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* Copyright 2000, Jonathan Barry Forman. Professor of Law, University of Oklahoma;B.A. 1973, Northwestern University; M.A. (Psychology) 1975, University of Iowa; J.D. 1978, University of Michigan; M.A. (Economics) 1983, George Washington University. Delegate to the 1998 National Summit on Retirement Savings. The author wishes to thank Cynthia L. Moore, Jay Toslosky, and Stanley C. Wisniewski for their comments on earlier drafts. Research assistance was provided by Melissa French.
INTRODUCTION

More than fourteen million state and local government workers and retirees are covered by pension plans. The overwhelming majority of these workers are covered by defined benefit plans, perhaps with a supplemental defined contribution plan. Recently, however, a number of state and local governments have reconsidered their pension obligations and are considering shifting away from their traditional defined benefit plans and toward defined contribution plans. In fact, a number of states and localities


Defined benefit plans typically provide each worker with a specific annual retirement benefit that is tied to the worker’s final average compensation and number of years of service. See id. For example, a plan might provide that a worker’s annual retirement benefit is equal to 2% times years of service times final average compensation ($B = 2\% \times yos \times fac$). See id. Under this formula, a typical worker with thirty years of service would receive an annual retirement benefit equal to 60 percent of her preretirement earnings ($B = 60\% \times fac = 2\% \times 30 \times yos \times fac$). See id. Final average compensation is typically computed by averaging the worker’s salary over the three years immediately prior to retirement. See id.

3. Under a typical defined contribution plan, the employer simply contributes a specified percentage of the worker’s compensation to an individual investment account for the worker. For example, contributions might be set at 10% of annual compensation. Under such a plan, a worker who earned $30,000 in a given year would have $3,000 contributed to an individual investment account for her. Her benefit at retirement would be based on all such contributions plus investment earnings thereon.

have already made such shifts.\textsuperscript{5} Michigan, for example, recently created a new defined contribution plan for all new state employees,\textsuperscript{6} and Michigan State Treasurer, Douglas B. Roberts has been one of the most vocal advocates of a shift away from defined benefit plans and towards defined contribution plans.\textsuperscript{7}

In the private sector, the shift away from defined benefit plans has been going on for years.\textsuperscript{3} In fact, there has been a worldwide trend towards defined

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8. See, e.g., [EMPLOYEE BENEFIT RESEARCH INSTITUTE], \textit{RETIREMENT PROSPECTS IN A DEFINED CONTRIBUTION WORLD} (Dallas Salisbury ed., 1997); \textit{WHAT IS THE FUTURE FOR DEFINED BENEFIT PENSION PLANS: AN EBRI-EFR Roundtable} [EMPLOYEE BENEFIT RESEARCH INSTITUTE] (1989); Roundtable Discussion: Defined Benefit/Defined Contribution Trends, in \textit{THE FUTURE OF PLANS IN THE UNITED STATES} 102 (Ray Schmitt ed., 1992); see also Gregory S. Alexander, \textit{Pensions and Passivity}, LAW & CONTEMP. PROBS., Winter 1993, at 111, 118 (1993) (arguing that defined contribution plans are more consistent with the democratic model of pensions than are
defined benefit plans).


11. See PBGC Study, Consultants Concur, Plans Will Not Vanish in Future, 17 BNA PENSION & BENEFITS REP. 2103 (1990) [hereinafter PBGC Study] (discussing a Pension Benefit Guaranty Corporation study that shows that almost all of the recent decline in defined benefit plans can be attributed to structural shifts in the economy rather than conscious decisions by plan sponsors to switch from defined benefit plans to defined contribution plans).


14. See Khavari, supra note 1, at 41 (indicating there is already $2 trillion in state and national social security programs). However, traditional defined benefit plans are far from disappearing in the private sector. In fact, there is a good deal of debate about how and whether government policies should be changed to stem the “erosion” in traditional defined benefit plans.

The debate over whether or not to shift away from defined benefit plans and toward defined contribution plans is now also squarely before state and local government policymakers. With literally trillions of dollars at stake,
this debate should prove interesting for all concerned. The purpose of this article is to consider the major issues that are involved in that debate. Specifically, this article discusses the principal issues that state and local governments should consider in choosing between defined benefit plans and defined contribution plans for their workers. Part I of this article provides a little background on state and local government pensions. Part II of this article discusses some of the key issues in choosing between defined benefit plans and defined contribution plans. Finally, Part III of this article offers some general recommendations about how to improve state and local government pension plans.

I. BACKGROUND ON PUBLIC PENSIONS

The overwhelming majority of state and local government workers are covered by defined benefit plans. For example, 91 percent of full-time state and local workers participated in defined benefit plans in 1993-94, while 9 percent participated in defined contribution plans that year. All in all, 96% of full-time state and local government workers were covered by at least one retirement plan in 1993-94.

local government pension funds. That number does not even count unfunded accrued liabilities or the future benefit accruals of state and local government workers. Not surprisingly, Wall Street is following this issue closely).


