



Equivalent Cost for Equivalent Benefits: Primary DC Plans in the Public Sector

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This policy brief was originally published by the TIAA-CREF Institute. It identifies elements that should be included in any retirement savings system, including defined contribution plans. The brief also debunks the claims made in *A Better Bang for the Buck*, a report published by the National Institute for Retirement Security.

EXECUTIVE SUMMARY

Providing adequate and secure income throughout retirement is the objective of a risk-managed defined contribution (DC) plan. The sweeping generalization that defined benefit (DB) plan designs provide benefits at lower cost to public employers than could a DC structure is simply incorrect. A best-practice DC plan can provide secure retirement income at equivalent cost to a DB plan.

Features producing the purported DB cost advantage, such as annuitized benefit payments and low-fee, professional asset management, can easily be incorporated into the DC model, and in fact, are inherent to the best-practice, risk-managed DC design. In practice, a large number of DC plans already exhibit these features, in particular, 401(a) and 403(b) plans sponsored by public and private colleges and universities.

Best-practice DC plans are a viable, sustainable option for providing retirement security to workers. Assertions that the DB structure is more cost efficient are based upon dubious comparisons with the typical private sector 401(k) model and assumptions that place a heavy thumb on the scale in favor of the DB design. More appropriate comparisons to a best-practice DC model reveal that DB plans do not possess a structural advantage over DC plans.

Providing adequate, secure income throughout retirement is the overriding objective of any retirement plan, regardless of the plan design. Despite dubious comparisons with the typical private sector 401(k) model, best-practice DC plans are a viable, sustainable option for providing retirement security to workers.

INTRODUCTION

State and local governments provide retirement benefits for essentially all-full time employees—99% of full-time public sector employees have access to an employment-based retirement plan and 94% participate in a plan.¹ Furthermore, primary coverage in the sector is typically through a defined benefit (DB) pension plan—92% of full-time employees have access to a DB plan and 87% are DB participants.²

The funding of public sector DB plans has become a particular concern among policymakers as governments continue to face budgetary challenges in the post-recession economy. Among DB plans sponsored by state and local governments, the ratio of assets to liabilities was estimated to be between 50% and 73% in 2012, depending upon methodology used.^{3,4} Increasing plan cost and reduced tax revenues have made it difficult for many governments to fully fund the annual required contribution (ARC) associated with their DB plans.⁵ The ARC was estimated to be 15.3% of payrolls in 2012—an amount that is double its 6.4 percent level in 2001—and the estimated percent of ARC paid was 80%.

1 Source: National Compensation Survey, March 2011, Bureau of Labor Statistics, U.S. Department of Labor <http://www.bls.gov/ncs/ebs/benefits/2011/ownership/govt/table02a.pdf>.

2 In addition, 34% of full-time state and local government employees have access to a defined contribution (DC) plan and 19% are DC participants

3 Munnell, Alicia H., Jean-Pierre Aubry, Josh Hurwitz, Madeline Medenica, and Laura Quinby. “The Funding of State and Local Pensions: 2012–2016,” Center for State and Local Government Excellence *Issue Brief* (July 2013).

4 This funded ratio of 73% is based on liabilities discounted by the expected long-term yield on plan assets, roughly 8%. Revaluing liabilities using the riskless rate, as advocated by most economists for reporting purposes, results in the 50% ratio.

5 The annual required contribution (ARC) to a defined benefit plan is the sum of two parts: (1) the normal cost, which is the cost for benefits attributable to the current year of service, and (2) an amortization payment, which is a catch-up payment for past service costs to fund the unfunded actuarial accrued liability over the next 30 years. GASB does not require that sponsors pay the ARC each year, but it does need to be calculated and disclosed in a public employer’s annual financial statements.

Funding concerns have led policymakers across the country to consider reform, and in fact, 44 states enacted retirement plan reforms between 2009 and 2012.⁶ The degree of reform ranges from adjustments to contribution requirements and benefit levels in existing DB plans to more fundamental changes that incorporate defined contribution (DC) elements into the primary plan structure. Changes have typically focused on reducing the costs and risks to governments of plan sponsorship.

