



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



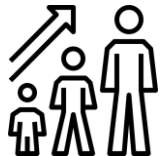
About **90% of public school teachers** are enrolled in statewide defined benefit pension plans



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

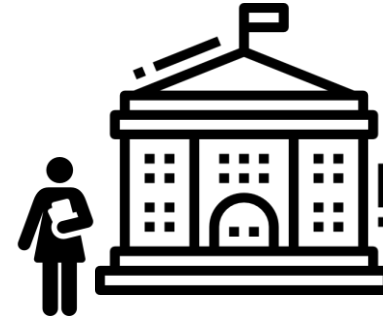
Learning more about teacher pensions will be critical for any would-be reformers to effect change on the issues they care about most

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 ...



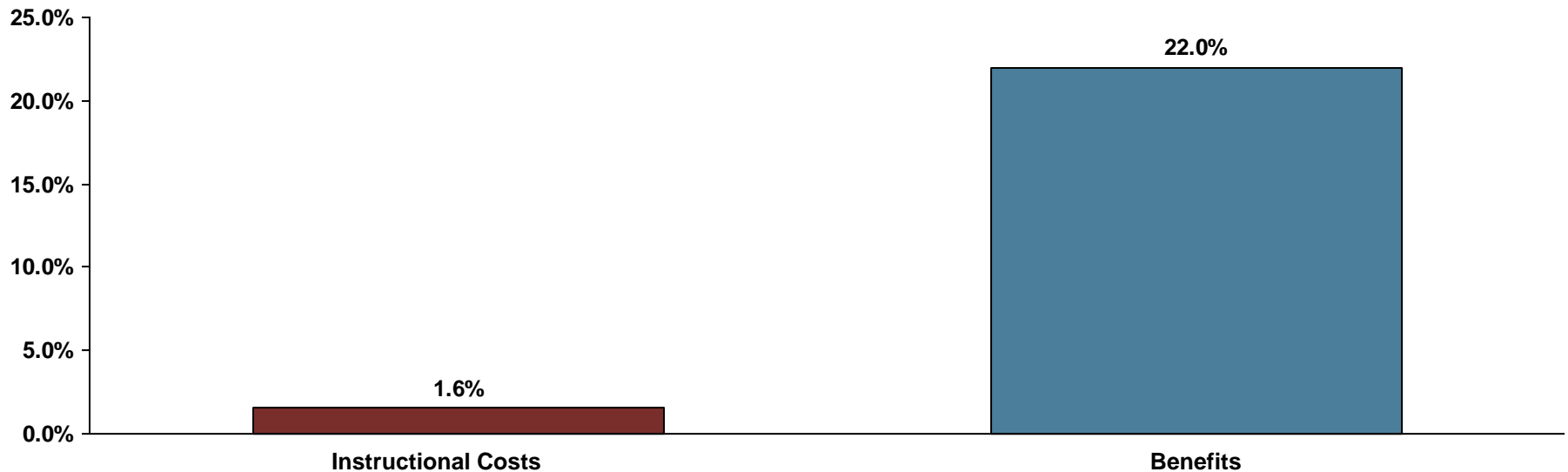
... about a third qualify for a small pension, worth less than their own contributions ...

... 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

Change in district spending between 2005 and 2014



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

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**

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?

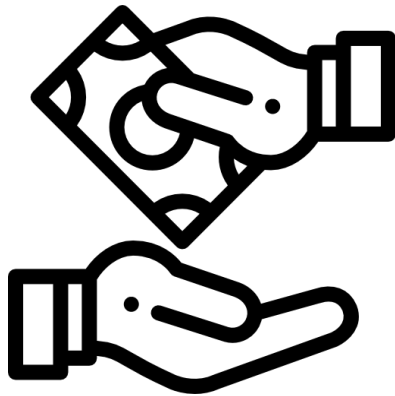
1. Structural reforms
2. Levers to improve existing plans

6. Acknowledgements

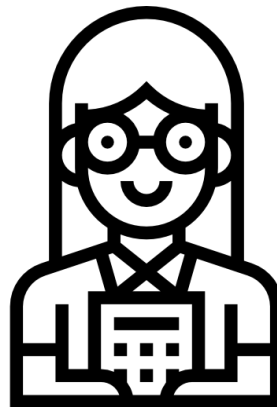
For some teachers, pension plans do work quite well

Pension plans take care of investing decisions on behalf of employees

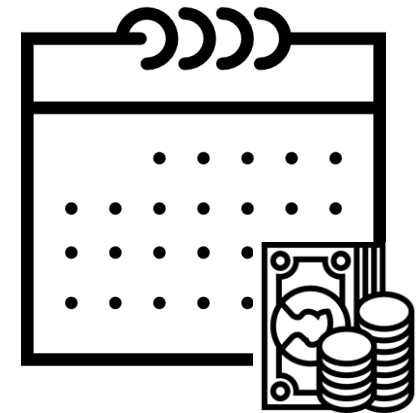
Employees enroll and **contribute automatically**



Investments are **managed by professionals**

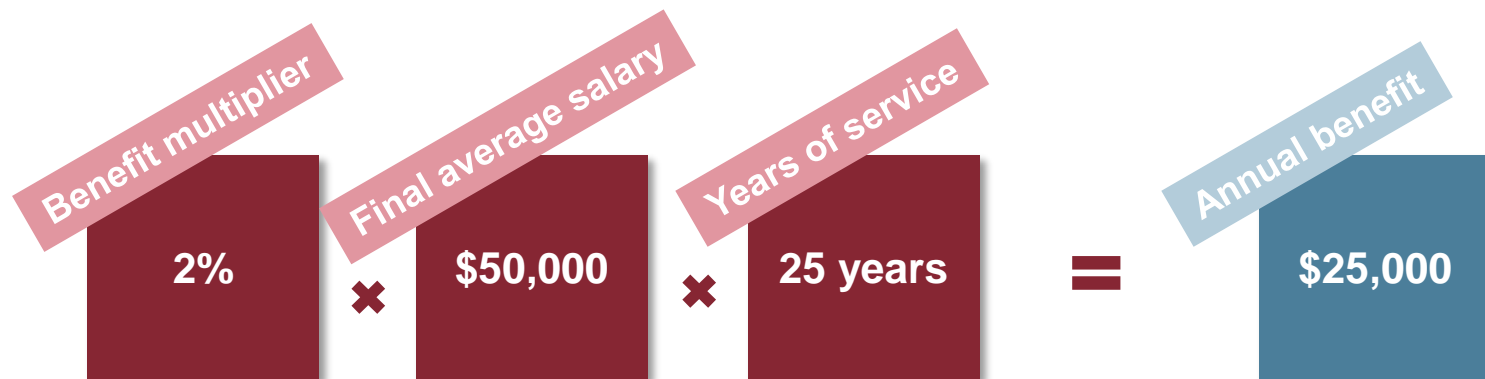


Retirees receive **predictable monthly payments**



The majority of public school teachers are enrolled in defined benefit pension plans

