PRAGER & CO., LLC
INVESTMENT BANKERS

Overview of Strategic Financial Analysis

July 14, 2014

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Disruptive Change*

- Costs, labor markets and new technology will turn old institutions upside down.
  - Baumol's disease – the tendency of costs to soar in labor intensive sectors with stagnant productivity.
- Public support for institutions has gone from approximately $40 billion in 2000 to about $16 billion in 2013 (source: State Higher Education Finance)
- Off campus, online.
  - MOOCS.
  - Faster, cheaper, better.
  - Not all colleges will suffer, but mediocre institutions could experience the fate of newspapers where over the last 2 decades revenues fell by more than half and employment dropped by more than 30%.
  - More than 700 institutions could close their doors.
- Accreditation will be the critical discriminator going forward.
- Strategic Financial Analysis will only be as good as the Strategy adopted.

* Source: Creative Destruction. (2014, June 28 – July 4). *The Economist, Volume 411 Number 8893,* pages 11, 20-22.

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Introduction to Strategic Financial Analysis

- To achieve the mission of the Institution, the Institution prepares and implements a strategic plan with a series of action steps and metrics to attain the plan's goals.
- Aligning strategic financial goals with action steps and risk assessment metrics will improve strategic decision making thereby enhancing the probability of institutional success.
- The mission, stated in the strategic plan, drives the institution; financial capacity and affordability measure the reasonableness of the institutional objectives.
    - A key trait among goals of most institutions is the necessity for additional capital required for successful execution of certain plan components.
- Capital has two basic forms: Internal reserves and external markets.
    - Main objective is to optimize overall cost of capital while not compromising liquidity, simultaneously accumulating internal capital resources and building credit.
    - Requires strategic use of both internal and external resources.
- This and the next presentation begin to address the strategic use of external capital sources and some approaches an entity can employ to improve its financial health.

Purpose of Strategic Financial Analysis

- Accessing external resources requires intimate knowledge of the Institution's financial health which can be achieved through strategic financial analysis.
- Assessing the Institution's current financial health is a critical step in understanding financial risk, developing strategies and effectively managing to institutional goals.
  - Strategic financial analysis involves identifying, measuring and monitoring financial risks through the use of ratio analysis.
  - Such risks include internal and external drivers.
    - Internal risks can be measured by budget, liquidity and financial metrics.
    - Some external risks can be identified and include federal and state funding, capital markets changes, demographics and the supply and demand for the educational products offered.
    - The biggest external risks are unknown (Black Swans and *Taleb's* Fat Tails).
  - Key ratios allow an Institution to measure it's financial health and can be used to calculate The Composite Financial Index ("CFI").

Purpose of Strategic Financial Analysis (continued)

- Ability to access external capital (debt) is one key reason for strategic financial analysis.
  - It helps assess the Institution's ability to repay current and future debt, including its own rationale for building long term creditworthiness.
  - Identifying potential strengths and weaknesses in the Institution's business model helps operational efficiency.
  - Debt affordability relates to operating budgets and the statement of activities.
  - Debt capacity relates to net assets and is focused on the balance sheet.

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Strategic Financial Analysis and the CFI

- Most institutions already calculate a multitude of financial ratios and apply such ratios to peer analysis.
- Comparative data has its place, but institutions' should not be making mission based decisions exclusively on what or how other institutions meet their objectives.
- The CFI was developed as a framework to help measure institutional progress against its own objectives longitudinally.
    - Measuring one institution’s CFI against another is irrelevant as each institution will have its own strategic goals.
- The framework presented is a suggestion of the ratios, weights and strength factors an institution can apply to begin measuring it’s progress towards its financial and mission objectives. As management becomes comfortable with the framework, it is encouraged to examine or substitute other ratios to better communicate progress towards specific objectives.

Calculating the CFI: Core Ratios

- The CFI uses 4 core ratios as described and defined below:

RATIO	CALCULATION
Primary Reserve Ratio:	$\frac{\text{Expendable Resources}}{\text{Total Expenses}}$
Net Operating Revenues Ratio:	$\frac{\text{Operating Surplus (Deficit)}}{\text{Total Unrestricted Operating Revenues}}$
Return on Net Assets Ratio:	$\frac{\text{Change in Net Assets}}{\text{Total Net Assets}}$
Viability Ratio:	$\frac{\text{Expendable Resources}}{\text{Plant-related Debt}}$

- All elements of the CFI can be calculated from an institution's financial statements. Careful consideration should be made based on the accounting classification employed by the institution.
  - For example, public institutions should include non-operating interest expense in total expenses when calculating its operating surplus or deficit.

