The Impact of Pensions on Municipal Credit

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SUMMARY

- Pensions are the most distinguishing credit factor for those entities that continue to struggle with post-recession fiscal balance.
- Pension liabilities are growing at an unprecedented rate, with current state level unfunded liabilities at four times the liability reported a decade ago.
- These liabilities are subject to differing and potentially unsustainable assumptions and market volatility.
- They are increasingly expensive to fund, complex to analyze, challenging to reform, and ultimately create risk for those bondholders whose investments are paid from the same source of revenues.

This paper will cover why we care about state pensions, how we analyze them, and what comes next.

1. Why Do We Care about Pensions?

Unfunded pension liabilities have ballooned over the last 15 years. In periods of economic expansion, many states reduced or eliminated contributions in light of healthy funded ratios and agreed to generous benefit packages for employees. This proved unsustainable when asset valuations plummeted with stock market declines and states again reduced or eliminated pension contributions because of revenue underperformance. As a result, elevated unfunded pension liabilities accompanied states out of the recession and continue to impede true recovery.

States and locals are now in the precarious position of funding these enlarged liabilities in an era of sluggish economic and revenue growth. Pension contributions, along with wages, programs, other retirement liabilities, infrastructure investment, and debt service are all paid from the same source of tax revenues; revenues that have not increased at nearly the rate of pension contribution requirements. As a result, we see pensions cannibalizing state and local budgets for some, while others continue to underfund the system.

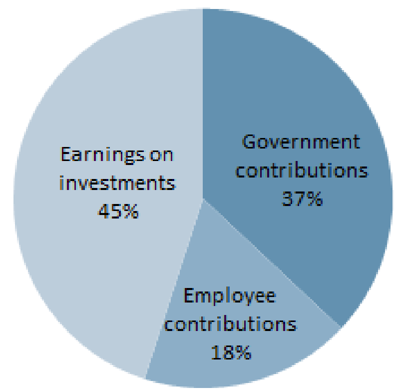
Pensions, like debt, are a liability of the municipal entity paid from general revenues. However, unlike debt, pensions are not a truly fixed cost. Pension liabilities can fluctuate as will the actuarial funding costs and actual funding strategies. Defined-benefit pensions carry inherent risk that was made apparent during the recession and continues to challenge measurement, funding, and analysis of pensions and ultimately puts debt repayment at risk.

- Pension liability measurement and funding practices are driven by assumptions. Board members, often comprised of officials from the government sponsor, determine assumptions that drive pension liability calculations and funding practices. Assumptions, like the amortization of liability, life expectancy, and market returns, can have huge impacts on liability and funding calculations and can be misaligned with actual outcomes.
- Lack of constitutional or statutory procedures that limit benefits or require healthy funding practices. While most state and local governments have limits on the amount and structure of debt they can incur, limited or no such

protections have existed when it comes to the liability of pensions or Other Post-Employment Benefits (OPEB). In many cases, the state constitution protects employees from reduction of contract benefits, but does not mandate sufficiency of funding or provide taxpayer protections against the burden of liability growth. Select states have more recently passed reform in which benefit growth is contingent on adequate funding levels – a credit positive.

- Pension liabilities fluctuate subject to stock market volatility. The nature of pensions makes them reliant on market returns. At the median, 45% of funding is derived from investment earnings. The burden of curing investment losses is borne by the municipality and creates a risk that is not aligned to the nature or function of municipal government.
- Superior or conflicting security features. We lack clear and binding precedent as to the priority of payment in a stress scenario. In terms of bankruptcy, we know that pensions can be impaired, but in the recent local bankruptcy cases, bondholder recovery has been significantly below that of pensions. Ultimately, each scenario will likely produce unique outcomes. In the case of States, we lack precedent for restructuring. Often state constitutions offer conflicting guidance. Several states have both a constitutional priority for bond payments and a restriction on impairing pensions.

