



National Conference on Public
Employee Retirement Systems

NCPERS Research Series

January 2011

The Top 10 Advantages of Maintaining Defined Benefit Pension Plans

Since the mid-1990s, legislation has been proposed to replace state and local defined benefit (DB) pension plans with defined contribution (DC) plans. The pace of these proposals increased from 2003 to 2006, partly because of the equity market downturn in 2000–2002 that increased contribution rates for many DB plans, both public and private. Although the pace of DC proposals fell in 2007–2008, they increased again as a result of the financial market downturn in 2008–2009.

This paper discusses the top 10 advantages of maintaining DB pension plans. At issue is not whether state and local employees should have access to DC plans – many already do in conjunction with their DB plans or through supplemental DC-type plans, which play a useful role in providing additional tax-deferred retirement savings.¹ Rather, the issue is whether DB plans should be eliminated and replaced with DC plans.

While recognizing that DC plans are useful in providing supplemental retirement benefits, this paper argues against replacing DB plans with DC plans. For many reasons, eliminating the DB plan and switching to a DC plan is likely to be a lose–lose situation for governments, their employees, and taxpayers, as will be discussed throughout this paper.

However, although DB plans have many advantages over DC plans, it is also important to recognize the risks associated with DB plans and take steps to mitigate those risks. This idea is discussed in the “Managing DB Plan Risks” section on page 14.

Summary of the Top 10 Advantages of Retaining DB Pension Plans

- Retaining a DB plan is likely to cost state and local governments less over the short term. The long-term cost savings of switching to a DC plan are uncertain at best.

¹ Examples of defined contribution (DC)-type plans available to state and local employees include governmental deferred compensation plans (also known as *457 plans*) and 403(b) annuities. In addition, some state and local employees are covered by 401(k) plans, if the plans were established before May 6, 1986. According to the 2010 *Defined Contribution Plan Survey* by the National Association of Government Defined Contribution Administrators, 5.2 million state and local governmental employees (27 percent of the state and local workforce) are eligible to participate in some form of DC or deferred compensation plan.



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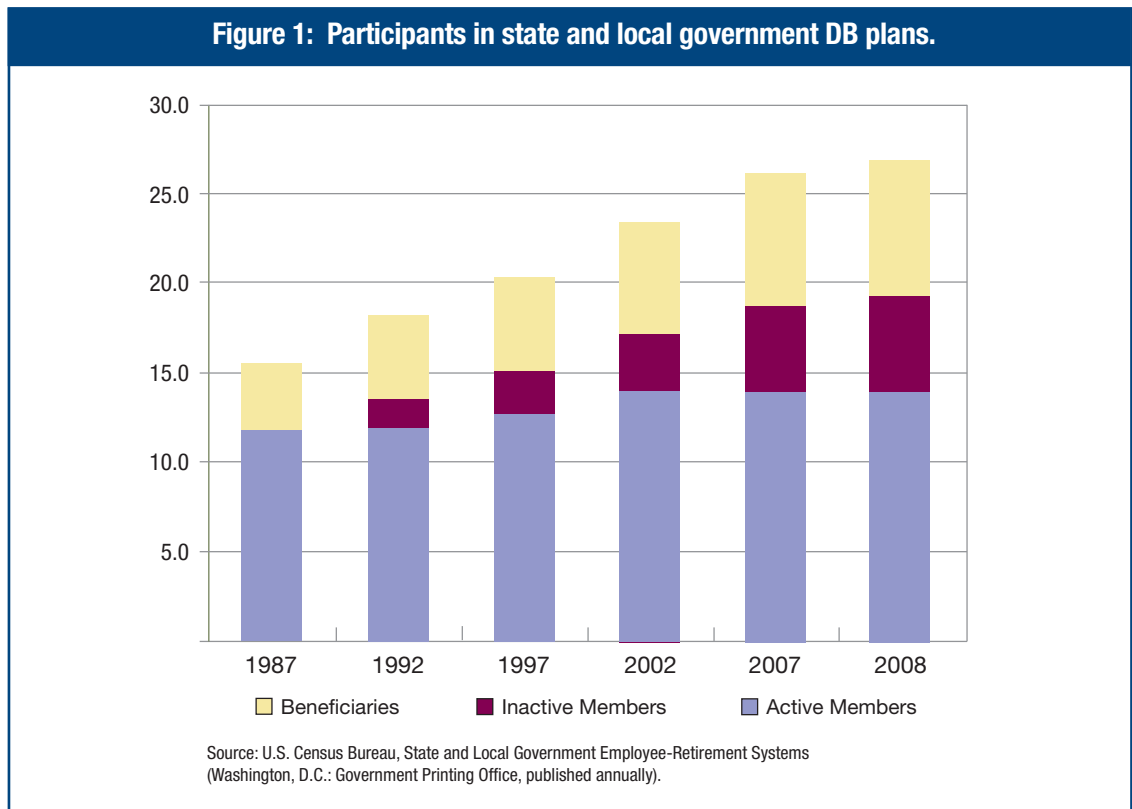
- Almost all state and local DB plans provide disability and survivor benefits, as well as retirement income. Switching to a DC plan would require employers to obtain these benefits from another source, likely at a higher cost.
- DB plans enhance the ability of state and local governments to attract and retain qualified employees. Switching to a DC plan would limit this ability, possibly exacerbating labor shortages in key service areas by increasing employee turnover rates. Higher turnover rates, in turn, could lead to increased training costs and lower levels of productivity, possibly resulting in the need for a larger workforce.
- DB plans help state and local governments manage their workforce by providing flexible incentives that encourage employees to work longer or retire earlier, depending on the circumstances. Switching to a DC plan would limit this flexibility and make these incentives more expensive for the employer.
- DB plans earn higher investment returns and pay lower investment management fees, on average, than DC plans. Switching to a DC plan would likely lower investment earnings and increase investment management costs, to the detriment of the plan participants.
- DB plans reduce the overall cost of providing lifetime retirement benefits by pooling mortality (and other) risks over a relatively large number of participants. Switching to a DC plan would require each individual to bear these risks alone, consequently requiring higher contributions than if the risks were pooled.
- DB plan investment earnings supplement employer contributions. Switching to a DC plan would prevent state and local governments from offsetting employer contributions with investment earnings, which, on average, have funded more than two-thirds of public retirement benefits over the past 25 years.
- DB plans provide secure retirement benefits based on a person's salary and period of service. Switching to a DC plan would likely result in lower and less secure retirement benefits for many long-term governmental employees, including firefighters, police officers, and teachers, who constitute more than half of the state and local government workforce.² State and local employees who are without Social Security coverage would be subject to even greater risk.
- DB plans help sustain state and local economies by providing sufficient and steady retirement benefits for a significant portion of the workforce. Switching to a DC plan could slow state and local economies, since a large number of retirees would likely receive lower retirement benefits.
- DB plans provide benefits that help ensure an adequate standard of living throughout retirement. Switching to a DC plan would likely result in pressure on state and local governments to augment DC plan benefits and require increased financial assistance for retirees.