Calculating the CFI: Ratio Normalization (Strength Factors)

- Once the core ratios are calculated, those ratios are converted using "strength factors". This conversion **normalizes** each of the core values to a common scale ranging from -4 to +10.
- The table below shows the representative numbers associated with strength factors 1, 3 and 10.

Scoring Scale	1	3	10
Primary Reserve Ratio	**0.133x**	0.4x	1.33x
Net Operating Revenues Ratio:			
Private Institutions	**0.70%**	2%	7.00%
Public Institutions	**1.30%**	3.9%	13%
Return on Net Assets Ratio	**2.0%**	6%	20%
Viability Ratio	**0.417x**	1.25x	4.17x

- A strength factor of 3 represents that an institution is in a reasonably strong financial position.
  - It is the proxy used to determine the level 1 and level 10 strength factors.
  - For example, industry experience suggests institutions aim for a growth rate Return on Net Assets greater than its growth rate of total expenses.
- Converting an institution's ratios into strength factors involves dividing the ratio by the score assigned for each respective level 1 ratio in the table.

Calculating the CFI: Weight Factors

- The CFI is intended to assist an institution in looking at its overall financial health, not just individual components of financial health.
- Weight factors are the key to assembling the ratios into a single quantitative score.
  - As single score allows weakness in individual ratios to be quantitatively offset by strengths in other ratios.

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%	-

- Retained wealth and strategic use of debt are indicators of long-term institutional financial health.
  - As such the suggested weighting above is more heavily skewed toward measurement of retained wealth and less toward current operations.

However, the goal is more important than the year-end result. Accordingly, one should identify areas of strategic investment, establish objectives over a 5 year (or longer) horizon, and measure institutional success by the change in the ratio over time.

CFI Calculation: Example

- Using the above methodology, the following provides a sample Institution's calculation of the Composite Financial Index:

Ratio	Actual Ratio		Scale of 1 factor (divide by -4)		Strength factor
Primary Reserve Ratio	.62x	÷	.133x	=	4.66
Net Operating Revenues Ratio	3.22%	÷	0.70%	=	4.60
Viability Ratio	.87x	÷	.417x	=	2.09
Return on Net Assets Ratio	8.97%	÷	2.00%	=	4.49

Ratio	Strength factor		Weighting factor		Score
Primary Reserve Ratio	4.66	×	35%	=	1.63
Net Operating Revenues Ratio	4.60	×	10%	=	0.46
Viability Ratio	2.09	×	35%	=	0.73
Return on Net Assets Ratio	4.49	×	20%	=	0.90

Composite Financial Index (CFI) = 3.72

* Hypothetical example – not reflective of a specific institution.

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Comparative Analytics & The Rating Agencies

- Moody's, Standard & Poor's and Fitch are the three major agencies that provide credit ratings and opinions on the financial health of an Institution.
- For example, Moody's Scorecard provides a reference tool that can be used to gauge the effect of key quantitative and qualitative characteristics on ratings. The following shows a sample scorecard of an Institution's quantitative factors alone:

Institute's Scorecard Breakout FY2013	Weights	Value	Score	Implied Rating
Factor 1: Market Position (35%)				
Operating Revenue ($000)	10%	83,951	7.00	A3
Primary Selectivity (%)	5%	49.0%	5.00	A1
Primary Matriculation (%)	5%	25.0%	7.00	A3
Net Tuition per Student ($)	10%	27,016	3.00	Aa2
Average Gifts per Student ($)	5%	13,107	3.00	Aa2
Factor 2: Operating Performance (30%)				
Operating Cash Flow Margin (%)	10%	11.2%	8.00	Baa1
Average Debt Service Coverage (x)	10%	4.05	4.00	Aa3
Revenue Diversity (Max Single Contribution) (%)	10%	61.0%	4.00	Aa3
Factor 3: Balance Sheet & Capital Investment (35%)				
Total Cash and Investments ($000)	10%	533,448	4.00	Aa3
Expendable Financial Resources to Direct Debt (x)	5%	4.17	2.00	Aa1
Expendable Financial Resources to Operations (x)	5%	4.34	2.00	Aa1
Debt to Operating Revenues (x)	5%	1.01	8.00	Baa1
Monthly Days Cash on Hand (x)	5%	546	3.00	Aa2
Monthly Liquidity to Demand Debt (%)	5%	260.3%	5.00	A1
Weighted Quantitative Score	**100%**		**4.75**	**A1**

