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2017 Annual Conference

Bond Rating Agencies Focus on Retirement Plans - What's the Big Deal?

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Agenda

- Background
- Credit Ratings – Primary Factors
- Debt vs. "Soft" Liabilities
- Retirement Plan Concerns
  - Pension Plans
  - OPEB Plans
- Moody's Adjustments
- The Big Deal – Case Studies
- Other Retirement Plan Bond-Related Issues

Overview

Credit Agencies and Public Sector Retirement Plans

- Rating agencies are evolving their views on retirement plan obligations, viewing them with debt as a combined fixed obligation
  - Includes Pension and OPEB plans.

- As this evolution continues, governments that manage their long-term liabilities in a cost effective and proactive manner could be viewed more favorably.

- Retirement plan funding and management can have a significant impact on a government's borrowing costs.

Taxable Market Commentary

- With taxable interest rates near historic lows, governments may find few more opportune times to enter the market and borrow.
- As can be seen in the below graphics, taxable interest rates have continued to trend lower since 1988.

30 Year Treasury Yields
(January 1976 – May 2017)

- **30 Year Treasury Yield averaged 6.81% from 1977 until 2017.**
- **Record high of 15.21% in October 1981 and low of 2.11% in July 2016.**
- **Rate was 2.87% on May 31, 2017.**

Credit Rating – Primary Factors

- Financial Performance
- Economic Base
- Management Issues
- Debt Management
  - Agencies recently revised criteria to officially include pension metrics.
  - Review incorporates total fixed cost calculation, including debt service, pensions, and OPEB contributions, as a percentage of budget.

Credit Rating Overview of Fixed Costs

Moody's Investors Service November 2016 Report:

- Pensions are now a more significant balance sheet obligation than debt for a majority of larger local governments.
  - As a result, governments have to face hard revenue raising/expenditure cutting decisions to offset increasing costs.
  - Adjusted Net Pensions Liabilities (ANPLs) doubled between 2010 and 2015 and are expected to increase again in 2016 and 2017 due to recent underperformance of investments and reduced discount rates.
- Fixed costs are consuming a greater percentage of a government's budget, limiting financial flexibility
  - Median pension costs represented 6% of operating expenditures in 2015 for the 50 largest local governments
  - Median fixed costs (including debt service, pensions, and OPEB) totaled 23% of budget

Background on Pension Liabilities

The Pew Center on the States:

The Trillion Dollar Gap:

Underfunded State Retirement systems and the roads to reform – February, 2010

- Update: $934 billion in 2014
- Other studies claim even higher unfunded levels
- Yes, there is an unfunded actuarial liability issue

Current Credit Agency Concerns – Retirement Plans

- Retirement plans – considered “soft” liabilities
  - Consider long term liabilities similar to debt?
- Retirement plans maturing – funding worsening?
  - Increased plan costs – amortization basis?
- More concern about 2 primary risks:
  - Interest rates
  - Investment returns

Credit Agencies Concerns: Retirement Plan Liabilities/Costs

- Funding Ratio – Assets/Actuarial Liabilities
  - Healthy Funding Target: 80%
  - National Average: Around 75%
- Actual Funding vs. Annual Actuarial Costs
  - Funding Approach/Policy – Written?
  - Amortization Basis and Period
- Actuarial Assumption Basis
  - Discount Rate
  - Mortality Table
- Annual costs – as % of budget
- GASB changes

Funding Policy

- Policy components
  - Funding progress objectives
  - Cost volatility
  - Minimum contributions
  - Actuarial assumptions/methods, and periodic review of such
  - How to handle extreme events (like 2008)
- This list is NOT all-inclusive
- Need to consider short and long term objectives
- Must be reasonable and enforceable

Actuarial Assumptions

- Investment Return and Inflation
  - Trending downward for many years
  - A clear movement from 8.0% with 3.5% inflation to something closer to 7.5% with 3.0% inflation
  - Many plans decreasing in 25 basis point increments
    - Current analysis re: moving to 7.25% or 7.00% rate
  - GASB now asking for justification and asset class info
- Mortality assumptions
  - Actuarial Standards of Practice put more focus on this in 2012
  - Updated Society of Actuaries (SOA) mortality study in 2014
    - Private Sector only
  - New Public Sector study expected in 2018
  - Actuary needs to consider mortality improvement for future years