Background

As shown in Figure 1, state and local government retirement plans in the United States cover 14.7 million active employees (about 12 percent of the U.S. workforce) and 7.6 million retirees, including teachers, police officers, firefighters, legislators, judges, and general employees.³ In addition, state and local plans cover 4.4 million former employees who will be eligible to receive benefits upon reaching retirement age (i.e., “inactive” employees).

² U.S. Census Bureau, “Statistical Abstract of the United States 2010,” table no. 450, <http://www.census.gov/compendia/statab>. Teachers, school employees, police officers, and firefighters constitute over 60 percent of state and local government employees.

³ U.S. Census Bureau, “2008 State and Local Government Employee Retirement Systems,” table 5a, <http://www.census.gov/govs/retire/2008ret05a.html>.



Ninety-one percent of full-time state and local governmental employees have access to DB retirement plans.⁴ Approximately 25 percent are not covered by Social Security, including many public school teachers, police officers, and firefighters.

As shown in Figure 2, state and local retirement plans paid annual benefits of approximately \$175 billion in 2008, averaging about \$23,300 per retiree.⁵ At the end of 2009, state and local plans had accumulated \$2.7 trillion in assets, up from \$2.3 trillion at the end of 2008 but down from \$3.4 trillion in 2007.⁶ However, even in 2008, state and local pension assets were, on average, 13 times the amount needed to pay annual benefits. In 2009, assets had increased to more than 14 times the amount needed to pay annual benefits.

Proponents of switching to a DC plan argue that it would lower the government’s cost of providing retirement benefits, thereby reducing state and local taxes. Some proponents also argue that DC plans would benefit public employees by giving them higher benefits through DC plan investment earnings and by making it easier for employees to transfer their benefits when they change jobs.

As this paper will show, it is likely that switching to a DC plan would increase retirement costs for governments over the short term and possibly over the long term as

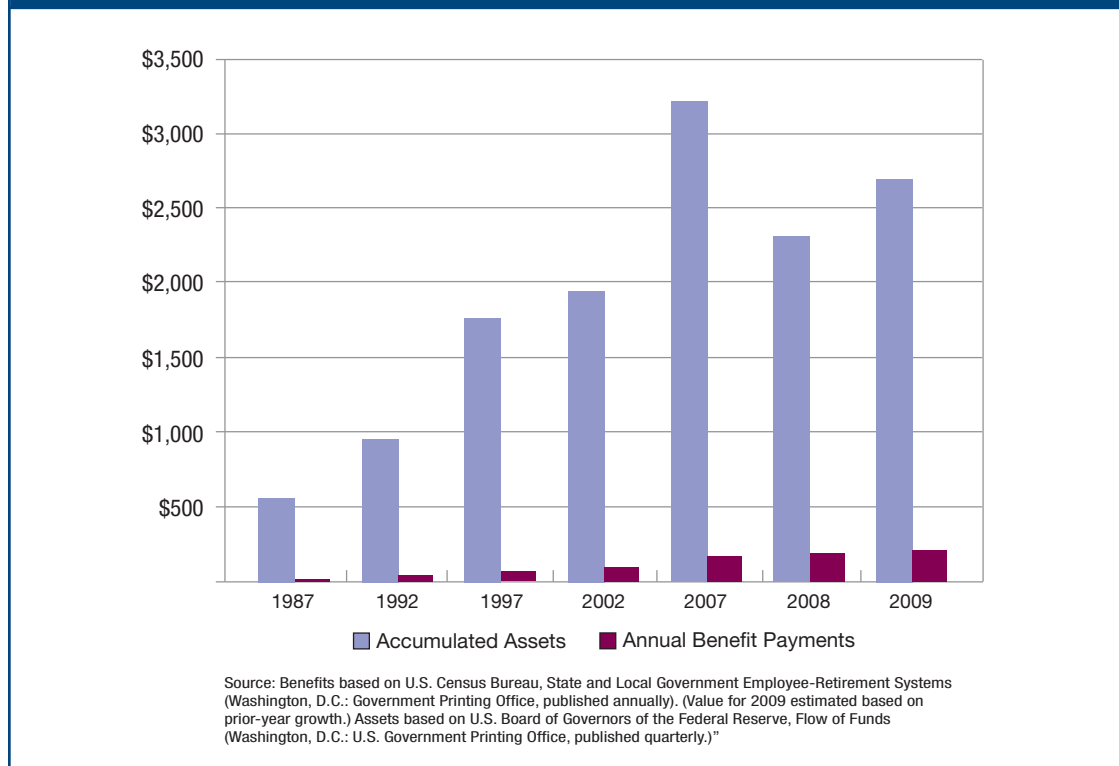
⁴ U.S. Bureau of Labor Statistics, “National Compensation Survey: Employee Benefits in State and Local Governments in the United States,” September 2007, table 1, <http://www.bls.gov/ncs/ebs/sp/ebsm0007.pdf>.