Weighted Score Legend	
Rating	**Score Range**
Aaa	≤ 1.5
Aa1	> 1.5 ≤ 2.5
Aa2	> 2.5 ≤ 3.5
Aa3	> 3.5 ≤ 4.5
A1	> 4.5 ≤ 5.5
A2	> 5.5 ≤ 6.5
A3	> 6.5 ≤ 7.5
Baa1	> 7.5 ≤ 8.5
Baa2	> 8.5 ≤ 9.5
Baa3	> 9.5 ≤ 10.5
SG	> 10.5

Quantitative Scorecard Rating:	**A1**
Actual Moody's Rating:	**Aa2**

* Hypothetical example – not reflective of a specific institution.

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Risk Metrics—Overview

We identify 11 different risks present in a complex debt portfolio, grouped under two categories:

Debt Service Risk

Market Rate Risk	Customarily thought of as interest rate risk, but limited to market-risk only.
Credit Risk	Changes in actual or perceived creditworthiness have a significant impact on the cost of capital.
Tax Risk	Actual or potential changes in Federal law may alter the pricing or availability of tax-exempt debt, including risk of reduction of BABs subsidy or hike in DP Rate.
Basis Risk (Subset of tax risk)	The risk that interest-rate hedges will be inefficient (or ineffective).
Liquidity Repricing Risk	The cost of liquidity for un-committed debt (e.g., VRDNs) will change.
Counterparty Performance Risk	Expected payments from a counterparty may not be available.

Liquidity Risk

Reissuance/Remarketing Risk	Put bonds, commercial paper or VRDNs cannot be remarketed.
Liquidity Facility Renewal Risk	Liquidity facilities may not be available, or may not be available on acceptable terms.
Failure of Liquidity Provider	A liquidity provider may fail (Lehman, MBIA, etc.).
Swap Collateralization Risk	Forced collateralization under a swap contract.
Swap Termination Risk	Voluntary or involuntary termination of a swap contract.

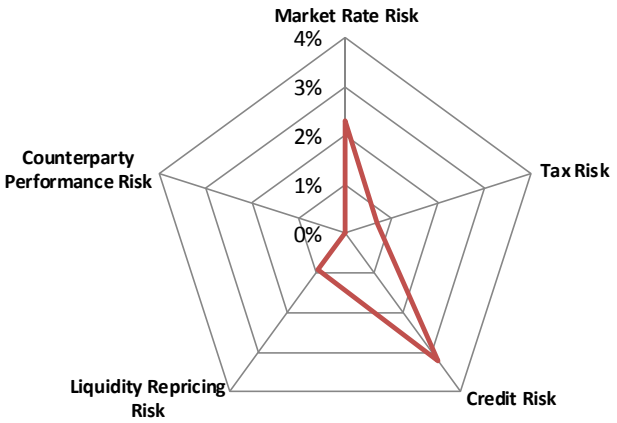
Debt Portfolio Risk

- Debt Service Risk is best understood in comparison to the budget.
- Liquidity Risk is best understood in the context of the balance sheet.
- Risk is quantified using historical data when possible.
  - Historical events highlight “tail risk” better than statistical distributions
  - When historical data is inadequate, “grey swan” assumptions are made
  - Much of debt risk is event risk, which is not well quantified by statistical distributions or Monte Carlo simulations
- Planned but unissued debt typically carries the most risk.
- Risk should be evaluated in context of risk capacity, tolerance, and management. Metrics should be quantitative and *actionable*.
- **Risk must be considered at the enterprise level—given other institutional risks, there must be adequate compensation for risks in the debt portfolio.**

