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Preserving Retirement Income Security for Public Sector Employees

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EXECUTIVE SUMMARY

When it comes to their retirement finances, Americans are concerned with two things: a steady and adequate retirement income that will not run out, and the ability to move their retirement plans from job to job.[1] These two characteristics can sometimes be seen as conflicting with one another. For example, if a plan is portable, that may limit the ability to accrue enough income to sustain a full retirement. Traditional defined benefit (DB) pension plans are typically seen as able to meet the goal of income security in retirement, while defined contribution (DC) plans are seen as more easily portable. However, it is not necessarily the case that DB plans cannot provide portability, nor that DC plans are unable to provide for secure retirement income. This report analyzes 89 public pension systems throughout the country to assess the portability features of public pension systems and the ability for their members to build retirement income.

Over the past several decades, an increasing number of private sector employers have moved away from DB pensions towards DC plans for various business reasons. State and local government retirement systems, by contrast, have maintained DB pensions as the primary retirement plan design, largely due to the demographic characteristics of the public sector workforce and an understanding of the cost efficiencies DB pensions offer by pooling risks and investments.[2]

The private sector switch from DB to DC plans has resulted in a "great risk shift" where the risk and most of the funding burden falls on individual employees, rather than experienced professionals and employers.[3] The results of this shift are startling—currently, the median retirement balance for all working-age households is only $2,500; for households near retirement, the balance only marginally improves to $14,500.[4] While employees do value the ability to move their DC account balances from one plan to another when they change jobs, far too many employees do not roll their balances into a new plan, but rather cash out their account balances, which helps to contribute to the dismally low account balances Americans experience as they get close to retirement.[5]

To assure that employees reach retirement with adequate sources of income, financial experts recommend that individuals start saving early in their careers, save consistently during the course of their careers, and preserve retirement benefits during job transitions. Public DB pension plans stack up well on these points. Almost all public retirement systems consistently require employees to contribute toward the cost of their retirement benefits as soon as they start working, and to continue with every paycheck.

Various public pension plans around the country provide a varied array of benefit designs and provisions. NIRS surveyed 89 public pension plans in order to analyze the similarities and differences between the plans on features such as plan design; employee contribution rates; vesting rates; interest rates paid on employee contributions; refundability of contributions; and ability to purchase service credits.

The key findings of this report are as follows:

1. **Almost all of the public retirement systems surveyed offer a DB pension plan.** In fact, most public retirement systems provide new members with a DB pension benefit or a DB benefit in combination with a DC account. Only a very small number of systems provide only a DC benefit.

2. **Many public pension plans have adopted features that allow individuals who change jobs to retain and even increase their benefits.** In fact, 71 percent of the plans surveyed credit their members with interest on their contributions if they leave and request a refund. Most plans allow their members to later rejoin a system and repay their refund with interest, and most plans allow separated members the option of leaving their account balances with the plan so that it may continue to earn interest.

3. **Nearly all public retirement systems allow members to purchase additional service credits to increase their pension benefits.** Specifically, all public DB plans allow for the purchase of service credits for prior military service, and more than half of the plans surveyed allow for the purchase of credits for prior out-of-state government service. Some plans allow for the purchase of credits for other specified types of service and leave.

4. **A number of plans have features that increase benefits for short or moderate term employees.** Modifications include increasing the value of the deferred annuity benefits paid to former employees, rewarding employees who choose to keep their member accounts in the plan with interest, and providing even higher matching amounts. These features can encourage workers who leave before retirement to preserve the lifetime retirement income benefits they have earned, rather than spend their refund.

INTRODUCTION

For the past 15 years, not having enough money for retirement has topped Americans' list of financial worries, as measured by the Gallup financial worry metric. In 2015, six out of 10 Americans were very or moderately worried about retirement.[6] Research on Americans' retirement readiness validates these concerns.[7] In fact, the Voya Financial Retirement Research Institute recommends that "individuals must understand the importance of retirement saving as soon as they enter the workforce and they should treat it as a financial priority throughout their working lives so they have enough at retirement."[8] Yet far too many Americans fall short of achieving this.

Consistent participation in an employer-sponsored retirement plan over a career can deliver a retirement income stream that can ease Americans' worries about their financial future.[9] Thus, Americans correctly maintain a dual focus when it comes to retirement security—wanting both a steady income that will not run out during retirement, and the ability to move their retirement benefits with them from job to job. In fact, among Americans surveyed by the National Institute on Retirement Security, 76 percent found portability very appealing, while 75 percent found receiving benefit in a monthly check very appealing.[10] The two basic types of retirement plans each address one of these major concerns: traditional defined benefit (DB) pension plans provide employees with a guaranteed monthly income at retirement, typically based on service and final earnings, while defined contribution (DC) retirement plans—most often 401(k) plans—help employees accumulate retirement wealth that can easily move to a new employer's plan after a job change.

Over recent decades, an increasing number of private sector employers have moved away from DB pensions towards DC retirement plans, for a variety of business reasons.[11] This switch from DB to DC plans has resulted in a "great risk shift" in which most of the decisions and responsibilities for enrollment, funding, investment, and retirement income adequacy fall on individual employees, rather than on employers and investment professionals.[12]

The results of this shift are startling. Rhee and Boivie calculated that only 55 percent of private sector wage and salary workers between 25 and 64 had access to a retirement plan at work in 2013.[13] Because 40 million working age American households have no retirement account assets, the median retirement balance for all working-age households is only $2,500. Households near retirement fare only marginally better, with a median balance of just $14,500.[14] Among households that own retirement accounts, the median balance is not nearly enough to support a 20 or 30 year retirement; overall, the typical household holds just $50,000, and the typical near-retirement household holds just $104,000 in their retirement account.[15] Today, income from DB pensions generally provides about one-fifth of aggregate household income to older Americans (age 65 and over) across gender, age and marital status.[16] Given that more than six out of ten near retirees have less than one times their salary saved in individual retirement accounts, the ability of DC plans to deliver similar lifetime income replacement for future retirees is a concern.

Even though DC retirement plans offer "portability" by allowing employees to move their account balances from one plan to another, many employees fail to redeposit their retirement money in their new retirement plans or in Individual Retirement Accounts (IRAs). Instead, many workers "cash-out" their 401(k) accounts and use the money for other purposes.[17] These cash-outs resulted in $81 billion in lost retirement savings in 2014 alone.[18] By another estimate, cash-outs account for nearly 50 cents of each dollar in annual contributions to DC retirement plans.[19] When employees cash out their retirement plans, it becomes much more difficult to accumulate enough savings to adequately fund a full retirement.

Despite this very real leakage issue, some tout DC plans as superior to DB plans in terms of portability of benefits. It is true that vested employees who leave DB plans after several years, especially at the start of their careers, receive lower retirement income benefits than those who stay for a full career. However, in considering public DB pensions, it is important to note the difference in job tenure between public and private sector workforces. Public sector employees consistently remain with employers for significantly longer periods, with their median tenure nearly double the rate of private sector workers.[20] In addition, public sector workers are nearly twice as likely to stay with their employer for a full career—25 or more years—than private sector workers.[21]

Thus, the public sector's continued use of DB pension plans aligns with the demographics of the public workforce. Because public employees are older and have more stable job tenure than workers in the private sector, DB pensions serve them well. An overwhelming percentage (88 percent) of public sector employees indicate that retirement plans are an extremely or very important factor they would consider when changing jobs, compared to the 65 percent of private sector employees.[22] Public employees also appreciate the greater retirement income security that DB pension plans offer over DC plans.[23] Thus, DB pensions help to ensure that public employers can count on and effectively manage an educated, trained, and skilled workforce to serve our communities.

Recent studies of public DB pensions in Colorado and California indicate that moving to DC retirement plans either would reduce the retirement income for a large majority of employees covered by these public pension plans, or require greater contributions to maintain current benefit levels.[24] High turnover rates among short-term workers pose concerns for employers, due to cost of recruiting and training replacements.

Unlike private sector single-employer DB pension plans, nearly all statewide public pensions require employees to contribute toward the cost of their retirement benefits. As a result of this cost-sharing feature, short-service teachers and other public employees can request a refund of their contributions from their member accounts and move those assets to a new retirement plan if they leave public service.

Almost all state retirement systems have additional features that allow for preservation of retirement income benefits when changing jobs, such as purchase of service credits, interest credits on withdrawn contributions, and the re-depositing of employee contributions.[25] Employees may transfer funds from a prior pension plan or a DC plan account to buy public pension service credits without incurring a current tax liability.[26] Generally, states allow the purchase of up to five additional years of service, and these credits generate larger lifetime incomes from public DB pensions. A number of states offer new employees options to elect to participate in a DC plan, in the case they are uncertain about long-term employment and may be less concerned about eventually having a guaranteed retirement income when they retire.[27] Some states offer combined DB-DC plans to provide a balance between retirement income protection and flexibility. Also, several public DB plans have unique features that encourage terminating employees to maintain their accounts in the system even after termination, by offering additional retirement income benefits at retirement age.

Because there is a lack of understanding of the variety of benefit provisions that public pension plans offer to employees to facilitate consistent savings over employees' careers and provide a steady income in retirement, NIRS surveyed 89 public pension plans in order to analyze:

- plan types;
- employee contribution rates;
- vesting requirements;
- interest rates paid on withdrawn employee contributions;
- refunds of member accounts;

It is important to note that while this study refers to public pension plans or public retirement systems at times as a single entity, these plans cover very different groups of employees, including, but not limited to, general government employees, teachers, and public safety employees—all of whom have individual career paths and may have different needs in terms of retirement planning and coverage. For example, police and firefighters have physically demanding jobs that require retirement at an earlier age, whereas teachers and general government workers are expected to have longer careers.

- re-deposits of employee contributions;
- the ability to purchase service credits for various types of service; and
- other features that enhance the retirement benefits earned to encourage preservation.

This report is organized as follows:

- **Section I** summarizes the different retirement plan offerings among 89 public pension plans, including the vesting period required by each plan and the treatment of employee contributions.
- **Section II** discusses how public pension plans provide portability while also encouraging consistent retirement savings throughout an employee's career. This includes the ability for members to request refunds of member accounts, the amount of interest credited to the accounts, as well as certain unique features that can encourage employees to obtain additional lifetime income even after they leave public employment.

SECTION I: PUBLIC RETIREMENT SYSTEMS PROVIDE MEMBERS WITH CONSISTENT PARTICIPATION AND ADEQUATE RETIREMENT INCOME

What Types of Plans Are Offered by Public Pension Systems?

Public retirement systems offer three kinds of retirement benefits to their members: traditional defined benefit (DB) plans, defined contribution (DC) plans, or combination (DB-DC) plans. **Table 1** summarizes differences between DB and DC plans with respect to portability and providing lifetime income. We find that public retirement systems—by an overwhelming majority—provide their new members with a DB pension, alone or in combination with a DC account, rather than only a DC plan.

Defined Benefit (DB) Plans

A traditional pension plan, also called a DB pension, is a pooled retirement plan that provides a predictable monthly benefit in retirement. This provides retired workers with a steady income stream that is guaranteed to last for the retiree's lifetime. The amount of the monthly pension is based on a formula which multiplies the years of service with an employer, the worker's annual pay at the end of his or her career (typically averaged over three to five years), and a stated multiplier that is unique to each plan.

