EQUABLE

RETIREMENT SECURITY REPORT

SECOND EDITION (2025)

The Most Effective Paths to Retirement Income Security for State and Local Employees

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About Equable Institute

Equable Institute is a bipartisan nonprofit that works with public retirement system stakeholders to solve complex pension funding challenges with data-driven solutions.

About the Retirement Security Report, Second Edition

The "Retirement Security Report" (RSR) is a comprehensive assessment of the quality of benefits being offered to public sector workers nationwide. This Second Edition of the report updates a June 2021 version, primarily by expanding the universe of plans covered to include municipally managed plans and legacy plans legacy plans (e.g., tiers or classes of benefits that are closed to new members).[1] With this 2024 update, users can review individual Retirement Benefit Scores for 1,953 retirement plans across state and local retirement systems (including the introduction of 1,247 legacy plans) by visiting RetirementSecurity.Report and searching for plans of interest. To ensure on-going accuracy, the digital landing page is periodically updated as states introduce new plans or modify existing public employee benefits.

About the Authors

Anthony Randazzo (Executive Director) is a national expert on public sector pension policy and has provided technical assistance to more than a dozen states and cities on ways to improve retirement plan sustainability.

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Acknowledgments

This report required contributions from the entire Equable team, but particularly critical research support, modeling work, and data collection efforts from David Hengerer (pension data analyst). Sam Shaw (vice president of communications) provided invaluable contributions to the structure and approach of this project, all while shepherding the digital presentation of the research.

[1] The First Edition is "Retirement Security Report: The National Landscape of State Retirement Benefits."

Key Findings and Insights

01 THE VALUE OF PUBLIC WORKER BENEFITS HAS BEEN DECLINING FOR THE PAST 20 YEARS.

10% ⬇

- The expected lifetime value of retirement benefits for the average full career public employee declined roughly 10%, or by more than $140,000, between 2006 and 2024.
- Less than 5% of new teachers will work long enough for a full, unreduced retirement benefit.
- Benefit values for new workers have been falling whether the participating government employer is enrolled in Social Security or not.

The primary reasons for a decline in the value of benefit have been higher normal retirement age requirements, longer vesting periods, and the reduction or elimination of COLAs.

02 ONLY 46.6% OF PUBLIC WORKERS OVERALL ARE BEING SERVED WELL BY THEIR RETIREMENT PLANS, NO MATTER WHAT THE BENEFIT DESIGN OF THE RETIREMENT PLAN LOOKS LIKE.

47%

- "Short-Term Workers": **Only 17.2%** of public workers with 10 years of service or less are being served well by their retirement plan, which means 82.8% of Short-Term Workers are NOT being served well, when averaging across all retirement plan types.
- "Medium-Term Workers": **Just 46.2%** of public workers with 10 to 20 years of service are being served well by their retirement plan, but 53.8% are not.
- "Full-Career Workers": **Over 76%** of full career public workers are, on average, served well by all retirement plan types currently offered to new workers, including pension, defined contribution, guaranteed return, and hybrid plans. And another 19.2% of Full-Career Workers are served moderately well.

Individuals who spend a full career in public service are likely to accumulate adequate retirement income — IF they stay in the same state and/or the same retirement system. Most others are not likely to accumulate meaningful benefits, on average, from the public sector retirement benefits available to workers today.

03 WHILE NEW PUBLIC RETIREMENT PLANS CREATED WITHIN THE LAST 10-15 YEARS HAVE LOWER BENEFITS ON AVERAGE, OPEN PLANS TODAY ARE MORE LIKELY TO SERVE SHORT-TERM AND MEDIUM-TERM WORKERS BETTER THAN LEGACY PLANS.

0%

- There are **zero** "legacy" public retirement plans (those that are closed to new members today) that were serving Short-Term Workers well. This is primarily because a majority of legacy plans were pensions designed for Full-Career Workers.
- Among plans that were created after Global Financial Crisis of 2008 (since 2010), 1.4% serve Short-Term Workers well and 12.2% serve them moderately well; 8.6% serve Medium-Term Workers well and 52.3% serve them moderately well.

Many of the new retirement plans created within the last 10 to 15 years have higher degrees of portability (hybrid plans, primary defined contribution plans, etc.) and higher member contribution rates, which creates a forced savings mechanism that boosts the value of accumulated retirement savings for those who leave without drawing a pension.

Introduction

Retirement security is ultimately about having consistent, dependable, and adequate retirement income.

Workers and their families want to know that during their retirement years they will have enough weekly, monthly, or annual income to live comfortably and meet their basic needs. Expenses can vary from family-to-family, depending on housing, health care costs, and dependents. But at the simplest level, the focus is still on income. And retirement security ensures that individuals have access to adequate income during post-working years.

The "Retirement Security Report" (RSR) is a comprehensive assessment of the quality of benefits being offered to public sector workers nationwide. While the financial sustainability of public sector retirement systems is also important, the RSR is focused on the value of benefits being offered to public sector workers.

The RSR is intended to provide information about the adequacy of a given retirement plan's capacity to provide retirement income for its own members. This provides a common point of measurement for all public sector plans, but the primary objective is not to measure the plans against each other. Each retirement plan exists in the context of its own state's demographics, political norms, underlying economy, and relationship to Social Security.

This report looks at whether those benefits are offering a quality path to retirement security for municipal employees, public safety officers, state workers, and teachers.

The RSR measures the quality of each public sector retirement plan using a mixture of best practice assessments and retirement income projections. This includes estimating the benefit value a retirement plan provides and then comparing that against a targeted amount of retirement income. The assessment also scores various benefit provisions and plan features, using multiple perspectives that a public worker might have based on being at different stages of their career.

Collectively this approach creates a set of Retirement Benefit Scores for each plan. These scores are provided for each plan based on duration of an employee's service (e.g., Short-Term, Medium-Term, Full-Career) and as an average or the plan as a whole. (See page 9 for details about this measurement approach.)

While these scores are presented in tables that show the relative Retirement Benefits Score for each public plan, the objective is not to measure the plans against each other. Rather, the RSR is intended to provide users with information about the adequacy of a given retirement plan on its own terms for its own members, with each plan scored against a common set of standards, benchmarks, and best practices.[2]

The results of the RSR analysis are presented in five parts:

Part 1 measures the value of public sector retirement benefits over time.

Parts 2 and **3** assess the performance of "open" and "legacy" retirement plans for public employees based on duration of work and occupation (teacher, public safety, general public worker), while also measuring across various plan types (pension, defined contribution, guaranteed return, hybrid).

Part 4 contrasts the quality of benefits in open plans (e.g., currently offered) versus legacy plans (e.g., those offered in the past that still have active employees as members today).

[2] A specific plan could be the highest or lowest rated state pension fund, but what matters is the quality of the individual score for that retirement plan.

Part 5 pulls various strands from these analyses together to form a holistic assessment of the state of public sector retirement security:

- Public employees who work a full career of service in the same state (or through the same retirement plan) are almost certain to be covered by a retirement plan that provides secure income in retirement, irrespective of whatever the underlying plan design terms are. Average benefit values are lower for open plans than legacy plans, but a full career is very likely to at least ensure 70% income replacement.

- By contrast, public workers who put in 10 years or less of service are very unlikely to be supported on a path to retirement income security. And the quality of benefits for those with 10 to 20 years of service are similarly poor. While some of the more recently created retirement plans are better than legacy plans for Short-Term Workers, less than 1 in 5 (just 17.2%) have a retirement plan that serves them well.

Details on how the RSR's Retirement Benefits Score is developed are outlined in Appendix A (how we define adequacy) and Appendix B (how we score each retirement plan). For a complete breakdown of the elements in the RSR also see the separately published methodology.

MEASURING BENEFIT EFFECTIVENESS BY CAREER STAGE

The duration of a public employee's career will influence how they value the various trade-offs associated with any particular retirement plan. Taking this into account, the RSR examines different components of retirement plan design, such as the "Eligibility," "Adequacy," and "Flexibility and Mobility," which are each incorporated as elements of a plan's Retirement Benefits Score. For instance, individuals deep into their career will already be eligible for their benefits and should not care as much about vesting rules as the adequacy of the benefit and any COLAs that improve the quality of the benefit over time. Conversely, individuals just starting their careers should put a premium on the vesting and refunding rules, not yet knowing what their long-term career prospects are in public service. To account for this variance in what aspects of a retirement plan's design are important depending on career stage, the RSR features measurements of the quality of benefits offered for three kinds of public workers:

SHORT-TERM WORKER (STW):

- An individual who works for a public sector employer(s) participating in the same retirement plan for 10 years of service or less. Retirement systems estimate that 55.2% of new employees will fall into this category.
- Individuals in this stage of their career should be focused on eligibility rules, the adequacy of benefits, and how flexible the benefits are to be portable to another employer-sponsored plan should they change jobs, careers, or move across state lines. They will care less about the COLA rules on the benefits that they will not be able to draw from until decades down the road.

MEDIUM-TERM WORKER (MTW):

- An individual who works for a public sector employer(s) participating in the same retirement plan between 10 and 20 years of service. Retirement systems estimate that 11.3% of new employees will fall into this category.
- These individuals should have already qualified to receive benefits and may or may not want to leave their money in the retirement plan upon leaving for another job or moving across state lines. They should care about the adequacy of benefits and whether those benefits will be inflation adjusted, and they should also be interested in how flexibility rules might shape whether they should roll their retirement savings to another employer-sponsored plan.

FULL-CAREER WORKER (FCW):

- An individual who works their entire career for a public sector employer(s) participating in the same retirement plan. This includes individuals who work more than 20 years of service. Retirement systems estimate that 33.5% of new employees will fall into this category.
- These individuals should care primarily about the adequacy of benefits and inflation adjustment of their retirement income. Rules related to eligibility and flexibility are unlikely to determine in any degree whether their retirement plan is serving them well.

KEY TERMS AND DEFINITIONS

Adequate Retirement Income
For the purposes of this report, adequacy is a 70% replacement of final average salary. See methodology for further details about salary definitions and how the analysis incorporates Social Security.

Pension Plan
A retirement plan design based on a formula that accounts for years of service and final average salary. The typical pension benefit formula is years of service (ex. 20 years) x benefit accrual percentage (ex. 2% multiplier) x final average salary (ex. $75,000). The example scenario would yield a 40% of final average salary benefit, or a $30,000 annual pension.

Defined Contribution (DC) Plan
A retirement plan design based on contributions from members and employers into an individual account, which is then usually invested through professionally designed and managed funds. DC plans are usually defined as 401k's or 403b's, typically default members into target date funds, and sometimes allow individuals to automatically convert their accumulated account balance to guaranteed income through annuities.

Guaranteed Return (GR) Plan
A retirement plan design that offers guaranteed investment returns on contributions from members and employers to an individual account managed by the retirement system. GR plans are often formally called "cash balance" plans. The typical GR plan accumulates contributions, minimum investment returns (ex. 4% guaranteed returns), and a share of returns when the plan's investments yield a return above the minimum threshold. Upon retirement, GR plans usually convert the accumulated account balance into guaranteed income, similar to annuities.

Hybrid Plan
A retirement plan design that mixes some combination of pension plan, DC plan, and GR plan. A typical hybrid plan provides a small pension plan (ex. using a 1% multiplier) and a small DC plan (ex. 3% employer contributions and 3% member contributions). Upon retirement, the income created by both elements of these retirement plans are combined for a single source of retirement income.

Retirement System
This is an umbrella organization authorized by a state or municipality to administer retirement benefits. A single retirement system could provide different retirement plan designs (e.g., pension, DC, GR, and hybrid plans). It might offer different retirement plans to different public sector workers depending on hire date and occupation.

Retirement Plan
This is a specific set of benefit provisions for a clearly defined group of public sector workers. The benefit provisions and rules determine whether the retirement plan is a pension, DC, GR, or hybrid plan. The plan may be offered to a narrowly tailored set of occupations, such as being only for public school teachers and public-school workers, or only for police and not for firefighters. The plan may be offered only to individuals hired on or after a particular date, with other retirement plans offered to those hired in other time frames.

Part 1: The Evolution of Benefits Over Time

Public sector retirement benefits generally have strong legal protections against being taken away from workers once earned.[3] However, those protections do not stop states and municipalities from periodically adjusting public benefit provisions for new workers.

States do sometimes increase benefit values for public retirement programs, and when they do those changes are typically applied retroactively to all plan members. But whenever adjustments aim to reduce benefit values they are generally only applied prospectively—that is they only affect public employees hired in the future.

The result is that public retirement plans often have various "tiers" or "classes" of benefits, some open to new members and "closed" to new members. (Note: because of strong state protections against retroactive reduction in benefits, when a pension plan is closed to new members it generally continues unchanged for all members still enrolled. States vary on whether previously hired workers that return to work can be grandfathered into such closed pension plans, but because of confusions around the word "closed" this report will generally refer to these as "legacy" plans.)

This leads to two fundamental ways to think about the universe of nearly 2,000 public sector pension, defined contribution, guaranteed return, and hybrid plans:[4]

- Open Plans: A retirement plan, tier, or class of benefits that new members can be enrolled in. Sometimes these are referred to as "new hire" plans, "open" plans, or "current" plans.

- Legacy Plans: A retirement plan, tier, or class of benefits that no longer is eligible to enroll new members. Sometimes public employees who have left their job but return to work are eligible to continue service in these plans under grandfathering-in clauses. Legacy plans are sometimes referred to as "closed" plans, but they haven't ceased functioning, they are just closed to new members.

1.1 MEASURING THE VALUE OF BENEFITS OVER TIME

In any given year, it is possible to assess all the public sector retirement benefits being offered and estimate the average value that they are aiming to provide. One simple way to measure this is to look at the value of benefits that each open plan offers to a Full-Career Worker based on average career wages. This method provides a picture of the average value of benefits being offered at a single point in time. Each time a new plan is opened it can be added to the set of plans being analyzed, with the legacy plan removed from the calculation. This allows for measuring how the value of benefits being offered to new workers changes year to year.

The primary way to measure cumulative estimated values over time is to look at the total benefit value — e.g., the net present value of all estimated pension checks to be paid to an individual.[5] These estimates can be averaged across all plans to provide an overall average benefit value, or broken down into smaller segments, such as by plan type or member occupation. (This analysis is focused on overall averages, but future RSR publications will explore various occupation groups and their respective benefits.)

Figure 1 below shows how the estimated average total value of benefits has changed over time. The analysis focuses on 1965 (the earliest year with sufficient reliably reported public benefit data) through 2024. All plans' benefit values are

[3] State law varies on how protected benefits are defined, but at a minimum, state laws and constitutions do not allow states to retroactively reduce based benefits earned. Some states also protect employees from changes in the employee contribution rate, COLA changes, changes in retirement age eligibility, and other prospective adjustments to benefit formulas. See "State Pension Law Infographics," Equable Institute, 2021.

[4] For details on the plans that were measured in the RSR, see Appendix C.

[5] Another way to report benefit values each year would be looking at the annuitized value (e.g., the monthly or annual amounts paid out). However, this requires a range of assumptions, mortality tables, discount rates, annuitization rates, inflation adjustment methods, and more — all of which are open to debate and would have a meaningful effect on the ability to interpret results. Therefore, we don't include that method in this analysis.

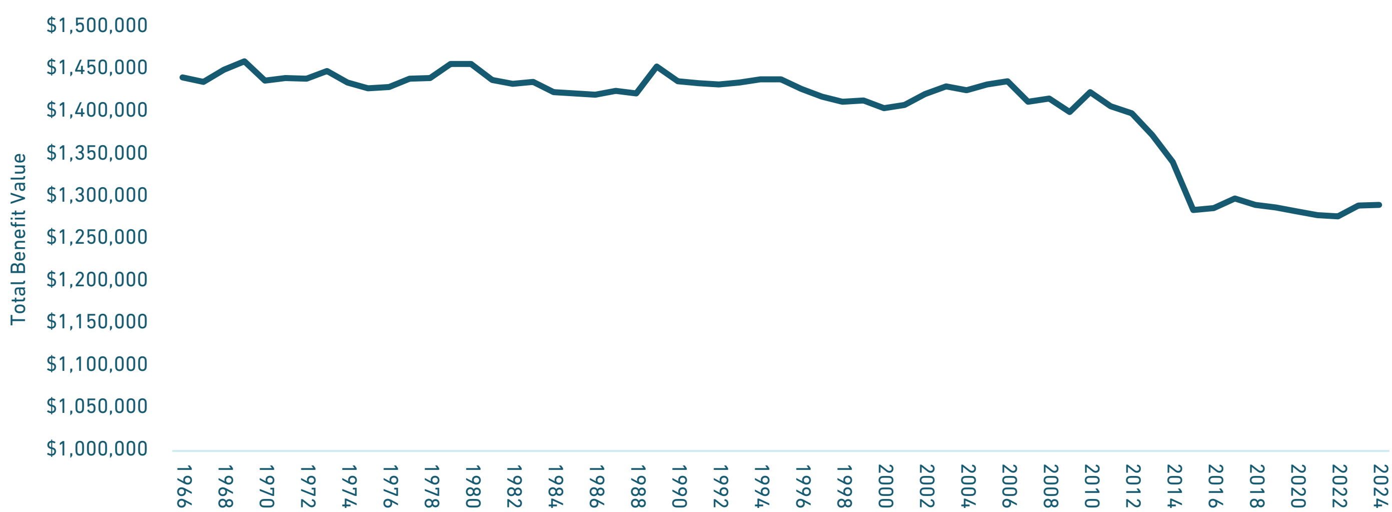
estimated using 2024 average salaries (as reported for each pension plan), which allows for all plans across the whole time series to use a common point of measurement (this effectively means that the analysis is also accounting for inflation's effects on wages).

The dollar figures for each year represent what a new, 25-year-old entrant will expect to receive in lifetime retirement benefits if they work a full career, leave at age 67, and live to an average point of mortality.[6] For defined benefits, the dollar figures are the expected value of all future monthly retirement checks totaled up to a single figure; for defined contribution plans, the dollar figures are the expected value of account balances at age 67. For any plans that blend defined benefits and defined contributions, this methodology allows for a simple addition of the net present value of both kinds of benefits.

For any given year the total number of plans measured varies as new plans are opened and legacy plans are closed, but across the total 60-year period there are nearly 2,000 tiers or classes of benefits from the RSR universe that are included.

FIGURE 1: PUBLIC EMPLOYEE RETIREMENT BENEFIT VALUES FOR FULL-CAREER WORKERS HELD STEADY FOR 40 YEARS, ONLY TO SHARPLY DECLINE AFTER 2010

Average Total Value of Future Retirement Benefits that New Workers Will Expect to Earn If They Work a Full Public Sector Career in the Same State



There are at least two notable observations from Figure 1:

- First, the total value of estimated benefits is relatively stable for the first four decades. On average, the value ranged from $1.4 million to $1.45 million. This means that state and local workers who spent a full career in public service from 1965 through 2010 could expect their retirement to be worth more than a million dollars in total (measured in today's dollars).[7]
- Second, it is not likely this level retirement wealth is going to persist for future members of the public sector workforce. Starting around 2010, there was a sharp decline in the average total value of benefits, which fell to roughly $1.3 million. This means that the average value of benefits offered today is between $100,000 and $150,000 less than at the turn of the century.