Example Debt Service (Budget) Risk Metrics

One-Year Debt Service Risk ($ in Millions)		Operating Expenses (O.E.): $750			
		Current Rate	Max 1Yr. Change	Budget Impact ($M)	% of O.E.
Market Rate Risk					
$425	Tax-Exempt Variable-Rate	0.05%	3.20%	13.6	
$150	Taxable Variable-Rate	0.15%	4.57%	6.9	
($50)	67% LIBOR Fixed Payer Receipt	0.10%	3.06%	-1.5	
($50)	SIFMA Fixed Payer Receipt	0.05%	3.20%	-1.6	
				17.3	**2.3%**
Tax Risk					
$425	Tax-Exempt Variable-Rate		1.37%	5.8	
($50)	SIFMA Fixed Payer Receipt		1.37%	-0.7	
				5.1	**0.7%**
Credit Risk					
$275	Bank Supported Tax-Exempt Variable Rate	0.05%	5.66%	15.4	
$75	Bank Supported Taxable Variable Rate	0.15%	5.66%	4.1	
$150	Self Supported Tax-Exempt Variable Rate	0.05%	2.00%	3.1	
$75	Self Supported Taxable Variable Rate	0.15%	2.00%	1.5	
				24.1	**3.2%**
Liquidity Repricing Risk					
$350	Liquidity Facility		2.0%	7.0	**0.9%**
Counterparty Performance Risk					
$100	Swap Notional		N/A	0.0	**0.0%**

Max Debt Service Risk Components (as percentage of Operating Expenses)



	$ Millions	% of O.E.
Maximum One-Year Risk:	**37.6**	**5.0%**
50% of Maximum	**18.8**	**2.5%**
25% of Maximum	**9.4**	**1.3%**

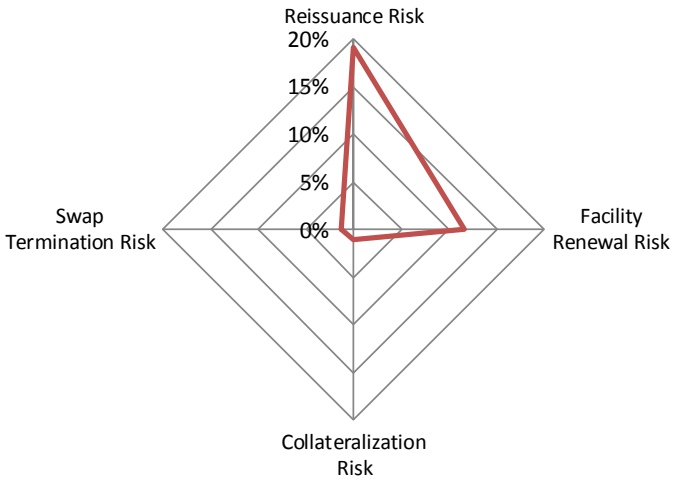
* Hypothetical example – not reflective of a specific institution.

Example Liquidity (Balance Sheet) Risk Metrics

Three-Year Liquidity Risk ($ in Millions)		Expendable Resources (E.R.):	$3,000

		Balance Sheet Impact ($M)	% of E.R.
Reissuance/Remarketing/Roll Risk			
$425	Tax-Exempt Variable-Rate	425.0	
$150	Commercial Paper	150.0	
$0	Line of Credit	0.0	
		575.0	**19.2%**
Liquidity Facility Renewal Risk			
$350	External Liquidity Facility	350.0	
		350.0	**11.7%**
Swap Collateralization Risk (with Rating Downgrade)			
$100	FXP Swap	31.0	**1.0%**
Swap Termination Risk			
$100	FXP Swap	41.0	**1.4%**