In pension reform deliberations, it has been argued that the DB structure provides retirement benefits at a lower cost to public employers than could a DC structure. These arguments were detailed in the National Institute on Retirement Security (NIRS) report—*A Better Bang for the Buck: The Economic Efficiencies of Defined Benefit Pension Plans*.⁷ While the arguments may be valid when comparing a DB plan with the typical private sector 401(k) plan, they are not universal with respect to DC plan design. In fact, the arguments do not hold when the base of comparison is a risk-managed DC design. This brief addresses each of the arguments raised in the NIRS report and discusses how best-practice DC design negates the claimed cost advantages of DB plans.⁸

BEST-PRACTICE DEFINED CONTRIBUTION DESIGN

To anchor a discussion of relative cost, it is necessary to specify the tenants of a best-practice DC structure. Any retirement plan should be designed to provide participants with adequate and secure income throughout retirement regardless of plan

structure. When comparing DB and DC structures, it is convenient to use information about typical plan design as the basis for the comparison. But this approach can be inappropriate and misleading when the dominant design looks very little like the ideal and does not accomplish the core aim of retirement income security. This is the case with the private sector 401(k) design used to make comparisons in the NIRS report. The typical private sector 401(k) has a number of design shortcomings, all of which are easily fixable and are absent in risk-managed DC designs. This is not a hypothetical argument about a potential design, but rather, is based on the best-practice 401(a) and 403(b) plans sponsored by public and private colleges and universities across the nation. The specific elements of best-practice, risk-managed DC design have been discussed in detail elsewhere, and are only noted here.⁹ They are consistent with findings from behavioral economics and the psychology of individual decision making. The following are the core features of such a structure:

- Mandatory participation or automatic enrollment
- Adequate contribution rates
- A limited set of professionally managed, low-cost, pooled investments
- Mandatory or default investment in automatic asset allocation vehicles, such as target date funds
- Limited or no borrowing from the plan
- Annuitized benefit payments
- Provision of objective education and advice for participants

6 Snell, Ronald. “Highlights of State Pension Reform in 2012,” National Council of State Legislatures (July 2012).

7 Almeida, Beth and William B. Forna. “A Better Bang for the Buck: The Economic Efficiencies of Defined Benefit Pension Plans,” National Institute on Retirement Security (August 2008).

8 The NIRS report has also been debunked by Ambachtsheer, Keith. “The Dysfunctional “DB vs. DC” Pensions Debate: Why and How to Move Beyond It,” *Rotman International Journal of Pension Management*, Volume 5, Issue 2 (Fall 2012).

9 The reader is referred to Crane, Roderick B., Michael Heller and Paul J. Yakoboski. “Defined Contribution Pension Plans in the Public Sector: A Benchmark Analysis,” in *The Future of Public Employee Retirement Systems*, edited by Olivia S. Mitchell and Gary Andersons (Oxford University Press, 2009); Yakoboski, Paul J. “Rethinking Defined Contribution Retirement Plan Design,” TIAA-CREF Institute Trends and Issues (March 2011); and Yakoboski, Paul J. “Rethinking Defined Contribution Retirement Plan Design: A Survey of Experts,” TIAA-CREF Institute Trends and Issues (August 2011).

A CLOSER LOOK AT RELATIVE COSTS

The NIRS report claims that DB plans have built-in efficiencies based on design structure that make them more cost effective than DC plans and therefore “... the cost to deliver the same level of retirement income to a group of employees is 46% lower in a DB plan than it is in a DC plan (page 1).” The magnitude of the asserted cost difference is striking, and raises the question - How is it that two retirement plans offering the same benefits could differ so greatly in their cost?

The purported cost difference is attributed to three factors:

1. Longevity risk pooling through annuitized payouts (15 percent)
2. Maintenance of a constant asset allocation mix (5 percent)
3. Low-fee, professional management of plan assets (26 percent)

But these claimed sources of efficiency are included in the best practices listed above, and they can be readily incorporated into a DC structure as evidenced by the large number of DC plans that do so in practice. The sections below address each of the three claims of efficiency in turn.

LONGEVITY RISK POOLING

The first claim is based on the assumption that DC plans do not provide annuitized benefit payments. Annuitization provides pooling of longevity risk, i.e., the risk of an individual outliving his or her assets, across a group of individuals. It converts a pool of assets into a consistent stream of income that is guaranteed for as long as an individual lives.¹⁰ The DB norm is to pay retirement benefits in the form of an annuity; retirees are thus protected from longevity

10 And the lifetime of another in the case of a joint and survivor annuity election.

risk.¹¹ While the NIRS report notes that DC plans can and do provide annuity payouts as well, their cost comparison assumes that annuitization is not part of the DC design. The result is a manufactured 15 percent cost advantage for DBs since a DC participant would then need to save “extra” to self-insure against the risk of outliving assets in retirement.¹² Comparison with a best-practice DC plan results in no cost advantage from longevity risk pooling since both plan types pool this risk by providing annuitized benefit payments.