In the years following the Global Financial Crisis, many U.S. states grappled with reduced tax revenue resulting economic recession. Combined with a spike in unfunded liabilities due to investment losses, public pension costs gradually began creating significant budgetary pressures.

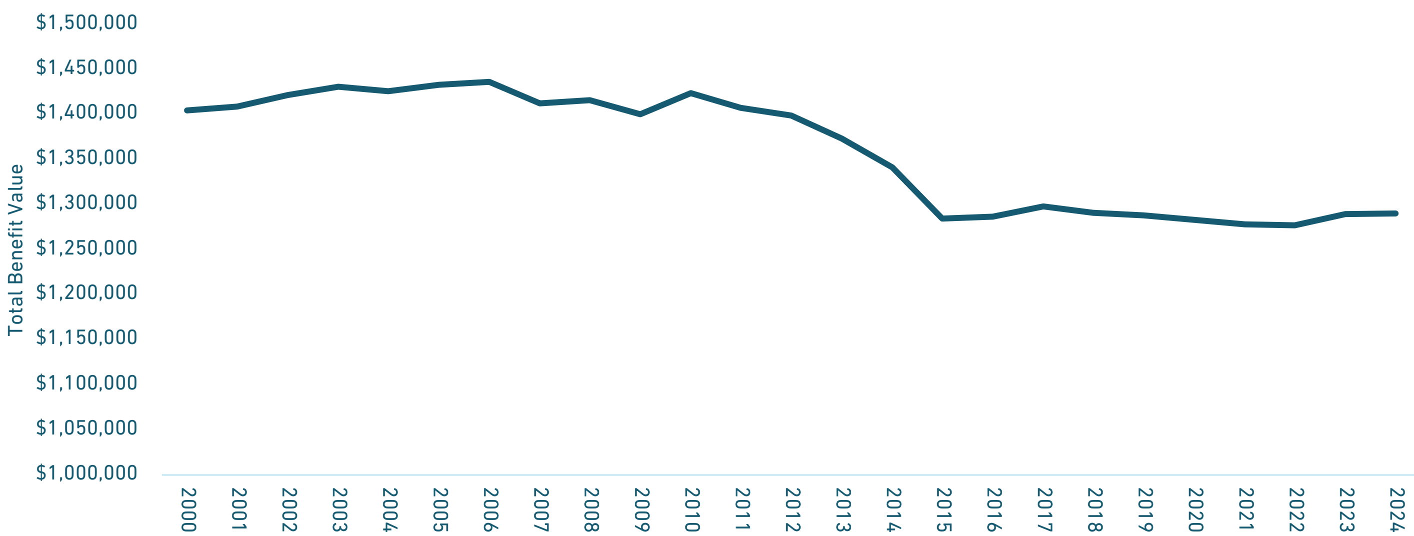
[6] We assume all plan members live until age 86, which is a reasonable expectation given the mortality rates published in the PUB-2010 tables. Additionally, note that the plans exclusively for judges and elected officials are excluded from these estimates, as most judges and elected officials do not start in their positions at age 25.
[7] Note that the total value of a benefit reflects the estimated total of all annual benefits. So, if a public worker had a pension benefit worth $1,000,000 but it is paid over 20 years, they would only receive $50,000 a year. In a purely technical sense, they are "millionaires" but they cannot access those benefits the way one could withdraw from a bank account.

One way that states tried to address this cost increase was by lowering the value of benefits for future workers, in the hopes that this would create cost savings. Another approach was adjusting legacy plan benefits by reducing or elimination cost-of-living adjustments and/or raising member contribution rates (where legal).

As new public plans, benefit tiers, and classes of benefits emerged from 2010, their reduced values lowered the national average value of benefits. This picture is easier to see in Figure 2, which zooms in to show the change in total public employee retirement benefit value for just 2000 through 2024.

FIGURE 2: A CLOSE UP ON THE PATTERN CHANGE—AVERAGE TOTAL PUBLIC EMPLOYEE RETIREMENT BENEFITS DECLINED ROUGHLY $145,000 FROM 2006 TO 2015

Average Total Value of Future Retirement Benefits that New Workers Will Expect to Earn If They Work a Full Public Sector Career in the Same State



Note: Figure includes estimated benefit values for all public employees in any given year. The average values for public safety, teacher, or other public worker benefits vary considerably by profession, state, and whether the government sponsoring benefits is also participating in Social Security.

The absolute peak of public employee benefit values during the 21st Century was 2006, when the average total value was around $1.44 million. By contrast, the lowest benefit value occurred in 2022, when the average estimated benefit fell to $1.28 million. This value rebounded slightly in 2023 and 2024 but remains closer to its lowest point than the peak.

Whether looking at this picture as a roughly $100,000 total value decline from 2000 to 2024, or a $145,750 drop from 2006 to 2024, it is clear there was a sharp decline in benefit values following the Global Financial Crisis. The result of various policy changes to public retirement plans was the eroding of benefit values such that a public employee hired today could expect to receive roughly 10% less in benefits than someone hired a quarter-century ago.

1.2 COMPARING PLAN VALUES OVER TIME BASED ON SOCIAL SECURITY PARTICIPATION

Public employers such as cities or school districts do not always participate in Social Security. Originally the federal retirement program was designed for members of the private sector, so, over time public employers had to opt-in to the program, and many did not choose to do so when the option was available.

In theory, then, public retirement benefits should account for whether members (public employees) will also have a federal retirement benefit. If a public employee is only going to be depending on their public retirement benefit, then the value offered should be relatively higher than a benefit for someone who will also get Social Security. And since non-participating public employers don't have the 6.2% of payroll employer tax for Social Security there is theoretically budgetary room to provide benefits with a higher quality (or at least with a higher total value).

This means in any discussion of the value of public benefits over time should also distinguish between plans where members are concurrently participating in Social Security from those sponsored by employers who do not participate in Social Security.

Figures 3 and 4 (next page) show the value of expected future lifetime retirement benefits overtime, just like Figure 1 — but this time splitting out the estimates for plans that are intended to compliment Social Security versus plans that assume no separate Social Security benefits.[8] Key trends to look for are differences in absolute values and relative changes in benefit values between plans with Social Security and plans without.

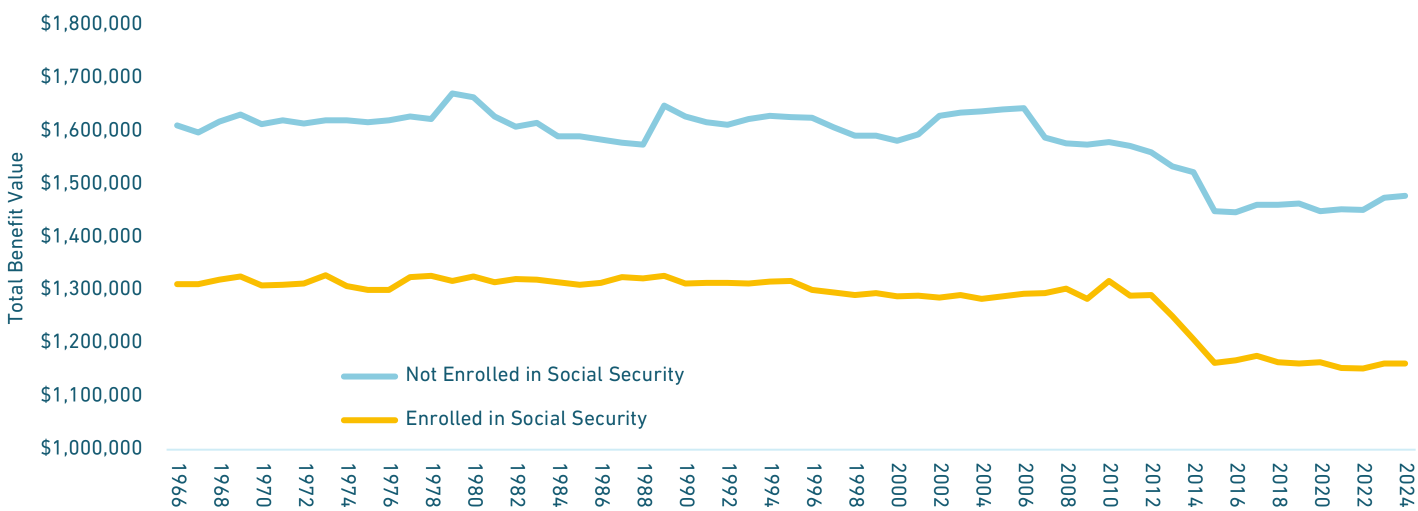
Two things jump out when looking at the results shown in Figure 3. First, the projected lifetime benefit values for all plans follow the same trends as illustrated in Figures 1 and 2 regardless of members' Social Security enrollment.

Specifically, this means that benefit values experienced some variation throughout the second half of the 20th century, but remained relatively stable until the late 2000s, when the value of benefits began to decline to a new, lower value equilibrium by the mid-2010s. States that sought to make changes to the value of benefits for new hires make such adjustments at roughly the same rates for plans with and without a Social Security pairing.

Second, there is a relatively consistent higher value for retirement plans offered by states and municipalities where their members are not enrolled in Social Security. The difference between plans based on enrollment status is remarkably consistent with an average of $303,397 separating the two trendlines over the sixty-year period shown.

FIGURE 3: PUBLIC WORKERS WHOSE EMPLOYER PARTICIPATES IN SOCIAL SECURITY HAVE LOWER VALUED BENEFITS ON AVERAGE FROM THEIR PEERS WHO ARE NOT IN SOCIAL SECURITY, BUT VALUES REMAINED SIMILARLY STABLE UNTIL AROUND 2005

Average Total Value of Future Retirement Benefits that New Workers Will Expect to Earn If They Work a Full Public Sector Career in the Same State, Disaggregated by Social Security Participation

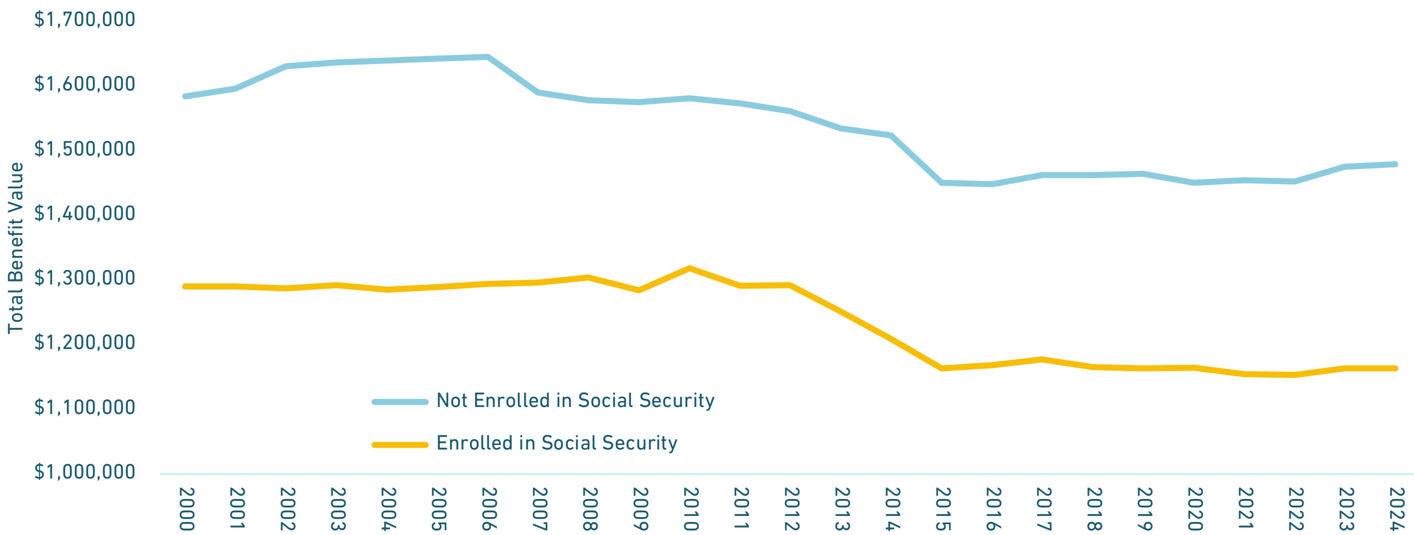


Note: Figure includes estimated benefit values for all public employees in any given year. The average values for public safety, teacher, or other public worker benefits vary considerably by profession and state.

[8] To be clear: the figures shown here do not include any Social Security benefit projections. The RSR's retirement adequacy metrics do account for Social Security benefits when assessing whether an individual's retirement plan is putting them on a path to an adequate replacement rate. However, here an evaluation of the value of benefits for plans with and without Social Security means it is more appropriate to look at just what is provided by the state and local retirement systems themselves.

FIGURE 4: A CLOSE UP ON THE PATTERN CHANGE—THE TOTAL VALUE OF RETIREMENT PLANS WHERE MEMBERS ALSO HAVE SOCIAL SECURITY DECLINED ROUGHLY $155,000 FROM 2000 TO 2024, PLANS WITHOUT SOCIAL SECURITY FELL ROUGHLY $130,000

Average Total Value of Future Retirement Benefits that New Workers Will Expect to Earn If They Work a Full Public Sector Career in the Same State, Disaggregated by Social Security Participation



Note: Figure includes estimated benefit values for all public employees in any given year. The average values for public safety, teacher, or other public worker benefits vary considerably by profession and state.

Just like in the aggregate, the general trend of declining benefit values holds with this zoomed-in look at the data. In both cases there is a decline between 2000 and 2024, which roughly corresponds with the $145,000 decline in benefit values observed in the aggregate combined data. In this case by splitting out the change in benefits by Social Security participation, it is clear in Figure 4 that the sharpest point of the decline happened slightly later for plans that are paired with Social Security (a $130,000 change between 2000 and 2024 that mostly dropped from 2010) versus plans without Social Security (a total change in $155,000 since 2000, with a peak in 2006 and slight improvement since 2022).

1.3 KEY FACTORS DRIVING THE CHANGE IN BENEFITS

While the data is clear that the value of benefits has been declining over the last two decades, there is more variance in the reasons why this has been happening. When introducing new tiers of benefits, legislators generally have been explicit that they are aiming to reduce costs, however the approaches to do this look different depending on the state.

Of all the instances where retirement systems introduced a new tier of benefits between 2000 and 2023, the most common way that costs (and benefit values) were reduced was by raising the retirement eligibility age or vesting period for benefits, along with changing COLA rates and adjusting how compensation gets measured for calculating a benefit. A lesson common approach was lowering multipliers.

For example, California's Public Employees' Pension Reform Act (PEPRA) created a new tier of benefits for most state-administered retirement systems effective for employees as of January 1, 2013. But PEPRA plans generally kept the same multiplier as previous plans, instead moving the retirement age (e.g., a 2% multiplier with a normal retirement age of 62 instead of "2% at 60" under the previous rules) or adjusting how salary was counted in the pension benefit calculation (e.g., capping pensionable salary, and changing the number of years used to average final compensation).

There are multiple instances where multipliers were reduced, however, the average multiplier for tiers of benefits that were closed before 2023 is essentially the same as the average for plans that were opened after 2000.[9] By contrast, between 2009 and 2023, the average normal retirement age for a new, 25-year-old entrant increased from age 55 to between 57 and 58.

Looking at COLA rates over-time, there is a bit more variability. From 1965 through 2000 the average COLA issued ranged between 1.55% and 1.65% per year. However, after peaking at 1.635% in 2010, the average rate has declined much more quickly than in any years prior. By 2020, the average COLA rate was 1.48%.[10]

The changes to retirement ages and COLA values have been driving forces in the reduction of lifetime value of benefits. For every additional year that a public employee has to wait before they can start drawing their pension benefit, that can reduce the value of benefits by tens of thousands of dollars.[11] A COLA that gets cut in half and/or is shifted from a compounding formula to a simple formula can result in the value of benefits to be paid to get reduced by as much as half over a 20 to 30 year period of time in retirement.[12]

[9] The average multiplier for all plans that closed by 2023 is 2.14 and the average multiplier for all plans with a tier start date after 2000 or later is 2.15. In some instances, a retirement system has multiple plans that are essentially the same except for the occupations covered, and this can influence how that system affects the national average. When we drop all "duplicate" instances for retirement systems such that a legislative change affecting an entire system is only counted once, the average multiplier for closed plans compared to recently opened plans is 2.1 compared to 1.96. There has been some change, but it is not significant.

[10] The average COLA rate has rebounded slightly in the post-Covid years as state legislatures used budget surpluses and strong investment returns to respond to high levels of inflation and attempt to address this with temporary or permanent adjustments to COLAs.

[11] Note that we assume all plan participants will survive to age 86 in our modeling. As such, a member whose retirement age was age 60 would have expected to see 26 years' worth of benefits. By contrast, if that retirement age is increased to age 60, now that member will only see 21 years' worth of benefits.

[12] From a modeling perspective, a COLA, particularly a compounding COLA, has the most significant impact on benefit values outside of a change to the actual benefit multiplier.

Part 2. The State of Retirement Security for Public Employees Today and Tomorrow

The primary objective of the RSR is to measure the quality of a retirement plan's benefits against a standard benchmark, allowing each plan to stand on its own terms, but it can be informative to identify which plans perform the best across different groupings and pairings. For a complete breakdown of our scoring, see our methodology.

Table 1 (next page) presents the performance of open retirement plans on RSR metrics, aggregated for each state averaging across, entry ages, plan types, and occupations.[13]

The top performing states reflect a wide range of plan designs offered across the country. However, one common element of these states is their stronger performance for Short-Term and Medium-Term Workers. In fact, Oregon is the only state in the top five where the average score for Short-Term Workers is below 50%. Similarly, Alaska and Kentucky are the only two states with an average score over 50% for STWs that rank outside of the top five.

But digging deeper into the top five, best performing states can help reveal the characteristics of what makes the highest quality benefit offerings:

1. South Carolina offers five plans that have the highest average score across all three worker profiles. However, these plans do not have equal scores. In fact, among the top five states, South Carolina has the two highest scoring plans (both defined contribution plans with high member rates and modest vesting rules) and two lowest scoring plans (both pension plans with weak benefit formula provisions).[14] The high member contributions to both the defined benefit and pension plans mean that they are more likely than the national average to work well for Short-Term and Medium-Term Workers, resulting in strong benefit adequacy scores for both worker profiles.

2. South Dakota offers three hybrid plans that are consistently among the best performing benefits across all three worker profiles. In each case, the plans score highly for Short-Term and Medium-Term Workers and receive a perfect score for Full-Career Workers. The strong early career benefit adequacy scores are driven by the combined pension and defined contribution plan offerings, plus a refunding policy that grants 3.5% interest plus a portion of employer contributions even if members have not fully vested result in strong benefit adequacy scores for workers in the early and mid-career stages.

