BELLWETHER EDUCATION PARTNERS

Teacher Retirement Systems: A Ranking of the States

Max Marchitello, Andrew J. Rotherham, and Juliet Squire

Aug. 31, 2021

Revised Nov. 12, 2021 to include an updated teacher contribution rate of 7.0% in Connecticut as well as adjustments to the COLA structure, interest credit, and vesting data for Indiana's default hybrid plan. These changes slightly decreased Indiana's ratings and rankings.

Executive Summary

Teacher retirement plans are not just an education issue. With about 3.2 million public school teachers and millions more retirees, teacher retirement is a broad retirement security issue for Americans. And contrary to much of the political rhetoric for and against defined benefit pension plans, these plans are not “gold-plated” for most teachers. In fact, many people who teach, even for substantial amounts of time, never see a pension at all. Taxpayers, too, have a stake in pension systems that are supported with public dollars and often have displacing effects on public finance. The State Teacher Retirement Rankings are an attempt to reduce confusion and misinformation and show how states are balancing the needs of various constituents.

To support broader understanding of the challenges of teacher retirement systems, the State Teacher Retirement Rankings cut through the complexity to provide information to help more people better understand how these systems work and don’t work for teachers and taxpayers. To show how well retirement plans serve various constituent groups, we assess them for four profiles: short-, medium-, and long-term teachers as well as for taxpayers. This approach shows that there are no “right” answers for reform, just trade-offs.

Unfortunately, reforms to date have nibbled around the edges of the challenges with pensions. Piecemeal efforts to increase contribution rates, reduce benefits for new teachers, raise the retirement age, or modify benefit formulas have slowly eroded benefits for teachers but failed to address the fundamental challenges in how teacher retirement plans are structured. Moreover, even those states that have made structural shifts by creating hybrid or defined contribution plans have not necessarily created high-quality options for teachers.

A state with an ideal teacher retirement system would earn 100% of its possible points. In our rankings, South Dakota comes closest. It emerges as the leading state with an overall score of 88.4%. Tennessee, Washington, Utah, and New York are also in the top five states. Pennsylvania, Connecticut, Kentucky, New Jersey, and Illinois make up the bottom five with scores ranging from 34.9% to 43.3%. Importantly, however, these overall scores mask variation in how each state serves different constituent groups; some states emerge with particularly strong ratings for short-term teachers, while others score much better for long-term teachers or taxpayers. Consequently, these rankings are designed to be used comprehensively *across* constituent profiles, rather than one profile at a time.

Source: National Center for Education Statistics, “Digest of Education Statistics,” 2019.

Table of Contents

These rankings shed light on how retirement plans stack up and how they serve (or don't serve) different stakeholders

To support broader understanding of the challenges of teacher retirement systems, and the trade-offs inherent to the status quo and to meaningful reform, the State Teacher Retirement Rankings cut through the complexity and provide information to help more people better understand how these systems work and why they should be a priority for policymakers, teachers, advocates, and school system leaders.

Importantly, we structure our rankings to show how well retirement plans serve various constituent groups, including short-, medium-, and long-term teachers as well as taxpayers. This structure allows us to show that some reforms that are broadly good for taxpayers and public finance may not be good for teachers. Likewise, reforms that are good for *some* teachers may not be good for *all* teachers, and some reforms that benefit teachers are inequitable to the broader public. In short, the four profiles illustrate that there are no "right" answers to teacher pension reform, just trade-offs, and highlight the need for reforms that meet the needs of as many teachers as possible and reflect responsible fiscal management. Since meaningful reform will require wrestling with the competing interests of all groups, we wanted a ranking system that would make the trade-offs more transparent.

We analyzed robust data* about every state-level teacher retirement plan in the country. We developed criteria for assessing how well they serve various stakeholders and a point system for comparing how plans stack up against our criteria. For states with multiple retirement plans, we created a composite score. We rank each state's retirement systems across each constituent group and overall. To provide a familiar scale and enable comparative analysis across states, and eliminate a sense of false precision, we translate the score for each state into a letter grade.

The analysis is complex because it takes into account so many dimensions of teacher retirement systems. In the slides that follow, we provide some context on the problems and politics of teacher retirement plans, describe our approach to the rankings, and outline our findings. Appendix A includes additional information about the methods and the assumptions that underlie them.

* Our analysis relies on data from the Equable Public Retirement Research Database, with updated data on public retirement systems across the country.

Teacher retirement plans vary considerably across states

Thirty-seven states, including the District of Columbia, provide teachers a traditional defined benefit (DB) pension plan as the default retirement option. Teachers and their employers make contributions to the pension, and teachers receive a guaranteed level of benefits when they retire — typically based on their years of service and a percentage of the salary teachers earned in their last year (or last several years) before retirement. Pensions sometimes include a cost-of-living adjustment to account for the effects of inflation. These defined benefit retirement plans tend to have longer vesting periods and are less portable if teachers change careers or move across state lines.

In addition, 14 states have created other retirement plans for teachers. In three cases, states have default retirement plans more akin to a 401(k), in which teachers and employers contribute a percentage of a teacher's salary into an individual account for that teacher each year. These defined contribution (DC) plans do not promise a specific level of benefit when a teacher retires; the value of the accounts fluctuate based on contribution rates and investment returns. However, defined contribution plans tend to have shorter vesting periods and are more portable. One state, Kansas, has a "cash balance" plan. Under this plan, teachers contribute a percent of their salary to their retirement, and the state manages these retirement funds and guarantees a certain rate of annual interest. The longer teachers stay, the higher their guaranteed rate of annual interest. Our analysis includes Kansas' "cash balance" plan in the defined contribution category.

In 10 cases, states have made hybrid plans the default option for teachers. These plans incorporate features from both defined benefit and defined contribution plans.

Defined benefit pension plans are still, by far, the most common arrangement for teachers, but it is important to acknowledge that they sit within a context where teachers increasingly have other options. Our State Teacher Retirement Rankings take that into account.

Teacher pension plans present enormous challenges for teachers, the education sector, and public finance

Teacher pension plans have enormous financial implications for teachers. They affect all teachers regardless of tenure, mobility, or age. Teacher pension plans are typically designed to serve those who teach for their entire career, but even those benefits sometimes provide inadequate retirement income. To help address unfunded liabilities, many states reduce pension benefits for new teachers while increasing contribution rates to fund benefits for current retirees. Many pension plans systematically disadvantage young and more mobile teachers, who are less likely to stay in the same profession and work in the same state for the seven or 10 years often required to vest and receive a pension. Today, half of teachers never vest and don't qualify for any pension benefit at all. Only about one in five teachers gets a full pension. Pension plans serve *some* teachers very well but do not serve *most* teachers well.

Teacher pension plans have enormous financial implications for schools. Efforts to pay down pension debt constrain teacher salaries; they also affect take-home pay, as teachers early in their careers see paycheck deductions for pension contributions they may never recoup. Reduced salaries and benefits have significant implications for how schools attract, compensate, and retain new teachers. In addition, pension debt incentivizes system leaders to direct operating dollars toward paying down debt, rather than to instructional supports or classroom resources. For instance, if state and district contributions toward pension debt in California were instead directed to teacher salaries, a teacher with the average annual salary could see a 15% raise, about $10,000. These numbers are projected to get much worse. By 2031-32, for instance, Los Angeles Unified School District estimates pension costs will account for 22.4% of payroll for covered employees.

Teacher pension plans have enormous implications for public finance. As of 2019, the gap between what states have saved for teacher pensions and what retirees are expecting now totals nearly $700 billion, not including the additional liabilities states have for health care costs. The gap is due in part to more generous pensions promised to veteran teachers or retirees, broader generational trends, and longer life expectancies. It is also due in part to poor political leadership and fiscal management, as many states have routinely contributed less to pension plans than actuaries recommend. Over time, the debt will come due and states will need to reckon with the shortfall and the unavoidable effects on tax rates, government services, and other funding priorities.

Sources: Chad Aldeman, "The Pension Pac-Man: How Pension Debt Eats Away at Teacher Salaries," TeacherPensions.org, last modified May 2016; Chad Aldeman, "In Los Angeles, Benefit Costs Are Eating Up the School District's Budget," TeacherPensions.org, last modified August 2017; Equable Institute, "Understanding the State of Teacher Pension Funding in 2020," last modified September 2020.

Reforms have been largely incremental; structural reforms are stymied by competing interests and attendant politics

Despite the well-documented challenges of teacher pensions, meaningful reform is elusive. States have nibbled around the edges of the challenges with pensions, often in ways that are disadvantageous to teachers. In addition to increasing contribution rates and reducing benefits for newer teachers, many states have raised the retirement age, increased vesting periods, or modified the formulas for how benefits are calculated. Piecemeal reforms slowly erode benefits for teachers but fail to address the fundamental challenges in how teacher pensions are structured. Moreover, even those states that have made structural shifts by creating hybrid or defined contribution options have not necessarily created high-quality options.

Meaningful reform requires navigating the competing interests of numerous constituent groups. Teachers nearing or in retirement who rely on pension plans in planning for retirement understandably oppose reforms that could reduce their benefits (these reforms are also typically prohibited under state law). Teachers who do not intend to teach for their whole career, meanwhile, typically want higher take-home pay and retirement plans that are more portable (e.g., defined contribution plans). Meanwhile, reforms that would increase state contributions to pension plans have little appeal to public officials, who are loath to reduce state spending on other priorities and/or increase taxes.

The politics of pension reform are particularly difficult. Reforming pensions presents at least three major political challenges. First, pension reform requires tolerating short-term pain for long-term gain; some reforms made today will not show benefits — for teachers, schools, or public finance — for decades. Politicians are not incentivized to take a hit when the benefits will not materialize until long after they have left office or retired and, conversely, are incentivized to kick hard decisions down the road. Second, pension reform pits a small, organized constituency of teachers who benefit the most from traditional pension plans (i.e., veteran teachers) against a large, unorganized constituency with diffuse interests (i.e., taxpayers and teachers who, for whatever reason, do not teach long-term in one state). Finally, pension plans are complex and opaque; it is difficult for a casual observer to assess the state of teacher pensions, let alone discern the implications of reform for teachers, schools, or taxpayers. Each challenge makes pension reforms one of the most fraught public policy questions in the sector.

There are no easy answers to reforming teacher retirement systems

Defined benefit plans are not necessarily bad. They tend to carry unfunded liabilities and lack portability, but the underlying structure of a defined benefit plan can work for teachers and taxpayers with adequate funding levels, reasonable vesting periods, and other characteristics to make these plans reflect the reality of today's labor market. More here.

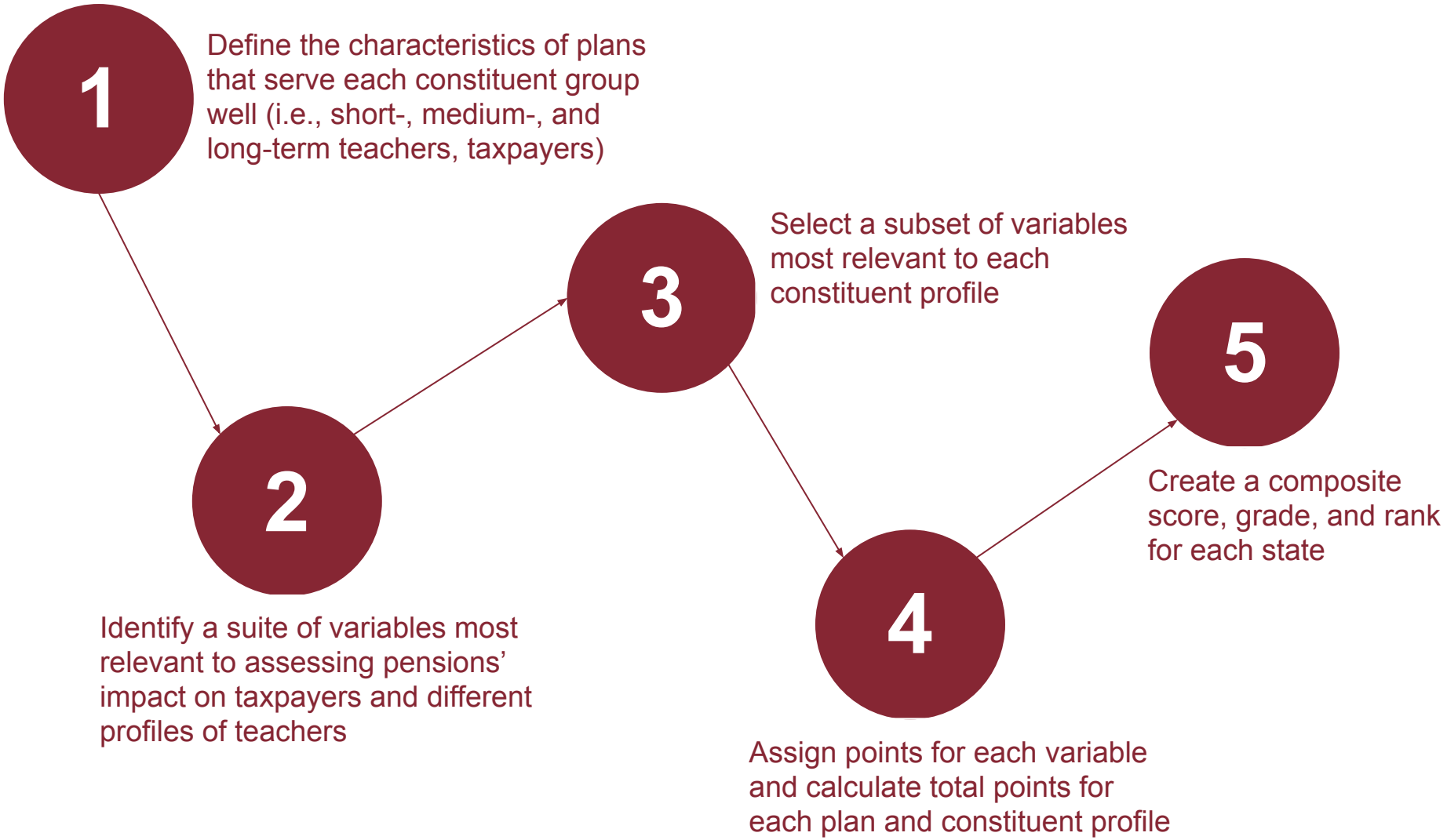
Defined contribution plans are not necessarily good. Among states that have reformed their retirement systems, introducing elements of a defined contribution plan has been a favored strategy. But defined contribution plans are not necessarily high quality; many have contribution rates, for instance, that fall far short of providing adequate retirement benefits. More here.

Providing options isn't a solution unless those options are good. Providing teachers with an opportunity to select a plan that best meets their needs is not necessarily worth much if the alternative options are poor quality. Teachers need access to *good* options. More here.

Retirement systems must maintain adequate benefits for teachers and responsible fiscal stewardship. Fundamentally, this will require policymakers and advocates to make hard choices to address unfunded liabilities, balance retirement benefits with their costs to teachers and taxpayers, and increase benefit portability for an increasingly mobile workforce. Beyond that, policymakers and advocates have dozens of other choices to make, each of which will affect constituent groups in different ways. For more about the complexities, challenges, and opportunities of teacher retirement systems, visit our website: www.TeacherPensions.org.

Table of Contents

Our process to develop the rankings included several steps



1 We defined the characteristics of plans that serve each constituent group

Retirement systems must balance the needs of numerous constituent groups, including taxpayers and teachers at various stages of their careers, who may or may not change jobs or move across state lines. To understand how well retirement systems balance these needs, the analysis begins with identifying the characteristics of systems that would serve these four groups well.

Short-term teachers	Teachers who stay for fewer than 10 years are best served by retirement systems that minimize the share of contributions used to pay down pension debt and offer plans with benefits that teachers can take with them if they change jobs or move to a new state.
Medium-term teachers	Teachers who stay for more than 10 years but do not stay until they reach retirement age are best served by systems that have low debt costs, strong returns on investment, and adequate benefits even without spending 30 or more years in the classroom.
Long-term teachers	Teachers who stay for their entire career are best served by retirement plans that have low debt cost, strong overall funding, strong investment returns, and adequate benefits at retirement.
Taxpayers	Taxpayers are best served by retirement plans that have low debt cost, a normal cost that balances costs and benefits, and strong investment returns and that have been managed responsibly with adequate state contributions.