It is misleading to assert a cost disadvantage for DC plans based on the absence of a design feature when that feature in fact exists in many DC plans in accordance with best practice. Annuitized benefit payments are a standard offer in DC plans administered by TIAA-CREF; 75% of TIAA-CREF participants receiving income payments in a given year receive annuity payments. While some individuals may under-annuitize when given a choice of how to structure their retirement payouts, public plan sponsors have the ability to require a minimum level of annuitization if they so choose.

MAINTENANCE OF A BALANCED PORTFOLIO DIVERSIFICATION

The second claim is that DB plans do not age which enables them to maintain a constant asset mix. In contrast, individual DC participants age and common investment advice calls for more conservative allocations as a participant approaches and moves into retirement. The NIRS report assumes that a DB earns higher returns than a DC due to different investment patterns resulting from this “non-aging” effect; a 5 percent cost saving is attributed to this effect. But again the purported savings is predicated upon questionable assumptions.

11 It should be noted that lump sum options are quite common in traditional DB plans, and when offered employees take this option up in significant numbers.

12 Almeida and Fornia assume that a DC participant must save an “extra” amount sufficient to fund 12 years of retirement beyond life expectancy of age 85 for someone retiring at age 62.

The authors base their estimates on a shift in asset allocation post retirement. They assume that DC participants do not annuitize, but rather continue to invest their retirement savings in the DC plan while directly controlling the rate at which they spend down their account. As noted above, it is simply incorrect to assume that DC plans have zero annuitization. Annuitization of DC benefit payments negates the asserted cost advantage.¹³

As a broader critique of the non-aging argument, DB benefit structures do age demographically. When a DB plan is first instituted, all plan participants are workers; there are no retirees receiving benefit payments. But the plan inevitably ages as the initial cohort of covered members ages, retires and begins receiving benefit payments. The question is whether the plan reaches a steady state where the ratio of working to retired participants remains constant. This may or may not happen depending upon the sponsor's workforce trends.¹⁴

A related issue is whether DB plans actually match their asset allocation to the duration of their liabilities, or if plans, alternatively, ignore duration and set asset allocation on the basis of a target level of risk and expected return. Further, a DB plan's investment allocation can be impacted by a number of factors beyond plan demographics, such as its asset/liability position, the ratio of liabilities to the supporting active employee compensation base and the risk carrying capacity of the plan sponsor. On net, it is

not clear that DB asset allocation should be superior to that of a best-practice DC plan where the default investment is an automatic asset allocation vehicle, such as a target-date fund.

LOW-FEE, PROFESSIONAL MANAGEMENT OF PLAN ASSETS

The third claim argues that net investment returns of DBs exceed those of DCs because the former are large pools of assets that are professionally managed at low cost. This produces more than half of the purported DB cost advantage. However, all of the cost saving features highlighted by the report can be integrated into the DC design, and in practice, they are.

At a fundamental level, it is inaccurate to claim that large-scale, low-cost, professional asset management does not exist within the context of best-practice DC plans. DC plan sponsors have access to a wide variety of large, low-fee, professionally managed investment options. Given the size of available funds and the availability of custom managed solutions, particularly for large multiple employer governmental arrangements, it is not clear how a DB fund would have any advantage from economies of scale. A risk-managed DC plan will provide participants with a limited menu of such options from which to choose, as well as defaulting new participants into an appropriate investment vehicle, such as a target date fund. It is hard to argue that target-date funds fundamentally misallocate an individual's account.

In response to this NIRS report claim, Ambachtsheer (2012) examined DB versus DC returns using CEM Benchmarking Inc. data covering the period from 1997 through 2010. He concluded that after adjusting for asset mix, the average investment cost is slightly lower for DC plans than for DB plans, a result that closely matches TIAA-CREF experience. According to the National Association of State Retirement Administrators, the median total cost of sponsoring

13 In addition, the cost advantage argument assumes that a DC participant's asset allocation becomes more conservative only while receiving income draws during retirement. But an individual's asset allocation should begin fairly aggressive in the early career period and gradually become more conservative over his or her work life. This implies that the DC participant would benefit from higher expected investment returns at younger ages. Participant education and advice would recommend such investment patterns. Automatic asset allocation structures, such as target-date funds, are designed to follow such a strategy over time.

