MissionSquare RESEARCH INSTITUTE

Public Plans Database Snapshot

as of December 2021

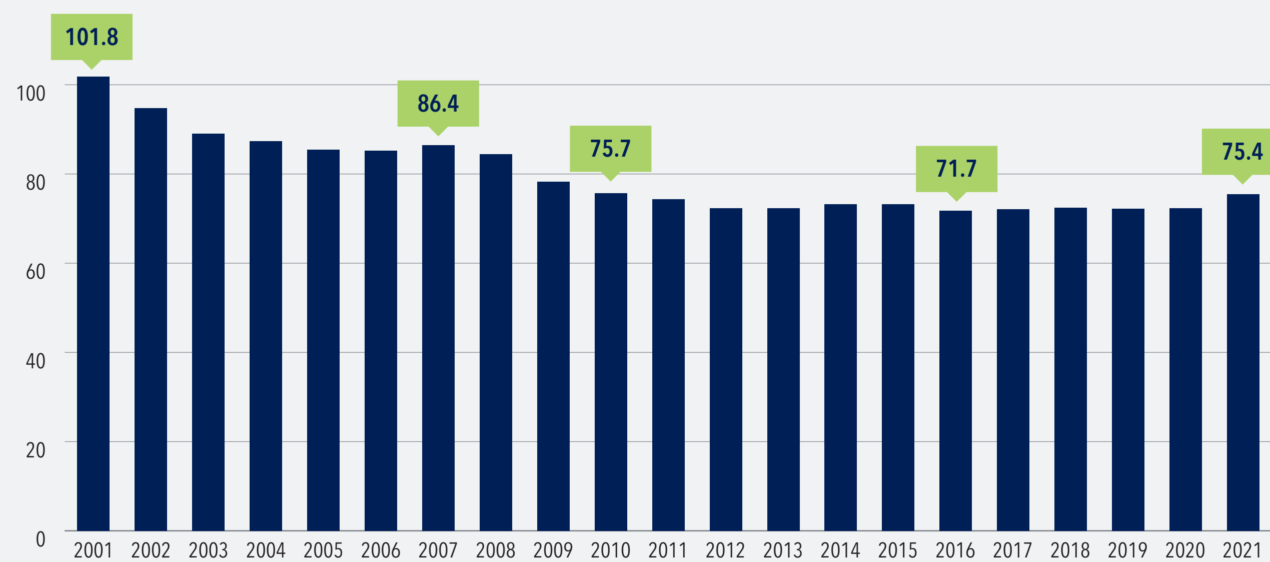
The **Public Plans Database (PPD)**, a repository for detailed performance data for state and local pension plans, is updated on a quarterly basis with the most recently reported funded ratios, investment income, and other information for 210 of the largest plans in the United States, representing 95% of state/local pension assets.

The analysis below is based on PPD data uploaded in December 2021, which contained 2021 data for roughly 25% of PPD plans. Additional 2021 data will be uploaded each quarter as more annual comprehensive financial reports are released in the coming months. Depending on data availability, some of the data presented is through 2019 or 2020, as noted in the figures below.

Funded Ratio

With strong performance by investments in 2020 and 2021, the funded ratio nationwide has improved, moving up two full percentage points since 2020 and almost reaching a level last seen in 2010.

