Teacher Pension Plans: How They Work, and How They Affect Recruitment, Retention, and Equity

Chad Aldeman and Andrew J. Rotherham
June 2019
Table of Contents

1. Introduction

2. How do teacher pension plans work?
   1. How the formulas work
   2. Sample teacher profiles

3. How do teacher pension plans interact with other goals in education?
   1. Teacher recruitment and retention
   2. Equitable distribution of resources

4. How much do teacher pension plans cost?
   1. Change over time
   2. Risks for the future

5. What are the alternatives?
   1. Structural reforms
   2. Levers to improve existing plans

6. Acknowledgements
Introduction and background

Pensions have been at the forefront of recent debates over teacher pay, but the issues are complicated and political. As such, this document is an attempt to inform readers about how pension plans work for the 90 percent of public school teachers enrolled in them.

Using objective data and analysis, we explain how teachers earn benefits in those plans, and how the plans interact with other goals in our education system, including attracting and retaining high-quality teachers and providing equitable resources to disadvantaged students. While there are no one-size-fits-all solutions, this document concludes with ideas on ways states could redesign their retirement systems to better meet the needs of teachers and the general public.

As a disclaimer, this report focuses on questions affecting public policy choices. Teachers should consult a qualified financial professional before making any consequential financial decisions.
Teacher pension plans are working at odds with other efforts to improve our educational system

About **90% of public school teachers** are enrolled in statewide defined benefit pension plans.

On average, schools are contributing 17% of each teacher’s salary toward pension plans. Those **costs are rising rapidly**.

While the plans work well for some long-serving veterans, the plans **do not serve most teachers very well**.

There are ways to **provide all teachers with secure retirement benefits** while also maintaining financial sustainability.

Learning more about teacher pensions will be critical for any would-be reformers to effect change on the issues they care about most.
Pensions were created to serve career teachers, but while the profession has changed, the plans have not.

1919
Teacher pension plans were designed in an earlier era. Teachers had extremely low pay and were often discouraged from marrying or starting families.

2019
The basic structure of teacher pension plans has not adapted to modern realities. Pension plan formulas were not designed to serve a mobile workforce in the modern society.
Today, most teachers enter and progress through the profession far differently than they did 100 years ago.

There are 3.2 million public school teachers in America, making it the most common occupation for full-time working women in the country. But the pension system doesn’t serve the majority of the teacher workforce.

Half of new hires leave with no pension at all …

… about a third qualify for a small pension, worth less than their own contributions …

… and only about 20% earn a full career benefit.
Meanwhile, rising benefit costs, including pensions, are squeezing out other classroom spending.

From 2005 to 2014, small increases in overall K-12 spending were dwarfed by much larger increases in spending on employee benefits.

As a result of rapidly rising benefit costs, school districts had $11 billion less to spend on classroom instructional costs.

Source: https://www.teacherpensions.org/resource/benefits-take-larger-bite-out-district-k-12-budgets
While the current system doesn’t work well for most teachers, there are alternative options. There are **cost-neutral alternative options** that would be more equitable and fair to teachers. At a minimum, states could **improve upon their current plans**.

### Alternative Models

1. **Cash balance (CB) plans**: A defined benefit plan that provides employees a guaranteed rate of return

2. **Defined contribution (DC) plans**: Both employers and employees contribute a “defined” amount

3. **Hybrid plans**: Include a mix of pension and DC components

### Levers to Improve Existing Benefits

1. **Extend Social Security coverage** to include all teachers

2. **Make current plans more portable**

3. **Adopt shorter vesting periods**

4. **Incorporate other progressive aspects**
1. Introduction

2. How do teacher pension plans work?
   1. How the formulas work
   2. Sample teacher profiles

3. How do teacher pension plans interact with other goals in education?
   1. Teacher recruitment and retention
   2. Equitable distribution of resources