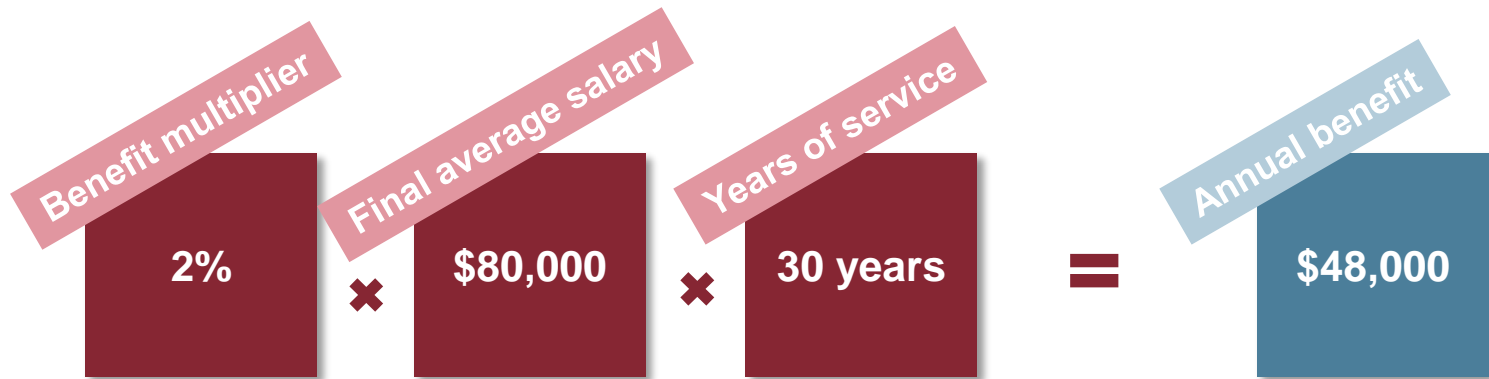
While the exact formulas vary, traditional defined benefit pension plans rely on simple formulas multiplying the teacher's years of service, his or her final average salary, and a benefit multiplier:



Consider how the formula would treat different types of teachers



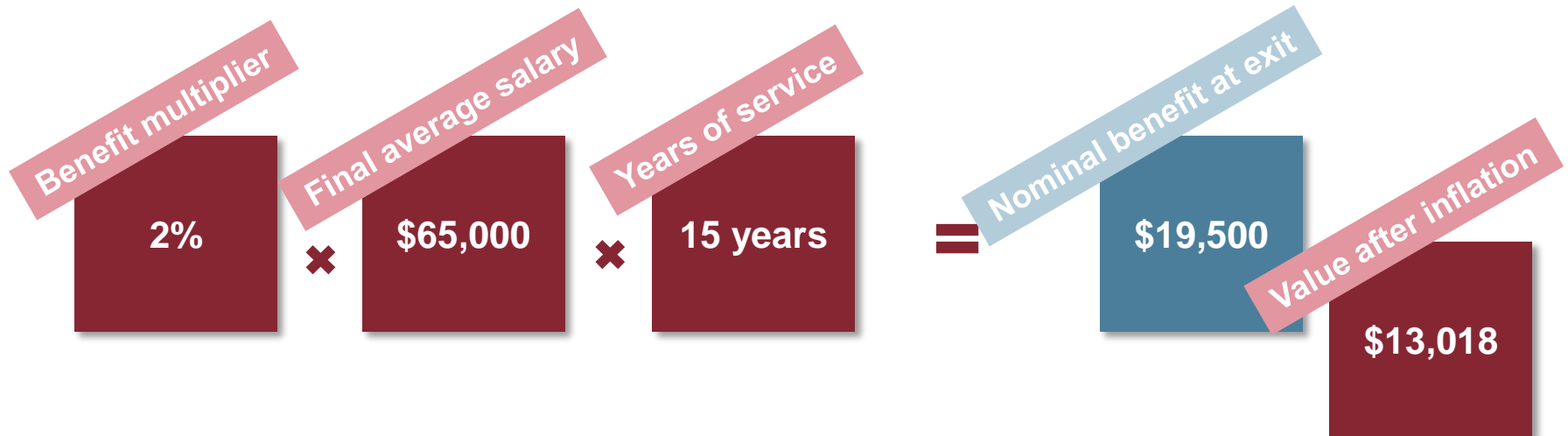
Ms. Career teaches in the same state for 30 years. She'll retire with a pension that immediately replaces 60 percent of her final salary:



However, the same formulas can work differently for teachers who serve for shorter periods of time



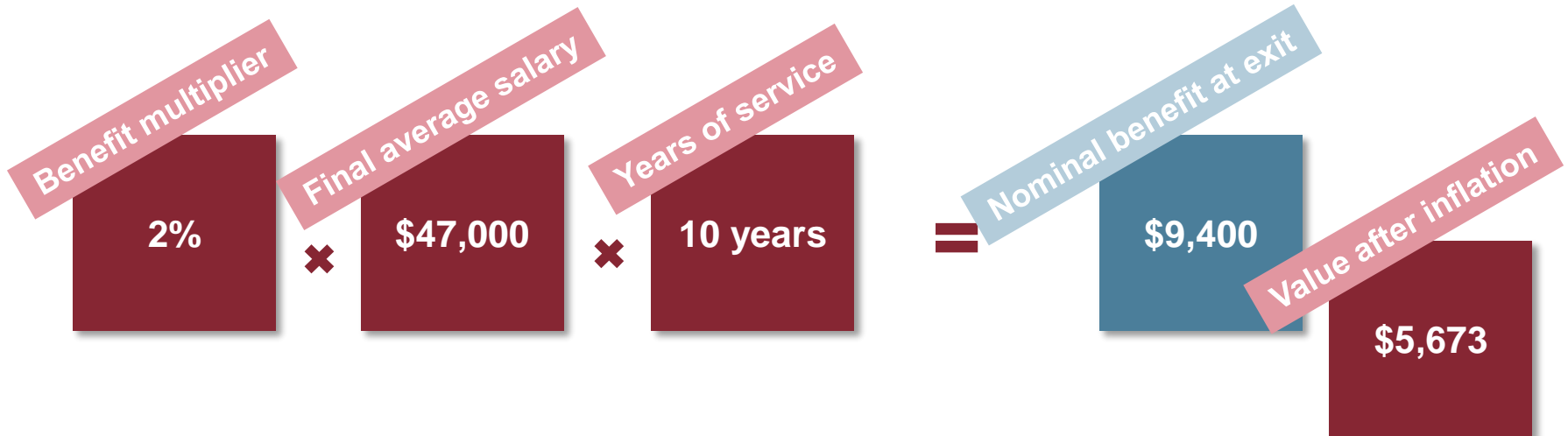
Ms. Middle teaches for 15 years before leaving the classroom. Her annual benefit will be based on her final salary before she left teaching. However, she won't be able to collect her pension until age 60. By then, her annual pension will be worth only \$13,018 in today's dollars:



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 ...