Figure 1 **Funded Ratio**



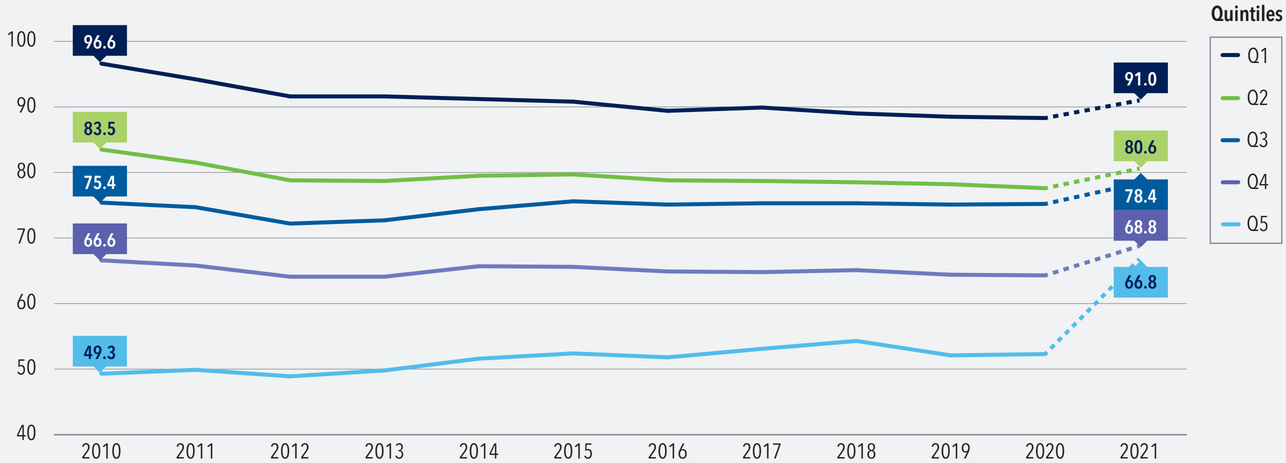
National averages are weighted by plan size. Source: Public Plans Database

To better understand whether this performance is universal across all types of plans, Figures 2 and 3 sort the data by plan size and by the historical funded ratio.

The increase in funded ratios is more apparent in Figure 2, where the funds are divided into quintiles of the lowest-to-highest funded ratios from 2010. The lines that follow track those same funds over time. While there was little change over much of that time period, in 2021 the bottom three quintiles from 2010 all showed improvement.

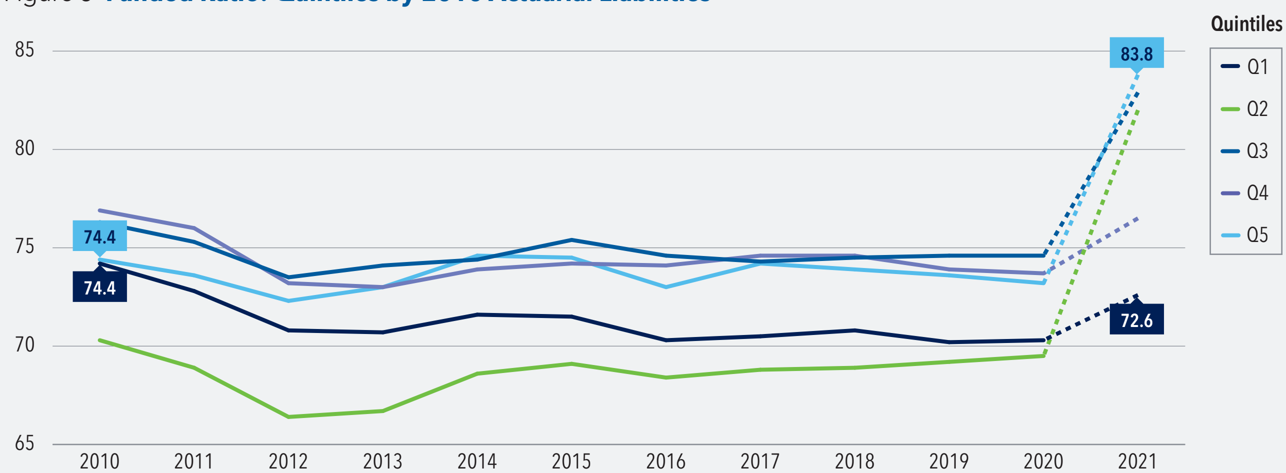
In Figure 3, funds were assigned to quintiles by the size of their actuarial liabilities. Comparisons of the largest funds (Q1) and smallest funds (Q5) show that both had a funded ratio of approximately 74% in 2010, with the smaller funds in quintile five outperforming the larger funds from that point forward. Although the 2021 figures only represent the 25% of plans for which data is so far available, the fact that all five quintiles saw increases within this preliminary dataset would appear to indicate that the improvement in funded ratios is not limited to one small segment of the sample.

