2010

Considering a Crisis

A study on the health of state pension funds

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INTRODUCTION

If you are a reader of the major news sources in the United States, you may believe that the country faces a pension crisis. Even if you don't, a quick search of Google Trends for the words "pension" and "crisis" shows an alarming rise in the rate at which people are seeking information on this topic[1]. Whether or not a public pension crisis exists is seemingly irrelevant at this point, as the perception is that it is so. But, perception does not always mirror reality. To this effect, it is the aim of this study to determine what type of variation, if any, exists amongst state pension funds in an attempt to examine whether or not we are facing a true crisis, or simply a crisis of confidence.

DATA ANALYSIS

To get a comprehensive image of pension plan health in the United States, an analysis is presented of the general employee systems of fifteen states. To ensure continuity and comparable data, only those states that have plans covering general employees and public safety employees (but excluding teachers) are included in this study. From there, considerations were made to ensure that variance was observed in terms of region. This fifteen-state analysis includes states from each of the nine U.S. Census divisions (Pacific, Mountain, West North Central, West South Central, East North Central, East South Central, South Atlantic, Middle Atlantic, and New England). The state plans chosen for this study are as follows: Alabama ERS, Alaska PERS, California PERF, Connecticut SERS, Georgia ERS, Illinois SERS, Indiana PERF, Kentucky ERS, Louisiana SERS, Maryland PERS, Massachusetts SERS, New Mexico PERF, North Dakota PERS, Ohio PERS, and Pennsylvania PERS.

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[1] http://www.google.com/trends?q=%22pension%22+%22crisis%22

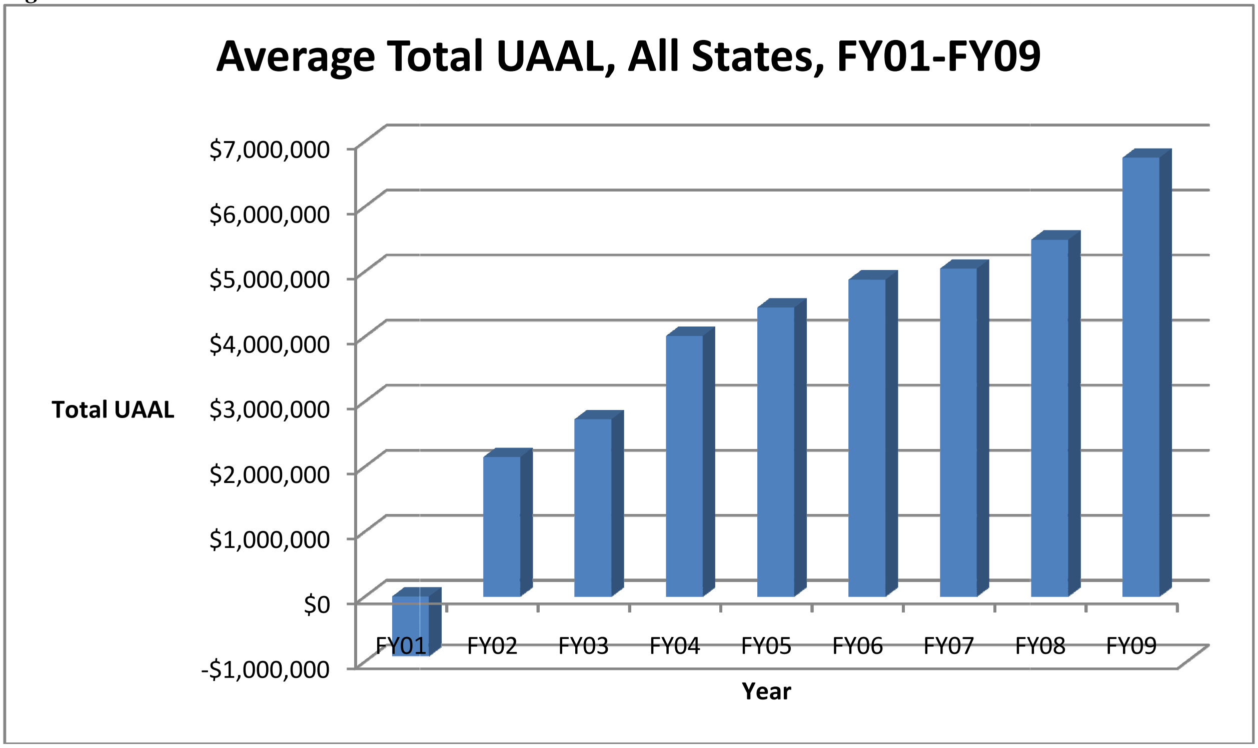
The next factor in making a wide-ranging determination of plan health was the actual data that was compared. To fully evaluate each of the fifteen plans in this study a variety of measures are considered including funding ratio, unfunded actuarial accrued liability (UAAL), UAAL per capita, and percentage of annually required contributions made by the plan. Since liabilities in public pension funds are absorbed over a period of time, nine years of data are analyzed covering the period of Fiscal Year 2001 to Fiscal Year 2009. To get an image of overall plan health from FY01-FY09, average numbers are taken for total UAAL, funding ratio, and percentage of annual required contributions made for all fifteen states in this study to see if trends were present. Once trends were established, the individual states were examined more closely, this time substituting UAAL per capita for total UAAL.