For example, if a plan provides a benefit of 1.5 percent of final average pay for each year worked, a worker whose final average salary was $60,000 and who had been employed for 25 years would earn an annual benefit of $22,500, or $1,875 per month—an income that would replace 37.5 percent of his or her final average salary based on the plan's normal retirement age.[28]

Defined Contribution (DC) Plans

DC plans—such as 401(k), 403(b), and 457(b) plans—are different from DB pensions, as they consist of separate, individual accounts for each participant. In most public sector DC plans, employees and employers contribute a specified amount—usually expressed as a percent of salary earned each year—into the plan over the course of an employee's career. Typically, the contributions are "participant directed," meaning that each individual employee can decide where to invest the funds, and how to withdraw the funds.

For example, if a public employee participated in a DC plan that had a six percent employee contribution and a three percent employer contribution, and the employee had a salary of $50,000, the employee would contribute $3,000 and the employer would contribute an additional $1,500, for a total contribution of $4,500 into the employee's DC account in that year. Even for employees who contribute the same amount of money for the same number of years, the amount of income in retirement they receive will vary, depending on each individual's investment decisions, the age when benefits start, and the method selected for withdrawing income from the account.

Table 1. **Selected Comparison of Defined Benefit and Defined Contribution Plans**

Plan	Defined Benefit (DB) Plans (Traditional Pensions)	Defined Contribution (DC) Plans (such as 401(k), 403(b), and 457 plans)
Contributions	In public and private sectors, contributions to DB pension plans are made on behalf of each employee by the employer. The amount the employer must contribute to the DB plan for the benefits employees earn in each year is called the normal cost. In nearly all state retirement systems, employees are required by law to contribute an established percentage of each paycheck toward the funding cost of their benefits. Private sector workers covered by DB pensions do not contribute to the cost of the plan. If additional contributions are needed to fund plan benefits, employers periodically adjust contributions, and in public DB pensions employees may also be required to contribute money.	Employees make their own contributions to their retirement accounts at the rate that they choose. A growing number of private sector DC plans automatically default employees in the DC plan with a contribution rate of at least 3% of salary. Public retirement systems that offer DC retirement accounts set rates of pay employees must contribute as well as a rate for employer contributions. Private sector employers typically match the DC contributions made by the employee. Most often the employer matches 50% of the employee contributions, up to 6% of salary.
Lifetime Income at Retirement	The DB plan benefit is a monthly income payment determined by a set calculation that links service and salary. The longer employees remain covered by a DB pension; the greater the value of the monthly income payments they will receive each month for as long as they live in retirement. Public pension systems pay benefits as guaranteed lifetime income streams rather than as lump sums. While DB pensions offered by private sector employers provide lifetime income, employees often choose to withdraw their benefits in one lump sum payment.	The amount of money accumulated in DC retirement accounts at the time the employee decides to retire depends on contributions, investment earnings, and age. DC plans are not required to offer lifetime income options. Typically, DC plans pay out retirement assets as a one-time lump sum or as a series of payments, such as minimum required distributions. Few DC plans offer in-plan lifetime options and even fewer participants choose a guaranteed lifetime income for their benefit. Employees underestimate expected lifetime benefits. To help DC plan participants deal with longevity risk, the Treasury recently developed guidance on in-plan annuity options and purchasing longevity insurance.
Portability	While long-service employees obtain greater benefits in DB plans, vested employees who leave after only several years of DB plan coverage may find their benefits too small to meet their needs in retirement. Since employee contributions are fully vested when they are made, employees who terminate public sector employment at early ages choose to withdraw their own contributions. Public pension systems refund employee contributions with some earnings. Typically, an employee moving from one public sector job to another within a state continues in the same pension system. And for out of state jobs, pension systems allow employees to purchase service credit with refunds from other pension systems and money from 401(k), 403(b) and 457 accounts. Private sector DB pensions offer vested employees lump sum distribution options that can be rolled over to a DC account.	Most DC retirement accounts can be easily rolled over to another DC retirement account—either in a 401(k) plan, 403(b), 457 plan or into an Individual Retirement Account (IRA). Federal tax law regarding taxable distributions from retirement plans encourages direct rollovers to a new employers plan or an IRA by imposing a 20% withholding tax on distributions made directly to individuals and a 10% tax penalty on early distributions (generally before the age of 59 ½) from DC retirement accounts. Avoiding leakage from a DC retirement account when an employee terminates is a key concern to assure account balances at retirement will be adequate to enable retirees to maintain their standard of living in retirement.
Supplemental Benefits	Spousal protections, disability benefits, and cost of living adjustments are common features in public sector DB pension systems. Public DB pensions do not provide loans or hardship withdrawals of employee contributions.	Supplemental benefits are not applicable in DC retirement accounts. If employers provide these, they require extra contributions or reduced payments during retirement. Employees can get access to retirement assets through loan and hardship withdrawals which add to leakage.

Nearly all public employees have the opportunity to make voluntary additional retirement savings in DC accounts by using 457 or 403(b) plans, subject to overall Federal tax code limits.

Combination Plans

Combination plans offer participation in both traditional DB pensions and DC retirement plans. They can take any number of different forms, but there are few main types of combination plans: a "side-by-side" plan, a "stacked" plan, and a cash balance plan. Side-by-side and stacked plans offer retirement benefits that combine a DB pension with a DC retirement account. The DB portion of the plan is generally less generous than a stand-alone DB plan would be.

In a side-by-side plan, the modified DB pension benefit and contributions to individual DC retirement accounts are based on total salary. For example, the Washington State Teachers Retirement System Plan 3 (TRS3) provides pension income based on a one percent of salary multiplier, solely at the employer's cost, while employees pay at least 5 percent of their salary into a DC account. Other side-by-side plans in Oregon and Indiana are similar to Washington's TRS3 in that they split the funding—with the employer responsible for the modest DB benefit and the employee contributions credited to the DC account. In the Georgia (Employees), Michigan (Public School), Rhode Island (Employees), Tennessee (Consolidated), Virginia, and Utah retirement systems, the employers and employees contribute to both plans. **Table 2** provides a summary of cost breakdowns for states with combination plans.

Table 2. **Distribution of Plan Cost Sharing by Employees and Employers in Combination Plans**

System		Contribution Percentage by Employees	Contribution Percentage by Employers
Georgia Employees' Retirement System	DB	1.25%	Balance of cost
	DC	5%	For each additional 1% contributed, ERS will match 50% of salary
Indiana Public Retirement System	DB	0%	Full cost
	DC	3%	None
Michigan Public School Employees Retirement System	DB	3%-6.4%	Balance of cost
	DC	2%	None
Oregon Public Service Retirement Plan	DB	0%	Full cost varies
	DC	6%	None
Employees' Retirement System of Rhode Island	DB	3.75%	Balance of cost
	DC	5%	1-3.5% of salary
Tennessee Consolidated Retirement System	DB	5%	4% of salary
	DC	2%	5% of salary
Virginia Retirement System	DB	4%	Balance of cost
	DC	1%-5%	Match 1% to 3.5% of salary
Washington State Public Employees Retirement System	DB	0%	Full cost
	DC	5%-15%	None
Washington Teachers' Retirement System	DB	0%	Full cost
	DC	5%-15%	None
Utah Retirement System*	DB	0%, unless cost exceeds 10%	Cost up to 10%
	DC	None	10%

Source: Authors' Calculations.

*See NIRS Report "Decisions, Decisions: Retirement Plan Choices of Public Employees and Employers." for more information on Utah's contribution rates.

In a stacked plan, the DB plan provides retirement benefits up to a specified salary level, and then contributions based on income over that salary cap go into the employee's DC account. For example, if the DB pension had a salary cap of $75,000 and a contribution percentage of 10 percent, then an employee earning $100,000 would receive DB pension income based on only $75,000 as their final average salary, and $2,500 (10% of the $25,000 excess salary over the $75,000 cap) would be placed in the DC account.

In a cash balance (CB) plan, an employee builds up retirement benefits based on pay credits expressed as a percent of compensation earned each year. The CB account also receives credits each year with a specified interest rate. For example, for an employee at a $100,000 salary with a $50,000 account balance, a CB plan with a five percent pay credit and three percent interest credit would contribute a $5,000 pay credit ($100,000 x 5%) plus an additional $1,500 interest credit ($50,000 x 3%), for a total contribution of $6,500 that year. At retirement, the cash balance plan would translate the amount in the employee's notional account into a monthly income, but the reality is that employees hardly ever take the benefit as lifetime income instead they withdraw the account balance as a lump sum. CB plan investments are pooled and the annual changes in account values are bookkeeping entries.

As shown in **Figure 1**, of the 89 public systems surveyed:

- 71 (80%) plans provided new members with a DB benefit, including 8 plans that offered an option for a DC account;

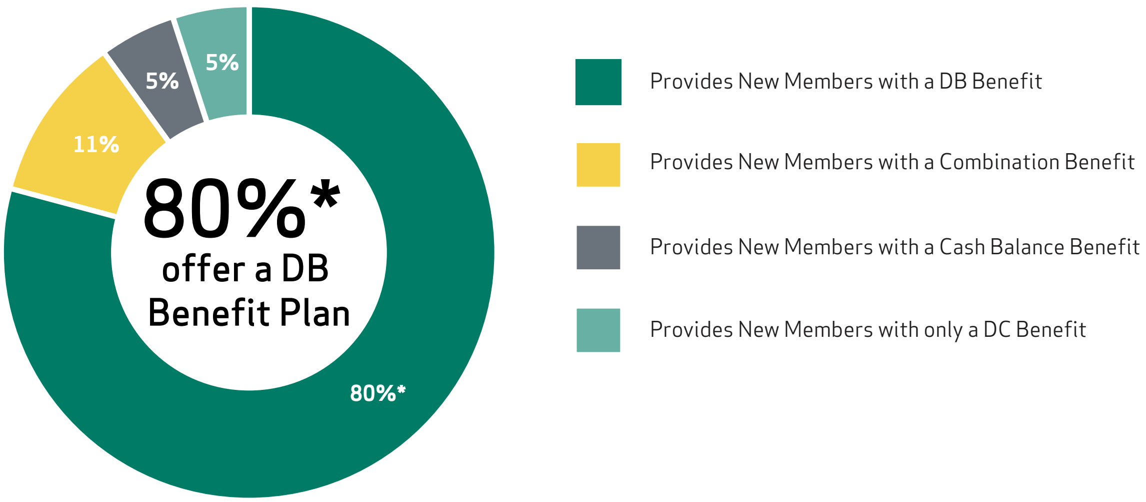
NEW COMBINED BENEFITS CREATED FOR SOUTH DAKOTA PUBLIC EMPLOYEES

The South Dakota Retirement System (SDRS), one of the most well-funded public DB pensions in the country, recently revised its benefit structure for new employees in order to enhance long-term sustainability and meet income replacement goals. Another important goal was to better align the benefits with the state's workforce needs to retain experienced employees, while maintaining the same fixed contribution rates. The new provisions become effective on July 1, 2017.

The new generational benefit design increases the benefit multiplier for most members, eliminates subsidies within the plan, and adds new Variable Retirement Accounts, which are funded from current employer contributions and earn the actual investment return of the plan. The variable retirement accounts are payable as a lump sum, a rollover, or a supplemental pension benefit at retirement.