Figure 2 **Funded Ratio: Quintiles by 2010 Funded Ratio**



Quintile values for 2021 are based on partial data available through December 2021. Source: MissionSquare Research Institute analysis of Public Plans Database.

Figure 3 **Funded Ratio: Quintiles by 2010 Actuarial Liabilities**



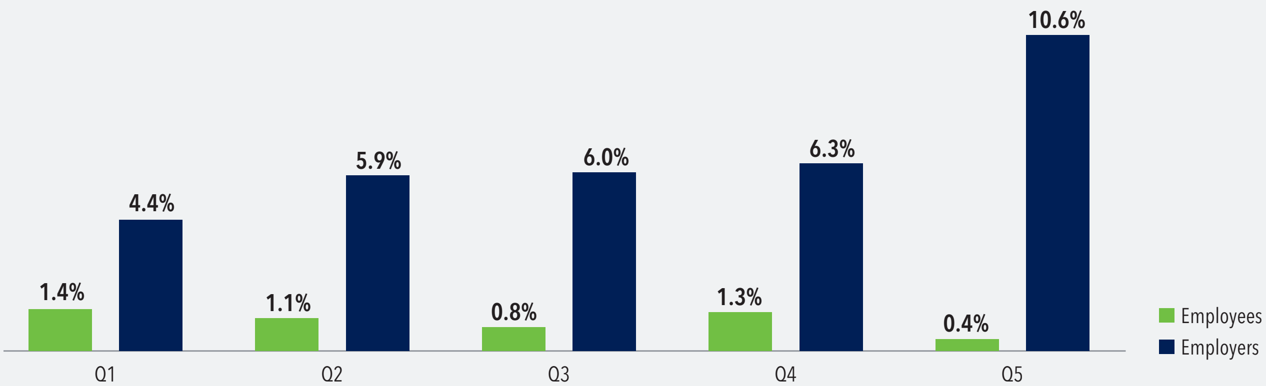
Quintile values for 2021 are based on partial data available through December 2021. Source: MissionSquare Research Institute analysis of Public Plans Database.

Contributing Factors

The asset side of funded ratio calculations is driven by a combination of contributions and investment earnings. As the Great Recession impacted earnings, one route to maintain funding was to increase either employer or employee contributions. Since 2012, an average of 6% of employers participating in MissionSquare Research Institute's **annual workforce survey** have cited increases in employer contributions, while an average of 12-14% have cited increases in the employee contribution.[1] The scale of those contribution changes likewise varies, as seen in Figure 4, with the employer contribution increase among those with the lowest funded ratios (quintile 5) more than double the average increase in employer contributions among those with the highest funded ratios.