2 We identified a suite of variables most relevant to taxpayers and different profiles of teachers (1 of 2)

Variable Name	Description
Alternative retirement plan	Whether teachers have more than one retirement plan to choose from and the quality of that plan, based on its vesting period and benefit adequacy after 15 years and at retirement.
Amortization cost	The percent of salaries that states and districts are contributing toward the cost of paying down the unfunded liabilities of retirement plans.
Amortization period	The number of years the state expects to take to pay down the unfunded liabilities of retirement plans.
Cost-of-living adjustment (COLA) structure	The structure and process for making COLAs.
COLA rate vs. inflation assumption	The plan's COLA rate compared to its inflation assumption.
Interest credit on early withdrawal	How much interest the state pays on the contributions a teacher made to the retirement fund if the teacher decides to withdraw from the system before reaching normal or early retirement age.
Investment returns over 10 years	The 10-year geometric average return on investment that the retirement plan earned. *Note: We use an average over 10 years to mitigate the effects of market fluctuations, as well as single-year boons that can occur when the plan managers make riskier investments.*
Normal cost of benefits	The total percent of salary required, from both teachers and employers, to pay for benefits, excluding debt costs. The normal cost is adjusted for state participation in Social Security.

2 We identified a suite of variables most relevant to taxpayers and different profiles of teachers (2 of 2)

Variable Name	Description
Overall funding level	The ratio of the teacher retirement plans' funding levels compared to total liabilities.
Plan adequacy at 15 years*	For defined benefit plans, the percent of salary a retiree can expect in benefits after 15 years of service. For defined contribution plans, the annual contribution. Both are adjusted for states that do not participate in Social Security for teachers.*
Plan adequacy at retirement*	For defined benefit plans, the percent of salary a retiree can expect in benefits if they stay until normal retirement age. For defined contribution plans, the annual contribution. Both are adjusted for states that do not participate in Social Security for teachers.*
Social Security**	Whether the state participates in Social Security for teachers or, for states that do not participate in the program, whether it permits districts to do so.
State contributions vs. ADEC***	The contributions the state has made to the retirement system over the previous 10 years, compared to the contributions actuaries recommend to fund a stable system.
Teacher contribution rate	The percent of salary that teachers are required to contribute to the retirement plan.
Vesting period	The period of time a teacher must work before they qualify for employer-provided retirement benefits. In defined benefit pension plans, a vested employee has a right to collect a pension upon reaching the state's normal or early retirement age.

* Additional details about retirement adequacy can be found in Appendix A.
** Due to a historical quirk, about 40% of public K-12 teachers are not enrolled in Social Security. For more information, see Chad Aldeman, "Social Security, Teacher Pensions, and the "Qualified" Retirement Plan Test," Bellwether Education Partners, last modified November 2019.
*** Actuarially determined employer contribution.

3 We selected a subset of variables most relevant to each constituent profile

Variable	Short-term	Medium-term	Long-term	Taxpayer
Alternative retirement option	X	X		
Amortization cost	X	X	X	X
Amortization period				X
COLA structure		X	X	
COLA rate vs. inflation assumption		X	X	
Interest credit on early withdrawal	X			
Investment returns over 10 years		X	X	X
Normal cost of benefits				X
Overall funding level			X	
Plan adequacy at 15 years		X		
Plan adequacy at retirement			X	
Social Security	X			X
State contributions vs. ADEC		X	X	X
Teacher contribution rate	X	X		
Vesting period	X			

3 For short-term teachers, we prioritized variables that assessed plan flexibility and contributions toward debt

Variable	For short-term teachers …
Alternative retirement option	The existence and quality of retirement plan options is important because it indicates whether teachers who do not plan to stay in teaching for the long term can select a plan that meets their needs. The more high-quality options a teacher has, the better.
Amortization cost	The amortization cost is important because it indicates what percentage of state and district contributions* to the pension fund are for debt costs rather than benefits. The lower the amortization cost, the better.
Interest credit on early withdrawal	The interest credit on early withdrawal is important because it affects the dollar value teachers receive when they withdraw from the retirement system before early or normal retirement age. The higher the interest credit on early withdrawal, the better.
Social Security	A state's participation in Social Security is important because social security supplements the benefits provided by the state retirement system and follows teachers regardless of future employment. For short-term teachers, participation is better than not.
Teacher contribution rate	Teachers' contribution rate to the retirement plan is important because it indicates how much of their paycheck is automatically set aside for retirement. The optimal contribution rates are neither too low (e.g., <3%) nor too high (e.g., >10%).
Vesting period	The vesting period is important because it indicates how long teachers must stay to qualify for benefits upon retirement. For short-term teachers, the shorter the vesting period, the better.

* In Arizona, Nevada, and Ohio, a portion of teachers' contributions may also go toward paying down debt costs.

BELLWETHER EDUCATION PARTNERS

3 For medium-term teachers, we prioritized variables that balance system debt and benefits after 15 years

Variable	For medium-term teachers …
Alternative retirement option	The existence and quality of retirement plan options is important because it indicates whether teachers who do not plan to stay in teaching for the long term can select a plan that meets their needs. The more high-quality options a teacher has, the better.
Amortization cost	The amortization cost is important because it indicates what percentage of state and district contributions* to the pension fund are for debt costs rather than benefits. The lower the amortization cost, the better.
COLA structure	The structure of a COLA is important as it indicates the certainty of whether teachers will receive one. The more reliable the COLA, the better.
COLA rate vs. inflation assumption	For plans that have a COLA, the rate is important because benefits to teachers who vest in retirement plans will be higher if the COLA counteracts the effects of inflation.
Investment returns over 10 years	Average investment returns are important because they suggest how well contributions to the retirement plan are being managed over time and how much of the benefit can be funded by investment returns rather than by increased employer or employee contributions. The higher the average returns, the better.
Plan adequacy at 15 years	Plan adequacy at 15 years is important because it suggests what benefit teachers who leave mid-career can expect when they retire. The higher the plan adequacy, the better.
State contributions vs. ADEC over 10 years	Average state contributions vs. ADEC are important because they suggest whether the state is making adequate contributions to the retirement fund to prevent the accrual of unfunded liabilities. A state contribution that is 100% of ADEC indicates an adequate contribution. The higher the average state contribution vs. ADEC, the better.
Teacher contribution rate	Teachers' contribution rate to the retirement plan is important because it indicates how much of their paycheck is automatically set aside for retirement. The optimal contribution rates are neither too low (e.g., <3%) nor too high (e.g., >10%).

* In Arizona, Nevada, and Ohio, a portion of teachers' contributions may also go toward paying down debt costs.

3 For long-term teachers, we prioritized variables that assess the level and security of benefits

Variable	For long-term teachers …
Amortization cost	The amortization cost is important because it indicates what percentage of state and district contributions* to the pension fund are for debt costs rather than benefits. The lower the amortization cost, the better.
COLA structure	The structure of a COLA is important as it indicates the certainty of whether teachers will receive one. The more reliable the COLA, the better.
COLA rate vs. inflation assumption	For plans that have a COLA, the rate is important because benefits to teachers who vest in retirement plans will be higher if the COLA counteracts the effects of inflation.
Investment returns over 10 years	Average investment returns are important because they suggest how well contributions to the retirement plan are being managed over time and how much of the benefit can be funded by investment returns rather than by increased employer or employee contributions. The higher the average returns, the better.
Overall funding level	Overall funding level is important because it suggests the health of the retirement system and the security of teachers' benefits. The higher the overall funding level, the better.
Plan adequacy at retirement	Plan adequacy at retirement is important because it suggests what benefits teachers can expect when they reach the normal retirement age. The higher the plan adequacy, the better.
State contributions vs. ADEC over 10 years	Average state contributions vs. ADEC are important because they suggest whether the state is making adequate contributions to the retirement fund to prevent the accrual of unfunded liabilities. A state contribution that is 100% of ADEC indicates an adequate contribution. The higher the average state contribution vs. ADEC, the better.

* In Arizona, Nevada, and Ohio, a portion of teachers' contributions may also go toward paying down debt costs.

BELLWETHER EDUCATION PARTNERS

3 For taxpayers, we prioritized variables that assess the stewardship of public finance and fund management

Variable	For taxpayers …
Amortization cost	The amortization cost is important because it indicates what percentage of state and district contributions* to the pension fund are for debt costs rather than benefits. The lower the amortization cost, the better.
Amortization period	The amortization period is important because it indicates how long it will take to pay down unfunded liabilities. The shorter the amortization period, the better.
Investment returns over 10 years	Average investment returns are important because they suggest how well contributions to the retirement plan are being managed over time and how much of the benefit can be funded by investment returns rather than by increased employer or employee contributions. The higher the average returns, the better.
Normal cost of benefits	The normal cost of benefits is important because it indicates how expensive it is for the state to provide retirement benefits. The optimal normal cost of benefits is neither too low (e.g., <5%) nor too high (e.g., ≥15%).
Social Security	Social Security is important because it indicates whether part of the cost of teachers' retirement is covered by the federal rather than state government. It is better that states participate in Social Security for teachers, than not.
State contributions vs. ADEC over 10 years	Average state contributions vs. ADEC are important because they suggest whether the state is making adequate contributions to the retirement fund to prevent the accrual of unfunded liabilities. A state contribution that is 100% of ADEC indicates an adequate contribution. The higher the average state contribution vs. ADEC, the better.

* In Arizona, Nevada, and Ohio, a portion of teachers' contributions may also go toward paying down debt costs.

BELLWETHER EDUCATION PARTNERS

4 We assigned points for each variable and calculated total points for each profile

Variable	Parameters for awarding points		Constituent profiles			
			Short-term	Medium-term	Long-term	Taxpayers
Vesting period 5 years	Vesting period ≤ 3	5	3 points	n/a	n/a	n/a
	3 < Vesting period ≤ 6	3				
	6 < Vesting period ≤ 9	1				
	9 < Vesting period	0				
Teacher contribution rate 7%	Rate ≤ 0%	0	5 points	5 points	n/a	n/a
	0% < Rate ≤ 3%	1				
	3% < Rate ≤ 5%	3				
	5% < Rate ≤ 8%	5				
	8% < Rate ≤ 10%	4				
	10% < Rate	2				
Amortization cost 17%	Cost ≤ 5%	5	2 points	2 points	2 points	2 points
	5% < Cost ≤ 10%	4				
	10% < Cost ≤ 15%	3				
	15% < Cost ≤ 20%	2				
	20% < Cost ≤ 25%	1				
	25% < Cost	0				

The above is illustrative only; additional details about the methodology are included in Appendix A.

5 We created a score, rank, and grade for each state, depending on the state's type(s) and number of plans

Our analysis incorporates data from all relevant plans, but we do not rank each retirement plan individually. Rather, we assess each state's overall retirement system for teachers.

We account for the various types of plans a state may have ...

For states with a DB plan as default	For states with a DC plan as default	For states with a hybrid plan as default
Thirty-seven states (including the District of Columbia) have DB plans that are the default retirement option for teachers. We evaluate all variables for these plans.	Four states have DC plans as their default retirement option for teachers (including Kansas, which has a cash balance plan). The variables for the DC plan are evaluated just as they are for other plans, excluding variables that are not relevant (e.g., amortization cost).	Ten states have hybrid plans as their default retirement option for teachers. The DB and DC elements of the plan are each evaluated separately as described.

… as well as for states that have multiple plans

Alternative plans: If the state offers an alternative to the default plan, we award points based on the existence and quality of that option in the "alternative retirement option" variable.

Other liabilities: If the state has a plan for which the state is still carrying liabilities that are not otherwise incorporated into the state's data, we include data about those liabilities to capture their continuing effects on teachers and taxpayers. We do this regardless of whether that plan is closed to new teachers.

Additional details about the methodology are included in Appendix A.

5 We include different variables for different plans, depending on their role in the state's overall system

Only a subset of variables are applicable to default DC plans because they do not carry debt or guarantee benefits.

We include variables about the existence and quality of the alternative plan in the short- and medium-term teacher profiles.

	Default			Alternative			Other Liabilities	
Variable	**DB**	**DC**	**Hybrid**	**DB**	**DC**	**Hybrid**	**DB**	**Hybrid**
Alternative retirement option	X	X	X					
Amortization cost	X		X				X	X
Amortization period	X		X				X	X
COLA structure	X		X					
COLA rate vs. inflation assumption	X		X					
Interest credit on early withdrawal	X		X					
Investment returns over 10 years	X		X				X	X
Normal cost of benefits	X	X	X					
Overall funding level	X		X				X	X
Plan adequacy at 15 years	X	X	X	X	X	X		
Plan adequacy at retirement	X	X	X	X	X	X		
Social Security	X	X	X					
State contributions vs. ADEC	X		X				X	X
Teacher contribution rate	X	X	X					
Vesting period	X	X	X	X	X	X		

Some alternative or closed plans have liabilities that are not captured in data a state reports for its default plan. When this is the case, we include data on these liabilities in our evaluation of relevant variables to reflect their continuing effects on teachers and taxpayers.

These rankings provide clarity and transparency, but there are some things they *do not* do

Teacher retirement systems are complex. Benefits vary depending on some fundamental factors, such as where a teacher lives and what plan they are enrolled in. Our methodology focuses on these factors as significant differentiators.

Other factors also affect teacher retirement plans, however, including how old a teacher is when they enter the profession, what tier of a plan they are in (states sometimes have multiple tiers of benefits depending on when a participant enrolls), whether they are covered by a municipal rather than state plan, how plans and options have changed over time, and whether there are sidebar provisions in district-level collective bargaining agreements that create local variation in employer and/or employee contribution rates. Our analysis cannot and does not cover every variation, and analysts and commentators should bear that in mind when making inferences from these data.

Finally, this ranking seeks to inform public policy choices; it is not personal or institutional investment advice. Teachers should consult a qualified financial professional before making consequential financial decisions.

Table of Contents

We use traditional ranges to convert ratings into A through F letter grades

Letter Grade	Range	Description
A	90 ≤ Rating	The state's retirement system offers a solid foundation for retirement security for participants and is fiscally responsible.
B	80 ≤ Rating < 90	The state retirement system has multiple positive elements for retirement security and fiscal responsibility but still has room to improve.
C	70 ≤ Rating < 80	The state retirement system has a strong foundation on which to build but must address shortcomings in order to better support retirement security and fiscal responsibility.
D	60 ≤ Rating < 70	The state retirement system has significant weaknesses to address.
F	Rating < 60	The state's retirement system is not meeting the needs of participants and/or taxpayers.

In the overall rankings, South Dakota, Tennessee, and Washington lead the pack; however, scores vary by profile

	Overall		Short-term		Medium-term		Long-term		Taxpayer	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
SD	88.4%	1	83.3%	1	78.6%	4	91.7%	3	100.0%	1
TN	82.5%	2	68.3%	6	80.0%	1	93.3%	2	88.3%	3
WA	81.9%	3	76.3%	3	79.6%	2	91.7%	3	80.0%	10

South Dakota's strong overall score reflects reasonably strong scores across all four dimensions. South Dakota's scores differ from other states in two ways. First, its strong scores on amortization cost, amortization period, normal cost of benefits, and overall funding level suggest lower liabilities and good fiscal management. Second, its strong scores on vesting period and interest credit on early withdrawal suggest higher-than-average portability for short-term teachers.

Tennessee's high scores for long-term teachers balance out much weaker scores for short-term teachers. Its relatively high strong score on overall funding level counteracts its lack of an alternative retirement option and relatively low score on interest credit on early withdrawal.

Washington scores less well than South Dakota on vesting period and normal cost of benefits; Washington's relatively strong alternative retirement option partially offsets these issues.

In the overall rankings, Kentucky, New Jersey, and Illinois lag behind

	Overall		Short-term		Medium-term		Long-term		Taxpayer	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
KY	39.7%	49	30.0%	45	47.1%	47	45.0%	48	36.7%	49
NJ	36.2%	50	36.7%	41	31.4%	51	30.0%	51	46.7%	42
IL	34.9%	51	13.3%	51	41.4%	50	45.0%	48	40.0%	46

All three states at the bottom of the rankings lose significant ground against their peers on variables related to unfunded liabilities. Amortization cost, the state's contribution vs. ADEC, and the plans' overall funding levels are substantial issues. Illinois and Kentucky also fare poorly because, in addition to other problems, the states do not participate in Social Security for teachers. This affected their ratings for Social Security, and, because their plans do not provide commensurately high benefits to counteract the lack of Social Security, this also affected the states' scores for providing adequate benefits after 15 years of service and at retirement.

Kentucky's return on investment score somewhat mitigates these weaknesses while, for New Jersey, a relatively strong normal cost of benefits does so.