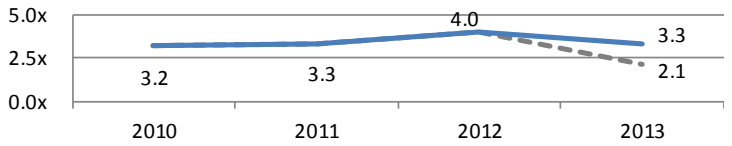
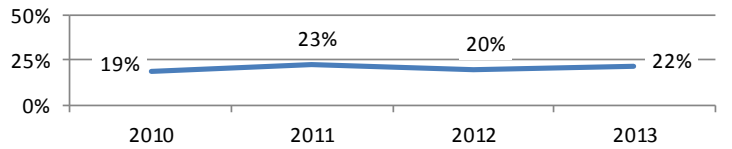
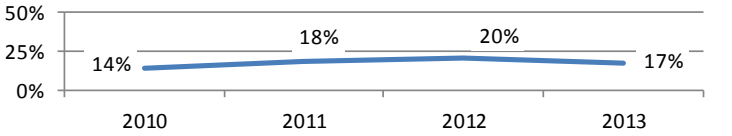
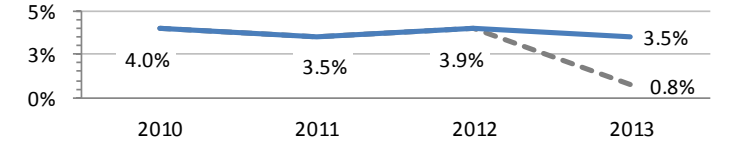
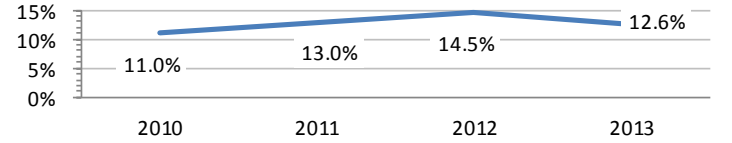
Max Liquidity Risk Components
(as percentage of Expendable Resources)



	$ Millions	% of E.R.
Maximum Three-Year Risk:	**616.0**	**20.5%**
50% of Maximum	**415.6**	**13.9%**
25% of Maximum	**244.4**	**8.1%**

* Hypothetical example – not reflective of a specific institution.

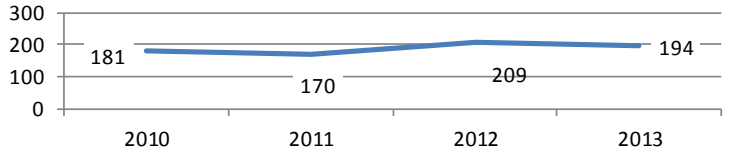
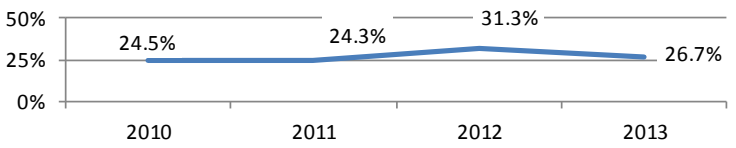
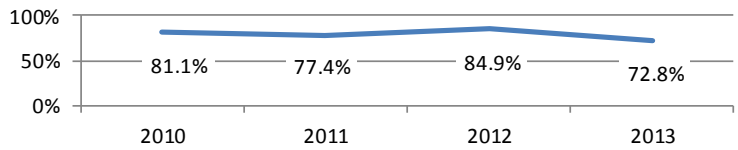
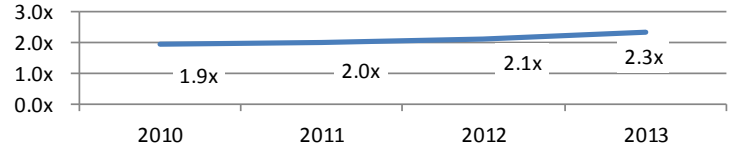
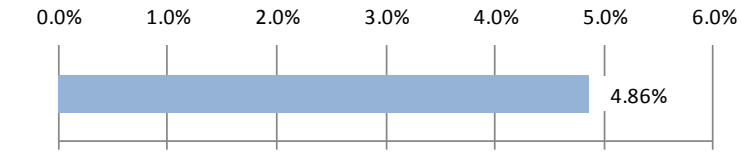
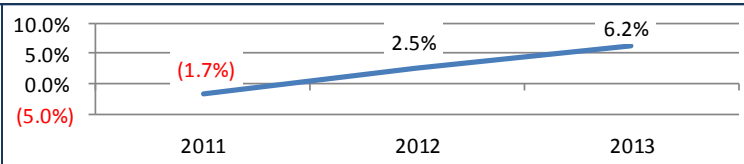
Example Dashboard (Page 1)

