



## Public Pension Showdown: Actuaries vs. Economists

By Charlie Curnow

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It's high noon in the showdown over public pension accounting methodologies. On one side we have actuaries, who say that pension liabilities should be discounted at the rate historically returned by the funds' assets – 8 percent. On the other side are economists, who say this is nonsense – a risk-free rate, currently around 3.5 percent, should be used in the discounting calculation.

At stake is \$2 trillion dollars. That is the approximate difference in just how underfunded our state pension systems are depending on which calculation you favor.

Both approaches have merits, according to a recent paper, "Valuing and Funding Public Pension Liabilities" by John Minahan, a senior finance lecturer at the MIT Sloan School.

The actuaries, so far, have had the upper hand; their approach is endorsed by Generally Accepted Accounting Principles. What ultimately matters, however, is whether the triumphant accounting method in this struggle leads pension funds to set aside enough funds to meet future promises to retirees. On that score, a risk-free approach may provide a more realistic assessment of future needs.

State pension systems currently have about \$2 trillion saved up, but actuaries using traditional accounting standards estimate that states really need a total of \$3 trillion nationwide, suggesting a fiscal gap of about \$1 trillion before the pension plans can be considered fully funded. Minahan and other economists, however, argue that the amount that state pension systems should really set aside is closer to \$5 trillion.

To illustrate the debate over accounting methodologies, Minahan uses the example of an employer who promises to pay an employee \$100 one year from now and says that he will "fully fund" that promise. If the employer is able to earn 5 percent per year by investing in a "risk-free" asset such as U.S. Treasury bonds, this means he would only need to set aside \$95.24, the amount that if increased by 5 percent, would equal \$100. This changes, however, if the employer decides to invest in riskier assets, such as stocks. Suppose the employer decides to invest in an asset that has a 50/50 chance of earning as much as 8 percent per year, or as little as 4 percent per year. Actuaries using accounting methods currently favored by pension managers would say that the employer could assume a 6 percent return on average, and thus could set aside just \$94.34. According to Minahan, however, the employer would really have to set aside \$96.15, the amount that if increased by just 4 percent would equal \$100, in order to guarantee full funding even in the worst-case market scenario.



Even though the dispute over public pension accounting methodologies may seem like technical hairsplitting, the policy implications of the ongoing debate are enormous. If states decided to play it safe and set aside an additional \$3 trillion instead of \$1 trillion in order to fully fund employee pension plans, that decision would have a huge ramifications, such as significantly reduced benefits and higher contribution rates for hundreds of thousands of state employees.

Public pension managers continue to defend the use of traditional actuarial methods to calculate assets and unfunded liabilities. Keith Brainard, research director at the National Association of State Retirement Administrators, responds to criticisms like Minahan's by pointing to the long-term performance of state pension assets relative to assumed rates of returns. While returns have indeed fluctuated wildly over the past few years — last year brought a positive return of 20 percent, while the past three years have seen an overall loss of 1 percent — the median rate of return over the past 25 years has been 9.25 percent, which actually beats the common actuarial estimate of 8 percent.

Using either valuation method, however, state pension plans are still underfunded relative to federal guidelines. The Government Accountability Office considers current and projected assets covering 80 percent of all present and future liabilities to be a healthy funding level for public pension systems. Traditional actuarial methods suggest that current and projected assets cover about 70 percent of all present and future promises nationwide. Methods supported by Minahan and other economists however, suggest that the aggregate funding level is actually closer to 40 percent.

Ultimately, market performance may settle the ongoing debate between state actuaries and economists. If Grantham Mayo Van Otterloo chairman Jeremy Grantham's forecast of 3.5 percent returns for a balanced 60/40 equity fixed income portfolio over the next seven years is correct, states would be wise to hew to the more conservative approach of Minahan and other economists. In that case, continuing the assumption of 8 percent annual growth would force pension managers to invest in even riskier portfolios than they currently own. That might be fine if pension funds had an unlimited time horizon, like university endowments. Pension funds, however, must be able to meet the liabilities of employees as they retire, which suggests an average time horizon of 20 or 30 years. A more endowment-like approach to investing — and a trend toward ever-riskier assets — could therefore be disastrous for public pension funds if the next few decades are like the last quarter century, during which stocks actually earned less than bonds.

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