3. Mississippi PERS offers a pension plan with three tiers of benefits that vary only slightly based on occupation groups covered. The benefit provisions for these pension plans are similar to the other top performing states in that members have a high contribution rate (9.0%) and a comparable crediting interest rate (3.5%), though Mississippi's refunding policy is weaker, with members only being entitled to their own contributions plus interest. Members of Mississippi PERS are also expected to particularly benefit from being concurrently enrolled in Social Security, specifically because their relatively lower average salaries mean that SSA will provide a higher replacement rate of final income. This helps offset some of the more modest elements of the pension benefit portion offered by Mississippi PERS alone.[15][16]

[13] Table 1 does not include plans exclusively for judges or elected officials. There are no 25-year-old entrants to retirement plans for judges, and very few elected officials serve a full career. We have offered scores in the digital version of the RSR for these retirement plans across all worker types for informational purposes but have left them off these ranking lists where their inclusion is not plausible.

[14] The three pension plans averaged would result in a score of 69.78%, 12th among the other states.

[15] Of note, the adjustments to the target benefit threshold were so significant for the Mississippi plans that we capped the SSA replacement rate at 50% of a member's final average salary. For more details on how we incorporated Social Security into our benefit assessments, please see the methodology.

[16] Since this analysis was completed, Mississippi has adopted a new Tier 5 of benefits for hires as of TKDATE. This new plan has notably lower benefit values, primarily driven by the elimination of any cost-of-living adjustment. In the next iteration of this analysis Tier 4 will be a legacy plan and the new Tier 5 plan will be formally evaluated under open plans.

TABLE 1: OPEN PLAN PERFORMANCE BY STATE

Average performance across all plans for each state. Some states have a mix of high and low performing plans that can influence the overall average.

	Average Benefit Score					
State	**STW**	**MTW**	**FCW**	**Overall**	**Tiers**	**Types Available**
South Carolina	66.9%	80.0%	98.7%	81.9%	5	Pension & DC
South Dakota	63.7%	81.4%	100.0%	81.7%	3	Hybrid
Mississippi	50.7%	83.2%	100.0%	78.0%	3	Pension
Oregon	49.8%	70.7%	100.0%	73.5%	3	Hybrid
Wyoming	50.3%	64.9%	100.0%	71.7%	2	Pension
Montana	53.1%	63.8%	97.9%	71.6%	4	Pension & DC
Vermont	48.6%	69.0%	95.1%	70.9%	10	Pension
Washington	47.0%	68.8%	95.1%	70.3%	10	Pension & Hybrid
Indiana	43.6%	67.1%	96.5%	69.1%	7	Pension, DC, & Hybrid
Alaska	57.8%	58.9%	90.2%	69.0%	4	DC
New Mexico	41.5%	70.3%	94.6%	68.8%	9	Pension
Kentucky	64.3%	62.7%	76.7%	67.9%	7	GR & Hybrid
Idaho	39.0%	62.7%	100.0%	67.2%	3	Pension
North Carolina	40.7%	60.5%	98.1%	66.4%	7	Pension
Delaware	35.3%	68.3%	93.3%	65.6%	2	Pension
Utah	46.6%	62.2%	87.5%	65.5%	14	DC & Hybrid
New York	38.5%	64.7%	91.9%	65.1%	17	Pension
Virginia	44.2%	61.1%	89.7%	65.0%	12	Pension, DC, & Hybrid
Florida	44.5%	57.9%	91.8%	64.8%	13	Pension & DC
Arkansas	31.8%	63.7%	98.4%	64.6%	7	Pension
California	43.6%	59.9%	84.9%	62.8%	92	Pension & GR
Minnesota	41.6%	52.5%	94.0%	62.7%	5	Pension
Oklahoma	38.5%	56.3%	92.6%	62.5%	5	Pension & DC
Tennessee	37.1%	55.2%	92.6%	61.6%	8	Pension & Hybrid
Arizona	38.1%	55.5%	90.5%	61.4%	15	Pension & DC
Connecticut	35.2%	60.6%	86.7%	60.8%	16	Pension
Wisconsin	32.6%	51.9%	97.0%	60.5%	14	Pension
Colorado	43.3%	47.9%	88.2%	59.8%	8	Pension & DC
Maryland	34.6%	60.0%	82.6%	59.1%	13	Pension
Missouri	33.2%	55.0%	86.1%	58.1%	22	Pension
West Virginia	31.6%	50.5%	90.0%	57.3%	4	Pension
Nebraska	32.1%	56.9%	81.7%	56.9%	9	Pension & GR
New Hampshire	34.3%	48.6%	85.9%	56.3%	4	Pension
Ohio	32.6%	47.9%	86.8%	55.8%	23	Pension, DC, & Hybrid
North Dakota	47.6%	42.2%	77.4%	55.7%	6	Pension & DC
Kansas	48.3%	49.2%	68.1%	55.2%	4	Pension & GR
Texas	40.9%	49.9%	74.7%	55.2%	35	Pension & GR
Iowa	36.9%	49.3%	77.6%	54.6%	6	Pension
Pennsylvania	36.4%	44.3%	82.6%	54.4%	13	DC & Hybrid
Hawaii	29.5%	47.5%	85.5%	54.2%	3	Pension
Georgia	36.5%	59.3%	63.9%	53.2%	8	Pension & Hybrid
Maine	28.9%	47.2%	83.3%	53.1%	7	Pension
Illinois	19.5%	43.4%	85.5%	49.5%	21	Pension & DC
Rhode Island	29.6%	33.9%	80.2%	47.9%	14	Pension & Hybrid
Alabama	23.8%	36.8%	73.9%	44.8%	7	Pension
District of Columbia	20.2%	34.4%	77.1%	43.9%	3	Pension
Massachusetts	22.1%	43.3%	60.4%	41.9%	6	Pension
Michigan	16.3%	30.3%	73.1%	39.9%	22	Pension, DC, & Hybrid
Nevada	18.9%	31.1%	68.9%	39.6%	4	Pension
Louisiana	14.7%	31.0%	71.2%	38.9%	18	Pension
New Jersey	15.2%	27.3%	70.2%	37.6%	6	Pension

4. Oregon offers a hybrid plan to three different occupation groups through their OPSRP program. Unlike other states where all their offerings are clustered around the same score, Oregon's Public Safety plan performs slightly worse, scoring roughly 5 percentage points lower on average across the worker profiles than the General and School District plans. All three plans have low vesting requirements (3-years for the pension component, and 6-months for the DC component), which helps their scores. Though a 0% crediting interest rate reduces the value of the benefit for STWs. The DC portion of the hybrid benefit is particularly good for MTWs compared to other retirement plans, which helps raise the relative overall performance of Oregon's open plans.

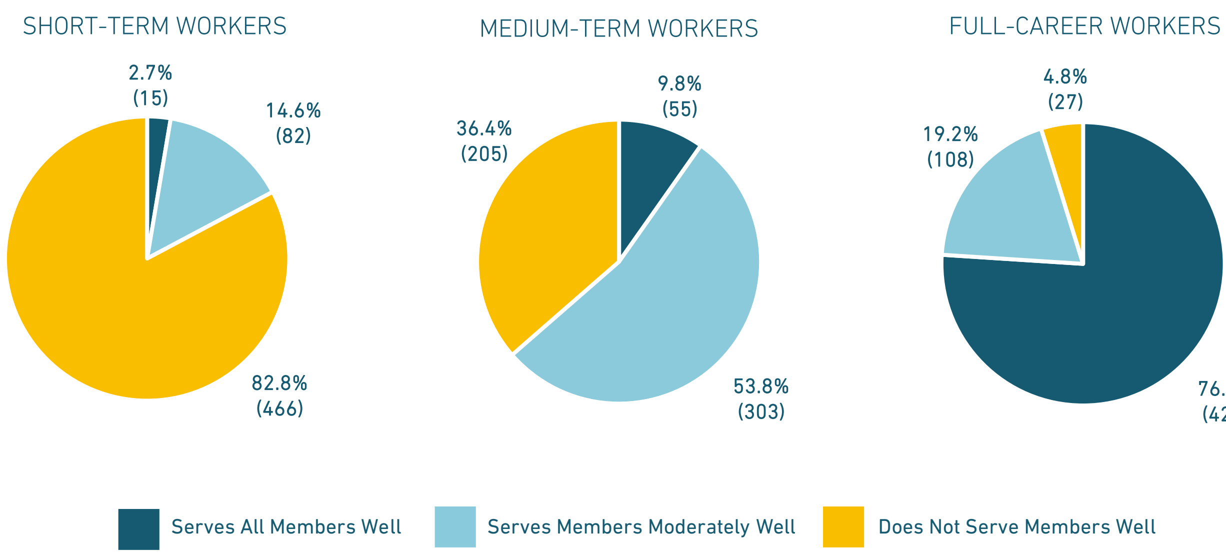
5. Wyoming offers two relatively traditional pension plans to new members, with the only major difference being member contribution rates — the General tier requires a 7.0% contribution, while the Teachers tier has a 9.13% employee rate. Both plans have a 5-year vesting requirement, a 3.0% crediting interest rate, a 2.0% multiplier, and offer no COLA at this time.[17] From these characteristics, Wyoming plans are not particularly unique when it comes to pension plan offerings. However, like Mississippi, Social Security benefits once again have an outsized influence, as they are projected to replace up to 50% of members' salaries upon retirement.[18]

Taken as a whole, the top performers identified in Table 1 illustrate the importance for states to offer benefits that serve their entire workforce well, not just Full-Career Workers. Policies like strong member contribution rates, good crediting interest rates, shorter vesting periods, and flexible refunding policies allow for better performing benefits for STWs and MTWs, which ultimately translate into higher average scores. Additionally, as both Mississippi and Wyoming illustrate, states can receive higher adequacy scores when Social Security benefits are expected to offset large portions of the retirement benefit needs for plan members.

Another way to evaluate the quality of benefit offerings in the aggregate is to look at how well a plan's benefits serve its members.[19] As the pie charts in Figure 5 below illustrate, regardless of the type of plan being offered, a majority of Short-Term Workers (82.8%) are not served well by their plan's benefits. By contrast, more than half of Medium-Term Workers (53.8%) are served moderately well, and more than three-out-of-every-four (76.0%) of Full-Career Workers are served well by their benefits. These results support the argument that most retirement benefits tend to be backloaded and more valuable the longer an individual remains in their retirement plan.

FIGURE 5: HOW WELL ARE OPEN RETIREMENT PLANS SERVING PUBLIC WORKERS?

All Plan Design Types, By Career Duration



[17] Note that Wyoming RS has a COLA policy, but the policy stipulates that no COLA can be issued until the plan reaches full funding.

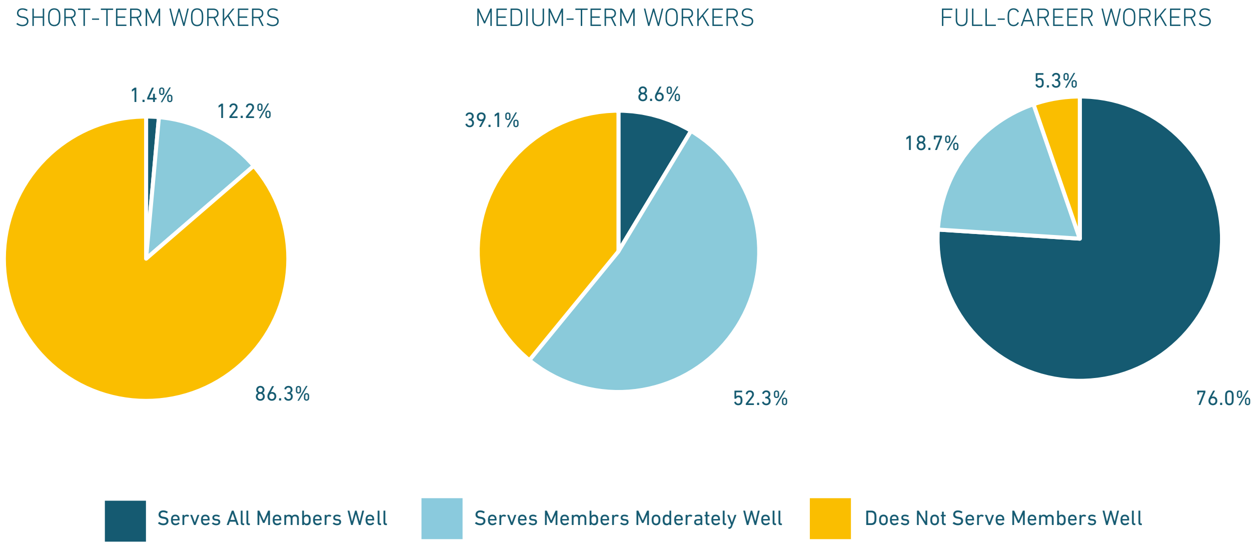
[18] Again, this 50% is the upper bound SSA benefits are allowed to replace in our model.

[19] These assessments are determined by a plan's overall performance, as measured by the share of available points they scored. Plans that score less than 50% of available points are deemed to "not serve members well," while those that score between 50% and 75% of available points are designated as serving their members "moderately well." Those plans that score above 75% of the available points are assessed to "serve their members well."

Some of these open plans have been available without change for decades, but most were introduced in the last few years as part of post-Global Financial Crisis changes. Out of the 563 open tiers currently available to newly hired public employees, 417 were created in 2010 or afterward. Looking at just those 417 open plans, Figure 6 shows some of the reduction in benefit quality shown in Part 1. Specifically, across all three worker profiles the performance of benefits is highly comparable, but generally a little worse. For instance, the share of STWs served well or even moderately well by the post-Financial Crisis tiers declines to 13.7% from 17.2% for all open tiers. Among FCWs slightly more workers are not served well by these more recently created tiers, with 5.3% of FCWs not being served well, compared to 4.8% when looking across all open tiers.

FIGURE 6: HOW WELL ARE OPEN RETIREMENT PLANS CREATED SINCE THE GLOBAL FINANCIAL CRISIS SERVING PUBLIC WORKERS?

All Plan Design Types, By Career Duration, For Plans Opened 2010 Or Later



2.1 BEST- AND WORST PERFORMING OPEN RETIREMENT PLANS, BY DESIGN FRAMEWORK

In the following pages, Tables 2 through 5 show the RSR retirement plan performance scores (averaging across all worker types, entry ages, and occupations) for each of the four plan types, plus a similar pie-chart breakdown in Figure 7 showing how well each plan type is serving the three different worker groups.

FIGURE 7: HOW WELL ARE OPEN PENSION PLANS SERVING PUBLIC WORKERS?

Open Pension Plans Only, By Career Duration

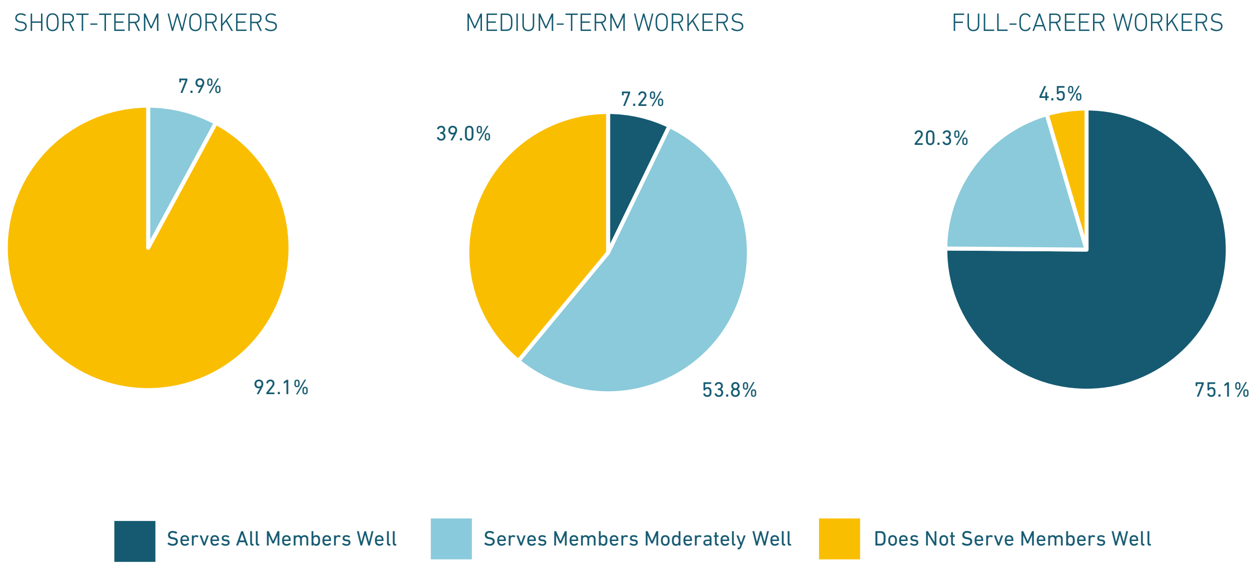


TABLE 2: BEST- AND WORST-PERFORMING PENSION PLANS, AVERAGED ACROSS ALL WORKER TYPES

1	California UCRS Safety PEPRA with Social Security	82.10%	409	Louisiana TRSL Higher Education	33.45%
2	Vermont SERS Public Safety	79.16%	410	Providence, Rhode Island RRS Class B Police Post-2011	32.87%
3	Arkansas DOT Tier 2	78.45%	411	Louisiana LASERS Post-2015 Plans*	30.63%
4	Mississippi PERS Plans*	77.98%	412	Kansas City, Missouri Police Tier 2 Plans*	29.09%
5	Washington SERS Pension Plan 2	77.72%	413	Baton Rouge, Louisiana Parish ERS Post-2015 Plans*	28.66%
6	Kern County, CA CERA Safety Tier 2B with Social Security	77.34%	414	Providence, Rhode Island RRS Class B Fire Post-2012	27.35%
7	Contra Costa County, CA CERS Plans with Social Security*	77.33%	415	Detroit, Michigan Police and Fire C1 Plans*	27.02%
8	Vermont SERS Groups C and D*	76.90%	416	Birmingham, Alabama RRS Police and Fire Post-2017 Plans*	23.49%
9	Georgia TRS with Social Security	76.28%	417	Detroit, Michigan General C1 Plans*	22.97%
10	Virginia Law Enforcement Officers Plan 2	74.92%	418	New Jersey SPRS Tier 2	17.56%

* Indicates more than one class of benefits being averaged.

Note: Score shown is the average percentage of available “Retirement Benefits Score” points earned by the plan.

