Does asset performance and management support direction? *Return on Net Assets Ratio*
- Do operating results indicate living within means? *Net Operating Revenues Ratio*



# The Composite Financial Index Measuring, Reporting, and Monitoring

The CFI assists institutions to:

- Establish an overall prospective financial target in the Strategic Plan
- Communicate through a single index rather than a large number of less impactful metrics
- Establish which trends require more analysis and communication and which do not
- Understand the impact of changing conditions on the institution

# The Composite Financial Index

## Measuring, Reporting, and Monitoring

### Cautions associated with use of the CFI:

- Less useful in peer group analysis
- Only measures success components related to financial activities
- Single year computation much less useful than a trend line
- Need to understand the underlying data and ratios and their changes before combining them
- For public institutions, need to include component units, like foundations

# The Composite Financial Index

## POLLING QUESTION

Have you used the Composite Financial Index?

- Yes
- No
- We are just beginning

# The Composite Financial Index - Measuring

Four step methodology to compute the CFI:

- Calculate the values of the four core ratios
- Convert the computed values to strength factors along a common scale
- Multiply strength factors by specific weighting factors
- Total the resulting four weighted factors to compute the single CFI score

# The Composite Financial Index - Measuring

## Step 1

Calculate the ratio values for the four Core Ratios.

*The ratio values become the starting point for not only the CFI, but for other financial analysis.*



# The Composite Financial Index - Measuring

Before we start, some commentary is needed:

Expendable net assets:

- Conditional Retirement Asset Obligation
- Post retirement and pension benefits

Long term debt:

- Operating leases \*
- Guarantees
- Interest rate swaps
- Short term debt for capital purposes

\* We are not suggesting this is debt, we are suggesting that if this is significant it may be avoiding debt, but not the cash flow requirements and is an appropriate consideration for debt management ratios.

# The Composite Financial Index - Measuring

Primary Reserve Ratio is the first of the four  
Core Ratios that comprise the CFI

*The Primary Reserve Ratio helps to understand the amounts that an institution must have in retained wealth to realize strategic objectives, and whether this should lead to a reevaluation of mission and priorities.*

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

# The Composite Financial Index - Measuring

**Table 13.2** Primary Reserve Ratio Calculation

	PRIVATE INSTITUTIONS	PUBLIC INSTITUTIONS
Numerator	Expendable net assets	Expendable net assets plus FASB CU expendable net assets
Denominator	Total expenses	Total expenses plus FASB CU total expenses

Ratio threshold value is .40

- Expendable net assets are readily accessible to meet operating and capital needs
- Total expenses represent the impact of inflation and programmatic changes

# The Composite Financial Index - Measuring

**TABLE 13.3:** ILLUSTRATION OF THE PRIMARY RESERVE RATIO – PRIVATE INSTITUTIONS

Numerator – Expendable net assets	
+ Unrestricted net assets	86,014
+ Temporarily restricted net assets	2,954
- Property, plant and equipment, net	(77,900)
+ Long-term debt	39,476
Numerator – Expendable net assets	50,544
Denominator – Total expenses	68,469
Value of ratio	.74x

## Factors to Consider:

- Conditional asset retirement obligation
- Deposits with bond trustee
- Definition of long-term debt
- Post retirement obligations

# The Composite Financial Index - Measuring

Viability Ratio is the second of the four Core Ratios that comprise the CFI

*Helps understand when the financial burden of debt outweighs its strategic usefulness to achieve mission. Affordability as well as capacity are assessed.*

*Are financial resources, including debt, managed strategically to support the mission?*



# The Composite Financial Index - Measuring

**Table 13.5** Viability Ratio Calculation

	PRIVATE INSTITUTIONS	PUBLIC INSTITUTIONS
Numerator	Expendable net assets	Expendable net assets plus FASB CU expendable net assets
Denominator	Plant-related debt	Plant-related debt plus FASB CU plant-related debt

Ratio threshold  
value is 1.25x

- Measures availability of resources to settle debt as of the balance sheet date
- An indication of debt capacity
- Governs institution's ability to issue new debt
- Look below this ratio to assess affordability of debt, issued and proposed
- Full look at creditworthiness adds factors, such as management quality