Trends in Pension Fund Health: FY01-FY09

The first variable for analysis is unfunded actuarial accrued liability, or UAAL. In simple terms, UAAL represents the difference between the actuarial accrued liability and the actuarial accrued value of assets for a given pension plan. The average amount of total UAAL for the fifteen plans in the study rose sharply from FY01 to FY09. On average, the plans ran a surplus in FY01, which is indicated as a negative value in the calculation. Average UAAL rose steadily over the measured period of time, with the sharpest increases occurring between FY01-FY02 and FY03-FY04. This rise in average UAAL is represented in the graph below[2].

[2] Public Pension Database. 2001-2010. Center for Retirement Research at Boston College and Center for State and Local Government Excellence

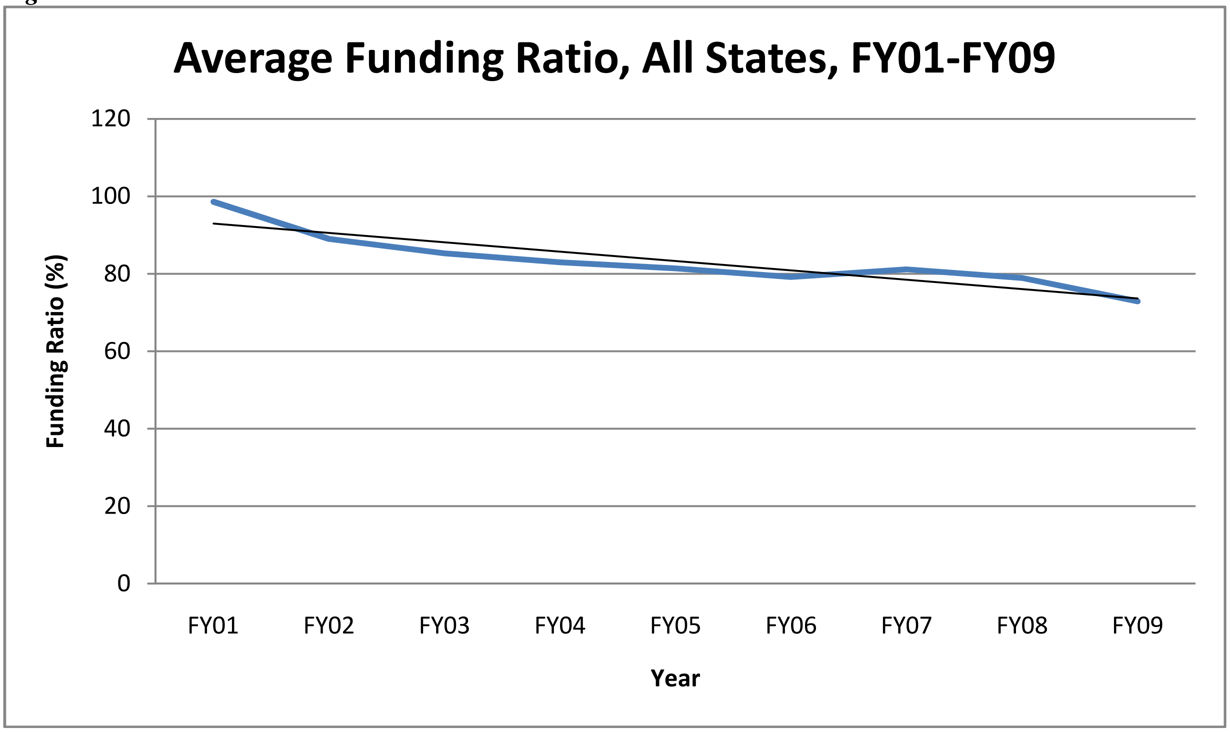
Figure 1



The first observation made in regards to the rise in UAAL was the decrease in funding ratio over the nine year period. In the graph below, a steady drop in average funding ratio is noted among the fifteen plans for the nine-year period of time. On average, the fifteen plans in this study were funded at nearly 100% in FY01 but experienced drops in nearly every subsequent year, falling to a funding level of just 79.9% in FY09. The decrease in funding level informs the increase in total UAAL, since funding ratio is a direct measure of a plan's assets to liability. A funding ratio at or around 100% indicates that a plan is able to cover all of its obligated payments. Simply put, the further below 100% a plans funding ratio falls, the more likely it is to face financial difficulty. The average decrease in funding ratio among the fifteen plan study is noted in the chart below[3].

[3] Public Pension Database. 2001-2010. Center for Retirement Research at Boston College and Center for State and Local Government Excellence