17. Throughout the remainder of this article, the terms “public pensions” and “public pension plans” will be used to refer only to state and local pensions. Specifically, these terms will not be used to refer to Social Security or to federal civilian or military retirement plans.


20. See Foster, supra note 2, at 37.

21. See id.
This contrasts sharply with the private sector where less than 60% of workers are covered by pension plans, and only about 40% are covered by defined benefit plans. At the same time, however, while Social Security coverage is almost universal in the private sector, more than 20% of state and local workers are not covered by Social Security.

It is also significant to note that unlike private-sector pension plans, state and local government plans are not subject to regulation by the federal government under the Employee Retirement Income Security Act of 1974 (ERISA). Instead, state and local pension plans are created and governed by state and local laws which often have less stringent funding, vesting, and other requirements. The federal tax rules governing state and local pensions are also less stringent than the rules that apply to private plans.

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23. See id. at 4.


27. In particular, the federal vesting and nondiscrimination rules applicable to governmental plans are much more relaxed than the rules applicable to private plans. See, e.g., I.R.C. §§ 401(a)(5)(G) (1994) (coverage), 411(e)(1)(A) (1994) (vesting). Of course, state and local government plan participants are subject to state vesting laws, which are often more stringent than federal law. Also, one reason that state and local government plans are not subject to the usual federal nondiscrimination rules may is that plan provisions are debated in
II. SOME KEY ISSUES IN CHOOSING BETWEEN DEFINED BENEFIT PLANS
AND DEFINED CONTRIBUTION PLANS

This Part discusses some of the key issues for a government to consider in choosing between a defined benefit plan and a defined contribution plan.

A. Funding And Cost

Defined contribution plans are always fully funded. On the other hand, defined benefit plans are often underfunded. Nowhere is this distinction more obvious than in the public sector. In fact, a recent survey of 451 state and local pension plans found that 75 percent of them were underfunded, and 38 percent were less than 80-percent funded. For example, Oklahoma’s teacher’s retirement pension system is only about 43-percent funded and has an unfunded liability of approximately $4.7 billion.

Defined benefit plans accumulate significant funding obligations as a result of employee service over time. The employees earn the right to future benefits as they work, but the employer does not always fully fund its accruing pension liabilities. Moreover, a defined benefit plan can easily become underfunded because of a decline in value of the pension fund’s investment portfolio or even because of changes in the employer’s work force (such as increasing life expectancies).

Since the enactment of ERISA in 1974, private employers have had relatively little leeway to avoid their funding obligations. On the other hand, public pensions are not governed by ERISA, and, as previously mentioned, states are frequently guilty of underfunding their defined benefit plans. The
funding of state and local pension plans has improved substantially since the 
1970s, but problems remain, and underfunding may present future problems for 
many public pensions. 34

Alternatively, it is worth noting that “a defined contribution system is 
ever underfunded.” 35 The employer’s funding obligation is completed when 
the employer makes the appropriate contributions to individual accounts, and 
subsequent events have no impact on the employer’s funding obligations. In 
short, under a defined contribution plan, the employer’s cost is known in 
advance and can be included in the budget.

B. Influence on Worker Behavior

Pension benefits accrue differently under traditional defined benefit plans 
and traditional defined contribution plans. In particular, under a defined benefit 
plan, benefit accruals increase significantly the closer a worker gets to 
retirement. On the other hand, under a defined contribution plan, benefits 
accrue at a constant rate (e.g., 10% of annual compensation). Consequently, 
defined benefit and defined contribution plans result in different incentives that 
can affect employee decisions about work and retirement. 36

In particular, defined benefit plans typically penalize workers who change 
jobs frequently, create large financial incentives for workers to stay on the job

35 See Baar, supra note 6 (quoting Michigan State Treasurer Douglas Roberts).
36 See, e.g., Richard A. Ippolito, Pension Plans and Employee Performance 10
17 (1997) [hereinafter Ippolito, Pension Plans]; Richard A. Ippolito, Pensions, Economics 
and Public Policy 133-50 (1986) [hereinafter Ippolito, Pensions]; Joseph F. Quinn et al., 
Passing the Torche: The Influence of Economic Incentives on Work and Retirement 
(1990); Lawrence Thompson, Older & Wiser: The Economics of Public Pensions 71-83 
(1998); Alan L. Gustman & Thomas L. Steinmeier, Pension Incentives and Job Mobility 
(1995); Michael D. Hurd, Research on the Elderly: Economic Status, Retirement, and 
Consumption and Saving, J. Econ. Literature 565 (1990); Alan L. Gustman et al., The Role 
(1994).
at least until they are eligible for early retirement, and push workers out of the work force once they reach the plan’s normal retirement age.