To encourage employees to preserve their full retirement benefits, the value of pension income for vested terminated members increases with the SDRS cost of living adjustment (COLA) through members' retirement date. New members variable retirement accounts will continue to grow based on investment returns, but members who terminate and take a refund of their accumulated contributions will not receive the variable retirement account. With these changes, the SDRS benefits structure meets the plan's dual goals to provide adequate lifetime income replacement by increasing the amount of retirement income at retirement age for employees who defer rather than withdraw from the SDRS, at the same time the change also increases personal retirement savings.

Figure 1: **Most Public Pension Systems Offer New Members a Traditional Pension**



Source: Authors' Calculations.
*Totals may not add up exactly due to rounding.

- ten (11%) plans provide new members with a combination benefit, including two with a DC account option,
- four (5%) plans provide new members with a cash balance benefit, and
- four (5%) plans provide new members with only a DC benefit.

Some States Allow New Members the Choice Between a DB and a DC Plan

As detailed in **Table 3,** nine states give new hires the flexibility to choose which type of retirement plan will best fit their retirement needs. These systems offer new hires the choice of retirement plan, such as a DB pension, a DC plan, or a combined DB-DC plan. NIRS' report "Decisions, Decisions: Retirement Plan Choices for Public Employees and Employers" found that in these states that offer a plan choice, public employees overwhelmingly elect to participate in the DB pension which is shown in **Table 4.**[29] While the range of actual employee selections varied by state, the DB pension plan consistently displayed strong popularity over the decade-long observation period. **Table 4** summarizes the new employees plan choices among DB, DC, and combination plans.

Table 3. **Contributions to DC Plans in States that Offer a DC Plan Option**

Systems	Contribution Percentage by Employees	Contribution Percentage by Employers
Colorado	8%	10.15%
Florida	3%	3.55%
Indiana	3%	4.6%
Montana	7.9%	4.19%
North Dakota Employees	6%	4.12%
Ohio Public Employees	10%	8.73%
Ohio Teachers	13%	9.5%
South Carolina	6.5%	9.24%
Utah	0%	10%

Source: NIRS Report "Decisions, Decisions: Retirement Plan Choices of Public Employees and Employers."

Table 4. **New Member Elections in States that Offer Employees Choice***

System	DB Plan Enrollments	DC Plan Enrollments	Combined Plan Enrollments
Colorado Public Employees' Retirement Association	88%	12%	Not offered
Florida Retirement System	75%	25%	Not offered
Montana Public Employee Retirement Administration	97%	3%	Not offered
North Dakota Public Employees Retirement System**	98%	2%	Not offered
Ohio Public Employees Retirement System	95%	4%	1%
State Teachers Retirement System of Ohio	89%	9%	2%
South Carolina Retirement Systems	82%	18%	Not offered

"Not offered" means enrollment in a combined DB/DC plan is not offered.

** Data for Colorado, North Dakota, and Ohio PERS are for January 2010 through December 2010. Data for Florida, Montana, STRS Ohio, and South Carolina are for July 2010 through June 2011.*

Source: NIRS Report "Decisions, Decisions: Retirement Plan Choices of Public Employees and Employers."

Furthermore, in Washington State, where employees can choose to be covered by a defined benefit plan (PERS2) or a side-by-side combined DB-DC plan (PERS3), more than two-thirds of PERS employees actively elected to participate in the DB pension plan.[30]

Vesting

Vesting occurs when a plan participant is legally entitled to his or her accrued benefit. Once benefits have vested, the participant can receive the vested portion of his or her retirement benefits even if he or she leaves their job before retirement. The shorter the vesting period, the more short-term employees are able to obtain a benefit from the DB plan. New, short-term employees who leave an employer before vesting in a DB pension may find the loss of employer-provided retirement benefits to be unfair, and they should consider that trade-off when comparing other career opportunities.[31] From the employer's vantage point of managing their workforce and staffing, defined benefit plans encourage greater workforce stability and reduce turnover costs.

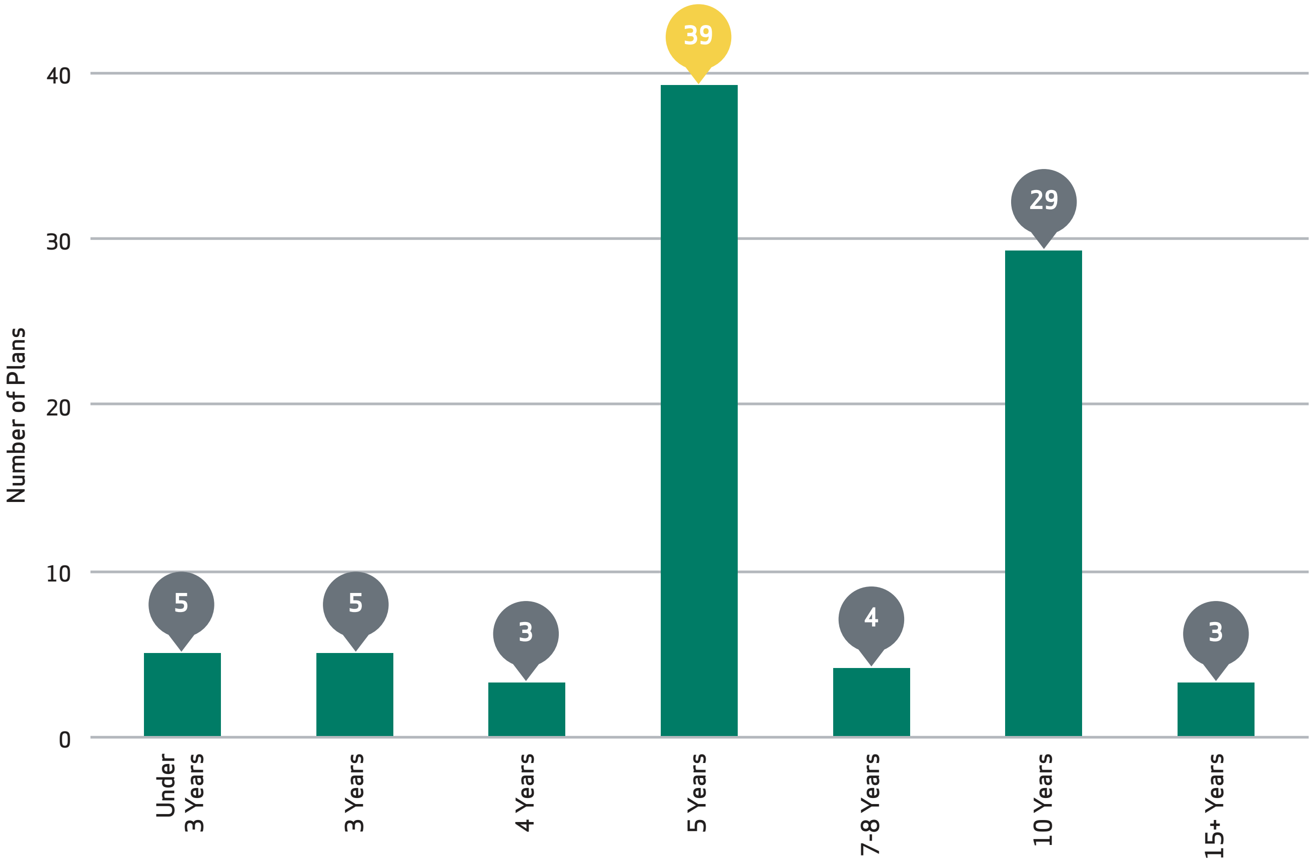
For all retirement plans, members' contributions to a plan vest immediately, and members can withdraw the funds in a lump sum after they terminate employment. In many DB and CB plans, members vest in the employer-provided benefit after they have worked a specified number of years, which is referred to as cliff vesting. Some plans provide employees a legal right to a specified percentage of their benefits each year until fully vested (referred to as graded vesting). In light of the financial commitment employers make in DB plan, vesting enables employers to direct more of the pension's value to employees who display a higher attachment to the employer's mission.[32] While employee contributions to DC plans are always 100% vested, DC plans in both the public and private sectors also commonly have either cliff or graded vesting of employer contributions. The majority of public pension plans include vesting periods of five years or less.

Looking specifically at teacher turnover, the U.S. Department of Education reported that five years after 2007-2008, when a national study group of teachers started teaching in public schools, 70 percent of the teachers still taught at the same school (stayers); 13 percent moved to another school (movers); and 17 percent left teaching all together.[33] K-12 teachers join statewide public retirement systems on their first day in the classroom. Consistent participation in statewide DB pensions benefited not only the stayers and the portion of movers staying in the same school district, but also any teacher who moved to another district within the state. For example, the aggregate turnover rate for teachers in the statewide California State Teachers' Retirement System (CalSTRS) is six percent, and half of California's teachers today will retire with 30 or more years of service.[34] These experienced teachers are valuable, as education policy literature finds that higher retention among mid-career teachers leads to increases in average teacher productivity within a school.[35]

NORTH DAKOTA PUBLIC EMPLOYEES RETIREMENT SYSTEM (PERS) - PORTABILITY ENHANCEMENT PROGRAM (PEP)

North Dakota PERS offers employees an optional retirement feature to provide greater portability. Under the PEP, an employee can vest in the employer portion of the DB plan by participating in a supplemental DC plan. Specifically, for every dollar that the employee invests in the DC plan (up to four percent of salary per year), PERS reallocates one dollar from the employer contribution to the DB plan into the member's account, which accelerates the vesting for that amount sooner. This feature enables employees DC accounts to accrue value faster than they would otherwise. Should the employee leave North Dakota state employment, he or she can withdraw the larger member account and transfer the value to another retirement plan.

Figure 2. **Most Public Pension Systems Surveyed Require Five Years or Less to Vest**



Source: Authors' Calculations.

As shown in **Figure 2**, the majority of public plans require five years of service or less for full vesting. Specifically:

- 13 plans required four or fewer years of service to vest;
- 39 plans required five years of service to vest;
- four plans required seven or eight years of service to vest
- 29 plans required ten years of service to vest; and
- three public safety plans had vesting years at 15 years or more of service.