Pension Funding Composition

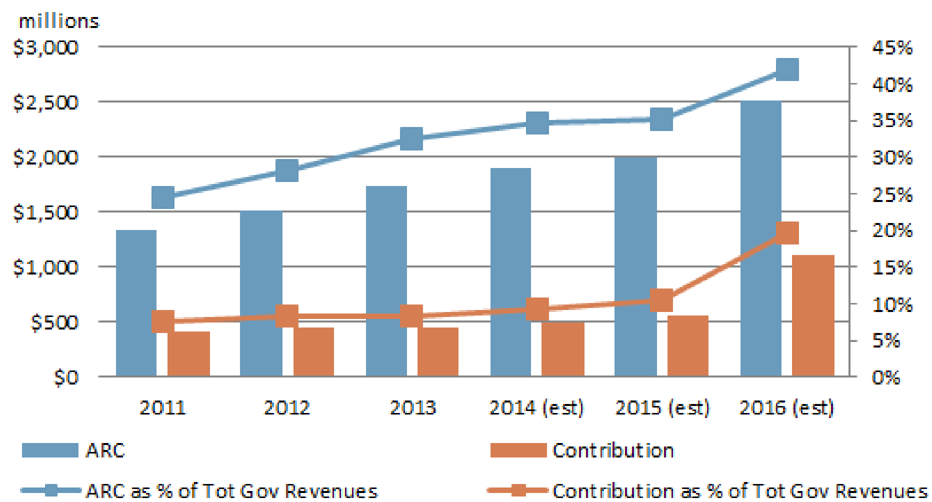


Source: US Census data -Standard & Poor's

Actuarial Required Contribution (ARC): The amount needed to be contributed by employers to adequately fund a pension plan: includes the cost of benefits accrued in the current year and the cost to amortize the plan's unfunded liability.

- The price of legacy costs is significant. When a pension fund drops below 100% funded, the ARC will include a payment to amortize that unfunded liability over a given time period (often 20-30 years). For each year in which the ARC is underfunded, both the ARC and the liability will grow for the subsequent year. In other words, the entity must contribute more of its current year's revenues to pay for services provided in the past. This growth in future costs reduces financial flexibility, decreasing revenue available to fund police, fire, education, and infrastructure while inhibiting investment in economic growth, potential tax savings, and government's ability to compete for business and jobs. For many with back-loaded amortization schedules, even funding at the ARC is not sufficient to keep the liability from growing. This compounding growth of liabilities can put an entity on a downward spiral that is very difficult to recover from – ultimately putting pension recipients and bondholders at risk. These burdens are particularly concerning in cases where multiple levels of government each possess an onerous unfunded liability with the burden of funding falling to a single tax base. Chicago is the most obvious example of the impact of underfunding.

City of Chicago Required Funding vs Actual



Source: Chicago Comprehensive Annual Financial Statements

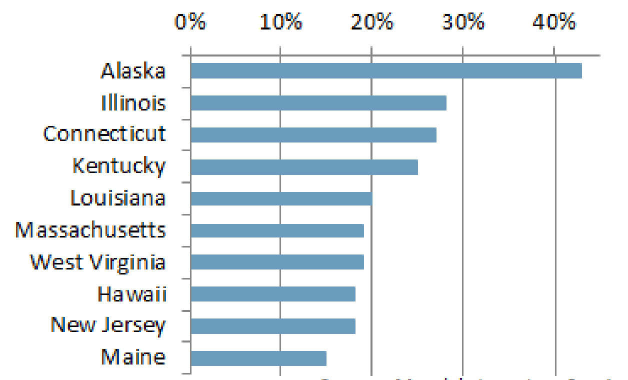
2. More Than a Funded Ratio – What We Consider in Credit Analysis

In order to gain a solid understanding of how pensions impact credit profiles, analysis of multiple factors is required, including, but not limited to:

- Burden of the Unfunded Liability. The commonly used funded ratio does not account for the size of the liability relative to a credit's governmental or economic attributes. Two entities could have the same funded ratio, but very different burdens. We look at the absolute value of the liability in relation to the following:
    - The state's annual budget. Even the most leveraged states and locals rarely have absolute tax-supported debt burdens greater than about one year's worth of revenues. Almost half of the states have pension liabilities that exceed one year's worth of revenues. The greatest state pension liability (Illinois) exceeds revenues by over 2.5 times.
    - Personal income or state or local GDP. Measuring the liability versus local economic activity provides a comparative view based on economic capacity to generate revenues to support the liability. Alaska, Illinois, Connecticut, and Kentucky top the list of unfunded liability-to-personal income and GDP, each in excess of 20% as measured by Moody's.
    - Per capita. This provides a liability comparison per state resident.

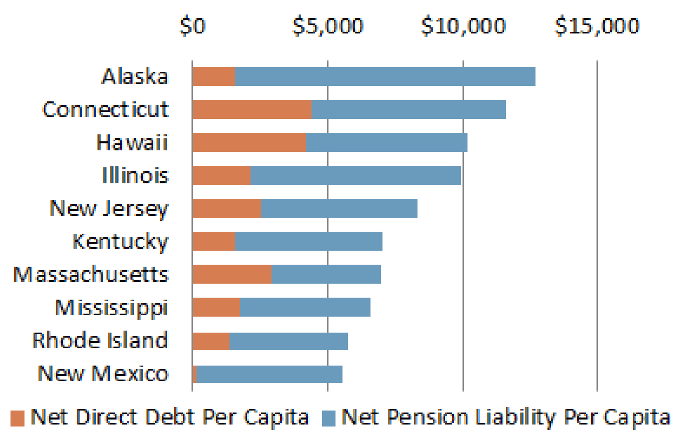
- Funding Practices. The level of annual funding is one of the most important indicators because it can mean the difference between retaining control of the liability versus allowing it to grow to an unsustainable level. Funding at the ARC indicates a level of affordability under the current tax and budget structure. Full funding, even during times of strong market gains, is essential to lessen impacts during future downturns. However, even if an entity is funding at the ARC, if that payment constitutes an outsized burden to the General Fund, sustainability is questionable. Conversely, funding at any lesser level will cause the liability to grow at a compounding rate, making return to full funding an even larger challenge.