# The Composite Financial Index - Measuring

**TABLE 13.6:** ILLUSTRATION OF THE VIABILITY RATIO – PRIVATE INSTITUTIONS

Numerator – Expendable net assets	
+ Unrestricted net assets	86,014
+ Temporarily restricted net assets	2,954
- Property, plant and equipment, net	(77,900)
+ Plant-related debt	39,476
Numerator – Expendable net assets	50,544
Denominator – Plant-related debt	39,476
Value of ratio	1.28x

- Consider definition of long-term debt
- Once selected, apply consistently
- Asset retirement obligations
- Post retirement benefits & pensions
- Operating leases
- Guarantees
- Interest rate swaps

# The Composite Financial Index - Measuring

Return on Net Assets Ratio is the third of the Core Ratios that comprise the CFI

*Institutions must generate reasonable return on the net assets owned, as well as provide for adequate capital reinvestment.*

*Does asset performance and management support mission?*

# The Composite Financial Index - Measuring

**Table 13.15** Return on Net Assets Ratio Calculation

	PRIVATE INSTITUTIONS	PUBLIC INSTITUTIONS
Numerator	Change in net assets	Change in net assets plus FASB CU change in net assets
Denominator	Total net assets	Total net assets plus FASB CU total net assets

➤ Threshold value is 6%

➤ Better assessed over a long period of time; expect annual volatility.

➤ May wish to use rolling averages

- Measures whether the institution's returns are keeping pace with the increases in overall institutional size
- Stewardship responsibility requires return on all assets under management

# The Composite Financial Index - Measuring

**TABLE 13.16:** ILLUSTRATION OF THE RETURN ON NET ASSETS RATIO – PRIVATE INSTITUTIONS

Numerator – Change in net assets	4,590
Denominator – Total net assets (beginning of year)	96,030
Value of ratio	4.78%



# The Composite Financial Index - Measuring

Net Operating Revenues Ratio is the fourth Core Ratio comprising the CFI

*To create overall financial health, annual operations need to contribute, not detract.*

*Do operating results indicate the institution is living within its means?*

# The Composite Financial Index - Measuring

**Table 13.26** Net Operating Revenues Ratio Calculation

	PRIVATE INSTITUTIONS	PUBLIC INSTITUTIONS
Numerator	Excess (deficiency) of unrestricted operating revenues over unrestricted operating expenses	Operating income (Loss) plus net nonoperating revenues (expenses) plus FASB CU change in unrestricted net assets
Denominator	Total unrestricted operating revenue	Operating revenues plus nonoperating revenues plus FASB CU total unrestricted revenue

Threshold value is 2%. Ratio is best assessed as a trend line.

- Ratio is based on an operating indicator
- Gains and Losses as well as non operating activities are excluded
- Structural deficits need to be distinguished from investments in mission
- Balance between return and achievement of mission is critical to assessment of success

# The Composite Financial Index - Measuring

**TABLE 13.27:** ILLUSTRATION OF THE NET OPERATING REVENUES RATIO  
- PRIVATE INSTITUTIONS

Numerator - Excess (deficiency) of unrestricted operating income over unrestricted operating expenses	1,597
Denominator - Total unrestricted operating revenues	
+ Total unrestricted revenues and gains	68,017
+ Net assets released from restrictions	2,049
Denominator - Total unrestricted operating revenues	70,066
Value of ratio	2.28%

# The Composite Financial Index

## POLLING QUESTION

Do you report and use an operating indicator?

- Yes, for external financial reporting and we use the same measure when calculating the net income ratio
- No, we do not report an operating measure in our financial statements, but we use an operating indicator when calculating the net income ratio
- No – we do not report this measure in our financial statements and do not use when calculating the net income ratio
- We don't calculate a net income measure

# The Composite Financial Index - Measuring

## Step 2

Convert computed values to strength factors along a common scale.

*The strength factors are key to allowing ratios computed on different bases to be combined in creating the CFI.*

# The Composite Financial Index - Measuring

**TABLE 14.1:** SCALE FOR CONVERTING THE CORE RATIOS TO STRENGTH FACTORS

SCORING SCALE	1	3	10
Primary Reserve Ratio	.133x	.4x	1.33x
Net Operating Revenues Ratio:			
Private Institutions	0.7%	2%	7.0%
Public Institutions	1.3%	4%	13%
Return on Net Assets Ratio	2.0%	6%	20%
Viability Ratio	.417x	1.25x	4.17x

- Threshold values translate into a strength factor of 3
- Range of strength factors is -4 to 10 for each individual ratio
- Strength factors outside this range are capped at 10 and floored at -4

# The Composite Financial Index - Measuring

## Step 3

Multiply strength factors by specific weighting factors.