1. **Defined Benefit Plans Tend to Favor Older Workers**  
   *(Backloading)*

One of the most obvious features of defined benefit plans is that they tend to disproportionately favor older workers. The primary reason for this backloading is that the value of benefit accruals typically increases as a percentage of compensation as employees approach retirement age.\textsuperscript{37} Indeed, most public pensions count on this so-called backloading – they expect to pay a pro rata portion of full retirement benefits to just 30 or 40% of workers.\textsuperscript{38} Unfortunately, this backloading can discourage talented young workers from coming into public service, and it can leave millions of former workers without meaningful pensions.

2. **Defined Benefit Plans Penalize Mobile Employees**  
   *(Lack of Portability)*

Because defined benefit plans are backloaded, they reward long-tenure employees and penalize more mobile employees. For example, Table 1 shows the magnitude of this financial penalty on the mobile worker.\textsuperscript{39} Table 1 compares the retirement benefits of four workers. These workers all have identical thirty-year pay histories (6% annual pay increases starting at $20,000 and ending at $108,370), and all their employers have identical defined benefit plans (1.5% times years of service times final pay). The only difference among these workers is that the first worker spent his entire career with one employer, while the other workers divided their careers over two or more employers. Nevertheless, the long-tenure worker would receive an annual benefit of $49,000 at retirement, while the worker who holds five jobs would receive just $27,000 per year.

In short, the mobile worker covered by a defined benefit plan will suffer large benefit losses each time she changes jobs. Moreover, even greater

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\textsuperscript{37} See generally IPPOLITO, supra note 36, at 41-60.

\textsuperscript{38} For example, California’s public employee pension system (CALPERS) expects that 70% of the people in its system will leave the system before they receive a retirement benefit. See Taylor, supra note 4.

\textsuperscript{39} Michael Falivene, *Pension Portability: No Easy Solution*, PENSIONS & INV., Feb. 5, 1990, at 15, reprinted in LANGBEIN & WOLK, supra note 25, at 85; see also Olsen & VanderHei, supra note 4, at 11-12.
financial penalties can result if a worker changes jobs without vesting. For example, under Michigan’s historical defined benefit plan, 45% of the state employees did not vest in the program before leaving under that system.\textsuperscript{40} All in all, the typical defined benefit plan penalizes workers who change jobs frequently.

At the same time, however, the typical defined benefit pension plan creates large financial incentives for workers to stay with a firm, at least, until they are eligible for early retirement. This is the so-called “golden handcuffs” phenomenon.

Few such benefit losses occur under defined contribution plans. Instead, a mobile employee can typically roll over any defined contribution plan accruals and accumulate a large account balance for retirement.\textsuperscript{41} Moreover, defined contribution plans tend to have shorter vesting periods (or immediate vesting) and an easily defined transfer value (the value in the account).\textsuperscript{42} Indeed, portability is one of the most important advantages of defined contribution plans.\textsuperscript{43} Moreover, the lack of job security in today’s workplace makes such portability and the resultant asset accumulation increasingly important, especially for women.\textsuperscript{44}

\textsuperscript{40} See Roberts, supra note 6. On the other hand, as a means of enhancing pension portability, many state pensions allow employees to purchase pension credits to reflect prior out-of-state service. See Moore, supra note 13, at 16.

\textsuperscript{41} See, e.g., I.R.C. § 402(c) (1998). Of course, with defined contribution plans, there is always the danger that employees will dissipate their retirement savings through early withdrawals, lump-sum distributions, and loans. See infra Subpart II.E.

\textsuperscript{42} See Dent & Sloss, supra note 9. Of course, not all defined contribution plans have short vesting periods. For example, the only major teacher plan that is a defined contribution plan is the West Virginia TDC, and it has a 12-year vesting schedule. Nat’l Educ. Ass’n, supra note 28, at 11.


\textsuperscript{44} Anna Rappaport, The Aging Society and Retirement Benefit Strategy, 45 Profit Sharing 8 (1997).
TABLE 1. NON-PORTABILITY OF DEFINED BENEFIT PLANS

<table>
<thead>
<tr>
<th>Worker</th>
<th>Employee no.</th>
<th>Yearly accrual rate</th>
<th>Years of service</th>
<th>Final year's pay</th>
<th>Total pension</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1.5%</td>
<td>30</td>
<td>$108,370</td>
<td>$49,000</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1.5</td>
<td>15</td>
<td>45,219</td>
<td>10,174</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1.5</td>
<td>15</td>
<td>108,370</td>
<td>24,383</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>1.5</td>
<td>10</td>
<td>33,791</td>
<td>5,069</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1.5</td>
<td>10</td>
<td>60,513</td>
<td>9,077</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>1.5</td>
<td>10</td>
<td>108,370</td>
<td>16,256</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>1.5</td>
<td>6</td>
<td>26,765</td>
<td>2,409</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1.5</td>
<td>6</td>
<td>37,967</td>
<td>3,417</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>1.5</td>
<td>6</td>
<td>53,856</td>
<td>4,847</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>1.5</td>
<td>6</td>
<td>76,396</td>
<td>6,876</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1.5</td>
<td>6</td>
<td>108,370</td>
<td>9,753</td>
</tr>
</tbody>
</table>