⁵ U.S. Census Bureau, “2008 State and Local Government Employee Retirement Systems,” table 1. Average benefit calculated by the author and rounded to the nearest hundred dollars.

⁶ Board of Governors of the Federal Reserve System, “Flow of Funds Accounts of the United States: Flows and Outstandings, Second Quarter 2010,” table L-119, <http://www.federalreserve.gov/releases/z1/Current/z1r-4.pdf>.



Figure 2: Accumulated assets and annual benefit payments of state and local government DB plans.



well. In addition, studies indicate that retirement benefits provided through DC plans are, on average, significantly lower than benefits provided through DB plans. Moreover, although DC plans are useful for providing supplemental, tax-deferred retirement savings, replacing DB plans with DC plans could cause severe, unintended consequences:

- Governments could lose a valuable tool for attracting and retaining qualified employees.
- Public employees could lose a significant amount of retirement income, potentially affecting state and local economies.
- Legislators could face additional pressure to increase DC retirement benefits and provide additional financial assistance for public-sector retirees.

How DB Plans Work

In a typical DB plan, employers promise to pay retirement benefits based on an employee's period of service and final average salary. A typical benefit formula for state and local general employees is 2 percent times final average salary times years of service.⁷ Under this formula, an employee who works 25 years and retires with a final average salary of \$40,000 would earn an annual benefit of \$20,000.

⁷ The "2 percent" portion of this benefit formula is referred to as the *benefit multiplier*. Benefit multipliers vary, depending on occupation and Social Security coverage. According to the National Association of State Retirement Administrators/National Council on Teacher Retirement (NASRA/NCTR) 2006 Public Fund Survey, the median benefit multiplier is 1.85 percent for state and local employees covered by Social Security and 2.20 percent for those not covered by Social Security.



Eligibility for the benefit (i.e., vesting) usually requires employees to work for a minimum period, typically five years.⁸ Upon retirement, the benefit is provided as a series of monthly payments over the retiree's lifetime (and the surviving spouse's lifetime if this option is selected by the member in return for a reduced benefit). Most state and local employees are in DB plans that also provide cost-of-living adjustments as protection against inflation. In addition, most public plans provide disability and preretirement death benefits.

DB plan benefits are financed by contributions from the employer (and most often from employees as well) and investment income. Employee contributions are usually established at a fixed rate of pay, averaging 5 percent for employees who are covered by Social Security and 8 percent for employees who are not covered.⁹ Employer contributions are calculated so that over the long run (30 years or more), annual contributions plus expected investment earnings are enough to pay the promised benefits plus administrative expenses. These calculations are done by actuaries and are designed to maintain employer contribution rates at a level percentage of payroll (to the extent possible), by smoothing short-term investment fluctuations and amortizing the unfunded liability. Plan assets are invested in professionally managed, broadly diversified portfolios, with investment fees paid by the plan or employer. Retirement benefits are paid from accumulated contributions and investment earnings.

For employers, a key advantage of DB plans is that investment earnings supplement employer contributions. In other words, employer and employee contributions generate investment earnings that, in turn, are used to pay benefits that otherwise would have been paid from future contributions. From 1984 through 2008, state and local DB plan investments earned \$3.1 trillion, amounting to two-thirds of total plan receipts over the period and reducing the need for additional employer contributions and taxpayer revenues.¹⁰

A disadvantage of DB plans is that when investment earnings are lower than expected, additional employer contributions are required, as evidenced by the recent market downturns. However, the \$3.1 trillion earned by state and local investments from 1984 to 2008 includes the investment losses in 2000–2002 and 2008. Moreover, over the 25-year period ending December 31, 2009, the annual investment returns of public pension funds averaged 9.25 percent, which exceeded their average actuarial expected returns of 8.0 percent.¹¹

For employees, a key advantage of DB plans is that they provide secure and predictable lifetime retirement income based on preretirement earnings. A key disadvantage is that employees who do not remain employed long enough to become vested often lose their DB plan benefits. However, employee contributions are almost always returned with interest for employees who leave service before vesting.

⁸ National Education Association, *Characteristics of Large Public Education Pension Plans* (Washington, D.C.: NEA, 2008). The 109 statewide plans surveyed cover 12 million active workers. Fifty-nine percent of the plans had vesting periods of five years.

⁹ Keith Brainard, *Public Fund Survey Summary of Findings for FY 2009* National Association of State Retirement Administrators, November 2010), 13.

¹⁰ U.S. Census Bureau, *Finances of Employee-Retirement Systems of State and Local Governments*, series GF, no. 2 (Washington, D.C.: Government Printing Office, published annually 1984–1997); and U.S. Census Bureau, *State and Local Government Employee Retirement Systems* (Washington, D.C.: Government Printing Office, published annually 1998–2008).

¹¹ "Public Pension Plan Investment Return Assumptions," *NASRA Issue Brief*, March 2010.



