Alicia Munnell’s book, *State and Local Pensions: What Now?* is a comprehensive introduction to public pension funds for the newcomer and a useful reference for seasoned professionals. It covers the history of public pensions since the 1970s, including the variations in history, politics and financing among states, and current policy issues. Munnell also stakes out a position on an important debate between economists and actuaries regarding liability valuation, and develops a background narrative portraying economists as impulsive, argumentative and clueless.

The valuation debate has implications that ripple through all aspects of pension fund management, including benefit negotiation, financial reporting, financial analysis, contribution planning, investment management and public policy — or at least it does if you look at it through the lens of financial economics. The author, while trained as an economist, thinks the debate is “sterile” and a distraction from the business at hand. This is ironic because, as we shall see, Munnell’s sanguine assessment of the financial health of public pension funds depends on her siding with the actuaries on a key element of the debate.

**Background**

At the end of 2010, state and local pension liabilities were valued at $5.2 trillion using the principles of economics and at $3.4 trillion using GASB (actuarial) standards. Assets were $2.6 trillion. The difference in liability valuations between the two approaches derives in a narrow mathematical sense from the choice of discount rates. More fundamentally, economists and actuaries get different answers because they ask different questions. Economists ask, “What are the liabilities worth?” and call the answer a “valuation.” Actuaries ask, “How much funding will on average be enough, given an expected return on assets?” and also call the answer a “valuation.” To avoid confusion, I

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1 The numbers come from the author, page 73. The author’s economic liability number is understated by at least $1 trillion because she used a 5% discount rate when market low-risk rates were about 3%. However, her numbers are sufficient to illustrate my points, so I will use them and save the “3% vs. 5%” argument for another day.

2 The Government Accounting Standards Board (GASB) determines the accounting rules used by public pension funds. GASB rules are strongly influenced by received actuarial practice and largely ignore economics.

3 “Worth” has shades of meaning. For example, one might ask what pension promises are worth if they are credibly guaranteed. Alternately, one might ask what the promises are worth under some set of expectations regarding the probability of default.
will use the terms “valuation liability” to refer to the answer to the economists’ question, and “funding target” or “funding plan” to refer to the answer to the actuaries’ question.

There is no reason why a valuation liability and a funding target need to be the same number. Nor do they need to be different. It all depends on the specifics of the situation. In the case of state and local pensions, promises have been made that are worth $5.2 trillion, while the funding plan calls for backing these promises with $3.4 trillion in assets. In other words, the funding plan calls for assets to be 65% of liabilities. It would seem reasonable, therefore, to use terms such as “65% funded” or “65% funded ratio” when describing the situation where assets are funded according to plan. Despite this, if state pension assets were indeed $3.4 trillion, most actuaries and plan sponsors would refer to the plans as 100% funded. This is most unfortunate, because funding in this scenario is 100% of plan. That the plan calls for 65% funding seems to be lost in the shuffle.

This is really just a semantic issue. Economists would prefer to reserve the term “fully funded” for the case where assets are greater than or equal to liabilities. Actuaries and plan sponsors, enabled by GASB, use the term “fully funded” to mean that the plan is fully funded, even if the plan calls for assets to be less than liabilities. As with all semantic issues, adverse consequences could be avoided if everyone understands the issue. But if some people get tripped up by the semantics, misunderstandings with real consequences may result.

Summary of the book

1. **Public pensions are, for the most part, in pretty good shape.** The current situation is fairly benign and much improved relative to a few decades ago. Forty years ago, most public pensions were 0% funded and cauldrons of corruption. Today, public funds are 76% funded on average (GASB-basis) and professionally managed. If it weren’t for two financial crises in one decade, pension funds would be fully funded.

2. **There is substantial variation among states.** The few funds that are in trouble behaved badly, mostly by failing to make their Annual Required Contribution. For these states, “neither changing the discount rate nor curbing union power provides a solution,” according to Munnell. “The path forward is clear: they will have to make tough decisions to distribute the pain among current retirees, current employees, future employees and future taxpayers.”