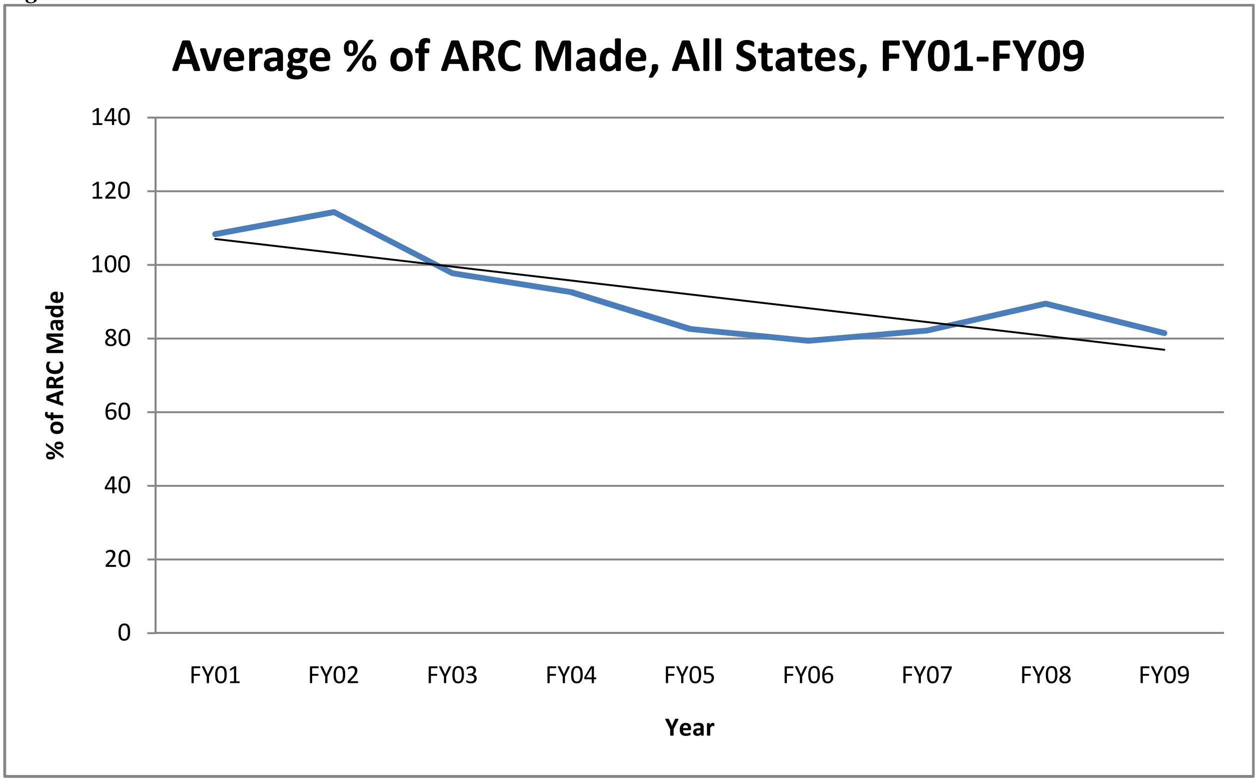
Figure 2



Another way to examine overall plan health is to look at percentage of annual required contributions made. This measures whether or not states are making an effort to fund their plans in a timely manner, or whether they are putting off payments for future years. Below I examine trends in percentage of annual required contributions made by each of the states analyzed over the nine year period[4].

[4] Public Pension Database. 2001-2010. Center for Retirement Research at Boston College and Center for State and Local Government Excellence

Figure 3



As shown in the graph above, the plans in the study made, on average, near 100% or more of their annual required contributions in the years FY01-FY03. After that, the percentage fell dramatically, bottoming out in FY06 with just 79.4% of ARC being made. The percentage rose somewhat in subsequent years, only to fall sharply again from FY08-FY09. Overall, % of ARC made has fallen on average from the first to last year of study.

It is now determined that among the sample size, public pension plan health has deteriorated from FY01 to FY09. Despite these noted trends, this data analysis aims to dig deeper to clarify which states are in the most financial trouble, and which are funded more appropriately. To this end, I elect to offer a comprehensive look at each of the fifteen plans in this study, and measure them against the criteria set forth earlier in this report. The results are as follows.

Funding Ratio