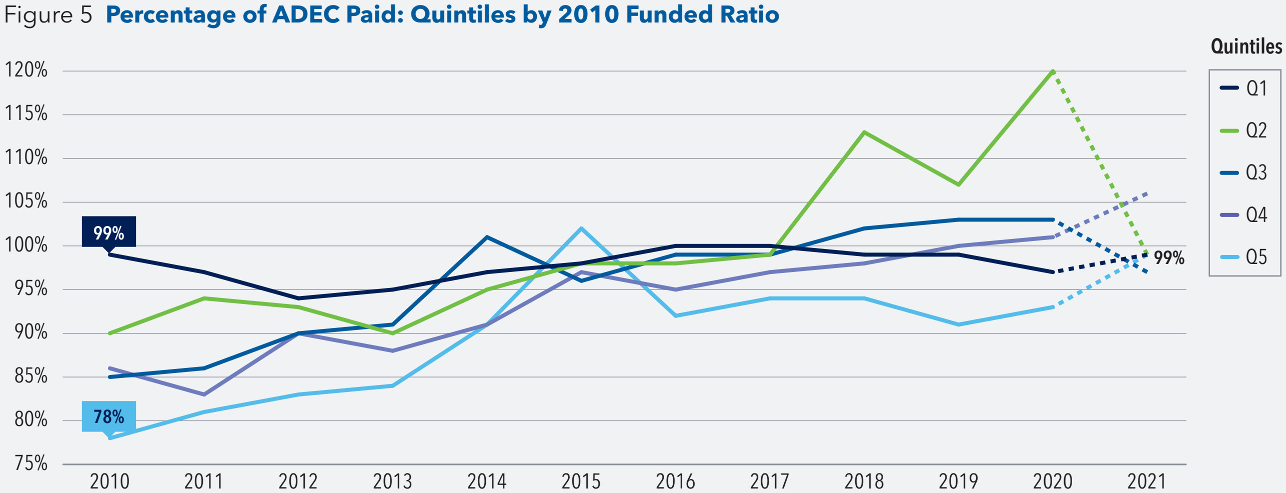
Regardless of required contributions, in some cases governments may contribute less than the full actuarially determined employer contribution (ADEC). In 2010, for example, plans in the top quintile were contributing 99% of the ADEC, while those in the bottom quintile were contributing 78% of the ADEC, in effect relying more on investment earnings or allowing the funded ratio to decline (see Figure 5). In the 2021 data available so far, all five quintiles are contributing 97%-106% of the ADEC.

Figure 4 **Changes in Employee and Employer Required Contributions, 2010-2020, Quintiles by Funded Ratio**



Source: MissionSquare Research Institute analysis of Public Plans Database.

Figure 5 **Percentage of ADEC Paid: Quintiles by 2010 Funded Ratio**



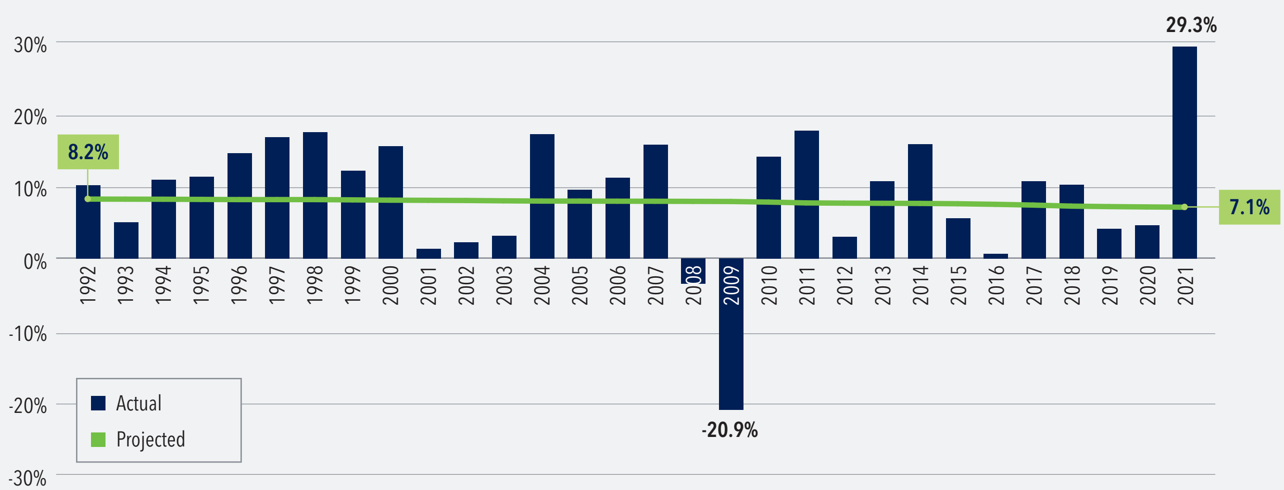
Quintile values for 2021 are based on partial data available through December 2021. Source: MissionSquare Research Institute analysis of Public Plans Database.