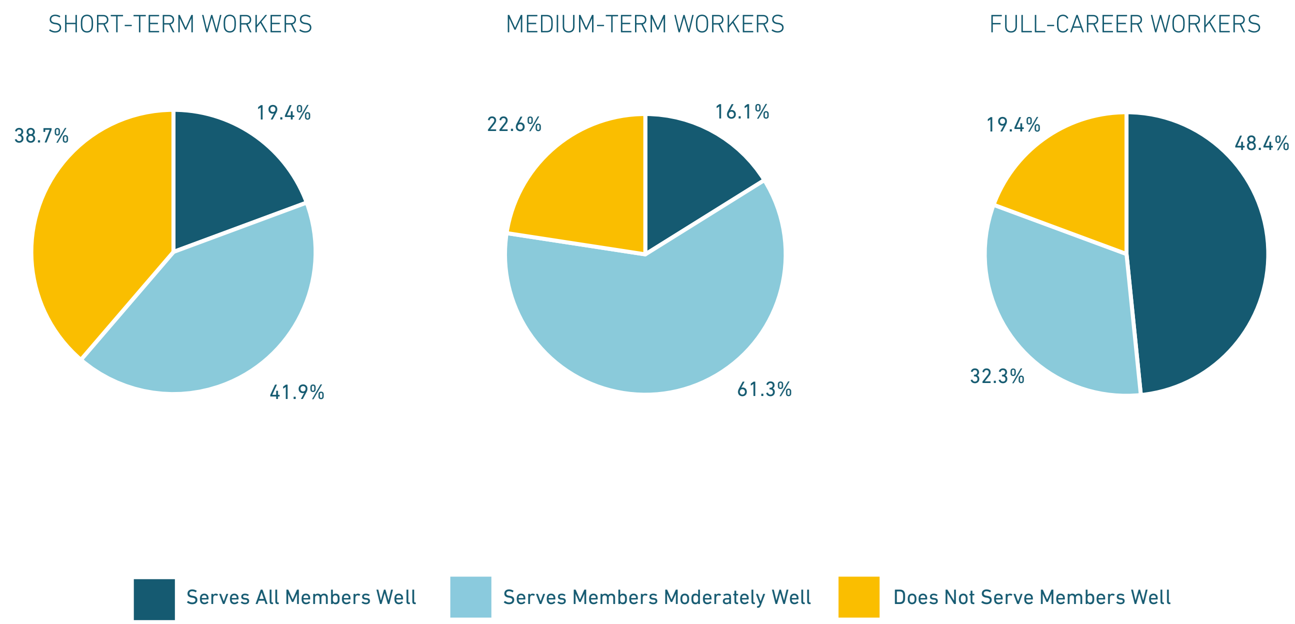
The top performers among pension plans exhibit many of the same qualities as identified in Table 1. Specifically, higher member contribution rates and more generous refunding policies support higher scores for Short-Term Workers (STWs) and Medium-Term Workers (MTWs), while strong COLA policies result in better scores for MTWs and Full-Career Workers (FCWs). Overall, benefit adequacy scores tend to be lower for STWs, but MTWs and FCWs both see comparable or even higher scores.

Notably among the top performing pension plans are the various tiers of benefits offered by Mississippi PERS, which has a mixture of high and low scoring policies. For instance, the vesting period is 8 years, but that is counteracted by a 3.0% fixed COLA. The benefit adequacy metric for these plans is also driven heavily by contributions from Social Security.[20]

The Figure 7 pie-charts for pensions show a similar distribution of performance as observed in the aggregate across all plan types (this makes sense as pensions are the most common type of benefit offered). For STWs, 92% of pensions are not providing a quality benefit, but once members achieve longer amounts of completed service, the scores improve. For MTWs, 61% of all plans serve their members at least moderately well. Similarly, for FCWs 95% of plans serve their members at least moderately well, with 75% of all plans serving these members well.

FIGURE 8: HOW WELL ARE OPEN GUARANTEED RETURN PLANS SERVING WORKERS?

Open Guaranteed Return Plans Only, By Career Duration



[20] One key change in this revision of the RSR is our Social Security benefit modeling, which allows the benefit to be calculated independently for each plan. One finding that emerged from the modeling is how Social Security provides a better replacement rate, and in turn a larger adjustment to the target threshold, in cases where salaries are lower. If a salary is low enough, then the Social Security benefit formula can result in replacement rates as high as in the 80% range, meaning that the Social Security benefit alone would be sufficient to reach the savings target threshold. To prevent Social Security from completely skewing the results of our analyses, we artificially capped those benefits at a 50% replacement rate, but, as we can see here, even that level may be too high, as it has allowed a plan with generally middle-of-the-road set of policies and benefit components to score among the best pensions offered.

TABLE 3: BEST- AND WORST-PERFORMING GUARANTEED RETURN PLANS, AVERAGED ACROSS ALL WORKER TYPES

1	Texas CDRS High Credit Plans with Social Security*	87.99%	**22**	Texas MRS High Credit Plans without Social Security*	61.95%
2	Texas MRS High Credit Plans with Social Security*	83.12%	**23**	Kansas PERS Local and Schools Post-2015 Plans*	60.35%
3	Kentucky State Police Tier 3	79.27%	**24**	Texas MRS Low Credit Plans with Social Security*	59.87%
4	Kentucky ERS Hazardous Tier 3	79.26%	**25**	Texas CDRS Low Credit Plans with Social Security*	53.54%
5	Nebraska PERS State Division CB	78.16%	**26**	Omaha, Nebraska City General Post-2015	52.91%
6	Kentucky CERS Tier 3 Plans*	75.84%	**27**	Texas ERS General without Social Security	47.33%
7	Kentucky ERS Non-Hazardous Tier 3	74.36%	**28**	Texas LECOS without Social Security	45.81%
8	Texas CDRS High Credit Plans without Social Security*	69.04%	**29**	Texas MRS Low Credit Plans without Social Security*	44.66%
9	Texas LECOS with Social Security	65.24%	**30**	California CalSTRS Supplemental GR Plan**	43.76%
10	Texas ERS General with Social Security	64.37%	**31**	Texas CDRS Low Credit Plans without Social Security*	37.64%

* Indicates more than one class of benefits being averaged.
Note: Score shown is the average percentage of available "Retirement Benefits Score" points earned by the plan.

Among guaranteed return plans, the factors driving the quality of benefits is best captured by the difference in performance for the different classes of both Texas County & District Retirement System (CDRS) and Texas Municipal Retirement System (MRS).

- One feature of both systems is the variability in plan contribution rates which are set by the employer.
- Also of note are differences in the guaranteed return on a member's individual account balance each year – for CDRS all classes receive a 7.0% guaranteed return, but MRS offers both a 5.0% and 7.0% guaranteed return options.
- For the purposes of the RSR, the "low credit" plans reflect the lower bound of possible member and employer contribution rates and guaranteed returns. Meanwhile, the "high credit" plans in the RSR reflect the upper bound of the contribution rates and guaranteed returns. As a result, the "high credit" plans for CDRS, which can have contribution rates as high as 7.0% for members and matching employer contributions up to a 250% match, result in larger account balances earlier on, which are then compounded with the 7.0% guaranteed interest over the course of a member's career.[21]

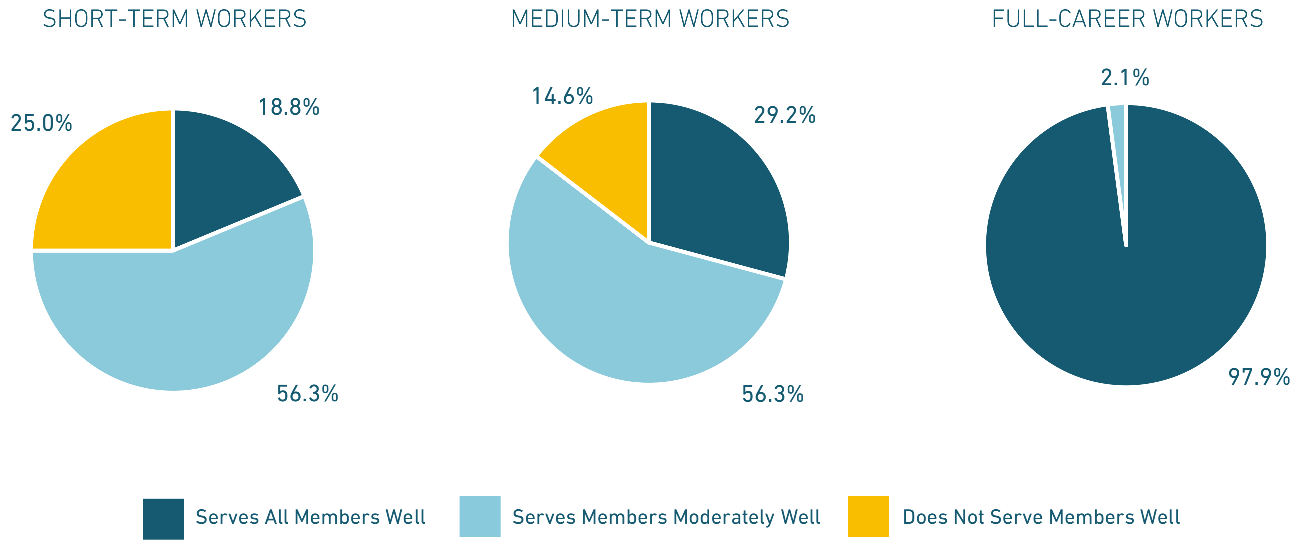
Another key factor that surfaces in these analyses is, again, the presence of Social Security benefits, as all the worst-performing versions of the CDRS and MRS plans are for those members who are not concurrently participating. However, it is notable that the "high credit" version of CDRS's benefits is strong enough to be among the top performing guaranteed return plans (receiving almost 70% of all eligible points) even without the added benefits offered by Social Security.

Looking at the distribution of plan performance across worker profiles, one thing that becomes evident is how guaranteed return plans, in general, score better for STWs and MTWs, with sizable shares of the plans serving STWs moderately well (with even roughly 20% of plans serving STWs well) and over 60% serving MTWs moderately well. However, the trade-off is for FCWs, where guaranteed return plans do not provide as consistently the high quality of benefits that is seen among pension plans.

[21] Note the rates offered by TX MRS differ from those offered by CDRS, but they are also designated by the employer. Similarly, the way we have captured the range of possible rates is reflected in the same fashion, with the "high credit" classes reflecting the highest possible rates and the "low credit" classes reflecting the lowest possible rates. However, one key distinction is that the "low credit" classes for MRS also reflect the lower 5.0% guaranteed return, while the "high credit" classes reflect the 7.0% guaranteed return that is available for all CDRS plans.

FIGURE 9: HOW WELL ARE OPEN DEFINED CONTRIBUTION PLANS SERVING WORKERS?

Open Defined Contribution Plans Only, By Career Duration



Among defined contribution plans, the real driving force behind both benefit quality and plan performance is contribution rates.

The best performing plans feature high member and high employer contributions to the plans, which are then able to grow over time. South Carolina RS's DC plans feature 9.0% member rates and 5.0% employer rates. Similarly, Florida RS's special risk classes have a 3.0% member rate that is then combined with 19.0% employer rates, giving a 22.0% combined rate.[22]

TABLE 4: BEST- AND WORST-PERFORMING DEFINED CONTRIBUTION PLANS, AVERAGED ACROSS ALL WORKER TYPES

1	South Carolina RS DC Plans*	99.96%	39	Alaska PERS DC State & Local Plans	65.71%
2	Florida RS DC Special Risk Classes*	94.89%	40	Richmond, Virginia RS DC General Employees	64.70%
3	Arizona CORP DC with Social Security	92.41%	41	Colorado PERA DC Plans*	64.50%
4	Florida RS DC Regular Classes*	90.73%	42	Alaska PERS DC Peace Officers and Firefighters	64.24%
5	Montana PERS DC	88.33%	43	Pennsylvania PSERS DC	62.66%
6	Florida RS DC Senior Management Class	87.46%	44	Arizona CORP DC without Social Security	60.50%
7	Utah RS Public Safety DC Tier 2	82.48%	45	Richmond, Virginia RS DC Police & Fire	60.19%
8	Pennsylvania SERS DC General	81.29%	46	Illinois SURS DC Retirement Savings Plan	57.90%
9	Indiana PERF DC Plans*	80.40%	47	Arizona PSPRS Plans without Social Security*	53.62%
10	Utah RS Fire DC Tier 2	79.19%	48	Utah RS Teacher DC Tier 2 without Social Security	41.16%

* Indicates more than one class of benefits being averaged.
Note: Score shown is the average percentage of available "Retirement Benefits Score" points earned by the plan.

[22] One reason that the South Carolina plans outperform the Florida Special Risk classes here is because South Carolina offers immediate vesting for the employer contributions, while Florida requires one year of service. The other reason why the South Carolina plans score higher is due to how we model DC plans' investment returns, which are assumed to be 100 basis points below the return assumption set by each retirement system's pension plan. In this case, SCRS uses a 7.0% assumed rate of return, which means that we assume the SCRS DC plans will return 6.0% over the long run. By contrast, FRS assumes 6.7%, which results in us assigning the DC plans a 5.7% return over-time.

Beyond the influence of contribution rates, other plan features do play a prominent role. For instance, the Arizona PSPRS plans feature 9% member and 9% employer contribution rates, but their 10-year graded vesting requirement offsets some of those benefits in both the vesting and refunding policy elements important to STWs and MTWs.

The effect of participation in Social Security is again a driving factor in stronger benefit adequacy scores (as it helps with the overall goal of reaching a 70% replacement rate). This is illustrated by the contrast between the Arizona CORP tiers, where those with Social Security rank among the top performers while those not enrolled score among the worst plans. Moreover, Social Security benefits typically follow a more linear accrual path, which means that those benefits are most impactful for the benefit adequacy of STWs and MTWs.

FIGURE 10: HOW WELL ARE OPEN HYBRID PLANS SERVING PUBLIC WORKERS?

Open Hybrid Plans Only, By Career Duration

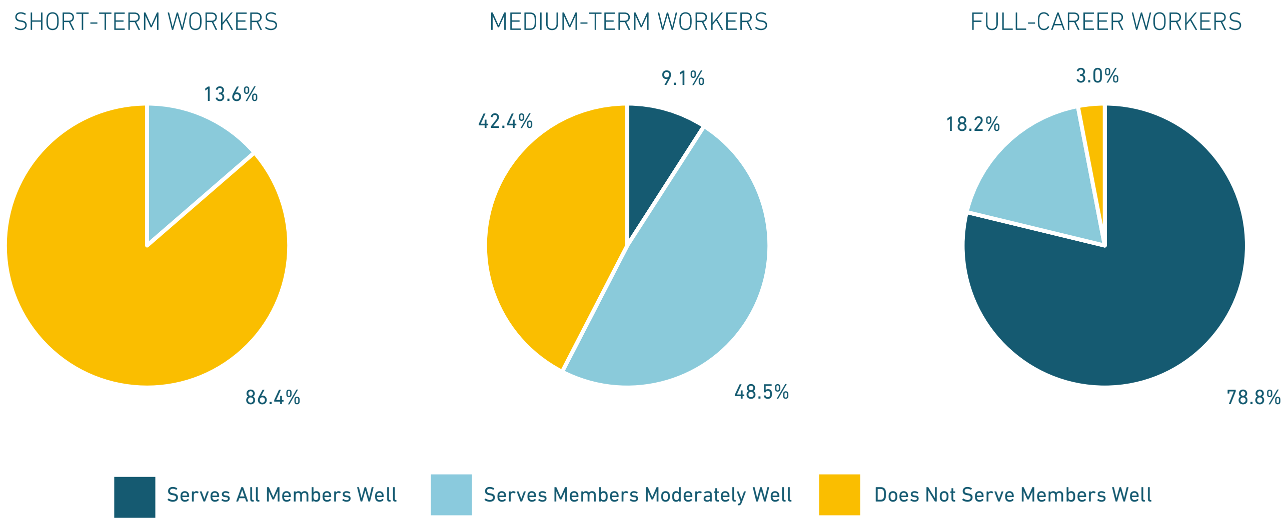


TABLE 5: BEST- AND WORST-PERFORMING HYBRID PLANS, AVERAGED ACROSS ALL WORKER TYPES

1	South Dakota Generational Plans*	81.71%	57	Utah Tier 2 Teacher Hybrid without Social Security	51.63%
2	Virginia VRS General Hybrid	76.61%	58	Rhode Island ERSRI State Correctional	51.17%
3	Oregon OPSRP Civilian Plans*	74.97%	59	Utah Tier 2 Public Safety and Fire Plans without Social Security*	50.41%
4	Georgia ERS Hybrid Plans*	73.59%	60	Rhode Island MERS Police & Fire Post-2015*	49.79%
5	Washington SERS Hybrid Plan 3	72.80%	61	Rhode Island ERSRI Teachers Schedule B2 with Social Security	49.17%
6	Virginia VRS Teachers Hybrid	71.47%	62	Rhode Island ERSRI Teachers B2 and B3 Plans without Social Security*	41.09%
7	Oregon OPSRP Police & Fire Plans*	70.52%	63	Kentucky TRS Hybrid University	39.17%
8	Washington PERS Hybrid Plan 3	69.76%	64	Philadelphia, PA Employees 2016 Tier Plans*	33.82%
9	Rhode Island MERS General Schedule 4 COLA with Social Security	69.49%	65	Michigan Municipal Hybrid Plans*	30.52%
10	Utah Hybrid Tier 2 Plans*	68.73%	66	Philadelphia, PA Employees of the Sheriffs 2016 Tier	24.84%

* Indicates more than one class of benefits being averaged.

Note: Score shown is the average percentage of available "Retirement Benefits Score" points earned by the plan.

Hybrid plans are thought by many to be a sensible balance between the trade-offs associated with pension and defined contribution frameworks. Members receive a minimal guaranteed benefit while the downside risk to plan sponsors of providing that benefit is at least partially offset by the division of the benefit into multiple plan types.

However, when looking at the quality of benefits offered by Hybrid plans, the performance is generally slightly worse than pensions. For most Hybrid plans STWs are still largely not served well, and FCWs continue see a strong benefit. The main improvement of Hybrid plans compared to pension plans on average is some substantial improvements for MTWs. This doesn't mean that Hybrid plans can't work, only that the plan designs for most could benefit from significant improvements.

One positive outlier showing that Hybrid plans can serve workers well is South Dakota's Generational Plans, which feature a very strong pension component paired a much smaller defined contribution element. Members contribute 6.0% to their pension benefit and are not required to make contributions to their individual retirement accounts (although they can make optional contributions). These member contributions combined with a 6.2% employer contribution to the pension and an automatic 1.5% contribution by employers to each member's DC plan. While the DC element of this plan would not provide a substantial benefit on its own, when combined with a strong pension, a three-year vesting requirement for both components, and a 3.5% COLA, it becomes clear that these plans would provide strong benefits for both MTWs and FTWs. Their performance for STWs would likely be comparable to a pension, but the shortened vesting helps to elevate those scores.