Actuarial Assumptions

- Changes in assumptions
- Experience studies/assumption reviews becoming more common
  - All assumptions need a sound basis
  - Study/review should be done every 4 or 5 years
- Must keep in mind purpose of assumptions: To Align Expectations More Closely With Actual Experience
- This gives the plan the best chance for stable contributions

OPEB Plan Concerns

- Primarily a “pass” to present
- Attention now being paid to this issue
- Looking for funding plan/policy
- Current average funding ratio – around 10%
- Actuarial funding vs. actuarial costs
- Actuarial assumption basis
- Annual costs – as % of budget
- GASB changes

Credit Agency Considerations for Funding/Budget

- Debt service limit/target costs
  - 10% of budget
- Retirement plan limit/target costs
  - 10% of budget
  - Target OPEB plan costs: 5% of budget
- Total “red line” limit
  - 20% - 25% of budget
- If retirement plan costs are relatively higher, then could impact flexibility for borrowing

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Moody's Adjusted Net Pension Liability

- Announced "final" version in April, 2013
- To be used in determining bond/credit ratings
- No additional information is required
  - They will make the adjustments on their own
- Ostensibly for "transparency and consistency"
- Moody's will compute their own unfunded liability and amortization of such, by:
  1. Adjusting reported liability using a bond index rate (Citigroup Pension Liability Index, now about 4%);
  2. Compute unfunded liability with market value of assets;
  3. Compute amortization using 20 year period; and
  4. Multiple-employer cost-sharing plan liabilities will be allocated to individual government employers based on proportionate share of contribution.

Moody's ANPL Calculation

- Example (single employer)
  - Plan Assets (MVA) = \$100 million
  - Smoothed (AVA) value = \$105 million
  - Actuarial Accrued Liability = \$105 million (AVA/AAL = 100%)
  - Plan Discount Rate = 7.05%
  - Measurement Date = 12/31/2012
- Step 1: conversion factor = 1.13^3 = 1.443
  (based on 4.05% index rate, 7.05 - 4.05=3)
- Step 2: adjusted liability = \$105 million x 1.443 = \$152 million
- Step 3: adjusted unfunded = \$152 - \$100 = \$52 million
  (funding = 66%)
- Step 4: amortization = \$52 ÷ 14.08 = \$3.7 million
  (actual amortization = \$0)