How DC Plans Work

In a DC plan, employers provide employees with individual investment accounts and promise to contribute a certain amount to the accounts annually. For governmental DC plans, the employer's contributions range from 3.5 to 8 percent (or more) per year. Usually, employees also contribute to their accounts and decide how the assets are invested, choosing from a number of funds representing major investment categories. Investment management fees are paid from the employee's account, reducing the funds available to pay benefits. At retirement, the employee's benefit is paid solely from the contributions and investment earnings that have accumulated in the individual's account.

For employers, one advantage of DC plans is that the employer's contribution rate is fixed and unaffected by downturns in investment markets. Moreover, the employer has no financial liability for the employees after they retire, even if the DC accounts are insufficient to provide an adequate retirement benefit. (However, although this characteristic may be an advantage for private-sector employers, it is a disadvantage for state and local governments – and taxpayers – who may have to pay increased public financial assistance as a result of the inadequate retirement benefits.)

A disadvantage for employers is that the provision of DC plans may not be a strong incentive for attracting and retaining qualified employees, especially if competing employers are offering DB plans. Moreover, if the employees' DC account balances are inadequate to provide retirement benefits when the employees intend to retire, employers may have a number of active employees who are not performing at peak productivity (also known as being “retired in place”). Another disadvantage is the fact that the employer's contribution rate is fixed in a DC plan, so upturns in the investment markets do not reduce the employer's contribution rate, as they do in DB plans.

For employees, one advantage of DC plans is that the vesting period is usually shorter than for DB plans (typically five years). In most cases, employee contributions vest immediately, and employer contributions typically vest after six months to two years, although sometimes longer.¹² Moreover, DC accounts are more portable – that is, easier to transfer if the employee changes jobs. A major disadvantage is that DC accounts are subject to investment risk and may not be sufficient to sustain employees throughout their retirement. Another disadvantage is that a high percentage of employees cash out and spend some or all of their DC accounts, significantly reducing the amounts available to pay retirement benefits.¹³

The remainder of this paper describes the advantages of retaining DB plans.

Advantage 1: Retaining a DB plan is likely to cost state and local governments less over the short term. The long-term cost savings of switching to a DC plan are uncertain at best.

- Pension benefits currently promised to state and local employees and retirees are protected by law. Switching to a DC plan does not reduce the accrued DB plan benefits already earned by current employees. Most governmental DB plan ben-

¹² Some public-sector DC plans require five years of service (or more) for employees to completely vest in the employers' contributions.

¹³ Alicia H. Munnell and Annika Sunden, *Coming Up Short: The Challenge of 401(k) Plans* (Washington, D.C.: Brookings Institution Press, 2004), 142.



efits are protected by the state's constitution or statutes that prevent accrued benefits from being reduced.

- **When given the option to transfer from a DB plan to a DC plan, most employees remain in the DB plan.** In some cases when new DC plans are established, current employees are given the option to transfer from the DB plan to the new DC plan. For current DB plan members who elect the DC plan, the value of the member's accrued DB benefit is often transferred to the DC plan. However, the vast majority of public employees remain within the DB plan.¹⁴
- **Even when newly hired employees are required to join the DC plan, long-term cost savings for employers are uncertain and may take many years to be realized.** To increase the number of employees who enter the DC plan, some governments have restricted the DB plan to current employees and have required newly hired employees to join the DC plan.¹⁵ However, when a DB plan is closed to new hires, benefits continue to accrue to employees in the DB plan as a result of their service. To the extent that DB plan assets are lower than the accrued liabilities, unfunded liabilities remain. Because new hires are not entering the plan, the cost of funding the liabilities is spread over a declining number of active members.¹⁶ As a result, the employer's contribution rate is likely to increase as a percentage of covered payroll. In addition, since a growing portion of plan assets must be used to pay benefits, a larger share of the assets would likely be held in short-term securities, thereby reducing investment returns.
 - ❖ For example, the Los Angeles County Employees Retirement Association estimated that the county's DB plan contribution rate would increase by 3.66 percent if employees hired after July 1, 2007, were required to join a DC plan. This scenario would have increased county contributions to the closed DB plan by \$206 million in 2008. Although the contributions would have gradually declined over time, the county would have had to wait until 2018 to see any savings in DB plan costs as a result of the change.¹⁷
- **DC plans are costly to establish and maintain.** Overall, a DC plan must be designed, vendors must be selected, the plan's operation must be monitored, and employees must be informed about plan features and available investments. Staff time is spent throughout this process, and the sponsoring government must pay legal and consulting fees. If a third-party administrator is not hired to operate the plan, the government must do this task as well. Even if a third-party administrator is hired, the government will still have operating costs related to the DC plan, possibly ranging in the millions of dollars.

¹⁴ Mark Olleman, "Public Plan DB/DC Choices," *PERIScope*, January 2009.

¹⁵ National Association of State Retirement Administrators, "Overview of Plan Types," <http://www.nasra.org>. Of the 14 state retirement systems discussed in this paper, only two (those of Michigan and West Virginia) required newly hired employees to join the DC plan. The remaining systems offered DC plans as a voluntary alternative to the DB plan or offered a new plan that combined DB and DC plan features.

¹⁶ Governmental Accounting Standards Board, Statement No. 27, *Accounting for Pensions by State and Local Governmental Employers* (Norwalk, Conn.: Governmental Accounting Standards Board, 1994), 7. In situations where a DB plan is closed to new members and unfunded liabilities are amortized as a level percentage of projected payroll, the payroll growth rate should include projected decreases in the number of active plan members.

¹⁷ Los Angeles County Employees Retirement Association, "Proposals to Close Public Defined Benefit Plans," <http://www.lacera.com/archives/archivesHome/ProposalsToClosePublicDefinedBenefitPlans.html>.



