

CURRENT LITERATURE REGARDING FINANCIAL ANALYSIS OF PENSIONS

A Report Prepared for the
Legislative Finance Committee

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SUMMARY

All analysis presented by the pension systems, the pension system actuaries, and the Legislative Fiscal Division has included basic financial assumptions. Two major assumptions include: using Return on Investment (ROI) of 7.75% as the discount rate of future liabilities and 4 year actuarial smoothing of the asset values.

In recent years, financial and pension literature outlined several analyses that illustrate alternate ways to evaluate the risk to pension systems. The Governmental Accounting Standards Board (GASB) has taken a leading role in analyzing these choices and made recommendations. After the recent experience of pension systems and the increased scrutiny that has been paid to the methods of evaluation, it is likely that the analysis of pension systems will tighten as soon as FY 2014.

This report identifies some of the choices for future analysis. The report also recommends that the Legislative Finance Committee (LFC) consider one or more of the alternative methods of analysis.

TWO MAJOR CHANGES IN ANALYSIS CONSIDERED

Discount Rates

Discounting is a method of converting the cost of the payment of benefits for retirees in the future (liabilities of the pension system) to today's dollars. The analysis of the methods of discounting these liabilities has weighed heavily in the literature. The following entities analyses and the key elements of the various analyses are outlined below:

Congressional Budget Office and others

In May of 2011 the Congressional Budget Office (CBO) issued a report called **THE UNDERFUNDING OF STATE AND LOCAL PENSION PLANS** <http://www.cbo.gov/ftpdocs/120xx/doc12084/05-04-Pensions.pdf>. The report outlines two methods of analyzing pension funding:

Current GASB Guidelines: This approach uses current GASB guidelines in evaluating pensions including a 30 year amortization period and a discount rate that is based on expected ROI which averages 8% for pension plans across the county. Note that: Montana uses GASB methodology with 7.75% ROI as the discount rate for the liabilities of the plan, 30 year amortization period, and 4 year smoothing.

Fair-Value Approach:

The fair-value approach is defined in the CBO report as follows:

“The fair-value approach aims to measure the market value of an asset or liability:¹⁶

- For assets, the fair value is what an investor would be willing to pay for them—that is, the current market value (or an estimate when market values are unavailable); it is not the averaged, or smoothed, market values that are reported under GASB guidelines.
- For pension liabilities, the fair value can be thought of as what a private insurance company operating in a competitive market would charge to assume responsibility for those obligations.”
Page 4 of the CBO report

The first element argues for a market value of assets and will be discussed below under the “Asset Values” section. The second element argues that the rate at which the liabilities are discounted should be at a riskless rate. This analysis argues that the present value of liabilities should not be based on the anticipated growth in the assets, but on the risk associated with the liabilities. In other words, the liabilities should be valued at the amount of payment that an independent investor would require to assume the liabilities of the pension plan. Given that there is nearly no chance that the investor would not need to pay the required benefits of the plan, the investor would discount the liabilities at a riskless rate, something close to the municipal bond market rate, or roughly 4%.

Governmental Accounting Standards Board (GASB)

The GASB proposed exposure draft outlined a direction relative to the analysis of plans that splits the rate used to discount the liabilities between those that are funded and those that are unfunded.

- Years that are funded will be discounted at the assumed return on investment (currently 7.75% in Montana) and
- Years that are unfunded are discounted at the municipal bond rate (approximation for riskless rate).

The weighted average of the two rates is called the blended rate.

A Boston College report evaluates impacts of the GASB exposure draft titled:

HOW WOULD GASB PROPOSALS AFFECT STATE AND LOCAL PENSION REPORTING? *By Alicia H. Munnell, Jean-Pierre Aubry, Josh Hurwitz, and Laura Quinby*

<http://leg.mt.gov/content/Publications/fiscal/Pensions/Boston-College-Proposals.pdf>

This report reviews the logic behind the GASB proposal and estimates how Montana's two largest plans would be impacted:

Plan name	Funded ratio			GASB run-out date	Blended rate
	Current (FY 2010)	Current liabilities w/ market assets	Blended rate liabilities w/ market assets		
Montana PERS	74.0%	63.3%	44.8%	2035	5.5%
Montana Teachers	65.5%	55.8%	34.7%	2032	4.8%

The blended rate for PERS is higher than the blended rate for TRS due to the higher funded ratio of PERS and thus the fewer years that in PERS liabilities are discounted at the lower rate. In both cases, the funded ratios of the plans drop significantly.

It should be noted that the GASB proposal uses market values of the plans. This can create a highly changing view of the funded ratio of the plans. The market value ratio in FY 2011 for PERS is 72.8% instead of the 63.3% in FY 2010 and for TRS is 63.8% in FY 2011 instead of 55.8% in FY 2010. For more information on this see the "Asset Value" section of this report.

Timeline of GASB exposure draft on pensions:

- GASB expects to issue the final statement mid-2012.
- The final statement will be effective for Montana in FY 2014, the first year of the next biennium.
- The 2015 session should have both forms of analysis available for consideration: the current analysis and the financial reporting analysis.

Fitch

FITCH: ENHANCING THE ANALYSIS OF U.S. STATE AND LOCAL GOVERNMENT PENSION OBLIGATIONS, February 17, 2011 Page 6 (Note the Fitch analysis is not available on the web)

Fitch is a credit rating agency and is most interested in creating comparable analysis of each pension plan. Fitch is less concerned with the academic arguments related to the correct discount rate, yet Fitch is interested if the assumed ROI is unrealistic or inconsistent.