Funding ratio is a measure of a plans liability (payments to annuitants) to assets. The lower the funding ratio, the lower percentage of liabilities a plan is able to cover with cash on hand (for example, a funding ratio of 50 indicates that a plan is only able to cover half of its liabilities).

Ideally a plan should be able to cover 100 percent of its liabilities, but since pension payments are not paid out all at once, this is an unreasonable request. Most experts define a pension plan as sustainable if it has a funding ratio above 80%, which provides for adequate payment over a 25-30 year period of time. In accordance with this accepted standard, just six of the fifteen state plans represented in this study could be considered sustainable in FY09. For sake of comparison, 12 of the plans in this study were funded at or above 80% in FY01. Since it was determined above that funding ratio has decreased significantly since FY01, below is a representation of states categorized by funding ratio for FY09[5]:

80% or Above: California PERF, Georgia ERS, Indiana PERF, New Mexico PERF, North Dakota PERS, Pennsylvania SERS

70-80%: Alabama ERS, Alaska PERS, Massachusetts SERS, Ohio PERS

70% or Below: Connecticut SERS, Illinois SERS, Louisiana SERS, Maryland PERS

This analysis shows that there are nearly as many funds with healthy funding ratios as without. The plans funded below 80% would be in serious trouble if they were required to pay off all liabilities at once, but since they are not, the measure of funding ratio alone does not give a comprehensive picture of plan health.