South Dakota, Tennessee, and Washington lead the pack **overall,** but they still have room to improve

State	Grade	Rank
SD	88.4%	1
TN	82.5%	2
WA	81.9%	3
UT	77.6%	4
NY	77.2%	5
OR	76.3%	6
MI	76.1%	7
ID	76.1%	7
NE	74.5%	9
AR	74.4%	10
DE	72.0%	11
AZ	71.4%	12
NC	70.5%	13
SC	69.1%	14
OK	68.9%	15
VA	68.5%	16
MN	68.2%	17
IA	67.4%	18
WI	67.4%	18
MT	67.2%	20
HI	66.7%	21
MS	66.2%	22
MD	65.7%	23
WV	64.8%	24
FL	64.6%	25
VT	64.0%	26
AL	63.3%	27
ND	62.0%	28
NH	61.8%	29
KS	61.0%	30
WY	60.3%	31
GA	58.2%	32
ME	57.6%	33
MO	57.5%	34
IN	57.0%	35
OH	57.0%	35
NM	56.1%	37
DC	55.1%	38
NV	54.2%	39
TX	54.3%	40
LA	48.6%	41
RI	48.3%	42
AK	48.2%	43
CO	47.8%	44
CA	46.5%	45
MA	46.2%	46
PA	43.3%	47
CT	42.1%	48
KY	39.7%	49
NJ	36.2%	50
IL	34.9%	51

A	B	C	D	F

Corrections to Indiana's data (see slide 47) reduced its score from 58.6% to 57.0% and its rank from 32 to 35.

BELLWETHER EDUCATION PARTNERS

Few states score well for **short-term teachers**, though South Dakota has multiple positive elements

State	Grade	Rank
SD	83.3%	1
OR	76.7%	2
WA	76.3%	3
FL	71.5%	4
MI	70.0%	5
TN	68.3%	6
UT	67.4%	7
MN	66.7%	8
SC	64.6%	9
KS	64.0%	10
ID	63.3%	11
VA	63.3%	11
AR	60.0%	13

State	Grade	Rank
AZ	60.0%	13
OK	60.0%	13
WI	60.0%	13
ND	60.0%	13
NE	56.7%	18
MT	56.7%	18
WY	56.7%	18
IA	56.7%	18
VT	56.7%	18
HI	55.0%	23
PA	54.6%	24
NC	53.3%	25
AL	53.3%	25

State	Grade	Rank
TX	51.7%	27
MD	50.0%	28
NH	50.0%	28
DE	46.7%	30
MS	46.7%	30
NM	46.7%	30
IN	44.6%	33
NY	43.3%	34
WV	43.3%	34
DC	43.3%	34
OH	42.3%	37
GA	41.7%	38
AK	40.0%	39

State	Grade	Rank
RI	38.3%	40
ME	36.7%	41
NJ	36.7%	41
CO	33.3%	43
CT	33.3%	43
MO	30.0%	45
NV	30.0%	45
LA	30.0%	45
KY	30.0%	45
CA	26.7%	49
MA	23.3%	50
IL	13.3%	51

A	B	C	D	F

Corrections to Indiana's data (see slide 47) reduced its score from 47.9% to 44.6% and its rank from 30 to 33.

BELLWETHER EDUCATION PARTNERS

Tennessee has several positive elements for **medium-term teachers**

State	Grade	Rank
TN	80.0%	1
WA	79.6%	2
MI	79.4%	3
SD	78.6%	4
SC	76.8%	5
AR	75.7%	6
ID	74.3%	7
NE	72.9%	8
MS	72.9%	8
UT	72.0%	10
DE	71.4%	11
OR	70.0%	12
HI	70.0%	12

State	Grade	Rank
MT	68.6%	14
NC	68.6%	14
NY	67.1%	16
VA	65.7%	17
AZ	65.7%	17
OK	65.7%	17
VT	65.7%	17
WV	65.7%	17
MN	64.3%	22
GA	64.3%	22
IA	62.9%	24
MD	62.9%	24
WI	62.9%	24

State	Grade	Rank
AL	60.0%	27
MO	60.0%	27
OH	59.1%	29
ME	58.6%	30
NV	58.6%	30
TX	57.1%	32
NH	57.1%	32
DC	57.1%	32
KS	56.7%	35
CO	54.3%	36
WY	54.3%	36
NM	54.3%	36
LA	54.3%	36

State	Grade	Rank
AK	53.3%	40
FL	52.9%	41
IN	52.9%	42
ND	51.4%	43
MA	51.4%	43
RI	50.0%	45
CT	50.0%	45
KY	47.1%	47
CA	45.7%	48
PA	45.4%	49
IL	41.4%	50
NJ	31.4%	51

A	B	C	D	F

Corrections to Indiana's data (see slide 47) reduced its score from 53.9% to 52.9% and its rank from 40 to 42.

BELLWETHER EDUCATION PARTNERS

Five states offer a solid foundation for retirement security for **long-term teachers**

State	Grade	Rank
NY	98.3%	1
TN	93.3%	2
SD	91.7%	3
WA	91.7%	3
UT	90.0%	5
NE	88.3%	6
DE	86.7%	7
AR	85.0%	8
ID	83.3%	9
MO	83.3%	9
ME	81.7%	11
AZ	80.0%	12
MS	78.3%	13

State	Grade	Rank
NV	78.3%	13
MI	77.3%	15
NC	76.7%	16
WI	76.7%	16
MN	75.0%	18
OR	75.0%	18
MD	73.3%	20
MT	73.3%	20
GA	71.7%	22
VA	71.7%	22
DC	70.0%	24
IA	70.0%	24
LA	70.0%	24

State	Grade	Rank
OH	70.0%	24
WV	70.0%	24
HI	68.3%	29
AL	66.7%	30
CA	66.7%	30
CO	66.7%	30
MA	66.7%	30
OK	66.7%	30
VT	66.7%	30
SC	65.0%	36
FL	64.0%	37
NH	63.3%	38
NM	63.3%	38

State	Grade	Rank
IN	62.5%	40
KS	60.0%	41
ND	60.0%	41
TX	60.0%	41
WY	60.0%	41
RI	56.7%	45
AK	56.0%	46
CT	55.0%	47
IL	45.0%	48
KY	45.0%	48
PA	33.3%	50
NJ	30.0%	51

A	B	C	D	F

Corrections to Indiana's data (see slide 47) reduced its score from 64.2% to 62.5% and its rank from 37 to 40.

BELLWETHER EDUCATION PARTNERS

When it comes to how well retirement plans score for **taxpayers,** New York and South Dakota receive high marks

State	Grade	Rank
NY	100%	1
SD	100%	1
TN	88.3%	3
DE	83.3%	4
ID	83.3%	4
NC	83.3%	4
OK	83.3%	4
OR	83.3%	4
UT	81.1%	9
AZ	80.0%	10
IA	80.0%	10
NE	80.0%	10
WA	80.0%	10

State	Grade	Rank
WV	80.0%	10
MI	77.8%	15
AR	76.7%	16
MD	76.7%	16
NH	76.7%	16
ND	76.7%	16
AL	73.3%	20
HI	73.3%	20
VA	73.3%	20
FL	70.0%	23
MT	70.0%	23
SC	70.0%	23
WI	70.0%	23

State	Grade	Rank
WY	70.0%	23
IN	68.3%	28
MN	66.7%	29
MS	66.7%	29
VT	66.7%	29
KS	63.3%	32
NM	60.0%	33
MO	56.7%	34
OH	56.7%	34
GA	55.0%	36
ME	53.3%	37
DC	50.0%	38
NV	50.0%	38

State	Grade	Rank
RI	48.3%	40
TX	48.3%	40
CA	46.7%	42
NJ	46.7%	42
AK	43.3%	44
MA	43.3%	44
IL	40.0%	46
LA	40.0%	46
PA	40.0%	46
CO	36.7%	49
KY	36.7%	49
CT	30.0%	51

A	B	C	D	F

BELLWETHER EDUCATION PARTNERS

Table of Contents

Alabama

Alabama has a single defined benefit pension plan, the Teachers' Retirement System of Alabama.

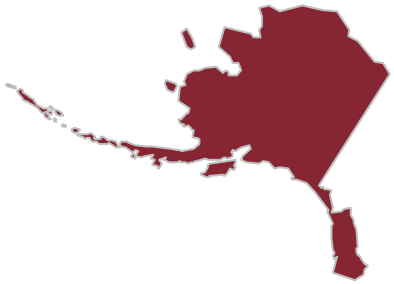
	Rank	Rating
Overall	27	63.3%
Short-term	25	53.3%
Medium-term	27	60.0%
Long-term	30	66.7%
Taxpayer	20	73.3%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	9.8%
Amortization period	28.8 years
COLA structure	No
COLA rate vs. inflation assumption	n/a
Interest credit on early withdrawal	4%
Investment returns over 10 years	8.7%
Normal cost of benefits	9.8%
Overall funding level	69.4%
Plan adequacy at 15 years	13.4%
Plan adequacy at retirement	61.1%
Social Security	Yes
State contributions vs. ADEC	100%
Teacher contribution rate	7.5%
Vesting period	10 years

BELLWETHER EDUCATION PARTNERS

Alaska



Alaska has two retirement plans. The Alaska Teachers' Retirement System is a DC plan; it is the default. The State of Alaska Teachers' Retirement System is a DB plan; it is closed to new teachers.

	Rank	Rating
Overall	43	48.2%
Short-term	39	40.0%
Medium-term	40	53.3%
Long-term	46	56.0%
Taxpayer	44	43.3%

A	B	C	D	F

Variable	**DC** *default*	**DB** *liabilities*
Alternative retirement option	No	n/a
Amortization cost	n/a	19.5%
Amortization period	n/a	25 years
COLA structure	n/a	n/a
COLA rate vs. inflation assumption	n/a	n/a
Interest credit on early withdrawal	n/a	n/a
Investment returns over 10 years	n/a	8.7%
Normal cost of benefits	15.0%	n/a
Overall funding level	n/a	75.3%
Plan adequacy at 15 years	15.0%	n/a
Plan adequacy at retirement	15.0%	n/a
Social Security	No	n/a
State contributions vs. ADEC	n/a	137%
Teacher contribution rate	8%	n/a
Vesting period	5 years	n/a

Note: Alaska's DB plan is closed, but we incorporate its liabilities as they continue to affect teachers and taxpayers.

Arizona

Arizona has a single defined benefit pension plan, the Arizona State Retirement System.

	Rank	Rating
Overall	12	71.4%
Short-term	13	60.0%
Medium-term	17	65.7%
Long-term	12	80.0%
Taxpayer	10	80.0%

A	B	C	D	F

Variable	**DB *default***
Alternative retirement option	No
Amortization cost	9.0%
Amortization period	27 years
COLA structure	Ad hoc
COLA rate vs. inflation assumption	n/a
Interest credit on early withdrawal	4.0%
Investment returns over 10 years	8.9%
Normal cost of benefits	14.9%
Overall funding level	72.8%
Plan adequacy at 15 years	21.5%
Plan adequacy at retirement	63.0%
Social Security	Yes
State contributions vs. ADEC	100%
Teacher contribution rate	11.9%
Vesting period	1 year

BELLWETHER EDUCATION PARTNERS

Arkansas

Arkansas has a single defined benefit pension plan, the Arkansas Teacher Retirement System.

	Rank	Rating
Overall	10	74.4%
Short-term	13	60.0%
Medium-term	6	75.7%
Long-term	8	85.0%
Taxpayer	16	76.7%

A	B	C	D	F

Variable	**DB *default***
Alternative retirement option	No
Amortization cost	8.7%
Amortization period	28 years
COLA structure	Automatic
COLA rate vs. inflation assumption	0.005
Interest credit on early withdrawal	0.1%
Investment returns over 10 years	8.8%
Normal cost of benefits	12.3%
Overall funding level	80.6%
Plan adequacy at 15 years	23.2%
Plan adequacy at retirement	60.2%
Social Security	Yes
State contributions vs. ADEC	93%
Teacher contribution rate	6.0%
Vesting period	5 years

BELLWETHER EDUCATION PARTNERS

California

California has a single defined benefit pension plan, the California State Teachers' Retirement System.

	Rank	Rating
Overall	45	46.5%
Short-term	49	26.7%
Medium-term	48	45.7%
Long-term	30	66.7%
Taxpayer	42	46.7%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	17.5%
Amortization period	30 years
COLA structure	Automatic
COLA rate vs. inflation assumption	-0.008
Interest credit on early withdrawal	1.5%
Investment returns over 10 years	9.3%
Normal cost of benefits	20.2%
Overall funding level	66.0%
Plan adequacy at 15 years	16.2%
Plan adequacy at retirement	74.0%
Social Security	No
State contributions vs. ADEC	85%
Teacher contribution rate	10.2%
Vesting period	5 years

BELLWETHER EDUCATION PARTNERS

Colorado

Colorado has a single defined benefit pension plan, the Colorado Public Employee Retirement Association-School Division.

	Rank	Rating
Overall	44	47.8%
Short-term	43	33.3%
Medium-term	36	54.3%
Long-term	30	66.7%
Taxpayer	49	36.7%

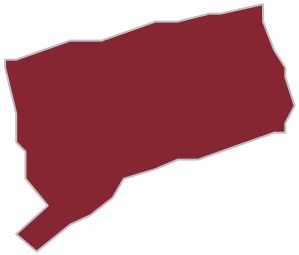
A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	19.6%
Amortization period	28 years
COLA structure	Automatic
COLA rate vs. inflation assumption	-0.004
Interest credit on early withdrawal	3.0%
Investment returns over 10 years	9.1%
Normal cost of benefits	13.0%
Overall funding level	59.9%
Plan adequacy at 15 years	24.2%
Plan adequacy at retirement	82.5%
Social Security	No
State contributions vs. ADEC	84%
Teacher contribution rate	9.1%
Vesting period	5 years

Note: Colorado recently made changes to its teacher retirement system that are not yet reflected in the most recent data used in this analysis.

Connecticut

Correction: Connecticut's teacher contribution rate was originally 6.0%; this version is corrected to reflect a teacher contribution rate of 7.0%



Connecticut has a single defined benefit pension plan, the Connecticut State Teachers' Retirement System.

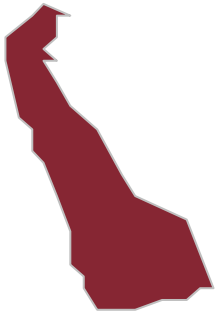
	Rank	Rating
Overall	48	42.1%
Short-term	43	33.3%
Medium-term	45	50.0%
Long-term	47	55.0%
Taxpayer	51	30.0%

A	B	C	D	F

Variable	**DB** *default*
Alternative retirement option	No
Amortization cost	27.5%
Amortization period	28 years
COLA structure	Automatic
COLA rate vs. inflation assumption	0.003
Interest credit on early withdrawal	6.0%
Investment returns over 10 years	7.7%
Normal cost of benefits	10.5%
Overall funding level	51.3%
Plan adequacy at 15 years	17.2%
Plan adequacy at retirement	70.0%
Social Security	No
State contributions vs. ADEC	100%
Teacher contribution rate	7.0%
Vesting period	10 years

BELLWETHER EDUCATION PARTNERS

Delaware



Delaware has a single defined benefit pension plan, the Delaware State Employees' Pension Plan.

	Rank	Rating
Overall	11	72.0%
Short-term	30	46.7%
Medium-term	11	71.4%
Long-term	7	86.7%
Taxpayer	4	83.3%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	5.3%
Amortization period	18 years
COLA structure	Ad hoc
COLA rate vs. inflation assumption	n/a
Interest credit on early withdrawal	3.5%
Investment returns over 10 years	9.2%
Normal cost of benefits	9.9%
Overall funding level	85.5%
Plan adequacy at 15 years	19.0%
Plan adequacy at retirement	55.5%
Social Security	Yes
State contributions vs. ADEC	100%
Teacher contribution rate	3.6%
Vesting period	10 years

BELLWETHER EDUCATION PARTNERS

District of Columbia

District of Columbia has a single defined benefit pension plan, the District of Columbia Teachers' Retirement Plan.

	Rank	Rating
Overall	38	55.1%
Short-term	34	43.3%
Medium-term	32	57.1%
Long-term	24	70.0%
Taxpayer	38	50.0%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	3.7%
Amortization period	20 years
COLA structure	Ad hoc
COLA rate vs. inflation assumption	n/a
Interest credit on early withdrawal	0%
Investment returns over 10 years	6.9%
Normal cost of benefits	16.0%
Overall funding level	91.1%
Plan adequacy at 15 years	17.6%
Plan adequacy at retirement	60.0%
Social Security	No
State contributions vs. ADEC	100%
Teacher contribution rate	8.0%
Vesting period	5 years

BELLWETHER EDUCATION PARTNERS

Florida

Florida has two plans. The Florida Retirement Investment System Plan is a DC plan; it is the default. The Florida Retirement System is a DB plan; teachers can opt in to this plan if they choose.

