BROOKINGS

Brown Center Chalkboard

Are teacher pensions really that high? Pension puzzles part I

Dick Startz Thursday, September 29, 2016

Everyone knows that teachers get great pensions and that those great pensions make up for the less-than-stellar salaries teachers earn. Everyone knows that taxpayers are getting stuck with a huge bill for said pensions and that the money paying for those pensions is money not going into direct education support. Well, the first thing everyone knows isn't true and the second thing everyone knows doesn't come close to describing how bad the situation really is.

Teacher pensions are a mess. Understanding what's going on with teacher pensions is messy as heck. However, some progress can be made if we divide the topic into two pieces: Are teacher pensions really high? (Not so much.) Are teacher pensions really expensive? (Not only expensive, they're even *more* expensive than it appears on the surface.) I'll tackle the first question today, then focus on the second in my next Chalkboard post.

The first thing you should know is that really good data on pensions that's comparable for teachers and non-teachers is tough to come by. The best source for teacher pension data is probably TeacherPensions.org, a group that's trying to straighten out the teacher pension mess. I'll show you some of their data together with data from other sources for non-teachers.

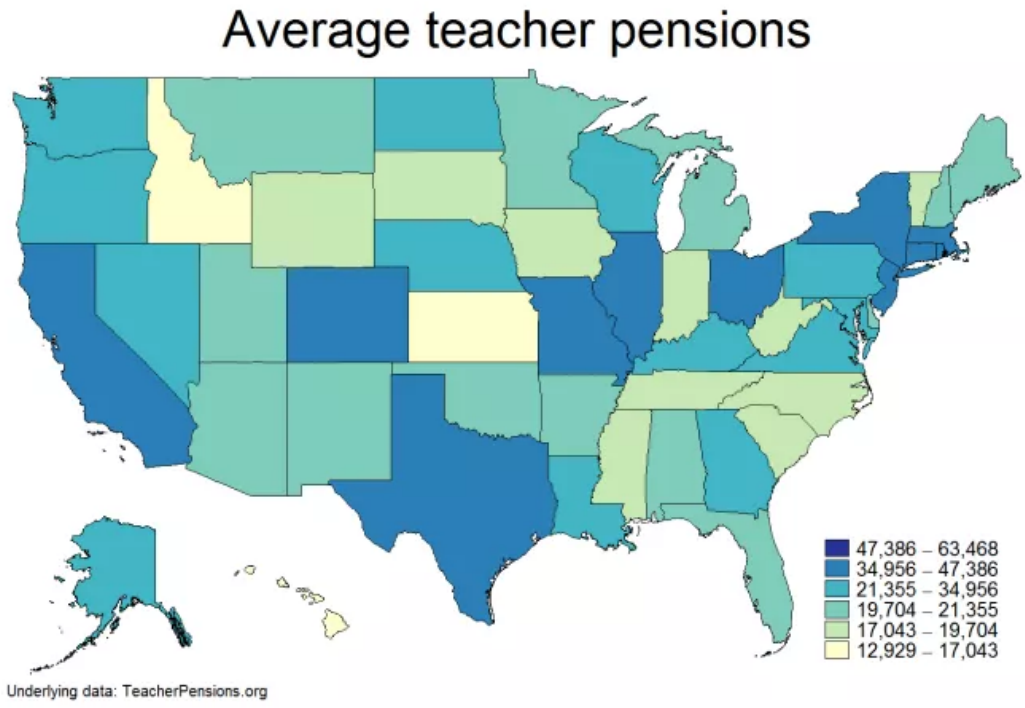
If we want to ask whether teacher pensions are high or not, we need to begin by asking "Compared to what?" The labor market for teachers is a subset of the more general labor market for college-educated workers. So let me give you two background numbers computed from the Current Population Survey. Among college-educated workers, only 57 percent report that they have an employer-provided pension plan. Almost all public

schools provide a pension plan, so in terms of availability teachers are better off than other workers. Except, as we'll see in a minute, many teachers never become eligible for the offered plan, so the difference isn't as great as it may seem.