Among the worst performing hybrid plans is Kentucky TRS Hybrid University, a tier that was only introduced in 2022 and offers members a combination of a pension and a guaranteed return account. For the most part, the policy elements of this plan are middle-of-the-road, with a five-year vesting requirement, a 1.5% COLA (for the pension component), and a 2.5% crediting interest rate for member contributions in the case of a refund. However, his plan struggles with the core benefit provisions. Specifically, members contribute 5.0% to the pension and 2.0% to the GR component which are met with another 5.75% to the pension and 2.0% to the GR component from employer contributions. At face value, these aren't problematic, but the benefit multiplier for the pension peaks at 1.5% only after members have completed more than 25 years of service. Moreover, the GR component sets the guaranteed interest at the rolling five-year average of 30-year treasury bonds. At the time of this analysis the treasury rates only afforded a 2.51% guaranteed return, which is essentially equal to the 2.5% inflation assumption held by the plan. This means that the GR component of the plan is expected to keep pace with inflation and not accumulate much more.[23]

[23] Note that if treasury bond rates increase, the guaranteed interest component for members' individual accounts will increase, which would then raise the value of the benefit. Similarly, if the inflation assumption is not raised, then it is feasible that the score awarded to Kentucky TRS Hybrid University would also increase.

2.2 BEST- AND WORST PERFORMING OPEN RETIREMENT PLANS, BY CAREER DURATION

There is value in looking at the Benefits Scores for plans by framework type (as it helps inform how much the design framework matters), as aggregate average scores in the above tables have limited interpretability when they average across our worker profiles. Workers shift over time in the elements of their retirement plan that matter most, as shorter-term workers will prefer portability of benefits over locking in guaranteed income, while individuals working a full career are likely to not care as much about portability, and instead will prioritize plan elements like COLA rules.

Reviewing the best and worst plans by career duration improves the ability to assess the quality of the plan by looking closer and who is being served well. Tables 6 through 8 show the best- and worst-performing retirement plans on RSR metrics across all plan types, age groups, and occupations.

TABLE 6: BEST- AND WORST-PERFORMING PLANS FOR SHORT-TERM WORKERS

		Plan Type	Benefits Score			Plan Type	Benefits Score
1	South Carolina RS DC General and Teacher Classes*	DC Plan	99.89%	**554**	Illinois SERS General Tier 2	Pension	6.11%
2	Florida RS DC Special Risk Classes*	DC Plan	92.19%	**555**	Baton Rouge, Louisiana Parish ERS Post-2015 Plans*	Pension	6.01%
3	Arizona CORP DC with Social Security	DC Plan	87.22%	**556**	Michigan Municipal Hybrid NRA65 M1.75 and M1 GV Plans*	Hybrid	5.95%
4	Florida RS DC Regular Classes*	DC Plan	83.09%	**557**	Louisiana LASERS Hazardous Duty Post-2015	Pension	5.64%
5	Texas CDRS High Credit Plans with Social Security*	GR Plan	82.15%	**558**	Louisiana Municipal Police Post-2013	Pension	5.19%
6	Montana PERS DC	DC Plan	80.00%	**559**	Arkansas LOPFI Post-2013 with Social Security	Pension	5.07%
7	Florida RS DC Senior Management Class	DC Plan	79.11%	**560**	Detroit, Michigan Fire and Police C1 2015 Plans*	Pension	4.63%
8	Kentucky SPRS Tier 3	GR Plan	78.93%	**561**	Detroit, Michigan General C1 Plans with Social Security*	Pension	4.49%
9	Nebraska PERS State Division CB	GR Plan	77.05%	**562**	Louisiana SPRS	Pension	4.29%
10	Kentucky CERS Tier 3 Plans*	GR Plan	74.34%	**563**	Detroit, Michigan General C1 Plans without Social Security*	Pension	2.59%

* Indicates more than one class of benefits being averaged.
Note: Score shown is the average percentage of available "Retirement Benefits Score" points earned by the plan.

The performance of plans for Short-Term Workers is, in almost every case, a function of the member contribution rates, refunding policy, and, to a lesser degree, the vesting policies. To this end, defined contribution and guaranteed return plans tend to be the best performers among STWs, as these plans often have very short vesting and the refunding policies are often the full accrued benefit. In addition, these plan types also tend to feature higher member contribution requirements, which further enhance their performance.

Among Medium-Term Workers many of the factors that drove high scores for STWs still ensure many of the same plans are top performers. But, what is of interest here is that several pensions and hybrid plans have begun to rise to the top-performers list as members' careers progress. In addition, MTWs are the first instance where COLAs begin to play a role in the benefit assessment, and that the value of members' benefits increase, the importance of a COLA becomes more prominent.

TABLE 7: BEST- AND WORST-PERFORMING PLANS FOR MEDIUM-TERM WORKERS

		Plan Type	Benefits Score			Plan Type	Benefits Score
1	South Carolina RS DC General and Teacher Classes*	DC Plan	100.00%	554	Detroit, Michigan Fire and Police C1 2015 Plans*	Pension	20.29%
2	Florida RS DC Special Risk Classes*	DC Plan	92.47%	555	Louisiana LASERS Regular	Pension	19.71%
3	Arizona CORP DC with Social Security	DC Plan	90.00%	556	Florida RS Pension Senior Management Class	Pension	19.18%
4	Florida RS DC Regular Classes*	DC Plan	89.11%	557	Detroit, Michigan General C1 Plans without Social Security*	Pension	17.90%
5	California UCRS Safety PEPRA with Social Security	Pension	85.58%	558	New Jersey SPRS Tier 2	Pension	17.86%
6	Montana PERS DC	DC Plan	85.00%	559	Baton Rouge, Louisiana Parish ERS Post-2015 Plans*	Pension	16.63%
7	Georgia TRS with Social Security	Pension	84.96%	560	Michigan Municipal Hybrid NRA65 M1.5 GB EMH	Hybrid	16.46%
8	Mississippi PERS Plans*	Pension	83.35%	561	Kansas City, Missouri Civilian Police Tier 2	Pension	16.40%
9	South Dakota RS Generational Plan Public Safety	Hybrid	83.33%	562	Birmingham, Alabama RRS Police and Fire Post-2017 Plans*	Pension	16.30%
10	Florida RS DC Senior Management Class	DC Plan	83.27%	563	Michigan Municipal Hybrid Plans*	Hybrid	11.44%

* Indicates more than one class of benefits being averaged.
Note: Score shown is the average percentage of available “Retirement Benefits Score” points earned by the plan.

Among Full-Career Workers the story is very different than the other profiles. First, 116 of the plans available to new hires receive a full score. (For FCWs their score is determined by two metrics, whether the benefit offered provides a 70% replacement rate at age 67 and the quality of the COLA being offered.)[24] With this in mind, and with so many plans receiving top marks, Table 8 takes a slightly different approach than the prior tables and instead looks at a few plans that score in different ranges of possible points.

[24] We first note that we provide five bonus points to plans whose replacement rate is 80% or more at age 67, which is enough to completely offset the five points available for the COLA policy. Second, we also flag that DC and GR plans often do not have a COLA, so they are not scored on a COLA policy, making the value of the benefit even more important for those plan types. For a full breakdown, please consult the methodology.

TABLE 8: BEST- AND WORST-PERFORMING PLANS FOR FULL CAREER WORKERS

	Plan Type	Benefits Score
116 plans had a perfect score for full-career workers *See full list*		
172 plans scored between 90% and 99.99%		
North Dakota PERS DC	DC Plan	99.06%
Montana PERS Pension	Pension	95.00%
Louisiana Parochial Schools Plan B	Pension	90.00%
166 plans scored between 70% and 89.99%		
Indiana TRF "My Choice" DC	DC Plan	89.97%
San Diego, California City Pension Fire Post-2012	Pension	80.21%
Iowa IPERS Sheriffs	Pension	70.09%
82 plans scored between 50% and 69.99%		
Hawaii ERSHI Police & Fire	Pension	69.80%
Louisiana LASERS Hazardous Duty Post-2015	Pension	60.07%
Michigan Municipal Hybrid NRA65 M1.75 GV	Hybrid	51.67%
27 plans scored less than 50%		
Massachusetts SERS State Police	Pension	49.82%
Texas MRS Low-Credit Plans without Social Security*	GR Plan	44.12%
New Jersey SPRS Tier 2	Pension	28.37%

* Indicates more than one class of benefits being averaged.
Note: Score shown is the average percentage of available "Retirement Benefits Score" points earned by the plan.

Beyond the sizable number of perfect scores, the second thing Table 8 indicates is that most of the plans that didn't score 100% are still performing very well. In fact, 447 plans did not receive a perfect score, but 338 of those plans (75.6%) scored 70% of the eligible points or more. This means that, even in cases where the benefit isn't reaching the full savings target, FCWs are still receiving a substantial benefit that replaces a significant portion of their pre-retirement income.

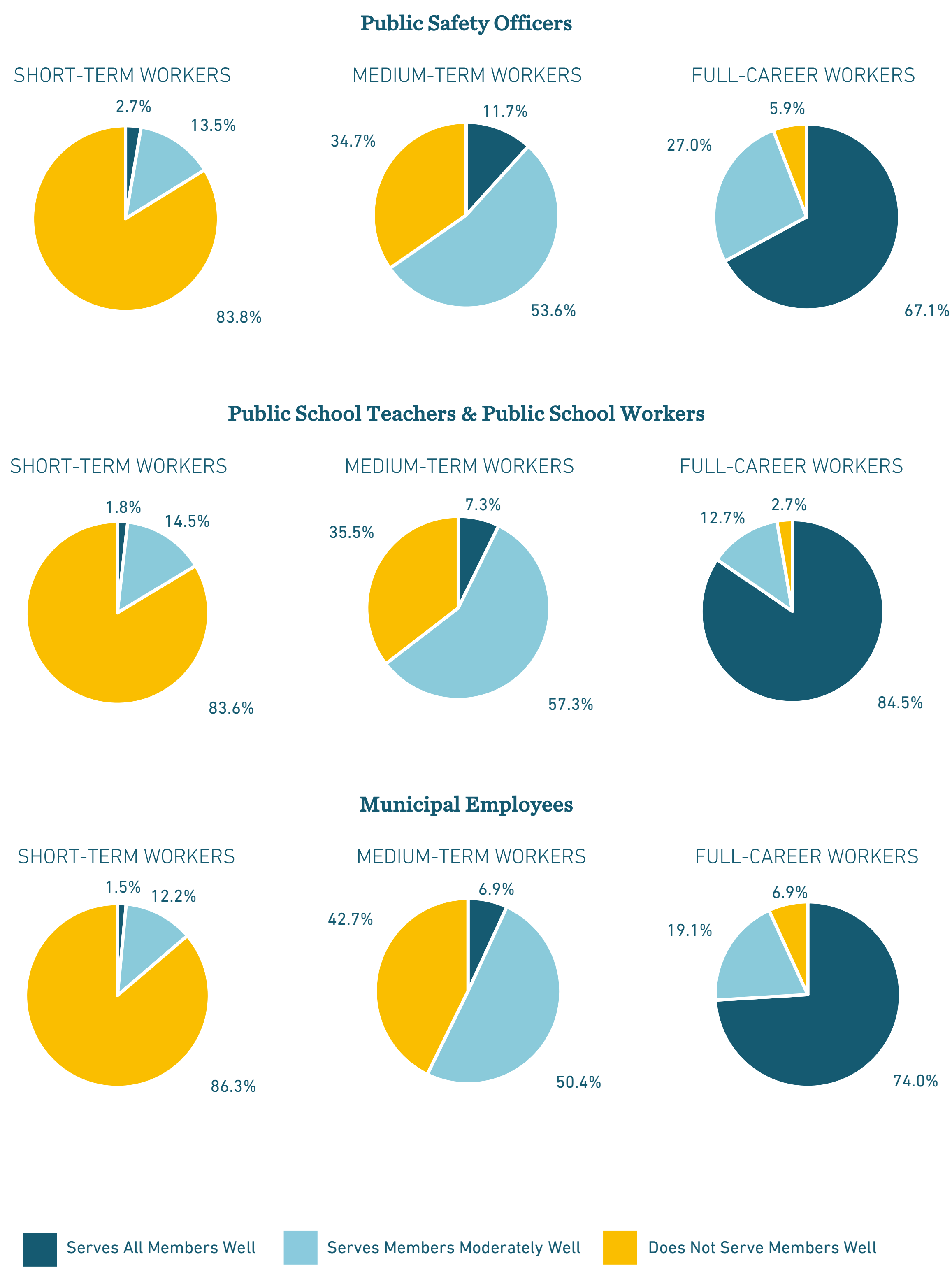
Among those plans that perform the worst, we see two of the prior poor-scoring plans: New Jersey SPRS Tier 2 and Texas MRS Low-Credit Plans without Social Security. In the case of New Jersey, as we flagged previously, in addition to several policy issues, the benefit is capped at 50%, meaning that it was not possible for it to reach our 70% target. For the Texas MRS plans, the combined low contribution rates and lower crediting rate simply do not provide enough funds for the benefit to accumulate to reach the savings target.

2.3 HOW WELL OPEN RETIREMENT PLANS ARE SERVING WORKERS, BY OCCUPATION

As one last thing, it is important to note that in addition to plan type, there are also differences in plan design elements based on the occupation of workers being covered. For example, public safety workers (police and firefighters most frequently) with pension plans typically have larger benefit multipliers and earlier retirement ages than public school teachers. For DC plans, in some states, the employer contribution rate can vary by occupation. As a result, it is informative to explore how well different occupations are served by the benefits they receive broken out by worker group. The distribution of how well each worker profile is served broken out by occupation is presented Figure 11, but more thorough analyses will be offered in a subsequent report.

FIGURE 11: HOW WELL ARE OPEN RETIREMENT PLANS SERVING PUBLIC SAFETY, PUBLIC SCHOOL, AND MUNICIPAL EMPLOYEES?

All Plan Design Types, By Occupation & Career Duration



Part 3. State of Retirement Security for Legacy Public Employees

This edition of the RSR provides a significant expansion of available data on public employee retirement plans though is the addition of "legacy" tiers of benefits — e.g., benefits that are no longer offered to new public employees. These data allow for the analysis of the quality of benefits for more than 1,300 prior tiers, which can be used to assess whether the quality of benefits have, on average, improved or worsened over time. While not all plans have a direct predecessor in our data (some plans have offered the same benefit for decades), a thorough examination of past benefit offerings can help shed some light on some of the ways public retirement has changed.

Following from the prior section, this first analysis of legacy benefits focuses on identifying the best- and worst-performing retirement plans on RSR metrics. Table 9 (next page) presents these results for each state averaging across all plans, worker types, entry ages, plan designs, and occupations.[25]

The driving factors behind the best performing states remain the same as we identified in the prior section, namely benefit provisions that increase scores for Short-Term and Medium-Term Workers. As a result, Table 9 indicates that a very similar set of states are the top performers. In fact, out of the top 5 states identified in Table 1, the only state to not have a comparable score for its legacy plans is Oregon (whose legacy plans rank 15th). For Oregon, the PERS legacy plans were pensions that had more back-loaded benefits which are less portable and serve STWs less effectively, which resulted in a lower STW benefit score and their lower ranking.

A similar reasoning exists for South Carolina's drop from the top spot in Table 1 to fourth place here, as the DC plans that were the among highest performing plans in the RSR for STWs and MTWs simply did not exist previously. Also, among the top 5 states, both Wyoming and Mississippi once again perform well largely due to the significant replacement effect of Social Security benefits for public employees in those states.

Another takeaway from Table 9 is that a much larger share of plans offered are pensions. This is largely an artifact of history, as there were very few DC plans or GR plans prior to the Global Financial Crisis (though there were some, like a DC plan in Michigan from the 1990s and multiple guaranteed return plans in Texas). As such, even though there are numerous DC, GR, and Hybrid plans that have been introduced over the last two decades, there are relatively few non-pension plans that are no longer available to new hires. Specifically, this update to the RSR includes 1,184 legacy pension tiers and 23 legacy hybrid tiers.[26]

[25] Table 11, like Table 3 in the prior section, does not include plans exclusively for judges or elected officials.

[26] The count of plans in the tables do not sum to these totals because we excluded elected official and judge plans from our analyses. Those plans are, however, available to review in the RSR interactive.

TABLE 9: LEGACY PLAN PERFORMANCE BY STATE

	Average Benefit Score					
State	STW	MTW	FCW	Overall	Tiers	Types Available
South Dakota	56.7%	70.7%	100.0%	75.8%	12	Pension
Delaware	52.7%	73.8%	99.2%	75.2%	8	Pension
Wyoming	53.3%	69.6%	100.0%	74.3%	3	Pension
South Carolina	51.9%	69.4%	98.3%	73.2%	4	Pension
Mississippi	47.1%	76.6%	94.5%	72.7%	12	Pension
Washington	47.7%	72.0%	91.8%	70.5%	5	Pension
Montana	43.9%	67.4%	99.0%	70.1%	7	Pension
Utah	44.5%	70.5%	90.5%	68.5%	20	Pension
Idaho	44.1%	61.6%	94.4%	66.7%	25	Pension
Maryland	42.5%	65.3%	91.5%	66.4%	24	Pension
North Carolina*	40.7%	60.5%	98.1%	66.4%	7	Pension
New Mexico	40.3%	67.1%	90.4%	65.9%	36	Pension
Alaska	43.4%	67.3%	87.1%	65.9%	11	Pension
Vermont	42.9%	60.2%	93.1%	65.4%	3	Pension
Oregon	38.3%	59.7%	95.0%	64.3%	14	Pension & Hybrid
New York	41.3%	63.8%	87.6%	64.2%	107	Pension
Virginia	41.9%	62.7%	86.3%	63.6%	26	Pension
Wisconsin	36.0%	55.6%	97.8%	63.1%	21	Pension
Minnesota	44.5%	52.8%	91.6%	63.0%	11	Pension
California	42.5%	61.6%	84.3%	62.8%	160	Pension
Arkansas	31.2%	59.3%	97.8%	62.8%	9	Pension
Kentucky	43.6%	55.0%	89.4%	62.7%	17	Pension
Florida	28.9%	67.8%	90.3%	62.3%	15	Pension
Connecticut	34.3%	65.1%	86.8%	62.1%	18	Pension
Arizona	32.4%	61.9%	90.0%	61.4%	24	Pension
New Hampshire	37.0%	59.4%	85.7%	60.7%	16	Pension
Hawaii	33.2%	57.7%	91.1%	60.7%	14	Pension
District of Columbia	26.4%	57.4%	95.1%	59.6%	5	Pension
West Virginia	39.5%	49.4%	88.9%	59.3%	3	Pension
Indiana	25.3%	57.7%	92.2%	58.4%	1	Hybrid
Nebraska	27.0%	56.9%	88.3%	57.4%	23	Pension & GR
North Dakota	43.5%	46.1%	81.9%	57.1%	9	Pension & DC
Missouri	33.0%	53.2%	84.7%	57.0%	41	Pension
Oklahoma	29.1%	45.3%	95.4%	56.6%	28	Pension
Tennessee	31.1%	54.1%	83.4%	56.2%	38	Pension & Hybrid
Kansas	35.3%	48.3%	83.7%	55.8%	22	Pension
Colorado	38.3%	47.9%	76.1%	54.1%	32	Pension
Illinois	21.4%	53.2%	87.3%	54.0%	28	Pension
Alabama	30.4%	47.2%	77.8%	51.8%	10	Pension
Ohio	29.4%	45.6%	79.2%	51.4%	40	Pension & Hybrid
Georgia	24.8%	52.3%	75.0%	50.7%	17	Pension
Maine	27.0%	46.5%	72.1%	48.5%	20	Pension
New Jersey	22.8%	38.2%	82.2%	47.8%	22	Pension
Michigan	21.7%	42.4%	78.8%	47.6%	59	Pension & Hybrid
Iowa	25.3%	32.6%	80.2%	46.0%	5	Pension
Rhode Island	24.7%	36.1%	75.9%	45.6%	33	Pension, DC, & Hybrid
Texas	22.7%	41.9%	67.9%	44.2%	63	Pension
Massachusetts	21.5%	41.7%	65.0%	42.7%	13	Pension
Pennsylvania	22.3%	35.6%	65.1%	41.0%	33	Pension
Nevada	19.4%	34.1%	68.2%	40.6%	10	Pension
Louisiana	11.2%	32.1%	66.5%	36.6%	33	Pension

* North Carolina does not have legacy plans. The totals here reflect their current, open tiers as presented in Table 1. The valuation reports in 2011 suggested that there were pre-2011 and post-2011 tiers, but those differences are not repeated in any other valuation reports. Moreover, the plan provisions match for all other years.
Note: Scores shown are the average percentage of available "Retirement Benefits Score" points earned by the plan for each worker profile. The "Overall" score is the average across all three worker profiles.

