Actuarial Considerations under Multiple Reporting Scenarios

Leslie Thompson, FSA, FCA, EA, MAAA

Presentation to NCTR Tucson, AZ

October 10, 2012

GRS
Gabriel Roeder Smith & Company
Consultants & Actuaries
www.gabrielroeder.com

Overview

- The Funding Standard
  - Using the actuarial valuation process to measure funding
- The Accounting Standard
  - GASB
- Rating Agencies
  - Moody's etc

Purposes

- The Funding Standard
  - Rates are set in statute. The annual valuation will measure the adequacy of those rates.
- The Accounting Standard
  - Allows the public to view the liabilities of the pension as deferred compensation-expensed at the same time as a member's compensation
- Rating Agencies
  - Allows debt purchasers to "compare" with pension debt measured similarly between entities

Purposes

- Each measurement is true to its own purpose
- Funding
  - Recognizes the long term nature of the promise and the long term available to fund the benefits. Actuarial assumptions take a long term point of view
- GASB
  - Accounting measures expense so that the current generation of taxpayers pay for their services-a shorter view for expense and hence the related assumptions and amortization period

Purposes

- Ratings
  - The debt markets want buyers to be able to compare the various debt purchases-they are looking to use one rate and, based on CAFR numbers, will adjust those rates to their comparable amount.
  - This does not mean Moody's thinks the long term return on the portfolio is 5.5%

Assumed rate of return (discount) rate

- Funding – 7.75%
- Accounting – less than or equal to 7.75%
- Ratings – 5.5% (Moody's)

Rating Agencies Weigh In

- Using duration, (13 years for retirees; 17 years for actives) Moody's will take numbers from the CAFR's and adjust them for their own purposes.
- *Observation-the use of a common discount rate creates the illusion of comparability, but plans have different durations so using one duration actually makes the plans less comparable.*

Rating Agencies Weigh In

- Rating agencies want to categorize pension debt at the same level as bonded debt
- Then, using their methods, they will assess emerging budget strain and the related ability of the entity to make all their debt payments

Rating Agencies Weigh In

- Investors are interested in knowing
  - Do the pension obligations-
    - Impact the ability to pay principal and interest on the bonds when due
    - Cause an adverse change in the public rating or outlook of the bond issue
    - Reduce the issuer's ability to refinance and/or refund the bonds in the future
    - Limit the issuer's ability to issue new debt at market rates for capital improvements and other important projects.

GRS

Rating Agencies Weigh In

- The overall point of the pension disclosure is to indicate whether the state or local government will likely struggle in meeting such obligations without making difficult financial decisions.
- The story of each issuer will be different.

Differences between Private and Public financial disclosures

- Differences are based on the differing needs of end users
  - Private sector- need information that allows creditors and equity holders to make decisions with respect to their financial investments
  - Public sector- public accountability for resources entrusted to the stewardship of the government (taxes);
    - whether resources are sufficient to meet current and future costs
    - whether the government's ability to provide services improves or deteriorates on a period-to-period basis

Accounting changes

- GASB is the accounting standard affecting the Employer and the Plan accounting
- The plan accounting will change, showing much higher liabilities
- Retirement plans will be questioned about the higher liabilities and expense

Effective Dates

- Expected effective dates:
  - GASB #67 (Plan Reporting)
    - This statement is effective for financial statements for fiscal years beginning after June 15, 2013.
  - GASB #68 (Employer Reporting)
    - This statement is effective for fiscal years beginning after June 15, 2014.

Implications of Accounting Changes

- Disconnects pension accounting from pension funding
- Requires employers to recognize the Net Pension Liability (NPL) on their balance sheets *(where NPL is code for the Unfunded Accrued Liability based on Market Value of Assets)*
- Requires employers to recognize a new measure of the Pension Expense (PE) on their income statements, which would be different from their actuarially determined contributions (ARC)
- Replaces most of the current note disclosures and required supplementary information with information based on the new measures
- Attempts to make pension obligations comparable in the debt market *(then why is Moody's doing their own thing?)*

The GASB's Current Standards

- The Annual Required Contribution
  - Normal Cost plus an Amortization payment on the Unfunded Accrued Liability
- The liability is the Net Pension Obligation (NPO)
  - Cumulative difference between the ARC and the actual contribution made
- Calculations based on methods and assumptions approved by GASB