How large are pensions for college-educated workers in general? The number I'll use as an average benchmark, computed from the Current Population Survey, is $33,281 a year. But this is more of a factoid than a hard number. It's the average pension for college-educated workers who report being retired and who report pension income—except that I exclude IRA's, 401(k)'s and the like from reported pension income because the data doesn't separate out whether these sources include employer contributions or are based in some part on the retiree's own savings. (A retiree's own savings aren't part of the teacher pension numbers, so they should be left out.) In other words, in order to exclude private savings in 401(k)'s, I had to exclude employer contributions as well. So $33,281 is somewhat lower than the truth.

Teacher pensions in comparative perspective

How does $33k compare to teacher pensions earned by recent retirees? Here's a map, based on data from TeacherPensions.org, that shows the average pension for teachers who retired in the last decade.



In 35 of the states, teacher pensions are lower than our national average of $33,281 for all college-educated workers. In the middle-ranked state, the pension is only $21,355. Even though the comparison numbers are quite rough, what we have suggests that teacher pensions are *not* out of line with pensions of similarly educated workers. Maybe they're even a bit on the low side. (Remember though, that the comparison numbers for college-educated retirees may include pensions from multiple jobs. Although, the comparison numbers don't include anything from employer provided 401(k)'s. Many teachers will also have pensions from non-teaching jobs because they don't teach their entire career. Since these "other job" pensions aren't included, the comparison isn't perfectly "apples-to-apples.")

On the other hand, you can see that the states marked in dark blue have pensions paying over $60,000 a year! Oh, you can't see it…it's too tiny; that's because the only place with such high teacher pensions is Washington, D.C. The average pension paid in D.C. is fully a third higher than the pension in the second-ranked state (Connecticut). Except, while D.C. is high, it may not be quite so crazy high as it may sound.

The puzzle of social security eligibility

Here's the next puzzling piece about teacher pensions: In 15 states, teachers are not eligible for social security. One of those "states" is D.C. So part of the explanation for high pensions in D.C. and those other states is that the high pensions are making up for the absence of social security payments. Country-wide, about 40 percent of teachers are left out of the social security system.

Is being left out of social security a big deal? A person who has earned $50,000 a year for the last 20 years would expect, roughly, $25,000 a year in social security benefits. So the absence of social security in D.C., and other states, makes a huge difference in thinking about pensions. (But remember that neither school districts nor teachers in those states have to contribute their share of social security tax, which is around six percent of salary each.) A Brookings study by William Gale, Sarah Holmes, and David John explains the reasons why it would be better to bring all teachers into the social security system. But for thinking about current teacher pensions, that's not where we are now.

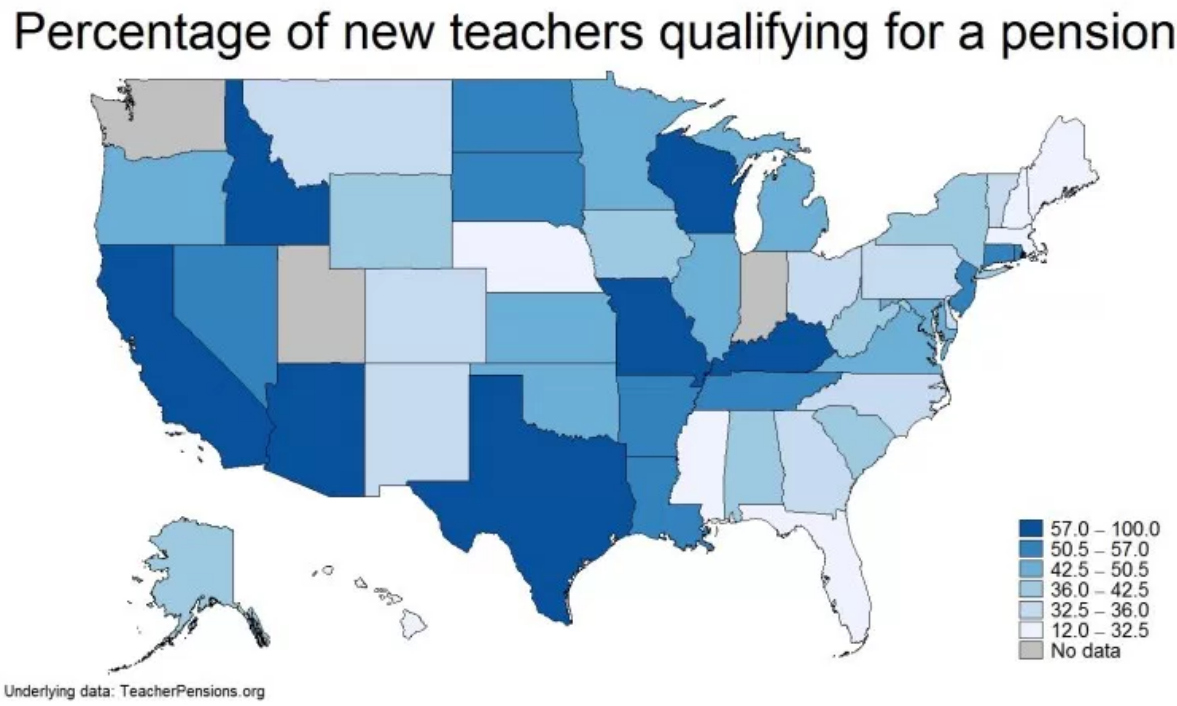
If you think that not being covered by social security is weird, since almost everyone else in the country is covered, let me make it a little weirder. Suppose a teacher has worked part of her career in the covered sector, paying social security taxes and earning credit toward social security on retirement. Now that teacher takes a job in a district which doesn't participate in social security. It turns out that the teacher *loses* part of the social security benefits she earned and that she and her employer paid for in the covered sector. A study by Alan Gustman, Thomas Steinmeier, and Nahid Tabatabai finds that teachers in this situation lose about 20 percent of the social security benefits they had earned.