[5] Public Pension Database. 2001-2010. Center for Retirement Research at Boston College and Center for State and Local Government Excellence

Annual Required Contributions

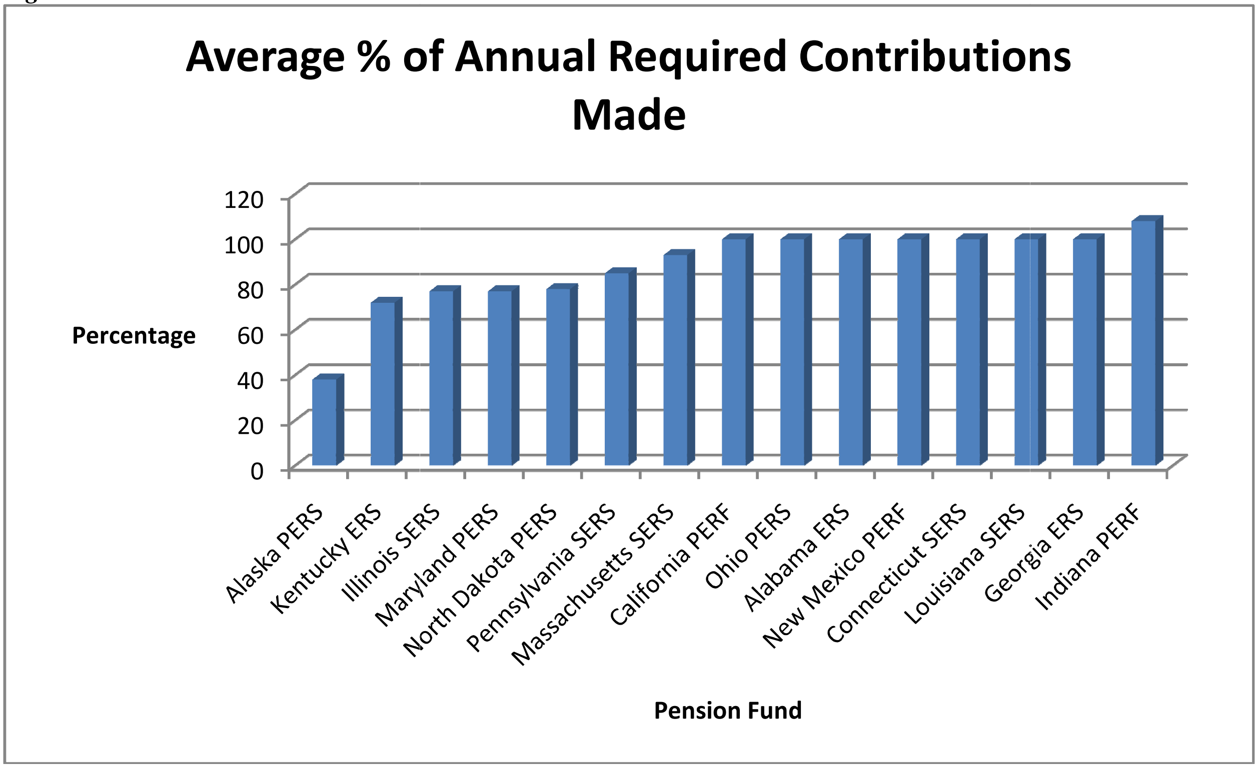
Annual required contributions are payments that a plan is required to make on a yearly basis, in accordance with the plans assumptions. Sometimes states will defer making these contributions, a practice that is especially common when the state is running a severe budget deficit. This produces less stress on the budget process immediately, but creates problems for the future.

This portion of the analysis measures what percent of a plan's annual required contributions were made. It adds a different dynamic to evaluating plan health, since a plan can be in good financial standing currently, but if it is not making its annual required contributions, this can deteriorate quickly. In this way, evaluating state plans on the basis of percentage of annual required contributions made is a forward-looking analysis.