*The weighting schema reflects the belief that each ratio does not impact the institution equally. Weightings can be adjusted, but if done, should be judiciously and consistently applied.*

# The Composite Financial Index - Measuring

**TABLE 14.2:** CREATING THE WEIGHTING SCHEMA

RATIO	INSTITUTION WITH LONG-TERM DEBT	INSTITUTION WITH NO (OR MINIMAL) LONG-TERM DEBT
Primary Reserve	35%	55%
Net Operating Revenues	10%	15%
Return on Net Assets	20%	30%
Viability	35%	-

Note the heavier weighting, or emphasis on Balance Sheet driven ratios.



# The Composite Financial Index - Measuring

## Step 4

Total the resulting four weighted factors to compute the single CFI score.

*The development of a single measure simplifies the monitoring of financial health, while still creating a holistic view of the institution.*

# Calculating the Composite Financial Index Measuring

**TABLE 14.3:** CREATING THE CFI—AN ILLUSTRATION USING UTOPIA UNIVERSITY

RATIO	RATIO VALUE		STRENGTH FACTOR		WEIGHTING FACTOR		SCORE
Primary Reserve	.74X	=	5.56	=	35%	=	1.95
Net Operating Revenues	2.28%	=	3.26	=	10%	=	.33
Return on Net Assets	4.78%	=	2.39	=	20%	=	.48
Viability	1.28X	=	3.07	=	35%	=	1.07
					Composite Financial Index		3.8+

+ Number has been rounded to reflect appropriate level of precision as indicated by research

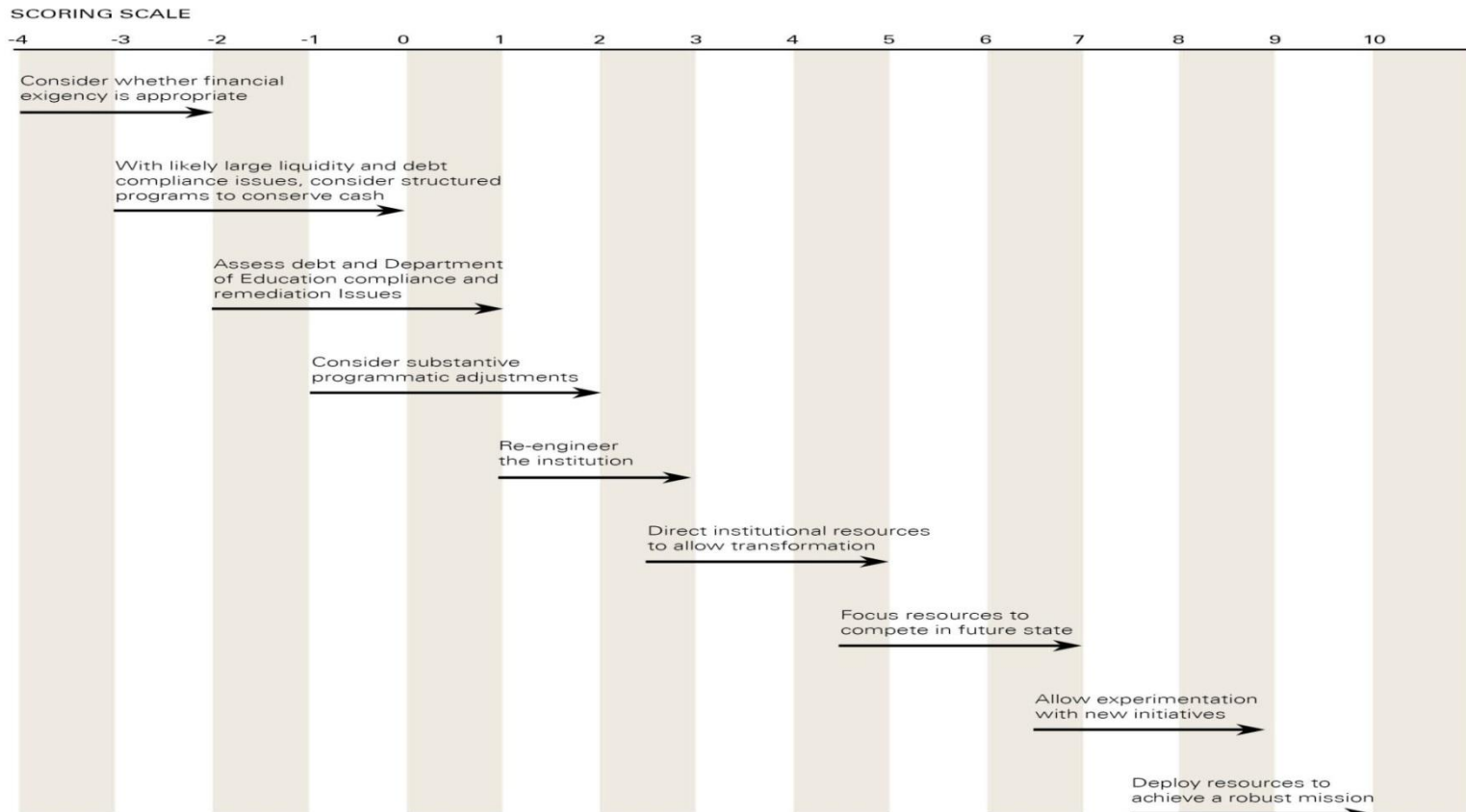
# The Composite Financial Index - Measuring