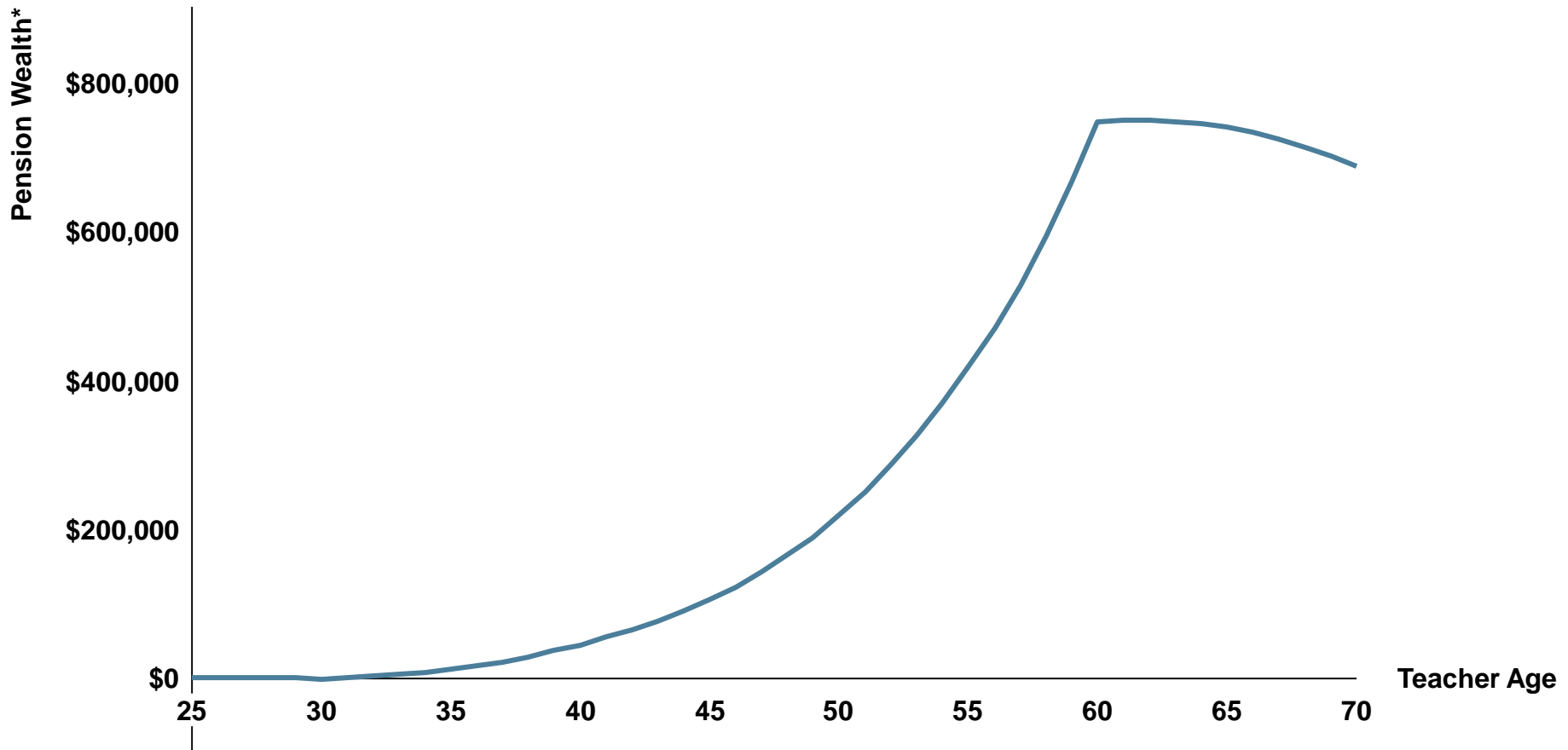


... about a third receive some benefit, but do not break even on their own contributions ...

... 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

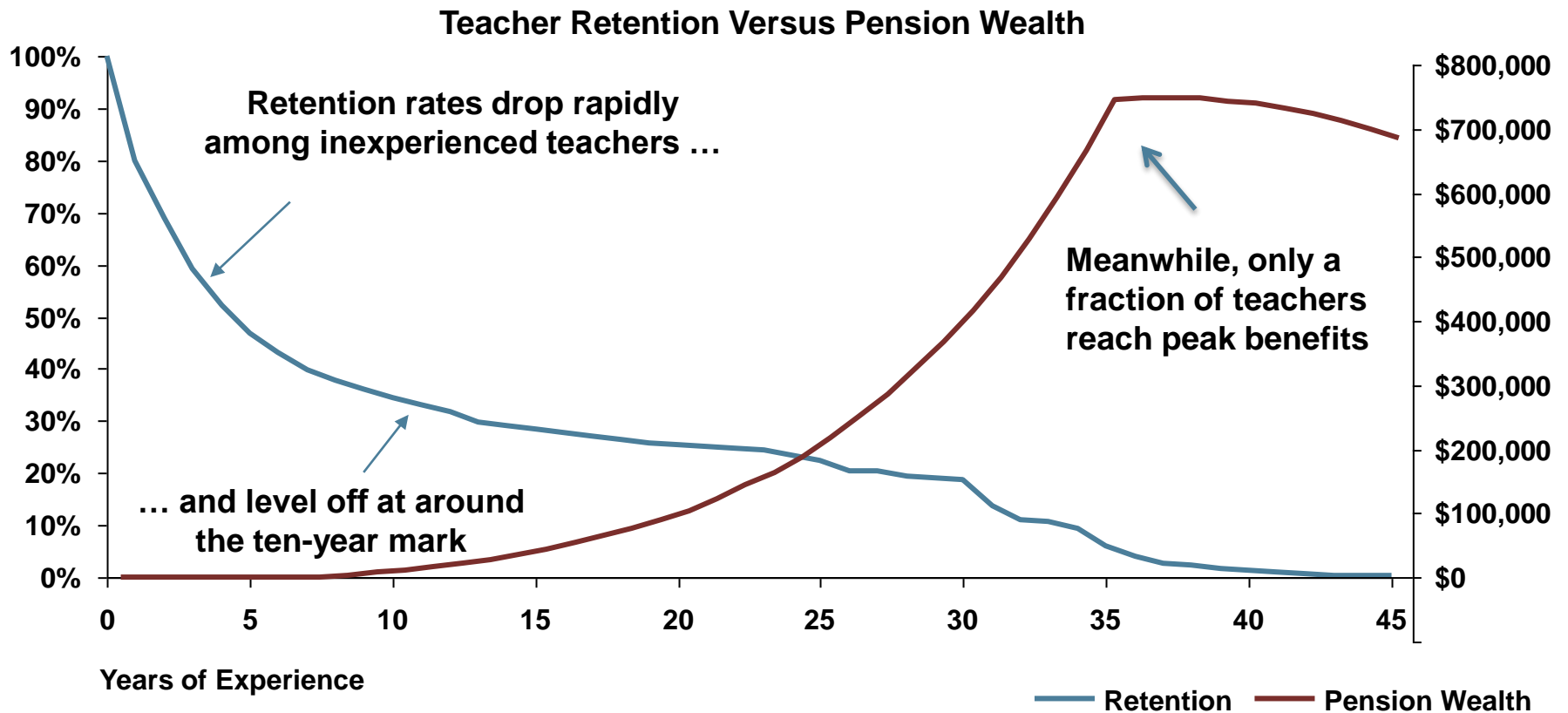
This pattern eventually works well for full-career teachers like "Ms. Career," but short- and medium-term workers lose out