- ❖ For example, the budget for the State of Florida’s DC plan, established in 2000, totaled \$89 million from FY 2001 through FY 2004. This total included \$55 million to educate Florida’s 650,000 government employees about the new plan.¹⁸
- **In several cases, states have replaced DC plans with DB plans because of the inadequacy of plan benefits or increased costs.**
 - ❖ The North Dakota Public Employees Retirement System was originally established as a DC plan in 1966. In 1977, it was changed to a DB plan to provide adequate retirement benefits and to assist the state in attracting and retaining quality employees.¹⁹
 - ❖ In 2000, the State of Nebraska reviewed its two DC retirement plans for state and county workers. It found that between 1983 and 1999, the DC plans’ investment returns averaged only 6 percent, compared with 11 percent for the state’s DB plans. Recognizing that these returns were inadequate to sustain retirement benefits, the state responded by creating a new hybrid plan for state and county workers, combining both DB and DC plan features.²⁰
 - ❖ In 2005, the West Virginia legislature passed a law allowing teachers in the Teacher’s Defined Contribution (TDC) Plan (created in 1991) to transfer into the State Teachers’ Retirement System, a DB plan, effective upon approval by TDC plan members. According to the West Virginia Consolidated Public Retirement Board’s actuary, the change would save the state \$1.8 billion over 30 years, because lower employer contributions would be required for the DB plan (4.34 percent of payroll) than for the DC plan (7.5 percent of payroll).²¹ State teacher representatives also indicated that the change would help prevent teachers from leaving their jobs.²² In 2008, more than 78 percent of the TDC members voted to transfer to the DB plan.²³

Advantage 2: Almost all state and local DB plans provide disability and survivor benefits, as well as retirement income. Switching to a DC plan would require employers to obtain these benefits from another source, likely at a higher cost.

- **Almost all state and local DB plans provide disability and survivor benefits.** According to the U.S. Bureau of Labor Statistics, 95 percent of full-time state and local government employees in DB plans have disability coverage through the plan, and 90 percent have the option to elect joint and survivor benefits.²⁴ These benefits are largely funded through the plan’s contributions and investment

¹⁸ Information provided by the Pension Protection Coalition, based on an analysis of the Florida Public Employee Optional Retirement Program’s approved budgets and revenue collections. The analysis was done for the Coalition by the law firm of Olson, Hagel & Fishburn, LLP, January 18, 2005. The budgeted amounts exclude investment management fees paid by plan participants. Used with permission.

¹⁹ North Dakota Legislative Council Employee Benefits Program Committee, “Public Employees Retirement Programs – History,” October 1998.

²⁰ Anya Sostek, “Pension Pendulum,” *Governing Magazine*, March 2004, 28.

²¹ Justin D. Anderson, “State: Reviving Teacher Benefit Plan Will Save Money,” *Wheeling News Register*, June 21, 2005.

²² Jim Wallace, “Teacher Pension Bill Has Hurdles,” *Charleston Daily Mail*, March 31, 2005.

²³ Walt Williams, “Teachers Rack Up Enough Votes to Switch Systems,” *State Journal*, June 5, 2008.

²⁴ U.S. Bureau of Labor Statistics, *National Compensation Survey: Employee Benefits in State and Local Governments in the United States*, September 2007, , tables 1, 16.



earnings. Disability and survivor benefits are especially important to employees in hazardous occupations who may die or become disabled in the line of duty, such as firefighters and police officers.

- Few DC plans provide disability benefits. Moreover, DC plan survivor benefits are usually limited to payment of the participant's account balance. In the absence of a DB plan, employers would need to obtain disability and preretirement death benefits through commercial insurance or would have to self-fund the benefits. Either of these options would likely result in additional administrative costs. If the benefits were obtained through commercial insurance, the employer's cost would also include the insurer's profit margin.

Advantage 3: DB plans enhance the ability of state and local governments to attract and retain qualified employees. Switching to a DC plan would limit this ability, possibly exacerbating labor shortages in key service areas by increasing employee turnover rates. Higher turnover rates, in turn, could lead to increased training costs and lower levels of productivity, possibly resulting in the need for a larger workforce.

- Employers offer retirement plans as a way to attract qualified employees and retain them so their skills and experience are used efficiently. According to the Diversified Investment Advisors 2004 Report on Retirement Plans, most large employers see a tangible value in offering a DB plan to their employees – despite the high costs sometimes associated with it. Fifty-eight percent of plan sponsors with 25,000 or more employees believe that their DB plans have a major impact on employee retention.²⁵
- DB plan provisions encourage employees to remain with an employer longer than do DC plan provisions. The vesting period for DB plans is typically longer (e.g., five years) than the vesting period for DC plans (e.g., six months to two years). Consequently, employees have a financial incentive to continue working for the employer at least until they become vested. After that, DB plan benefit accruals based on continued service provide an additional financial incentive to remain with the employer.
- Key governmental service areas, such as education and public safety, require skilled and dedicated employees to work in positions involving high levels of stress or physical activity or both. Individuals with the skills and temperament to assume these roles usually have other opportunities in the labor market. DB plans provide strong incentives for these employees by rewarding long-term, dedicated service with a secure retirement.

Advantage 4: DB plans help state and local governments manage their workforce by providing flexible incentives that encourage employees to work longer or retire earlier, depending on the circumstances. Switching to a DC plan would limit this flexibility and make these incentives more expensive for the employer.