What about teachers who don't receive pensions at all?

What we have to this point is the idea that teacher pensions might be roughly comparable to other pensions, although there is clearly enormous variability. Except, about half of teachers don't get teacher pensions at all. As an extreme example, "high-pension" D.C. estimates that four out of five beginning teachers won't get a cent in pension pay.

Two issues affect whether a teacher gets a pension and whether that pension is worth much. Both are related to the fact that many teachers have relatively short careers in education. In many pension systems, you have to participate for a minimum number of years for the pension to "vest," i.e. for you to get a right to your employers' pension contributions. In general, federal law requires private employers to either vest fully after five years or to begin partial vesting earlier, in which case full vesting can stretch to seven years. However, public sector pension plans are allowed longer waits. About a quarter of such plans require 10 years or more for full vesting. So the first short career issue is that many teachers leave teaching before being vested in their pension.

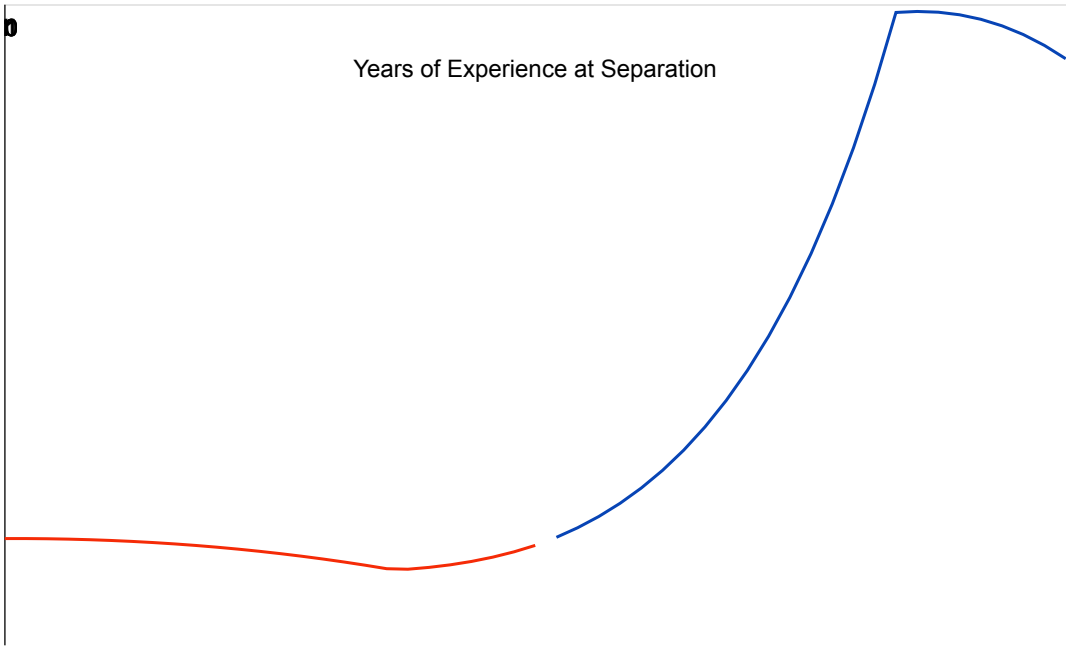
There is enormous variation across states in how many teachers end up with a pension. With a warning that the map isn't perfect because some states have changed plans, here's a picture again based on TeacherPensions.org data.