	Rank	Rating
Overall	25	64.6%
Short-term	4	71.5%
Medium-term	41	52.9%
Long-term	37	64.0%
Taxpayer	23	70.0%

A	B	C	D	F

Variable	**DC** *default*	**DB**	
		Alternative	*Liabilities*
Alternative retirement option	Yes	n/a	n/a
Amortization cost	n/a	n/a	6.3%
Amortization period	n/a	n/a	26 years
COLA structure	n/a	n/a	n/a
COLA rate vs. inflation assumption	n/a	n/a	n/a
Interest credit on early withdrawal	n/a	n/a	n/a
Investment returns over 10 years	n/a	n/a	8.7%
Normal cost of benefits	6.3%	n/a	n/a
Overall funding level	n/a	n/a	82.0%
Plan adequacy at 15 years	6.3%	12.4%	n/a
Plan adequacy at retirement	6.3%	64.0%	n/a
Social Security	Yes	n/a	n/a
State contributions vs. ADEC	n/a	n/a	91.0%
Teacher contribution rate	3.0%	n/a	n/a
Vesting period	1 year	8 years	n/a

Note: Florida's DB plan provides an alternative, and it is incorporated into the "alternative retirement option" variable. The DB plan also carries unfunded liabilities, which are accounted for under the relevant variables.

Georgia

Georgia has a single defined benefit pension plan, the Teachers Retirement System of Georgia.

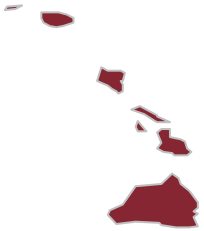
	Rank	Rating
Overall	32	58.2%
Short-term	38	41.7%
Medium-term	22	64.3%
Long-term	22	71.7%
Taxpayer	36	55.0%

A	B	C	D	F

Variable	**DB** *default*
Alternative retirement option	No
Amortization cost	13.4%
Amortization period	27.1 years
COLA structure	Automatic
COLA rate vs. inflation assumption	0.005
Interest credit on early withdrawal	3.5%
Investment returns over 10 years	9.1%
Normal cost of benefits	13.8%
Overall funding level	76.7%
Plan adequacy at 15 years	20.5%
Plan adequacy at retirement	60.0%
Social Security	Split
State contributions vs. ADEC	100%
Teacher contribution rate	6.0%
Vesting period	10 years

BELLWETHER EDUCATION PARTNERS

Hawaii



Hawaii has two plans. The Employees' Retirement System of the State of Hawaii is a hybrid plan; it is the default. Hawaii also has a DB plan that is closed to new teachers. Hawaii includes data for the liabilities of the closed DB plan in data for the DB portion of the hybrid plan.

	Rank	Rating
Overall	21	66.7%
Short-term	23	55.0%
Medium-term	12	70.0%
Long-term	29	68.3%
Taxpayer	20	73.3%

A	B	C	D	F

	Hybrid *default*	
Variable	**DC element**	**DB element**
Alternative retirement option	No	
Amortization cost	n/a	15.7%
Amortization period	n/a	26 years
COLA structure	n/a	Automatic
COLA rate vs. inflation assumption	n/a	-0.01
Interest credit on early withdrawal	n/a	4.5%
Investment returns over 10 years	n/a	9.2%
Normal cost of benefits	14.1%	
Overall funding level	n/a	55.3%
Plan adequacy at 15 years	8.0%	15.8%
Plan adequacy at retirement	8.0%	61.3%
Social Security	Yes	
State contributions vs. ADEC	n/a	96%
Teacher contribution rate	8.0%	0%
Vesting period	0 years	10 years

BELLWETHER EDUCATION PARTNERS

Idaho

Idaho has a single defined benefit pension plan, the Public Employee Retirement System of Idaho.

	Rank	Rating
Overall	7	76.1%
Short-term	11	63.3%
Medium-term	7	74.3%
Long-term	9	83.3%
Taxpayer	4	83.3%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	4.5%
Amortization period	20.5 years
COLA structure	Automatic
COLA rate vs. inflation assumption	-0.02
Interest credit on early withdrawal	2.5%
Investment returns over 10 years	8.5%
Normal cost of benefits	14.9%
Overall funding level	87.6%
Plan adequacy at 15 years	17.3%
Plan adequacy at retirement	66.0%
Social Security	Yes
State contributions vs. ADEC	96%
Teacher contribution rate	7.4%
Vesting period	5 years

BELLWETHER EDUCATION PARTNERS

Illinois

Illinois has a single defined benefit pension plan, the Illinois Teachers' Retirement System.

	Rank	Rating
Overall	51	34.9%
Short-term	51	13.3%
Medium-term	50	41.4%
Long-term	48	45.0%
Taxpayer	46	40.0%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	34.3%
Amortization period	20 years
COLA structure	Automatic
COLA rate vs. inflation assumption	0.005
Interest credit on early withdrawal	0%
Investment returns over 10 years	8.3%
Normal cost of benefits	19.7%
Overall funding level	40.5%
Plan adequacy at 15 years	12.6%
Plan adequacy at retirement	70.1%
Social Security	No
State contributions vs. ADEC	74%
Teacher contribution rate	9.0%
Vesting period	10 years

Note: This analysis does not include separate retirement system for Chicago's teachers.

Indiana

Correction: Indiana's COLA structure was originally listed as "automatic"; it is updated here to "ad hoc." The vesting period for the DC element of the default hybrid plan was originally 5 years; it is updated here to zero. The interest credit on early withdrawal was previously 2.6%; it is updated here to reflect that no interest credit is provided. Finally, the pre-1996 plan was previously described as a "DB" plan; the description here is updated to reflect that the plan has characteristics of a hybrid plan.

Indiana has three retirement plans. The Indiana State Teachers' Retirement Fund (post-1996) is a hybrid plan; it is the default. The Indiana State Teachers' Retirement Fund (pre-1996) is a hybrid plan; it is closed to new teachers. The My Choice Retirement Plan is a DC plan; teachers can opt in to this plan if they choose.

	Rank	Rating
Overall	35	57.0%
Short-term	33	44.6%
Medium-term	42	52.5%
Long-term	40	62.5%
Taxpayer	28	68.3%

A	B	C	D	F

	Hybrid *default*		DC *alternative*	Hybrid *closed*
Variable	**DC Element**	**DB Element**		
Alternative retirement option	Yes		n/a	n/a
Amortization cost*	n/a	-0.5%	n/a	456%
Amortization period*	n/a	30 years	n/a	5 years
COLA structure	n/a	Ad hoc	n/a	n/a
COLA rate vs. inflation assumption	n/a	n/a	n/a	n/a
Interest credit on early withdrawal	n/a	0.0%	n/a	n/a
Investment returns over 10 years	n/a	6.7%	n/a	6.7%
Normal cost of benefits	8.1%		n/a	n/a
Overall funding level	n/a	101%	n/a	26.5%
Plan adequacy at 15 years	3.0%	11.7%	8.5%	n/a
Plan adequacy at retirement	3.0%	33.0%	8.5%	n/a
Social Security	Yes		Yes	n/a
State contributions vs. ADEC	n/a	121%	n/a	100%
Teacher contribution rate	3.0%	0.0%	n/a	n/a
Vesting period	0 years	10 years	5 years	n/a

Note: Indiana's pre-1996 plan is closed and carries liabilities that are not otherwise accounted for. We incorporate variables that reflect these liabilities. Additionally, the pre-1996 plan is a "pay as you go" plan. While the terms "amortization cost" and "amortization period" are imperfect terms for the plan, they nonetheless describe the cost of the plan, and we use them here in order to be consistent across states.The high cost of the plan is due to dwindling enrollment in the closed plan.

Iowa

Iowa has a single defined benefit pension plan, Iowa Public Employees' Retirement System.

	Rank	Rating
Overall	18	67.4%
Short-term	18	56.7%
Medium-term	24	62.9%
Long-term	24	70.0%
Taxpayer	10	80.0%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	5.2%
Amortization period	24 years
COLA structure	No
COLA rate vs. inflation assumption	n/a
Interest credit on early withdrawal	3.5%
Investment returns over 10 years	8.6%
Normal cost of benefits	10.5%
Overall funding level	84.0%
Plan adequacy at 15 years	19.2%
Plan adequacy at retirement	64.0%
Social Security	Yes
State contributions vs. ADEC	99%
Teacher contribution rate	6.3%
Vesting period	7 years

BELLWETHER EDUCATION PARTNERS

Kansas

Kansas has a single retirement plan. The Kansas Public Employees Retirement System is a cash balance plan, which we treat as a DC plan.

	Rank	Rating
Overall	30	61.0%
Short-term	10	64.0%
Medium-term	35	56.7%
Long-term	41	60.0%
Taxpayer	32	63.3%

A	B	C	D	F

Variable	Cash Balance *default*
Alternative retirement option	No
Amortization cost	13.9%
Amortization period	25 years
COLA structure	None
COLA rate vs. inflation assumption	n/a
Interest credit on early withdrawal	n/a
Investment returns over 10 years	8.8%
Normal cost of benefits	8.2%
Overall funding level	62.3%
Plan adequacy at 15 years	11%
Plan adequacy at retirement	12%
Social Security	Yes
State contributions vs. ADEC	75%
Teacher contribution rate	6.0%
Vesting period	5 years

Note: Kansas offers a cash balance plan with a guaranteed return that increases slightly for more experienced teachers. For our adequacy calculations, we used the employer contribution corresponding with 15 years of service and the state's normal retirement age.

Kentucky

Kentucky has a single defined benefit pension plan, the Teachers' Retirement System of the State of Kentucky.

	Rank	Rating
Overall	49	39.7%
Short-term	45	30.0%
Medium-term	47	47.1%
Long-term	48	45.0%
Taxpayer	49	36.7%

A	B	C	D	F

Variable	**DB *default***
Alternative retirement option	No
Amortization cost	24.7%
Amortization period	24.4 years
COLA structure	Automatic
COLA rate vs. inflation assumption	-0.015
Interest credit on early withdrawal	2.5%
Investment returns over 10 years	9.6%
Normal cost of benefits	14.8%
Overall funding level	58.4%
Plan adequacy at 15 years	17.7%
Plan adequacy at retirement	45.9%
Social Security	No
State contributions vs. ADEC	88%
Teacher contribution rate	9.1%
Vesting period	5 years

Note: Kentucky recently made changes to its teacher retirement system that are not yet reflected in the most recent data used in this analysis.

Louisiana

Louisiana has a single defined benefit pension plan, the Louisiana State Teachers Retirement System.

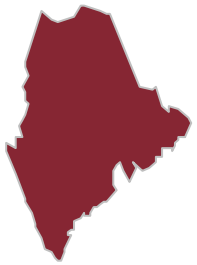
	Rank	Rating
Overall	41	48.6%
Short-term	45	30.0%
Medium-term	36	54.3%
Long-term	24	70.0%
Taxpayer	46	40.0%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	22.1%
Amortization period	30 years
COLA structure	Ad hoc
COLA rate vs. inflation assumption	n/a
Interest credit on early withdrawal	0%
Investment returns over 10 years	9.9%
Normal cost of benefits	11.2%
Overall funding level	67.9%
Plan adequacy at 15 years	22.6%
Plan adequacy at retirement	87.5%
Social Security	No
State contributions vs. ADEC	103%
Teacher contribution rate	8.0%
Vesting period	5 years

BELLWETHER EDUCATION PARTNERS

Maine



Maine has a single defined benefit pension plan, the Maine Public Employees Retirement System - State and Teacher Retirement Program.

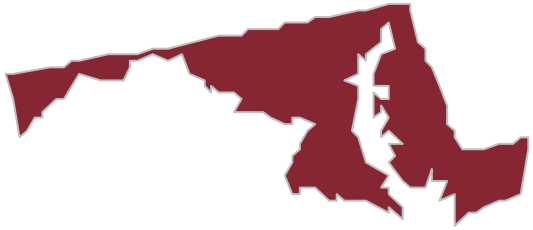
	Rank	Rating
Overall	33	57.6%
Short-term	41	36.7%
Medium-term	30	58.6%
Long-term	11	81.7%
Taxpayer	37	53.3%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	15.7%
Amortization period	8 years
COLA structure	Automatic
COLA rate vs. inflation assumption	.003
Interest credit on early withdrawal	2.7%
Investment returns over 10 years	8.3%
Normal cost of benefits	11.8%
Overall funding level	82.4%
Plan adequacy at 15 years	14.9%
Plan adequacy at retirement	80.0%
Social Security	No
State contributions vs. ADEC	100%
Teacher contribution rate	7.7%
Vesting period	5 years

BELLWETHER EDUCATION PARTNERS

Maryland



Maryland has a single defined benefit pension plan, the Maryland State Retirement and Pension System - Teachers Combined System.

	Rank	Rating
Overall	23	65.7%
Short-term	28	50.0%
Medium-term	24	62.9%
Long-term	20	73.3%
Taxpayer	16	76.7%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	11.2%
Amortization period	18 years
COLA structure	Automatic
COLA rate vs. inflation assumption	-0.001
Interest credit on early withdrawal	4.0%
Investment returns over 10 years	8.1%
Normal cost of benefits	11.4%
Overall funding level	77.0%
Plan adequacy at 15 years	14.0%
Plan adequacy at retirement	49.5%
Social Security	Yes
State contributions vs. ADEC	88%
Teacher contribution rate	7.0%
Vesting period	10 years

BELLWETHER EDUCATION PARTNERS

Massachusetts

Massachusetts has a single defined benefit pension plan, the Massachusetts Teachers' Retirement System.

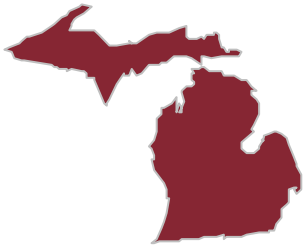
	Rank	Rating
Overall	46	46.2%
Short-term	50	23.3%
Medium-term	43	51.4%
Long-term	30	66.7%
Taxpayer	44	43.3%

A	B	C	D	F

Variable	**DB *default***
Alternative retirement option	No
Amortization cost	15.1%
Amortization period	17 years
COLA structure	Automatic
COLA rate vs. inflation assumption	-0.005
Interest credit on early withdrawal	3.0%
Investment returns over 10 years	8.8%
Normal cost of benefits	13.2%
Overall funding level	51.7%
Plan adequacy at 15 years	14.3%
Plan adequacy at retirement	105%
Social Security	No
State contributions vs. ADEC	98%
Teacher contribution rate	9.7%
Vesting period	10 years

BELLWETHER EDUCATION PARTNERS

Michigan



Michigan has four retirement plans. Michigan's DC Plan is the default. The Pension Plus 2 is a hybrid plan; teachers can opt in to this plan if they choose. The Michigan Public School Employees' Retirement System is a DB plan; it closed to new teachers. The Pension Plus program is a hybrid plan and is also closed.

	Rank	Rating
Overall	7	76.1%
Short-term	5	70.0%
Medium-term	3	79.4%
Long-term	15	77.3%
Taxpayer	15	77.8%

A	B	C	D	F

Variable	**DC** *default*	**Hybrid** *alternative*		*closed* **Hybrid** *liabilities*	*alternative* **Hybrid** *liabilities*	*closed* **DB** *liabilities*
		DC Elements	**DB Elements**			
Alternative retirement option	Yes	n/a		n/a	n/a	n/a
Amortization cost	n/a	n/a	n/a	24.1%	24.1%	24.1%
Amortization period	n/a	n/a	n/a	16 years	16 years	16 years
COLA structure	n/a	n/a	n/a	n/a	n/a	n/a
COLA rate vs. inflation assumption	n/a	n/a	n/a	n/a	n/a	n/a
Interest credit on early withdrawal	n/a	n/a	n/a	n/a	n/a	n/a
Investment returns over 10 years	n/a	n/a	n/a	9.4%	9.4%	9.0%
Normal cost of benefits	7.0%	n/a		n/a	n/a	n/a
Overall funding level	n/a	n/a	n/a	100.1%	108.1%	60.0%
Plan adequacy at 15 years	7.0%	7.0%	14.3%	n/a	n/a	n/a
Plan adequacy at retirement	7.0%	7.0%	52.5%	n/a	n/a	n/a
Social Security	Yes	n/a		n/a	n/a	n/a
State contributions vs. ADEC	n/a	n/a	n/a	100.0%	100%	91.6%
Teacher contribution rate	4.0%	n/a	n/a	n/a	n/a	n/a
Vesting period	4 years	4 years	10 years	n/a	n/a	n/a

Note: Michigan has a closed hybrid plan and a closed DB plan. Both carry liabilities that are not otherwise accounted for. In addition, we incorporate liabilities of Michigan's alternative hybrid plan, which are not captured in our evaluation of alternative plan quality.

Minnesota

Minnesota has a single defined benefit pension plan, the Teachers Retirement Association of Minnesota.

