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FUNDING PUBLIC PENSION PLANS

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Most state and local government employees are covered by traditional final-average-pay pension plans. State and local government employers typically fund those pension plans through a combination of employer and employee contributions, with help from investment returns on already-accumulated assets. Unlike private sector pension plans, however, public pension plans are not subject to strict minimum funding standards like those in the Employee Retirement Income Security Act of 1974 ("ERISA").[1] Public pensions also face more flexible accounting standards than private sector pensions.[2] To be sure, many public pensions are nevertheless fairly well funded. Unfortunately, however, the recent meltdown of financial markets, the decline in the stock market, and the recession are putting tremendous pressure on both public pensions and the state and local governments that fund them; and public employers need to respond.

At the outset, this Article reviews the operation and funding status of state and local government pension plans. Next, this Article discusses the major financial, accounting, and legal issues that relate to the funding of state and local government pension plans. Finally, this Article considers how to ensure that public employees will have adequate retirement benefits now and in the future.

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1. Employee Retirement Income Security Act of 1974, Pub. L. No. 93-406, 88 Stat. 829 (2006).

2. For purposes of this article, the term "public plans" refers only to state and local government pension plans and does not include Social Security or the federal government's civil service and military retirement plans.

I. OPERATION AND FUNDING STATUS OF STATE AND LOCAL GOVERNMENT PENSION PLANS

A. Overview of State and Local Government Pension Plans

There are fifty state governments and 87,525 local governments in the United States.[3] Compensation of state and local government employees is a large share of the cost of providing services to citizens. Almost twenty million employees and seven million retirees and dependents of state and local governments have been promised pensions.[4] Over the next thirty years, it has been estimated that states will spend around $2.35 trillion on pension benefits for their workers.[5]

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3. U.S. GOV'T ACCOUNTABILITY OFF., GAO 08-317, STATE AND LOCAL GOVERNMENTS: GROWING FISCAL CHALLENGES WILL EMERGE DURING THE NEXT 10 YEARS 6 (2008).

4. Barbara D. Bovbjerg, Dir. of Educ., Workforce, and Income Sec., State and Local Government Pension Plans: Current Structure and Funded Status, Testimony Before the Joint Economic Committee (July 10, 2008), *in* U.S. GOV'T ACCOUNTABILITY OFF., GAO 08-983T, July 2008, at 1. According to the Census Bureau, there were 2,547 state and local government employee retirement systems in 2006-2007 covering 18,583,270 members (14,422,883 active and 4,160,387 inactive), and 7,463,567 beneficiaries were receiving periodic benefit payments. U.S. Census Bureau, Table Five: Number and Membership of State and Local Government Employee-Retirement Systems by State: 2006-2007 (Dec. 9, 2008), http://www.census.gov/govs/retire/2007ret05.html. For more details about state and local government employees, see generally Joshua M. Franzel, *The Public Sector Workforce – Past, Present, and Future*, CTR. FOR ST. AND LOCAL GOV'T EXCELLENCE, Jan. 5, 2009, http://www.slge.org (search "Franzel," then click "The Public Sector Workforce – Past, Present, and Future" hyperlink).

5. THE PEW CTR. ON THE STATES, PROMISES WITH A PRICE: PUBLIC SECTOR RETIREMENT BENEFITS 3 (2008), *available at* http://www.pewcenteronthestates.org/report_detail.aspx?id=32626. The number is an estimate of the total of the state's thirty-year obligations as calculated in 2006. *Id.* at 4 fig.1-1. Pertinent here, it is worth noting that state employees typically contribute to their pensions. *See infra* note 13, at 1, 4 and accompanying text. Also of note, public pensions play an important role in state and local economies. *See, e.g.*, ILANA BOIVIE & BETH ALMEIDA, NAT'L INST. ON RET. SEC., PENSIONOMICS: MEASURING THE ECONOMIC IMPACT OF STATE AND LOCAL PENSION PLANS 1 (2009), *available at* http://www.nirsonline.org/storage/nirs/documents/Pensionomics%20Report.pdf (finding that recipients of pensions spend their income in the local economy); William Pryor, Chairman, L.A. County Emp. Ret. Ass'n, The Economic Impact of Traditional Public Pension Plans on the Communities They Serve, Testimony Before the Joint Economic Committee, Hearing on Your Money, Your Future: Public Pension Plans and the Need to Strengthen Retirement Security and Economic Growth 3-4 (July 10, 2008) (transcript available at http://www.jec.senate.gov/index.cfm?FuseAction=Hearings.HearingsCalendar) (choose "July" and "2008" in the "Browse by" dropdown box, then click "Your Money, Your Future: Public Pension Plans and the Need to Strengthen Retirement Security and Economic Growth" hyperlink) (noting the effects that pension plans have on the United