3. Defined Benefit Plans Push Older Workers Out of the Work Force

Defined benefit plans typically push older workers out of the work force at normal retirement age. Once a worker is eligible to receive full retirement benefits, delaying retirement can actually be quite costly. Those who delay retirement lose current benefits, and the increase in benefits that can result

45. Falivena, supra note 39, at 15; reprinted in LANGBEIN & WOLK, supra note 25, at 85.
from an additional year of work rarely compensates for the benefits lost.\textsuperscript{46} Table 2 provides a numerical example of these financial penalties for delaying retirement for a worker under a typical private-sector defined benefit plan.\textsuperscript{47} Table 2 assumes a thirty-year worker who could retire at age sixty-five with a $3,000 a year pension and a fifteen-year remaining life expectancy. As is common in private-sector defined benefit plans, the worker does not receive additional service credit for work after age sixty-five but is permitted to retain the current wage in the pension formula. Moreover, in this simple example, the pension is not actuarially increased for delayed retirement. Consequently, the real value of the pension annuity drops from $45,000 at age 65 ($45,000 = $3,000 x 15 years from retirement until death at age 80) to $36,000 if the worker delays retiring until age sixty-eight ($36,000 = $3,000 x 12 years of retirement). Working until age seventy-two further reduces the value of this pension to just $24,000 ($24,000 = $3,000 x 8 years or retirement).

All in all, defined benefit plans create “windows” of retirement opportunity that typically range from the plan’s early retirement age through the plan’s normal retirement age.\textsuperscript{48}

\begin{table}[h]
\centering
\begin{tabular}{|c|c|}
\hline
\textbf{Year} & \textbf{Pension Value} \\
\hline
65 & $45,000 \\
68 & $36,000 \\
72 & $24,000 \\
\hline
\end{tabular}
\caption{Example of Pension Annuity Values for Delayed Retirement}
\end{table}

\textsuperscript{46} Additionally, those who work until they drop often leave nothing behind for their estates.

\textsuperscript{47} See IPPOLITO, supra note 36, at 146 tbl.2.

\textsuperscript{48} Moreover, a number of studies suggest that employers can significantly influence the timing of retirement by offering subsidized benefits for workers who elect to retire early. See Robin L. Lumsdaine \textit{et al.}, \textit{Retirement Incentives: The Interaction Between Employer-Provided Pensions, Social Security, and Retiree Health Benefits}, in \textit{THE ECONOMIC EFFECTS OF AGING IN THE UNITED STATES AND JAPAN} 261 (Michael D. Hurd & Nashiro Yashiro eds., 1997); Paul Fronstin, \textit{Employee Benefits, Retirement Patterns, and Implications for Increased Work Life}, EMPLOYEE BENEFIT RESEARCH INSTITUTE ISSUE BRIEF NO. 184, Apr. 1997.
TABLE 2. IMPLICATIONS OF “LATE” RETIREMENT FOR PENSION WEALTH

<table>
<thead>
<tr>
<th>Retirement Age</th>
<th>Present Value of Pension</th>
<th>Percent of Pension Lost From Retiring “Late” (Percent x 100)</th>
<th>Pension Loss As a Percent Of Wage (Percent x 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td>$45,000</td>
<td>- 0 -</td>
<td>- 0 -</td>
</tr>
<tr>
<td>68</td>
<td>36,000</td>
<td>20.0</td>
<td>90.0</td>
</tr>
<tr>
<td>72</td>
<td>24,000</td>
<td>46.6</td>
<td>210.0</td>
</tr>
</tbody>
</table>

Note: Assumptions embedded in calculations: pension paid as annuity equal to $3,000 per year; annuity is indexed to inflation; the real rate of interest is zero; normal retirement age is sixty-five; death occurs at age eighty; the wage is $10,000 (real) per year.

Defined contribution plans can also influence the timing of the decision to retire, but their effects are typically less dramatic. Their impact results largely from the “wealth effect” of enabling workers to accumulate enough money to be able to afford to retire.

4. Work Force Management Issues

As the preceding subpart has shown, defined benefit plans and defined contribution plans can be designed to influence employee decisions about work and retirement. Just which type of plan is best for a given employer depends upon the human resources objectives of that employer and the demographics of its work force. Some employers may value younger workers who will stay for short periods of time. Presumably, they would want to have defined contribution plans. On the other hand, high training costs may cause some employers to make retention of staff a high priority, and defined benefit plans are better at rewarding long-tenure employees. Defined benefit plans also

49. See IPPOLITO, supra note 36, at 146.
50. See id.
51. See Richter, supra note 13.
52. For example, in the private sector, service and high tech firms typically prefer defined contribution plans as a way of attracting younger, more mobile workers. See, e.g., PBGC Study, supra note 11.
provide much greater flexibility in providing early and normal retirement incentives.

