

Why Is There Debate About Whether Economics Applies to Pensions?

JOHN R. MINAHAN

JOHN R. MINAHAN is a senior lecturer in finance at MIT Sloan School of Management in Cambridge, MA. jminahan@mit.edu

The accounting rules for valuing pension liabilities are inconsistent with the principles of economics.^{1,2} This is not in dispute. Whether or not it matters, however, is subject to fierce “debate.” I put “debate” in quotes because from the perspective of economics, there is no debate: The same principles of economics that apply to the valuation of any asset or liability apply to valuation of pension liabilities. The economic value of already accrued liabilities and of prospective future commitments are crucial elements of the financial picture of any pension fund, including those sponsored by public entities. There is no “pension exemption” or “public entity exemption” to the principles of economics.

Economists have been attempting to explain the principles of economics to public plan sponsors, public pension actuaries, and government accounting standard setters for over a decade, but the public fund community has brushed off these overtures. While there are a few champions of the economic perspective in the public fund community, the more common reaction, it seems to me, is for members of the public fund community to respond to economists defensively by invoking red herrings, accusing economists of being out of touch, and, in a few cases, suggesting that economists are politically motivated.³

Economists find this rejection of the field of economics odd. It is not as if economists are straying from their core expertise in thinking that economics has something to say about valuing financial commitments. From this economist’s perch, it appears that the public pension fund community, in responding defensively to the economic critique of pension accounting rules, does not actually give consideration to what economists are attempting to tell them.⁴ This would seem to suggest that the public fund funding crisis will continue to get worse until it becomes impossible to ignore. Unless, perchance, the public fund community starts listening.

This article illustrates how pension liability valuation rules are inconsistent with the principles of economics, describes the opaque decision environment that impedes consideration of economics by pension decision makers, and makes suggestions for action.

HOW PENSION ACCOUNTING RULES ARE INCONSISTENT WITH ECONOMICS

A public fund, a corporate fund, and an insurance company walk into a bank. They each promise to pay \$10 billion 10 years from now in exchange for cash today. How will the banker decide how much cash to give

them? In attempting to value these promises, the banker might ponder the following questions:

What would the value of the promise be if I were confident that the promise would be honored?

What would the value of the promise be if I were to discount the promise to account for the possibility of default?

How much collateral would I require to ensure that there is 50/50 chance that the collateral turns out to be enough, given an assumption for the expected return on the collateral?⁵

To answer question 1, the banker needs to know the interest rate on secure promises. To answer question 2, the banker needs to know the interest rate on promises with credit risk comparable to that of the promise. To answer question 3, the banker needs to have a point of view on the expected return of the collateral. *The answers do not depend on whether the promise is made by a public fund, a corporate fund, or an insurance company.*⁶

Unfortunately, pension accounting rules introduce confusion to what otherwise is a straightforward set of questions. The Government Accounting Standards Board (GASB) calls for valuing liabilities by answering question 3.⁷ The Financial Accounting Standards Board (FASB) calls for valuing liabilities by answering question 2, unless the liabilities are those of a Taft-Hartley fund, in which case question 3 should be answered. Neither FASB nor GASB seem to have any interest in question 1.

Financial economics recognizes that all three questions may be relevant. The answer to question 1 is of particular interest to economists for two reasons: 1) It is reasonable to think of the answer to question 1 as representing the 100% mark for full funding,⁸ and 2) it represents the cost to the sponsor of providing a secure promise and the value of such a promise to plan participants.

To put some numbers on it, suppose the most secure interest rate available is 3%, the investment grade credit rate is 5%, and the expected return on assets is 8%, all with a 10-year horizon. See Exhibit 1 for the implied answers to the banker's questions.

The italicized numbers show the current practice for valuing public and corporate pension liabilities, according to GASB and FASB rules, respectively. Note that GASB and FASB rules yield different answers, \$4.6 billion and \$6.1 billion respectively, only because they answer different questions and not because of any fundamental difference in the promises. If one were to hold fixed the question being asked, this inconsistency would be eliminated. *Note again that the answers to the banker's three questions do not depend on who the promisor is.*

Another perhaps more serious problem is that neither GASB nor FASB rules address the question, "What is a secure promise worth?" This leads to an understatement of the value of secure liabilities for both public and corporate funds. For example, suppose you have a corporate fund and a public fund for which the probability of default is *de minimis*. The accounting rules would call for valuing the public liability at \$4.6 billion and the corporate liability at \$6.1 billion, even though basic present value math yields a value of \$7.4 billion for both promises. Thus, according to current rules, public fund liabilities would be undervalued by 38% and the corporate fund liabilities by 18%.