State and local governments typically provide their employees with a traditional defined benefit pension plan[6] and a supplemental defined contribution plan[7] for additional, voluntary savings.[8] For example, the Oklahoma Public Employees

States economy); Christian E. Weller, Assoc. Prof., Univ. of Mass., and Senior Fellow, Ctr. for Am. Progress, Model Retirement Savings: How Public Sector Pension Plans Provide Adequate Retirement Savings in an Efficient and Sustainable Way, Testimony Before the Joint Economic Committee, Hearing on Your Money, Your Future: Public Pension Plans and the Need to Strengthen Retirement Security and Economic Growth 8-9 (July 10, 2008) (transcript available at http://www.jec.senate.gov/index.cfm?FuseAction=Hearings.HearingsCalendar) (choose "July" and "2008" in the "Browse by" dropdown box, then click the "Your Money, Your Future: Public Pension Plans and the Need to Strengthen Retirement Security and Economic Growth" hyperlink) (discussing the impacts of defined benefit pensions plans in the public sector).

6. In a defined benefit plan, an employer promises employees a specific benefit at retirement. JONATHAN B. FORMAN, MAKING AMERICA WORK 215 (2006). To provide that benefit, the employer typically makes payments into a trust fund and makes withdrawals from the trust fund. *Id.* Employer contributions are based on actuarial valuations, and the employer bears all of the investment risks and responsibilities. *Id.* Defined benefit plans often 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. *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% × *yos* × *fac*). *Id.* Under this final-average-pay formula, a worker with 30 years of service would receive a retirement benefit equal to 60% of her pre-retirement earnings (B = 60% × *fac* = 2% × 30 *yos* × *fac*). *Id.* Final-average-compensation is typically computed by averaging the worker's salary over the 3 or 5 years prior to retirement. *Id.*

7. The typical supplemental defined contribution plan operates like an I.R.C. § 401(k) plan in the private sector. *See* I.R.C. §§ 403(b), 457 (2009) (explaining the deferred compensation plans of state and local governments). Employees are permitted to contribute to individual investment accounts, and their benefits at retirement are based on all such contributions plus investment earnings. The maximum annual amount of such elective deferrals that can be made by an individual in 2009 is $16,500, although workers over the age of fifty can contribute up to $22,000. IRS.gov, IRS Announces Pension Plan Limitations for 2009 (Oct. 16, 2008), http:// www.irs.gov/newsroom/article /0,,id=187833,00.html.

8. As of 2007, most states had traditional final-average-pay defined benefit plans. Bovbjerg, *supra* note 4, at 2. Only Alaska, Michigan, and the District of Columbia had adopted defined contribution plans as their principal pension plans; Indiana and Oregon had primary plans with both defined benefit and defined contribution plan features, and Nebraska had a cash balance defined benefit plan. *Id.* at 2-3; *see also* U.S. BUREAU OF LAB. STAT., NATIONAL COMPENSATION SURVEY: RETIREMENT BENEFITS IN STATE AND LOCAL GOVERNMENTS IN THE UNITED STATES 1-2 (2007) (presenting findings regarding provisions of retirement plans in state and local governments); EMP. BENEFIT RES. INST., FUNDAMENTALS OF EMPLOYEE BENEFIT PROGRAMS 489 (6th ed. 2009), *available at* http://www.ebri.org/pdf/publications/books/fundamentals/2009/48_DC-SuppPlns_PUB-SCT_Funds-2009_EBRI.pdf (discussing