There's a lot of light blue on that map. That's a lot of states where many teachers walk away with no benefits at all.

The second short career issue is that many teacher pensions are rigged up to give disproportionately high payments to very long service teachers at the expense of quite low payments to teachers with "short" careers. Sometimes "short" means a couple of decades. Chad Aldeman, Daniel Fuchs, and Leslie Kan have looked at how the value of Illinois' current pension system varies depending on how long a teacher works. Chad sent me their data.

Net Value: Illinois Tier II Pension System



Data source: Chad Aldeman, TeacherPensions.org

That's right, a teacher who retires after 25 years of teaching *loses* money. How can that be? Teachers, like most of us, make contributions to their pension as does their employer. In Illinois, the system is set up so that the value of a pension for a teacher with 25 years on the job is less than the value of that teacher's contributions plus accumulated interest.

So what's the bottom line? Some teacher pensions are indeed very generous, but many teachers end up with only a small pension—or no pension at all. This is a screwy way to run a retirement system, and is almost certainly not an effective way to spend taxpayer money to attract great people into the profession.

And on that issue of what this means from the taxpayers' point of view, stay tuned to my next Chalkboard post for the bad news.

Brown Center Chalkboard

The Brown Center Chalkboard launched in January 2013 as a weekly series of new analyses of policy, research, and practice relevant to U.S. education.

In July 2015, the Chalkboard was re-launched as a Brookings blog in order to offer more frequent, timely, and diverse content. Contributors to both the original paper series and current blog are committed to bringing evidence to bear on the debates around education policy in America.