So, what does a score of 3.8 mean?

...Or any other score for that matter?

# The Composite Financial Index - Measuring

**FIGURE 10.1: SCALE FOR CHARTING CFI PERFORMANCE**



# The Composite Financial Index

## POLLING QUESTION

How many of the four core ratios do you use in your institution?

- None
- One
- Two
- Three
- All four

# The Composite Financial Index - Reporting

1. Present the CFI, consistently applied (next slide)
2. Present as the Graphic financial Profile

# The Composite Financial Index - Reporting

Present the CFI, consistently applied:

- Show a series of years – consider 3 to 5 back, 5 forward
- Consider presenting comparative CFI for schools, divisions, departments within the institution
- Concise explanations of events critical to keeping Board and Senior Leadership engaged
- On forward looking data, provide sensitivity analysis to create options and identify risks

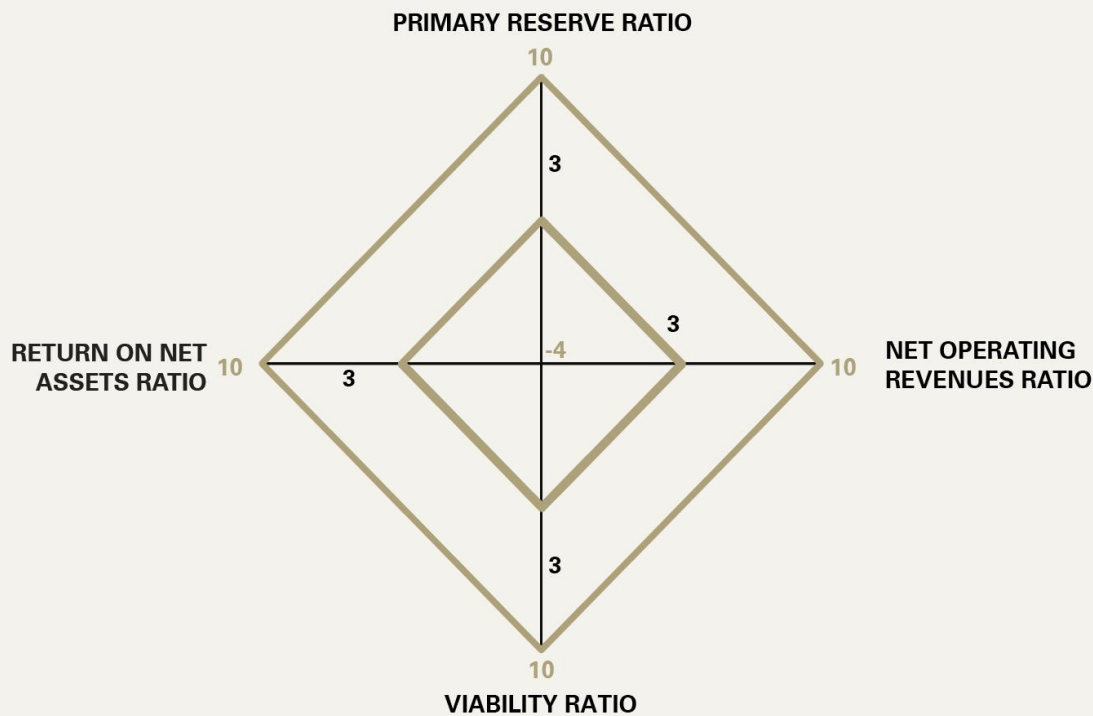
# The Composite Financial Index - Reporting