How GASB's New Rules Miss the Boat

GASB responded to the economic critique by conducting a formal review of the rules, which yielded a rule change effective in 2014.⁹ Under the new rules, "funded" liabilities will continue to be valued at the expected return on assets. However, unfunded liabilities will be discounted at a municipal bond rate. While this may look like GASB is throwing a bone to the economists—since it acknowledges the legitimacy of a market discount rate—the new rule not only fails to fix the problem, it introduces new anomalies.¹⁰ For example, the new rule values unfunded liabilities higher than funded liabilities.

To see this, consider Exhibit 2. Suppose the public fund in the example above has \$4.6 billion in assets, so it is

EXHIBIT 1

What Is the Value of a Promise to Pay \$10 Billion in Ten Years?

	Public	Corporate	Insurance
Promise	\$10 b in 10 years	\$10 b in 10 years	\$10 b in 10 years
Value of secure promise	\$7.4 billion	\$7.4 billion	\$7.4 billion
Value of risky promise	\$6.1 billion	<i>\$6.1 billion</i>	\$6.1 billion
Collateral with 50/50 chance of being enough	<i>\$4.6 billion</i>	\$4.6 billion	\$4.6 billion

Current Accounting Practice Shown in Italics.

EXHIBIT 2

A Decrease in Collateral Increases the Value of Liabilities Secured by that Collateral According to New GASB Rules

	Fully Funded by GASB Measure	Underfunded by GASB Measure
Promised pension Assets	\$10 b (given)	\$10 b (given)
Value of liabilities	\$4.6 b (given)	\$3.68 b (given)
	\$4.6 b (derived)	\$4.9 b (derived)

fully funded by the new GASB measure. Now suppose the fund experiences a 20% asset loss: Assets fall to \$3.68 billion and GASB would call for the \$920 million gap between assets and the “fully funded” liability measure to be rediscounted at a lower rate. If we were to rediscount at 5%, the \$920 million asset gap would be valued at \$1.22 billion on the liability side, resulting in total liabilities of \$4.9 billion, according to GASB. *A decline in the value of the collateral has led to an increased valuation for the promises backed by that collateral.*

While this makes no sense from a valuation perspective, it does create a (presumably desirable) funding incentive, since unfunded liabilities “ding” your official funded status above and beyond the amount of underfunding. Unfortunately, it also reflects that GASB has not internalized the economists’ critique of GASB rules.

Flawed accounting rules are not fatal in and of themselves, as competent financial analysis can compensate for poor accounting. Financial analysts routinely start with misleading or garbled accounting data and make adjustments to render the data economically meaningful. However, misleading accounting can be a problem if decision makers do not recognize the problem and/or do not use financial analysis to fix it, and this in turn enables poor decisions.

OPAQUE DECISION ENVIRONMENTS INHIBIT PROFESSIONAL FINANCIAL ANALYSIS

The confused rules of FASB and GASB create an “opaque decision environment,” by which I mean two things, financial opacity and social opacity.

Financial opacity describes a situation where pension managers do not have the best information available regarding the cost of the pension to the sponsor, the

value of the pension to plan participants, and the financial condition of the fund. In this situation, important financial decisions may be made without those decisions being fully informed by an understanding of the context and potential consequences of those decisions.

In principle, financial opacity is easy to correct: Just define new terms and measures so as to be able to focus on what matters—i.e., just do good financial analysis. However, in the case of public pension funds, financial analysis is unable to draw back the curtain because of *social* opacity.