For FY01, the fifteen states averaged 108% of annual required contributions made. By FY09, the percentage had fallen to just 81%, with some states falling to dangerously low funding levels. Two states in particular – Pennsylvania and Kentucky – have seen their plans annual required contribution percentages fall below 60% in each of the last five fiscal years. The chart below shows average percentage of annual required contributions made from FY01 to FY09[6].

[6] Public Pension Database. 2001-2010. Center for Retirement Research at Boston College and Center for State and Local Government Excellence

Figure 4

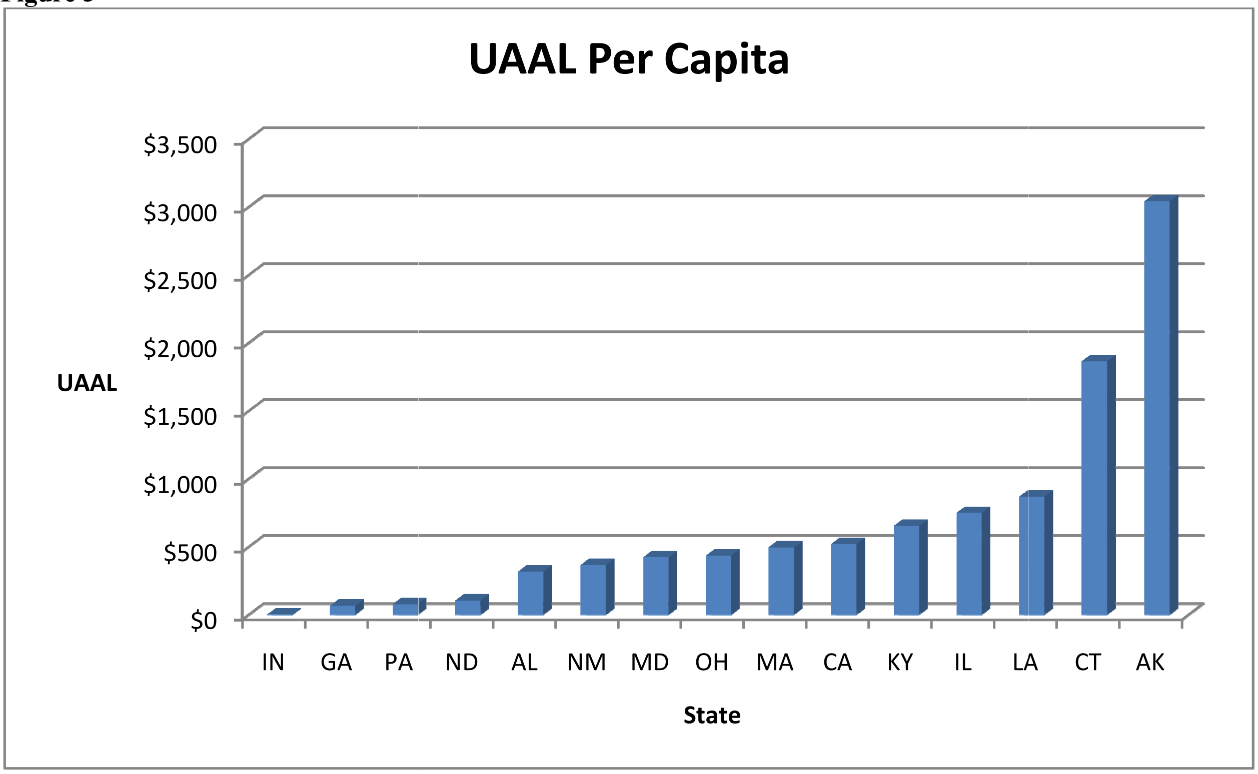


The chart above shows that most plans have, on average, made close to 100% of their annual required contributions. A few however fell short by significant amounts, putting the long term health of their fund in jeopardy. With this measure we are able to get a more comprehensive image of overall plan health. Some of the states that measured well in other categories are among those with the lowest percentages of average annual required contributions made, diminishing their overall health.