Regarding investment earnings, the steep declines with the end of the dot-com bubble and with the Great Recession led to long-term impacts on funded ratios. As seen in Figure 6, actual returns have sometimes fallen far short of projections. In recognition of this, projected returns have steadily been adjusted downward from an average just over 8% in 1992 to just over 7% today.

The decrease in assumed returns has been implemented by plans regardless of their relative funded status, with projections dropping by 0.7% since 2010 (from 7.8% to 7.1%; see Figure 7).

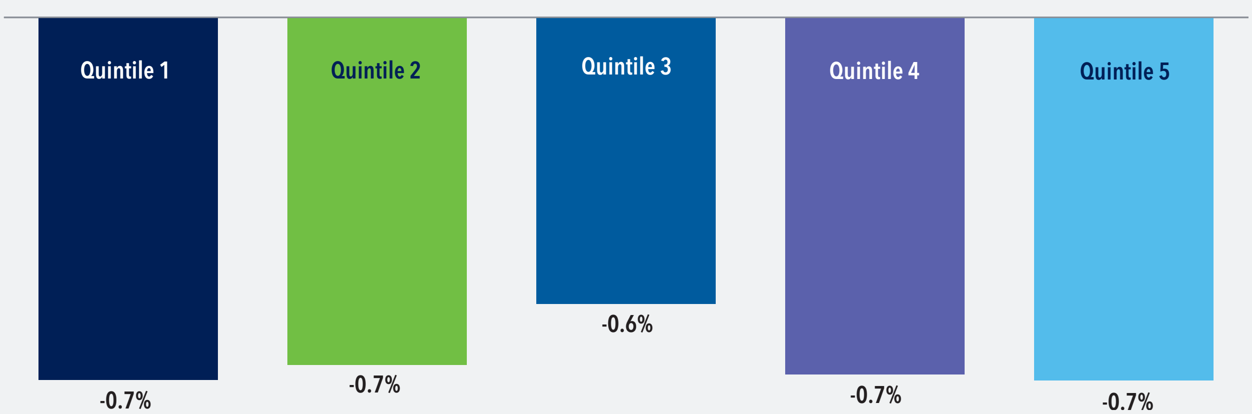
Related to the shift in projected returns, the mix of investments has changed significantly for public plans, with

Figure 6 **Annual Investment Returns vs Projected Returns**



Source: Public Plans Database

Figure 7 **Change in Investment Return Projection, 2010-2020, Quintiles by Funded Ratio**