C. Inflation

1. Preretirement Inflation

When it comes to inflation, the typical defined benefit plan has a serious deficiency. Under the typical plan, benefits accrued by employees who terminate employment before they retire are not indexed for inflation occurring between the date of termination and the retirement date. Indeed, that is why the mobile employees in Table 1 end up with smaller retirement benefits than the employee who stayed with the same employer throughout her career.

There is a straightforward solution to this problem. Index a worker’s accrued benefits for the inflation that occurs from the termination of employment until retirement. This would preserve the real value of the retirement benefits earned by mobile employees.

2. Postretirement Inflation

Another problem with both defined benefit and defined contribution plans is that inflation after retirement can erode the value of accrued pension benefits. Table 3 illustrates this problem. Post retirement inflation is always a problem for defined contribution plans. On the other hand, many public sector defined benefit plans provide for automatic or periodic increases in benefits paid to retirees.

D. Investments And Risk


One of the biggest problems with defined contribution plans is that individuals, rather than professional money managers, control investments. Unfortunately, individuals tend to invest too conservatively, certainly toward the end of their working careers. Additionally, many individual investors are unsophisticated, and some may even end up being bilked by con artists.

<table>
<thead>
<tr>
<th>Years in Retirement</th>
<th>No Inflation</th>
<th>3% Annual Inflation</th>
<th>5% Annual Inflation</th>
<th>10% Annual Inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>5</td>
<td>100</td>
<td>86</td>
<td>78</td>
<td>62</td>
</tr>
<tr>
<td>10</td>
<td>100</td>
<td>74</td>
<td>61</td>
<td>39</td>
</tr>
<tr>
<td>15</td>
<td>100</td>
<td>64</td>
<td>48</td>
<td>24</td>
</tr>
<tr>
<td>20</td>
<td>100</td>
<td>55</td>
<td>38</td>
<td>15</td>
</tr>
<tr>
<td>25</td>
<td>100</td>
<td>48</td>
<td>30</td>
<td>9</td>
</tr>
</tbody>
</table>

Another problem with defined contribution plans is uncertainty. Financial planning is difficult because the value of the ultimate benefit is unknown, and the employee bears all of the investment risks. In particular, unlike defined benefit plan benefits, retirement income bears no specific relationship to pre-retirement pay, so it is possible for there to be a significant change in living standards at retirement. And, because of stock market volatility, workers who retire when the market is up will have higher pensions than those who retire when it is down.

On the other hand, defined benefit plans are able to pool investments and achieve superior returns and efficient fee structures by using professional managers. Unlike individual investors, pension fund managers invest for the

56. See McEntee, supra note 13, at 12.
57. President’s Commission on Pension Policy, supra note 54, at 32.
58. See Richter, supra note 13.
59. See id.
long haul, and do not panic when the market becomes volatile.\textsuperscript{60} In 1994, for example, the average public pension had 40.6\% of its assets invested in domestic stocks and 36.7\% in domestic bonds. \textsuperscript{61}

At the same time, however, there may be problems of political pressure on public defined benefit plans.\textsuperscript{62} For example, there is a danger that public pension funds may undertake imprudent investments for political reasons. There is also some risk that politicians will manipulate or “raid” public pensions to balance government budgets.\textsuperscript{63} Finally, many analysts are concerned about the increasing power of public pensions to interfere with normal market activity.\textsuperscript{64}

E. Leakage and Distributions

Another major problem with defined contribution plans is that they are leaky. While defined benefit plans typically provide lifetime annuities for retirees and their spouses, defined contribution plans typically make lump sum distributions to departing workers. Unfortunately, a significant portion of these distributions end up being dissipated long before retirement. For example, a recent study suggests that 60\% of lump sum distributions made to job changers from large plans are not rolled over into Individual Retirement Accounts (IRAs) or other retirement savings plans.\textsuperscript{65}

Defined contribution plans also often allow individuals to borrow against their accounts. Recent federal legislation suggests that Congress is increasingly willing to let defined contribution plan savings be used for nonretirement purposes (i.e., to purchase homes or to pay for college education).\textsuperscript{66} Under a defined contribution plan, the responsibility for


\textsuperscript{61} See Zorn, supra note 33.


\textsuperscript{66} See, e.g., I.R.C. § 408A (Roth IRAs) (1998).
purchasing an annuity is borne by the individual worker. Unfortunately, there is just not much of a market for private annuities, and the costs are often prohibitive. 67

Another problem with defined contribution plans is the longer life span of women. Because women tend to live longer than men, they are more likely to outlive their retirement savings. 68 That is not as much of a problem with defined benefit plans because distributions usually take the form of an annuity. 69

F. Administrative Expense and Complexity

Defined benefit plans can also be costly to administer. 70 They have complicated benefit structures, they are subject to complicated accounting requirements and tax rules, and actuaries must be employed to determine funding obligations. There are economies of scale, however, so it can be relatively inexpensive to administer a large defined benefit plan, such as a state-wide teacher retirement system.