"Each system's unfunded actuarial accrued liability (UAAL) will be adjusted to approximate the impact of a 6%, 7%, and 8% investment return assumption to provide a range of outcomes. **Fitch believes (*emphasis added*)** that, given the recent market downturn and potential for lower returns in the future, the current 8% average discount rate used by public pension plans is likely optimistic."

While Fitch notes that they have no perfect method of adjusting for these comparisons, Fitch will re-evaluate public pension liabilities using a 7% discount rate and 5 year smoothing. Fitch considers funding ratios above 70% to be adequate and less than 60% to be weak. The summary numbers given in the report for Montana based on the FY 2009 evaluations are as follows:

Plan name	Funded ratio		
	Current (FY 2009)	Funded at 7%	Funded at 7% and 5 year smoothing
Montana PERS	83.5	75.2	72.3
Montana Teachers	66.2	61.1	61.7

Note that the funding ratios used in the Fitch analysis are from FY 2009. The current funding ratios are lower and an updated Fitch analysis would show lower funded ratios than shown in this table.

Wilshire

2011 WILSHIRE REPORT ON STATE RETIREMENT SYSTEMS: FUNDING LEVELS AND ASSET ALLOCATION by: *Julia K. Bonafede, CFA; President, Steven J. Foresti, Managing Director; Russell J. Walker, Vice President; February 28, 2011* <http://web.wilshire.com/BusinessUnits/Consulting/Investment/>

The Wilshire report states a concern regarding the 8.0% as the estimated ROI on page 1 of the report: “Wilshire forecasts a long-term median plan return equal to 6.5% per annum, which is 1.5 percentage points below the median actuarial interest rate assumption of 8.0%.”

Note that Montana’s asset allocation is more heavily weighted toward equities than the average system. This may result in a higher than average ROI, but also exposes the system to higher than average risk.

Summary

In summary, if the actual annual Return on Investments is less than the current actuarial assumptions, the long term funding status of the plans will appear to deteriorate and the unfunded liability will increase. Some experts believe that liabilities should be discounted at the riskless rate to reflect what the liabilities are worth in the market.

Asset Values

The Congressional Budget Office fair-value approach and the GASB exposure draft both advocate for the use of market value to evaluate plans. The Fitch analysis uses a consistent 5 year smoothing in its analysis. Montana pension plans use variations of 4 year smoothing to account for these fluctuations in market values.

Currently the FY 2011 actuarial valuations for the Montana systems put actuarial values slightly below market values. The FY 2011 actuarial funding ratio in Montana’s pension systems is 61.53% for TRS, and 70.25% for PERS. If market values were used to determine the funding ratios in Montana’s pension systems it would be 63.81% for TRS, and 72.82% for PERS. This is the result of the past two years’ gains in the market offsetting the remaining losses of FY 2009.

When the actuarial value and the market value are similar, there is little argument to consider both market and actuarial values. However, when there is a significant market swing one direction or the other, how the value should be considered is of greater interest and debate.

If the GASB exposure draft use of market value analysis is adopted in the final statement, legislators and the public would be exposed to wide variation in the funding ratios of the systems from year to year. Currently the respective boards of the pension plans determine the smoothing period of the plans. Most major plans in the

country use either 4 or 5 year smoothing to set funding policy choices. Eight major plans use smoothing periods above 5 years and four major plans use smoothing periods less than 4 years. (Fitch Report page 7.)

Due to biennial sessions (meeting once every two years), the complexity of the funding choices, and the public policy associated with those choices, the funding policy of the legislature would necessarily remain more stable than the annual volatility of the market value approach.

QUESTIONS AND RECOMMENDATIONS FOR THE LEGISLATIVE FINANCE COMMITTEE:

The Pension boards constitutionally set the actuarial assumptions (see the Montana Constitution, Article VIII, Section 15). These are the measurements from which the state of Montana defends constitutional actuarial soundness. Yet the legislature may want to consider a broader analysis from which to make decisions. The risks associated with the following, may influence policy making.

- The possibility that the rate of return is lower than the assumed ROI, thus causing funding shortages in future years.
- The likelihood that the GASB exposure draft or some variation will be adopted and when the recalculated funding status occurs in FY 2014 Montana plans will appear worse.
- How will the arguments surrounding the fair-value approach impact how legislators and the public evaluate pensions in the future?

Recommendation:

Although it is uncertain at this time what the final GASB guidance will be, the final will be available this summer and it will impact the financial reporting of the state in the first year of the next biennium. Given this it appears prudent to present to the 2013 Legislature with an analysis of the anticipated impacts of this GASB guidance. This analysis may or may not be available from the pension systems actuaries. If no estimate is available, the Legislative Fiscal Division could create estimates of this impact.

Question:

Are there other analyses that the Legislative Finance Committee would recommend be presented to the 2013 Legislature?

Examples:

- Return on investment or discount rate assumptions
 - Riskless rate
 - A lower assumed ROI
 - 7% as Fitch is using
 - 6.5% as Wilshire is anticipating
 - 6.25% as shown in the PERS actuarial analysis for FY 2011
- Market value of assets in addition to the actuarial value of assets (if not already included in the GASB financial reporting)

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