4. How much do teacher pension plans cost?
   1. Change over time
   2. Risks for the future

5. What are the alternatives?
   1. Structural reforms
   2. Levers to improve existing plans

6. Acknowledgements
For some teachers, pension plans do work quite well

Pension plans take care of investing decisions on behalf of employees

- Employees enroll and **contribute automatically**
- Investments are **managed by professionals**
- Retirees receive **predictable monthly payments**
The majority of public school teachers are enrolled in defined benefit pension plans

While the exact formulas vary, traditional defined benefit pension plans rely on simple formulas multiplying the teacher’s years of service, his or her final average salary, and a benefit multiplier:

\[
\text{Annual benefit} = \text{Benefit multiplier} \times \text{Final average salary} \times \text{Years of service}
\]

Example:
- Benefit multiplier: 2%
- Final average salary: $50,000
- Years of service: 25 years
- Annual benefit: $25,000
Consider how the formula would treat different types of teachers

Ms. Career teaches in the same state for 30 years. She’ll retire with a pension that immediately replaces 60 percent of her final salary:

\[
2\% \times \$80,000 \times 30 \text{ years} = \$48,000
\]
However, the same formulas can work differently for teachers who serve for shorter periods of time.

Ms. Middle teaches for 15 years before leaving the classroom. Her annual benefit will be based on her final salary before she left teaching. However, she won’t be able to collect her pension until age 60. By then, her annual pension will be worth only $13,018 in today’s dollars:

- Benefit multiplier: $2\%$
- Final average salary: $65,000$
- Years of service: 15 years
- Nominal benefit at exit: $19,500$

Value after inflation: $13,018$
The formulas especially disadvantage young entrants who don’t stay that long.

Ms. Early teaches for ten years before leaving the classroom. Due to inflation, her annual benefit will be worth just $5,673 in today’s dollars:
Unfortunately, there are a lot more teachers with teaching careers like “Ms. Middle” or “Ms. Early” than “Ms. Career”

Half of new hires leave with no pension at all …

… about a third receive some benefit, but do not break even on their own contributions …

… and less than 20% earn a full career benefit
The graph below shows how pension benefits accumulate over the course of a teacher’s entire career. This pattern eventually works well for full-career teachers like “Ms. Career,” but short- and medium-term workers lose out.

*Here, “pension wealth” captures the value of the total lifetime payments a teacher is projected to receive at that point in time, discounted to today’s dollars, based on their age and how long they have served up to that point.
The way pension benefits accumulate is not aligned with the way most teachers progress through the profession.

In order to secure a comfortable retirement, short- and medium-term workers will need to save more in other jobs, work longer, or draw on other sources of income.

Teacher Retention Versus Pension Wealth

Retention rates drop rapidly among inexperienced teachers … and level off at around the ten-year mark.

Meanwhile, only a fraction of teachers reach peak benefits.
Due to a historical quirk, these issues are compounded by a lack of Social Security coverage in some states

- **1935**: Original Social Security Act covers most private-sector workers, but excludes employees of federal, state, and local government

- **1954**: Congress allows states to voluntarily extend coverage to state and local workers

- **1983**: Newly hired federal workers begin receiving Social Security coverage

- **1990**: Congress requires Social Security coverage for all state and local government workers not enrolled in a “qualified” retirement plan

- **Today**: About 5 million current public-sector workers, including 1.2 million teachers, remain uncovered by Social Security
Teachers in 15 states without universal Social Security coverage are particularly dependent on state pension plans.

Large portions of teachers in Alaska, California, Colorado, Connecticut, Georgia, Illinois, Kentucky, Louisiana, Maine, Massachusetts, Missouri, Nevada, Ohio, Rhode Island, Texas, and the District of Columbia lack Social Security coverage.

1. Introduction

2. How do teacher pension plans work?
   1. How the formulas work
   2. Sample teacher profiles

3. How do teacher pension plans interact with other goals in education?
   1. Teacher recruitment and retention
   2. Equitable distribution of resources

4. How much do teacher pension plans cost?
   1. Change over time
   2. Risks for the future

5. What are the alternatives?
   1. Structural reforms
   2. Levers to improve existing plans

6. Acknowledgements
Pensions are often seen as a tool to help schools attract and retain teachers, but the evidence is more complicated.