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BROOKINGS

Brown Center Chalkboard

An underfunded disaster awaiting taxpayers? Pension puzzles part II

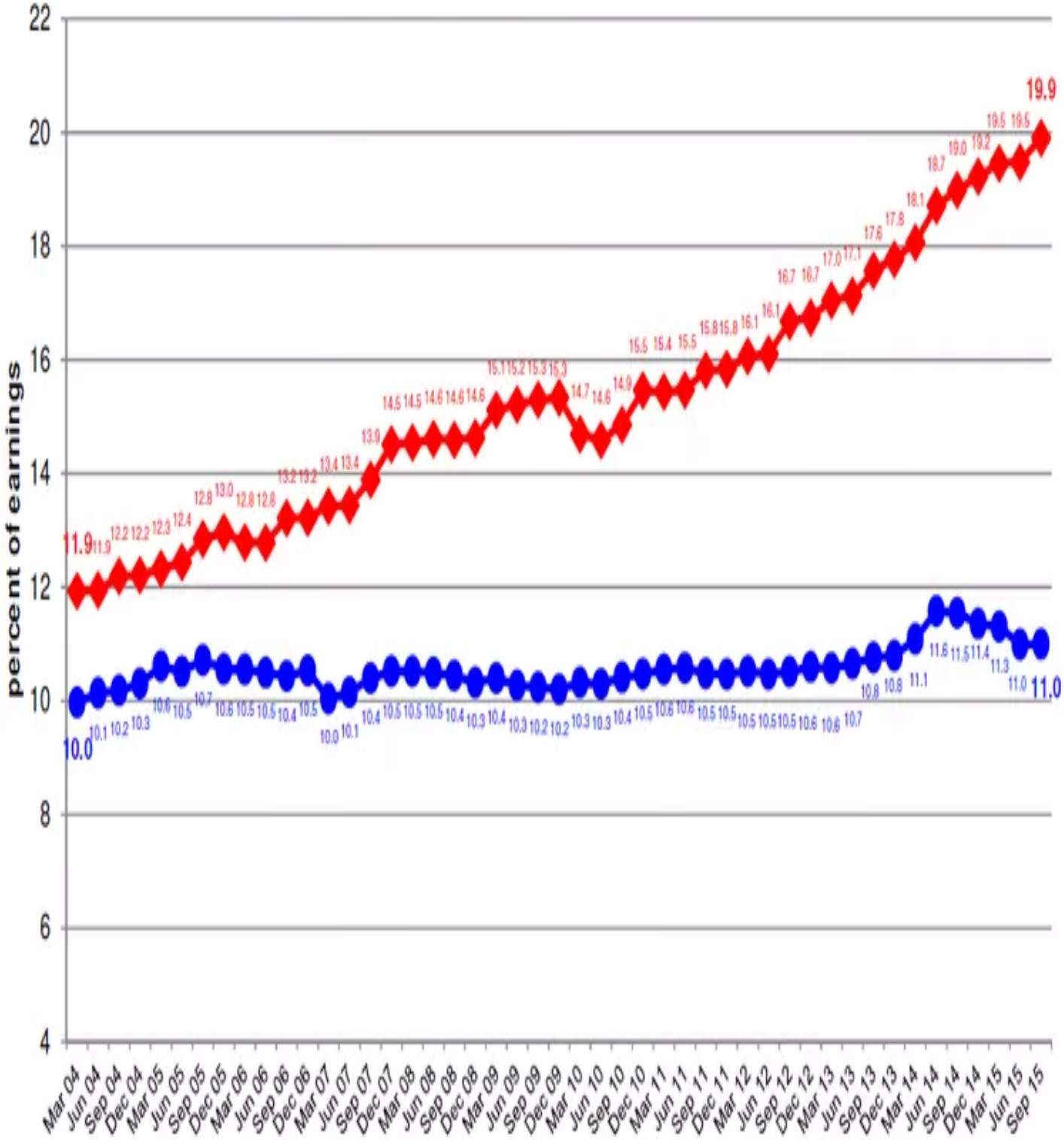
Dick Startz Wednesday, October 12, 2016

In the first part of "Pension Puzzles" I wrote "Everyone knows that taxpayers are getting stuck with a huge bill for teacher pensions and that the money paying for those pensions is money not going into direct education support. The thing everyone knows doesn't come close to describing how bad the situation really is."

You probably have a sense that teacher pensions have gotten very expensive. That is true, but things are worse than you may think for two reasons: (1) Much of the large amount that we pay into pension systems is currently allocated to make up for failures to adequately fund pension systems in the past—such spending doesn't support current education at all; and, (2) The accounting rules for public pension systems are bent, so the real deficit is far larger than it appears to be.

Are we really spending that much more than we used to on teacher pensions? Robert Costrell, of the University of Arkansas, has put together the numbers that show just how much spending has risen. Costrell's first graph shows employer contributions for teachers' retirement benefits (in red) and for private sector managers and professionals (in blue) from 2004 through the fall of 2015.

Employer Contributions for Retirement Benefits and Social Security: Public School Teachers and Private-Sector Managers and Professionals



Source: BLS, National Compensation Survey, Employer Costs for Employee Compensation;
Robert Costrell and Michael Podgursky, "Teacher Retirement Benefits," *Education Next*, Spring 2009
authors' estimate of teacher SS contributions, using BLS estimate of SS

public K-12 teachers private management & professional

The first thing that strikes you may be that the red teacher line is substantially higher than the blue private-sector line. Remember though that the height of the lines are determined by employer contributions divided by salary. The denominator (the salary) is generally higher in the private sector (as I've written about before), which makes the blue line lower than it would be if we were looking at employer contributions for equal salary levels. So the relative heights of the lines don't necessarily mean that pension payments are higher (in actual dollar value) for teachers. However, Costrell's work does make two things clear:

1. The mix of pension spending to current salary is much higher for teachers than it is for the private sector. This suggests, but for reasons discussed below doesn't prove, that the mix between current and deferred compensation for teachers is wrong.
2. Spending on pensions versus current compensation has skyrocketed for teachers while remaining more or less unchanged in the private sector.