**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



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

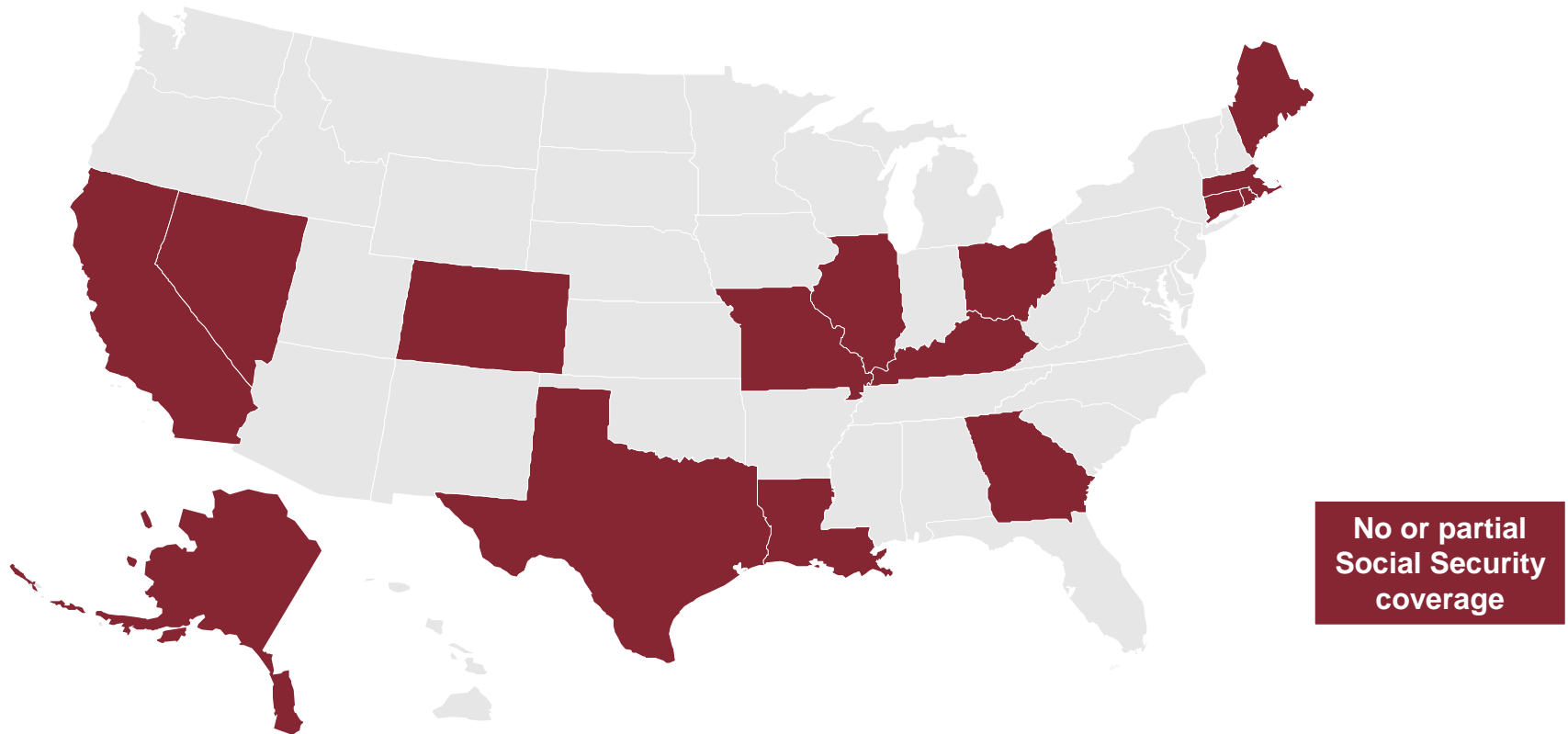


Table of Contents

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

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

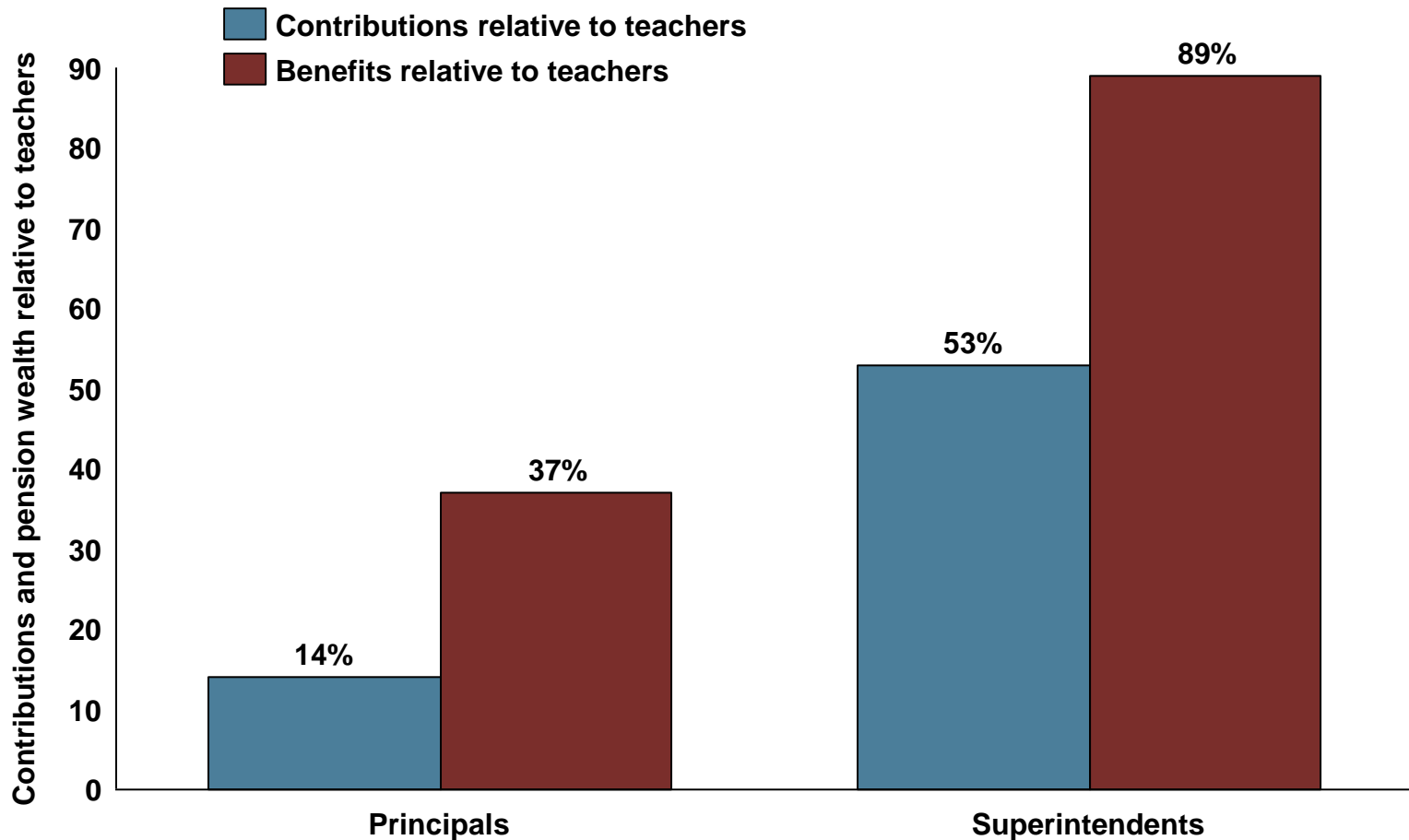
Veteran Teachers

- 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