Social opacity describes a situation where impediments exist to open communication. In the public pension world, red herrings play a central role in preventing open communication. The red herrings described below I first encountered in practice.¹¹ That is, when I would raise the topic of economic value of liabilities to a plan sponsor or actuary and even some investment professionals, I would encounter these responses as ways of dismissing the relevance of economics to pension liability valuation. As I began to read about this topic, I discovered that the written debate paralleled my personal experience.¹²

Red Herrings

We have a long-term perspective. When people say this after being asked about economic valuation of pension liabilities, it seems like they think this settles the matter, as if my question was motivated out of a simple misunderstanding—that I did not realize that they had a long-term perspective—and now that that has been clarified, there is nothing left to talk about. The first time I heard this “rebuttal” to the economics perspective, I could not figure out why the actuary with whom I was speaking thought a long-term perspective somehow made economics irrelevant. However, after hearing the rebuttal dozens if not a hundred times, it began to seem that those who disagree with economics consider it common knowledge that economists have a short-term perspective, and that this makes their views on pensions irrelevant. I am not aware of any economist who agrees with this characterization.

However, I do think I have come to understand the source of this red herring: Confusion about the relationship between time horizon and valuation seems to derive from confusion about the difference between valuation and funding. When I have pressed plan sponsors and

actuaries about why they believe a “perpetual entity” is justified in valuing its liabilities lower than a “terminable entity” would value the same liabilities, they usually respond by saying something like, “Because we will be around to make up the difference if assets turn out to be insufficient.” That is, they argue that *funding* can be less for a public fund than a comparable corporate fund because the public fund has a perpetual entity backstopping the promises. Whatever one thinks about funding public funds less than private ones because public funds have a public backstop, reduced funding does not reduce the value of the pensions if the backstop is credible. Indeed, the public backstop *increases* the value of the liabilities relative to what they would be worth without the backstop.

Economists focus on termination liabilities, which are irrelevant for going concerns. In the actuarial view of the world, there is one time when the economists’ view of the world is relevant: when a plan is being terminated. The actuaries are correct as far as they go: If a plan is being terminated, the correct way to measure the value of the liabilities is to estimate their market value as of the termination date. The actuarial view then commits a logical error of the type “All trees are plants; broccoli is not a tree; therefore broccoli is not a plant.” Specifically, I often encounter the following argument: “MVL¹³ is a termination liability; public plans are long-term entities with no intent of terminating; therefore, MVL is irrelevant for public funds.”¹⁴ Yes, MVL is a termination liability in the sense that it is what the liabilities would be worth if you terminated the plan. However, MVL also represents the value of liabilities if you do not terminate the plan. Using MVL as a termination liability does not preclude using it in a going concern context as well.

We don’t make the rules; we just live by them. The “rules” cover accounting and funding. They do not constrain financial analysis. Nor do they constrain decisions from being informed by financial analysis. Financial analysts often run into situations where accounting does not capture a clear picture of the economics that one is analyzing. Indeed, starting with imperfect data and attempting to extract useful information from it is, in large part, what financial analysis is all about. There is no conflict between following the rules for accounting purposes and conducting financial analysis to translate the accounting numbers into something economically meaningful.

We can’t afford to lower the discount rate.

I was recently at a public conference where I raised the issue of how to choose an appropriate discount rate for public pension liabilities and, specifically, whether presently used discount rates are too high. The head of a state pension fund said, “I would love to lower my discount rate, but the reality is that the state can’t afford the increase in contributions that would result from lowering the discount rate.” Similarly, I once heard a different head of a state pension fund say, dismissively, “Yeah, right, like I’m gonna get up in front of the state legislature and ask for a tax increase so we can lower our discount rate.”¹⁵

To an economist, there is a correct discount rate independent of whether the state can afford the implied contributions. Practical or political realities may “force” use of an inflated discount rate, but that does not mean it isn’t inflated, and that doesn’t mean that the resulting measure of the liabilities isn’t understated. Transparency would seem to suggest that, if the plan sponsor cannot afford the contributions, then it cannot afford the benefits.

Economists are driven by a desire to make public rules consistent with corporate rules; since public entities are very different from corporations, this desire is misplaced. It is true that economists place a high value on the consistent application of a coherent set of principles. However, economists have no desire to make public fund accounting consistent with corporate fund accounting per se—indeed, corporate pension accounting also has its flaws. The desire is to make both corporate and public valuation rules consistent with general principles of valuation.