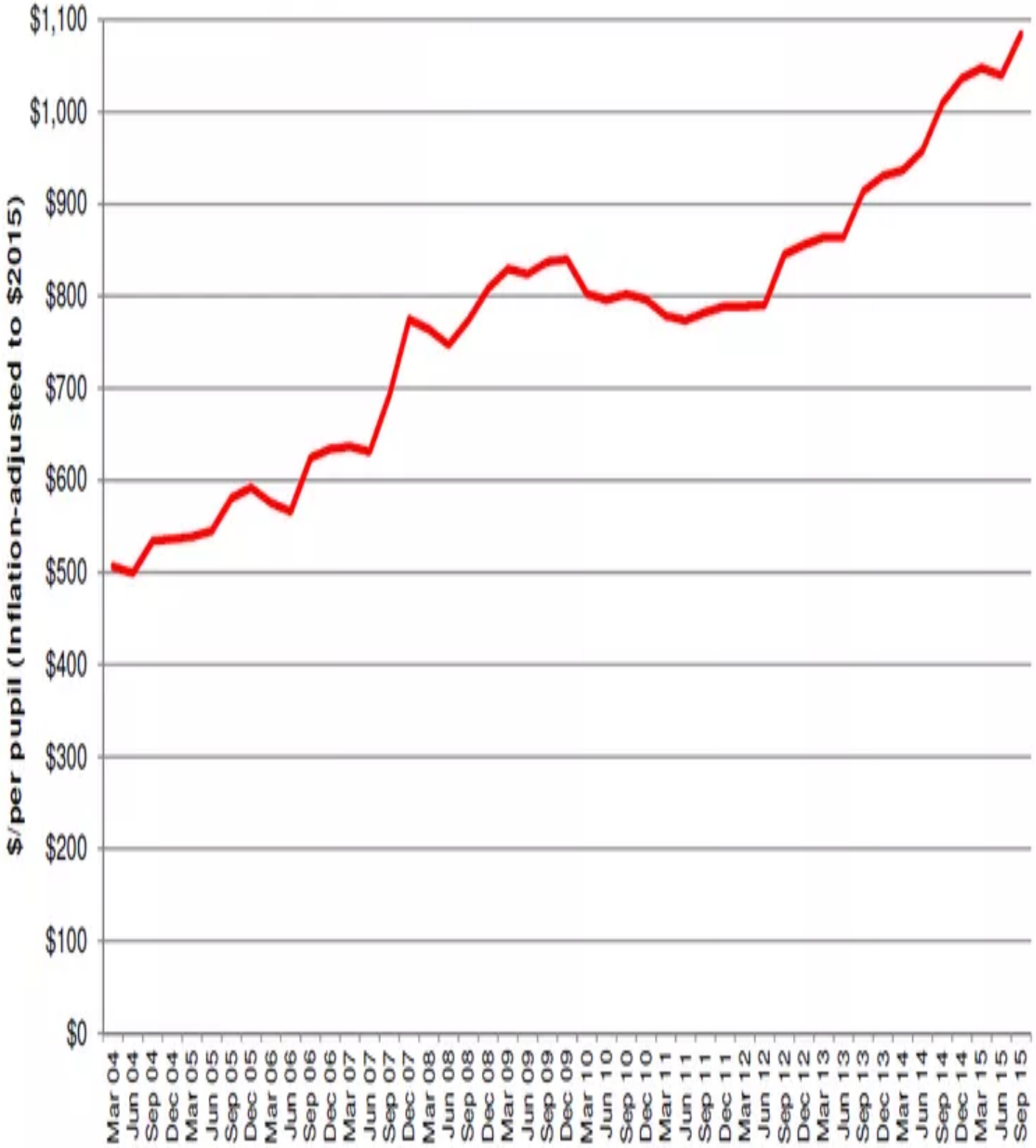
Does this pension spending amount to a big deal in the overall scheme of education budgets?

Yes.

Costrell has calculated that school contributions to retirement plans (for all employees, not just teachers) has doubled in inflation-adjusted terms over the last decade. Here's his picture:

Employer Contributions Per Pupil for Retirement Benefits

U.S. Public Elementary and Secondary Schools, 2004-2015



Sources: BLS, National Compensation Survey, Employer Costs for Employee Compensation;
NCES Digest of Education Statistics; BLS, CPI; author's calculations explained in:
http://www.teacherpensions.org/blog/school-pension-costs-have-doubled-over-last-decade-now-top-1000-pupil-nationally

Note: Does not include retiree health benefits or Social Security

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Costrell estimates that schools now devote almost 9 percent of all current spending to pension contributions.