**New Hires**

- Rising employee contribution rates have not deterred new teachers from entering the profession.
- Early-career teachers do not remain just to qualify for a pension (e.g., “vesting”).
- Factors like salary, geography, and other working conditions are more powerful drivers of recruitment and retention.

**Veteran Teachers**

- Pensions do help retain teachers nearing their retirement age, but this effect occurs late in a teacher’s career.
- For those who reach retirement age, pension plans nudge veteran teachers out of the classroom and into retirement.
- When states enhanced their pension benefits in the 1990s, teacher retention rates barely changed.

As such, retirement plans should be thought of as a tool to meet the needs of workers, not as a lever for employers to shape their workforce.

In addition, state “teacher” pension plans often include other educators in higher-paid roles.

Due to salary differences, teachers pay less into the systems than K-12 principals and district superintendents, but teachers get far less in return.

Source: https://www.educationnext.org/the-school-administrator-payoff-from-teacher-pensions/
Pension formulas also exacerbate gender wage gaps

In a study out of Illinois, male educators outearned women with similar years of experience and educational credentials

Because salary is a component of pension formulas, wage gaps extend into retirement

Source: https://www.teacherpensions.org/resource/women-education-workforce-impact
Pension plans can also amplify spending differences by student race …

In Illinois, teachers in schools with predominantly white students earn higher salaries and receive higher pension contributions than teachers in schools with predominantly black and Latinx students.
Illinois spends less on teachers in low-income schools, and pension spending exacerbates those differences

Salary and Pension Spending in Illinois Schools, By Income Quintile

- $1,243 per pupil

Source: https://www.teacherpensions.org/resource/illinois-teacher-pension-plans-deepen-school-funding-inequities
Table of Contents

1. Introduction

2. How do teacher pension plans work?
   1. How the formulas work
   2. Sample teacher profiles

3. How do teacher pension plans interact with other goals in education?
   1. Teacher recruitment and retention
   2. Equitable distribution of resources

4. How much do teacher pension plans cost?
   1. Change over time
   2. Risks for the future

5. What are the alternatives?
   1. Structural reforms
   2. Levers to improve existing plans

6. Acknowledgements
The rapidly rising cost of teacher pensions is forcing schools to pull money away from the classroom.

States and districts now spend about $40 billion in pension costs, up from an estimated $15 billion 15 years ago.

Average Teacher Pension Contribution Rates

Source: https://www.teacherpensions.org/blog/how-much-do-teacher-retirement-plans-cost
Pension costs are coming out of education budgets, but teachers aren’t benefiting from those increases.

Teacher retirement benefits have declined over time, even as total costs have risen.

*States break down their contributions into the “normal cost” of benefits, which is the actuaries’ estimate of how much the benefits are worth on average, and the cost of paying down any unfunded liabilities, known as the “amortization cost.”*
Rising benefit costs, including pensions, are squeezing out other classroom spending

From 2005 to 2014, small increases in overall K-12 spending were dwarfed by much larger increases in spending on employee benefits

**Change in district spending between 2005 and 2014**

As a result, school districts had **$11 billion less** to spend on classroom instruction

Source: https://www.teacherpensions.org/resource/benefits-take-larger-bite-out-district-k-12-budgets
Pension costs could rise even higher in the future if their investment returns fail to meet their expectations.

Public pension plans are taking more risk to deliver higher long-term returns.

Pension plan investment assumptions used to be conservatively set close to the rate of return on government bonds.

Today, pension plans are taking much more risk to reach their investment targets.

