RETIREMENT

Public Pensions Are Being Overly Optimistic

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By Megan McArdle

This column often tackles controversial issues: race, gender, crime, the tragedy of people who order steak in restaurants. Today, however, we're going to have some real fireworks. We're going to talk about the appropriate discount rate for public-sector defined-benefit pension plans.

Do I really dare to go there? Oh, yes, my friends, I dare. But first a little background.

Why we're talking about this

The proximate cause of this column is an article in the New York Times, detailing the travails of a tiny government office that decided to withdraw from Calpers, the California state pension system, in order to switch to a 401(k) system. Officials at the office thought this would be a simple matter, since their members were fully paid in. Only it turned out it cost them more than $500,000 to make the switch, because when

they went to leave, Calpers said “We meant fully funded if you stay, not fully funded if you leave.” In economist-speak, they used a different discount rate to calculate the termination value of the plan.

But as much as my heart goes out to the six participants in the pension fund of Citrus Pest Control District No. 2, their plight is not really why I decided to write a whole column. This is actually a hugely important issue for everyone -- because while taxpayers remain oblivious to terms like “discount rate” and “hypothetical termination basis,” these terms are sneaking up and preparing to thwack them hard, in the wallet.

What is a discount rate?

It is not the 20 percent savings you got by buying a new washing machine on Black Friday last year. A discount rate is a way of accounting for the fact that dollars in the future are not quite the same as dollars you have right now.

You know this, don’t you? Imagine I offered to give you a dollar right now, or a dollar a year from now. You don’t have to think hard about that decision, because you know instinctively that the dollar that’s right there, able to be instantly transferred into your sweaty little hand, is much more valuable. It can, in fact, be easily transformed into a dollar a year from now, by the simple expedient of sticking it in a drawer and waiting. It can also, however, be spent before then. It has all the good stuff offered by a dollar later, plus some option value.

Even if you’re sure you don’t want to spend it in the next year, however, a dollar later is not as good as a dollar now, because it’s riskier. That dollar I’m holding now can be taken now, and then you will definitely have it. If you're counting on getting a dollar from me a year from now, well, maybe I’ll die, or forget, or go bankrupt.

The point is that if you’re valuing assets, and some of your assets are dollars you actually have, and others are dollars that someone has promised to give to you at some point in the future, you should value the dollars you have in your possession more highly than dollars you’re supposed to get later.

The rule for establishing an exchange rate between future dollars and current ones is known as the “discount rate.” Basically, it’s a steady annual percentage by which you lower the value of dollars you get in future years.

All you need to remember is two things: the longer you have to wait to get paid, the less that promise is worth to you today. And the higher the discount rate you apply, the lower you're valuing that future dollar.

Two possible rules for discounting pension plans

Now, we've been discussing future dollars as if they were an asset you will eventually have. But of course, if I'm the one who has to give you those dollars, then to me, they're not an asset; they're a liability, a debt I'll have to repay. The math is the same regardless. But the incentives to choose a discount rate are a little different.

As Citrus Pest Control District No. 2 discovered to its dismay, Calpers was actually using two different methods to estimate its pension liabilities. The first method was used to estimate how close the plan was to being "fully funded" -- able to pay all obligated benefits. That's the number Calpers tells the public. However, when District 2 went to close out its pension, Calpers used a different method. One that said the plan was roughly $500,000 short of meeting its obligations.

These two different methods reflect a larger debate among actuaries over how we should be valuing public pension plans. One way is to discount the future payments you'll have to make by something approaching the average annual profit you'd expect to earn by investing in a broad portfolio of stocks and bonds. I do, in fact, expect to invest my pension fund in a broad portfolio and stocks and bonds. That money will grow over time. I can therefore invest much less than a dollar today, and still deliver the promised dollar later. So if I discount the money I owe in the future by something like my expected investment returns, I'll get a relatively good estimate of how much money I need on hand right now to ensure that those payments are eventually made.

The other way is to treat those future payments as if they're a guaranteed income stream that has to be paid even if all the fund's investments go to heck in a hand basket. And therefore, to use a very low discount rate to assess how big the fund's liability is.

Imagine that you wanted to make absolutely certain that your investments paid out exactly $50,000 a year every year for the rest of your life. You'd want to stick the money in something really, really safe. Something like U.S. government securities. Which are currently paying 2.43 percent.