Retirement System provides a traditional defined benefit pension to covered workers.[9] At retirement, each worker receives an annual retirement benefit equal to 2%, multiplied by years of service, multiplied by final average pay.[10] For example, a worker who retires after 30 years with final average pay of $50,000 would receive a pension of $30,000 a year ($30,000 = 2% × 30 years of service × $50,000 final average pay).[11] In addition, Oklahoma employees can elect to participate in a supplemental defined contribution plan, known as SoonerSave.[12]

Unlike private sector pension plans, most governments require employee contributions as well as employer (i.e., government) contributions to fund their primary pension plans.[13] In 2006, for example, the median contribution rate was 8.5% of payroll for state and local government employers and 5% for employees for plans in which employees are also covered by Social Security.[14] Pertinent here, while Social Security coverage is nearly universal in the private sector, about 30% of all state and

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defined contribution and supplemental retirement savings plans in the public sector); NAT'L EDU. ASS'N, CHARACTERISTICS OF LARGE PUBLIC EDUCATION PENSION PLANS 1 (2008) (discussing the retirement benefits provided to education employees); WILLIAM FORD, WISC. LEGIS. COUNCIL, 2006 COMPARATIVE STUDY OF MAJOR PUBLIC EMPLOYEE RETIREMENT SYSTEMS 9, 15 (2007), *available at* http:// www.legis.state.wi.us/lc/publications/crs/2006_retirement.pdf (examining contribution rates and vesting requirements); THE CTR. FOR GOV'T ANALYSIS, AN ANALYSIS OF PUBLIC EMPLOYEE RETIREMENT SYSTEMS IN CALIFORNIA 5, 11 (2007), *available at* http://www.govanalyst.com/articles/pensionanalysis.pdf (discussing employee retirement systems in California).

9. OKLA. PUB. EMP. RET. SYS., MEMBERS HANDBOOK, STATE AND LOCAL GOVERNMENT EMPLOYEES 4-5 (2007), *available at* http://www.opers.ok.gov/Websites/opers/Images/pdfs/reg.book.07.pdf [hereinafter OPERS HANDBOOK].

10. *Id.* at 44.

11. *Id.* Pertinent here, unlike most private sector defined benefit plans, most government defined benefit plans provide postretirement cost-of-living adjustments ("COLAs"). Bovbjerg, *supra* note 4, at 3; MILLIMAN, INC., STATE OF OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM: ACTUARIAL VALUATION REPORT AS OF JULY 1, 2008 1, 7 (2008), *available at* http://www.opers.ok.gov/Websites/opers/Images/pdfs/OPEVAL08.pdf (noting that the Oklahoma legislature enacted a 4% COLA in 2008).

12. OPERS HANDBOOK, *supra* note 9, at 4-5.

13. *See generally* Alicia H. Munnell & Mauricio Soto, *State and Local Pensions Are Different from Private Plans*, 2007 CTR. FOR RET. RES. at B.C. 1, *available at* http://crr.bc.edu/briefs/state_and_local_pensions_are_different_from_private_plans.html.

14. Bovbjerg, *supra* note 4, at 4. For the fiscal year ending June 30, 2009, Oklahoma public employees contributed 3.5% of their pay to the Oklahoma Public Employees Retirement System, and state agencies contributed 15.5%. Okla. Pub. Employees Ret. Sys., Contributions, http://www.opers.ok.gov/contributions (last visited Sept. 26, 2009) [hereinafter Contributions].

local government workers are not covered by Social Security;[15] as to those plans, the median contribution rates in 2006 were 11.5% of payroll for employers and 8% for employees.[16]

B. Funding Public Plans

Defined contribution plans, by their nature, are always fully funded.[17] On the other hand, defined benefit plans are often underfunded. Nowhere is this more apparent than in the public sector. While private sector defined benefit plans are subject to strict minimum funding standards under the Employee Retirement Income Security Act of 1974 ("ERISA"),[18] public sector plans are not.[19]

Theoretically, state and local governments could simply pay pension benefits to retirees on a pay-as-you-go basis.[20] Since the

15. Bovbjerg, *supra* note 4, at 3 n.5.

16. *Id.* at 4.