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4 Financial economics calls for discounting cash flows at a rate that reflects the risk of the cash flows, a low-risk rate in the case of pension liabilities and about 3% in the current environment. A funding/actuarial/GASB perspective calls for discounting cash flows at the expected return on the assets that have been set aside to fund the liabilities — about 8% is typically assumed.

5 The Annual Required Contribution (ARC) is the contribution that is called for by GASB standards.
3. **Economists are correct that risk-free discounting should be used for financial reporting**, but this has no relevance for funding. Valuation and funding are different issues.

4. **Economists bark up wrong tree** in their focus on how to value liabilities. Discount rates have little real consequence.

5. **Public funds should reduce equity because the return pattern of equities creates a perverse incentive to offer excessively high pension benefits.** The author believes that pensions funded with equity are less expensive than pensions funded with lower-risk assets, but there is a limit to how much equity can be used. Pension managers have a tendency to increase benefits after good return experiences but not to reduce them when good returns cease, resulting in richer and richer benefits over time. To avoid this, investment in equities must be lower than it is today, even though this will increase the cost of pensions.

6. **Public workers are not paid more than private sector workers on average**, on a total compensation basis. They do, however, receive a larger portion of their total compensation as pension benefits. The author fears that, if pension benefits are reduced for public workers and other forms of compensation are not increased to compensate, public entities will have a disadvantage competing for human resources.

7. **Pension contributions accounted for 4.6% of state and local revenues in 2009** and could go much higher if return expectations are not met. There is significant variation in projected contributions by state. States with richer benefits (like New York and California) and states that are more underfunded (like Illinois and New Jersey) will have higher contributions.

8. **Defined contribution plans have a role in the public sector as complements to defined benefit plans**, not as substitutes. A complementary arrangement provides for optimal risk sharing between taxpayers and public employees.

**Critique of the book**

1. **The author is absolutely correct that valuation and funding are distinct concepts.** This is a critical point because one can’t have a productive conversation about pension liabilities if valuation and funding aren’t recognized as separate, albeit related, concepts.

2. **While the author acknowledges that risk-free discounting is appropriate for financial reporting, she fails to carry through with the implications of this acknowledgement on the measurement of funded status.** After establishing that valuation and funding are separ-
able, the author does not address the natural follow-up question: Which of the two liability measures should be used as the denominator for calculating the ratio of assets to liabilities? When quoting funded status, the author treats $3.4 trillion\(^6\) as the denominator, even though she thinks that economic measurement would yield “more realistic funding ratios.”

A funded ratio compares the value of assets to the value of the liabilities. The aggregate fund\(^7\) has $2.6 trillion in assets and $5.2 trillion in liabilities, for a 50% funded ratio. (It’s not that complicated.) A plan that calls for funding $5.2 trillion in liabilities with $3.4 trillion in assets is a plan to fund the liabilities at 65\%(3.4/5.2). If the fund has assets that are only 76\% of plan (2.6/3.4), the funded ratio is 50\%(2.6/5.2). This is quite straightforward and ought to be noncontroversial. Unfortunately, common usage of the term “funded ratio”, including that of the author and GASB, confuses funding relative to plan with funding relative to liabilities.

3. **Public pension funds are in trouble.** By the author’s own numbers, the value of public pension liabilities is $2.6 trillion greater than the value of assets.\(^8\) GASB accounting may make this gap look like only $800 billion – which would be bad enough – but this does not change the reality of the situation. Not only are public funds in trouble, they are all doubling down on the same bet –compensating for underfunding by investing in a broadly diversified portfolio of equity-like risks. Consequently, when trouble does materialize, it will likely be a systemic phenomenon.

There are three possible outcomes to our current path:

- **Doubling down saves us.** The current system underfunds pensions and then attempts to make up for it by investing in risky assets. It might work, but it also might not.

- **Doubling down fails, and taxpayers make beneficiaries whole.** In the event that doubling down fails, taxpayers are on the hook for making up the difference.