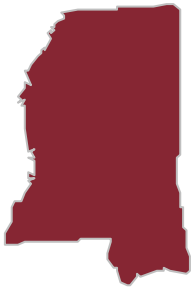
	Rank	Rating
Overall	17	68.2%
Short-term	8	66.7%
Medium-term	22	64.3%
Long-term	18	75.0%
Taxpayer	29	66.7%

A	B	C	D	F

Variable	**DB** *default*
Alternative retirement option	No
Amortization cost	7.8%
Amortization period	28 years
COLA structure	Automatic
COLA rate vs. inflation assumption	-0.015
Interest credit on early withdrawal	3.0%
Investment returns over 10 years	9.7%
Normal cost of benefits	9.1%
Overall funding level	76.1%
Plan adequacy at 15 years	14.8%
Plan adequacy at retirement	77.9%
Social Security	Yes
State contributions vs. ADEC	76%
Teacher contribution rate	7.5%
Vesting period	3 years

BELLWETHER EDUCATION PARTNERS

Mississippi



Mississippi has a single defined benefit pension plan, the Public Employees' Retirement System of Mississippi.

	Rank	Rating
Overall	22	66.2%
Short-term	30	46.7%
Medium-term	8	72.9%
Long-term	13	78.3%
Taxpayer	29	66.7%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	16.0%
Amortization period	37.1 years
COLA structure	Automatic
COLA rate vs. inflation assumption	0.003
Interest credit on early withdrawal	3.5%
Investment returns over 10 years	9.4%
Normal cost of benefits	9.4%
Overall funding level	60.5%
Plan adequacy at 15 years	19.7%
Plan adequacy at retirement	60.0%
Social Security	Yes
State contributions vs. ADEC	106%
Teacher contribution rate	8.1%
Vesting period	8 years

BELLWETHER EDUCATION PARTNERS

Missouri

Missouri has a single defined benefit pension plan, the Public School Retirement System of Missouri.

	Rank	Rating
Overall	34	57.5%
Short-term	45	30.0%
Medium-term	27	60.0%
Long-term	9	83.3%
Taxpayer	34	56.7%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	11.6%
Amortization period	21.7 years
COLA structure	Automatic
COLA rate vs. inflation assumption	0.028
Interest credit on early withdrawal	2.0%
Investment returns over 10 years	9.0%
Normal cost of benefits	17.4%
Overall funding level	84.0%
Plan adequacy at 15 years	26.7%
Plan adequacy at retirement	75.0%
Social Security	No
State contributions vs. ADEC	106%
Teacher contribution rate	14.5%
Vesting period	5 years

Note: This analysis does not include the separate retirement systems for Saint Louis's or Kansas City's teachers.

Montana

Montana has a single defined benefit pension plan, the Teachers' Retirement System of Montana.

	Rank	Rating
Overall	20	67.2%
Short-term	18	56.7%
Medium-term	14	68.6%
Long-term	20	73.3%
Taxpayer	23	70.0%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	9.3%
Amortization period	29 years
COLA structure	Automatic
COLA rate vs. inflation assumption	-0.020
Interest credit on early withdrawal	2.3%
Investment returns over 10 years	8.8%
Normal cost of benefits	10.0%
Overall funding level	68.8%
Plan adequacy at 15 years	19.0%
Plan adequacy at retirement	55.5%
Social Security	Yes
State contributions vs. ADEC	95%
Teacher contribution rate	8.2%
Vesting period	5 years

BELLWETHER EDUCATION PARTNERS

Nebraska

Nebraska has a single defined benefit pension plan, the Nebraska Public Employees Retirement System - School Employees Plan.

	Rank	Rating
Overall	9	74.5%
Short-term	18	56.7%
Medium-term	8	72.9%
Long-term	6	88.3%
Taxpayer	10	80.0%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	5.5%
Amortization period	30 years
COLA structure	Automatic
COLA rate vs. inflation assumption	-0.018
Interest credit on early withdrawal	3.0%
Investment returns over 10 years	8.9%
Normal cost of benefits	13.3%
Overall funding level	91.6%
Plan adequacy at 15 years	19.7%
Plan adequacy at retirement	60.0%
Social Security	Yes
State contributions vs. ADEC	123%
Teacher contribution rate	9.8%
Vesting period	5 years

BELLWETHER EDUCATION PARTNERS

Nevada

Nevada has a single defined benefit pension plan, the Public Employees' Retirement System of Nevada - Regular Employees Plan.

	Rank	Rating
Overall	39	54.2%
Short-term	45	30.0%
Medium-term	30	58.6%
Long-term	13	78.3%
Taxpayer	38	50.0%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	13.6%
Amortization period	20 years
COLA structure	Automatic
COLA rate vs. inflation assumption	0.003
Interest credit on early withdrawal	0.0%
Investment returns over 10 years	9.6%
Normal cost of benefits	16.2%
Overall funding level	74.9%
Plan adequacy at 15 years	24.7%
Plan adequacy at retirement	75.0%
Social Security	No
State contributions vs. ADEC	97%
Teacher contribution rate	3.2%
Vesting period	5 years

BELLWETHER EDUCATION PARTNERS

New Hampshire

New Hampshire has a single defined benefit pension plan, the New Hampshire Retirement System.

	Rank	Rating
Overall	29	61.8%
Short-term	28	50.0%
Medium-term	32	57.1%
Long-term	38	63.3%
Taxpayer	16	76.7%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	10.4%
Amortization period	19 years
COLA structure	No
COLA rate vs. inflation assumption	n/a
Interest credit on early withdrawal	3.5%
Investment returns over 10 years	8.7%
Normal cost of benefits	9.9%
Overall funding level	61.2%
Plan adequacy at 15 years	12.1%
Plan adequacy at retirement	60.6%
Social Security	Yes
State contributions vs. ADEC	100%
Teacher contribution rate	7.6%
Vesting period	10 years

BELLWETHER EDUCATION PARTNERS

New Jersey

New Jersey has a single defined benefit pension plan, the Teachers' Pension and Annuity Fund of New Jersey.

	Rank	Rating
Overall	50	36.2%
Short-term	41	36.7%
Medium-term	51	31.4%
Long-term	51	30.0%
Taxpayer	42	46.7%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	27.1%
Amortization period	30 years
COLA structure	No
COLA rate vs. inflation assumption	n/a
Interest credit on early withdrawal	2.0%
Investment returns over 10 years	8.0%
Normal cost of benefits	10.1%
Overall funding level	54.4%
Plan adequacy at 15 years	12.5%
Plan adequacy at retirement	66.8%
Social Security	Yes
State contributions vs. ADEC	34.0%
Teacher contribution rate	7.2%
Vesting period	10 years

BELLWETHER EDUCATION PARTNERS

New Mexico

New Mexico has a single defined benefit pension plan, the Educational Retirement Board of New Mexico.

	Rank	Rating
Overall	37	56.1%
Short-term	30	46.7%
Medium-term	36	54.3%
Long-term	38	63.3%
Taxpayer	33	60.0%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	11.2%
Amortization period	70 years
COLA structure	Automatic
COLA rate vs. inflation assumption	-0.005
Interest credit on early withdrawal	2.2%
Investment returns over 10 years	7.8%
Normal cost of benefits	13.7%
Overall funding level	60.4%
Plan adequacy at 15 years	24.1%
Plan adequacy at retirement	70.5%
Social Security	Yes
State contributions vs. ADEC	76.0%
Teacher contribution rate	10.7%
Vesting period	5 years

BELLWETHER EDUCATION PARTNERS

New York

New York has a single defined benefit pension plan, the New York State Teachers' Retirement System.

	Rank	Rating
Overall	5	77.2%
Short-term	34	43.3%
Medium-term	16	67.1%
Long-term	1	98.3%
Taxpayer	1	100.0%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	0.0%
Amortization period	0 years
COLA structure	Automatic
COLA rate vs. inflation assumption	0.008
Interest credit on early withdrawal	5.0%
Investment returns over 10 years	9.6%
Normal cost of benefits	12.2%
Overall funding level	100%
Plan adequacy at 15 years	14.8%
Plan adequacy at retirement	63.1%
Social Security	Yes
State contributions vs. ADEC	100%
Teacher contribution rate	1.3%
Vesting period	10 years

Note: This analysis does not include separate retirement system for New York City's teachers.

North Carolina

North Carolina has a single defined benefit pension plan, the Teachers' and State Employees' Retirement System of North Carolina.

	Rank	Rating
Overall	13	70.5%
Short-term	25	53.3%
Medium-term	14	68.6%
Long-term	16	76.7%
Taxpayer	4	83.3%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	9.0%
Amortization period	12 years
COLA structure	Ad hoc
COLA rate vs. inflation assumption	n/a
Interest credit on early withdrawal	4.0%
Investment returns over 10 years	7.6%
Normal cost of benefits	11.2%
Overall funding level	86.4%
Plan adequacy at 15 years	17.3%
Plan adequacy at retirement	54.6%
Social Security	Yes
State contributions vs. ADEC	99%
Teacher contribution rate	6.0%
Vesting period	10 years

BELLWETHER EDUCATION PARTNERS

North Dakota

North Dakota has a single defined benefit pension plan, the North Dakota Teachers' Fund for Retirement.

	Rank	Rating
Overall	28	62.0%
Short-term	13	60.0%
Medium-term	43	51.4%
Long-term	41	60.0%
Taxpayer	16	76.7%

A	B	C	D	F

Variable	**DB** *default*
Alternative retirement option	No
Amortization cost	12.7%
Amortization period	23 years
COLA structure	No
COLA rate vs. inflation assumption	n/a
Interest credit on early withdrawal	7.3%
Investment returns over 10 years	8.5%
Normal cost of benefits	11.9%
Overall funding level	65.7%
Plan adequacy at 15 years	17.2%
Plan adequacy at retirement	70.0%
Social Security	Yes
State contributions vs. ADEC	95%
Teacher contribution rate	11.8%
Vesting period	5 years

BELLWETHER EDUCATION PARTNERS

Ohio

Ohio has three retirement plans. The School Employees' Retirement System of Ohio is a DB plan; it is the default option. The Ohio Teachers Defined Contribution Plan is a DC plan; the Ohio Teachers Combined Plan is a hybrid plan. Teachers can opt in to the DC or hybrid plan if they choose.

	Rank	Rating
Overall	35	57.0%
Short-term	37	42.3%
Medium-term	29	59.1%
Long-term	24	70.0%
Taxpayer	34	56.7%

A	B	C	D	F

Variable	DB *default*	DC *alternative*	Hybrid *alternative*	
			DC Element	DB Element
Alternative retirement option	Yes	n/a	n/a	n/a
Amortization cost	12.7%	n/a	n/a	n/a
Amortization period	14.9 years	n/a	n/a	n/a
COLA structure	Ad hoc	n/a	n/a	n/a
COLA rate vs. inflation assumption	n/a	n/a	n/a	n/a
Interest credit on early withdrawal	3.5%	n/a	n/a	n/a
Investment returns over 10 years	9.4%	n/a	n/a	n/a
Normal cost of benefits	11.0%	n/a	n/a	n/a
Overall funding level	77.4%	n/a	n/a	n/a
Plan adequacy at 15 years	22.6%	23.5%	12.0%	9.0%
Plan adequacy at retirement	66.0%	23.5%	12.0%	35.0%
Social Security	No	n/a	n/a	n/a
State contributions vs. ADEC	105%	n/a	n/a	n/a
Teacher contribution rate	14.0%	n/a	n/a	n/a
Vesting period	5 years	5 years	5 years	5 years

Note: Ohio's hybrid alternative plan carries liabilities, but they are included in the data reported for the default DB plan.

Oklahoma

Oklahoma has a single defined benefit pension plan, the Teachers' Retirement System of Oklahoma.

	Rank	Rating
Overall	15	68.9%
Short-term	13	60.0%
Medium-term	17	65.7%
Long-term	30	66.6%
Taxpayer	4	83.3%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	13.7%
Amortization period	21 years
COLA structure	No
COLA rate vs. inflation assumption	n/a
Interest credit on early withdrawal	4.0%
Investment returns over 10 years	9.3%
Normal cost of benefits	10.3%
Overall funding level	67.3%
Plan adequacy at 15 years	18.1%
Plan adequacy at retirement	70.0%
Social Security	Yes
State contributions vs. ADEC	101%
Teacher contribution rate	7.0%
Vesting period	5 years

BELLWETHER EDUCATION PARTNERS

Oregon

Oregon has a single retirement plan. The Oregon Public Employees Retirement System is a hybrid plan. Oregon also has a DB plan that is closed to new teachers but is included in the DB portion of the hybrid plan.

	Rank	Rating
Overall	6	76.3%
Short-term	2	76.7%
Medium-term	12	70.0%
Long-term	18	75.0%
Taxpayer	4	83.3%

A	B	C	D	F

Variable	**Hybrid *default***	
	DC Element	**DB Element**
Alternative retirement option	No	
Amortization cost	n/a	6.4%
Amortization period	n/a	20 years
COLA structure	n/a	Automatic
COLA rate vs. inflation assumption	n/a	-0.013
Interest credit on early withdrawal	n/a	7.2%
Investment returns over 10 years	n/a	7.6%
Normal cost of benefits	11.5%	
Overall funding level	n/a	78.6%
Plan adequacy at 15 years	5.3%	14.3%
Plan adequacy at retirement	5.3%	49.5%
Social Security	Yes	
State contributions vs. ADEC	n/a	100%
Teacher contribution rate	5.3%	0%
Vesting period	0.5 years	5 years

BELLWETHER EDUCATION PARTNERS

Pennsylvania

Pennsylvania has three retirement plans. The T-G Hybrid plan is the default. The Public School Employees' Retirement System of Pennsylvania is a DB plan; it is closed to new teachers. The Pennsylvania Public School Employees' Retirement System is a DC plan; teachers can opt in to this plan if they choose.

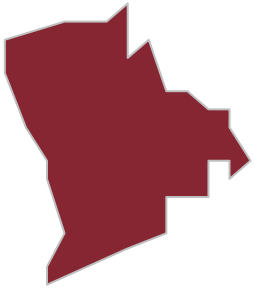
	Rank	Rating
Overall	47	43.3%
Short-term	24	54.6%
Medium-term	49	45.4%
Long-term	50	33.3%
Taxpayer	46	40.0%

A	B	C	D	F

	Hybrid *default*		**DC** *alternative*
Variable	**DC Element**	**DB Element**	
Alternative retirement option	Yes		n/a
Amortization cost	n/a	25.9%	n/a
Amortization period	n/a	24 years	n/a
COLA structure	n/a	None	n/a
COLA rate vs. inflation assumption	n/a	n/a	n/a
Interest credit on early withdrawal	n/a	4.0%	n/a
Investment returns over 10 years	n/a	7.7%	n/a
Normal cost of benefits	15.1%		n/a
Overall funding level	n/a	59.3%	n/a
Plan adequacy at 15 years	5.0%	10.2%	9.5%
Plan adequacy at retirement	5.0%	46.3%	9.5%
Social Security	Yes		n/a
State contributions vs. ADEC	n/a	75%	n/a
Teacher contribution rate	2.8%	5.5%	n/a
Vesting period	3 years	10 years	3 years

Note: Pennsylvania's DB plan provides an alternative, but its liabilities are accounted for in the DB element of the hybrid plan.

Rhode Island



Rhode Island has two plans. The Employees' Retirement System of Rhode Island is a hybrid plan; it is the default. Rhode Island also has a DB plan that is closed to new teachers; its data are included in the DB portion of the hybrid plan.

	Rank	Rating
Overall	42	48.3%
Short-term	40	38.3%
Medium-term	45	50.0%
Long-term	45	56.7%
Taxpayer	40	48.3%

A	B	C	D	F

Variable	Hybrid *default*	
	DC Element	DB Element
Alternative retirement option	No	
Amortization cost	n/a	20.3%
Amortization period	n/a	18 years
COLA structure	n/a	Automatic
COLA rate vs. inflation assumption	n/a	0.010
Interest credit on early withdrawal	n/a	0.0%
Investment returns over 10 years	n/a	7.8%
Normal cost of benefits	8.0%	
Overall funding level	n/a	56.2%
Plan adequacy at 15 years	6.15%	7.6%
Plan adequacy at retirement	5.6%	42.0%
Social Security	Split	
State contributions vs. ADEC	n/a	100%
Teacher contribution rate	5.0%	3.8%
Vesting period	3 years	5 years

Note: Rhode Island's employer contribution rate to the DC portion of the hybrid changes based on a teacher's years of service. Our adequacy calculations are based on a weighted average. The result is 1.15% for 15 years and 0.6% at the state's normal retirement age.