Top Ten - Moody's Adjusted Net Pension Liability to Personal Income



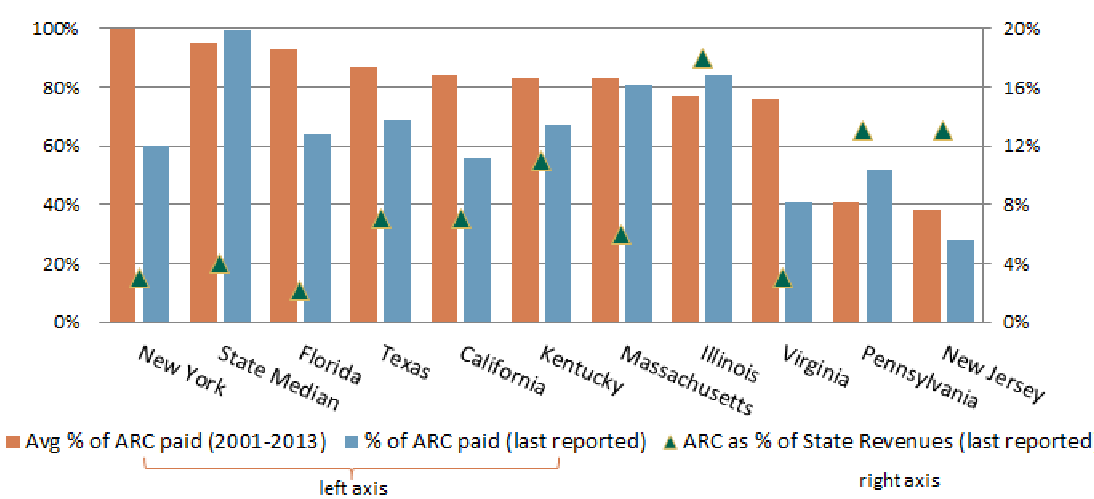
Source: Moody's Investors Service

Top Ten - State Liabilities Per Capita



Source: Merritt Research & State Audited Financials

Select States Funding Below the Actuarially Determined Contribution (ARC)



Sources: National Association of State Retirement Administrators & Merritt Research Services

- Impact of Other Credit Factors. Unfunded pension liabilities must be viewed as just part of the whole credit profile, and unique factors can either exacerbate or mitigate pension-associated risks. Examples include:
  - Liability in relation to assets. Alaska has the largest pension burden per capita of all the states. However, the current level of state reserves exceeds that of the unfunded liability. This fact serves to moderate overall risk.
  - Overlapping pension burdens. Of our largest pension- and debt-burdened states, Hawaii and Connecticut have limited overlapping burdens (for both debt and pensions) due to the structure of state government. New Jersey locals have a moderate level of pension burden, but are materially better funded than the state. Illinois local entities have multiple levels of overlapping entities (schools districts, counties and cities), each with huge liabilities of their own. These factors impact affordability and flexibility for a given tax base.
  - Overall liability cost profile. Virginia has a somewhat high pension burden, but comparably lower debt burden. While this does not fully alleviate the pension concerns, it keeps their liability costs lower and offers comparably more operating flexibility. Liabilities associated with Other Post-Employment Benefits (OPEB) will also factor into the analysis.
  - Economy and demographics. We examine the economic and demographic conditions that are likely to indicate ability to fund these obligations going forward. Pennsylvania, for example, has an aging population with a shrinking workforce. This is concerning for a materially underfunded pension plan that is reliant on future taxpayers and government employees to support a high population of retirees.
- Actuarial Assumptions. Basic assumptions used in an actuarial assessment can shed significant light on a system's funding health. Even small adjustments in assumptions like amortization schedule of the liability, life-expectancy, retirement age, and discount rate can cause huge swings in liabilities, funded ratios, and annual costs.
- Ability to Reform. In the natural cycle of economic activity, we expect to see employment across sectors rise and fall, wage growth accelerate and decelerate, and benefits change. Those states that do not allow pension adjustments will find themselves struggling to cover the generous benefits promised to employees during an economic high when a downturn inevitably hits; likely at the expense of core municipal services. States that have constitutional limitations on benefit adjustments include Alaska, Arizona, Hawaii, Illinois, Louisiana, Michigan, and New York.
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3. What Comes Next

New GASB Standards – Expect New Transparency to Shine Light on Severity of Liabilities & Underfunding. Beginning with the reported 2015 audits, the new Governmental Accounting Standards Board (GASB) 68 rules will be required for municipal entities. While these accounting procedures do not change a plan's core assumptions or ultimate liability, it will change the way pension assumptions and funding levels are reported — in many cases highlighting a more burdensome position than previously reported. Ultimately, we view this change as positive, providing increased transparency for plans and funding levels. Key changes and impacts include:

- The market value of the liability will be reflected on the balance sheet. Entities will now be required to report the current market value of the unfunded liability on the balance sheet. This is particularly impactful for those entities that did not previously report an individual unfunded liability under a shared plan (i.e., local liability within a state-wide plan). The new standards will also eliminate the practice of smoothing the value of the liability and will report the true market value as of the most recent reporting date, which will increase the year over year volatility of the liability.

  Entities with large unfunded liabilities may see valuations increase based on the requirement that a lower bond rate be used in the years where assets are depleted under the current funding structure. New Jersey reported a $51 billion liability in 2014 (53% funded ratio) under the old accounting standards. Under the new standards, the 2014 liability would be reported as $83 billion (33% funded ratio) and plan assets could be depleted in as few as 8-12 years.