Moody's ANPL and GO Scorecard

	Very Strong	Strong	Moderate	Weak	Poor	Very Poor	
	Aaa	Aa	A	Baa	Ba	B & Below	Weight
Economy/Tax Base (30%)							
Tax Base Size: Full Value	> $12B	$12B ≥ n > $1.4B	$1.4B ≥ n > $240M	$240M ≥ n > $120M	$120M ≥ n > $60M	≤ $60M	10%
Full Value Per Capita	> $150,000	$150,000 ≥ n > $65,000	$65,000 ≥ n > $35,000	$35,000 ≥ n > $20,000	$20,000 ≥ n > $10,000	≤ $10,000	10%
Socioeconomic Indices: MFI	> 150% of US median	150% to 90% of US median	90% to 75% of US median	75% to 50% of US median	50% to 40% of US median	≤ 40% of US median	10%
Finances (30%)							
Fund Balance as % of Revenues	> 30% > 25% for School Districts	30% ≥ n > 15% 25% ≥ n > 10% for SD	15% ≥ n > 5% 10% ≥ n > 2.5% for SD	5% ≥ n > 0% 2.5% ≥ n > 0% for SD	0% ≥ n > -2.5% 0% ≥ n > -2.5% for SD	≤ -2.5% ≤ -2.5% for SD	10%
5-Year Dollar Change in Fund Balance as % of Revenues	> 25%	25% ≥ n > 10%	10% ≥ n > 0%	0% ≥ n > -10%	-10% ≥ n > -18%	≤ -18%	5%
Cash Balance as % of Revenues	> 25% > 10% for School Districts	25% ≥ n > 10% 10% ≥ n > 5% for SD	10% ≥ n > 5% 5% ≥ n > 2.5% for SD	5.% ≥ n > 0% 2.5% ≥ n > 0% for SD	0% ≥ n > -2.5% 0% ≥ n > -2.5% for SD	≤ -2.5% ≤ -2.5% for SD	10%
5-Year Dollar Change in Cash Balance as % of Revenues	> 25%	25% ≥ n > 10%	10% ≥ n > 0%	0% ≥ n > -10%	-10% ≥ n > -18%	≤ -18%	5%
Management (20%)							
Institutional Framework	Very strong legal ability to match resources with spending	Strong legal ability to match resources with spending	Moderate legal ability to match resources with spending	Limited legal ability to match resources with spending	Poor legal ability to match resources with spending	Very poor or no legal ability to match resources with spending	10%
Operating History: 5-Year Average of Operating Revenues / Operating Expenditures	> 1.05x	1.05x ≥ n > 1.02x	1.02x ≥ n > 0.98x	0.98x ≥ n > 0.95x	0.95x ≥ n > 0.92x	≤ 0.92x	10%
Debt/Pensions (20%)							
Net Direct Debt / Full Value	< 0.75%	0.75% ≤ n < 1.75%	1.75% ≤ n < 4%	4% ≤ n < 10%	10% ≤ n < 15%	> 15%	5%
Net Direct Debt / Operating Revenues	< 0.33x	0.33x ≤ n < 0.67x	0.67x ≤ n < 3x	3x ≤ n < 5x	5x ≤ n < 7x	> 7x	5%
3-Year Average of Moody's Adjusted Net Pension Liability / Full Value	< 0.9%	0.9% ≤ n < 2.1%	2.1% ≤ n < 4.8%	4.8% ≤ n < 12%	12% ≤ n < 18%	> 18%	5%
3-Year Average of Moody's Adjusted Net Pension Liability / Operating Revenues	< 0.4x	0.4x ≤ n < 0.8x	0.8 x ≤ n < 3.6x	3.6x ≤ n < 6x	6x ≤ n < 8.4x	> 8.4x	5%

- **2015 Median for 3-Year Average ANPL/Full Value was 1.7% for cities, 1% of counties, and 3% for school districts.**
- **2015 Median for 3-Year Average ANPL/Operating Revenue was 1.46x for cities, 1.23x for counties, and 1.54 for school districts.**

Financial Impact of Rating Downgrade

- Outsized pension liabilities effect budgetary flexibility and overall financial health of a government, and can ultimately result in a rating downgrade (sometimes more than one and multiple notches)
  - Local Government Examples: Dallas, TX; Central Falls, RI; and Chicago, IL
  - State Government Examples: Connecticut, Kentucky, New Jersey, Illinois, and Pennsylvania.
- Subsequent effect of rating downgrade is increased costs for borrowing, which further limits budgetary flexibility

Initial Rating	Revised Rating	Increase in Interest Rate
Aaa	Aa	5-10 bps
Aa	A	25-40 bps
A	Baa	75-85 bps

Case Study: Chicago, IL

- Due to significant pensions pressures, the City of Chicago has been downgraded to Ba1 from Aa3 over the last 10 years
    - State constitutional protections for pension benefits
    - State statute dictates pension contribution levels for local government single-employer plans
        - Unlike some of the other local governments in the state, the city had a history of underfunding the ARC
- In January 2017, Chicago sold $1.2B of debt in the capital markets
    - For the $888 million in Tax-Exempt Debt, rates ranged from 5.6% to 6.0%, which equated to approximately 3% higher than cities with Aaa rating
    - The $275 million in Taxable debt had a rate of 7%, which was about 4% higher than cities with Aaa rating
    - Ultimately, the city will be responsible for funding approximately $1.1 billion in interest costs over the lifetime of the bond
        - If the city was still rated in the "AA" category, interest savings would have amounted to approximately $450 to $500 million

Other Retirement Plan Bond-related Issues

- Bond holders rights vs. pension rights (RI vs. CA)
- Pension Obligation Bonds (POB's)
- OPEB Obligation Bonds (OPEBOB's)
- Arbitrage issue: if interest rates are low enough, significant potential savings are available
- Concern about government's capacity for risk; GFOA guidelines
- Past disaster stories
- Turning "soft" liabilities into "hard" debt
- Recent client experiences

QUESTIONS?

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