These red herrings contribute to social opacity because they serve to deflect discussion away from the fact that accounting rules understate the value of liabilities. Sometimes the “red herring defense” is accompanied by political or ad hominem attacks. Indeed, some defenders of the status quo have come right out and suggested that economists have political motivations for undermining public pensions.¹⁶ Others have cast this issue as one of professional jurisdiction, and have basically told economists to mind their own business.¹⁷ It appears that the distrust of economists on the part of the defenders is so entrenched that the defenders distrust anything that economists say, regardless of how sensible it is.

So while financial analysis could in principle lift the veil of poor accounting, the entire field of financial economics is summarily rejected by public plan spon-

sors and their actuaries for, shall we say, “behavioral” reasons. The norm in the public pension world, it seems, is to take accounting numbers at face value, and to freeze out those who attempt to draw attention to an alternative view from the field of economics. Consequently, financial analysis is compromised.

WHY DOES THIS MATTER?

Ignorance of economics can lead to perverse decisions, by which I mean decisions that would not have been made if the cost and benefits of the decision were transparent, such as overpromising benefits, underfunding those benefits, and excessive risk-taking as one attempts to make up for the hole left by underfunding. There is ample anecdotal evidence that pension decisions have been distorted in this way.¹⁸ Furthermore, it just does not seem plausible that good decisions could arise from a process that rejects professional financial analysis and is unwilling to have a conversation about improving financial analysis.

However we got here, the shortfall between the amount of assets needed to make state pension promises secure (about \$5 trillion) and actual assets (about \$2 trillion) is in the vicinity of \$3 trillion for state-wide funds.¹⁹ Add in municipal and Taft-Hartley funds, and the shortfall is closer to \$4 trillion. To put this in perspective, we are basically talking about the entire unionized workforce – police officers, firemen, teachers, sanitation workers, nurses, construction workers, and so on. A sizable swath of what is left of the middle class in the United States is relying on a retirement system that is only 40% funded.²⁰

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 in the hope that risk-taking will be successful. It might work, but it also might not.

Doubling down fails. Taxpayers make beneficiaries whole. In the event that the risks of doubling down materialize, plan sponsors – taxpayers, in the case of public funds – are on the hook for making up the difference.

Doubling down fails. Taxpayers balk. Beneficiaries take the hit. If doubling down fails and taxpayers refuse to

honor the promises that elected officials have made on their behalf, 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 society as a whole to consider whether this is a gamble we really want to take, or if “path correction” is appropriate. To have such a conversation, economists and financial analysts have to be able to talk about and practice their profession unencumbered by the taboos of those who defend the status quo.

WHAT CAN ONE DO?

Promises are promises. Every effort should be made to fully fund and protect promises that have already been made. While some commentators have called for “sharing the pain”—i.e. closing funding gaps by a mix of tax increases and renegeing on pension promises—this recommendation does not follow from generally accepted economic principles and would involve a significant breach of trust.

A more ethical approach, I believe, would be for plan sponsors to honor all outstanding promises, to raise taxes if that is what is necessary to honor and pre-fund the promises, but to reconsider prospective future promises in light of more informative accounting. Even if public plan sponsors must report misleading accounting numbers as prescribed by GASB, there is no law that prevents them from also calculating economically meaningful measures of the liabilities, publicizing those measures, and making decisions based on those measures.

The problem discussed in this article is essentially one of lack of transparency: Current pension accounting rules obscure the value of pension commitments that public plan sponsors have made and continue to make, and a blizzard of red herrings makes it difficult for those who call for better accounting to make their case in a way that is convincing to those entrenched in more traditional thinking about these issues.

Transparency will not make underfunded pensions magically funded, but it would seem to be a necessary precursor to rationally addressing the problem, so it is quite unfortunate that the “red herring machine” has succeeded in marginalizing the economists who are attempting to improve the situation. It would have been

ideal if GASB had listened to economists and incorporated transparency into its new liability valuation rules, but the fact that it did not, and the fact that the red herring machine continues unabated, does not mean that all hope for transparency is lost.