- Operating expense line-item (replacing the ARC) may uncover a greater level of underfunding. The new standards require reporting an expense line-item on the operating statement. Moody's describes this pension expense as the amount required to "tread water", meaning that funding at this level would be enough to maintain the current liability as is. Moody's recent sample of 54 large plans found that only 26% of plans were funding at a level to "tread water", though most fall within 10% of the tread water target. This tread-water payment, like the ARC before it, does not always align to state and local requirements for actual cash funding, and is still subject to a broad variation of actuarial assumptions. Ultimately, the reporting of this expense on the operating statement will increase the level of transparency from current requirements.

Common Types of Pension Reform
New plans for new employees
Increase employee contributions
Reduce or eliminate retiree cost of living adjustments (COLAs)
Extend retirement age
Increase employee vesting schedule
Greater smoothing of base-line retirement wage determination (eliminate spiking or double pensions)

Reform. Since 2008, all 50 states have instituted some level of pension reform modifying benefit levels for new or current employees. For many, reform measures have been sufficient to increase budget flexibility and reach stabilization of the liability. For others, the growing liabilities are not so easily addressed with reform, either because instituted reform is simply insufficient or because reform measures are politically challenging – sometimes even prohibited by constitutional or statutory restrictions. In the last three years, Colorado, Florida, New Mexico, Washington, and Wisconsin Supreme Courts upheld reform measures with respect to current employee benefit adjustments like COLAs. In Arizona, Oregon and Illinois, state courts struck down the reform, despite arguments that reforms served an essential public purpose. Those states restricted from reforming unsustainable pensions will continue to struggle. The level of tax growth needed to fully fund these onerous liabilities will be challenging given the tax growth comes with no change in services. We anticipate pension plan insolvency will become a very real concern in the next decade, and that various one-time measures or backroom negotiations will serve to delay but not reverse this path to insolvency.

Bankruptcy and Restructuring.[1] We do not expect a material increase in the number of municipal bankruptcies in the foreseeable future. At the margin, however, should pension obligations become too burdensome to endure and further reform is not feasible, restructuring could be deemed the final or only option for relief. While many locals have the avenue of bankruptcy for which we have some precedent, states (and some locals) are not eligible for bankruptcy, and state-level restructuring has no precedent. Our expectation is that bondholder treatment would be similar to what we have seen on the local level: bonds would be subject to cuts at the same level or greater than that of pensions. While various securities will experience unique treatment and each situation may lead to differing outcomes, we generally view unsecured debt as subject to impairment should pensions be subject to impairment though bankruptcy or restructuring.

Constitutional or Statutory Priority for Payment from General Fund receipts
California
Delaware
Georgia
Hawaii
Louisiana
Maine
Maryland
Michigan
Minnesota
New York
Pennsylvania
Texas
Virginia
Wisconsin

State constitutions and laws vary, but a few contain language supporting the priority of General Obligation (GO) bond debt service payments over other general fund expenditures (including pensions). Most states note the non-appropriation nature of GO bonds as well. While the appropriated nature of pension payments indicates a level of subordination to GO bonds, a constitutional restriction on impairment of pension benefits would compete with the priority designation for bonds.

Despite this, we expect that it would be politically unpalatable to expect cuts (beyond moderate reform measures) from employees and retirees without opening the door to cuts for unsecured bondholders. The interpretation of recovery between pensions and bonds as "Wall Street vs. Main Street" will inevitably impact the restructuring process. The key focus for state and local governments perusing restructuring will be to exit with a sustainable path in an increasingly competitive municipal environment. We expect restructuring outcomes will reflect this motivation, and depending on the severity of the situation, the burden of market penalties in the form of higher borrowing costs may be easier to tolerate than the burden of a potentially disenfranchised workforce or tax base. Therefore, we would qualify the majority of unsecured bonds (including certain general obligation bonds, appropriation debt, and leases) as more subordinate than senior in relation to pensions in the event of restructuring.