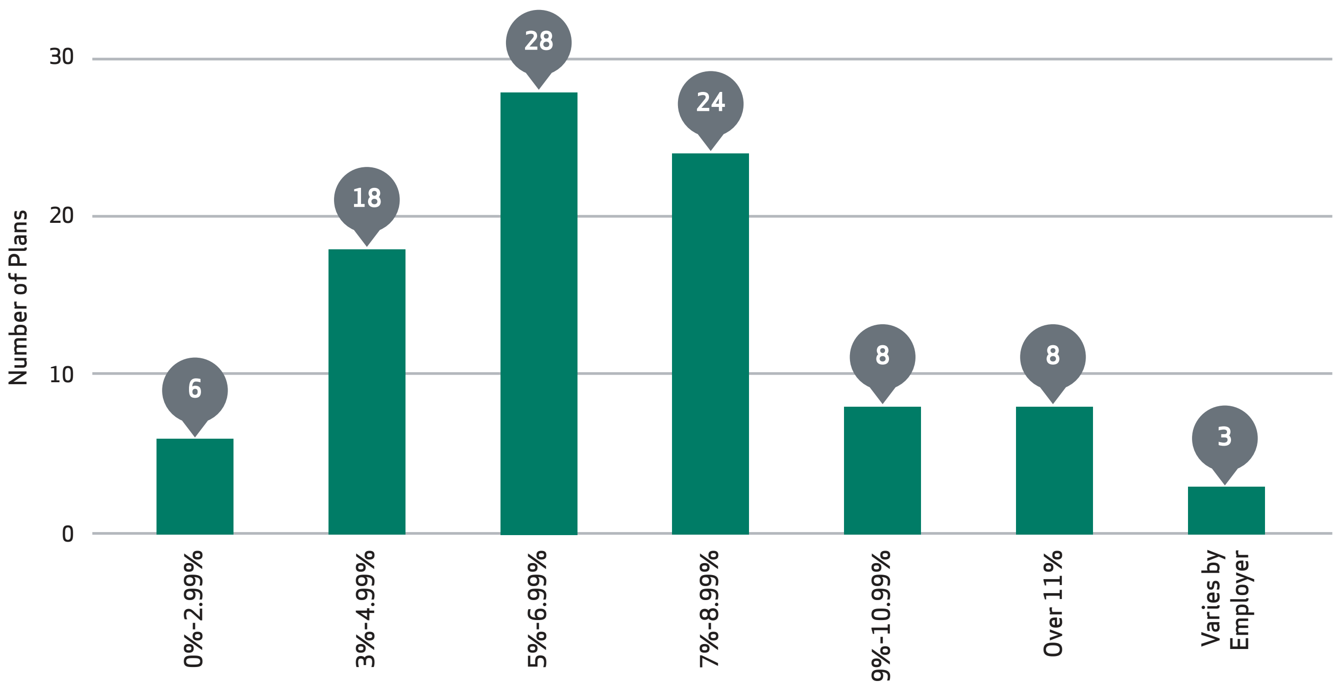
Six plans that offered employees the option of choosing a DC account plan provided earlier vesting for the DC plan option.

Employee Contributions and Employer Pension Costs

Nearly all state and local pension plans require employees to contribute a percentage of their salary each pay period to help fund their retirement benefits. This forced savings component starts public employees saving for retirement from their first day at work and continues for their entire tenure. Even short-service public employees have member accounts that can follow them should they leave their current employer for other job opportunities. In contrast, such immediate and mandatory participation does not occur in the private sector.

As shown in **Figure 3**, the employee contributions to public sector retirement systems, which are typically set in legislation, range from 0% of salary (referred to as non-contributory) to 14.5% of pay, with an average contribution rate of 6.68% and a median contribution of 6.2%. Public employees who are not covered by Social Security typically pay a higher contribution rate, as their DB benefits tend to be more generous in order to compensate for the lack of Social Security benefits. The employer costs to fund the DB pension plan are calculated by the plan actuary, although this rate may not be the same as what is actually contributed. The employer pension costs can vary in amount from year to year and include the normal cost for the benefits that employees earn for the current year, payments toward the amortization of actuarial gains and losses, and a portion of the plan's unfunded liability. According to a study by the National Education Association (NEA), the breakdown of the employers' cost to fund their share of pension funding expressed as a percent of covered payroll ranges from three to 37.3 percent of salary as of 2015. The median employer contribution is about 13 percent, while the average is 14.2 percent.[36]

Figure 3. **The Average Employee Contribution is 6.68% of Pay for New Members***



*See Appendix 1 for breakouts by each individual system.

DB Pensions Provide a Higher Retirement Income than Alternatives

As retirement systems and policymakers evaluate the cost effectiveness and appropriateness of different retirement plan design structures for public employees, considering the level of retirement income that different plan designs can reasonably be expected to provide is an important factor. The State Auditor in Colorado recently analyzed the benefits provided by the Colorado Public Employees' Retirement Association (PERA) in a detailed report that looked at anticipated benefits and estimated cost of different plan designs. **Figure 4** summarizes the income replacement that an individual would receive at retirement age under each plan design, and compares that amount to the current Colorado PERA benefit and cost structures. The Colorado Auditor's study found that the current DB plan, with its feature that increases the match for members' accounts to 100 percent when members retain their Colorado PERA accounts until retirement age, uses the employer dollars contributed more efficiently than other plan designs. In other words, Colorado PERA provides a higher retirement benefit at a lower cost than any of the alternative plans.[37]

To illustrate how the range of employees would fare in the various design alternatives, the study modeled four different public service career paths. The study found that for all sample employees—regardless of starting age and number of years worked—the DB pension provided a higher level of benefit in retirement than all alternative designs. In light of the clear cost-efficiency of the DB plan design in providing an adequate lifetime income, it is perhaps not surprising that some 92 percent of public systems continue to offer a DB benefit.

Figure 4: **Colorado Finds that DB Plan Provides the Most Income in Retirement, Regardless of Starting Age and Years of Service**

	Starting Age: 40 Years Worked: 3	Starting Age: 40 Years Worked: 10	Starting Age: 25 Years Worked: 20	Starting Age: 35 Years Worked: 30	The percentages below represent replacement rates, or the percentage of pre-retirement income that is paid out by a pension program at retirement.
PERA	4.4%	13.0%	20.6%	72.2%	PERA Hybrid Defined Benefit Plan This plan blends the defined benefit structure (uses a formula which creates the promised benefit at retirement) and defined contribution features (employer match on a member's account balance, payable at termination or retirement).
DB/DC Side-by-Side	0.8%	11.7%	20.1%	54.4%	Defined Benefit (DB) and Defined Contribution (DC) Side-by-Side Plan This type of plan provides a smaller defined benefit with the goal that both benefits combined will provide adequate retirement resources.
Cash Balance	2.7%	9.1%	17.1%	26.3%	Cash Balance Plan This type of plan functions like a defined contribution plan, building a member's account balance year-by-year through the addition of mandated employer and employee contributions as well as the addition of a guaranteed rate of return.
Self-Directed DC	3.0%	10.0%	19.7%	28.3%	Self-Directed Defined Contribution (DC) Plan This type of plan builds a member's account balance year-by-year through the addition of employee contributions with an employer match and grows with actual investment returns.

Source: *A Comprehensive Study Comparing the Cost and Effectiveness to Alternative Plan Designs Authorized by Senate Bill 14-214.*

COLORADO PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION

The Colorado Public Employees' Retirement Association (PERA) provides its members with a special benefit incentive to keep their contributions in the pension plan after they terminate employment. After termination, if the PERA member leaves his or her account with PERA until age 65, the individual can receive a higher benefit than just the amount of the refunded contributions.

All terminated, vested members receive a 50% match of the refund of the employee's contributions compounded with credited interest. Should the employee keeps his or her money in PERA until retirement age, however, the match provided by PERA increases to a 100% match. Interestingly, even non-vested employees can take advantage of this feature. In fact, while they also receive the 100% match on the value accumulated in the employee member account at retirement, they would otherwise receive no match at all, were they to request a refund instead.

Under PERA, these amounts may be converted into an annuity at the PERA assumed rate of return, which is less costly than purchasing an annuity from an insurance company.

Figure 5 illustrates the additional lump sum value that employees would receive by preserving their member account until retirement. Under all scenarios, employees are better off keeping their money in PERA.

Figure 5. **Colorado PERA Special Benefit for Ten, Seven, and Three Years of Service**

10 YEARS OF SERVICE								
Hire Age	Salary at Date of Hire	Age at Termination	Lump Sum Payable at Termination, including the employer match on the employee contributions			Lump Sum Payable at Age 65 (option to convert to montly annuity)		
			Employee Contributions with Interest	50% Employer Match	Total	Employee Contributions with Interest	100% Employer Match	Total
25	$25,000	35	$31,400	$15,700	$47,100	$76,200	$76,200	$152,400
40	$45,000	50	$51,400	$25,700	$77,100	$80,100	$80,100	$160,200

Source: Gabriel, Roeder, Smith & Company.

7 YEARS OF SERVICE								
Hire Age	Salary at Date of Hire	Age at Termination	Lump Sum Payable at Termination, including the employer match on the employee contributions			Lump Sum Payable at Age 65 (option to convert to montly annuity)		
			Employee Contributions with Interest	50% Employer Match	Total	Employee Contributions with Interest	100% Employer Match	Total
25	$25,000	32	$19,000	$9,500	$28,500	$50,400	$50,400	$100,800
40	$45,000	47	$32,000	$16,000	$48,000	$54,600	$54,600	$109,200
55	$55,000	62	$37,900	$37,900[1]	$75,800	$41,400	$41,400	$82,800

Source: Gabriel, Roeder, Smith & Company.
[1] Employer match is 100% since the member is eligible for early retirement.

3 YEARS OF SERVICE								
Hire Age	Salary at Date of Hire	Age at Termination	Lump Sum Payable at Termination, including the employer match on the employee contributions			Lump Sum Payable at Age 65 (option to convert to montly annuity)		
			Employee Contributions with Interest	No Employer Match	Total	Employee Contributions with Interest	100% Employer Match	Total
25	$25,000	28	$6,700	$0	$6,700	$19,900	$19,900	$39,800
40	$45,000	43	$11,700	$0	$11,700	$22,500	$22,500	$45,000
55	$55,000	58	$14,200	$0	$14,200	$17,400	$17,400	$34,800

Source: Gabriel, Roeder, Smith & Company.

SECTION II: PUBLIC RETIREMENT SYSTEMS PROVIDE PORTABILITY IN ORDER TO PRESERVE INCOME FOR RETIREMENT

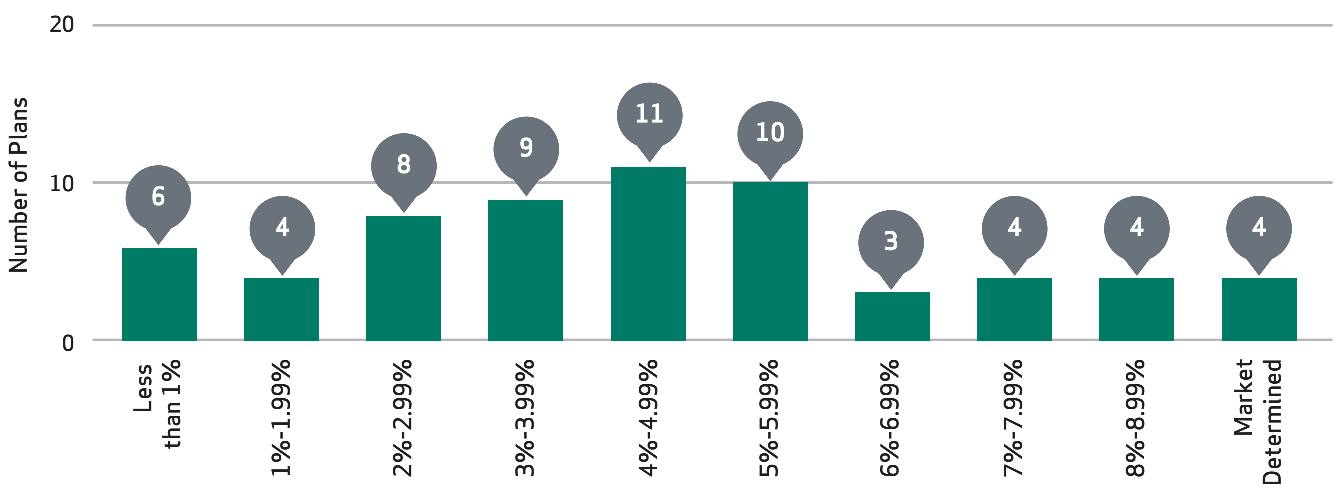
Public pension plans tend to offer features that provide for portability, while maintaining their primary focus of consistently accumulating retirement income benefits. Portability features include refunds of contributions, interest credits on employee contributions, and the option to restore refunds should former employees return to public service. Furthermore, nearly all state retirement systems provide the ability to purchase service credits to add more income to their DB benefit, based on other employment. Some public plans also include additional features that encourage employees to maintain their benefits within the system and thereby prevent loss of retirement savings through cash-outs, should they leave before the normal retirement age.

