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Are State and Local Pension Funds Taking More Risk Now Than Before?

In the headline for a December 2, 2014, *Wall Street Journal* article, Andrew Biggs went as far as saying, "Public Pensions Need Gamblers Anonymous."[1] Of course, various writings by opponents of public pensions base their claims on the type of assets pension funds hold. None of these writings present any evidence through any measure of risk to support their points. The purpose of this issue brief is to use a common measure of risk and examine whether pension funds are taking on more risk than before. More specifically, we examine the level of risk taken by state and local pension funds to generate each unit of return during the 1960s, 1970s, 1980s, 1990s, and 2000s.

In a nutshell, our analysis of historical data from the Census of Governments, US Bureau of Census, shows that state and local pension funds are not taking higher risk than before. In a way, they are taking lower risk now than they did in the 1970s and 1980s. The only periods that disrupted this trend were the 2001 and 2007 recessions during the Bush era.

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Data and Methodology

The data used for this analysis were obtained from two sources. The first data set, historical data, was obtained directly from the US Bureau of Census. This set covers data from 1967 to 2007, with some years for which data are not available. The second data set was obtained from the Census website.[2] These data cover 1993 to 2014. For the purpose of this study, we extracted two key variables: total assets and total investment income. We then calculated the rate of return for each year and each state from 1957 to 2014.

We use standard deviation of the rate of return as a measure of risk. Level of risk per unit of return was then calculated using the ratio of risk and return. These calculations were made first using the historical data file. Since

[1] See http://www.wsj.com/articles/andrew-g-biggs-public-pensions-need-gamblers-anonymous-1417563447.

[2] See http://www.census.gov/govs/retire/historical_data.html.

historical data do not have data for all the years, we picked selected years (10 years apart, starting with 2007 and going back to 1967) and examined the risk taken by 50 states in each of those years. These results are shown in Table 1.

We then combined the more recent data from the Census website with data from the historical file and calculated the level of risk taken by all states within each decade. These results are shown in Table 2.

Results

As mentioned above, Table 1 is based on selected years (10 years apart) starting with the latest year (2007) in the data set. Because of missing data, this data set does not allow analysis by decades. The results in Table 1 show that states are taking lower risk for each unit of return on investment than they did before. For example, the level of risk in 1977, 1987, and 1997 was between 0.22 and 0.38. The same figure for 2007 was 0.15. In other words, state and local pension funds in 2007 were taking lower risk for generating each unit of return on investments.

Table 1. Level of Risk Taken by 50 States and DC for Each Unit of Rate of Return for Selected Years, 1967–2007

Selected Years (The Latest Year in Historical Public Pension Data File from Census Is 2007)	**Average Rate of Return** (50 States and DC in a Given Year)	**Level of Risk** (Standard Deviation)	**Level of Risk Per Unit of Rate of Return**
1967	3.89	0.44	0.11
1977	6.53	1.58	0.22
1987	11.35	2.60	0.22
1997	10.63	4.13	0.38
2007	13.67	2.15	0.15

Source: Author's calculations using the Census of Governments (Historical Public Pension Data File – 2007 is the latest year).

The results in Table 2 are based on the analysis of the risk state and local pensions were taking during each decade. This table shows that state and local pension plans are taking slightly higher risk in recent decades than they did in the 1960s and 1970s. But the risk level has been relatively stable during the past 30 years.

Table 2. Level of Risk Taken by 50 States and DC for Each Unit of Return for Each Decade, 1960s–2000s			
Decades	**Average Rate of Return** (50 States and DC in Each Decade)	**Level of Risk** (Standard Deviation)	**Level of Risk per Unit of Rate of Return**
1960s	3.78	0.33	0.09
1970s	5.44	0.65	0.11
1980s	9.11	1.37	0.15
1990s	9.41	1.47	0.16
2000s	11.97	1.92	0.16*

Source: Author's calculations using the Census of Governments.
Note: Excludes the two Bush era recessions, which added unusual volatility.

Closing Thoughts

There is a continuous barrage of attacks on public pension funds. Opponents of public pension funds argue that they are taking too much risk and their rate of return assumption is too high. If pension funds lower their rate of return assumptions, then the opponents argue that unfunded liability will rise and state and local governments will not be able to pay the required contributions. The ultimate goal of opponents of public pensions is to dismantle them and convert them into do-it-yourself retirement saving schemes. Our earlier research shows that when public or private pensions are converted from defined benefits to do-it-yourself defined contribution plans, income inequality rises. When income inequality rises, it drags the economy down. In the end everyone suffers, not just public employees.

As the foregoing analysis shows, the arguments advanced by the opponents of public pensions are based on ideology rather than facts. For example, the opponents argue, pension funds are taking too much risk and need help from Gamblers Anonymous. Empirical data show that pension funds are not taking higher risk now than they did before, although the asset allocation may have changed over time. Kudos to administrators and trustees of public pensions!

[3] See http://www.ncpers.org/files/NCPERS%20Income%20Inequality%20Paper_Web(1).pdf

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