[1] For more information on bankruptcy, see our report "Bankruptcy – What does the future hold?" dated February 2014

We would expect the potential for non-interruption of debt service or full recovery in bankruptcy only when bonds are clearly secured by a dedicated revenue stream that is distinctly and legally separate from revenues that pay pensions (general fund revenues). These include bonds that are secured by revenues originated to support the bond-supported project or enterprise, particularly if that revenue source is unique from general fund revenues. A state restructuring would likely follow this same guideline. However, because a state is a sovereign entity and is not required to follow the procedures of federal bankruptcy, the "rules" or "expectations" of restructuring are vague.

- Other Post-Employment Benefits (OPEB). OPEB largely refers to retirement healthcare. Both locals and states can have huge liabilities, but these are most often funded on a pay-go basis without pre-funding. Most often, OPEB does not enjoy the same contractual or constitutional benefits as pension benefits. In recent bankruptcy cases, OPEB benefits have been reduced significantly or eliminated completely. In fact, this has been used to justify strong recovery of pension benefits – as the beneficiaries are the same. The legal obligation of OPEB can vary by state, based on constitutional protections. Recent court rulings in both Hawaii and Illinois have deemed the state obligation of OPEB at the same level as pensions: constitutionally protected.
- Pension Obligation Bonds (POBs). We remain cautious on POBs. By issuing POBs, an entity hopes that investment returns on POB proceeds will exceed bond coupon payments, generating long-term savings. POBs are taxable bonds because they are an arbitrage play and not issued for an IRS qualified purpose. The issuance of these bonds in itself signals a stress situation, suggesting that annual costs are unaffordable and a risky arbitrage play is needed to reduce the interest costs. POBs are most often an unsecured general obligation. The ultimate treatment of POBs in the Stockton (1% recovery) and Detroit (14%+ recovery) bankruptcies point to POB holders as an unsecured creditor, potentially subject to very poor recovery.[2]

Conclusion

- Pensions are the most distinguishing credit factor for those entities that continue to struggle with fiscal balance post-recession.
- Pension liabilities are growing at an unprecedented rate, with current unfunded liabilities (reported at the state level) at four times the liability reported a decade ago.
- These liabilities are subject to differing and potentially unsustainable assumptions and exposed to market volatility
- They are increasingly expensive to fund, complex to analyze, challenging to reform, and ultimately create risk for bondholders who are paid from the same source of revenues.

[2] See report "Stockton and Detroit Exit Bankruptcy - Key Takeaways" dated November 2014 for more information.