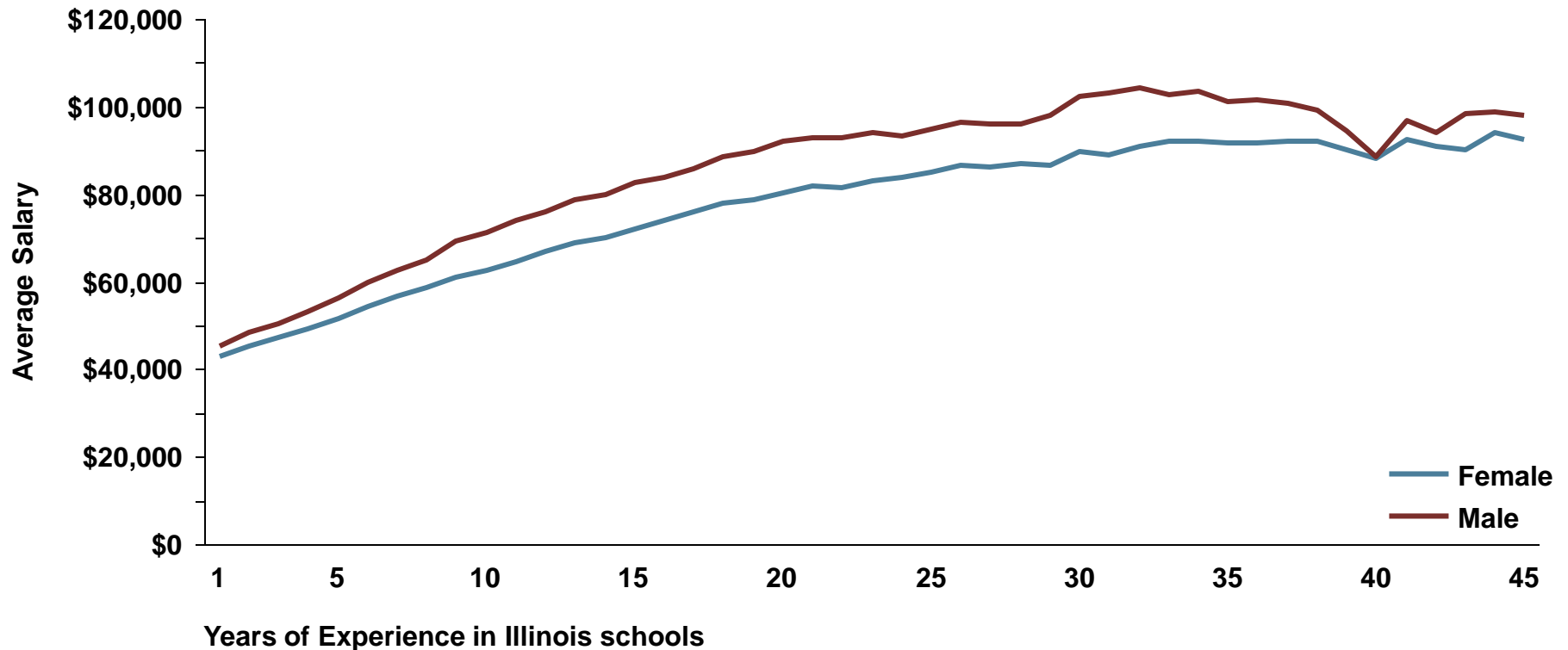
In addition, state “teacher” pension plans often include other educators in higher-paid roles

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



Pension formulas also exacerbate gender wage gaps

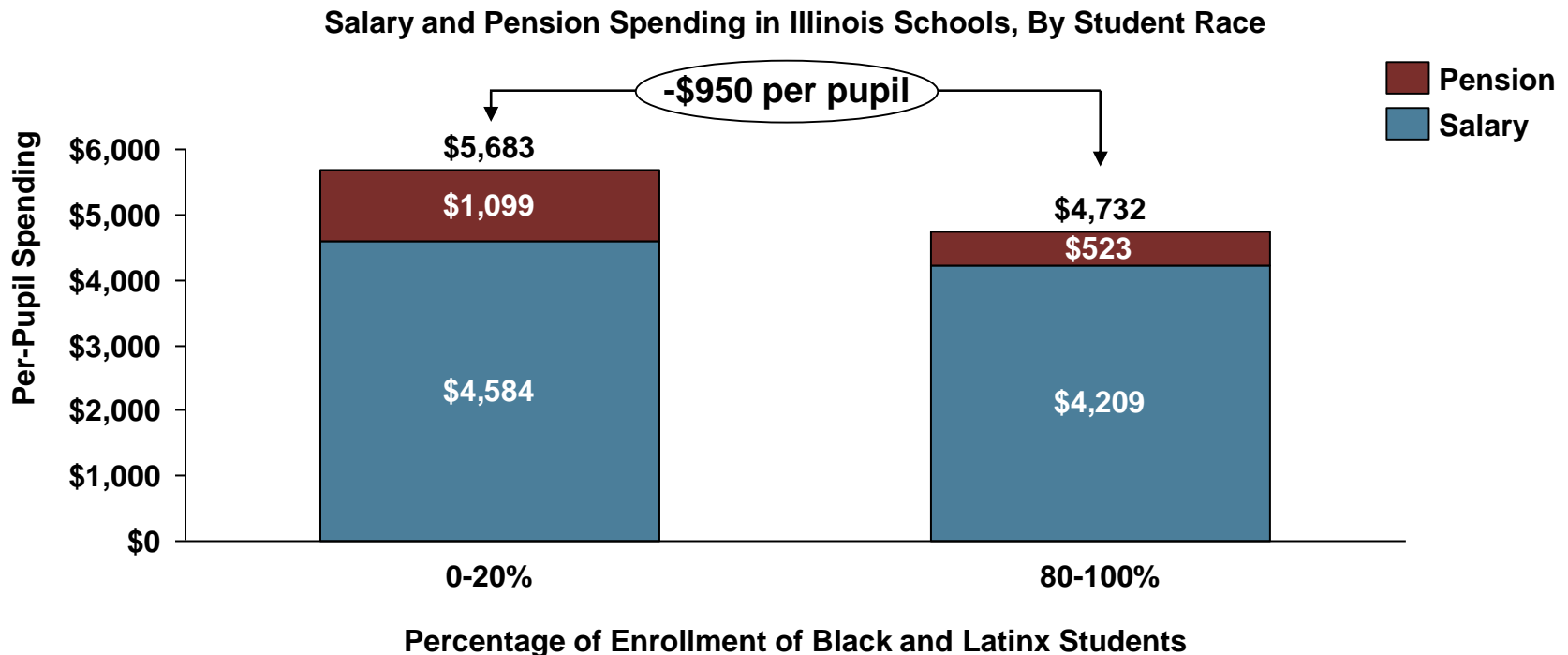
In a study out of Illinois, **male educators outearned women** with similar years of experience and educational credentials