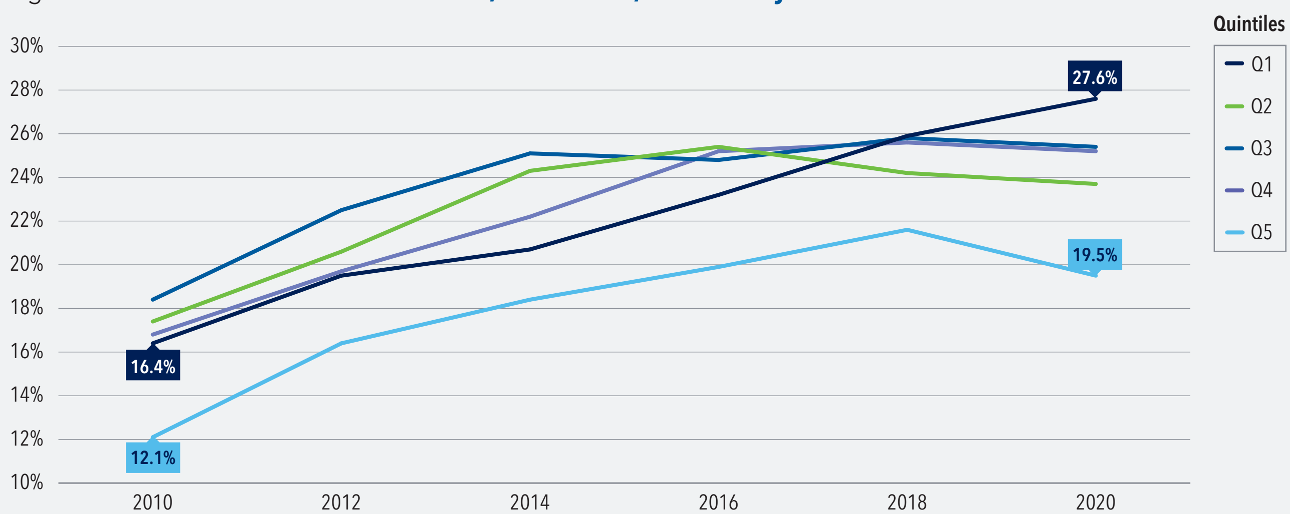


Source: MissionSquare Research Institute analysis of Public Plans Database.

the portion of total portfolios invested in real estate, hedge funds, commodities, and alternatives growing from 9% in 2001 to 28% in 2020 (see Figure 8). This may relate to both the development of new investment instruments as well as the evaluation of how risk should be considered in setting investment policy.

The risks associated with alternatives may lead to favorable returns under some market conditions but may also result in more volatility. As shown in Figure 8, while all quintiles have increased their share of alternatives, the funds with the lowest funded ratios (quintile 5) have placed 8 percentage points less of their portfolios in alternatives compared to those with the highest funded ratios (quintile 1).

Figure 8 **Share of Alternative Investments, 2010-2020, Quintiles by Funded Ratio**



Source: MissionSquare Research Institute analysis of Public Plans Database.

Active Participants vs. Beneficiaries

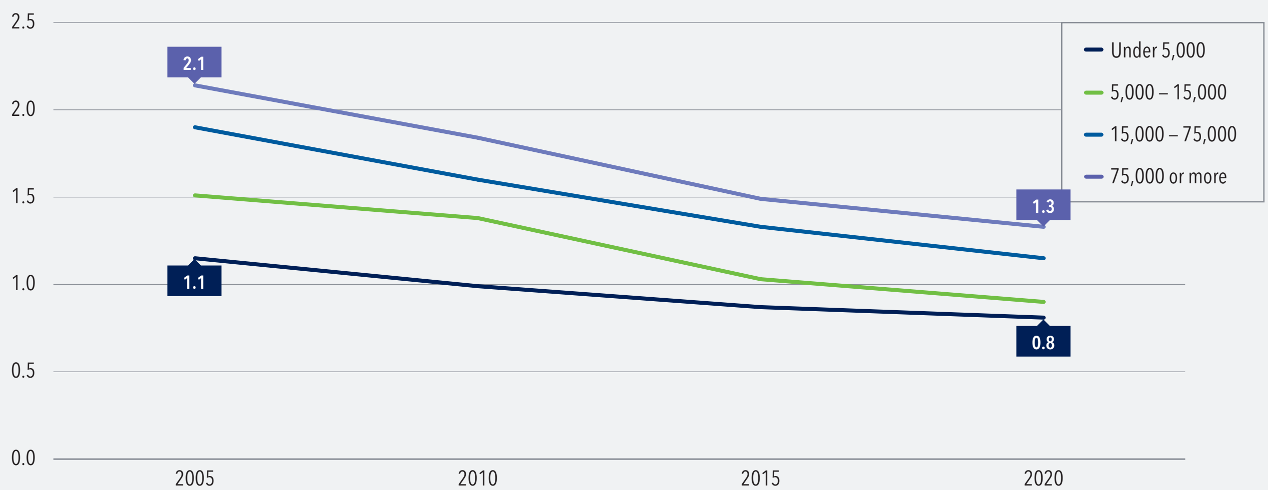
Since pension funds contributions are based on total payrolls, the number of active employees compared to the number of beneficiaries is one indicator of how well-positioned the fund is to spread costs across a wide base. Figure 9 shows the decline in the ratio of actives to beneficiaries since 2005, which is happening across all plan sizes. Factors contributing to this trend may include the ongoing retirement of members of the baby boom generation; slowdowns in hiring with the Great Recession; movement toward gig hiring for shorter-term needs; and more recently, the departure of other employees via the Great Resignation.