State Pension Funding	Discount Rate**	As reported Unfunded Actuarial Liability*** ($000)	Funded Ratio ***	State Share of Liability for Largest Plan****	State Share UAAL as % of Revenue****	State Share UAAL as % of Personal Income****	State ARC as % of Total Revenue (less Federal Aid)***	State Contribution % of State ARC***
Alabama*	8.00%	12,319,267	66%	7%	41%	5%	2%	100%
Alaska*	7.50%	8,854,372	52%	79%	99%	43%	1%	100%
Arizona	8.00%	11,742,238	74%	21%	37%	4%	2%	100%
Arkansas	8.00%	6,899,556	74%	100%	47%	6%	9%	90%
California*	7.50%	101,675,745	71%	37%	93%	10%	7%	56%
Colorado	7.50%	9,714,265	59%	100%	93%	7%	4%	82%
Connecticut	8.50%	25,877,200	49%	100%	236%	27%	13%	95%
Delaware	7.50%	752,247	88%	100%	77%	11%	5%	99%
Florida	7.75%	30,859,545	81%	20%	27%	2%	1%	64%
Georgia*	7.50%	18,658,912	79%	19%	60%	6%	3%	100%
Hawaii*	7.75%	8,494,916	60%	63%	126%	18%	7%	91%
Idaho	7.50%	946,100	85%	25%	29%	3%	2%	100%
Illinois	7.75%	111,181,453	39%	95%	268%	28%	18%	90%
Indiana*	6.75%	12,664,844	35%	100%	64%	7%	4%	100%
Iowa	7.50%	5,741,151	81%	18%	25%	3%	7%	100%
Kansas	8.00%	8,176,149	56%	100%	141%	14%	8%	68%
Kentucky	7.50%	24,021,479	44%	100%	193%	25%	11%	64%
Louisiana	7.75%	20,340,532	58%	100%	162%	20%	16%	94%
Maine	7.13%	2,298,518	78%	100%	112%	15%	6%	100%
Maryland	7.65%	19,035,294	64%	100%	142%	13%	10%	74%
Massachusetts	8.00%	26,899,966	61%	100%	156%	19%	6%	81%
Michigan*	8.00%	29,542,511	61%	13%	59%	7%	2%	97%
Minnesota	8.40%	9,588,930	74%	10%	28%	3%	1%	97%
Mississippi	8.00%	14,601,213	58%	37%	75%	12%	10%	100%
Missouri*	8.00%	12,604,030	76%	100%	39%	4%	4%	100%
Montana	7.75%	3,800,287	73%	47%	76%	10%	1%	100%
Nebraska	8.00%	1,899,817	79%	100%	13%	1%	1%	97%
Nevada	8.00%	12,555,129	69%	12%	53%	4%	4%	100%
New Hampshire*	7.75%	4,667,845	57%	20%	40%	3%	2%	100%
New Jersey	7.90%	51,024,716	65%	100%	178%	18%	13%	28%
New Mexico	7.75%	11,221,158	63%	50%	46%	8%	12%	82%
New York*	8.00%	19,846,000	89%	40%	24%	3%	3%	100%
North Carolina	7.25%	3,516,266	94%	38%	35%	4%	1%	100%
North Dakota	8.00%	1,051,200	63%	100%	51%	10%	2%	58%
Ohio*	8.25%	48,106,789	73%	40%	33%	4%	1%	97%
Oklahoma	8.00%	9,651,946	67%	47%	82%	9%	7%	100%
Oregon	7.75%	2,579,500	91%	26%	54%	6%	2%	100%
Pennsylvania*	7.50%	50,351,430	62%	59%	130%	13%	13%	59%
Rhode Island*	7.50%	4,577,592	58%	40%	114%	14%	6%	99%
South Carolina*	7.50%	17,371,023	63%	33%	74%	9%	1%	100%
South Dakota	7.25%	-	100%	37%	30%	3%	2%	100%
Tennessee*	7.50%	2,272,526	93%	100%	21%	2%	2%	100%
Texas	8.00%	38,958,103	80%	77%	103%	9%	7%	75%
Utah	7.50%	5,249,020	77%	18%	37%	4%	3%	100%
Vermont	8.10%	1,520,777	67%	100%	69%	12%	3%	100%
Virginia*	7.00%	28,380,000	66%	100%	60%	5%	3%	55%
Washington*	7.90%	9,561,200	86%	47%	43%	5%	2%	99%
West Virginia	7.50%	5,551,536	63%	100%	117%	19%	10%	94%
Wisconsin	7.20%	52,600	100%	29%	14%	2%	3%	100%
Wyoming*	7.75%	1,874,382	79%	46%	52%	8%	2%	100%

* UAAL reported 2013 - remainder are 2014 (For those reporting 2013 where funding was under 100% - you can expect the 2014 numbers will increase.

**When rates are different for different plans - the higher rate is reported above

*** Last Reported Audited Financials

**** Moody's Adjusted Ratios use lower discount rates and adjust assumptions for comparability (FY2013)