- Governments can use DB plan benefits as a way to manage their workforce by rewarding longer employment and encouraging retirement after a certain period

²⁵ "Majority of U.S. Companies That Offer a Pension Plan Say It Impacts Employee Retention," *Business Wire*, September 7, 2004.



of employment. DB plan benefit formulas can be structured to provide incentives for longer employment by increasing the benefit multiplier after a certain period of service.

- ❖ For example, to reward longer employment, the formula could provide benefits of 2.0 percent of final average earnings for the first 20 years of service and 2.2 percent for service of longer than 20 years. Moreover, to encourage retirement after a certain period of employment, the formula could limit benefit accruals to a maximum percentage of final average earnings or maximum years of service. In this example, if the benefit accrual were limited to 62 percent of final average earnings, it would encourage employees to retire after 30 years of service. Other options, such as early retirement incentives and deferred retirement option plans (DROPs), are also available.

Advantage 5: DB plans earn higher investment returns and pay lower investment management fees, on average, than DC plans. Switching to a DC plan would likely lower investment earnings and increase investment management costs, to the detriment of the plan participants.

- **On average, investment returns for DC plans are lower than for DB plans, resulting in significantly lower investment earnings over an individual's lifetime.** According to a recent Towers Watson study, DB plans have outperformed DC plans by one percentage point (i.e. 100 basis points) annually, on average, between 1995 and 2007 and likely through 2008.²⁶ For a person contributing \$5,000 to a DC plan each year for 40 years, the difference between an 8 percent annual return and a 7 percent return amounts to a loss of more than \$330,857.²⁷ Other studies show that nonprofessional investors may underperform the market by 1.8 percent (i.e., 180 basis points) annually.²⁸ The difference between an 8 percent annual return and a 6.2 percent return amounts to a loss of more than \$534,638.²⁹
- **Administration and investment costs for DC plans can be more than four times higher than for DB plans. In DC plans, these costs are borne directly by individual plan participants through deductions from their DC accounts.** According to the Investment Management Institute, the operating expense ratio for DB plans averaged 31 basis points in 2003 (31 cents per \$100 of assets), compared with 96 to 175 basis points for DC plans.³⁰ Additionally, a 2007 study by Boston College reported asset management fees averaging 25 basis points for DB plans, compared with 60 to 170 basis points for DC plans, depending on plan size and the mix of investments.³¹ According to the Illinois Municipal Retirement Fund, the total annual administrative and investment cost for its DB plan amounted to 44 basis points in 1999. Had it switched to a DC plan, total annual administrative and investment costs could have increased up to 225 basis

²⁶ Towers Watson, *Defined Benefit vs. 401(k) Investment Returns: The 2006–2008 Update*, December 2009.

²⁷ Author's calculations assuming contributions are made at the beginning of each year.

²⁸ Chris Flynn and Hubert Lum, *DC Plans Under Performed DB Funds* CEM Benchmarking, Inc., 2006).

²⁹ Author's calculations assuming contributions are made at the beginning of each year.

³⁰ Sean Collins, "The Expenses of Defined Benefit Pension Plans and Mutual Funds," *Perspective* 9, no. 6 (December 2003). DC plan expenses include 12-b1 marketing and distribution fees.

³¹ Alicia H. Munnell and M. Soto, *State and Local Pension Plans Are Different from Private Plans* (Boston: Center for Retirement Research, Boston College, 2007).

points, or up to \$250 million more than the annual administrative and investment costs paid by the DB plan.³²

- **Employees direct their own investments in a DC plan, usually selecting from among several funds that reflect major investment categories. Generally, employees have limited investment experience or training.** According to a 2007 study by Watson Wyatt Worldwide (now Towers Watson), many DC plan participants “don’t start saving soon enough, don’t save enough, and don’t follow sound investment principles in managing their retirement assets.” The study also found that assets are more effectively managed in DB plans, in part because plan administrators work with consultants and professional asset managers to set and implement investment goals.³³
- **DC plan participants often cash out and spend some or all of their DC accounts when they switch jobs. As a result, the accounts have less money to earn investment returns and to pay benefits at retirement.** According to Alicia Munnell at the Center for Retirement Research at Boston College, a high percentage of employees in DC plans cash out or spend some or all of their DC accounts when they change jobs, significantly reducing the amounts available to pay retirement benefits.³⁴

Advantage 6: DB plans reduce the overall cost of providing lifetime retirement benefits by pooling mortality (and other) risks over a relatively large number of participants. Switching to a DC plan would require each individual to bear these risks alone, consequently requiring higher contributions than if the risks were pooled.

- **DC plan participants must save enough to ensure that they will not outlive their accumulated assets while protecting their investments against financial market fluctuations.** According to the Society of Actuaries RP-2000 mortality tables, 50 percent of U.S. males who reach age 65 will live to age 83, 10 percent will live to age 93, and about 1 percent will live to 100. Moreover, 50 percent of U.S. females who reach age 65 will live to age 85, 10 percent will live to age 96, and 2 percent will live to 100. To ensure that their DC accounts will sustain them over their expected lifetimes, DC plan participants must save enough so that their benefits will be paid into their 90s.
 - ❖ For example, a 25-year-old male would have to save 17 percent of his salary each year to age 65 in order to replace 75 percent of his preretirement income from age 65 to age 93 (assuming 7 percent annual investment returns). A 25-year-old female would have to save 18 percent of her salary to ensure 75 percent income replacement to age 96. However, if these longevity risks were pooled over a large enough group to allow the risks to be fully averaged, the required savings rate would fall to 13.6 percent of salary for both males and females.³⁵ Risk pooling is one of the main advantages of a DB plan.

³² Louis W. Kosiba, “The Defined Benefit vs. Defined Contribution Debate: The \$250 Million Question,” Illinois Municipal Retirement Fund, October 13, 1999, p. 2.