Defined Contribution Plans

In addition to defined benefit (DB) pension plans, the PPD now also includes data for 103 defined contribution (DC) plans across 44 states. These plans include stand-alone 401(a), 457, and 401(k) plans; hybrid plans (smaller DB with DC); and cash balance plans. Additionally, the database includes both primary and supplemental plans. Of the 103 DC plans for which 2019 data is available, 49% are primary retirement plans. Information is available on the number of active and inactive participants, total assets, employee contribution rates, and base and matching employer contribution rates.

As with the rest of the PPD, more plans are added to the DC database on a regular basis.

Figure 9 **Ratio of Active Participants to Beneficiaries, by Size of Active Workforce (weighted average)**



NOTE: Where plans were more recently established, they may have an extremely low number of beneficiaries (e.g., the Washington Law Enforcement/Firefighter (LEOFF) Plan 2, established in 1977, had only 574 beneficiaries in 2005). To avoid skewing averages based on the very high active-to-beneficiary averages ratios among such recently-established plans, the averages in Figure 9 are weighted by the number of beneficiaries per plan.

Source: MissionSquare Research Institute analysis of Public Plans Database.

The PPD contains summary data, as well as state- or fund-specific information for a wealth of data points, plus graphing tools to generate and export custom graphs, and focused datasets on such topics as investment fees, disability benefits, and post-retirement return-to-work policies.

This report was prepared by Gerald Young, Senior Research Analyst with MissionSquare Research Institute (formerly the Center for State and Local Government Excellence). We are also grateful for the assistance provided by Jean-Pierre Aubry, Director of State and Local Research, Center for Retirement Research at Boston College (CRR). MissionSquare Research Institute and CRR established a partnership in 2007 to 1) produce research on state and local pension plans and the retirement prospects of state and local workers; 2) disseminate research findings broadly; and 3) develop and make available comprehensive data on state and local pensions and retiree health benefits. These data, covering both defined benefit and defined contribution plans, are updated regularly and have been expanded over time. The National Association of State Retirement Administrators (NASRA), which has been collecting and sharing public plan data since 2001, supports the partnership by providing review and assistance on the development of data models, validation of data, and development and administration of surveys.

As of 2021, the Government Finance Officers Association now oversees and administers the financial support for updates and enhancements to the PPD, and provides review and feedback on research and data presentation.

For more information visit **publicplansdata.org**.

1. The annual workforce survey also collects data on other pension plan changes such as modifications to vesting requirements or cost-of-living adjustments (COLAs). MissionSquare Research Institute has also compiled a series of case studies on the implementation of **variable benefit or contribution arrangements**.

MissionSquare Research Institute (formerly the Center for State and Local Government Excellence at ICMA-RC) promotes excellence in state and local government and other public service organizations so they can attract and retain talented employees. The organization identifies leading practices and conducts research on retirement plans, health and wellness benefits, workforce demographics and skill set needs, labor force development, and topics facing the not-for-profit industry and the education sector. MissionSquare Research Institute brings leaders together with respected researchers. For more information and to access research and publications, visit **mission-sq.org/researchinstitute** and follow on **Twitter** and **LinkedIn**.

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