17. 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. Pertinent here, under a defined contribution plan, the employer's cost is known in advance and can be included in the budget.

To be sure, some analysts wonder whether funding level is an appropriate measure to use when comparing defined benefit plans and defined contribution plans. U.S. GOV'T ACCOUNTABILITY OFF., GAO 08-8, PRIVATE PENSIONS: LOW DEFINED CONTRIBUTION PLAN SAVINGS MAY POSE CHALLENGES TO RETIREMENT SECURITY, ESPECIALLY FOR MANY LOW-INCOME WORKERS 12 (2007). Instead, it may be more useful to compare the extent to which assets accumulated in defined contribution plans (and defined benefit plans) are sufficient to meet retiree needs. On that measure, a recent study by the Government Accountability Office found that defined contribution plans were fairly "underfunded." *See id.* at 37 (explaining that a significant portion of workers will not save a sufficient amount for a secure retirement).

18. ERISA § 302 (2009), 29 U.S.C. § 1082 (2006); I.R.C § 412 (2009). These rules help ensure that the money needed to pay the promised benefits is set aside in a trust fund where it can earn income until it is used to pay benefits when the employee retires. In general, underfunded pension plans now have to amortize their unfunded liabilities over seven years. ERISA § 303(c)(2), 29 U.S.C. § 1083(c)(2); I.R.C. § 430(c). Private-sector defined benefit plans are also subject to the plan termination insurance program administered by the Pension Benefit Guaranty Corporation ("PBGC"). ERISA §§ 4001 et seq., 29 U.S.C. §§ 1301-11; Pension Benefit Guar. Corp., *Pension Benefit Guaranty Fact Sheet*, http://www.pbgc.gov/media/key-resources-for-the-press/content/page13542.html (last visited Sept. 25, 2009). In the event an underfunded plan terminates (for example, because the employer went out of business), the PBGC guarantees payment of pension benefits to the participants, up to $54,000 per participant in 2009. *Id.* The guarantee is lower for those who retire early or when there is a benefit for a survivor. *Id.* The guarantee is increased for those who retire after age 65. *Id.*

19. ERISA § 4(b)(1), 29 U.S.C. § 1003(b)(1).

20. That is practically what private employers and governments have done with respect to their promises to provide health care benefits to retirees. In

1980s, however, the Government Accounting Standards Board ("GASB") has provided general standards for accounting and financial reporting that most state and local government plans follow.[21] Under those accounting standards, state and local governments are generally expected to prefund their pension plans and to issue reports that disclose information about plan assets, liabilities, funding status, and the assumptions used by the plan actuary.[22] Nevertheless, while both private sector and public sector plans strive to be 100% funded, many public sector experts seem content when public plans are at least 80% funded.[23]

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that regard, when the Financial Accounting Standards Board ("FASB") issued guidance requiring private employers to recognize those retiree health liabilities on their financial statements, many of those employers reduced or eliminated those benefits. *See, e.g.*, PAUL FRONSTIN, EMP. BENEFIT RES. INST., RETIREE HEALTH BENEFITS: TRENDS AND OUTLOOK 3 (2001), *available at* http://www.ebri.org/pdf/briefspdf/0801ib.pdf (noting the impact of Financial Accounting Standard No. 106). Similarly, recent guidance from the Government Accounting Standards Board ("GASB") is likely to lead state and local governments to either abandon or prefund their retiree health obligations. *See, e.g.*, John Sanchez, *The Vesting, Modification, and Financing of Public Retiree Health Benefits in Light of New Accounting Rules*, 41 J. MARSHALL L. REV. 1147, 1161-63 (2008) (establishing that the new GASB accounting standard will insist that state and local governments compile data about their retiree health benefits, which may lead to public employers setting aside funds, or prefunding); Joshua M. Franzel, *Local Government Retiree Health Care: Current Offerings and Future Direction*, 25 J. OF COMP. AND BENEFITS 1, 5, 9 (2009) (stating that due to the reluctance of local governments to raise taxes, they are instead adopting other strategies to reduce postemployment benefit liability); William R. Voorhees, *Counting Retirement Expenditures Before They Hatch: GASB and the New Reporting Requirements for Other Postemployment Benefits*, 25 PUB. BUDGETING & FIN. 4, 59, 68 (2005) (noting the possibility that a large number of governments will alter their retiree healthcare benefits to minimize their liability from other postemployment benefits); Standard & Poor's, *U.S. States Are Quantifying OPEB Liabilities and Developing Funding Strategies as the GASB Deadline Nears*, STANDARD & POOR'S RATINGS DIRECT, Nov. 12, 2007, at 2-3, *available at* http://www.nasra.org/resources/medical/SandPOPE B0711.pdf (noting that the focus on states is now on their ability to maintain current benefit levels and avoid liability for other postemployment benefits). The federal government also runs the Social Security system mostly on a pay-as-you-go basis. FORMAN, *supra* note 6, at 190-91.