Another reason why there are so many fewer legacy DC and GR plans is due to differences in the benefit protections afforded to their members:

- For most pension plans, if plan trustees or the legislature decide that they would like to make significant changes (most frequently in an effort to reduce costs), that can require the creation of a new tier of benefits.
- The prior pension benefit provisions are, in many cases, set as part of a member's terms of employment and are protected under various contracts clauses in state and federal law.
- So, to increase the member contribution rate, change a benefit multiplier, or reduce a COLA, these plans often must create a new tier of benefits only available to those hired after a set date and then uphold the benefits promised under the prior tier.

By comparison, DC and GR plans offer different guarantees that pertain to the value of the benefit, but that do not provide a set benefit amount:

- For a DC plan, the only guarantee is that the employer will pay the full employer contribution in accordance with the plan provisions. Beyond that, the value of the benefit depends on members' contributions and each individual member's investment returns.
- For a GR plan, the employers guarantee both their contributions to the individual member retirement accounts and, more importantly, a minimum investment return the member's savings will accrue each year (often with an upside sharing provision). As such, while a GR plan does provide a "guaranteed benefit" in the sense that the returns are guaranteed, the final value of the benefit again depends on member contributions and, to a lesser degree, investment performance.

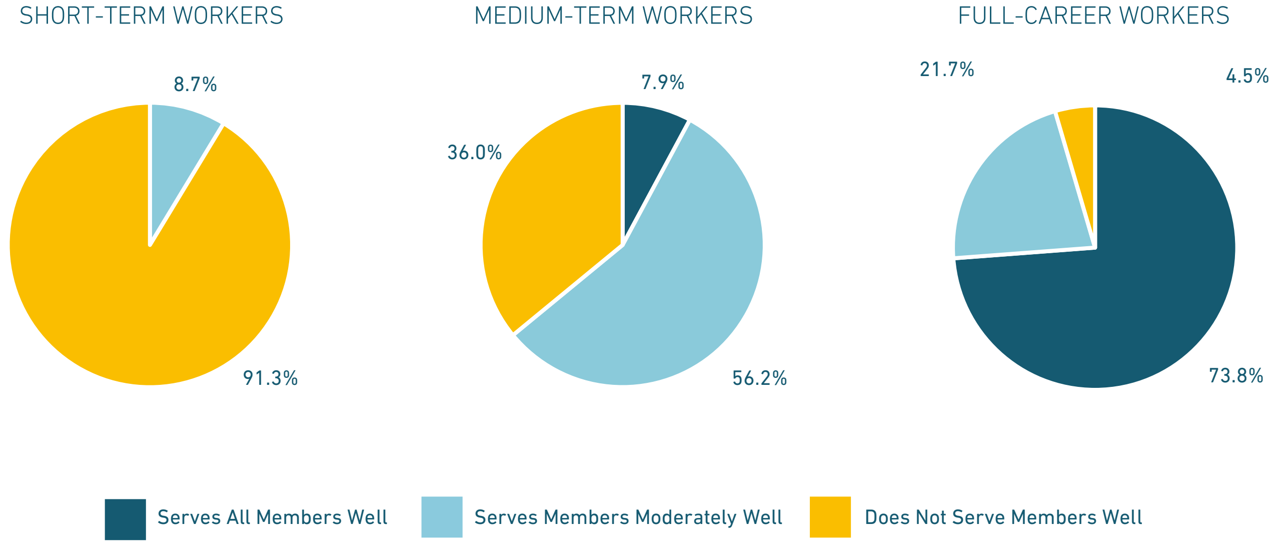
These differences in guarantees are notable here because the specific provisions regarding member contribution rates and other benefit provisions are not considered to be contractual agreements between the plans and their members, meaning that it is possible for plan trustees or legislatures to make changes to the plan provisions far more easily. These reduced barriers to changing the plans mean that new tiers do not need to be created whenever a plan is changed, which, in turn, means that many DC and GR plans in the RSR are the same ones that were initially introduced by their respective retirement systems, whether they have been modified or not.

To be more specific to our analyses here, there is only one legacy GR plan (Nebraska PERS State Cash Balance Pre-2007) and two legacy DC plans (North Dakota PERS DC Pre-2020 and Rhode Island ERSRI DC State General 20 YOS by 2012). The GR plan was found to serve Short-Term and Medium-Term Workers moderately well, but improves for Full-Career workers, such that it serves them well. The DC plans were a bit more varied. For Short-Term Workers, one plan serves members moderately well, while the other does not serve its members well. When looking at Medium-Term Workers, neither plan serves their members well. And for Full-Career Workers, one of the two serves its members well, while the other only serves its members moderately well.

As one final, but perhaps more telling, result from Table 9, it is notable how even the best performing plans only achieve overall scores averaging just above 80% across all three worker profiles. This speaks to the backloading of pension benefits and how, in many cases, even legacy tiers of benefits did not require sufficiently large member contributions to drive higher Benefit Adequacy Scores for Short-Term and Medium-Term Worker profiles.

Just like with open plans, when looking at how well legacy retirement plans are serving workers by career duration, FCWs are clearly the favorites. Figure 12 shows that for Short-Term Workers, over 90% (1,082 plans to be specific) of the plans score less than 50% of the eligible points available, which would result in them being classified as "does NOT serve members well." If we move up to Medium-Term Workers, we see how the legacy tiers have improved in quality as their Benefit Adequacy Scores catch up to our savings target. For the MTW profile, 95 plans achieve more than 75% of eligible points and are classified as "serves all members well", while 670 plans fall between 50% and 75% of eligible points to receive the "serves members moderately well" designation. Only roughly 1/3 of the plans still score below 50% of eligible points.

FIGURE 12: HOW WELL ARE LEGACY RETIREMENT PLANS SERVING PUBLIC WORKERS?
All Plan Design Types, By Career Duration



3.1 BEST- AND WORST PERFORMING LEGACY RETIREMENT PLANS, BY DESIGN FRAMEWORK

While there are limited defined contribution and guaranteed return plans among the cohort of legacy retirement benefits, there are sufficient pension and hybrid plans to review in a consideration of where the best and worst performing plans are located. Table 10 shows the overall performance for the 10 best, and 10 worst legacy pension plans and Figure 13 below illustrates the distribution of the pension plans' benefit quality over the different worker profiles.

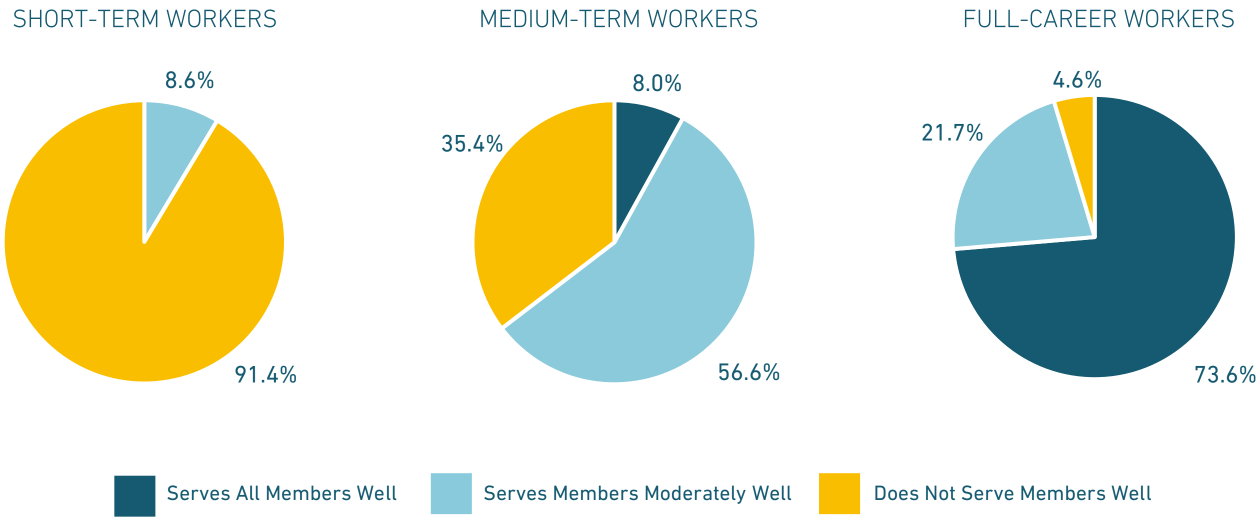
TABLE 10: BEST- AND WORST-PERFORMING LEGACY PENSION PLANS, AVERAGED ACROSS ALL WORKER TYPES

1	Mississippi PERS Pre-2007 Tiers with Social Security*	81.56%	**1176**	Birmingham, AL RRS P&F Pre-2017 Tiers*	29.44%
2	South Dakota RS Public Safety Foundational Pre-2008	81.39%	**1177**	Louisiana LASERS Miscellaneous Public Safety Tiers*	29.34%
3	South Dakota RS School Safety Class B Tiers*	80.89%	**1178**	Louisiana Parochial Plan B Pre-2007	28.48%
4	California UCRS Public Safety with Social Security	80.86%	**1179**	Kansas City, Missouri City Civilian Police Tier 1	28.07%
5	Maryland Correctional Employees Pre-2012	80.80%	**1180**	Detroit City Police and Fire C1 Tiers*	26.70%
6	Oregon PERS School District Tier 1	80.48%	**1181**	Providence, RI RRS Class B Tiers*	26.69%
7	California Kern CERA Safety Tier 1 with Social Security	79.93%	**1182**	New Jersey State Police Tier 1 Pre-2010	26.33%
8	Utah Public Safety Contributory Tiers*	79.43%	**1183**	Kansas City, Missouri City Police Tier 1 without Social Security	24.86%
9	California Contra Costa CERA CCCFPD Tier 1 with Social Security	79.15%	**1184**	Texas LECOS Tiers without Social Security*	21.36%
10	New Mexico PERA Detention Officers Pre-2013 with Social Security	79.11%	**1185**	Philadelphia Miscellaneous Municipal Tiers*	15.59%

* Indicates more than one class of benefits being averaged.

Note: Score shown is the average percentage of available "Retirement Benefits Score" points earned by the plan.

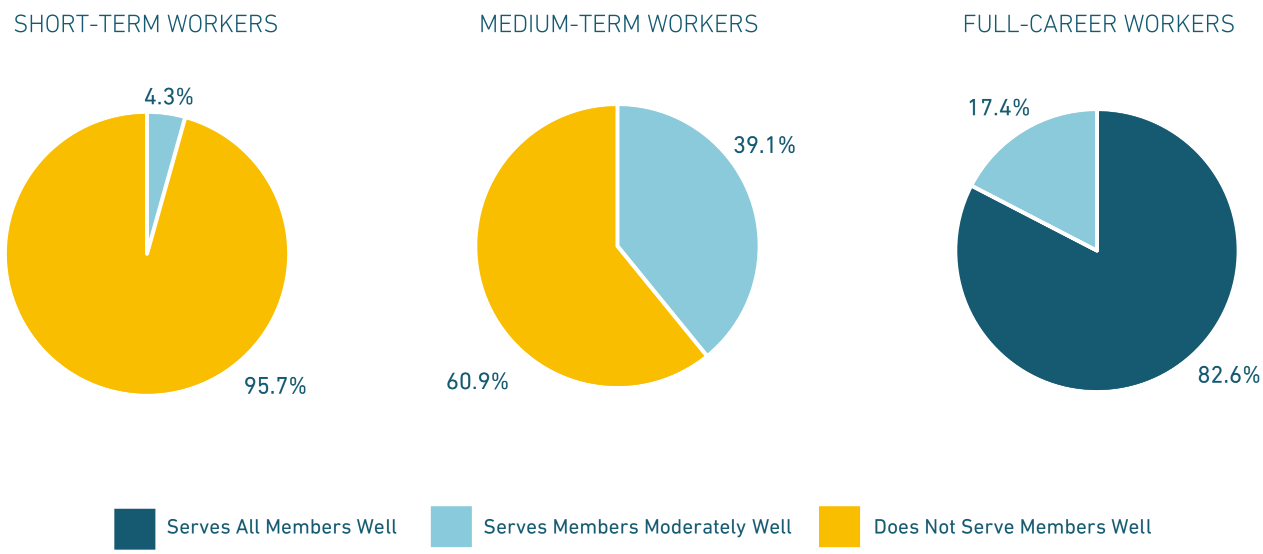
FIGURE 13: HOW WELL ARE LEGACY PENSION PLANS SERVING PUBLIC WORKERS?
Legacy Pension Only Plans, By Career Duration



It is noteworthy that 4.6% of legacy pension plans (55 plans) do not serve Full-Career Workers well. This finding is in line with the 5.0% of pension plans with the same designation among those currently offered to new employees documented in the prior section.

Figure 14 and Table 11 provide the overall performance for all the legacy hybrid plans included in the RSR.[27]

FIGURE 14: HOW WELL ARE LEGACY HYBRID PLANS SERVING PUBLIC WORKERS?
Legacy Hybrid Only Plans, By Career Duration



[27] There are 23 legacy hybrid classes of benefits, but 10 of them have been combined to result in the 13 that are listed in this table.

TABLE 11: BEST- AND WORST-PERFORMING LEGACY HYBRID PLANS, AVERAGED ACROSS ALL WORKER TYPES

1	Rhode Island MERS 2012 Plans with Social Security*	71.20%
2	Oregon PERS School District Tier 2	68.48%
3	Michigan MPSERS Pension Plus Pre-2018	63.12%
4	Indiana TRF Pre-1996	58.41%
5	Ohio STRS Hybrid Pre-2015	57.20%
6	Rhode Island MERS 2012 Plans without Social Security*	55.72%
7	Ohio PERS Combined Plans*	55.18%
8	Rhode Island ERSRI State Employee Plans*	50.71%
9	Rhode Island MERS Police & Fire Pre-2015 Plans*	49.32%
10	Memphis, Tennessee Hybrid General 2016 Plan	46.25%
11	Rhode Island ERSRI Teachers Plans with Social Security*	45.46%
12	Memphis, Tennessee Hybrid Police and Fire 2016 Plan	39.88%
13	Rhode Island ERSRI Teachers Plans without Social Security*	35.34%

* Indicates more than one class of benefits being averaged.
Note: Score shown is the average percentage of available "Retirement Benefits Score" points earned by the plan.

3.2 BEST- AND WORST-PERFORMING LEGACY RETIREMENT PLANS, BY CAREER DURATION

The aggregate average scores in the above tables only have limited interpretability because what a worker values in their retirement plan design shifts over their career. Tables 12 through 14 show the best- and worst-performing legacy retirement plans on RSR metrics across all plan types, age groups, and occupations.

TABLE 12: BEST- AND WORST-PERFORMING LEGACY PLANS FOR SHORT-TERM WORKERS

		Plan Type	Benefits Score			Plan Type	Benefits Score
1	Nebraska PERS State CB Pre-2007	GR Plan	69.96%	1201	Louisiana SPRS Pre-1978 and Pre-2011 Plans*	Pension	5.37%
2	South Dakota RS School and Public Safety Plans*	Pension	66.38%	1202	Philadelphia, PA Municipal 1987 Tier Plan Y	Pension	5.07%
3	Kentucky SPRS Tier 1 Pre-2008	Pension	61.40%	1203	Philadelphia, PA Uniformed Fire and Police 2010 Plans*	Pension	4.98%
4	Maryland CORS Pre-2012	Pension	60.72%	1204	Louisiana Municipal Police Pre-2013	Pension	4.89%
5	California UCRS Public Safety with Social Security	Pension	60.52%	1205	Philadelphia, PA Uniformed Fire and Police 1967 Plans*	Pension	4.53%
6	Kern County, California CERA Safety Tier 1 with Social Security	Pension	60.08%	1206	Philadelphia, PA Municipal 1967 Plans*	Pension	4.27%
7	Alameda County, CA CERA Safety Tier 2 with Social Security	Pension	58.93%	1207	Georgia ERS Pre-1982 and Pre-2009 Plans*	Pension	4.19%
8	Mississippi PERS General Pre-2007 Plans*	Pension	58.04%	1208	Detroit, Michigan Fire and Police C1 Pre-2015 Plans*	Pension	3.66%
9	Contra Costa County, CA CERA Plans with Social Security*	Pension	57.95%	1209	Philadelphia, PA Municipal 2010 Plans*	Pension	2.60%
10	Mississippi PERS Police & Fire Pre-2007	Pension	57.93%	1210	Hawaii ERSHI Teachers and General Non-Contributory Plans*	Pension	1.24%

* Indicates more than one class of benefits being averaged.