In any event, defined contribution plans are always relatively simple to administer. They operate like a bank account and are easy to explain to employees. 71

G. Summary

Table 4 summarizes many of the differences between traditional defined benefit and defined contribution plans.

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67. THOMPSON, supra note 36, at 162-64.
68. Cf. Janet C. Boyd, When is a Girl Not a Girl and a Boy Not a Boy, TAX NOTES, Aug. 10, 1998, at 729 (discussing a similar problem when defined benefit plans are allowed to make lump sum distributions in lieu of annuity payments).
69. See id.
70. See Dent & Sloss, supra note 9; see also PBGC Study, supra note 11.
71. See Dent & Sloss, supra note 9.
### TABLE 4. SUMMARY COMPARISONS BETWEEN TRADITIONAL DEFINED BENEFIT AND DEFINED CONTRIBUTION PLANS

<table>
<thead>
<tr>
<th>DEFINED BENEFIT PLANS</th>
<th>DEFINED CONTRIBUTION PLANS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefits determined by set formula (e.g., 2 percent times years of service times final average compensation)</td>
<td>Benefits determined by contributions and investment earnings (e.g., 10 percent of annual compensation)</td>
</tr>
<tr>
<td>Funding flexibility</td>
<td>Possible discretion in funding</td>
</tr>
<tr>
<td>Reward older and longer service employees (backloaded)</td>
<td>Significant accruals at younger ages</td>
</tr>
<tr>
<td>Employees face financial penalties for working past normal retirement age</td>
<td>No disincentives for working past normal retirement age</td>
</tr>
<tr>
<td>Long vesting period (e.g., 10 years)</td>
<td>Often a short vesting period</td>
</tr>
<tr>
<td>Employer bears the investment risk</td>
<td>Employee bears the investment risk</td>
</tr>
<tr>
<td>Employee has no investment discretion</td>
<td>Employee has investment discretion</td>
</tr>
<tr>
<td>Often not portable</td>
<td>Portable</td>
</tr>
<tr>
<td>Require actuarial valuation</td>
<td>Does not require actuarial valuation</td>
</tr>
<tr>
<td>Relatively low employee understanding and appreciation</td>
<td>Relatively high employee understanding and appreciation</td>
</tr>
<tr>
<td>Unfunded liability exposure</td>
<td>No unfunded liability exposure</td>
</tr>
<tr>
<td>Provide benefits targeted to income replacement level</td>
<td>Does not provide benefits targeted to income replacement level</td>
</tr>
<tr>
<td>Usual form of benefit payment is monthly income (annuity)</td>
<td>Usual form of benefit payment is lump sum distribution</td>
</tr>
<tr>
<td>Employees cannot borrow</td>
<td>Employees may be able to borrow</td>
</tr>
</tbody>
</table>
H. Hybrid Plans

As the above discussion has shown, both defined benefit and defined contribution plans have their advantages and disadvantages. Perhaps a better approach may be found by looking at so-called “hybrid” plans that mix the features of defined benefit and defined contribution plans. In particular, state and local governments may want to seriously consider the merits of cash balance plans.\(^2\)

1. Cash Balance Plans

A cash balance plan is a defined benefit plan that looks like a defined contribution plan. The plan accumulates, with interest, a hypothetical account balance for each participant. The individual account balances are determined by the plan’s benefit formula and consist of two components: an annual cash balance credit and an interest credit. For example, a simple cash balance plan might allocate 5% of salary to each participant’s cash balance account each year, and credit the account with 7% interest on the balance in the account.

Cash balance account statements are issued to participants each quarter and may provide benefit projections at retirement age. Cash balance statements look like defined contribution plan statements and are generally easier for participants to understand than a traditional defined benefit plan formula. Cash balance plans may pay out account balances in the form of a lump-sum distribution or as an annuity, but some sponsors encourage the selection of an annuity by specifying a favorable actuarial basis to convert accounts to annuities. Table 5 provides an example of a simple cash benefit plan.\(^3\)

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\(^3\) See Lawrence T. Brennan & Dennis R. Coleman, *Cash Balance Pension Plans*, THE
Like other defined benefit plans, employer contributions are based on actuarial valuations, and the employer bears all of the investment risks and responsibilities. Cash balance plans have been adopted by the Bank of America, Bell Atlantic, Bell South Corporation, Chemical Bank, IBM, and dozens of other companies. A traditional defined benefit plan can be converted to a cash balance plan, but some transitional benefits would be needed for employees nearing retirement.