21. *See generally* Gov't Acct. Standards Bd., Summary of Statement No. 25: Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans (Nov. 1994), http://www.gasb.org/st/summary/gstsm25.html [hereinafter Statement No. 25]; Gov't Acct. Standards Bd., Summary of Statement No. 27: Accounting for Pensions by State and Local Government Employees (Nov. 1994), http://www.gasb.org/st/summary/gstsm27.html [hereinafter Statement No. 27].

22. Statement No. 25, *supra* note 21; Statement No. 27, *supra* note 21.

23. U.S. GOV'T ACCOUNTABILITY OFF., GAO 07-1156, STATE AND LOCAL GOVERNMENT RETIREE BENEFITS: CURRENT STATUS OF BENEFIT STRUCTURES, PROTECTIONS, AND FISCAL OUTLOOK FOR FUNDING FUTURE COSTS 30 (2007)

1. *An Overview of Public Pension Plan Funding*

Traditional defined benefit plans promise to pay pension benefits for years and even decades into the future. Employees typically earn benefit entitlements each year that they work, and they typically receive pension benefits from retirement until death. The challenge is to design a pension system that saves enough resources while employees are working to pay them benefits after they retire.

Public pension plans receive contributions from employers and employees, invest those contributions, and eventually pay out the promised retirement benefits. Plans rely on actuaries to tell them how much they need to contribute today in order to meet their pension benefit obligations in the future. More specifically, a plan actuary estimates the plan's future liabilities to its retirees, discounts those liabilities to present value, allocates a portion of those liabilities to the past, and compares those liabilities to the actuarial value of the plan's assets. The actuarial value of assets is often based on a five-year moving average of expected actuarial values and market values.[24] The excess of the plan's actuarial accrued liabilities over the actuarial value of its assets is known as its "unfunded actuarial accrued liability" or "unfunded liability."[25] In making these projections about future liabilities and assets, the actuary needs to make assumptions about an array of future variables, including the interest rate, the investment rate, and work force experience (e.g., terminations, deaths, disabilities, wage growth, length of service, age of retirement, and life expectancy).[26] For example, consider the recent 2008 annual report of the Oklahoma Public Employees Retirement System ("OPERS"). (See Table 1). According to the actuarial section of that report, on June 30, 2008, OPERS had a total actuarial accrued liability of $8.9 billion and an actuarial value of assets of $6.5 billion, leaving it with an unfunded actuarial accrued liability ("UAAL") of $2.4 billion.[27] Dividing $6.5 billion by $8.9 billion yielded a funded ratio of 73%.[28] A variety of actuarial assumptions were used to compute these valuations, including an investment return rate of

[hereinafter FUNDING FUTURE COSTS].

24. *See, e.g.*, OKLA. PUB. EMPLOYEES RET. SYS., OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM COMPREHENSIVE ANNUAL REPORT FOR THE FISCAL YEAR ENDED JUNE 30, 2008 64 (2008), *available at* http://www.opers.ok.gov/publications [hereinafter OKLA. RET. SYS. REP.].

25. *Id.* at 61, 63-64.