GRS

The GASB's Current Standards

- Key Valuation Methods and Parameters
  - Six allowable actuarial cost methods
  - Discount rate based on expected long-term investment return
  - Amortization of actuarial gains/losses and other changes in the unfunded actuarial accrued liability over a maximum of 30 years
    - Could be open or closed amortization
    - Could be level dollar or level percent of pay amortization

The GASB's Proposed Standards

- Total Pension Liability (TPL)
  - Analogous to Actuarial Accrued Liability (AAL) but with critical differences
    - Must use Entry Age Normal Cost method –
    - Must reflect current membership – *may not anticipate lower cost of new tier*
    - Will require use of a discount rate blended between the long-term rate of return and municipal bond rates – *lower discount rate means higher liability and expense*

The GASB's Proposed Standards

- Net Pension Liability (NPL)
  - TPL less the <u>market</u> value of plan assets
  - Plan reports NPL on plan year-end
  - Employers report NPL on fiscal year-ends
  - Sticker shock for employers – *proportionate share of NPL (for cost sharing employers) likely much larger than current pension entry on balance sheet*

GRS

The GASB's Proposed Standards

- Pension Expense (PE)
  - Also based on Entry Age Method and blended discount rate
  - Much shorter amortization periods
    - Deferred Inflows and Outflows
      - Recognition of investment gains/losses over a closed 5-year period-performed each year
      - Recognition of demographic gains/losses over a closed average-future-working lifetime period
      - The amount "not recognized" is reported as deferred outflows or inflows

GRS

A glimpse at the new standard

- There will be a liability on the governments' books that is larger than ever seen
  - It will encompass all systems
  - This will be a "bumpy" liability; changing each year with a new blended discount rate and change in market value of assets
- There will be an expense on the governments' books-a larger expense than ever seen
  - The new funding method will increase the expense for all systems using the projected unit credit cost method and potentially lower discount rate
  - The shorter amortization will also accelerate recognition of pension cost

Summary: Changes in Calculations

- Total Pension Liability (TPL), Net Pension Liability (NPL), and Pension Expense (PE)
  - Entirely separate set of calculations from the typical funding policies;
  - Two valuations each year, instead of one *(a funding valuation and an accounting valuation)*
  - Accounting results will likely be higher and more volatile than current practices;
    - Blended discount rate changing each year
    - Market Value of Assets
    - Shorter amortization periods

GRS

Emerging Trends

- The separation of accounting and funding has prompted a need for a funding policy that is separate from accounting
- The funding policy will delineate annual contributions
- It will also indicate the strategy for paying off the liability of the pension trust

GRS

Emerging Trends

- Placing the pension liability on the balance sheet puts it in a position comparable to other "hard debt" of the sponsoring entity
- Funds may develop communications material that explains why funding values differ from accounting values
- Plan sponsors may look to "de-risk" their portfolios in an attempt to manage financial statement volatility

Emerging Trends

- The higher liability and expense may prompt a review of benefit policy
- Liability management could become a tactic for the government
  - This could mean a change in the benefit structure as a way to respond to the higher liabilities

Field Testing Group-issues surfaced with implementation

- Software system changes
- Individual employer valuations
- Staff training
- Who pays the fees?
- Change formatting of financial statements
- Attend educational and training seminars
- Add staff

Field Testing Group-issues surfaced

- Additional reporting from the Master Custodian and increased external audit fees
- Updated actuarial valuation software system
- Improve employer reporting on a monthly basis

Projection of Contributions

	Projected Payroll			Projected Contributions			
Year	Payroll for Current Employees (a)	Payroll for Future Employees (b) = (c) – (a)	Total Employee Payroll (c)	Contributions from Current Employees (d) = (a) x 5%	Employer Contributions for Current Employees (e) = (a) x 10%	Contributions Related to Payroll of Future Employees (f) = (b) x 3%	Total Contributions (g) = (d) + (e) + (f)
0	$ 488,072	$ -	$ 488,072	$ 24,404	$ 48,807	$ -	$ 73,211
1	474,494	34,321	508,815	23,725	47,449	1,030	72,204
2	469,203	61,237	530,440	23,460	46,920	1,837	72,217
3	463,875	89,109	552,984	23,194	46,388	2,673	72,255
4	457,451	119,035	576,486	22,873	45,745	3,571	72,189
5	450,018	150,969	600,987	22,501	45,002	4,529	72,032
6	441,785	184,744	626,529	22,089	44,179	5,542	71,810
7	432,704	220,452	653,156	21,635	43,270	6,614	71,519
8	422,353	258,562	680,915	21,118	42,235	7,757	71,110
9	411,044	298,810	709,854	20,552	41,104	8,964	70,620
10	399,081	340,942	740,023	19,954	39,908	10,228	70,090

Note: Years subsequent to year 10 have been omitted from this table.