Transparency can be generated on a grassroots basis by financial analysts, investment advisors, actuaries, and plan sponsors who actually perform analyses, give advice, and make decisions. Those who understand economics and value transparency can seek ways to nurture plan sponsors' understanding of these issues. For example, incorporating the economic value of liabilities in reports, analysis, and informal conversations can perhaps increase plan sponsors' openness to the idea that the field of economics has some relevance for liability valuation and pension fund management more broadly.

Professionals who wish to promote transparency may find moral support in professional codes of ethics. For example, the CFA Code of Ethics [2014] calls for CFAs to "promote the integrity of the capital markets," and both the CFA Standard of Practice and the actuary Code of Professional Conduct [2000] call for abstaining from misrepresentation and using independent judgment, all of which could be invoked to justify using the economic value of liabilities in one's analyses and recommendations.²¹

CONCLUSION

Measures of the economic value of liabilities are essential inputs to analysis of the balance sheet of any entity that has a balance sheet, and are also an essential input to measuring the cost of new financial commitments. Despite this, plan sponsors and actuaries often respond defensively to attempts on the part of economists to promote the use of economic valuation of pension liabilities. This article is a call for those who appreciate the relevance of economics to pension liability valuation to speak up, and for plan sponsors and actuaries to try their best to listen non-defensively.

There ought not to be a debate about the relevance of economics to pension funds. The debate should focus on what to do about the financial picture that economic analysis brings to light. Turning off the light won't help, nor will blaming the messenger, but listening to economists might.

ENDNOTES

¹Corporate, public, and Taft-Hartley accounting rules are all inconsistent with economics, although the associated problems are more severe with public and Taft-Hartley funds. "Corporate" refers to pension funds sponsored by corporations for their employees; "public" refers to pension funds sponsored by state and local governments for their employees; "Taft-Hartley" refers to multi-employer, jointly trustee (management and union) pension funds for union members. The Financial Accounting Standards Board (FASB) determines accounting rules for corporate and Taft-Hartley funds, while the Government Accounting Standards Board (GASB) promotes rules for public funds. This article focuses primarily on public funds, but will touch on corporate and Taft-Hartley funds as well.

²There is a large and growing literature that establishes the inconsistencies and assesses the consequences of valuing public pension liabilities incorrectly. Bader and Gold [2003] were the first to lay out the inconsistencies systematically. See Pension Actuaries Guide to Financial Economics [2006], Gold and Latter [2009], Novy-Marx and Rauh [2009], Waring [2012], Biggs and Smetters [2013], and Novy-Marx [2013] for more recent examples.

³I was a pension consultant for most of my career. I have had countless conversations with colleagues, actuaries, and clients about these issues, I have testified to GASB on this topic, and I have followed the topic in "the literature," much of which I read on www.nasra.org, www.soa.org, and www.actuary.org.

⁴For example, while GASB solicited comments on proposed rules changes and many economists responded, the resulting rule changes displayed no evidence that GASB had internalized the economists' message. Nor did GASB offer any sound reasons why it rejected the economists' arguments, that I am aware of.

⁵Actually, the banker would probably want more than a 50/50 chance of the collateral being enough, but we will stay with this number since it corresponds to GASB rules for valuing public pension liabilities.

⁶According to economics, things that are very similar must have very similar valuations; this is called the "law of one price." An example that many are familiar with is residential real estate—nearly identical houses on the same street and on the market at the same time will sell for similar prices, regardless of who the seller is.

⁷The new GASB rules are slightly more complicated than this, but this does not affect our central point.

⁸This is discussed more fully in Minahan [2013a] and diBartolomeo and Minahan [2014].

⁹Government Accounting Standards Board [2012] announces the replacement of rules 25 and 27 with 67 and 68.

¹⁰See Novy-Marx [2013] for a discussion of some of the anomalies.

¹¹As previously noted, I was an asset-side pension consultant for most of my career. I have had many conversations with colleagues, clients, and actuaries about these topics. These conversations were, by and large, friendly discussions with people I respect.

¹²Much of the debate regarding pension liability valuation is posted on www.nasra.org, www.actuary.org, and www.soa.org. See Bader and Gold [2003], McCrory and Bartel [2003], Findlay [2008], Joint Letter [2008], and Brainard [2011], for example.

¹³MVL = market value of liabilities.

¹⁴I have encountered this argument countless times. See Findlay [2008] for a good example.