26. *Id.* at 64-65.

27. *Id.* at 63-64 (noting that the market value of assets as of June 30, 2008, was just $6.255 billion and the actuarial value of assets, $6.492 billion, was based on a five-year moving average of expected actuarial values and market values).

28. *Id.* at 63.

7.5% per year, an inflation assumption of 3.0% per year, and a wage growth assumption of 4.25% per year; benefits were assumed to increase 2% a year due to future ad hoc cost-of-living increases.[29]

Table 1.[30] Oklahoma Public Employees Retirement System, Actuarial Valuation, June 30, 2008

1. Participant Data	
Number of	
Active Members	45,120
Retired and Disabled Members and Beneficiaries	26,033
Inactive Members	5,580
Total Members	76,733
Projected Annual Salaries of Members	$1,682,663,413
Annual Retirement Payments for Retired Members and Beneficiaries	$ 376,147,494
2. Assets and Liabilities	
Total Actuarial Accrued Liability	$8,894,287,254
Market Value of Assets	$6,255,207,565
Actuarial Value of Assets	$6,491,928,362
Unfunded Actuarial Accrued Liability	$2,402,358,892
Funded Ratio	73.0%
3. Employer Contribution Rates as a Percent of Payroll	
Normal Cost Rate	12.46%
Amortization of Unfunded Actuarial Accrued Liability	10.13%
Budgeted Expenses	0.39%
Actuarial Required Contribution Rate	22.98%
Less Estimated Member Contribution Rate	4.04%
Employer Actuarial Required Contribution Rate	18.94%
Less Statutory State Employer Contribution Rate	14.50%
Contribution Shortfall	4.44%

The GASB also allows public pensions to use different "actuarial cost" methods, and OPERS uses the so-called individual entry-age normal actuarial cost method of valuation to determine its actuarial accrued liability and normal cost.[31] Under the entry-age normal cost method, the normal cost is calculated to produce a level cost over each employee's career (i.e., a level percentage of payroll).[32] The normal cost generally represents the expected cost

29. *Id.* at 64.
30. *Id.* at 61, 63.
31. *Id.* at 64.
32. *Id.*

of projected benefits attributable to work performed and pension benefits earned in the current plan year. The actuary for OPERS estimated that the normal cost rate was 12.46% of covered wages.[33] However, because additional contributions should be made to amortize the plan's unfunded actuarial accrued liability, the actuary reports that the actuarial required contribution ("ARC") rate was 22.98% of covered wages—4.44% more than projected contributions based on current Oklahoma law.[34]

In sum, the OPERS balance sheet in Table 1 highlights the three key measures used to measure a pension plan's funded status: unfunded liabilities, funded ratios, and contributions.[35] As of June 30, 2008, OPERS had an unfunded liability of $2.4 billion, a funded ratio of 73.0%, and a contribution shortfall of 4.44% of covered wages.[36] Governments use reports like this to help them decide about contribution levels, and plans use them to help determine their investment strategies.

2. *Investment Strategies*

The GASB directs plan sponsors to articulate a combination of contributions and investment returns on their existing assets that will lead to the plan being fully funded within 30 years.[37] Contributions are often fixed by statute. For example, Oklahoma law currently requires employees to contribute 3.5% of their pay to the system, and state agencies currently contribute 15.5% of payroll.[38]

Asset allocation is the key determinant of the rate of return on the plan's assets. In that regard, plans can virtually guarantee a modest real return if they invest entirely in Treasury Bonds. Plans that need to achieve a higher rate of return can usually raise their expected rate of return by investing more in higher-yielding, but riskier, investments like stocks and real estate. In that regard, Table 2 shows some recent estimates of the rates of return that can be expected from various classes of investment assets.

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33. *Id.* at 63.
34. *Id.*
35. *Id.* at 63.
36. *Id.*
37. *See, e.g.*, Alicia H. Munnell, Jean-Pierre Aubry & Dan Muldoon, *The Financial Crisis and State/Local Defined Benefit Plans*, 2008 CTR. FOR RET. RES. at B.C. 8-19, 5, *available at* http://crr.bc.edu/images/stories/Briefs/ ib_8-19.pdf (noting that 40 years was previously thought to be an acceptable amortization period).
38. *See* Contributions, *supra* note 14 (reflecting mandated employer contributions for fiscal year ending June 30, 2009).