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

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



... and student class

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

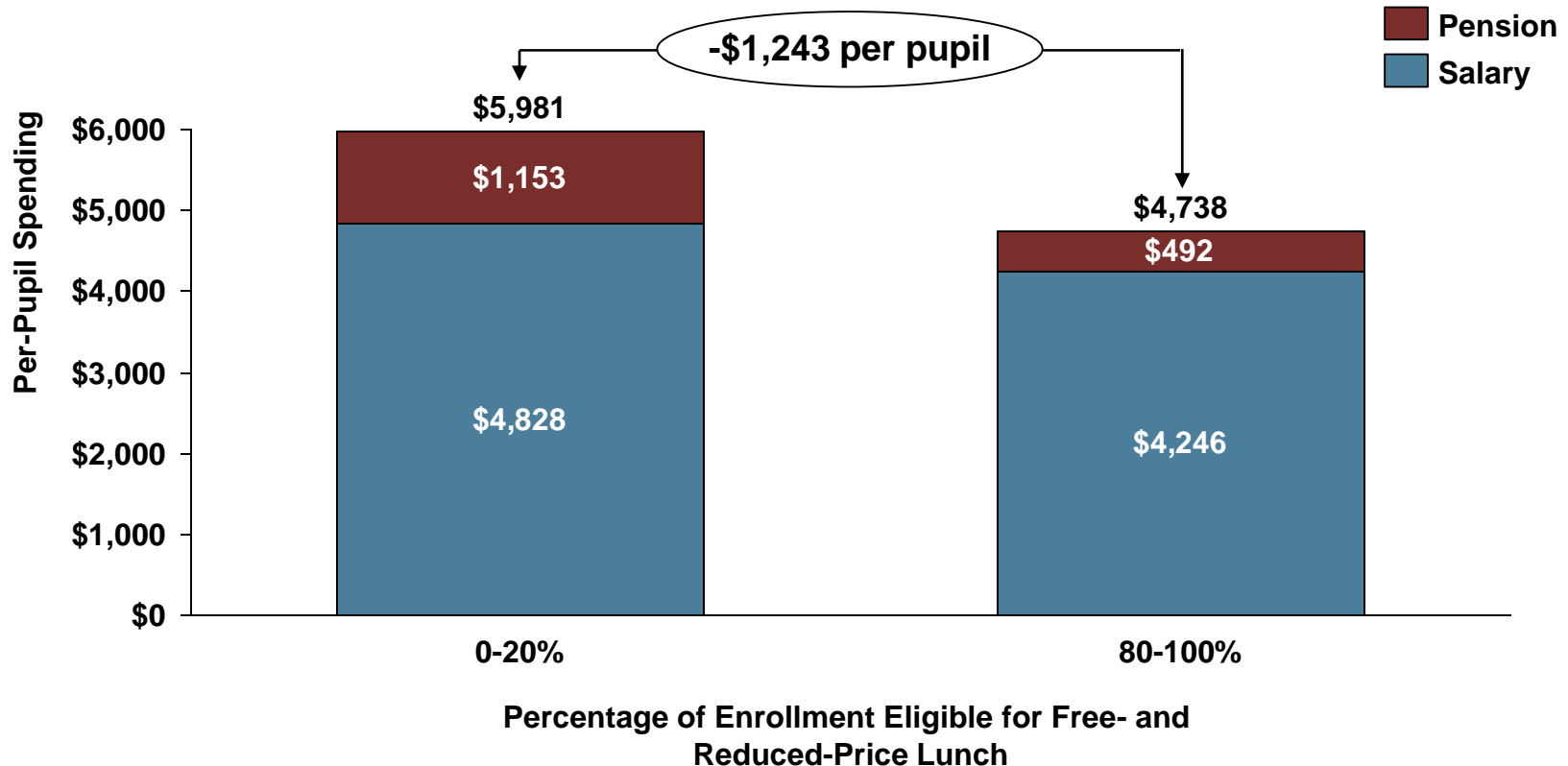