³³ Watson Wyatt Worldwide, *Pension Aspirations and Realizations: A Perspective on Yesterday, Today, and Tomorrow*, March 2007

³⁴ Munnell and Sunden, *Coming Up Short*, 142.

³⁵ Gabriel, Roeder, Smith & Company, “The Advantages of Risk Pooling for Financing Retirement Benefits,” *GRS Insight*, July 2006, <http://www.gabrielroeder.com/pubs/GRSInsight-2006-07.pdf>.



- In addition, to lower their investment risk, DC plan participants usually shift a greater portion of their assets from stocks into bonds as they grow older. Although doing so helps protect against equity market downturns, it also lowers likely investment return. According to a 2008 Employee Benefit Research Institute study, over the 10-year period ending in 2008, 401(k) plan participants in their 30s invested an average of 64 percent of their account balances in equities (including company stock) and 21 percent in bonds, money market, and stable value securities. Participants in their 60s invested 37 percent in equities and 48 percent in bonds, money market, and stable value securities.³⁶ In contrast, large public retirement systems hold 52 percent of assets in equities, 29 percent in fixed-income securities, 6 percent in real estate, and the remaining 12 percent in alternative and other investments.³⁷ This pooling of assets allows DB plans to maintain a more diversified portfolio and helps improve their investment returns.
- By pooling longevity risks and earning higher investment returns, DB plans lower the total costs of providing retirement benefits. Instead of requiring contributions large enough to fund retirement benefits through each individual's maximum life expectancy, DB plans need to fund benefits only through the average life expectancy of the group. Moreover, by earning higher investment returns over a longer period, DB plans can lower required contributions. In the example related to mortality pooling presented earlier in this section, if investment returns increased from 7 to 8 percent, the required savings rate for the pooled participants would fall from 13.6 to 10.0 percent.³⁸

Advantage 7: DB plan investment earnings supplement employer contributions. Switching to a DC plan would prevent state and local governments from offsetting employer contributions with investment earnings, which, on average, have funded more than two-thirds of public retirement benefits over the past 25 years.

- Most of the money paid into state and local retirement plans comes from investment earnings. Over the 25-year period from 1984 through 2008, state and local government investment earnings amounted to \$3.1 trillion, compared with employer contributions of \$1.1 trillion and employee contributions of \$523 billion.³⁹ Thus, roughly two out of every three dollars paid into state and local retirement plans over the last 25 years were received from investment earnings. According to a paper on state and local retirement plans prepared for the Wharton School's Pension Research Council, "*Setting aside all the other benefits to employers and employees of DB plans, contributions to public pension plans may be among the best investments a state or local government can make.*"⁴⁰

Advantage 8: DB plans provide secure retirement benefits that are based on a person's salary and period of service. Switching to a DC plan is likely to result in lower and less secure retirement benefits for many long-term governmental employees, including firefighters, police officers, and teachers,

³⁶ Jack VanDerhei, Sara Holden, and Luis Alonso, "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2008," *EBRI Issue Brief* 335, Employee Benefit Research Institute, October 2009.

³⁷ Brainard, *Public Fund Survey Summary of Findings for FY 2009*, 10.

³⁸ Gabriel, Roeder, Smith & Company, "The Advantages of Risk Pooling."

³⁹ U.S. Census Bureau, *Finances of Employee-Retirement Systems of State and Local Governments*; and U.S. Census Bureau, *State and Local Government Employee Retirement Systems*.

⁴⁰ Gary W. Anderson and Keith Brainard, *Profitable Prudence: The Case for Public Employer Defined Benefit Plans* Pension Research Council, Wharton School, University of Pennsylvania, 2004), 14.



who constitute more than half of the state and local government workforce. State and local employees who are without Social Security coverage would be subject to even greater risk.

- **Retirement benefits paid from DC plans are significantly less than benefits paid from DB plans.** A 2007 study by the U.S. Congressional Research Service found that for current older workers, DC-type plans will provide annual benefits of less than \$8,400 for half the workers.⁴¹ This amount is approximately one-third of the \$23,300 average annual benefits currently paid by governmental DB plans to state and local workers.
- **If average state and local retirement benefits fell from \$23,300 to \$8,400, it would mean a loss of approximately \$112 billion in annual retirement income.**⁴² This loss would be felt by state and local economies, since many retirees remain in the same location when they retire. In most cases these pension benefits are also subject to federal and state income taxes, thus resulting in a loss of tax revenues. Tax losses would also be seen in reductions of state sales tax revenues.
- **Switching to a DC plan would have an even greater effect on the 25 percent of state and local government employees who are not covered by Social Security, including school teachers, police officers, and firefighters.** When first enacted in 1935, Social Security excluded state and local employees, due largely to constitutional concerns about the federal government's right to tax state and local governments. In 1950, Congress amended Social Security to allow state and local governments to voluntarily elect coverage. By then, however, half of the largest state and local plans – including many plans for teachers and public safety employees – had already been established.⁴³ These DB plans provide benefits that compensate for the lack of Social Security coverage. Replacing them with DC plans would put these members at even greater risk, since they would not be eligible to receive Social Security benefits.

Advantage 9: DB plans help sustain state and local economies by providing sufficient and steady retirement benefits for a significant portion of the workforce. Switching to a DC plan could slow state and local economies, since a large number of retirees would likely receive lower retirement benefits.

- **Public DB plans have a substantial impact on state and local economies.** In essence, state and local retirement plans act as financial engines, using employer and employee contributions to generate investment income that, when paid as retirement benefits, bolsters state and local economies. State and local retirees purchase a wide range of goods and services with their retirement income. These purchases, in turn, promote employment and create additional economic demand, generating additional economic activity. Moreover, because employer (i.e., taxpayer) contributions are invested, the economic impact associated with these contributions is even greater, since a large portion of the benefits are paid from investment earnings.