Member Refunds

In all public pension plans, terminated members may request a refund of their contributions from the plan at any time prior to retirement. In 63 of the plans surveyed, members also receive a credited rate of interest on these refunds. **Figure 6** indicates the rate of interest earned in those plans. Interest rates range greatly, from very modest rates similar to bank or money market returns; to rates as high as 8.7%, with an average rate of 3.86% and a median of 4%. In fact, depending on the interest rate credited to the member account, keeping the employee's contributions in the public pension plan would be a good option, in light of their attractive retirement income options. For other public sector employees who terminate service early in their careers, refunds can be more valuable than the deferred annuity under the plan, provided that the refund is rolled over to another retirement plan.

While employees are always entitled to refunds on their own contributions, some plans also offer refunds on the employer-funded portion of the pension benefit.

Figure 6. **71% of the Public Pension Systems Surveyed Provide their Employees with Interest on their Contributions, at an Average Rate of 3.86%***



*See Appendix for breakouts by each individual system.

Several public plans surveyed, such as the Iowa Public Employees Retirement Plan (IPERS), Colorado Public Employees' Retirement Association (PERA) and the South Dakota Retirement System (SDRS), provide the entirety of the employee contribution and a portion of the employer contribution in the refund for vested members. SDRS also refunds a smaller portion of the employer contribution to non-vested employees. Similarly, members of the Ohio Public Employees Retirement System (OPERS) can receive a refund on a portion of employer contributions, based on a vesting schedule. In the Montana State Employees DC Plan and the Nebraska Public Employees Retirement System, vested members may receive all their employee and employer contributions in a refund. The Oklahoma Teachers Retirement System provides refunds on employee and employer contributions to both vested and non-vested members.

Unique Plan Features that Encourage Preservation of DB Income

State retirement systems understand the value that they deliver to employees by providing lifetime income. In fact, financial experts have recommended that individuals seeking additional retirement lifetime income should buy it from a DB plan, if such an option exists.[38] To increase retirement benefits for shorter-service employees, some state retirement systems allow employees who leave before reaching retirement age to obtain more income from the plan.

As illustrated earlier, Colorado PERA increases the match in a member's account to 100 percent of the value based on employee contributions. The Wisconsin Retirement System also uses the member's account in a similar way. Both Washington TRS and PERS systems and the Minnesota Teachers Retirement Association take a different approach to encourage a worker who leaves before retirement age to remain in the plan by adjusting the employee's final average salary.

Wisconsin Retirement System (WRS)'s Money Purchase Feature

The Wisconsin Retirement System's DB benefit is calculated by multiplying years of service by a 1.6% factor and the average of the employee's highest three years' earnings, with other adjustments. The Wisconsin plan also has a "money purchase" feature that computes an employee's retirement annuity benefit that can be purchased with money in the employee's retirement account. Over the years in WRS, both the employee and employer contributions receive compound interest based on the actual performance of the fund. At retirement, the amount in the money purchase account is annuitized at an assumed five percent interest rate. Active employees participate in essentially a DB pension and DC account simultaneously, and the employee receives the higher of either the defined benefit or the money purchase annuity. WRS guarantees a minimum level of benefit.

LEAVING EMPLOYMENT BEFORE RETIREMENT AGE AND DELAYING RETIREMENT

A DB pension income benefit is most typically based on the highest average salary over some period of years and benefits can start once an employee is eligible for a regular or an early retirement benefit. If a vested employee leaves employment before the retirement age when benefits commence, the benefit calculated is based on the employees salary at termination. Most retirement systems will allow employees to start benefits at an earlier age, but the benefit may be reduced to be equivalent to the value of the benefit at the normal retirement age.

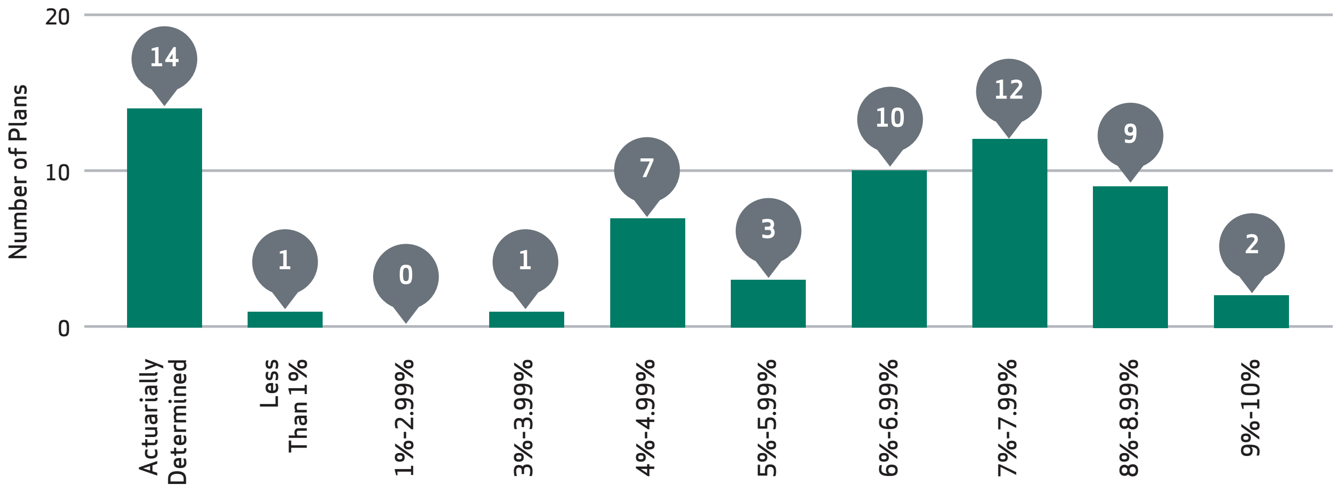
Several state retirement systems have provisions that adjust the final salary level for employees that leave employment early. One example is the deferred retirement annuity from Teachers Retirement Association of Minnesota. For members who leave before age 55 and are vested, the amount of deferred annuity income would increase by two percent each year from the year of termination until age 55. This annuity should be considered before choosing to withdraw the member account.

A similar option is available in Washington State's combined DB-DC plans (ERS3, TRS3 and SERS3). Employees who choose to withdraw their DC account values face no loss of income from the DB component. In fact, if a former employee, who worked for the state of Washington for at least 20 years, leaves his or her job before age 65, the employee can increase his or her defined benefit income by approximately three percent for each year the retiree delays receiving it, up to age 65. Employees can start DB income as early as age 55 (with ten years of service) but the amount of monthly income will be reduced to reflect that more payment will be made over a lifetime.

Ability to Repay a Refund

Some members who terminate public sector employment and request a contribution refund end up returning to public service later in their careers. Most plans allow the employee to rejoin by repaying their refund. As described in **Figure 7**, of the 59 systems that require interest to be paid on these repayments, the repayment interest rate ranges from 0.1% to 10%, with an average rate of 6.46% and a median rate of 6.7%.

Figure 7. **Most Public Pension Plans Allow for their Members to Later Rejoin a System and Repay their Refunds with Interest at an Average Rate of 6.46%***



*See Appendix for breakouts by each individual system.

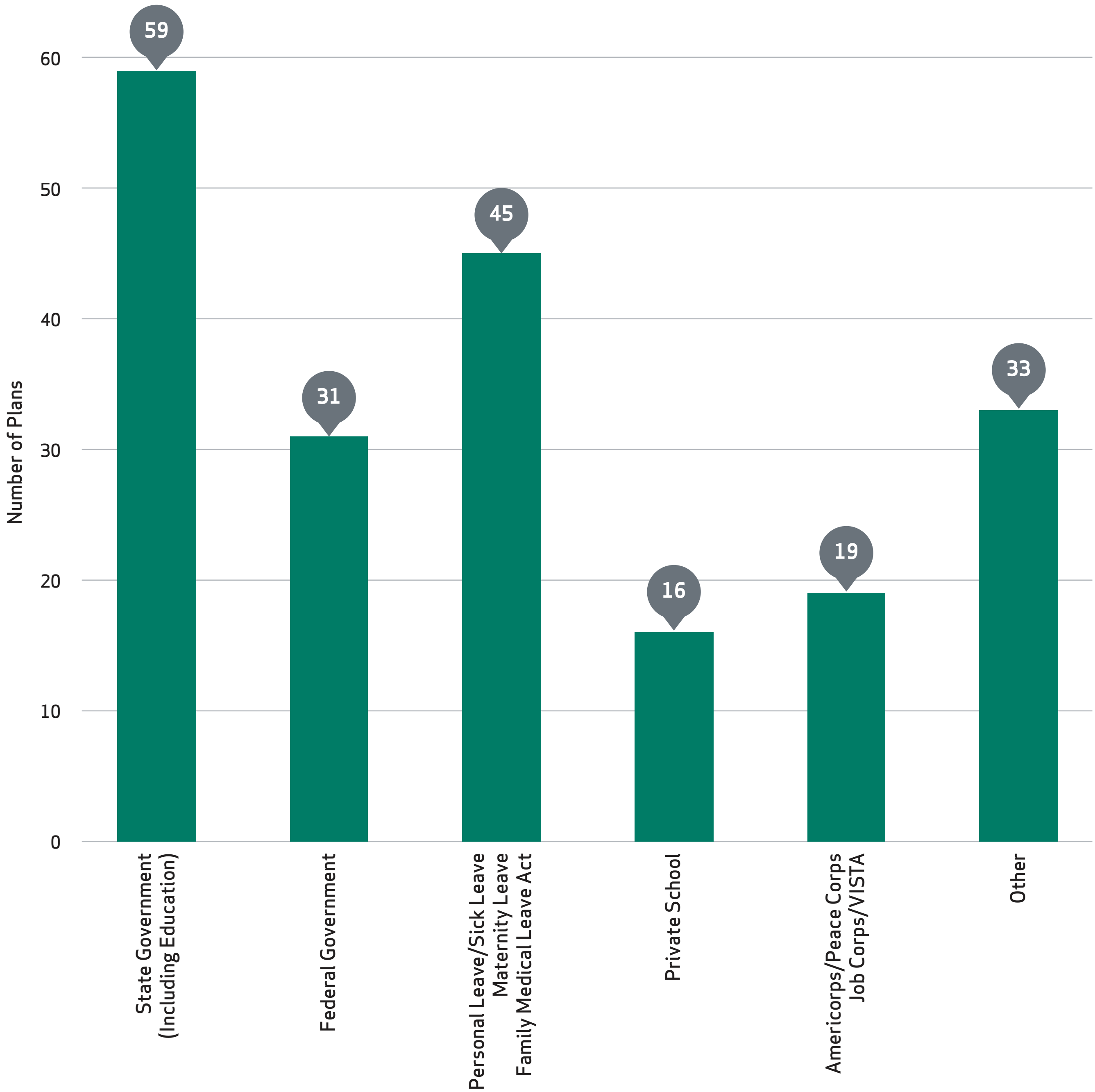
Ability to Purchase Service Credits

DB plans provide a retirement benefit based on years of service, age at retirement, and final compensation. Members of most public pension systems are able to purchase additional years of service based on specific types of prior service (or absence from service), including:

- Adoption leave credit
- Federal government employment
- Family and Medical Leave Act (FMLA)
- Fulbright scholarship
- Homebound teaching
- Involuntary leave
- Job corps
- Leave of absence
- Legislative staff internship
- Maternity leave
- Non-worked service
- Prior military service
- Peace Corps
- Private employment
- Private school service
- State government
- Teacher corps
- Unreported service
- USERRA
- VISTA service
- Workman's compensation

As specified in **Figure 8**, nearly all plans allow some ability to purchase service credits to enhance members' pension benefits. Some 59 pension plans allow their members to purchase additional service credits for state government service; 31 plans allow their members to purchase service credits for federal government service; 45 plans allow for the purchase of service credits for FMLA and other types of personal leave; 16 plans allow for the purchase of service credits for private school service; 19 plans allow for the purchase of AmeriCorps, Peace Corps, Job Corps, or VISTA service; and 33 plans allow for the purchase of service credits for other types of service.

Figure 8. **Nearly All Public Pension Systems Allow for their Members to Purchase Additional Service Credits to Enhance their Pension Benefits**



WHAT IS USERRA? HOW DO PUBLIC PENSIONS TREAT MILITARY SERVICE?

The Uniformed Services Employment and Reemployment Rights Act of 1994 (USERRA) is a federal law providing certain pension rights to employees returning from uniformed service. The law is intended to ensure that persons who serve or have served in the Armed Forces, Reserves, National Guard, or other uniformed services are not disadvantaged in their civilian careers because of their military service; are promptly reemployed in their civilian jobs upon their return from duty; and are not discriminated against in employment based on past, present, or future military service.

USERRA applies to uniformed service in the Army; Navy; Marine Corps; Air Force; Coast Guard; Army Reserve; Naval Reserve; Marine Corps Reserve; Air Force Reserve; Coast Guard Reserve; Army National Guard; Air National Guard; and Commissioned Corps of the Public Health Service. USERRA applies to active duty service; active duty training; inactive duty training; full-time National Guard duty; absence from work for an examination to determine a person's fitness for duty; funeral duty performed by National Guard or Reserve members; and duty performed by intermittent employees of the National Disaster Medical System for public health emergencies.

Public defined benefit pensions across the country honor the military service of a wider group of employees than as required under USERRA, which not only includes those who interrupted their career but also includes those who served in the military before they become public employees. Military Service credits for prior service enables veterans to receive added retirement income benefits from public plans when they do not get pension benefits from the military, especially during times of armed conflict and national crisis.

Each state sets its own policy for prior Military Service credits. Employees can purchase service credits based on this military service with a majority of states having veterans pay the employee's share of cost for these service credits, but a number of states, such as Maryland, pay the cost of Military Service Credits. Five or more years of Military Service credits can be added to the service credits employees earn each year that they are employed, in 60 percent of states, while the other states set limits at fewer years.

CONCLUSION

Most Americans aspire to reaching retirement with an income that allows them to maintain their pre-retirement lifestyle for as long as they and their spouses live; but they also worry about achieving this goal. Economic studies show that the best way to retire securely is to consistently participate in a retirement plan from the start of one's working career, and if one's career path changes, to preserve the retirement benefits accumulated (by either staying in the former employer's plan or moving the balance to another retirement plan). The two types of workplace retirement benefits—DB and DC plans—have different strengths and shortcomings.

DC plans provide easy portability because the account value can move from one DC plan to another or an IRA. However, many workers do not see the long-term value of preserving small sums—especially younger employees and those with small account balances. As a result, these workers often spend a considerable amount of their retirement savings on non-retirement expenses. In addition, at retirement, most DC plans do not provide lifetime income options. While policymakers and plan providers continue to seek ways to incorporate lifetime income payments into DC plans, in practice, lifetime payments are only chosen by a very small number of DC account holders,[39] so the risk of running out of income remains a concern.

Public DB plans provide benefits as monthly retirement income that last for the lifetime of retired workers and (often) their spouses. This makes it easier for workers to plan toward a retirement target date.

Public sector employers use DB plans as a cost-effective workforce management tool to retain their most effective employees in order to provide quality public services for citizens and taxpayers. A comparison of the job tenure rates for private and public employees indicates that public workers remain with their employer for a significantly longer time, especially after they vest in their pension benefits. State retirement systems predominantly offer DB pension benefits that public sector workers find attractive and valuable, which aligns with public employees' high appreciation of the need to adequately fund their retirement.

Public DB plans offer a variety of features to provide a steady income in retirement, while also facilitating consistent saving and preservation of benefits. The analysis in this report finds that:

1. **Almost all of the public retirement systems surveyed offer a DB pension plan.** In fact, most public retirement systems provide new members with a DB pension benefit or a DB benefit in combination with a DC account, while a very small number of systems provide only a DC benefit.

2. **Public pension plans have features that allow individuals who change jobs to retain or even increase their benefits.** Employee contributions can follow employees to new employers, often at market or better interest rates. Most plans allow members to later rejoin a system and repay any refunds with interest.

3. **Nearly all public pension plans allow members to purchase additional service credits to enhance their pension benefits.** Specifically, all DB plans allow for the purchase of service credits for prior military service, and many public plans provide this without cost. More than half of the plans surveyed allow for the purchase of credits for prior out-of-state government service, and some plans allow for the purchase of credits for prior federal government service, personal leave, maternity leave, out-of-state or in-state private school service, AmeriCorps, Peace Corps, or VISTA public service.

4. **A number of plans have features that increase benefits for short or moderate term employees.** These features include increasing the value the deferred annuity benefits paid to former employees, rewarding employees who choose to keep their member accounts in the plan with interest, and providing even higher matching amounts. These

features can encourage workers who leave before retirement age to preserve the lifetime retirement income benefits they have earned.

While DB pensions are seen as less portable than DC plans, portability is only one dimension of retirement security. Perhaps, the more important concern to assure employees can obtain adequate income from retirement plans is the preservation of the retirement benefits earned while working so benefits can replace paychecks when employees retire. This study demonstrates that DB pension plans can address some of the issues that short-term employees may have when they decide to seek other career options outside of the public sector. Public retirement systems are able to provide such flexibility without harming the benefits of more productive and dedicated career educators and public employees.

Appendix 1. **New Employee Contribution Rates for Public Retirement Plans**

State	Plan Name	Tier	Join Date	Plan Type		Social Security?	Employee Contribution
AL	Employees	II	1/1/13	DB		Yes	6%
	Teachers	II	1/1/13	DB		Yes	6%
AK	Public Employees*	IV	7/1/06	DC		No	8%
	Teachers*	III	7/1/06	DC		No	8%
AZ	State Retirement System		7/1/12	DB		Yes	11.35%
	Public Safety*		1/1/12	DB		Yes	11.65%
AR	Public Employees		7/1/05	DB		Yes	5%
	Teachers*			DB		Yes	6%
CA	Public Employees		1/1/13	DB		Yes	Varies by Employer
	Teachers		1/1/13	DB		No	8%
CO	Public Employees		1/1/11	DB		No	8%
				DC Option		No	8%
	Fire & Police			DB		No	8.5%
CT	State Members		1/11/11	DB		Yes	2%
	Teachers		7/1/12	DB		No	Varies by Employer
DE	Public Members		1/1/12	DB		Yes	5% over $6,000
DC	Employees	3	11/10/96	DB		No	8%
	Teachers	II	11/1/96	DB		Yes	8%
FL	Retirement System			DB		Yes	3%
				DC Option		Yes	3%
GA	Employees		1/1/09	Combination	DB	Yes	1.25%
					DC	Yes	5%
	Teachers			DB		Yes	6%
HI	Members		6/1/12	DB		Yes	8%
ID	Public Employees			DB		Yes	6.79%
IL	State Members	II	1/1/11	DB		Yes	4% or 8%
	Teachers	II		DB		No	9.4%
	Municipal	2		DB		Yes	4.5%
IN	Public Members		7/1/15	Combination	DB	Yes	0%
					DC	Yes	3%
				DC Option		Yes	3%
	Teachers*			DB		Yes	3%
	Police & Fire*			DB		Yes	6%
IA	Public Members			DB		Yes	5.95%
KS	Public Members		1/1/15	Cash Balance		Yes	6%

*Information obtained from public sources.

N/A - not applicable. N/S - not specified.

Appendix 1. **New Employee Contribution Rates for Public Retirement Plans (cont.)**

State	Plan Name	Tier	Join Date	Plan Type	Social Security?	Employee Contribution
KY	Members*	III	1/1/14	Cash Balance	Yes	5% or 8%
	Teachers*			DB	No	12.855%
LA	Members		7/1/15	DB	No	8%
	Teachers*		7/1/15	DB	No	8%
ME	Public Members			DB	No	7.65%
MD	State Retirement Plan			DB	Yes	5% or 7%
MA	Members*		4/1/12	DB	No	5%-12%
	Teachers*		4/1/06	DB	No	5%-11%
MI	Public School Members*		7/1/10	Combination DB	Yes	3%-6.4%
				DC	Yes	2%
	State Members*		4/1/97	DC	Yes	6%
MN	State Retirement System			DB	Yes	5.5%
	Teachers			DB	Yes	7.5%
MS	Public Members		7/1/11	DB	Yes	9%
MO	State Members		1/1/11	DB	Yes	4%
	Patrol Members			DB	Yes	4%
	Local Government Members			DB	Yes	4%
	Public School			DB	No	14.5%
MT	State Employees*			DB	Yes	7.9%
				DC Option	Yes	7.9%
	Teachers*			DB	Yes	8.15%
NE	School Members*			DB	Yes	9.78%
	State Members*			Cash Balance	Yes	4.8%
NV	Public Members			DB	No	14%
NH	Retirement System	I		DB	Yes	7%
NJ	Teachers		6/28/15	DB	Yes	6.78%
	Public Members*		6/28/15	DB	Yes	6.70%
NM	Public Members*	II		DB	Yes	7.42%-8.92%
	Education			DB	Yes	7.9%-10.7% Depending on Salary
NY	Teachers	6	4/1/12	DB	Yes	3%-6%
	State & Local*	6	4/1/12	DB	Yes	3%-6% Depending on Salary
NC	Teachers and State Members			DB	Yes	6%
ND	Public Members			DB	Yes	7%
				DC Option	Yes	7%
	Teachers*			DB	Yes	11.75%

*Information obtained from public sources.

N/A - not applicable. N/S - not specified.