2. Other Hybrid Approaches

Another approach might be to offer a target benefit plan. A target benefit plan is a defined contribution plan which establishes a “target” benefit for each participant using a defined benefit formula. The employer contributions for each participant are actuarially determined to achieve this goal, but this “target” benefit is not guaranteed. Instead, a worker’s ultimate retirement benefit is based on the actual balance in the worker’s account.

Still another approach would be to offer a combination of defined benefit and defined contribution plans. For example, a public pension might provide for a defined benefit plan funded by employer contributions and a separate defined contribution plan based on employee contributions. The State of Washington recently adopted a teachers’ retirement system along these lines.74

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74. See Williamson, supra note 5.
TABLE 5. CASH BALANCE PLAN EXAMPLE\textsuperscript{75}

This example illustrates how an employee's cash balance account grows over five years. A new employee in this example earns $30,000 per year. Each year the employee will earn cash balance pay credits equal to 5 percent of $30,000, or $1,500, and an interest credit of 7 percent.

For purposes of this example, assume that each year’s pay credit earns one-half of the annual interest credit rate in that year (i.e., 3.5 percent), since pay credits normally will be credited throughout the year.

The balance after the first year would be $1,552.50 ($1,500 + 3.5 percent of $1,500). To determine the interest credit for the second year, add 7 percent of the balance at the beginning of the year ($108.67) to 3.5 percent of the pay credit for the year ($52.50) to arrive at $161.17. Continuing in this manner, at the end of five years, the account value will be $8,928.01, or almost 30 percent of annual pay (see table below).

\[
\begin{array}{|c|c|c|c|c|}
\hline
\text{Year (Beginning of Year)} & \text{Annual Pay} & \text{Pay Credit (5 percent)} & \text{Interest Credit (7 percent)/a/} & \text{Account Value (End of Year)} \\
\hline
1 & $0.00 & $30,000 & $1,500 & $52.50 & $1,552.50 \\
2 & 1,552.50 & 30,000 & 1,500 & 161.17 & 3,213.67 \\
3 & 3,213.67 & 30,000 & 1,500 & 277.46 & 4,991.13 \\
4 & 4,991.13 & 30,000 & 1,500 & 401.87 & 6,893.00 \\
5 & 6,893.00 & 30,000 & 1,500 & 535.01 & 8,928.01 \\
\hline
\end{array}
\]

/a/ Pay credits assumed to receive one-half of the annual interest credit.

I. Transition to a Defined Contribution Plan or Hybrid Plan

Finally, it is worth noting that it would not be easy to shift from a traditional defined benefit plan to a new type of retirement plan.\textsuperscript{76} Converting a defined benefit plan into another type of plan can be an “arduous task,” and it can be expensive to do because it involves consultants, actuaries, lawyers and plan providers.\textsuperscript{77} Moreover, it would be unlikely that any revenue would actually be saved in that process. In all likelihood, generous transition rules

\textsuperscript{75} Brennan & Coleman, supra note 73, reprinted in Campbell, supra note 72, at 8.
\textsuperscript{76} See Dent & Sloss, supra note 9.
\textsuperscript{77} See Khavari, supra note 1.
would be required, at least for workers close to retirement. With these concerns in mind, Table 6 suggests some plausible approaches for a transition from a traditional defined benefit plan to a new defined contribution or hybrid plan.

**TABLE 6. POSSIBLE TRANSITIONS FROM A TRADITIONAL DEFINED BENEFIT PLAN TO A NEW DEFINED CONTRIBUTION OR HYBRID PLAN**

- **Keep the Defined Benefit Plan and Add a Supplemental Plan**
  - Under this approach, the employer would continue to operate its current defined benefit plan but also add a supplemental defined contribution plan for those employees who want to save additional amounts for their retirement.

- **Offer Both a Defined Benefit Plan and a New Plan**
  - Under this approach, the employer would offer both its current defined benefit plan and a new defined contribution or hybrid plan, and employees would choose the plan in which they would participate.

- **Close Entry to the Defined Benefit Plan and Add a New Plan**
  - Under this approach, the employer would continue to operate its current defined benefit plan for all existing participants, but all new employees would be required to participate in a new defined contribution or hybrid plan.

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78. For example, if an existing defined benefit plan has an unfunded accrued actuarial liability, that unfunded liability will not just disappear, even if the plan is terminated. Instead, it is more likely that the employer would not only pay off that unfunded liability, but also provide generous transitional benefits to protect long-service workers. Otherwise, those long-service workers would see a sharp reduction in their ultimate retirement benefits as the employer shifted from a traditional (backloaded) defined benefit plan to an equal-cost defined contribution plan.
• Close Entry to the Defined Benefit Plan, Add a New Plan, and Shift Unvested Employees to the New Plan
  - Under this approach, all new employees and unvested employees would be shifted to a new defined contribution or hybrid plan. Alternatively, all new employees and all employees under the age of, for example, fifty would be shifted to the new plan.