Source: http://www.pewtrusts.org/-/media/assets/2014/06/state_public_pension_investments_shift_over_past_30_years.pdf
1. Introduction

2. How do teacher pension plans work?
   1. How the formulas work
   2. Sample teacher profiles

3. How do teacher pension plans interact with other goals in education?
   1. Teacher recruitment and retention
   2. Equitable distribution of resources

4. How much do teacher pension plans cost?
   1. Change over time
   2. Risks for the future

5. What are the alternatives?
   1. Structural reforms
   2. Levers to improve existing plans

6. Acknowledgements
States are trying to cut corners by reducing benefits for new teachers

In the wake of the Great Recession, cash-strapped states cut benefit formulas and asked teachers to pay more for their benefits

12 states increased the length of time before teachers qualify for benefits (vesting)

Half the states increased teacher contribution rates, effectively cutting teachers' take-home pay

The burden of these reforms falls predominantly on new hires, while existing employees remain under previous, more generous rules

Source: https://www.nctq.org/dmsView/Doing_the_Math
There are cost-neutral alternatives that would offer more equitable, more portable benefits to all workers.

There is no one-size-fits-all solution. States can (and already do) employ a variety of options:

<table>
<thead>
<tr>
<th>Plan Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defined contribution (DC) plans</td>
<td>• Both employers and employees contribute a set, or “defined,” amount</td>
</tr>
<tr>
<td>Cash balance (guaranteed return) plans</td>
<td>• Defined benefit plan that provides employees a guaranteed rate of return</td>
</tr>
<tr>
<td>Hybrid plans</td>
<td>• A mix of pension and defined contribution components</td>
</tr>
<tr>
<td>Employee choice</td>
<td>• Some states allow employees to choose a plan that best suits their needs</td>
</tr>
</tbody>
</table>

All of these plans could accommodate teacher mobility without sacrificing retirement security.
Defined contribution plans are typical in the private sector, and are the most common alternative to DB plans

**Defined contribution (DC) plans**

- Like a 401(k), both employers and employees contribute a set, or “defined,” percentage
- Many states offer higher education employees the choice of a DC plan

In **New Mexico**, higher education employees earn a generous employer match (10.9%) with no waiting (vesting) period, allowing more workers to qualify for portable benefits.

**Alaska** is the only state to enroll all teachers in a DC plan. Vesting on employer contributions is graduated (25% after two years, 50% after three years, and 75% after four), with full vesting after five years.
Another alternative is called a cash balance plan

**Cash balance (guaranteed return) plans**

- A defined benefit plan in which an employee’s retirement benefit is set in terms of a guaranteed rate of return
- Benefits accrue steadily, rather than the back-loading common in traditional pension plans

**Nebraska** state employees are enrolled in a cash balance plan that guarantees at least a 5% return, with extra dividends when investment returns are particularly strong.

**Texas** offers cash balance plans to county and municipal employees. Employers set contribution rates and match employee contributions. The state guarantees steady returns and converts account balances into monthly annuity payments.
Hybrid plans combine a smaller DB pension plan with a DC component

Hybrid plans

- Include a mix of DB and DC components
- Rhode Island, Virginia, and Tennessee offer teachers a hybrid plan, and the federal government also enrolls its employees in a hybrid plan

Rhode Island’s hybrid consists of a smaller pension and a defined contribution component.

According to a study by The Urban Institute, nearly 80% of Rhode Island teachers are better off under the state’s hybrid plan than its prior pension plan.

Source: https://www.urban.org/research/publication/how-will-rhode-islands-new-hybrid-pension-plan-affect-teachers
Some states give teachers a choice between more than one plan

Incorporating employee choice into plans

- Teachers can select a plan that best suits their needs
- Florida, Michigan, Ohio, and Utah all offer teachers a choice over their retirement plan

New teachers in Florida can choose between a traditional DB pension plan or a DC plan.

A state website helps teachers decide which plan is best for them. In 2017, Florida realized that the portable DC plan was better for most incoming teachers and set it as the default.

Source: https://www.teacherpensions.org/blog/florida-should-nudge-teachers-portable-retirement-plan
To varying degrees, these alternative models would shift some or all investment risks from the state to teachers.

However, any of these options could be designed with protections to “nudge” teachers toward a secure retirement.