		DASHBOARD METRICS - HYPOTHETICAL INSTITUTION		
		EQUATION	**MEASURES**	**RATIO**
OPERATIONS	**DEBT SERVICE COVERAGE**	Net Revenues - Investment Income + 5% * 3Yr Average Cash & LT Inv. / + Depreciation / Debt Service	Institution's ability to cover debt service with operating revenues.	
	STATE APPROPRIATIONS AS PERCENTAGE OF OPERATING REVENUE	State Appropriations / Total Unrestricted Revenues	Revenue dependence on support from the State	
	GRANTS AND CONTRACTS AS PERCENTAGE AS OPERATING REVENUE	Grants & Contracts / Total Unrestricted Revenues	Revenue dependence on grants and contracts	
	OPERATING MARGIN	Net Operating Revenues - Interest on LT Debt - Investment Income / + 5% * 3Yr Average Cash & LT Inv. / Total Unrestricted Revenue	Operating performance	
	OPERATING CASH FLOW MARGIN	Net Operating Revenues - Investment Income + 5% * 3Yr Average Cash & LT Inv. / + Depreciation / Adjusted Unrestricted Revenue	Excess cash flow available to cover operations	

* Hypothetical example – not reflective of a specific institution.

Example Dashboard (Page 2)

DASHBOARD METRICS - HYPOTHETICAL INSTITUTION

		EQUATION	MEASURES	RATIO
LIQUIDITY	**MONTHLY DAYS CASH ON HAND**	(Operating Liquidity + Unrestricted Board Designated Endowment + Unrestricted Working Capital)*365 / Operating Expenses - Depreciation	Number of effective days Institution can cover its expenses using liquid assets available (where liquid assets are defined as assets with a liquidation period less than or equal to one month)	
	CASH ON HAND	Monthly Liquidity / Total Cash and Investable Funds	Percentage of investments that can be liquidated within 1 month	
CREDIT	**EXPENDABLE RESOURCES TO OPERATIONS**	Unrestricted Resources + Temp. Restricted Resources / Total Operating Expenses	Balance sheet resources available to cover operating expenses	
	EXPENDABLE RESOURCES TO DEBT (VIABILITY RATIO)	Unrestricted Resources + Temp. Restricted Resources / Total Debt	The University balance sheet leverage	
DEBT	TIME WEIGHTED DEBT PORTFOLIO COST OF CAPITAL	Weighted average cost of capital of all Institution outstanding debt (%)	Institution's cost of debt used to fund capital projects.	
ASSET PERFORMANCE	FINANCIAL RESOURCES GROWTH	5-year average growth rate in total financial resources (%).	The pace of cash and investment accumulation or liquidation.	

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Overview of the SEC's Municipal Advisor Rule (the "Rule")

Effective October 1, 2010 registration with the SEC was required for market participants deemed to act as Municipal Advisors. The Rule became final and effective January 13, 2014 and enforcement began on July 1, 2014.

- One of the key municipal market reforms of the Dodd-Frank Wall Street Reform and Consumer Protection Act was to amend the Securities Exchange Act of 1934 to make it unlawful for municipal advisors to provide advice to, or solicit, municipal entities or obligated persons without registering with the SEC.
- The Dodd-Frank Act also, for the first time, imposed an express fiduciary duty on municipal advisors in respect of municipal entities.
- Many borrowers have typically looked to their underwriters for advice concerning their debt portfolio. In order for such advice to not disqualify a broker-dealer from serving as underwriter under the Rule, such advice must be limited to a particular issuance of securities.
- Certain communications between issuers and underwriters that may have been routine in the past may now constitute municipal advisory activities under the Rule unless an exemption applies.
- The following presentation is intended as an overview of the Rule, certain exemptions available under the Rule and the impact on market participants.

Note: The source information for these materials is the Securities and Exchange Commission ("SEC") and the Municipal Securities Rulemaking Board ("MSRB").

SEC's Municipal Advisor Rule: Key Terms

Who is a Municipal Advisor?

- Municipal advisors include, without limitation, financial advisors, guaranteed investment contract brokers, third-party marketers, placement agents, solicitors, finders and swap advisors to the extent they otherwise meet the definition cited below.

- *"A person (who is not a municipal entity or employee of a municipal entity) that provides advice to or on behalf of a municipal entity or obligated person with respect to municipal financial products or the issuance of municipal securities, including advice with respect to the structure, timing, terms, and other similar matters concerning such financial products or issues; or undertakes a solicitation of a municipal entity or obligated person."*

What are Municipal Advisory Activities?

- *"Municipal advisory activities" is defined as "(1) providing advice to or on behalf of a municipal entity or obligated person with respect to municipal financial products or the issuance of municipal securities, including advice with respect to the structure, timing, terms, and other similar matters concerning such financial products or issues; or (2) solicitation of a municipal entity or obligated person."*

Who is a Municipal Entity and an Obligated Person?