UAAL Per Capita

The final portion of the state-specific analysis brings another dimension into the picture – state population. In this analysis UAAL is based on the total state population, since the associated costs affect everyone in the overall budgetary sense, rather than just those annuitants and beneficiaries of the plan itself[7]. Each time a state promises future payments to an employee it is creating a liability for taxpayers. The chart below illustrates UAAL per capita. In this graph, both UAAL and total state population are calculated as nine-year averages[8].

Figure 5



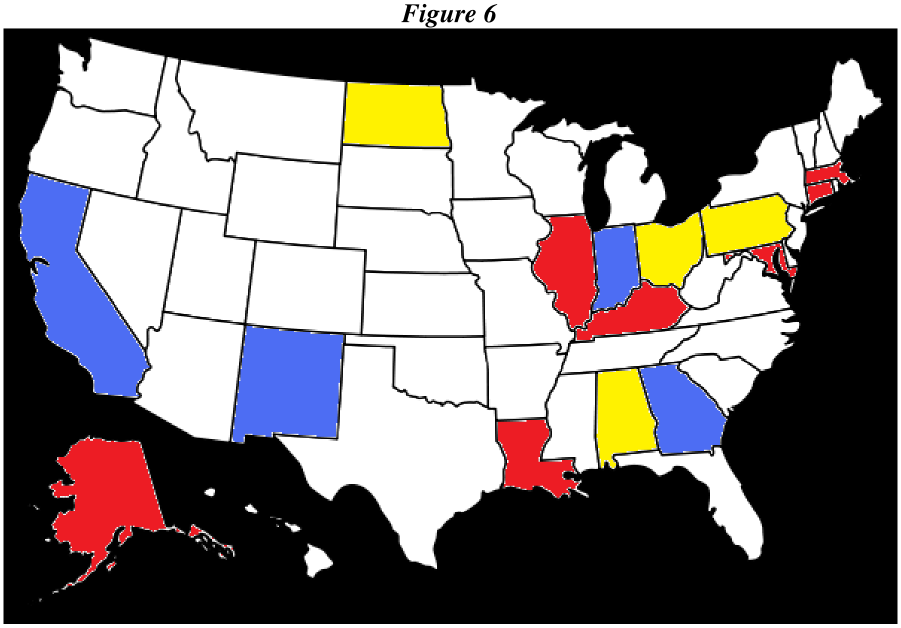
Of all the states in the study, only Connecticut and Alaska carry per capita liabilities over $1,000 per person. Kentucky, Illinois, and Louisiana are all over $500 per person, while the other states fall short of that number. Indiana is by far the healthiest plan by this measure – they carry a miniscule per capita cost for total unfunded liabilities.

[7] Data Source: "Population Estimates," n.d., http://www.census.gov/popest/states/.
[8] Public Pension Database. 2001-2010. Center for Retirement Research at Boston College and Center for State and Local Government Excellence

A Comprehensive View of Pension Fund Health

Based on the four variables, we can now begin to discern which funds are in the most serious trouble, and which are operating at healthy levels. The map below shows a visualization of the state analysis, with states classified as "good (blue)," "average (yellow)," or "poor (red)," based on the variables chosen for evaluation and followed by a brief explanation for why states are categorized as they are.

Figure 6



Alabama ERS: Alabama ERS ranks in the middle of the pack in this study. It was above 80% funding ratio until FY08, but had has declined steadily in each year. If its funding ratio can rise to prior levels, the plan could be considered healthy, especially when considering that 100% of ARC have been made in each year from FY01-FY09.

Alaska PERS: Beginning in FY02, Alaska has experienced funding ratios slightly below average, a trend that has continued through FY09. From FY01-FY04 the system made 100% (or above) of its annual required contributions, but this trend stopped abruptly in FY05, when the system checked in at just 47% of ARC. A slightly below average funding ratio isn't enough alone to put Alaska PERS among the worst plans in this study, but when combined with the sharp decline in % ARC, I had no choice but to categorize the plan as unhealthy. Additionally, Alaska PERS carries a high cost of unfunded liabilities per capita, probably as a result of 10% of Alaskans being employed by state or local government[9].