¹⁵These plan sponsors are speaking as if the discount rate used for accounting purposes is necessarily the one used to develop a funding plan, which does not have to be the case. Once again we see confusion when calculations performed for funding purposes are assumed to apply for valuation as well.

¹⁶See Brainard [2011] and Joint Letter [2008], for example.

¹⁷See Findlay [2008] and McCrory and Bartel [2003], for example.

¹⁸For example, in the late 1990s, California state plans appeared overfunded by GASB rules and increased benefits, only to discover later that they did not in fact have surpluses to give away. See Lowenstein [2008] and Munnell [2012] for more information on these and other examples.

¹⁹Novy-Marx and Rauh [2009].

²⁰That many such workers and retirees are also relying on their employer for post-retirement health care and are not eligible for Social Security adds to the concern.

²¹A more comprehensive discussion of the ethics of pension liability valuation is contained in Minahan [2013b].

REFERENCES

- Bader, L.N., and J. Gold. "Reinventing Pension Actuarial Science." *The Pension Forum*, Vol. 14, No. 2 (January 2003), pp. 1-13.
- Biggs, A.G., and K. Smetters. "Understanding the Argument for Market Valuation of Public Pension Liabilities." American Enterprise Institute, May 2013.
- Brainard, K. "The Role of Public Employee Pensions in Contributing to State Insolvency and the Possibility of a State Bankruptcy Chapter." Testimony to Subcommittee on Courts, Commercial and Administrative Law, Committee on Judiciary, House of Representatives, February 14, 2011.
- "CFA Institute Code of Ethics and Standards of Professional Conduct." CFA Institute (2014).
- "Code of Professional Conduct." American Academy of Actuaries, 2000.
- diBartolomeo, D., and J. Minahan. "Risk Management for Public Pension Funds: Still Trying to Not Waste the Crisis." *Investment and Wealth Monitor*, September/October 2014.
- Findlay, G. "An 'ASOP' Fable: The Illusion of Market Value." *Pensions and Investments*, November 10, 2008.
- "GASB Improves Pension Accounting and Financial Reporting Standards." Press release, Government Accounting Standards Board, June 25, 2012.
- Gold, J., and G. Latter. "The Case for Marking Public Plan Liabilities to Market." In: O. Mitchell and G. Anderson, eds., *The Future of Public Employee Retirement Systems*, Oxford University Press, 2009.
- Joint Letter to Board of Directors of American Academy of Actuaries from National Council on Teacher Retirement; National Association of State Retirement Administrators; National Conference on Public Employee Retirement Systems; National Association of State Auditors, Comptrollers, and Treasurers; National Education Association; American Federation of Teachers; National Association of Police Organizations; American Federation of State, County, and Municipal Employees; and Service Employees International Union, June 6, 2008.
- Lowenstein, R. *While America Aged: How Pension Debts Ruined General Motors, Stopped the NYC Subways, Bankrupted San Diego, and Loom as the Next Financial Crisis*. Penguin, 2007.
- McCrory, R., and J. Bartel. "Reinventing Pension Actuarial Science: A Critique." *The Pension Forum*, Vol. 14, No. 2 (January 2003), pp. 17-23.
- Minahan, J. "On the Ethics of Pension Liability Valuation." Working paper, 2013a.

——. Book Review of *State and Local Pensions: What Now?* by Alicia Munnell. *Advisor Perspectives*, May 28, 2013b.

Munnell, A. *State and Local Pensions: What Now?* Brookings Institution, 2012.

Novy-Marx, R. "Logical Implications of GASB's Methodology for Valuing Pension Liabilities." *Financial Analysts Journal*, January/February 2013.

Novy-Marx, R., and J.D. Rauh. "The Liabilities and Risks of State-Sponsored Pension Plans." *Journal of Economic Perspectives*, Fall 2009.

Pension Actuaries Guide to Financial Economics. Joint AAA/SOA Task Force on Financial Economics and the Actuarial Model, 2006.

Waring, M.B. *Pension Finance: Putting the Risks and Costs of Defined Benefit Plans Back Under Your Control*. Wiley, 2012.

To order reprints of this article, please contact Dewey Palmieri at dpalmieri@ijournals.com or 212-224-3675.