• Freeze the Defined Benefit Plan at Current Salary Levels and Add a New Plan
  - Under this approach, each employee’s benefit accruals would be frozen at the employee’s current salary level. Each employee would continue to accrue benefits on earnings up to that salary level until retirement. Salaries in excess of that cap would be covered under a new defined contribution or hybrid plan, and all new employees would be covered only under the new plan.

• Terminate the Current Defined Benefit Plan and Replace It With a New Plan
  - Under this approach, the current defined benefit plan would be replaced with a new defined contribution or hybrid plan that covered all new and existing participants. Existing accrued benefits would be converted to initial individual account balances.
III. General Recommendations and Conclusions

Whatever pension system a state or local government chooses to provide for its workers should be designed to help ensure that retirees and their spouses will have adequate incomes throughout their retirement years. The pension system should also be designed to attract and retain qualified workers, and it should not discourage them from remaining at work after normal retirement age. To help meet these goals, the pension system should strive to expand coverage, preserve retirement savings until retirement, and pay retirement benefits in the form of a lifetime annuity.

A. Expand Coverage and Preserve Retirement Savings until Retirement

To ensure an adequate retirement income, every worker needs to save early and often for their own retirement, and those retirement savings must remain untouched until actual retirement. There are a number of things that state and local government pensions can do to help meet these goals.

1. Have a Short Vesting Period

First, state and local government pensions should have a short vesting period. The ten-year vesting period that is still common among state and local government defined benefit plans is just too long. At the very least, States should strive for the five-year cliff vesting approach applicable to most private-sector plans. An even better approach would be to have vesting after no more than one or two years.

2. Accrue Significant Benefits for Every Worker

Second, state and local government pensions should be designed to ensure that every worker accrues a significant retirement benefit during each year of work. In short, state and local government plans should minimize backloading. This happens automatically in defined contribution plans. As for defined benefit plans, state and local governments should seriously consider indexing benefits for inflation from the time that a worker leaves employment until she actually starts drawing her benefits at retirement.

80. See supra Section II.C.1.
3. Preserve Retirement Savings Until Retirement

Third, state and local government employers also need to be concerned about employees dissipating their retirement savings through early withdrawals, lump-sum distributions, and loans. But plans can easily be designed to minimize this leakage and, consequently, to preserve retirement savings until retirement.

4. Encourage Workers to Remain in the Work Force Longer

Fourth, employers need to be concerned about keeping employees in the work force longer. The fact of the matter is that public-sector workers simply cannot expect to work thirty years, retire at age fifty-five, and have a taxpayer-funded pension that will support them for the next thirty years—yet that is how many public pensions are currently designed. Most public pensions need to be redesigned to raise the normal retirement age and to eliminate any financial penalties for working past that age.

B. Pay Retirement Benefits in the Form of an Annuity

Finally, public pensions should be designed to ensure that all retirees and their spouses have adequate incomes throughout their retirement years. Consequently, it may also be appropriate to impose significant limits on pension distributions after retirement. This goal could perhaps best be accomplished by paying at least a basic portion of benefits in the form of a lifetime annuity, perhaps even an indexed-for-inflation annuity. Beyond that basic annuity, however, more relaxed distribution rules might apply.

For example, it could make sense to design a basic public pension benefit that, together with Social Security (if any), would provide the equivalent of an indexed annuity that is targeted to, say, at least 125% of the poverty level. In 1999, the poverty level for a single individual was $8,240, and the poverty level for a married couple was $11,060. Consequently, assuming a 125%-of-the-poverty-level target, a single individual retiring in 1999 would have needed the equivalent of an indexed annuity that paid $10,300 that year ($10,300 = 125% x $8,240) and appropriately inflation-adjusted amounts in future years.

For many public employees, Social Security would provide a good chunk of this minimum 125%-of-the-poverty-level benefit, leaving only the balance

82. Annual Update of the Health and Human Services Poverty Guidelines, 64 Fed. Reg. 13,428 (Dep’t Health & Human Serv. 1999). These numbers are adjusted for inflation each year.
to be made up from the worker’s pension. Specifically, the basic pension benefit accrued for a retiring public employee might be made available under just three options:

1. A 100% payout to purchase an indexed annuity that, when coupled with Social Security, results in sufficient annual income to meet the 125%-of-the-poverty-level standard.
2. Distributions as desired with only one constraint: the amount remaining in the account after withdrawal must always be at least 110% of the amount necessary to purchase an annuity guaranteeing the 125%-of-the-poverty-level standard.
3. A combination of 1 and 2.

Similarly, distributions for married couples might be geared towards purchasing an indexed, joint and survivor annuity (i.e., paying $13,825 this year [$13,825 = 125% \times $11,060] and appropriately inflation-adjusted amounts in future years).

Finally, as already mentioned, more relaxed rules could apply to distributions in excess of the basic amounts needed to meet the 125%-of-the-poverty-level standard.