South Carolina

South Carolina has two retirement plans. The South Carolina Retirement System is a DB plan; it is the default option. The South Carolina Optional Retirement Plan is a DC plan; teachers can opt in to this plan if they choose.

	Rank	Rating
Overall	14	69.1%
Short-term	9	64.6%
Medium-term	5	76.8%
Long-term	36	65.0%
Taxpayer	23	70.0%

A	B	C	D	F

Variable	DB *default*	DC *alternative*
Alternative retirement option	Yes	n/a
Amortization cost	13.9%	n/a
Amortization period	27 years	n/a
COLA structure	Automatic	n/a
COLA rate vs. inflation assumption	-0.013	n/a
Interest credit on early withdrawal	4.0%	n/a
Investment returns over 10 years	6.7%	n/a
Normal cost of benefits	10.7%	n/a
Overall funding level	54.1%	n/a
Plan adequacy at 15 years	18.1%	14%
Plan adequacy at retirement	60.1%	14%
Social Security	Yes	n/a
State contributions vs. ADEC	100%	n/a
Teacher contribution rate	9.0%	n/a
Vesting period	8 years	1 year

Note: South Carolina recently made changes to its teacher retirement system that are not yet reflected in the most recent data used in this analysis.

South Dakota

South Dakota has two plans. The South Dakota Retirement System is a hybrid plan; it is the default. South Dakota also has a DB plan that is closed to new teachers. South Dakota incorporates data for its DB plan into the DB portion of the hybrid plan.

	Rank	Rating
Overall	1	88.4%
Short-term	1	83.3%
Medium-term	4	78.6%
Long-term	3	91.7%
Taxpayer	1	100.0%

A	B	C	D	F

	Hybrid *default*	
Variable	**DC Element**	**DB Element**
Alternative retirement option	No	
Amortization cost	n/a	0.0%
Amortization period	n/a	0 years
COLA structure	n/a	Automatic
COLA rate vs. inflation assumption	n/a	0.013
Interest credit on early withdrawal	n/a	6.5%
Investment returns over 10 years	n/a	9.6%
Normal cost of benefits	12.4%	
Overall funding level	n/a	100%
Plan adequacy at 15 years	1.5%	16.5%
Plan adequacy at retirement	1.5%	46.5%
Social Security	Yes	
State contributions vs. ADEC	n/a	100%
Teacher contribution rate	0.0%	6.2%
Vesting period	3 years	3 years

BELLWETHER EDUCATION PARTNERS

Tennessee

Tennessee has two retirement plans. The Tennessee Consolidated Retirement System is a hybrid plan; it is the default. The Tennessee State and Teachers' Retirement Plan is a DB plan; it is closed to new teachers.

	Rank	Rating
Overall	2	82.5%
Short-term	6	68.3%
Medium-term	1	80.0%
Long-term	2	93.3%
Taxpayer	3	88.3%

A	B	C	D	F

Variable	**Hybrid** *default*		**DB** *closed*
	DC Element	**DB Element**	
Alternative retirement option	No		n/a
Amortization cost	n/a	2.3%	5.1%
Amortization period	n/a	0 years	3.1 years
COLA structure	n/a	Automatic	n/a
COLA rate vs. inflation assumption	n/a	0.005	n/a
Interest credit on early withdrawal	n/a	5.0%	n/a
Investment returns over 10 years	n/a	8.9%	8.9%
Normal cost of benefits	6.7%		n/a
Overall funding level	n/a	99.6%	101.8%
Plan adequacy at 15 years	7.0%	9.5%	n/a
Plan adequacy at retirement	7.0%	33.0%	n/a
Social Security	Yes		n/a
State contributions vs. ADEC	n/a	100%	100%
Teacher contribution rate	2.0%	5.0%	n/a
Vesting period	1 year	5 years	n/a

Note: The amortization period of the DB element of Tennessee's hybrid plan is 0 years because the state currently overpays its normal cost as part of its annual contribution. Tennessee also has a DB plan that is closed, and we incorporate its liabilities, which are not already captured in the hybrid DB data.

Texas

Texas has a single defined benefit pension plan, the Teacher Retirement System of Texas.

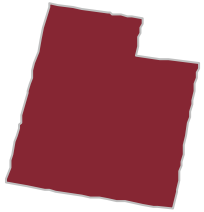
	Rank	Rating
Overall	40	54.3%
Short-term	27	51.7%
Medium-term	32	57.1%
Long-term	41	60.0%
Taxpayer	40	48.3%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	5.4%
Amortization period	27 years
COLA structure	Ad hoc
COLA rate vs. inflation assumption	n/a
Interest credit on early withdrawal	2.0%
Investment returns over 10 years	8.5%
Normal cost of benefits	11.7%
Overall funding level	76.8%
Plan adequacy at 15 years	25.5%
Plan adequacy at retirement	64.4%
Social Security	Split
State contributions vs. ADEC	87%
Teacher contribution rate	7.7%
Vesting period	5 years

Note: Texas recently made changes to its teacher retirement system that are not yet reflected in the most recent data used in this analysis.

Utah



Utah has four retirement plans. The Tier 2 Hybrid Contributory plan is the default. Teachers can opt in to the Tier 2 Defined Contribution plan if they choose. The Utah Public Employees Noncontributory Retirement System ("DB1") and the Utah PERS Contributory ("DB2") are DB plans; both are closed.

	Rank	Rating
Overall	4	77.6%
Short-term	7	67.4%
Medium-term	10	72.0%
Long-term	5	90.0%
Taxpayer	9	81.1%

A	B	C	D	F

Variable	Hybrid *default*		DC *alternative*	DB1 *closed*	DB2 *closed*
	DC Element	DB Element			
Alternative retirement option	Yes		n/a	n/a	n/a
Amortization cost	n/a	0.1%	n/a	5.4%	7.8%
Amortization period	n/a	20 years	n/a	20 yrs	20 yrs
COLA structure	n/a	Automatic	n/a	n/a	n/a
COLA rate vs. inflation assumption	n/a	0.0	n/a	n/a	n/a
Interest credit on early withdrawal	n/a	7.0%	n/a	n/a	n/a
Investment returns over 10 years	n/a	8.9%	n/a	8.9%	8.9%
Normal cost of benefits	8.9%		n/a	n/a	n/a
Overall funding level	n/a	91.4%	n/a	87.5%	96.5%
Plan adequacy at 15 years	10.0%	13.6%	10.0%	n/a	n/a
Plan adequacy at retirement	10.0%	52.5%	10.0%	n/a	n/a
Social Security	Yes		n/a	n/a	n/a
State contributions vs. ADEC	n/a	100%	n/a	100%	100%
Teacher contribution rate	0.0%	0.0%	n/a	n/a	n/a
Vesting period	4 years	4 years	4 years	n/a	n/a

Note: Utah has two DB plans that are closed and carry liabilities that are not otherwise accounted for. We incorporate variables that reflect these liabilities.

Vermont

Vermont has a single defined benefit pension plan, the State Teachers' Retirement System of Vermont.

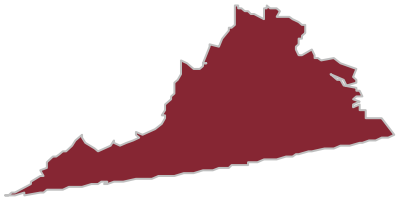
	Rank	Rating
Overall	26	64.0%
Short-term	18	56.7%
Medium-term	17	65.7%
Long-term	30	66.7%
Taxpayer	29	66.7%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	15.2%
Amortization period	18 years
COLA structure	Automatic
COLA rate vs. inflation assumption	0.025
Interest credit on early withdrawal	5.0%
Investment returns over 10 years	6.8%
Normal cost of benefits	6.4%
Overall funding level	51.3%
Plan adequacy at 15 years	15.9%
Plan adequacy at retirement	55.1%
Social Security	Yes
State contributions vs. ADEC	107%
Teacher contribution rate	5.4%
Vesting period	5 years

BELLWETHER EDUCATION PARTNERS

Virginia



Virginia has two retirement plans. The VARS Teachers plan is a hybrid plan; it is the default. The Virginia Retirement System is a DB plan; this plan is closed to new teachers.

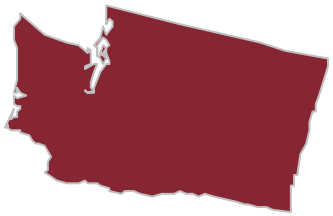
	Rank	Rating
Overall	16	68.5%
Short-term	11	63.3%
Medium-term	17	65.7%
Long-term	22	71.7%
Taxpayer	20	73.3%

A	B	C	D	F

Variable	Hybrid *default*	
	DC Element	DB Element
Alternative retirement option	No	
Amortization cost	n/a	8.3%
Amortization period	n/a	24 years
COLA structure	n/a	Automatic
COLA rate vs. inflation assumption	n/a	0.005
Interest credit on early withdrawal	n/a	4.0%
Investment returns over 10 years	n/a	8.1%
Normal cost of benefits	10.7%	
Overall funding level	n/a	73.5%
Plan adequacy at 15 years	5.0%	7.6%
Plan adequacy at retirement	5.0%	42.0%
Social Security	Yes	
State contributions vs. ADEC	n/a	77%
Teacher contribution rate	4.0%	4.0%
Vesting period	4 years	5 years

Note: Virginia's DB plan is closed to new teachers, and its liabilities are accounted for in the DB element of the hybrid plan.

Washington



Washington has two retirement plans. The Washington Teachers Plan 3 is a hybrid plan; it is the default. The Washington Teachers Plan 2 is a DB plan; teachers can opt in to the plan if they choose.

	Rank	Rating
Overall	3	81.9%
Short-term	3	76.3%
Medium-term	2	79.6%
Long-term	3	91.7%
Taxpayer	10	80.0%

A	B	C	D	F

Variable	Hybrid *default*		DB *alternative*
	DC Element	DB Element	
Alternative retirement option	Yes		n/a
Amortization cost	n/a	7.2%	n/a
Amortization period	n/a	0 years	n/a
COLA structure	n/a	Automatic	n/a
COLA rate vs. inflation assumption	n/a	0.003	n/a
Interest credit on early withdrawal	n/a	5.5%	n/a
Investment returns over 10 years	n/a	9.4%	n/a
Normal cost of benefits	15.9%		n/a
Overall funding level	n/a	90.3%	n/a
Plan adequacy at 15 years	5.0%	7.5%	14.9%
Plan adequacy at retirement	5.0%	40.0%	80.0%
Social Security	Yes		n/a
State contributions vs. ADEC	n/a	100%	n/a
Teacher contribution rate	5.0%	0.0%	n/a
Vesting period	1 years	10 years	5 years

Note: Washington's DB plan provides an alternative, but its liabilities are accounted for in the DB element of the hybrid plan. Washington recently changed its default to its DB plan. However, our data come from before that shift. For consistency with other states, we have evaluated Washington as it existed prior to this shift, when the hybrid plan was the default.

West Virginia

West Virginia has a single defined benefit pension plan, the West Virginia Public Employees' Retirement System.

	Rank	Rating
Overall	24	64.8%
Short-term	34	43.3%
Medium-term	17	65.7%
Long-term	24	70.0%
Taxpayer	10	80.0%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	21.5%
Amortization period	15 years
COLA structure	Ad hoc
COLA rate vs. inflation assumption	n/a
Interest credit on early withdrawal	3.5%
Investment returns over 10 years	8.9%
Normal cost of benefits	10.6%
Overall funding level	72.8%
Plan adequacy at 15 years	19.0%
Plan adequacy at retirement	60.0%
Social Security	Yes
State contributions vs. ADEC	108%
Teacher contribution rate	6.0%
Vesting period	10 years

BELLWETHER EDUCATION PARTNERS

Wisconsin

Wisconsin has a single defined benefit pension plan, the Wisconsin Retirement System.

	Rank	Rating
Overall	18	67.4%
Short-term	13	60.0%
Medium-term	24	62.9%
Long-term	16	76.7%
Taxpayer	23	70.0%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	0.7%
Amortization period	30 years
COLA structure	Ad hoc
COLA rate vs. inflation assumption	n/a
Interest credit on early withdrawal	0.0%
Investment returns over 10 years	4.0%
Normal cost of benefits	14.1%
Overall funding level	100%
Plan adequacy at 15 years	15.6%
Plan adequacy at retirement	51.2%
Social Security	Yes
State contributions vs. ADEC	100%
Teacher contribution rate	6.8%
Vesting period	5 years

BELLWETHER EDUCATION PARTNERS

Wyoming

Wyoming has a single defined benefit pension plan, the State of Wyoming Retirement System.

	Rank	Rating
Overall	31	60.3%
Short-term	18	56.7%
Medium-term	36	54.3%
Long-term	41	60.0%
Taxpayer	23	70.0%

A	B	C	D	F

Variable	DB *default*
Alternative retirement option	No
Amortization cost	9.7%
Amortization period	29 years
COLA structure	No
COLA rate vs. inflation assumption	n/a
Interest credit on early withdrawal	3.0%
Investment returns over 10 years	7.8%
Normal cost of benefits	10.8%
Overall funding level	74.2%
Plan adequacy at 15 years	21.3%
Plan adequacy at retirement	60.0%
Social Security	Yes
State contributions vs. ADEC	83%
Teacher contribution rate	8.9%
Vesting period	4 years

BELLWETHER EDUCATION PARTNERS

Table of Contents

The rankings are holistic; they assess each state's overall retirement system for teachers, rather than individual plans

The rankings are anchored around each state's default teacher retirement plan.

We anchor our rankings on states' default retirement plans because the "default" is a strong predictor of which plans teachers end up enrolled in. In the private sector, enrollment rates in retirement plans increase between 25 and 35 percentage points when it is the default and automatic option. Research also indicates that employees typically follow default options on contribution rates and investment decisions.

The rankings incorporate other plans that are not the default but that offer teachers options and/or carry liabilities that continue to affect teachers and taxpayers. We incorporate these plans in two ways.

First, if a state has more than one plan that is open to new teachers, we incorporate the plan that is *not* the default into our rankings. We assess the quality of alternative plans based on benefit adequacy after 15 years, benefit adequacy at retirement, and vesting period. These three variables are combined into a single variable, *alternative retirement option*, which informs both the short-term and medium-term teacher constituent profiles. States can receive a maximum of five points for each option.

Second, if a state has a plan that is *not* the default and that carries liabilities not captured in the data for the default plan, we incorporate additional data to account for these liabilities. Additional data include unfunded liabilities (i.e., amortization cost, amortization period) and fiscal management (i.e., overall funding level, state contributions vs. ADEC, and return on investment). Using these approaches, some variables for some states include data from multiple plans, but all variables are weighted equally.

Source: John Beshears et al., "The Effect of Default Options on Retirement Savings," The Bulletin on Aging and Health 3 (2006).

37 states, including the District of Columbia, have defined benefit plans as their default option

Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Georgia, Idaho, Illinois, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, Texas, Vermont, West Virginia, Wisconsin, Wyoming

We collected data for each variable of the plan.

We awarded points for each variable based on plan characteristics through a consistent point system.

For each profile, we calculated a state's total points as a percentage of overall points available.

See slides 96 through 115 for details on our point system.
See slides 11 through 18 for descriptions of each profile.

California is an example of a state with a default defined benefit plan

We collected data for each variable of the plan.

We awarded points for each variable.

We calculated total points for each profile, as a percentage of possible points.

Variable	Plan Data	Points	Short-term	Medium-term	Long-term	Taxpayer
Alternative retirement option	No	0/5	0/5	0/5		
Amortization cost	17.5%	2/5	2/5	2/5	2/5	2/5
Amortization period	30 years	1/5				1/5
COLA structure	Automatic	2.5/2.5		2.5/2.5	2.5/2.5	
COLA rate vs. inflation assumption	-0.008	1.5/2.5		1.5/2.5	1.5/2.5	
Interest credit on early withdrawal	1.5%	1/5	1/5			
Investment returns over 10 years	9.3%	5/5		5/5	5/5	5/5
Normal cost of benefits	20.2%	3/5				3/5
Overall funding level	66.0%	2/5			2/5	
Plan adequacy at 15 years	16.2%	0/5		0/5		
Plan adequacy at retirement	74.0%	4/5			4/5	
Social Security	No	0/5	0/5			0/5
State contributions vs. ADEC	85%	3/5		3/5	3/5	3/5
Teacher contribution rate	10.2%	2/5	2/5	2/5		
Vesting period	5 years	3/5	3/5			
Score for each profile			8/30 (26.7%)	16/35 (45.7%)	20/30 (66.7%)	14/30 (46.7%)
Overall score			46.5%			

3 states have defined contribution plans as their default option; we also include Kansas and its cash balance plan*

Alaska, Florida, Kansas, Michigan

We collected data for each variable of the plan.