Appendix 1. **New Employee Contribution Rates for Public Retirement Plans (cont.)**

State	Plan Name	Tier	Join Date	Plan Type		Social Security?	Employee Contribution
OH	Public Members			DB		No	10%
				DC Option		No	10%
	Police & Fire			DB		No	12.25%
	School Employees			DB		No	10%
	Teachers			DB		No	14%
				DC Option		No	13%
OK	Public Members*			DC		Yes	4.5%
				DC Option		Yes	2.5%
	Teachers*			DB		Yes	7%
OR	Public Members*		8/29/03	Combination	DB	Yes	0%
					DC	Yes	6%
PA	Public School Members			DB		Yes	7.5% to 9.5%
	State Members*			DB		Yes	9.3%
RI	Members			Combination	DB	Yes	3.75%
					DC	Yes	5%
SC	Retirement System*			DB		Yes	8.16%
				DC Option		Yes	6.5%
SD	Retirement System			DB		Yes	6%
TN	Consolidated Board			Combination	DB	Yes	5%
					DC	Yes	2%
TX	Teacher	5		DB		No	7.2%
	County & District			DB		Yes	Varies by Employer
	Employees*			DB		Yes	9.5%
	Municipal			Cash Balance		Yes	5-7%
UT	Retirement System	2	7/1/11	Combination	DB	Yes	0%
					DC	Yes	0%
				DC Option		Yes	0%
VT	State Members*	F		DB		Yes	6.4%
	Teachers*			DB		Yes	5%
VA	Retirement System		1/1/14	Combination	DB	Yes	4%
					DC	Yes	1%-5%

*Information obtained from public sources.
N/A - not applicable. N/S - not specified.

Appendix 1. **New Employee Contribution Rates for Public Retirement Plans (cont.)**

State	Plan Name	Tier	Join Date	Plan Type		Social Security?	Employee Contribution
WA	State Employees	3		Combination	DB	Yes	3%
					DC	Yes	2%
		2		DB Option		Yes	5.63%
	Teachers	3		Combination	DB	Yes	3%
					DC	Yes	2%
		2		DB Option		Yes	5.63%
WV	Consolidated Board*			DB		Yes	4.5%
	Teachers*			DB		Yes	6%
WI	Retirement System*			DB		Yes	6.6%
WY	Public Employees	2	9/1/12	DB		Yes	8.25%

*Information obtained from public sources.
N/A - not applicable. N/S - not specified.

Appendix 2. **Public Plan Refunds for New Members**

State	Plan Name	Tier	Plan Type		Vesting (in years) on Employer Contributions	Interest Rate on Employee Contributions	Repayment Interest Rate	Ability to Repay Refund?
AL	Employees	II	DB		10	4%	8%	Yes
	Teachers	II	DB		10	4%	8%	Yes
AK	Public Employees*	IV	DC		0-5	Market Determined	N/A	N/A
	Teachers*	III	DC		0-5	Market Determined	N/A	N/A
AZ	State Retirement System		DB		0	8%	8%	Yes
	Public Safety*		DB		15	3%	9%	Yes
AR	Public Employees		DB		5	4%	8%	Yes
	Teachers*		DB		5	N/S	Actuarially Determined	Yes
CA	Public Employees		DB		5	6%	6%	Yes
	Teachers		DB		5	0.49%	Actuarially Determined	Yes
CO	Public Employees		DB		5	3%	7.5-8%	Yes
			DC Option		0-5	N/A	N/A	N/A
	Fire & Police		DB		5	5%	6%	Yes
CT	State Members		DB		10	5%	5%	Yes
	Teachers		DB		10	7%	7%	Yes
DE	Public Members		DB		10	5%	6%	Yes
DC	Employees	3	DB		5	0%	N/S	Yes
	Teachers	II	DB		5	0%	N/S	Yes
FL	Retirement System		DB		8	0%	6.5%	Yes
			DC Option		1	N/A	N/A	N/A
GA	Employees		Combination	DB	10	N/S	4.25%	Yes
				DC	0-5	N/A	N/A	N/A
	Teachers		DB		10	4.5%	7.5%	Yes
HI	Members		DB		10	2%	N/A	No
ID	Public Employees		DB		5	2.39%	4.25%	Yes
IL	State Members	II	DB		10	0%	6.5%	Yes
	Teachers	II	DB		10	0%	6%	Yes
	Municipal	2	DB		10	7.5%	N/S	Yes
IN	Public Members		Combination	DB	10	0%	N/A	No
				DC	1-5	0%	N/A	No
			DC Option		1-5	0%	N/A	No
	Teachers*		DB		10	0%	N/A	No
	Police & Fire*		DB		20	1.87%	N/S	Yes

*Information obtained from public sources.
N/A - not applicable. N/S - not specified.

Appendix 2. **Public Plan Refunds for New Members (cont.)**

State	Plan Name	Tier	Plan Type		Vesting (in years) on Employer Contributions	Interest Rate on Employee Contributions	Repayment Interest Rate	Ability to Repay Refund?
IA	Public Members		DB		7	1.99%	Actuarially Determined	Yes
KS	Public Members		Cash Balance		5	4%	6%	Yes
KY	Members*	III	Cash Balance		5	4%	0%	Yes
	Teachers*		DB		5	8%	8%	Yes
LA	Members		DB		5	0%	7.75%	Yes
	Teachers*		DB		5	0%	7.75%	Yes
ME	Public Members		DB		5	5%	7.125%	Yes
MD	State Retirement Plan		DB		10	5%	0%	Yes
MA	Members*		DB		10	3%	N/S	Yes
	Teachers*		DB		10	3%	N/S	Yes
MI	Public School Members*		Combination	DB	4	N/A	Actuarially Determined	Yes
				DC	4	N/A	Actuarially Determined	Yes
	State Members*		DC		4	N/A	N/A	N/A
MN	State Retirement System		DB		5	4%-6%	8%	Yes
	Teachers		DB		3	4%	4%	Yes
MS	Public Members		DB		8	3.5%	3.5%	Yes
MO	State Members		DB		10	0.112%	0.11%	Yes
	Patrol Members		DB		10	0.112%	7.75%	Yes
	Local Government Members		DB		5	0.5%	7.25%	Yes
	Public School		DB		5	1%	8%	Yes
MT	State Employees*		DB		5	N/S	N/S	Yes
			DC Option		5	N/A	N/A	N/A
	Teachers*		DB		5	0.2%	N/S	Yes
NE	School Members*		DB		5	N/S	Actuarially Determined	Yes
	State Members*		Cash Balance		3	5%	N/A	N/A
NV	Public Members		DB		5	N/S	Actuarially Determined	Yes
NH	Retirement System	I	DB		10	2%	5.75%	Yes
NJ	Teachers		DB		10	N/S	N/S	N/S
	Public Members*		DB		10	N/S	N/S	N/S
NM	Public Members*	II	DB		5	N/S	N/S	Yes
	Education		DB		5	0.20%	Actuarially Determined	Yes

*Information obtained from public sources.
N/A - not applicable. N/S - not specified.

Appendix 2. **Public Plan Refunds for New Members (cont.)**

State	Plan Name	Tier	Plan Type		Vesting (in years) on Employer Contributions	Interest Rate on Employee Contributions	Repayment Interest Rate	Ability to Repay Refund?
NY	Teachers	6	DB		10	5%	Actuarially Determined	Yes
	State & Local*	6	DB		10	5%	N/S	Yes
NC	Teachers and State Members		DB		5	3%	6.5%	Yes
ND	Public Members		DB		3	7.5%	Actuarially Determined	Yes
			DC Option		2-4	N/A	N/A	N/A
	Teachers*		DB		3	6%	6%	Yes
OH	Public Members		DB		5	1%	8%	Yes
			DC Option		1-5	N/A	N/A	N/A
	Police & Fire		DB		15	0%	8.25%	Yes
	School Employees		DB		10	0%	7.5%	Yes
	Teachers		DB		5	2%-3%	8%	Yes
			DC Option		1	N/A	N/A	N/A
OK	Public Members*		DC		1-5	N/A	N/A	N/A
			DC Option		1-5	N/A	N/A	N/A
	Teachers*		DB		5	Market Determined	Actuarially Determined	Yes
OR	Public Members*		Combination	DB	5	8%	7.5%	Yes
				DC	0	0%	N/A	N/A
PA	Public School Members		DB		10	4%	4%	Yes
	State Members*		DB		10	Market Determined	Actuarially Determined	Yes
RI	Members		Combination	DB	5	0%	N/S	Yes
				DC	3	0%	N/S	No
SC	Retirement System*		DB		5	4%	4%	Yes
			DC Option		0	N/A	N/A	N/A
SD	Retirement System		DB		3	N/S	N/S	Yes
TN	Consolidated Board		Combination	DB	5	N/A	7.5%	Yes
				DC	5	N/A	N/A	No
TX	Teacher	5	DB		5	2%	6%	Yes
	County & District		DB		5-10	7%	N/S	N/S
	Employees*		DB		10	2%	10%	Yes
	Municipal		Cash Balance		Varies by Employer	5%	5%	Yes
UT	Retirement System	2	Combination	DB	4	7.5%	N/A	Yes
				DC	4	7.5%	N/A	Yes
			DC Option		4	7.5%	N/A	Yes

*Information obtained from public sources.

N/A - not applicable. N/S - not specified.

Appendix 2. **Public Plan Refunds for New Members (cont.)**

State	Plan Name	Tier	Plan Type		Vesting (in years) on Employer Contributions	Interest Rate on Employee Contributions	Repayment Interest Rate	Ability to Repay Refund?
VT	State Members*	F	DB		5	N/S	Actuarially Determined	Yes
	Teachers*		DB		5	N/S	Actuarially Determined	Yes
VA	Retirement System		Combination	DB	5	4%	4%	Yes
				DC	4	4%	4%	Yes
WA	State Employees	3	Combination	DB	10	3%	N/A	N/A
				DC	0	2%	N/S	N/S
		2	DB Option		5	5.5%	0%	N/S
	Teachers	3	Combination	DB	10	3%	N/A	N/A
				DC	0	2%	N/S	N/S
		2	DB Option		5	5.5%	0%	N/S
WV	Consolidated Board*		DB		5	4%	4%	Yes
	Teachers*		DB		5	N/S	N/S	N/S
WI	Retirement System*		DB		5	8.7%	Actuarially Determined	Yes
WY	Public Employees	2	DB		2	3%	7.75%	Yes

*Information obtained from public sources.
N/A - not applicable. N/S - not specified.