Here's another way to put the numbers. This figure shows we now spend nearly $1,100 per student on retirement benefits. The average public school student teacher ratio is 16 to 1. So we are spending about $17,000 per year per teacher in pension contributions. Do you suppose most teachers might prefer a little less in the way of pension contributions and a little more in the way of salary? The mix of current versus deferred compensation for teachers seems weighted too heavily toward pension and not enough toward current salary.

But here's the problem. In many states, much of the spending on teacher pensions isn't actually going to pay for pensions for current teachers. Instead, the payments into pension funds are going to make up for the failure to adequately fund those pensions in past years. (The inadequate funding is a problem for state and local pensions generally; it's not limited to teacher pensions.)

How did we get into this situation? When politicians sit down to negotiate teacher compensation they face a choice: Pay good salaries now and raise taxes to fund them, or pay modest salaries now with the promise of big pensions later and figure that someone else will be in office when the bill comes due. Well, you could probably guess what happened in most states, and now the bill is coming due. The National Council on Teacher Quality writes,

In 2014 teacher pension systems had a total of a half trillion dollars in unfunded liabilities—a debt load that climbed more than $100 billion in just the last two years. Across the states, an average of 70 cents of every dollar contributed to state teacher pension systems goes toward paying off the ever-increasing pension debt, not to future teacher benefits (p. iii).

While we are spending a huge amount to fund teacher pensions, most of that spending doesn't go to attracting the best teachers. It's paying off past debts. (For a more detailed discussion, see Chad Aldeman's "The Pension Pac-Man.")

If all this sounds bad, that just means you don't fully appreciate the situation. It's not "bad," it's really, *really* bad. It turns out that public pension systems play by a different set of accounting rules than those allowed in the private sector, and this allows the pension funds to greatly overstate their reserves. (Again this is all local and state pensions, not just teacher pensions.)

The issue at hand is the interest rate that the public pension systems are allowed to assume in calculating how much money they need to fund future pension liabilities. The fundamental rule of finance theory is that if you guarantee a future payment—as pension funds do—then you need to figure your investment returns based on investments guaranteed not to lose money. In other words, the interest rate you should use in calculations is the so-called "safe rate of return." Safe assets don't pay as much as risky assets. When we invest for our own retirement, most of us put some of our money in stocks. We realize that if the stock market takes a turn for the worse we'll be hurt, but the odds are good that we're better off with some risk in the investment. The issue is that when we invest for ourselves we've decided to risk a smaller retirement income. Pension funds have *promised* a specified payment level—therefore they should be forecasting earnings only at the safe rate of return..

The way the law is written, public pension funds are allowed to assume they will earn at the higher, risky rate. Nobel laureate William Sharpe (Bill invented much of modern finance theory) explains that public pension funds can be valued in two ways. The "actuarial approach" uses the (legally permissible) higher, risky interest rate. The "market value approach" uses the (correct) lower, safe rate of interest. For example, CalPERS (the giant California public pension system for most workers other than teachers) assumes a 7.5 percent return on assets (actuarial approach) when deciding how much money it needs to set aside but assumes a much lower 2.56 percent return ("market value approach") when negotiating buyouts from the system.

All this makes an unbelievably large difference. Suppose you wanted to guarantee a $20,000 a year pension with 30 years of payments. If you believe that you are guaranteed to earn 7.5 percent a year then you need to set aside $236,208. But if you are only sure to earn 2.56 percent a year then the required set aside rises to $415,276. In this example, a pension fund using the actuarial method has set aside only a bit over half of what it really needs.

If that sounds really, really bad…you're still missing something. Most teacher pension plans provide significant inflation protection. That means that the safe investment return has to include an offset for future inflation. At the moment, the return on a 30-year Treasury bond that includes an inflation offset is only 0.67 percent. Using that as a truly safe rate of return, the pension fund in our example should really set aside $541,908 (*2.3 times* the original set aside value).

In summary, teacher pensions aren't great for most teachers, and the system is an underfunded disaster waiting to happen for taxpayers. For teachers, we should reform the system to something equitable for all teachers and fairly funded going forward. It's harder to say what we should do about the gross underfunding of the already incurred pension debt. But as the aphorism attributed to Will Rogers says,

If you find yourself in a hole, stop digging.

Brown Center Chalkboard

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