Projection of Plan Net Position

Year	Projected Beginning Plan Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Plan Net Position (f) = (a) + (b) – (c) – (d) + (e)
0	$ 1,431,956	$ 73,211	$ 109,951	$ 1,000	$ 105,981	$ 1,500,197
1	1,500,197	72,204	116,500	1,030	110,815	1,565,686
2	1,565,686	72,217	123,749	1,061	115,454	1,628,547
3	1,628,547	72,255	131,690	1,093	119,871	1,687,890
4	1,687,890	72,189	140,229	1,126	123,998	1,742,722
5	1,742,722	72,032	149,168	1,160	127,768	1,792,194
6	1,792,194	71,810	158,466	1,195	131,120	1,835,463
7	1,835,463	71,519	168,332	1,231	133,983	1,871,402
8	1,871,402	71,110	178,591	1,268	136,277	1,898,930
9	1,898,930	70,620	189,069	1,306	137,929	1,917,104
10	1,917,104	70,090	199,709	1,345	138,872	1,925,012

Note: Years subsequent to year 10 have been omitted from this table.

GRS

Present Values of Projected Benefit Payments

	Projected Benefit Payments				Present Value of Projected Benefit Payments		
Year (a)	Projected Plan Net Position (b)	Projected Benefit Payments (c)	Funded Portion of Benefit Payments (d)	Unfunded Portion of Benefit Payments (e)	Present Value of Funded Benefit Payments $(f) = (d) \div (1 + 7.5\%)$ [(a)]	Present Value of Unfunded Benefit Payments $(g) = (e) \div (1 + 4\%)$ [(a)]	Present Value of Benefit Payments Using the Single Discount Rate $(h) = (c) \div (1 + 5.35\%)$ [(a)]
0	$ 1,431,956	$ 109,951	$ 109,951		$ 109,951	-	$ 109,951
1	1,500,197	116,500	116,500		108,372	-	110,586
2	1,565,686	123,749	123,749		107,084	-	111,504
3	1,628,547	131,690	131,690		106,005	-	112,635
4	1,687,890	140,229	140,229		105,004	-	113,850
5	1,742,722	149,168	149,168		103,904	-	114,960
6	1,792,194	158,466	158,466		102,680	-	115,926
7	1,835,463	168,332	168,332		101,463	-	116,892
8	1,871,402	178,591	178,591		100,136	-	117,720
9	1,898,930	189,069	189,069		98,615	-	118,301
10	1,917,104	199,709	199,709		96,898	-	118,615
25	547,880	322,779	322,779		59,929	-	87,752
26	316,985	326,326	316,985	9,341	48,352	3,369	84,213
27	64,800	328,997	-	328,997	-	114,102	80,592
28	-	330,678	-	330,678	-	110,274	76,892
29	-	331,266	-	331,266	-	106,221	73,118
30	-	330,744	-	330,744	-	101,975	69,297
95	-	1	-	1	-	1	-
96	-	-	-	-	-	-	-
Total					$ 2,315,885	$ 1,679,188	$ 3,995,073

Note: Years 11-24 and 31-94 have been omitted from this table.

GRS

Transition

- In transitioning to the new standards:
  - The effects of the new standards would be reported as adjustments to prior periods
  - Restatement of the beginning balance sheet liability
  - Restatement of deferred inflows/outflows to the extent it is practical with available information

GRS

Disclaimers

- Circular 230 Notice: Pursuant to regulations issued by the IRS, to the extent this presentation concerns tax matters, it is not intended or written to be used, and cannot be used, for the purpose of (i) avoiding tax-related penalties under the Internal Revenue Code or (ii) marketing or recommending to another party any tax-related matter addressed within. Each taxpayer should seek advice based on the individual's circumstances from an independent tax advisor.

- This presentation shall not be construed to provide tax advice, legal advice, investment advice, or accounting advice.

- Readers are cautioned to examine original source materials and to consult with subject matter experts before making decisions related to the subject matter of this presentation.

- This presentation expresses the views of the author and does not necessarily express the views of Gabriel, Roeder, Smith & Company.