For DC plans, which do not carry debt or guarantee benefits, we assess only on relevant variables.

We awarded points for each variable based on plan characteristics through a consistent point system.

We calculated a state's total points as a percentage of overall points available. We did the same for all four constituent profiles for each state.

See slides 96 through 115 for details on our point system.
See slides 11 through 18 for descriptions of each profile.

* Under Kansas' cash balance plan, teachers contribute a percent of their salary to their retirement, and the state manages these retirement funds and guarantees a certain rate of annual interest. The longer teachers stay, the higher their rate of annual interest. We treat this plan as if it were a defined contribution plan, although there are some differences. Learn more about cash balance plans on TeacherPensions.org.

Alaska is an example of a state with **a defined contribution plan as the default option**

	DC *default*		
Variable	**Variables**	**Data**	**Points**
Alternative retirement option	X	No	0/5
Amortization cost			
Amortization period			
Cost of Living Adjustment			
COLA rate vs. inflation assumption			
Interest credit on early withdrawal			
Investment returns over 10 years			
Normal cost of benefits	X	15%	0/5
Overall funding level			
Plan adequacy at 15 years	X	15%	0/5
Plan adequacy at retirement	X	15%	0/5
Social Security	X	No	0/5
State contributions vs. ADEC			
Teacher contribution rate	X	8.0%	5/5
Vesting period	X	5 yrs	3/5

Several variables that apply to DB plans do not apply to DC plans.

Amortization cost, amortization period, overall funding level, and state contributions vs. ADEC do not apply to DC plans because DC plans do not carry debt.

COLAs and interest rates on early withdrawals are not relevant to DC plans because, under DC plans, there are no guaranteed benefits to which to apply a COLA adjustment, and plans are portable.

Investment returns over 10 years are not relevant to DC plans because returns vary based on decisions individual teachers make.

We exclude these variables from the calculations to avoid penalizing DC plans for features that do not apply. As a result, their scores are based on a lower number of possible points.

Note: Alaska also has a defined benefit plan that is closed to new teachers but carries liabilities; slide 95 shows how we incorporate its data.

10 states have **hybrid plans as their default** retirement plan for teachers

Hawaii, Indiana, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Utah, Virginia, Washington

We collected data for each variable for the DC and DB elements of the plan.

We awarded points for each variable, for the DC and DB elements of the plan, based on plan characteristics through a consistent point system.

We calculated a state's total points as a percentage of overall points available. We did the same for all four constituent profiles for each state.

See slides 96 through 115 for details on our point system.
See slides 11 through 18 for descriptions of each profile.

Hawaii is an example of a state with a **hybrid plan as the default** retirement option

	Hybrid *default*		
Variable	**DC element**	**DB element**	**Points**
Alternative retirement option	No		0/5
Amortization cost	n/a	15.7%	2/5
Amortization period	n/a	26 years	1/5
COLA structure	n/a	Automatic	2.5/2.5
COLA rate vs. inflation assumption	n/a	-0.01	1/2.5
Interest credit on early withdrawal	n/a	4.5%	2/5
Investment returns over 10 years	n/a	9.2%	5/5
Normal cost of benefits	14.1%		5/5
Overall funding level	n/a	55.3%	1/5
Plan adequacy at 15 years	8.0%	15.8%	5/5
Plan adequacy at retirement	8.0%	61.3%	5/5
Social Security	Yes		5/5
State contributions vs. ADEC	n/a	96%	4/5
Teacher contribution rate	8.0%	0.0%	5/5
Vesting period	0 years	10 years	2.5/5

In a hybrid plan, some variables are "shared" by both the DC and DB elements. Specifically for "alternative retirement option," "normal cost of benefits," and "Social Security," the data will always be the same for both elements.

Some variables are only relevant to the DB element, specifically those related to liabilities, such as the amortization variables.

Some variables are relevant to both elements but can be different. For instance, teachers may contribute to the DC element at different rates than the DB element or have different vesting periods. We average these scores.

For adequacy variables, we assume that each element of the hybrid plan accounts for half of a teacher's retirement benefit. Thus, each individual element is evaluated against half of the salary rate expectations. See slide 111 for more.

8 states offer teachers alternatives to the default plan; we incorporate them in the "alternative retirement option" variable

Florida, Indiana, Michigan, Ohio, Pennsylvania, South Carolina, Utah, Washington

We collected data for each variable of the plan.

We awarded points for each variable for the default plan.

In the alternative retirement option variable, we award points for the existence and quality of the alternatives.

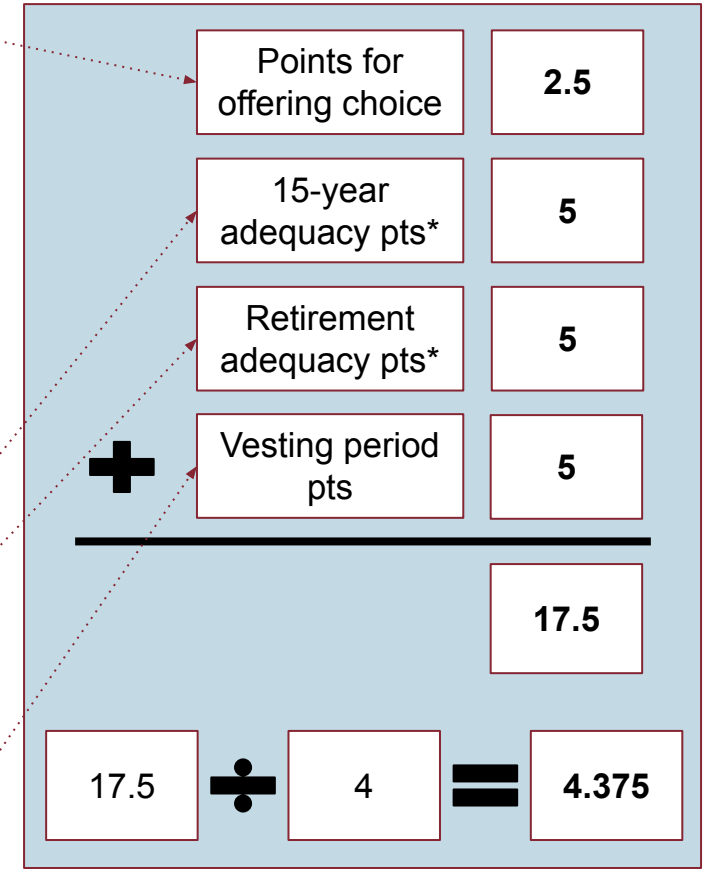
We calculated a state's total points as a percentage of overall points available. We did the same for all four constituent profiles for each state.

See slides 96 through 115 for details on our point system.
See slides 11 through 18 for descriptions of each profile.

South Carolina is an example of a state that **offers an alternative** to the default plan

Variable	DB *default*	DC *alternative*	Points
Alternative retirement option	Yes	n/a	4.4/5
Amortization cost	13.9%	n/a	3/5
Amortization period	27 years	n/a	1/5
COLA structure	Automatic	n/a	2.5/2.5
COLA rate vs. inflation assumption	-0.013	n/a	1/2.5
Interest credit on early withdrawal	4.0%	n/a	2/5
Investment returns over 10 years	6.7%	n/a	2/5
Normal cost of benefits	10.7%	n/a	5/5
Overall funding level	54.1%	n/a	1/5
Plan adequacy at 15 years	18.1%	14%	5/5
Plan adequacy at retirement	60.1%	14%	5/5
Social Security	Yes	n/a	5/5
State contributions vs. ADEC	100%	n/a	5/5
Teacher contribution rate	9.0%	n/a	4/5
Vesting period	8 years	1 year	5/5

States that have alternative plans receive points for offering choices and the quality of those choices.



BELLWETHER EDUCATION PARTNERS

* See slides 106 through 111 for more on how we assess adequacy.

6 states have plans that are not the default plan, nor are their liabilities captured in the default plan data

Alaska, Florida, Indiana, Michigan, Tennessee, Utah

We collected data for each variable of the plan.

We awarded points for each variable for the default plan.

We incorporate data from additional plans with otherwise uncounted liabilities into our analysis of key variables.

We calculated a state's total points as a percentage of overall points available. We did the same for all four constituent profiles for each state.

See slides 96 through 115 for details on our point system.
See slides 11 through 18 for descriptions of each profile.

Florida is an example of a state with a plan that carries liabilities that are not otherwise captured in its data

Florida's default is a defined contribution plan, but the state also has a defined benefit alternative plan.

Variable	DC *default*		DB *option*	DB *liabilities*
	Data	Points		
Alternative retirement option	Yes	2.9/5	n/a	n/a
Amortization cost	n/a	4/5	n/a	6.3%
Amortization period	n/a	1/5	n/a	26 yrs
COLA structure	n/a	n/a	n/a	n/a
COLA rate vs. inflation assumption	n/a	n/a	n/a	n/a
Interest credit on early withdrawal	n/a	n/a	n/a	n/a
Investment returns over 10 years	n/a	4/5	n/a	8.7%
Normal cost of benefits	6.3%	3/5	n/a	n/a
Overall funding level	n/a	4/5	n/a	82.0%
Plan adequacy at 15 years	6.3%	0/5	12.4%	n/a
Plan adequacy at retirement	6.3%	0/5	64.0%	n/a
Social Security	Yes	5/5	n/a	n/a
State contributions vs. ADEC	n/a	4/5	n/a	91.0%
Teacher contribution rate	3.0%	1/5	n/a	n/a
Vesting period	1 year	5/5	8 years	n/a

The rankings incorporate the existence and quality of an alternative option, just as South Carolina's rankings do.

See slide 93.

The rankings incorporate data about the liabilities of Florida's defined benefit plan, which are not otherwise captured.

Table of Contents

Alternative retirement plan (1 of 2)

Whether teachers have more than one retirement plan to choose from and the quality of that plan, based on its vesting period and retirement benefit adequacy.

Alternative retirement plan is used as a variable for the following profiles.

Short-term	Medium-term	Long-term	Taxpayer
✔	✔		

States earn points depending on their alternative retirement plan.

Range	Points
Alternative retirement plan = Yes	Up to 5
Alternative retirement plan = No	0

Notes:

- *States receive more points when they offer retirement plan options because it allows teachers to select the plan that best meets their individual needs.*
- *States also receive more points when the options are high quality. We evaluated the alternative plan's vesting period, as well as its adequacy at 15 years and at retirement. Those values were combined into a single rating. See slide 98 for additional detail.*

Alternative retirement plan (2 of 2)

We gave states credit for providing teachers with alternative plans but also accounted for the quality of those options. The alternative plan variable is included in the **short-term** and **medium-term** teacher profiles. Providing teachers a choice of retirement plans, to allow them to **choose the option that best meets their financial needs,** is most important for those educators who will not stay in the profession or live in their state until normal retirement age.

States that provide teachers with retirement options earn points based on the plan's vesting period as well as its benefit adequacy after 15 years and at retirement. **Offering a choice is a net positive, but low-quality options are scored poorly.** Points for each of the elements are provided using the same parameters as our evaluations for the default plans. Adequacy still depends on state participation in Social Security.

Alternative Plan Rating

(Points for offering choice + Vesting period pts + 15-year adequacy pts + Retirement adequacy pts) / 4 variables = Variable points

Example: Florida's default option is a defined contribution plan, but teachers can opt in to a defined benefit pension plan if they wish.

(2.5 / 2.5 + 1 / 5 + 3 / 5 + 5 / 5) / 4 variables = 2.9 / 5

Amortization cost

The percent of salaries that states and districts are contributing toward the cost of paying down the unfunded liabilities of retirement plans.

Amortization cost is used as a variable for the following profiles.

Short-term	Medium-term	Long-term	Taxpayer
✔	✔	✔	✔

States earn points depending on their amortization cost.

Range	Points
Amortization cost ≤ 5.0%	5
5.0% < Amortization cost ≤ 10.0%	4
10.0% < Amortization cost ≤ 15.0%	3
15.0% < Amortization cost ≤ 20.0%	2
20.0% < Amortization cost ≤ 25.0%	1
25.0% < Amortization cost	0

Notes:

- *States receive more points for plans with lower amortization costs because lower amortization costs indicate that states and districts today are contributing less to pay down the debts of the teacher retirement system and that taxpayers are likely to experience less strain on the state's public finances.*

Amortization period

The number of years the state expects to take to pay down the unfunded liabilities of retirement plans.

Amortization period is used as a variable for the following profiles.

Short-term	Medium-term	Long-term	Taxpayer
			✔

States earn points depending on their amortization period.

Range	Points
Amortization period ≤ 10 years	5
10 years < Amortization period ≤ 15 years	4
15 years < Amortization period ≤ 20 years	3
20 years < Amortization period ≤ 25 years	2
25 years < Amortization period ≤ 30 years	1
30 years < Amortization period	0

Notes:

- *States receive more points for plans with shorter amortization periods because, in combination with amortization cost (see previous slide), shorter amortization periods indicate a lower unfunded liability overall and less strain on a state's public finances.*

Cost-of-living adjustment (COLA) structure and rate vs. inflation assumption

The structure and process for making COLAs and the plan's COLA rate compared to its inflation assumption.

Overall funding level is used as a variable for the following profiles.

Short-term	Medium-term	Long-term	Taxpayer
	✔	✔	

States earn points depending on their COLA.

Certainty	Points
Automatic	5
Ad hoc	3
No COLA	0

COLA minus inflation assumption	Points
0.01 < Difference	5
0.00 < Difference ≤ 0.01	4
-0.01 < Difference ≤ 0.00	3
-0.02 < Difference ≤ -0.01	2
-0.03 < Difference ≤ -0.02	1
Difference ≤ -0.03	0

Notes:

- *States receive more points for plans that adequately incorporate cost-of-living adjustments into their benefit calculations because they counteract the effects of inflation and protect teachers from benefits that erode as the value of the dollar gradually goes down. The more certain the COLA, the better.*
- *For states with an automatic COLA, the point system also includes how COLA rates compare with the plan's inflation assumption; the higher the COLA rate in comparison to the inflation assumption, the better. To avoid weighting COLA higher than other variables for these states, we combine the score for the certainty of the COLA and the score for the comparison to the inflation assumption and scale to five total possible points.*

Interest credit on early withdrawal

How much interest the state pays on the contributions a teacher made to the retirement fund if the teacher decides to withdraw from the system before reaching normal or early retirement age.

Interest credit on early withdrawal is used as a variable for the following profiles.

Short-term	Medium-term	Long-term	Taxpayer
✔			

States earn points depending on their interest credit on early withdrawal.

Range	Points
5.0% < Interest credit	5
3.0% < Interest credit ≤ 5.0%	2
0.0% < Interest credit ≤ 3.0%	1
Interest credit = 0.0%	0

Notes:

- *States receive more points for plans with higher interest credit on early withdrawal because higher interest credit ensures that teachers who leave before vesting receive not only the contributions they made to the plan but also some appreciation on those contributions that they would likely have accrued if the funds had been invested in a standard index fund or money market account.*

Investment returns over 10 years

The 10-year geometric average return on investment that the retirement plan earned.
Note: We use an average over 10 years to mitigate the effects of market fluctuations, as well as single-year boons that can occur when the plan managers make riskier investments.

Investment returns are used as a variable for the following profiles.

Short-term	Medium-term	Long-term	Taxpayer
	✔	✔	✔

States earn points depending on their investment returns.

Range	Points
9.0% < Investment returns	5
8.0% < Investment returns ≤ 9.0%	4
7.0% < Investment returns ≤ 8.0%	3
6.0% < Investment returns ≤ 7.0%	2
5.0% < Investment returns ≤ 6.0%	1
Investment returns ≤ 5.0%	0

Notes:

- *States with plans that have higher investment returns receive more points because it indicates that plan investments are managed well and that the plan will require lower contributions from teacher and state to fund benefits.*

Normal cost of benefits

The total percent of salary required, from both teachers and employers, to pay for benefits, excluding debt costs. The normal cost is adjusted for state participation in Social Security.

Normal cost of benefits is used as a variable for the following profiles.

Short-term	Medium-term	Long-term	Taxpayer
			✔

States earn points depending on their normal cost of benefits.

Range with Social Security	Range without Social Security	Points
Normal cost of benefits < 5.0%	Normal cost of benefits < 17.4%	0
5.0% ≤ Normal cost of benefits < 10.0%	17.4% ≤ Normal cost of benefits < 22.4%	3
10.0% ≤ Normal cost of benefits < 15.0%	22.4% ≤ Normal cost of benefits < 27.4%	5
15.0% ≤ Normal cost of benefits	27.4 % ≤ Normal cost of benefits	0

Notes:

- *States receive more points for plans where the normal cost of benefits is neither too low nor too high because it indicates whether the dollars that teachers and employers contribute to retirement sufficiently balance an interest in supporting adequate benefits for teachers and the financial burden on taxpayers.*
- *We add 12.4% to the ranges for states without Social Security, which is the total Social Security tax paid by the employee and the employer.**

* Internal Revenue Service, "Social Security and Medicare Withholding Rates," last modified March 2021.