California PERF: California experienced high average funding ratios and made 100 percent of their annual required contributions in every year of study. The rank in the middle of the group for total UAAL per capita, though the ratio is edging closer to $1,000/resident as of FY09. This is not enough to declare the fund unhealthy, but the state must keep an eye on growing liabilities in the future.

Connecticut SERS: Connecticut SERS was among the most poorly funded plans in this study. They are on the higher end of percentage of annual required contributions made, but disproportionately low funding levels mean that this system is in trouble. Additionally, Connecticut SERS carries a liability per capita cost of over $1,000 per person, making it the second highest in this study for that measure.

Georgia ERS: Georgia's funding ratio has fallen steadily from FY01-FY09, but it's not particularly troublesome because it was well over 100% to begin with (as of FY09, Georgia ERS is funded at 86%). The plan is helped by the fact that 100% of ARC has been made in each year, which contributed to its healthy rating.

Illinois SERS: By every measure of plan health, Illinois SERS is in bad shape. The system was not funded appropriately in any year of study, and with the third lowest percentage of annual required contributions made from FY01-FY09, it looks like this system will experience continued financial issues going forward.

Indiana PERF: Indiana PERF is the healthiest plan in this study. Neither its funding ratio nor percentage of annual required contributions made has dipped below 90% in any year of this study. Additionally, Indiana residents pay an astonishingly low $300 per person for pension related expenses.

Kentucky ERS: Like Illinois, Kentucky is unique in this study for ranking poorly in both funding ratio and percentage of annual required contributions made. Kentucky ranks second to last among the states observed for the former category, so things are not likely to improve soon.

Louisiana SERS: Louisiana SERS has made above 90% of its ARC in every year of this study, but has never been funded at a rate higher than 74%, and that level was acquired in the first year of this study. An average funding level so low makes it impossible to characterize Louisiana SERS as anything but unhealthy.

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[9] Alaska Department of Labor & Workforce Development

Maryland PERS: Maryland is among the most unhealthy plans in this study, combining low funding levels with low % of ARC on average. As mentioned above with Illinois SERS and Kentucky ERS, this is a challenging combination for a pension fund.

Massachusetts SERS: Massachusetts has been up-and-down based on the criteria of this study. In every year except for FY05 and FY09, it has been funded above 80% with nearly 100% of ARC being made. However, a sharp decline was noticed in FY09, putting both levels far below accepted standards. The fact that the most recent year numbers look so bad, combined with the overall volatility of this plan place it in the unhealthy category.

New Mexico PERF: New Mexico PERF has been funded at acceptable levels and has made 100% (or more) of ARC in every year from FY01-FY09. It is among the healthiest of the fifteen plans looked at in this study.

North Dakota PERS: North Dakota has always experienced acceptable funding levels, but it since FY04 the plan has had a serious challenge meeting its % of ARC. Because of the potential for future problems, North Dakota is ranked among the middle in this study in terms of health.

Ohio PERS: Ohio PERS has made 100% of ARC in every year of study, but it's funding levels have experienced some volatility, falling from acceptable levels to just 75% in FY09, putting it among the middle of this study.

Pennsylvania SERS: Pennsylvania SERS is similar to North Dakota PERS – high funding levels in every year of study, supplemented with low percentages of ARC made. Pennsylvania's percentages are extremely low, falling below 40% from FY05-FY09.

CONCLUSION

Despite the negative attention given to the condition of public pension funds, a simple analysis of fifteen states shows that there is intense variation in their levels of funding as measured by different variables. Though a noticeable downward trend exists when moving from FY01 to FY09, it should also be noted that some states have managed to appropriately fund their pension system while others have not.