- **Doubling down fails, taxpayers balk and beneficiaries take the hit.** If doubling down fails and taxpayers refuse to honor the promises elected officials have made on their behalves, pension beneficiaries may get less than what is promised them.

All of these outcomes are possible, as is some combination of them. It seems appropriate for pension professionals, plan sponsors, beneficiaries and citizens to

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\(^6\) Or the equivalent number, if she is talking about an individual plan rather than the aggregate.

\(^7\) For expositional purposes, we will discuss the aggregate of all state funds as if it is a single fund.

\(^8\) As noted earlier, this figure understates the gap due to the author’s choice of 5\% as the “risk-free” rate. If 3\% had been used, the gap would be closer to $4 trillion.
consider whether this is a gamble we really want to take. I find it puzzling that the author seems to dismiss the seriousness of these issues.

4. **The author’s caricature of economists is not helpful.** In the author’s words:

   - “Among the many complex questions surrounding the provisions of pensions in the public sector … [the issue] that economists pounced on was the rate used to discount obligations.”
   - “The discount rate is a narrow prism through which to view the hard questions public plan sponsors face.”
   - “The story of state and local pensions is big and complicated. It cannot be reduced to a single mantra such as discounting the liabilities by the riskless rate or limiting union power.”

I am not aware that anyone is claiming that discount rates or reduced union power alone can solve the problem, so the author seems to be attacking a straw man. It is true that economists have paid a lot of attention to the discount rate(s) used for calculating the present value of liabilities, but this is because it is an important issue. The difference between $5.2 trillion and $3.4 trillion is a big number, and which number you use in what context has consequences that ripple through all aspects of pension fund management and public policy. Attention to this critical issue, contrary to the author’s suggestion, does not require one ignore the full complexity of the problem. Indeed, one might argue that attention to valuation is a necessary component of embracing the full complexity of the pension problem.

5. **I find odd the reason that the author recommends reducing equities.** Let’s accept for the sake of argument her (questionable) premise that funding with equity is cheaper than funding with lower risk assets. How big is the alleged cost savings from investing in risky rather than secure assets? Using the author’s numbers, full funding with low-risk assets will cost $5.2 million while funding with a diversified risky portfolio will cost $3.4 trillion, for a savings of $1.8 trillion. For $1.8 trillion, wouldn’t it make more sense to build a governance environment that protects against the tendency to increase benefits after strong returns rather than give up the benefits of equities?

6. **“Sharing the pain” many sound reasonable for funds in trouble, but it is actually a fairly extreme suggestion.** Failure to pay pensions that have already been earned is a major breach of trust. Reducing the accumulation of new pension promises is one thing, but failing to pay that which has already been promised is another thing altogether: a default.

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9 In fairness, the Munnell does not recommend completely eliminating equity, so the hypothesized savings is only a fraction of $1.8 trillion, but is still a big number.
Conclusion

Valuing liabilities in a manner that meaningfully informs financial analysis and decision-making is a first-order challenge for public pension fund managers. The valuation methods of GASB are deeply flawed. They allow discounting fixed liabilities at a rate that reflects an equity risk premium. If left uncorrected, use of GASB liability valuations can create a variety of distortions in financial analysis and decision-making, such as undervaluation of liabilities, underfunding of liabilities and excessive risk-taking as pension fund managers attempt to earn their way out of the holes created by underfunding. While the need for accounting reform is by no means the only issue facing public pension funds, it is an important part of the mix.

I find the narratives of this book puzzling. The author repeatedly states how unimportant the debate between economists and actuaries is, yet her sanguine assessment of public fund finances seems to depend on her siding with the actuaries when measuring funded status. She also portrays economists in an unfavorable light, as if the idea that low-risk liabilities should be discounted at a low-risk discount rate is merely a personality quirk of economists.

The book does contain a lot of good data, but the data is not consistent with the author’s narrative. Public pension funds are not in good financial shape. Their weak financial position is exacerbated by entrenched adherence to GASB liability valuation rules, which makes financial analysis, communication and strategizing about improving the situation more difficult. This isn’t a good situation. Economists and financial analysts should be speaking up more about this issue, not less.

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