⁴¹ Patrick J. Purcell, *Retirement Savings and Household Wealth in 2007* (Washington, D.C.: Library of Congress, Congressional Research Service, April 8, 2009).

⁴² Author's calculation based on \$175 billion in annual pension benefits paid by state and local government retirement plans in 2008.

⁴³ Olivia S. Mitchell et al *Pensions in the Public Sector* (Philadelphia: University of Pennsylvania Press, 2001), 13.



- ❖ A 2009 study by the National Institute on Retirement Security found that in 2006, the \$151 billion in retirement benefits paid nationally to 7.3 million retired state and local government employees supported \$358 billion in total economic output, including employment for more than 2.5 million Americans. As a result, for every \$1 paid out in pension benefits, \$2.37 worth of economic activity was supported. The study also found that every \$1 contributed by employers (i.e., taxpayers) to the pension funds (and invested) supported \$11.45 in total economic activity.⁴⁴ This is because, on average, employer contributions make up only about 20 percent of the total plan receipts used to fund benefits. The remaining 80 percent comes largely from investment earnings.

Advantage 10: DB plans provide benefits that help ensure an adequate standard of living throughout retirement. Switching to a DC plan would likely result in pressure on state and local governments to augment DC plan benefits and require increased financial assistance for retirees.

- If DC plan benefits are less than are required to ensure an adequate standard of living during retirement, continued pressure will be placed on state and local governments, legislators, and taxpayers as retirees outlive their retirement income. Since DC benefits are not indexed to inflation, extended periods of even modest inflation will mean continuing long-term pressure for additional financial support for retirees, who would make up a growing portion of the electorate. If DC plan benefit improvements were granted, they would be paid from current government revenues and would not be offset by investment earnings.
- ❖ According to the National Institute on Retirement Security (NIRS), public- and private-sector DB plans “play a vital role in reducing the risk of poverty and material hardship among older Americans.”⁴⁵ In a 2009 study of financial hardship among the elderly, the NIRS found the following:
 - Rates of poverty among older Americans without DB plans were six times greater than for those with DB plans.
 - Older households with DB plans were far less likely to experience food, shelter, or healthcare hardships.
 - DB plans resulted in savings of about \$7.3 billion in public assistance in 2006 (approximately 8.5 percent of aggregate public assistance received that year by American households).

Managing DB Plan Risks

The financial market declines from 2000 to 2002 and 2008 to 2009 have had a major impact on the funding of state and local government pension plans and have caused many governments to reevaluate their plan designs. Although DB plans have many advantages over DC plans, it is also important to recognize and manage the associated risks. A full discussion of the actions needed to manage DB plan risks is beyond the scope of this paper; however, a few key steps are discussed below:

⁴⁴ Ilana Boivie and Beth Almeida, *Pensionomics: Measuring the Economic Impact of State and Local Pension Plans* National Institute on Retirement Security, February 2009).

⁴⁵ Frank Porell and Beth Almeida, *The Pension Factor: Assessing the Role of Defined Benefit Plans in Reducing Elder Hardships* National Institute on Retirement Security, July 2009), 1.

- **Examine portfolio allocations in light of downside risks.** Probably the largest single risk facing DB plans is investment volatility, as demonstrated by the market declines over the past decade. Asset allocations should be made with an understanding of the downside risks facing the portfolio and the techniques available to manage them.
- **Avoid benefit increases based on “excess assets.”** Funding progress will likely be undermined when benefit improvements are based on “excess assets” (i.e., assets that are greater than actuarial liabilities) or “excess returns” (i.e., investment returns that exceed expected returns). Actuarial valuations are determined using actuarial assumptions that represent averages. For example, the actuarially assumed investment return represents the average expected return over the long term (e.g., 30 years or more). High returns in a given period may be followed by low returns in a future period. Consequently, increasing benefits in years of higher returns may lower the plan’s ability to cope with the volatile economic environment and require higher contributions in the future.
- **Consistently contribute the amounts necessary to fund the plan.** As demonstrated by the recent recession, making the necessary contributions can be especially difficult in times of intense fiscal pressure. However, contributing less than the actuarially determined contribution means that the amounts not contributed must be repaid in the future with interest (at the expected rate of return, e.g., 8 percent). Consequently, chronic patterns of contributing less than the actuarially determined amount will make it increasingly difficult to pay the necessary contributions in the future and diminish the benefit security of plan members.
- **Determine the long-term costs of new benefits before awarding them.** Since pension benefits are generally legally protected once adopted, it is essential to understand how much they will cost before they are awarded. If benefits are not sustainable over the long term, governments will necessarily find ways of addressing the fiscal pressures, including furloughs, layoffs, wage freezes, and other measures, all of which diminish the financial security of public employees. This makes it more difficult for government employees to effectively provide needed services to citizens.

Conclusion

This paper addresses the question, *Should state and local government defined benefit plans be eliminated and replaced with defined contribution plans?* It concludes that such a move would have significant, long-term, detrimental effects on state and local governments, their employees, their economies, and ultimately the taxpayers.

In the final analysis, the real question is, *How can state and local governments efficiently provide secure, sufficient, and sustainable retirement benefits for their employees?* To answer this question, retirement benefits should be viewed in total, including benefits from Social Security, DB plans, DC plans, and individual savings. No single source alone is sufficient, but together they can be used to provide effective and efficiently funded retirement income. Eliminating DB plans would only intensify future problems rather than provide solutions.



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