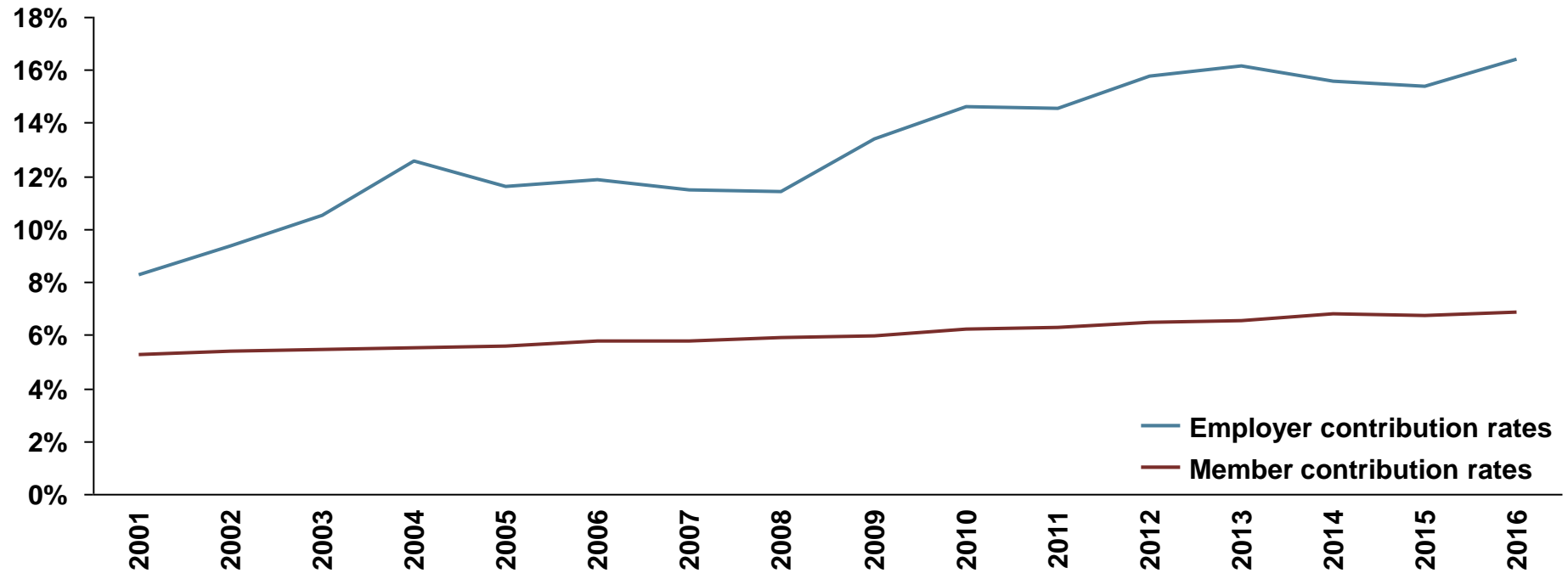
Table of Contents

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

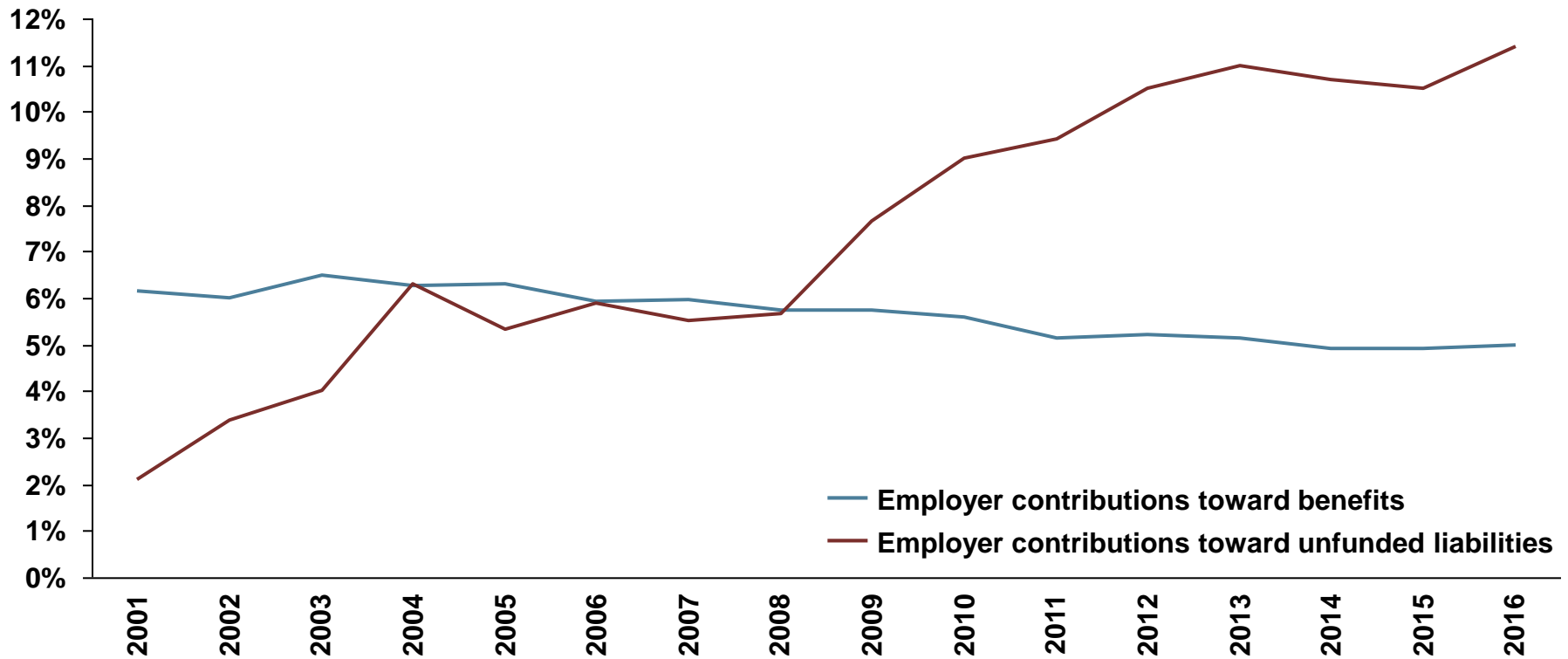
Average Teacher Pension Contribution Rates