That money will be as close to a sure thing as we can get in this vale of tears. But it isn't going to grow much, which means that if you want to generate, say $50,000 a year for 35 years, you'll need to sock away more than $1 million right now. On the other hand, if you were expecting a 7 percent return, you'd only have to put away a little over $640,000.

The exact same math applies to discounting your future obligations, instead of calculating your future returns. When I'm trying to figure out how much I need to set aside now to pay what I'll owe in the future, the size of the discount rate will tell me if the answer is "a little" or "oh, boy, time to sell the cat."

If I am fond of my cat, however, I will have a strong urge to use as large a discount rate as possible.

So what's the argument?

The reasonable-sounding argument of the folks who want to use a low discount rate is that high discount rates are ignoring risk. There's a reason, after all, that stocks offer better returns than U.S. government bonds: companies are riskier entities. If you want people to buy your risky security, instead of just sticking the money into Treasury notes, you're going to have to offer them a sweetener, in the form of higher expected profits.

If you discount your liabilities by a high rate, you're going to end up with just enough money to pay out if everything goes as expected. You're essentially acting as if pensioners are buying an index fund instead of receiving a guaranteed income. Unfortunately, they are expecting you to make those payments no matter what, not to make them as long as the market does what you expect. Which is to say, those pension payments resemble a U.S. Treasury bond more closely than they resemble a high-flying tech stock, and should be discounted accordingly.

The reasonable-sounding argument of the advocates for a higher discount rate is "Yes, but we're not actually sticking all the money in U.S. Treasuries, and if I pretend we are, we're going to end up with way more money than we need to pay those obligations."

As I say, Calpers actually used both methods. It uses a higher discount rate to decide whether its funding levels are adequate. But when Citrus Pest Control District No. 2 terminated its plan, Calpers applied a rate that was, as far as I can tell, based on U.S. Treasuries.

Why did it do that?

Because it views closed plans differently from ongoing plans. An ongoing plan, as the American Academy of Actuaries writes, “In effect ... has a contingent asset, the equivalent of a call option on the sponsor’s assets if the budget amount proves inadequate.”

In a plan that’s still being run normally -- taking in new employees, and paying out benefits as they leave with their gold watch -- the pension manager has a kind of fail safe if returns are less than they expected. The fund can call up the employer and say “Oops, we goofed, you’re going to have to raise your contributions.” With a plan that’s no longer ongoing, employers aren’t making new contributions. So the manager needs to get all the money up front, and put it in something very, very safe to ensure that those pensions get paid.

This is not crazy reasoning, however unfair it might have seemed to the folks in Citrus Pest Control District No. 2. But this brings us back to our argument above.

Effectively, Calpers itself is illustrating why, from the taxpayer’s perspective, public pensions should set their discount rates more conservatively. It’s only really safe for penionsers to bet on high returns as long as you assume that taxpayers will bail out the fund if those returns don’t materialize. Accountants would call that an off-balance-sheet asset. The rest of us would call it taxpayers' wallets.

So maybe the discount rate shouldn’t be as low as the yield on a U.S. Treasury bond. But it should certainly be lower than what most public plans have chosen.

Who’s winning the battle for hearts and minds?

It’s easier to say who’s losing than who’s winning. The losers are future taxpayers and pensioners. Because the funny thing is that even using aggressive discount rates, public pensions are often badly underfunded. Except that’s not very funny. But it’s certainly remarkable. For example, Calpers, which uses a 7.5 percent discount rate, has a funding level of about 75 percent. It is currently contemplating lowering that discount rate all the way to 6.5 percent, but only over two decades.

It’s hard to believe that 20 years was chosen for mathematical reasons. After all, the wave of boomer retirements, which will be the greatest stressor our national retirement

systems have ever seen, should be well over by 2035. Rather, one suspects it was chosen because Calpers doesn't dare change it faster. Changing it faster would mean big increases in current contributions.

And states are probably not going to pony up the trillions of dollars that Robert Novy-Marx and Joshua D. Rauh have suggested they actually need to make their pensions whole.

Nonetheless, we should care about what discount rate is used, even if we aren't a farmer or a worker in California's Citrus Pest Control District No. 2. Using a high discount rate allows public pension funds to make their pension shortfalls seem smaller than they are. If voters could see a more realistic estimate of the size of the problem, they might put more pressure on politicians to do something about it. And given that a dollar invested in a fix today is worth more than the same dollar invested in a fix 10 or 20 years from now, the sooner voters get that information, the better.

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