- *Municipal entity: state or local governmental entity with power to issue bonds*

- *Obligated person: non-governmental person ultimately obligated to pay debt service, excluding credit enhancers*

SEC's Municipal Advisor Rule: Key Terms

What is Advice?

- The SEC stated the term "advice" is not susceptible to a "bright-line definition." Under the rule and the SEC's interpretation, the following would be considered "general information" and not "advice" for purposes of the rule.

General Information

- Information of a factual nature without subjective assumptions, opinions, or views;
- Information that is not particularized to a specific municipal entity or type of municipal entity;
- Information that is widely disseminated for use by the public, clients, or market participants other than municipal entities or obligated persons; and
- General information in the nature of educational materials.

Advice

- Recommendation for action or not acting is "advice"
- Information tailored to the specific needs, objectives or circumstances of a borrower is "advice"
- Payment of compensation not relevant to whether information constitutes "advice"

Impact on Market Participants: The Underwriter/Borrower Relationship

The Rule will impact a wide variety of participants in the municipal market however, there are several significant exclusions for market participants performing specified functions.

- In order to underwrite an Institution's debt, underwriters will seek to be exempt from the definition of municipal advisor and the fiduciary duty required of municipal advisors. The Rule provides narrowly-defined exemptions to underwriters:
  - The issuer provides in writing that it has engaged an "independent registered municipal advisor" or "IRMA" who is providing advice with respect to the same aspects of the municipal financial product or issuance of municipal securities.
  - Any advice in response to an issuers' request for proposals (RFPs) or request for qualifications (RFQs) provided such respondent is not directly or indirectly compensated for advice provided in their response.
  - Advice provided within the scope of an underwriting will not trigger Municipal Advisor treatment so long as the firm is contractually engaged to serve as Underwriter on a specific transaction.

Impact on Market Participants: What Does it Mean to Institutions?

The Rule will impact a wide variety of participants in the municipal market however, there are several significant exclusions for market participants performing specified functions.

- Ultimately, broker-dealers serving as underwriters will need to take steps to ensure that they are compliant with the Rule while attempting to provide investment banking services.
- Unsolicited pitches by underwriters to municipal issuers may be limited which may impede the ability of municipal issuers to receive, review and respond to refunding and/or restructuring opportunities.
- From an Institution's perspective, there are two primary ways to maintain the relationship with investment bankers looking to serve as underwriters and the resulting flow of information.
  - **IRMA Exemption:** The regulation exempts from the rule any person providing advice if the municipal entity is otherwise represented by an independent registered municipal advisor, provided certain disclosures are made and written acknowledgement is provided. **This exemption is intended to protect the Institution from not seeking the advice of a party (advisor) whose purpose is to serve their best interests and to make sure that this advice is solicited and received.**
  - **General Information:** As described earlier, general information **can freely be exchanged** that is:
    - of a factual nature without subjective assumptions; or,
    - public information that is not specific to a municipal entity.
- ***It is important to note that each broker-dealer may have different interpretations of how to qualify for a particular exemption and what constitutes "advice".***

Legal Disclaimers

1. This presentation is for your internal use alone, for the limited purpose of assisting an evaluation of your potential interest in the strategies described, and is confidential as to third parties (with the exception that there is no limit on any disclosure of the US tax treatment or tax structure of any transaction). This material may not be given to third parties without our prior written consent. Information regarding values should not be relied on for maintaining books and records.

2. This presentation is not contractual, not a research report nor an offer to buy or sell or a solicitation of an offer to buy or sell any security or interest. Contractual obligations will be created only by formal written agreement. Information regarding pricing, interest rates, and transaction costs is preliminary and indicative only.

3. Except as compelled by applicable law we make no warranty, express or implied of any nature as to any information or technique herein and do not guarantee satisfactory results. In no event may we be liable for any special or consequential damages that may be incurred in using the data provided. Before entering into any transaction, you must independently determine the economic risks, and your institution's ability to assume the risks. Senior management should be involved in or informed as to this process.

4. Risk assessment of derivative products is complex. One must also consider the implications of accounting and financial disclosure rules such as the FASB requirements for mark-to-market procedures or the extensive GASB reporting requirements.

5. We are not lawyers, accountants or tax specialists; you should seek and rely on independent advice as to such matters from properly qualified firms or individuals.