TABLE 13: BEST- AND WORST-PERFORMING LEGACY PLANS FOR MEDIUM-TERM WORKERS

		Plan Type	Benefits Score			Plan Type	Benefits Score
1	Mississippi PERS Pre-2007 and Pre-2011 Plans*	Pension	86.67%	1201	Kansas City, Missouri Police Tier 1 without Social Security	Pension	20.78%
2	Connecticut SERS Hazardous Tier 2A	Pension	86.16%	1202	Detroit, Michigan Fire and Police C1 Pre-2015 Plans*	Pension	20.29%
3	Oregon PERS School District Pension Tier 1	Pension	86.16%	1203	Iowa IPERS General Pre-2012	Pension	20.29%
4	New York City ERS General Sanitation 20 Tier 4	Pension	85.52%	1204	Birmingham, Alabama RRS Police and Fire Pre-2017 Plans*	Pension	19.35%
5	Utah RS Public Safety Contributory & Noncontributory Plans*	Pension	85.25%	1205	Kansas City, Missouri Civilian Police Tier 1	Pension	18.82%
6	Maryland CORS Plans*	Pension	83.33%	1206	Philadelphia, PA Uniformed Fire and Police 1987 Plans*	Pension	17.70%
7	Fairfax County, Virginia CERS School Plan A	Pension	83.33%	1207	Philadelphia, PA Municipal 1967 Tier without Social Security	Pension	16.27%
8	Connecticut SERS Hazardous Tier 1 and Tier 2 Plans*	Pension	83.20%	1208	Philadelphia, PA Uniformed Fire and Police 2010 Plans*	Pension	13.34%
9	New York City ERS General TBT Tier 4	Pension	82.83%	1209	Rhode Island ERSRI Correctional CO and CO1E Plans*	Pension	13.14%
10	California UCRS Public Safety with Social Security	Pension	82.07%	1210	Philadelphia, PPA Municipal 2010 Tier Plans*	Pension	9.78%

* Indicates more than one class of benefits being averaged.

TABLE 14: BEST- AND WORST-PERFORMING LEGACY PLANS FOR FULL CAREER WORKERS

	Plan Type	Benefits Score
245 plans had a perfect score for full-career workers See full list		
292 plans scored between 90% and 99.99%		
Milwaukee, Wisconsin County Plans*	Pension	99.94%
Arizona PSPRS Fire Tier 2 with Social Security	Pension	95.03%
New York SLRS Police and Fire Career Plan Tier 1	Pension	90.00%
456 plans scored between 70% and 89.99%		
Chicago, Illinois Teachers Tier 1	Pension	89.77%
Idaho PERSI Police & Fire Pre-1992 without Social Security	Pension	80.12%
Chicago, Illinois City Police 1966 Plan	Pension	70.03%
162 plans scored between 50% and 69.99%		
Atlanta, Georgia City Fire and Police Plans*	Pension	69.90%
Ohio SHPRS Pre-2021 without Social Security	Pension	59.58%
Kansas City, Missouri Civilian Police Tier 1	Hybrid	50.92%
55 plans scored less than 50%		
New Jersey SPRS Tier 1 Pre-2010	Pension	49.31%
Memphis, Tennessee 1978 Plans*	Pension	44.65%
Texas LECOS Legacy Plans without Social Security*	Pension	17.88%

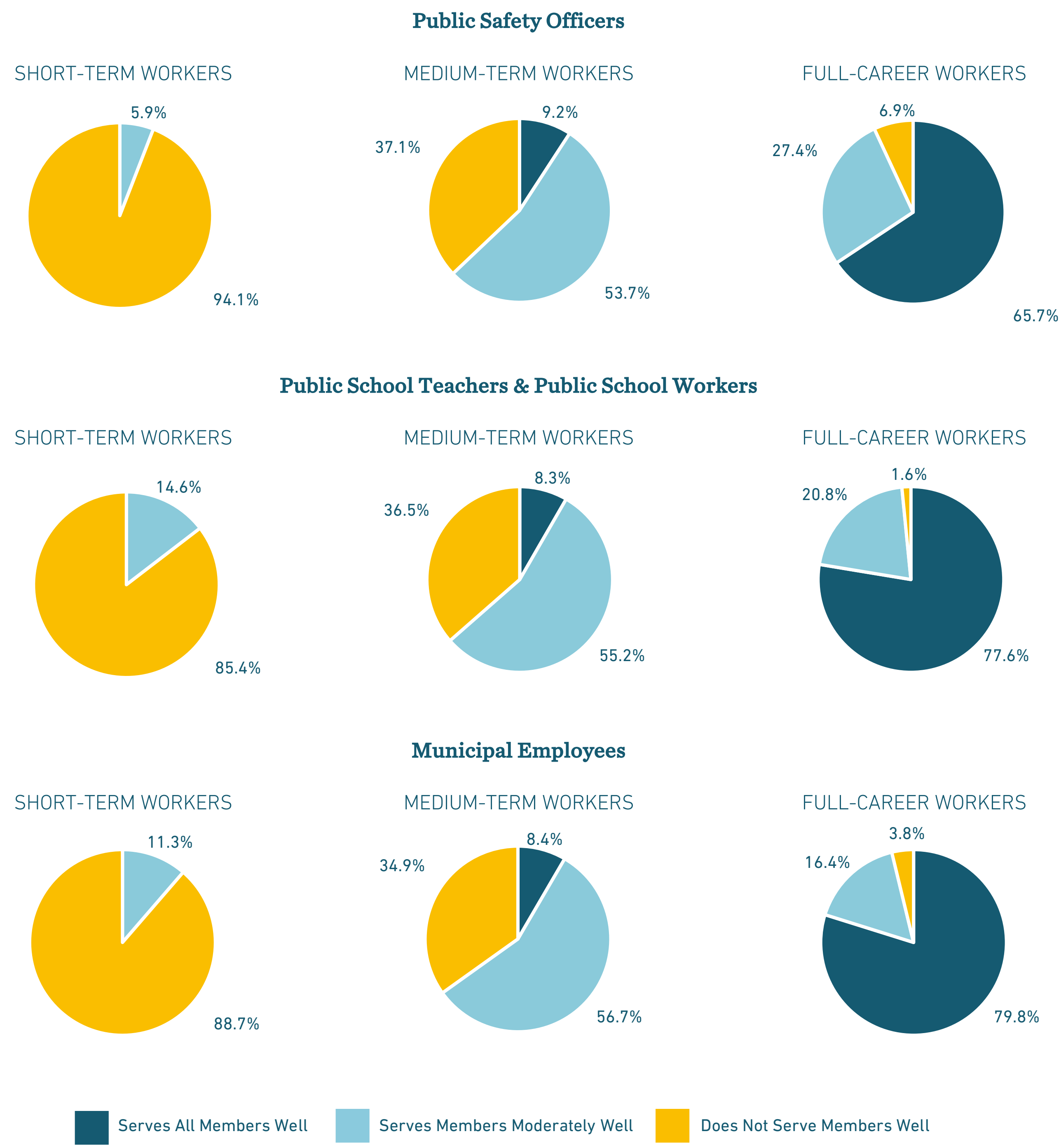
* Indicates more than one class of benefits being averaged.
Note: Score shown is the average percentage of available "Retirement Benefits Score" points earned by the plan.

3.3 HOW WELL RETIREMENT PLANS ARE SERVING WORKERS, BY OCCUPATION

Legacy plans vary in plan design elements even within the same plan type framework, just like open plans. And benefit provisions for legacy plans also have some commonalities based on the occupation of workers being covered. Figure 15 illustrates how well different occupations are served (averaging across all entry ages and plan types), broken out by worker group:

FIGURE 15: HOW WELL ARE LEGACY RETIREMENT PLANS SERVING PUBLIC SAFETY, PUBLIC SCHOOL, AND MUNICIPAL EMPLOYEES?

All Plan Design Types, By Occupation & Career Duration



Part 4. Comparing Legacy and Open Plan Benefit Values

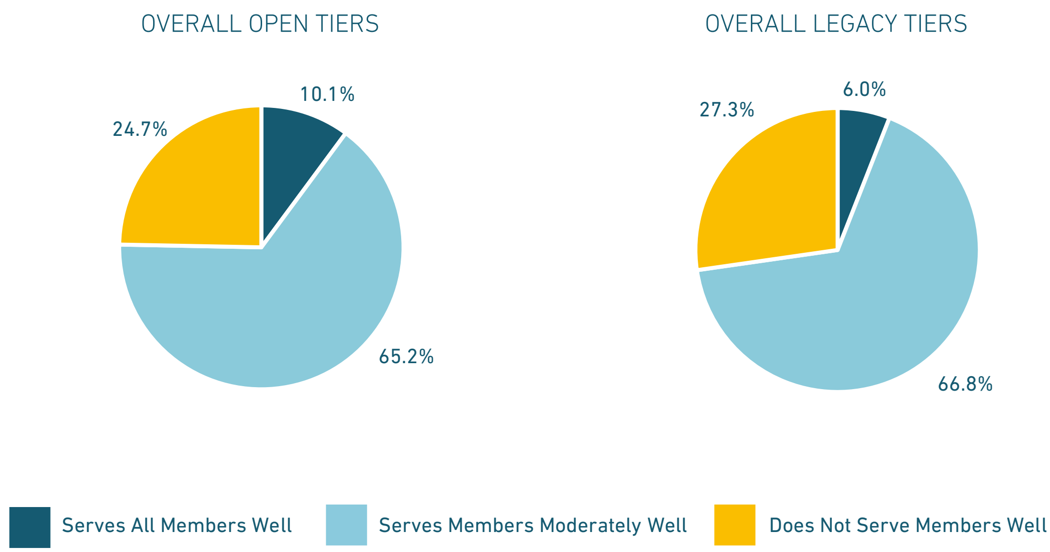
There are different ways to compare legacy retirement plans and open retirement plans. At least three key points of comparison are (1) change in total value, (2) change in types of retirement plans offered, and (3) change in how well the plans are serving members.

Part 1 in this paper addressed this first comparison approach and showed how the average expected lifetime value for Full-Career Workers has been declining over the last two decades, as states have opened new plans with lower benefit values than legacy plans. Parts 2 and 3 of this paper documented data showing a diversification in the types of retirement plans being offered — notably legacy plan are primarily pensions (97.9% of all plan offerings) with a few hybrids while open plans are robustly distributed across pensions, defined contribution plans, hybrids, and some guaranteed return plans.

The last approach, comparing plans based on how well they are serving members, is among the most important perspective to takes because it zooms in closer on who the "winners and losers" are in the specific way that states have replaced legacy plans with open plans. Figure 16 sets the distributions of RSR assessments side-by-side to see how the open and legacy plans stack up.

FIGURE 16: COMPARING HOW WELL WORKERS ARE SERVED BY OPEN PLANS COMPARED TO LEGACY PLANS

All Plan Types, by Overall Average

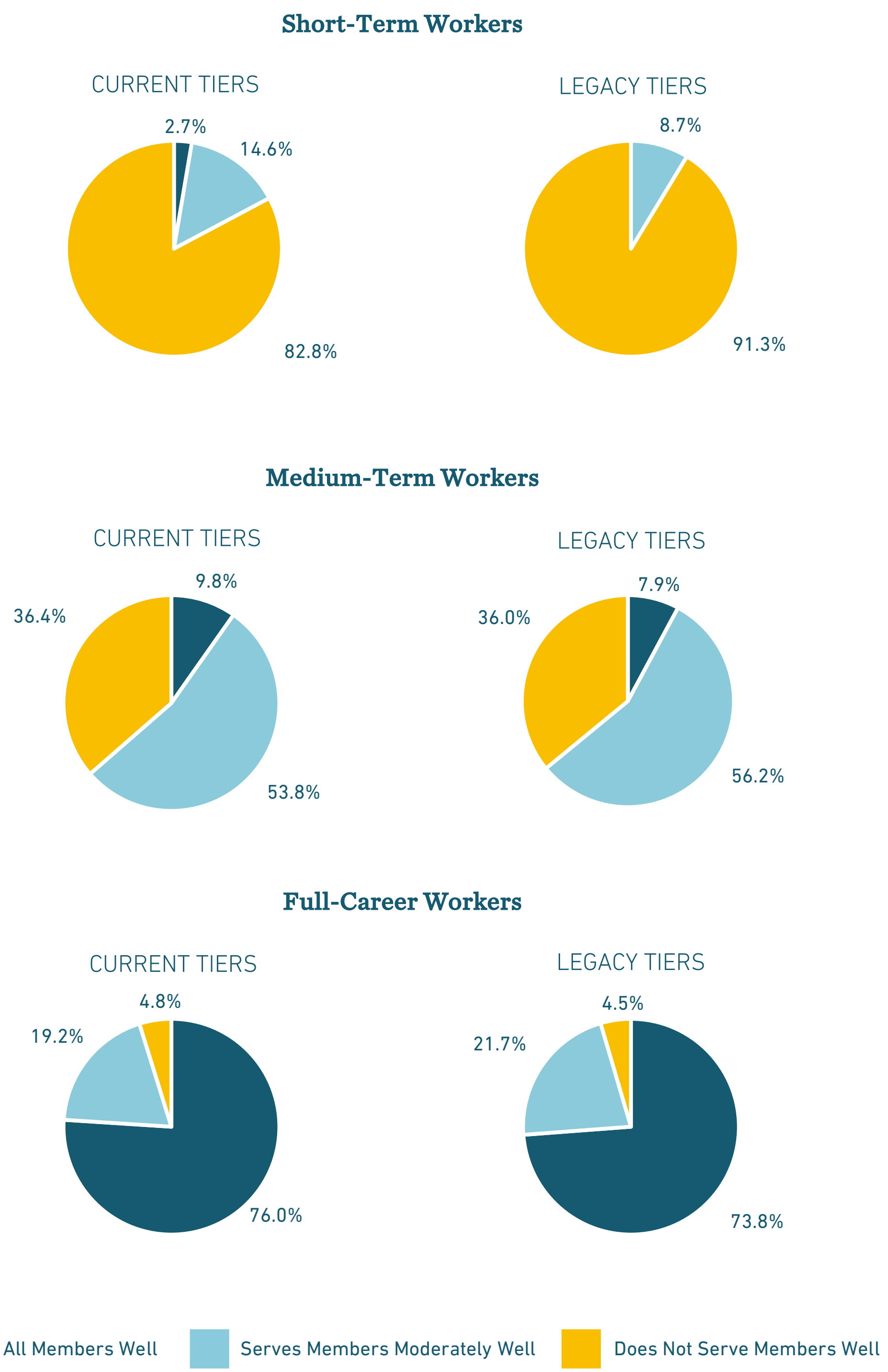


Results are very similar across all worker profiles, plan types, and occupations. Overall, both the legacy tiers and open tiers have roughly a quarter of plans (yellow shading) that are not serving members well. Each have a small number of plans serving members moderately well (dark blue shading). While both sets of tiers are serving around 65% of members well (light blue shading). It is worthwhile to note that the open tiers have roughly 40% more of the total plan offerings that score 75% of the eligible points (or more) on average.[28]

[28] Looking at absolute numbers, there were 72 plans that rated as serving all members well among the legacy tiers. In comparison, there were 57 plans that reached that mark among the open tiers. However, as there are only 563 open tiers compared to 1,210 legacy tiers, it becomes apparent how a comparable number of plans in each case results in such widely differing shares.

Dividing plans up by career duration provides a more nuanced look at where open tiers are outperforming legacy benefits, or vice versa.

FIGURE 17: COMPARING HOW WELL WORKERS ARE SERVED BY OPEN PLANS COMPARED TO LEGACY PLANS
All Plan Types, by Career Duration



When examined across worker profiles, the benefits of the past are strikingly comparable to those available to newly hired public employees. Measured by in the share of workers they serve well for Full-Career Workers, there is a less than 3.0% difference (76.0% open vs 73.8% legacy). Meanwhile, fewer Short-Term Workers were served well in the past (2.7% open vs 0.0% legacy), and the same holds for Medium-Term Workers as well (9.8% open vs 7.9% legacy). But, as a whole, the benefits of the past appear to score at remarkably similar levels in the RSR when compared to the plans currently available.

Part 5. Conclusion

The RSR can serve as a tool for measuring the quality of benefits offered by public sector retirement systems. This is valuable to public employees because they can understand characteristics of their own plan, and how well it is working for them. Moreover, the RSR provides a common set of benchmarks that retirement policy stakeholders can use for understanding how well certain plans stack up against others.

Using data across all 1,953 tiers of open and legacy benefits, we've found the following primary conclusions about the state of retirement security for public sector workers:

1. The average lifetime benefit value for Full-Career Workers declined meaningfully over time during the first two decades of the 21st Century, down roughly 10% over the last two decades.

2. Fortunately, even though the total value of benefits has declined, on average workers who spend a full career in public service are still likely to have a plan that serves them well, no matter what the underlying plan design looks like (e.g., pension, defined contribution, guaranteed return, or hybrid). The total benefits received are likely lower than what was offered in the past, but Full-Career Workers are still on average accumulating retirement savings that will translate into at least 70% income replacement or higher.

3. Even before the average public employee benefit began declining, legacy plans were generally not serving Short-Term Workers and Medium-Term Workers well. While Full-Career Workers were earning larger pension benefits in the past, most public employees with 20 years of service or less did not have retirement plans serving them well.

4. Fortunately, the introduction of more varied retirement plans as well as retirement plan choice has meant there are more plans that serve STWs and MTWs well than during the 20th Century.

5. On the flipside, the absolute amount of benefit quality for STWs and MTWs today remains poor. Just 17.2% of plans are serving STWs well, and only 46.2% of plans are serving MTWs well, despite their 10 to 20 years of service.

6. Among plans that do work well for all workers — irrespective of whether they are 10 years or less, full career, or somewhere in between — the factors that are most important include employee contribution rates above 5%; vesting periods of 5 years or, ideally, less; crediting rates on employee contributions that outpace inflation; refunding policies that return employee contributions with interest, or even better a portion of employer contributions as well; and member participation in Social Security.

Overall, today's public retirement benefits are generally serving Full-Career Workers well while underserving those with 20 years of service or less. Benefit values are lower today than in the past, though the increased variability in benefit designs and choice of retirement plans is a net improvement for STWs and MTWs compared to the 20th Century.

There are obvious political aspects to the way that retirement benefits are negotiated in the public sector, one effect of which is to offer confounding and competing narratives. However, even a data-centric approach doesn't provide a clean and neat story:

- The quality of open benefits today is comparable to legacy benefits, when considered as a whole. While at the same time today's public employees are working longer to receive a smaller benefit.

- There are quality plans for Full-Career Workers across all retirement plan types, but there are certainly specific instances where all plan design types are failing to serve Full-Career Workers.[29]

[29] Those who spend 30 years or more in their positions can reasonably expect that their plan will provide them with a secure retirement, regardless of the plan type or the member's occupation. Overall, 76.5% of the plans currently available to new hires achieved scores of 75% of the eligible points or higher, with another 18.8% classified as serving their members moderately well (scoring between 50% and 75% of eligible points). In fact, only roughly one out of every 20 plans is designated as not serving its Full-Career Workers well. one reason Full-Career Worker plans perform so well is the fact that benefits have accumulated to reach, or even outpace, our Benefit Adequacy threshold. However, there remains room for improvement for many plans on a policy front.

- STWs and MTWs are generally not served well by their retirement plans, despite being the majority of public workers.[30] But in a few states the best plans are serving all their workers well.

Ultimately, it is important to understand this high level national narrative but then move to state and plan specific analysis. The analysis in this paper focuses on averages and cohorts and it does not fully reflect the wide variance for each individual plan. It is valuable for all readers to work with the RSR digital tool to understand how different retirement plans stack up: see detailed retirement Benefits Scores at RetirementSecurity.Report.