Overall funding level

The ratio of the teacher retirement plans' funding levels compared to total liabilities.

Overall funding level is used as a variable for the following profiles.

Short-term	Medium-term	Long-term	Taxpayer
		✔	

States earn points depending on their overall funding level.

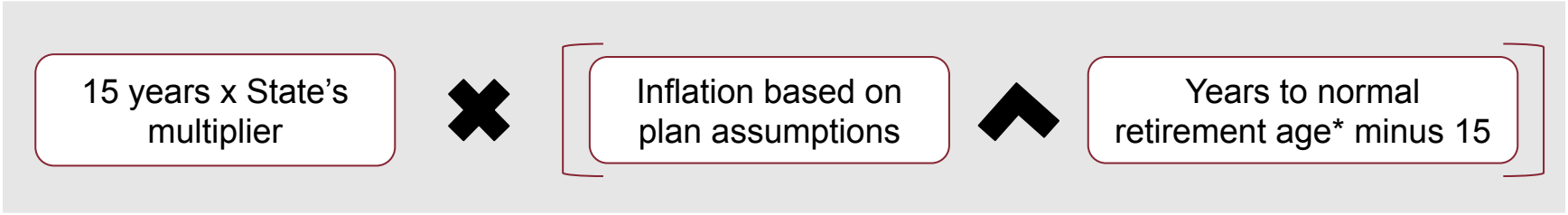
Range	Points
90.0% ≤ Overall funding level	5
80.0% ≤ Overall funding level < 90.0%	4
70.0% ≤ Overall funding level < 80.0%	3
60.0% ≤ Overall funding level < 70.0%	2
50.0% < Overall funding level < 60.0%	1
Overall funding level < 50.0%	0

Notes:

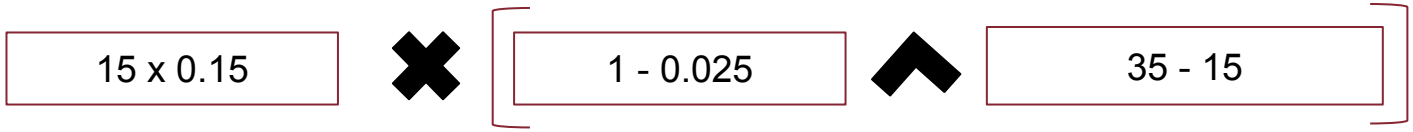
- *States receive more points for plans with higher overall funding levels because it indicates the ability of the plan to pay the benefits promised.*

Plan adequacy at 15 years: defined benefit (1 of 2)

We calculated a plan's 15-year retirement adequacy using a simple salary replacement. It incorporates the cost of inflation for a teacher who leaves the profession after 15 years and does not collect benefits until later.



Example: Utah



At the 15-year mark, we expect states to have a replacement rate on track to replace 60%-80% of salary by retirement. We assume Social Security accounts for 40% of salary replacement rate at retirement.**

After 15 years, a teacher is expected to be approximately 42% through their career, which we assume to be 35 years. After 15 years, then, we also assume that a teacher is about 42% toward filling the gap between Social Security benefits and an adequate replacement rate of 60%-80%. Our point system therefore ranges from 7% (about 42% of the gap between Social Security [40%] and the minimum adequate replacement rate [60%]) and 17% (about 42% of the gap between Social Security [40%] and the maximum adequate replacement rate [80%]).

In states without Social Security for teachers, retirement benefits after 15 years should be 42% toward filling the adequate replacement rate of 60%-80% on their own. Our point system for these states therefore ranges from 23% (about 42% of the minimum replacement rate [60%]) to 34% (about 42% of the maximum replacement rate [80%]).

* We calculate years to normal retirement age based on a teacher who starts teaching at 25 years old and the normal retirement age defined by each plan. For Utah, normal retirement age is 60. Sixty minus a starting age of 25 is 35.

** The Social Security Administration estimates that Social Security benefits typically account for a replacement rate of roughly 40% (see here).

Plan adequacy at 15 years: defined benefit (2 of 2)

The percent of salary a retiree can expect in benefits after 15 years of service. We assume 60% as the minimum threshold, and that 40% comes from Social Security for participating states.

Plan adequacy after 15 years is used as a variable for the following profiles.

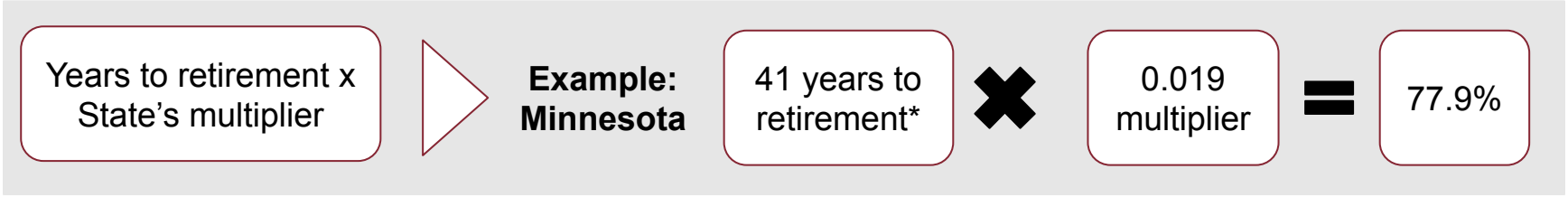
Short-term	Medium-term	Long-term	Taxpayer
	✔		

States earn points depending on their plan adequacy after 15 years.

Range with Social Security	Range without Social Security	Points
17.0% ≤ Plan adequacy at 15 years	34.0% ≤ Plan adequacy at 15 years	5
15.0% ≤ Plan adequacy at 15 years < 17.0%	32.0% ≤ Plan adequacy at 15 years < 34.0%	4
12.0% ≤ Plan adequacy at 15 years < 15.0%	29.0% ≤ Plan adequacy at 15 years < 32.0%	3
9.0% ≤ Plan adequacy at 15 years < 12.0%	26.0% ≤ Plan adequacy at 15 years < 29.0%	2
7.0% ≤ Plan adequacy at 15 years < 9.0%	23.0% ≤ Plan adequacy at 15 years < 26.0%	1
Plan adequacy at 15 years < 7.0%	Plan adequacy at 15 years < 23.0%	0

Plan adequacy at retirement: defined benefit (1 of 2)

We calculated a plan's retirement adequacy using a simple replacement rate derived from each state's policies and assumptions. The calculation relies on a state's formula multiplier, assumed rate of inflation, and the number of years to reach normal retirement.



We expect states benefits at retirement to replace 60%-80% of salary. We assume Social Security accounts for 40% of salary.**

With Social Security providing 40% of salary replacement, the salary replacement rate provided by a teacher's retirement plan should fall between the 20% and 40% necessary to reach adequacy. Without Social Security, the salary replacement rate provided by a teacher's retirement plan should range from 60% to 80% on its own.

* We calculate years to normal retirement age based on a teacher who starts teaching at 25 years old and the normal retirement age defined by each plan. For Minnesota, normal retirement age is 66.
** The Social Security Administration estimates that Social Security benefits typically account for a replacement rate of roughly 40% (see here).

Plan adequacy at retirement: defined benefit (2 of 2)

The percent of salary a retiree can expect in benefits at normal retirement age. We assume 60% as the minimum threshold and that 40% comes from Social Security for participating states.

Plan adequacy at retirement is used as a variable for the following profiles.

Short-term	Medium-term	Long-term	Taxpayer
		✔	

States earn points depending on their plan adequacy at retirement.

Range with Social Security	Range without Social Security	Points
40.0% ≤ Plan adequacy at ret.	80.0% ≤ Plan adequacy at ret.	5
33.5% ≤ Plan adequacy at ret. < 40.0%	73.5% ≤ Plan adequacy at ret. < 80.0%	4
29.0% ≤ Plan adequacy at ret. < 33.5%	69.0% ≤ Plan adequacy at ret. < 73.5%	3
24.5% ≤ Plan adequacy at ret. < 29.0%	64.5% ≤ Plan adequacy at ret. < 69.0%	2
20.0% ≤ Plan adequacy at ret. < 24.5%	60.0% ≤ Plan adequacy at ret. < 64.5%	1
Plan adequacy at ret. < 20.0%	Plan adequacy at ret. < 60.0%	0

Plan adequacy: defined contribution plans

We calculated a plan's retirement adequacy by combining the teacher and employer contribution rates. We compared that total contribution rate with the parameters below. As with defined benefit pension plans, adequacy expectations are higher for states that do not participate in Social Security. We assume Social Security provides a 12.4% contribution.* Due to the nature of defined contribution plans, the adequacy thresholds at 15 years and at retirement are the same.

Plan adequacy is used as a variable for the following profiles.

Short-term	Medium-term	Long-term	Taxpayer
	✔	✔	

States earn points depending on their plan adequacy at retirement.

Range with Social Security	Range without Social Security	Points
14.0% ≤ Total contribution rate	26.4% ≤ Total contribution rate	5
12.0% ≤ Total contribution rate < 14.0%	24.4% ≤ Total contribution rate < 22.6%	4
10.0% ≤ Total contribution rate < 12.0%	22.4% ≤ Total contribution rate < 24.4%	3
8.0% ≤ Total contribution rate < 10.0%	20.4% ≤ Total contribution rate < 22.4%	2
7.0% ≤ Total contribution rate < 8.0%	19.4% ≤ Total contribution rate < 20.4%	1
Total contribution rate < 7.0%	Total contribution rate < 19.4%	0

* Employers and employees each pay 6.2% of wages toward annual payroll tax. See Social Security Administration, "How is Social Security Financed?," last modified 2021.

Plan adequacy: hybrid plans

The adequacy of a hybrid retirement plan is based *both* on its defined benefit and defined contribution elements. Together, the two components of the plan represent a teacher's retirement wealth. To evaluate the plan's adequacy, we assessed each element separately against **half** of the adequacy expectations we used to evaluate DB and DC plans. The thresholds used depended on a state's participation in Social Security. We then combined them to find the total adequacy of a state's hybrid plan. Each portion was worth 2.5 points. The same approach was used for 15-year and retirement-adequacy.

DB element adequacy *out of 2.5 points* + DC element adequacy *out of 2.5 points* = Hybrid adequacy *out of 5 points*

DB range with Social Security	DC range with Social Security	Pts
8.5% ≤ Total contribution rate	7.0% ≤ Total contribution rate	5
7.5% ≤ Total contribution rate < 8.5%	6.0% ≤ Total contribution rate < 7.0%	4
6% ≤ Total contribution rate < 7.5%	5.0% ≤ Total contribution rate < 6.0%	3
4.5% ≤ Total contribution rate < 6.0%	4.0% ≤ Total contribution rate < 5.0%	2
3.5% ≤ Total contribution rate < 4.5%	3.5% ≤ Total contribution rate < 4.0%	1
Total contribution rate < 3.5%	Total contribution rate < 3.5%	0

These are the thresholds used to evaluate the DB and DC portions of a hybrid plan after 15 years in a state that participates in Social Security. To ensure a plan provides adequate benefits, the thresholds are higher for states without Social Security.

Social Security participation

Whether the state participates in Social Security for teachers or, for states that do not participate in the program, whether it permits districts to do so.

Participation in social security is used as a variable for the following profiles.

Short-term	Medium-term	Long-term	Taxpayer
✔			✔

States earn points depending on their participation in social security.

Range	Points
Participation in Social Security = Yes	5
Participation in Social Security = Split	2.5
Participation in Social Security = No	0

Notes:

- *States that participate in Social Security for teachers receive more points because Social Security offers teachers a valuable and portable benefit to supplement teacher retirement plans. In addition, while not a sufficient substitute for a broader retirement system, Social Security offers taxpayers a relatively inexpensive way to provide portable and progressive benefits for teachers.*
- *Some states do not participate in Social Security for teachers but permit districts to elect to enroll. These states receive partial credit.*
- *For the purposes of calculating adequacy after 15 years, adequacy at retirement, and normal cost, we assume a "split" state does not participate in Social Security.*

State contributions vs. actuarially determined employer contribution (ADEC)

The contributions the state has made to the retirement system over the previous 10 years, compared to the contributions actuaries recommend to fund a stable system.

State contributions vs. ADEC is used as a variable for the following profiles.

Short-term	Medium-term	Long-term	Taxpayer
	✔	✔	✔

States earn points depending on their state contributions vs. ADEC.

Range	Points
100.0% ≤ State contributions vs. ADEC	5
90.0% ≤ State contributions vs. ADEC < 100.0%	4
80.0% ≤ State contributions vs. ADEC < 90.0%	3
70.0% ≤ State contributions vs. ADEC < 80.0%	2
60.0% ≤ State contributions vs. ADEC < 70.0%	1
State contributions vs. ADEC < 60.0%	0

Notes:

- *States receive more points when their contributions to pension plans align to actuarially recommended amounts because it indicates whether states are being responsible stewards of public finance and minimizing the accrual of unfunded liabilities that teachers and/or taxpayers will eventually need to pay down.*

Teacher contribution rate

The percent of salary that teachers are required to contribute to the retirement plan.

Teacher contribution rate is used as a variable for the following profiles.

Short-term	Medium-term	Long-term	Taxpayer
✔	✔		

States earn points depending on their teacher contribution rate.

Range	Points
10.0% < Teacher contribution	2
8.0% < Teacher contribution rate ≤ 10.0%	4
5.0% < Teacher contribution rate ≤ 8.0%	5
3.0% < Teacher contribution rate ≤ 5.0%	3
0.0% < Teacher contribution rate ≤ 3.0%	1
Teacher contribution rate ≤ 0.0%	0

Notes:

- *Financial advisers recommend that workers save 10%-15% percent of salary annually for retirement, in addition to Social Security.*
- *We assume that a teacher's contributions cover half of the recommended annual savings and the employer's contribution rate covers the other half.*
- *Plans receive more points for teacher contribution rates between 5% and 8% of salary because a contribution rate that is too high may overly constrain teachers' take-home pay and contribution rates that are too low suggest insufficient savings for retirement.*

Vesting period

The period of time a teacher must work before they qualify for employer-provided retirement benefits. In defined benefit pension plans, a vested employee has a right to collect a pension upon reaching the state's normal or early retirement age.

Vesting period is used as a variable for the following profiles.

Short-term	Medium-term	Long-term	Taxpayer
✔			

States earn points depending on their vesting period.

Range	Points
Vesting period ≤ 3 yrs	5
3 yrs < Vesting period ≤ 6 yrs	3
6 yrs < Vesting period ≤ 9 yrs	1
9 yrs < Vesting period	0

Notes:

- *States receive more points for plans with shorter vesting periods because shorter vesting periods ensure that teachers receive some value from their contributions to a retirement plan even if they stay for a short period of time.*
- *About four in 10 teachers leave the profession within five years.*
- *For hybrid plans, we average the scores for the DC and DB elements of the plan.*

Source: Richard Ingersoll, "Seven Trends: The Transformation of the Teaching Force," Consortium for Policy Research in Education, last modified 2018.

Table of Contents

About the authors

Max Marchitello is the founder of MVM Consulting LLC and a former senior analyst at Bellwether Education Partners. He can be reached at maxmarchitello@gmail.com.

Andrew J. Rotherham is a co-founder and partner at Bellwether Education Partners. He can be reached at andy.rotherham@bellwethereducation.org.

Juliet Squire is a partner at Bellwether Education Partners. She can be reached at juliet.squire@bellwethereducation.org.

Acknowledgments

We are grateful to many individuals who supported and advised the development of these rankings. We are especially grateful to Jon Moody and Anthony Randazzo at the Equable Institute for their expert counsel on some technical aspects of our analysis, as well as for generously sharing with us the Equable Public Retirement Research Database, which made these rankings possible. Chad Aldeman of the Edunomics Lab at Georgetown University helped develop the methods behind these rankings while he was a member of the Bellwether team, and we are also grateful for his continued advice and expertise as we finalized them.

Additional thanks to the Walton Family Foundation for their financial support of this project. Thanks also to Super Copy Editors.

These contributions significantly enhanced our work. However, the model and analysis represent the views of the authors; any errors in fact or analysis are the responsibility of the authors alone.

If state or retirement plan officials identify any data for their plans that are inaccurate, please reach out. These are complicated data, and we have made our best effort to be accurate and up-to-date, but we welcome additional information.