## Present as the Graphic Financial Profile:

- Creates a method of expressing and communicating the balance of the institution's financial health
- Uses the four Core Ratios in a diamond shape to demonstrate the balance and counterbalance of the ratios
- Presented over a period of time depicts the changes in the institution's financial profile



# The Composite Financial Index - Reporting

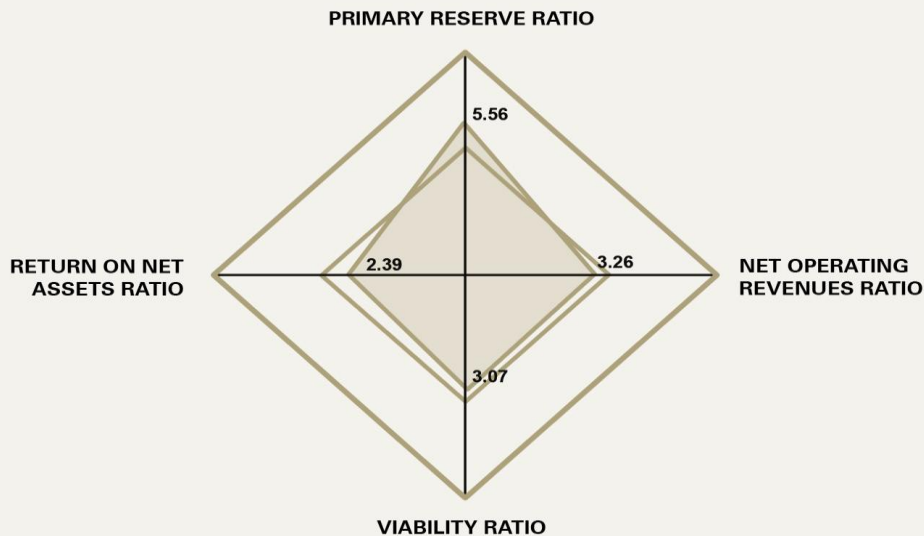


## Graphic Financial Profile:

- The schema creates a picture of the financial assessment of the institution
- Balance sheet oriented ratios on the vertical axis
- Return oriented ratios on the horizontal axis
- Strength factors same as CFI (-4 to 10)
- Goal is balance with at least values of 3

# The Composite Financial Index - Reporting

RATIO	RATIO	STRENGTH FACTOR
Primary Reserve	.74x	5.56
Net Operating Revenues	2.28%	3.26
Return on Net Assets	4.78%	2.39
Viability	1.28x	3.07



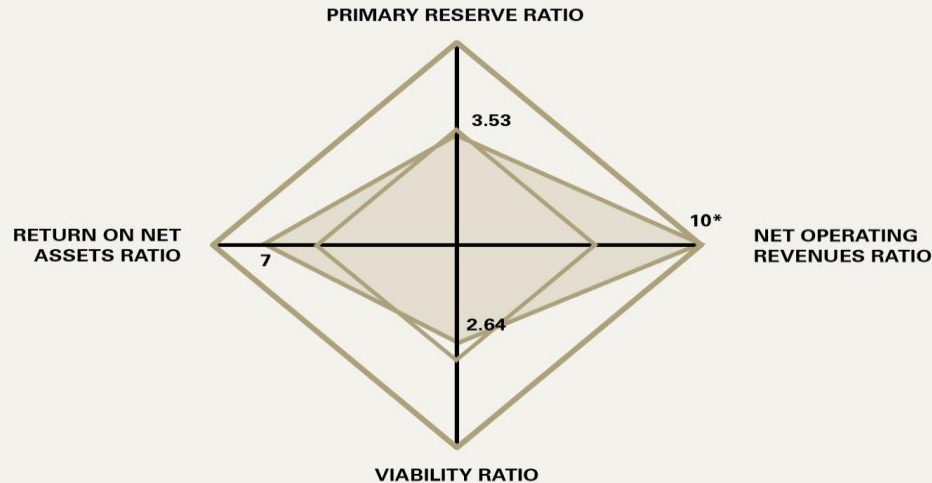
## Utopia University GFP:

- Presents a reasonably balanced picture with modest weaknesses
- CFI was at 3.8 due to balance sheet strength
- Return on assets under 3.0; if this is the trend line, could indicate need to reassess resource deployment
- Would appear to have some debt capacity, would need further analysis, likely not a lot of room for new debt

# The Composite Financial Index - Reporting

RATIO	RATIO	STRENGTH FACTOR
Primary Reserve	0.47x	3.53
Net Operating Revenues	10.00%	10.00*
Return on Net Assets	14.00%	7.00
Viability	1.10x	2.64

\*Default to 10, as calculated score exceeds 10



The profile of Institution #1 indicates a thinly capitalized institution with reasonable returns generated in the current period. This is an institution that may need to assess ways of focusing the deployment of its resources to ensure sufficient capitalization to achieve stated initiatives.

## Institution #1 (from book)

A horizontally elongated profile is an indicator of good return on current activities, with relatively less retained wealth.

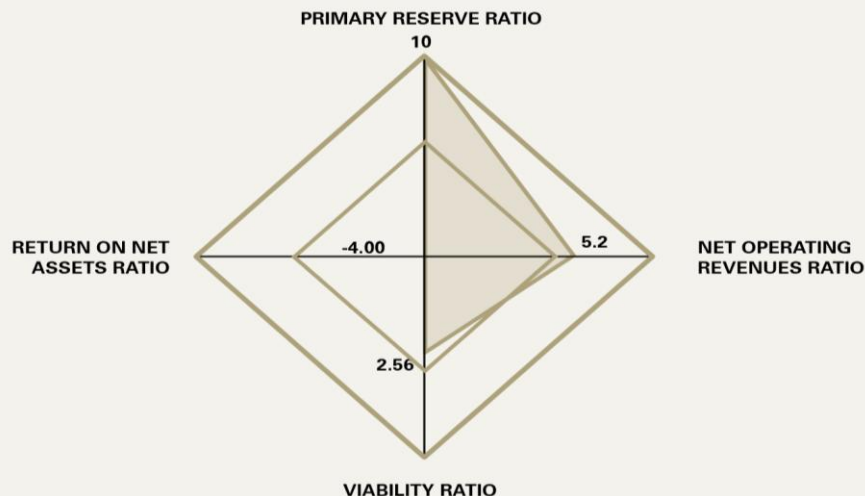
Many of these institutions tend to be:

- newer (not a legacy of large giving)
- sometimes public, where surpluses are taken back in future appropriations

# The Composite Financial Index - Reporting

RATIO	RATIO	STRENGTH FACTOR
Primary Reserve	3.64x	10.00
Net Operating Revenues	15.00%	5.20
Return on Net Assets	-12.5%	-4.00*
Viability	1.07x	2.56

\*Default to -4, as calculated score is less than -4



Institution #5 (from book)

Does this look like 2009 for many here today?

➤ The negative Return on Net Assets Ratio is driven by investment losses

*Note: not impacting the Net Operating Revenues because of the operating indicator.*

*Note: Strength factor for Primary Reserve is over 10 so capped at 10; for Return on Net Assets, under -4 so floor established at -4.*

# The Composite Financial Index

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## Case Studies

# The Composite Financial Index

## POLLING QUESTION

Does your institution use the Graphic Financial Profile as a reporting tool?

- Yes
- No

# The Composite Financial Index Measuring, Reporting, and Monitoring

Wrap up

Q&A

# The Composite Financial Index

## Measuring, Reporting, and Monitoring

Thanks for attending, we greatly enjoyed the opportunity to work with you today.

We look forward to seeing you at the next Webinar whose topics will be:

- Measuring Liquidity and Related Risks: creating a debt management policy and keys to understanding credit worthiness

We will also be at the Accounting Forum in April to discuss financial trends that we see in the market place, using the ratios as a basis for analysis.



# Thank You For Your Participation

Please complete the  
online evaluation