Appendix 3. **New Members' Ability to Purchase Service Credits in Public Plans**

State	Plan Name	Tier	Plan Type	Purchase Service Credit?	Eligible Service for Purchase	Maximum Amount of Purchasable Service Credit?	Able to Purchase Credit for Military Service?	Maximum Amount of Purchasable Military Credit?
AL	Employees	II	DB	Yes	Job Corps State Government Teacher Corps	10	Yes	4
	Teachers	II	DB	Yes	Job Corps State Government Teacher Corps	10	Yes	4
AK	Public Employees*	IV	DC	N/A	N/A	N/A	No	N/A
	Teachers*	III	DC	N/A	N/A	N/A	No	N/A
AZ	State Retirement System		DB	Yes	Federal Government Leave of Absence State Government	5	Yes	No maximum
	Public Safety*		DB	Yes	Federal Government State Government	5	Yes	3
AR	Public Employees		DB	Yes	Federal Government Private Education Leave of Absence Worker's Compensation	5	Yes	5
	Teachers*		DB	Yes	Federal Government Private Education Sabbatical Leave State Government	5 - 15	Yes	5
CA	Public Employees		DB	Yes	Leave of Absence Temporary Service	1 - no maximum	Yes	4
	Teachers		DB	Yes	FMLA Leave Fulbright Scholarship Job Corps Maternity Leave Peace Corps Leave of Absence	2 - no maximum	Yes	No maximum
CO	Public Employees		DB	Yes	Federal Government State Government	10	Yes	5
			DC Option	N/A	N/A	N/A	No	N/A
	Fire & Police		DB	Yes	Private Employment	5	Yes	5
CT	State Members		DB	Yes	FMLA Leave State Government	10	Yes	10
	Teachers		DB	Yes	Peace Corps State Government VISTA	2 - 10	Yes	3 -10
DE	Public Members		DB	Yes	Federal Employment FMLA Leave Private Education State Government Worker's Compensation	5	Yes	5
DC	Employees	3	DB	Yes	Federal Government State Government	N/S	Yes	N/S
	Teachers	II	DB	Yes	Federal Government State Government	10	Yes	N/S

*Information obtained from public sources.

N/A - not applicable. N/S - not specified.

Appendix 3. **New Members' Ability to Purchase Service Credits in Public Plans (cont.)**

State	Plan Name	Tier	Plan Type		Purchase Service Credit?	Eligible Service for Purchase	Maximum Amount of Purchasable Service Credit?	Able to Purchase Credit for Military Service?	Maximum Amount of Purchasable Military Credit?
FL	Retirement System		DB		Yes	Federal Government State Government	5	Yes	5
			DC Option		N/A	N/A	N/A	No	N/A
GA	Employees		Combination	DB	Yes	Additional Service	3	Yes	5
				DC	N/A				
	Teachers		DB		Yes	Private Education	10	Yes	5
HI	Members		DB		Yes	N/A	N/A	Yes	10
ID	Public Employees		DB		Yes	N/A	N/A	Yes	5
IL	State Members	II	DB		Yes	Leave of Absence Legislative Staff Internship Temporary Service	1 - 8	Yes	2
	Teachers	II	DB		Yes	Adoption Leave Credit Homebound Teaching Involuntary Layoff Part-Time Employment Maternity Leave State Government Substitute Employment	10	Yes	5
	Municipal	2	DB		Yes	Leave of Absence State Government	1 - no maximum	Yes	No maximum
IN	Public Members		Combination	DB	Yes	State Government	1 - no maximum	Yes	2
				DC					
			DC Option		N/A	N/A	N/A	No	N/A
	Teachers*		DB		Yes	Uncredited Service Leave of Absence Substitute Employment	1 - no maximum	Yes	2
	Police & Fire*		DB		Yes	State Government	2	Yes	2
IA	Public Members		DB		Yes	State Government	5	Yes	5
KS	Public Members		Cash Balance		Yes	Peace Corps State Government VISTA	No maximum	Yes	6
KY	Members*	III	Cash Balance		No	N/A	N/A	No	N/A
	Teachers*		DB		Yes	Federal Head Start Peace Corps Leave of Absence State Government	2 -10	Yes	6
LA	Members		DB		Yes	Administrative Error Additional Service Uncredited Service	5	Yes	4
	Teachers*		DB		Yes	Private Education Maternity Leave Leave Without Pay Leave of Absence State Government U.S. Military Base Education	No maximum	Yes	4

*Information obtained from public sources.

N/A - not applicable. N/S - not specified.

Appendix 3. **New Members' Ability to Purchase Service Credits in Public Plans (cont.)**

State	Plan Name	Tier	Plan Type	Purchase Service Credit?	Eligible Service for Purchase	Maximum Amount of Purchasable Service Credit?	Able to Purchase Credit for Military Service?	Maximum Amount of Purchasable Military Credit?
ME	Public Members		DB	Yes	State Government	No maximum	Yes	4
MD	State Retirement Plan		DB	Yes	Federal Government State Government	10	Yes	5
MA	Members*		DB	Yes	Federal Government State Government	4	Yes	4
	Teachers*		DB	Yes	Peace Corps Private Education Substitute Employment State Government Part-Time Employment Vocational Teaching	2 - 10	Yes	4
MI	Public School Members*		Combination DB DC	Yes	FMLA Leave Private Education State Government	5	Yes	5
	State Members*		DC	N/A	N/A	N/A	Yes	N/S
MN	State Retirement System		DB	Yes	Leave of Absence	1	Yes	4
	Teachers		DB	Yes	FMLA Leave Leave of Absence Medical Leave	1 - 5	Yes	5
MS	Public Members		DB	Yes	Leave Without Pay State Government	2 - 5	Yes	4
MO	State Members		DB	Yes	FMLA Leave Sick Leave State Government	No maximum	Yes	4
	Patrol Members		DB	Yes	State Government	No maximum	Yes	4
	Local Government Members		DB	Yes	State Government	No maximum	Yes	4
	Public School		DB	Yes	Leave Without Pay Maternity Leave Not-for-Profit Education State Government Vocational Teaching	1 - no maximum	Yes	No maximum
MT	State Employees*		DB	Yes	Federal Government	No maximum	Yes	5
			DC Option	N/A	N/A	N/A	No	N/A
	Teachers*		DB	Yes	Private Education State Government Worker's Compensation	5	Yes	4
NE	School Members*		DB	Yes	Leave of Absence State Government	4 -10	Yes	4
	State Members*		Cash Balance	N/A	N/A	N/A	No	N/A
NV	Public Members		DB	Yes	N/S	5	Yes	5

*Information obtained from public sources.

N/A - not applicable. N/S - not specified.

Appendix 3. **New Members' Ability to Purchase Service Credits in Public Plans (cont.)**

State	Plan Name	Tier	Plan Type	Purchase Service Credit?	Eligible Service for Purchase	Maximum Amount of Purchasable Service Credit?	Able to Purchase Credit for Military Service?	Maximum Amount of Purchasable Military Credit?
NH	Retirement System	I	DB	Yes	AmeriCorps Peace Corps Temporary Service Workman's Compensation	1 - 5	Yes	3
NJ	Teachers		DB	Yes	Federal Government Maternity Leave Leave of Absence State Government	3 months - 2 years	Yes	10
	Public Members*		DB	Yes	Federal Government Maternity Leave Leave of Absence State Government	3 months - 2 years	Yes	10
NM	Public Members*	II	DB	Yes	Co-operative Work Study Private Education	1 - no maximum	Yes	3
	Education		DB	Yes	Federal Government Private Education State Government	N/S	Yes	5
NY	Teachers	6	DB	Yes	State Government	10	Yes	5
	State & Local*	6	DB	Yes	Leave of Absence Sick Leave	N/S	Yes	N/S
NC	Teachers and State Members		DB	Yes	Charter School Service Federal Service Part-Time Employment State Government Temporary Service Workman's Compensation	N/S	Yes	10
ND	Public Members		DB	Yes	Federal Employment Leave of Absence Sick Leave State Employment	3	Yes	2
			DC Option	N/A	N/A	N/A	No	N/A
	Teachers*		DB	Yes	Additional Service Education Organization Leave of Absence Private Education	N/S	Yes	4
OH	Public Members		DB	Yes	Federal Government Leave of Absence State Government	5 - no maximum	Yes	5
			DC Option	N/A	N/A	N/A	No	N/S
	Police & Fire		DB	Yes	State Government	1 - no maximum	Yes	5
	School Employees		DB	Yes	Federal Government State Government	5	Yes	10
	Teachers		DB	Yes	Federal Government State Government	2 - no maximum	Yes	5
			DC Option	N/A	N/A	N/A	No	N/A

*Information obtained from public sources.

N/A - not applicable. N/S - not specified.

Appendix 3. **New Members' Ability to Purchase Service Credits in Public Plans (cont.)**

State	Plan Name	Tier	Plan Type		Purchase Service Credit?	Eligible Service for Purchase	Maximum Amount of Purchasable Service Credit?	Able to Purchase Credit for Military Service?	Maximum Amount of Purchasable Military Credit?
OK	Public Members*		DC		No	N/A	N/A	No	N/A
	Teachers*		DB		Yes	State Government	5	Yes	No maximum
OR	Public Members*		Combination	DB	Yes	State Government	10	Yes	4
				DC	N/A	N/A	N/A		
PA	Public School Members		DB		Yes	Federal Government Leave of Absence Maternity Leave Part-Time Employment	12	Yes	5
	State Members*		DB		Yes	State Government	N/S	Yes	5
RI	Members		Combination	DB DC	Yes	Firefighter Nurse Peace Corps Substitute Employment Teacher Corps VISTA	5	Yes	N/S
SC	Retirement System*		DB		Yes	FMLA Leave Federal Government Maternity Leave Sick Leave State Government	5	Yes	6
			DC Option		N/A	N/A	N/A	No	N/A
SD	Retirement System		DB		Yes	Federal Government State Government	5	Yes	No maximum
TN	Consolidated Board		Combination	DB DC	N/A	N/A	N/A	Yes	5
TX	Teacher	5	DB		Yes	Leave of Absence Sick Leave Substitute Employment Uncredited Service	1 - no maximum	Yes	5
	County & District		DB		Yes	State Government		Yes	5
	Employees*		DB		Yes	Air Time State Government	3	Yes	3
	Municipal		Cash Balance		No	N/A	N/A	Yes	5
UT	Retirement System	2	Combination	DB DC	Yes	Federal Government Private Education State Government Worker's Compensation	5	Yes	5
			DC Option		N/A		N/A	No	N/A

*Information obtained from public sources.

N/A - not applicable. N/S - not specified.

Appendix 3. **New Members' Ability to Purchase Service Credits in Public Plans (cont.)**

State	Plan Name	Tier	Plan Type		Purchase Service Credit?	Eligible Service for Purchase	Maximum Amount of Purchasable Service Credit?	Able to Purchase Credit for Military Service?	Maximum Amount of Purchasable Military Credit?
VT	State Members*	F	DB		Yes	Additional Service Peace Corps State Government VISTA	5 - no maximum	Yes	5
	Teachers*		DB		Yes	Additional Service Peace Corps Private Education State Government	5 - no maximum	Yes	5
VA	Retirement System		Combination	DB	Yes	Federal Government State Government	4	Yes	4
				DC					
WA	State Employees	3	Combination	DB	N/A	Federal Government State Government	5	Yes	5
				DC	Yes				
		2	DB Option		Yes	Federal Government State Government	5	Yes	5
	Teachers	3	Combination	DB	N/A	Federal Government State Government	5	Yes	5
				DC	Yes				
		2	DB Option		Yes	Federal Government State Government	5	Yes	5
WV	Consolidated Board*		DB		Yes	State Government	5	Yes	5
	Teachers*		DB		Yes	Federal Government State Government Sick Leave	10	Yes	10
WI	Retirement System*		DB		Yes	Federal Government State Government	Cannot exceed YOS	Yes	4
WY	Public Employees	2	DB		Yes	N/S	5	Yes	8

*Information obtained from public sources.

N/A - not applicable. N/S - not specified.

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