<table>
<thead>
<tr>
<th>Low fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Low-fee index funds ensure worker contributions stay and accumulate, rather than enriching third-party providers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Life-cycle funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Funds that automatically adjust the riskiness of their investments based on the employee’s age and time to retirement</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Automatic enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Automatically enroll workers in a retirement plan, and default into a contribution rate that’s likely to lead to a secure retirement</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annuitization</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Help workers spend down their savings through monthly payments, to replicate the appeal of a traditional pension plan</td>
</tr>
</tbody>
</table>
Short of adopting entirely new plans, states could pull other levers to improve teachers’ retirement security

1. Extend Social Security to include all teachers
2. Improve portability in existing benefits
3. Adopt shorter vesting periods
4. Incorporate other progressive aspects
Extending Social Security coverage would provide a solid base of retirement benefits for workers

**Current Situation**
Fifteen states and the District of Columbia **do not** extend Social Security coverage to all teachers

**Implication**
Teachers depend solely on their state-run pension plan

**Recommendation**
While not sufficient as a stand-alone benefit, Social Security could provide teachers with a base of secure retirement benefits, regardless of where life takes them
Improving portability features would put more teachers on a path to a secure retirement

**Current Situation**
Teachers can withdraw their own contributions, but usually with no employer match and very little interest

**Implication**
Short- and medium-term teachers earn less than what they need to secure a comfortable retirement

**Recommendation**
States could allow teachers to take a portion of their employer’s contributions with them, as well as competitive interest on their own contributions
Adopting shorter vesting requirements would give more teachers access to retirement benefits

Current Situation
Most states require teachers to stay 5 years, and some require 10 years of service, in order to qualify for a pension

Implication
Over half of teachers will leave before meeting vesting requirements

Recommendation
Shortening vesting periods would allow more teachers access to retirement benefits earlier in their careers
Incorporating other progressive elements would make existing pension plans more fair and equitable

Current Situation
Pension plans provide disproportionately large benefits to the highest-paid, longest-serving workers

Implication
Pension plans replicate and exacerbate existing inequities in educator pay

Recommendation
States could adjust their pension formulas for inflation, like Social Security does. Or states could provide flat-rate pensions to employees based on their years of service, rather than basing payments on salaries.
Unique and deeply ingrained pension politics keep reforms from progressing

While pension reform can appear to be a “no-brainer,” there are significant political hurdles to adoption and implementation

<table>
<thead>
<tr>
<th>Pensions are complicated</th>
<th>The complexity of pension policies makes them challenging to explain and understand, even for enrollees, taxpayers, and legislators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Security carries new costs</td>
<td>Enrolling all public school teachers in Social Security seems like a straightforward policy, but it comes with transition issues and new costs</td>
</tr>
<tr>
<td>Pensions provide a guarantee</td>
<td>Even as states have cut benefits for new workers, many teachers prefer the guarantee of a pension over the unpredictable nature of some alternatives, such as defined contribution plans</td>
</tr>
<tr>
<td>Change is politically unpopular</td>
<td>Pension reform requires state lawmakers to clean up an inherited mess; unfunded liabilities won’t disappear overnight</td>
</tr>
</tbody>
</table>
On a smaller scale, those interested in understanding how teacher retirement plans work can pursue several actions:

**Ask for help:** Teachers and their families should talk to trusted professionals or their district’s HR offices about whether they are on the path to a secure retirement.

**Start a conversation:** Connect with friends, policymakers, and other stakeholders. Pension spending is a substantial piece of education spending, but many people don’t understand how they work or how they affect other efforts to improve education.

**Vote:** Cast ballots for leaders and initiatives that support fair and equitable retirement systems for all teachers.
Acknowledgements

The authors thank all those who offered generous feedback on earlier drafts of this deck. We also thank Super Copy Editors for excellent editorial work. Former Bellwether Analyst Kirsten Schmitz provided much of the research and analysis for this project. Funding for this project was provided by the Laura and John Arnold Foundation, but all conclusions and any errors are the authors’ alone.

About the Authors
Chad Aldeman is a senior associate partner on the Policy and Evaluation team at Bellwether Education Partners. He can be reached at chad.aldeman@bellwethereducation.org.

Andrew J. Rotherham is co-founder and partner on the Policy and Evaluation team at Bellwether Education Partners. He can be reached at andy.rotherham@bellwethereducation.org.