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

Employer Contribution Rates to Teacher Pension Plans, By Type of Contribution

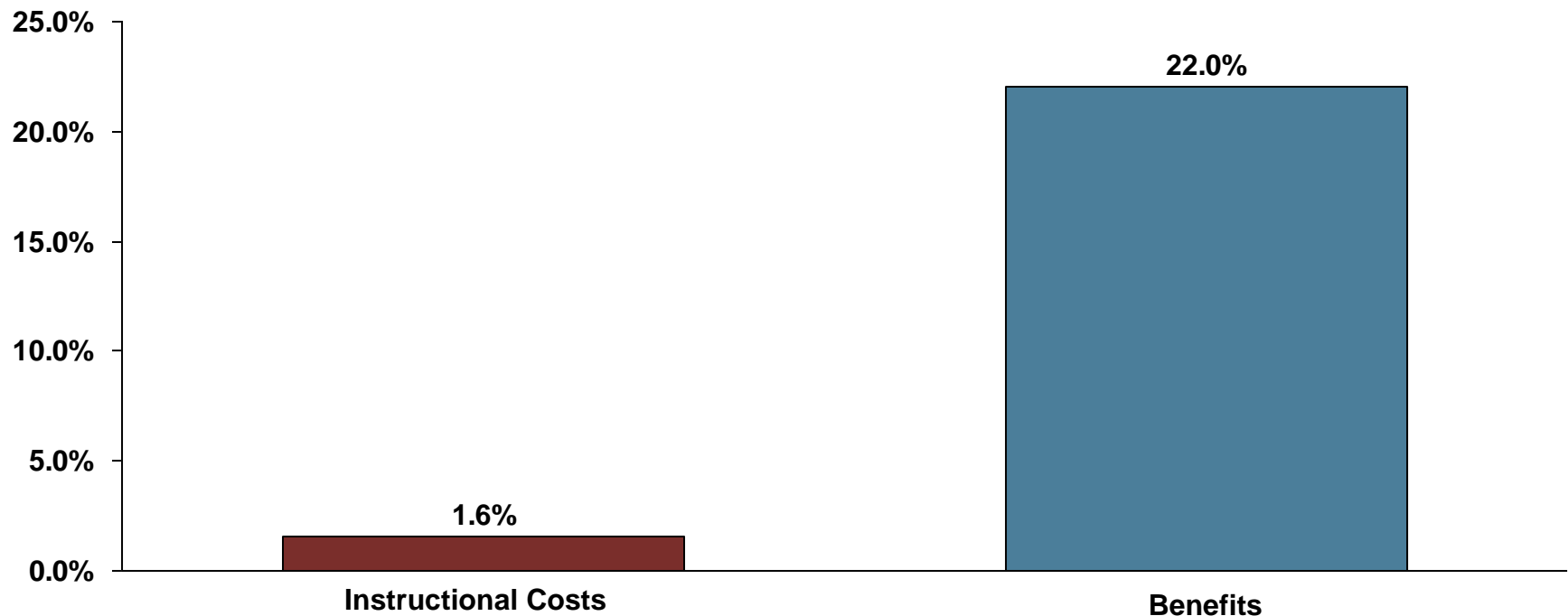


*States break down their contributions into the “normal cost” of benefits, which is the actuaries’ estimate of how much the benefits are worth on average, and the cost of paying down any unfunded liabilities, known as the “amortization cost.”

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

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

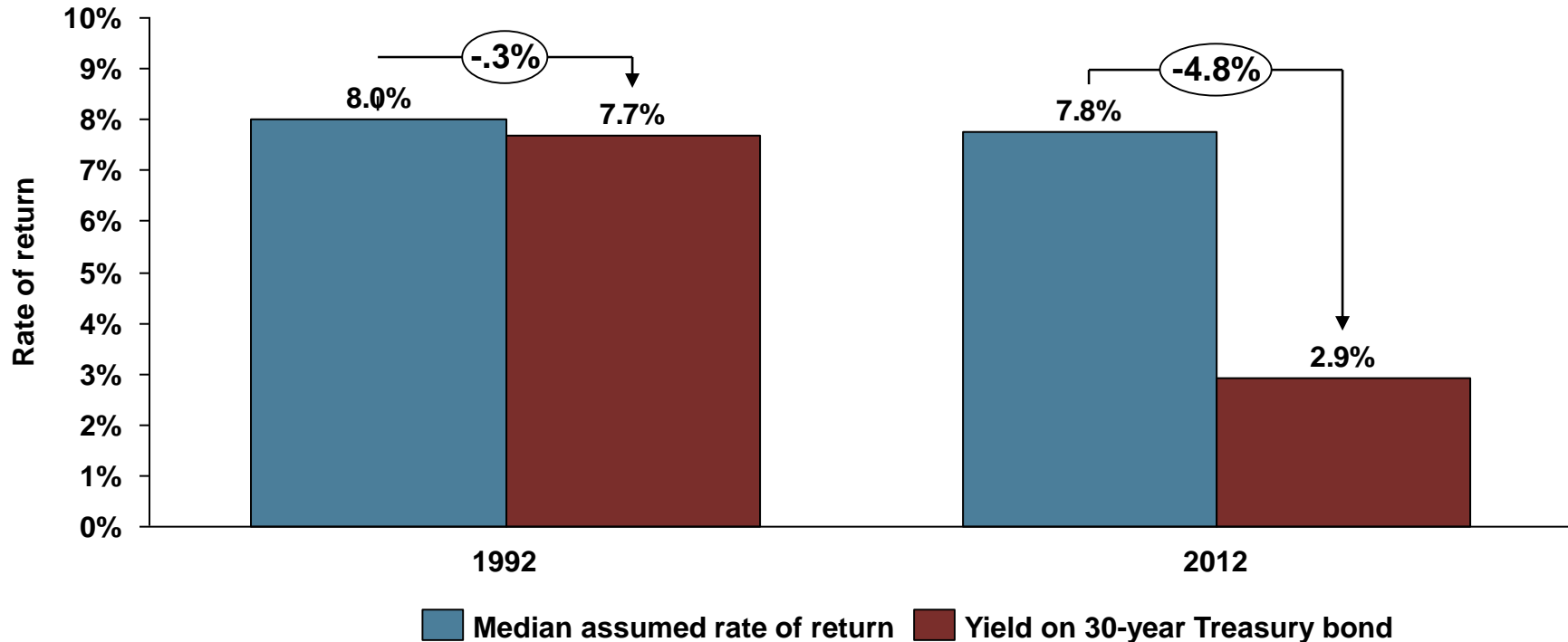


Table of Contents

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

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

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

Defined contribution (DC) plans	Cash balance (guaranteed return) plans	Hybrid plans	Employee choice
<ul style="list-style-type: none">• Both employers and employees contribute a set, or “defined,” amount	<ul style="list-style-type: none">• Defined benefit plan that provides employees a guaranteed rate of return	<ul style="list-style-type: none">• A mix of pension and defined contribution components	<ul style="list-style-type: none">• Some states allow employees to choose a plan that best suits their needs

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

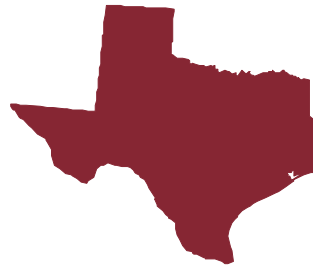
Another alternative is called a cash balance plan

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

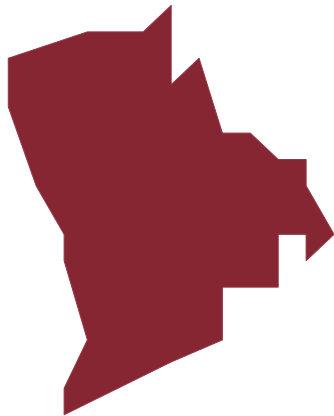


Texas offers cash balance plans to county and municipal employees. Employers set contribution rates and match employee contributions. The state guarantees steady returns and converts account balances into monthly annuity payments

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

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

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

Low fees

- Low-fee index funds ensure worker contributions stay and accumulate, rather than enriching third-party providers

Life-cycle funds

- Funds that automatically adjust the riskiness of their investments based on the employee’s age and time to retirement

Automatic enrollment

- Automatically enroll workers in a retirement plan, and default into a contribution rate that’s likely to lead to a secure retirement

Annuitization

- Help workers spend down their savings through monthly payments, to replicate the appeal of a traditional pension plan

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**

1

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



2

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



3

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



4

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



Pensions are complicated

The complexity of pension policies makes them challenging to explain and understand, even for enrollees, taxpayers, and legislators



Social Security carries new costs

Enrolling all public school teachers in Social Security seems like a straightforward policy, but it comes with transition issues and new costs



Pensions provide a guarantee

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



Change is politically unpopular

Pension reform requires state lawmakers to clean up an inherited mess; unfunded liabilities won't disappear overnight

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

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

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.