The primary intent of the RSR isn't to provide a perfect tool for comparing plans, as there are many state and local-specific factors that can influence the particulars of an underlying plan design. However, by measuring how well a plan is serving its members the RSR helpfully provides a lens of stacking plans up against each other on aspects of quality for different cohorts of public employees based on the length of their public service careers.

There are many ways in which different retirement systems are designed to put public workers on a path to retirement income security. Each of these elements should be examined, such that poorly performing retirement plans can identify where they can be improved. There is no reason the public sector should not be offering quality retirement plans based on the best practices adapted to the twenty-first century, ensuring that all workers have a path to retirement income security.

While not as important as the amount of pre-retirement income that is replaced by the benefit, COLAs are critical in ensuring that retirement benefits maintain their purchasing power and ensure that retirement is secure.

[30] Retirement plans expect that 55.2% of new hires into their pension plans will leave within 10 years. Among those that reach 10 years, another 25.3% are expected to leave before they get to 20 years. In total, 66.5% of new members are not expected to reach 20 years of service. And yet, while these individuals represent a majority of the public workforce, only 4.7% of retirement plans currently available are serving Short-Term Workers well while only 14.7% are serving them moderately well. This means that roughly 80% of the plans that are offered are not working well for the 55.2% of public employees that fit this description. For those Medium-Term Workers, things look a bit better. More than double the share of plans when compared to STWs are serving their members well (up to 11.7% from 4.7% for STWs) and another 52.7% working moderately well. This means that for those roughly 11% of new hires expected to last between 10 and 20 years, their benefits are a marked improvement but are often still not enough to place them on a path to a secure retirement.

APPENDICIES

Appendix A: How to Define “Security” and “Adequacy”

A.1 HOW WE MEASURE RETIREMENT SECURITY

The objective of the RSR is to assess public sector retirement systems by measuring the quality of benefits offered against a standard benchmark path to retirement income security. We use a scorecard approach to grade each retirement system on its own terms. The benefit provisions of each retirement plan are measured against a common set of standards, benchmarks, and best practices.

For example, we define adequate retirement income as reaching at least a 70% replacement of pre-retirement salary by age 67. The retirement income produced by a given retirement plan is calculated for each year of a participant’s career and measured against this adequacy threshold.

The RSR uses a multifaceted approach to measuring retirement security. While the adequacy of retirement income is at the heart of our scorecard for each retirement plan, we also factor in eligibility for those benefits, inflation adjustment of retirement income, rules related to refunding member contributions, and interest credits provided for member contributions that are being withdrawn.

This data-driven approach to assessing benefits produces a profile for each retirement plan that can help public workers understand the quality of their own benefits and whether their plan puts them on a path toward a secure retirement. In addition, these profiles can help inform discussion among policymakers, labor and industry leaders, and plan members about the future of their retirement benefits.

For complete details please see our methodology.

A.2 HOW THE RETIREMENT SECURITY REPORT SHOULD BE USED

While the crux of this paper is to identify the top-performers across our population of public retirement plan offerings and to offer aggregated findings, there is limited value in comparing specific retirement plans against one another. The RSR is best used to see how the same type of public worker is being served by their retirement plans in different states; or it can be used to compare the quality of retirement plans for different types of public workers in the same state over time.

Given the variance in the way that public workers are compensated around the country, comparisons across plans or comparing the benefits from a plan against those in one state against those in another state may be problematic. There may be underlying reasons for why one plan is better than another that are fully accounted for by differences in salary, health benefits, or other forms of compensation.

For instance, the total value of a benefit offered to public school teachers in California may seem to be significantly more generous than those offered in Minnesota, North Carolina, or Oklahoma, the estimated value of those benefits depends on the salaries that are appropriate for that area. Because the cost of living is higher in California, salaries are higher and, as a result, the estimated value of benefits will be higher in nominal dollars — but this does not necessarily reflect a higher quality benefit.

Because of these complexities, the analyses in this paper focus on standardized performance across our measures of retirement benefit quality. Plans are ranked based on how well they perform relative to our combination of objective benchmarks, as opposed to offering a direct comparison across plans.

A.3 DEFINING AN ADEQUATE RETIREMENT INCOME

The simplest way to think about adequate retirement income is to identify how much money an individual or family would need in retirement to maintain their pre-retirement lifestyle and consumption patterns when they decide to stop working. Retirement planning specifics will differ depending on gender and career income patterns and the appropriate age of retirement will differ based on industry and profession.

The art and science of individual financial planning require digging into these complexities. However, when assessing retirement plans straightforward and generalized targets are necessary. Therefore, we define adequate retirement income as reaching a 70% replacement of pre-retirement salary by age 67.

For a more complete explanation of the state of the literature, trade-offs, and how we reached this target, please refer to the methodology.

A.4 KEY TARGETS USED FOR THE RSR DEFINITION OF ADEQUATE RETIREMENT INCOME

Here are some ways we have defined adequate retirement income for the purposes of measuring the quality of a retirement plan:

Replacement Rate Target: Our project defines adequate retirement income as 70% replacement of working years income. While reasonable arguments can be made to define an appropriate target for replacement of pre-retirement income at a lower level (such as 60%) or a higher level (such as 80% or even 100%), the target we have selected is consistent with many financial experts, the Social Security Administration, and the existing academic and practitioner literature.[31]

Retirement Age Target: Our project focuses on using a simple replacement rate of final average income at age 67 as the target for retirement adequacy. This age is the current age for normal, unreduced retirement as set by the Social Security Administration for most active workers (e.g., currently, anyone born in 1960 or later).[32]

Pre-Retirement Income Definition: Our methodology allows every state to define pre-retirement income using their own standards.[33] Every pension plan (whether on its own or part of a hybrid plan) has rules for either “final average salary” or “highest average compensation” that are most commonly measured in three- or five-year periods.[34] For the purposes of determining replacement-rate values for DC plans and GR plans, we use the same pre-retirement income definition rules from associated pension plans managed by the same or related retirement systems.[35]

[31] See the methodology for a brief literature review on the debate over using an appropriate rate of replacement of pre-retirement income.

[32] Age 67 is later than the specified “normal” retirement age for many public retirement systems. However, this target age provides a consistent adequacy target for all plans to ensure an objective assessment, regardless of plan design or other confounding factors. It allows us to appropriately blend in SSI where relevant. Our methodology for FCWs assumes they work until their specified normal retirement age even if it is less than 67 and utilizes the income replacement earned at that point. Someone who works until age 65, for example, will have two years before they can start collecting SSI and they will need to have personal savings or some plan to cover the difference until their full replacement income is available.

[33] While we avoid many of the complexities that come with pre-retirement income, we are attentive to the maximum pensionable salaries as identified in plans' respective actuarial valuation reports or maximum replacement rates; or, in cases where neither are applied, we designate the maximum final salary at $230,000 as that matches the designation from the IRS.

[34] Since our methodology assumes a steady income accrual for public workers, the highest years of compensation are the final years of compensation, meaning there is no meaningful difference between the use of a final average or highest average salary. What is important is the number of years in the average. And since we are only using salary accrual projections, we do not account for states that allow some individuals to “spike” their pensions by cashing out unused sick leave or vacation days and adding that to the final year of income in the average.

[35] For example, the Florida Retirement System's pension plan's final average salary rules are used when determining what salary is measured for the Florida Retirement System's DC plan.

Appendix B: How We Score Each Retirement Plan

Measuring adequate retirement income is not the only component for considering whether a plan is offering a path to a secure retirement. For example, inflation adjustment of benefits is important for enhancing security and ensuring the quality of benefits over time.

To analyze the retirement security of a given retirement plan, we have created an approach that considers when individuals become eligible for benefits, the adequacy of benefits, how flexible the design of those benefits are, and how sustainable the benefits appear to be.

The RSR contains three sections for each retirement plan: Plan Overview & Information, Retirement Benefits Score, Plan Sustainability Score:

- The Plan Overview & Information section is designed to provide topline information about the plan and data points of interest. This information is not included in the scoring and none of the measures in this section affect the assessment of any plan in the RSR.
- The Retirement Benefits Scores section is the main component of the scorecard profile for each retirement plan. This is broken down into scores for "Eligibility," "Adequacy," and "Flexibility and Mobility" (see Section 2.3 for details).
- The Plan Sustainability Scores section is a snapshot of elements that contribute to the sustainability of benefits over time. This is not intended to be a comprehensive assessment of the financials of a retirement plan; however, this score offers several measures of each plan's funded status and funding policies.[36]

The following sections provide a summary explanation of our approach to scoring retirement plans, but for complete technical details please see our methodology.

B.1 HOW RETIREMENT SECURITY FACTORS CHANGE OVER CAREER TERMS

Different types of workers will place different values on the three elements of the Retirement Benefits Scores — "Eligibility," "Adequacy," and "Flexibility and Mobility."[37] To account for this variance in what aspects of a retirement plan's design are important depending on career stage, we have designed the RSR to have adaptive measurements for three kinds of public workers:

Short-Term Worker:

- An individual who works for a public sector employer(s) participating in the same retirement plan for 10 years of service or less.
- Individuals in this stage of their career should be focused on eligibility rules, the adequacy of benefits, and how flexible the benefits are to be portable to another employer-sponsored plan should they change jobs, careers, or move across state lines. They will care less about the COLA rules on the benefits that they won't be able to draw for decades down the road.

Medium-Term Worker:

- An individual who works for a public sector employer(s) participating in the same retirement plan between 10 and 20 years of service.

[36] Note that DC plans have no risk of underfunding due to shifting any benefit risk to the investments held by individual members. As a result, DC plans do not receive any assessment in the Plan Sustainability Scores section.
[37] We use the term "should" related to variance in how public employees value aspects of their benefits based on a rational assessment of plan provisions. In practice, we recognize that the actual preferences of public workers may not always align with an academic framework on their decision making, whether because of personal choices or a lack of full understanding of how their retirement benefits work.

- These individuals should have already qualified to receive benefits and may or may not want to leave their money in the retirement plan upon leaving for another job or moving across state lines. They should care about the adequacy of benefits and whether those benefits will be inflation adjusted, and they should also be interested in how flexibility rules might shape whether they should roll their retirement savings to another employer-sponsored plan.

Full-Career Worker:

- An individual who works their entire career for a public sector employer(s) participating in the same retirement plan. This includes individuals who work more than 20 years of service.[38]

- These individuals should care primarily about the adequacy of benefits and inflation adjustment of their retirement income. Rules related to eligibility and flexibility are unlikely to determine in any degree whether their retirement plan is serving them well.

The boxes drawn around these three types of workers — STWs, MTWs, and FCWs — are based on the typical turnover pattern assumed by public pension plans.

B.2 STARTING AGE CONSIDERATIONS

The different retirement considerations of STWs, MTWs, and FCWs mean an effective assessment will include measurement of “retirement security” in a way that emphasizes these different needs at each respective stage of a public worker’s career. At the same time, there is variance in how retirement security scores can be understood depending on how old an individual is when they are enrolled in a retirement plan.

Thinking about the life cycle of an individual as the basis for measuring the quality of a retirement plan has obvious merit, but grading retirement plans for mid-career entrants matters, too. Just as an individual who works from age 25 to 35 will want to have their retirement plan contribute toward their overall career accumulation of retirement savings that can lead to retirement income, so too, does a 40-year-old entrant want their retirement plan to add on to any retirement savings that they’ve already accumulated in life.[39]

B.3 ELEMENTS INCLUDED IN RSR RETIREMENT BENEFIT SCORES

As previously noted, Retirement Benefits Scores are broken down into scores for “Eligibility,” “Adequacy,” and “Flexibility and Mobility.” The application of these varies depending on if we are measuring a STW, MTW, or FCW, but they are consistently used for both 25-year-old and 40-year-old measurements on entry age.

Eligibility:

- The single measure for eligibility is how long it takes a worker to be fully vested in their retirement plan. These are applicable to all plan types but are only included in the scores and assessments for STWs.

- Retirement plan members want to know when they will be vested into their benefits. There is no formal set of vesting rule guidelines for state retirement systems but there is for private sector plans. We use the federal standards for private sector retirement plans (known as ERISA), which specify that employees should be 100% vested after five years of service (though private plans could use a shorter period).

[38] To offer some technical clarification, we measure the value of retirement plans at age 67, even though a specific plan’s “normal retirement” age might be defined earlier (often between 60 and 65). This approach encompasses anyone who works until they qualify for an unreduced, “normal” benefit and it aligns with eligibility for Social Security.

[39] It would be unreasonable to assume that an employer-sponsored retirement plan should provide all the retirement income for a 40-year-old entrant who should already have a decade or more of retirement savings. Therefore, our modeling approach not only provides separate scores based on “entry age” (i.e., age at hire) for 25-year-old hires and 40-year-old hires, but it also assumes that the latter entrant brings with them the full value of retirement savings that our adequacy threshold model says they should have up to that point.

Adequacy:

- We assess the adequacy of benefits by comparing how they stack up against the accumulation pattern to reach a 70% pre-retirement income replacement rate by age 67.
- For STWs and MCWs, we score retirement plans based on how closely they are tracking a path to adequate retirement benefits. First, we draw a line showing a steady, even path to a 70% replacement-rate target. Second, we project the value of the state retirement plan. Finally, we compare the two lines and score the plan based on how close they are to the adequacy target line.
- For FCWs, we use the value of their retirement plan at age 67. We compare the replacement rate earned at that age to the adequacy target reduced to reflect any eligible SSI at that point.[40]
- We also grade whether a plan offers COLAs. Scores for COLA policies are only used to grade MTWs and FCWs.

Flexibility & Mobility:

- In most retirement systems if a plan member chooses to withdraw before reaching normal retirement, they are entitled to a refund of their own contributions.[41]
- The measurements for this category vary depending on the retirement plan type:
  - For pension and hybrid plans, we grade the refunding policy on member contributions, plus the interest crediting rate. The more generous the refunding and crediting rate provisions, the more portable the employer-funded share of the benefit is for an individual.
  - For DC plans, we grade the mobility of employer-funded contributions based on a more fine-grained measurement of vesting rules related to how much of those contributions a member can take with them in the event they leave their retirement plan.
  - For GR plans, we grade the mobility of employer contributions in part on the size of the investment return guarantee offered.

B.4 ELEMENTS INCLUDED IN RSR PLAN SUSTAINABILITY SCORES

A retirement plan is only as good as the money in the fund available to pay benefits. This is why it is important for an assessment of retirement security to have some consideration of the sustainability of the benefits. To achieve this goal, we approach plan sustainability from the perspective of plan members and pose questions related to the overall stability of the plan and consistency of funding to support future benefits.[42]

The following are four areas directly related to the sustainability of a pension plan, GR plan, and/or hybrid plan (see the methodology for a complete breakdown of our scoring):

- **Is the plan on a path to full funding?** While there are very few public retirement systems that are in any near-term danger of becoming insolvent, it is still important for plan members to understand the stability behind their benefits.

[40] Several of the pension plans measured in the RSR allow individuals to start collecting unreduced retirement checks earlier than age 67. For the purposes of the RSR, we measure the value of their benefits as if the individuals waited until age 67, which effectively raises the value of those retirement plans since they accumulate additional years of service beyond their plan's "normal" retirement age.
[41] Often member contributions are supplemented with interest at a rate designated by the plan's retirement board. In a few cases, the refund may also include a portion of the contributions made by the employer. Further, in some cases, the level of refund can vary according to the vesting status of the member when they leave the system. Finally, some designs provide individuals all employer contributions and investment returns on those contributions even if they leave the plan after vesting.
[42] DC plans, by inherent nature of their benefit design, are fully sustainable. There are no funding or investment risks related to the employer. There are risks to the individual participant that might influence the value of their benefits and whether they can get to adequacy; but these are not questions about the sustainability of the retirement plan.

We measure the number of years a retirement plan has in its "amortization schedule" until it is projected to reach a 100% funded ratio (using the retirement plan's own funding policy).

- **Are government employers paying their bills?** All plan members should want to know whether their employer is paying the required contributions determined by plan actuaries each year. We measure the share of "actuarially determined employer contributions" that actually get paid each year.

- **Are the plan's investments earning what they should?** All plan members should want to know whether their retirement plan is earning the necessary investment revenue needed to be sustainable over the long term. We measure how often the investment earnings of a plan meet or exceed what the funding policy assumes they will achieve each year.

- **Does the retirement system board have special tools to manage through tough times?** Risk-sharing tools are ways that retirement system trustees and legislatures can distribute the gains or costs that might arise related to investment experience, contribution policies, or changes to benefits. It is important for retirement systems to have these tools available to help in the case of a sharp economic shock.

Appendix C: Which Retirement Plans Did We Measure?

This second iteration of the RSR is intended to build upon the original primarily by expanding the population of plans included in our analyses. Specifically, whereas the original RSR was limited to only state-administered retirement plans available to newly hired public sector full-time employees, this update expands our analyses to include capture all state- and municipally administered plans that are intended to be a primary source of retirement income for public workers.[43]

In addition to expanding the RSR to include a more complete collection of plans currently offered to newly hired public employees, we have also incorporated as many tiers of benefit offerings that were offered in the past, but which have been discontinued, which we refer to as "legacy" plans, as possible. The result of this process was the compilation of full benefit data for a total of 1,963 plans, with 617 tiers of benefits currently available to new hires and another 1,342 legacy plans.[44] Broken out by plan type, there are a total of 1,769 pension plans, 57 defined contribution plans, 40 guaranteed return plans, and 97 hybrid plans in the data used to populate the RSR.

The newly updated benefit data reflects a significant expansion upon the initial RSR, which did not include legacy tiers of benefits or municipally administered retirement systems. The addition of legacy tiers of benefits alone accounts for the addition of 1,342 new tiers to our analyses. The addition of the municipally administered plans accounts for the inclusion of another 613 benefit tiers. Among the legacy benefit tiers, the data cover multiple different plan designs, including 1,316 additional pension plans, two defined contribution plans, one guaranteed return plan, and 23 hybrid plans that are no longer offered to new hires, but which can now be explored via the RSR.

It is important to note there are two aspects of retirement benefits not completely captured by the RSR:

- First, those who elect to take early retirement do not have the value of those benefits measured in this project. While the provisions related to early retirement can greatly enhance the value of benefits a retirement plan offers, the RSR is focused on measuring the value of benefits based on normal duration of employment.

- Second, death and disability benefits are not factored into the RSR coverage. Inherently, the need for such benefits is unplanned and outside the norm for a retirement plan. While the value of such benefits is a worthwhile aspect on which to measure the quality of a retirement plan, this is beyond the scope of the RSR.

[43] In some states where a single retirement system administrates multiple plans, we have included smaller plans in our data set for the sake of comprehensively covering that same system, such as with the Arizona Elected Officials Retirement Plan, formally administrated by the Arizona Public Safety Personnel Retirement System.

[44] Note the 1,963-plan count includes the 12 classes drawn from the Pennsylvania Municipal Retirement System which did not publish sufficient benefit provision data to allow for them to be included in our analyses. As such, these 12 plans are excluded from analyses, but they are documented in the RSR for users to see.