14 As noted by Ambachtsheer (2012), "...many DB plans have in fact seen their ratio of retirees to actives rise in recent years, and further increases are projected in the years ahead." Ambachtsheer, Keith. "The Dysfunctional "DB vs. DC" Pensions Debate: Why and How to Move Beyond It," *Rotman International Journal of Pension Management*, Volume 5, Issue 2 (Fall 2012).

a public sector DB plan is 45 basis points¹⁵ while the all-in fee for TIAA-CREF 401(a) and 403(b) plans is approximately 51 basis points—a negligible difference of 6 basis points (the NIRS report assumed a 100 basis point difference).¹⁶

Additionally, Ambachtsheer (2012) found that the average return difference exhibited in the data, and confirmed by prior authors, is entirely due to DB plans higher allocations to private markets (private equity and real estate) versus stable value assets. In other words, DB plans do not have a magic formula for generating higher returns; rather, DB plan assets have on average traditionally been invested in riskier asset classes that have historically yielded higher returns. The prudence of DB plans' investments in some alternatives is still an open question. With that said, there remains considerable heterogeneity in the share of assets allocated to these asset classes even within DB plans.¹⁷ Regardless, there is nothing structurally inherent in DC design that precludes sponsors from incorporating such investments. For example, TIAA-CREF incorporates direct investment in commercial real estate and alternative investments such as natural resource and infrastructure, private equity and private placements. In other words, the claimed 26 percent DB cost advantage is purely a function of assumed implementation, and potentially prudent choices, rather than inherent structure.

CONCLUSION

Best-practice, risk-managed DC plans can provide equivalent retirement income at equivalent cost to traditional DB designs. Assertions that the DB structure is more cost efficient are based upon dubious comparisons with the typical private sector 401(k) model and assumptions that place a heavy thumb on the scale in favor of DB plans. More appropriate comparisons to a best-practice DC design reveal that DB plans do not possess a structural advantage over DC plans. Providing adequate, secure income throughout retirement is the overriding objective of any retirement plan, regardless of the plan design. Risk-managed DC plans accomplish this aim by incorporating longevity risk pooling through in-plan annuities, automatic diversified asset allocation solutions in a limited menu of professionally managed, low-fee investment options, and objective advice for plan participants. Best-practice DC plans are a viable, sustainable option for providing retirement security to workers. ■

15 Brainard, Keith. "Public Fund Survey Summary of Findings for FY 2010," National Association of State Retirement Administrators (December 2011).

16 Expenses incurred in the operation of retirement plans can generally be classified as administrative services expenses and investment services expenses. Administrative services include functions such as recordkeeping, accounting, legal and trustee services, customer service support and participant communications. Investment services cover management of plan investments; in the case of a DC plan, separate expenses are incurred for each investment option offered by the plan and participants pay expenses only for the options in which their account is invested.

17 Nesbitt, Stephen L. *Cliffwater 2013 Report on State Pension Performance and Trends*, Cliffwater LLC (July 22, 2013).

ABOUT THE AUTHOR

Josh B. McGee, Ph.D., is vice president of public accountability at the Laura and John Arnold Foundation. McGee also serves as an adjunct faculty member at Rice University where he has taught in the Rice education entrepreneurship program at the Jones Graduate School of Business. McGee has produced high-quality, policy-relevant research spanning a number of important areas, including public pension structure, cost and labor market effects, K-12 education policy, and economic development. His work has appeared in scholarly journals including the Journal of Development Economics, Education Finance and Policy, and Education Next. Throughout his career, McGee has worked to actively shape public policy. He has provided expert testimony, policy advice, and technical assistance on the topics of K-12 education policy and public pension reform in a number of states, including Arizona, Arkansas, California, Florida, Kentucky, Illinois, Rhode Island, and Texas. During his tenure with the Foundation, McGee has focused primarily on addressing the problems with the nation's public retirement systems by educating the public and policymakers about the nature and size of the problem as well as potential structural reforms that would create a retirement system that is affordable, sustainable, and secure. McGee holds a B.S. and M.S. in industrial engineering and a Ph.D. in economics from the University of Arkansas.

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