Table 2.[39] Asset Class Assumptions

	Expected Return	Risk
U.S. Equity	8.50%	16.0%
Non-U.S. Equity	8.50%	17.0%
Private Equity	11.55%	26.0%
Real Estate	7.00%	15.0%
U.S. Bonds	4.00%	5.0%
Non-U.S. Bonds	3.75%	10.0%

Because most public plans want to earn a rate of return higher than what they could earn by investing in U.S. Treasury Bonds alone, public plans usually invest in a mix of stocks, bonds, and other assets.[40] For example, to achieve the 7.5% expected rate of return assumed by the actuary for the Oklahoma Public Employees Retirement System, OPERS invests in a mix of U.S. equity, non-U.S. equity, and U.S. bonds, as shown in Table 3. OPERS periodically rebalances its portfolio when, because of market fluctuations, the plan's actual asset allocation gets out of line with its targeted allocation.[41]

Table 3.[42] Asset Allocation of the Oklahoma Public Employees Retirement System (OPERS), June 30, 2008

	Actual Allocation	Low	Target	High
U.S. Equity	38.6%	37.3%	40.0%	42.7%
Non-U.S. Equity	37.8%	31.9%	36.0%	40.1%
U.S. Bonds	23.2%	21.0%	24.0%	27.0%
Non-U.S. Bonds	0.4%	0.0%	0.0%	0.0%

39. WILSHIRE CONSULTING, 2009 WILSHIRE REPORT ON STATE RETIREMENT SYSTEMS: FUNDING LEVELS AND ASSET ALLOCATION 12, Exhibit 14 (2009), *available at* http://www.wilshire.com/BusinessUnits/Consulting/Investment/2009_State_Retirement_Funding_Report.pdf#13.

40. Pension plans try to use sound investment practices to invest their assets in accordance with the actuarial needs of the plan. The typical pension plan in the United States uses modern portfolio theory to choose a mix of stocks, bonds, and other investments that balances risks and investment returns, somewhere on the so-called "efficient frontier." Plans that need higher rates of return tend to invest more heavily in stocks, but they face greater volatility. On the other hand, plans that want less volatility invest more heavily in bonds, consequently tolerating the generally lower rates of return that comes with those conservative investments.

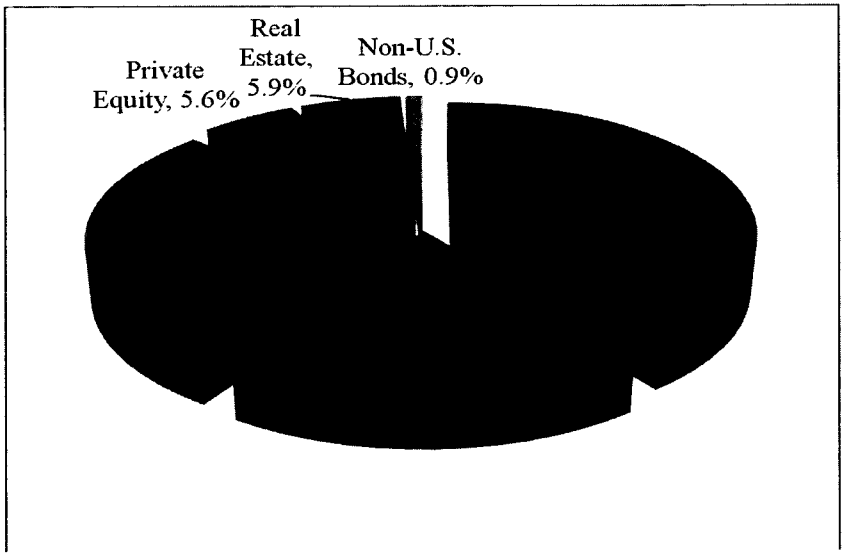
Fiduciary standards also tend to require pension plans to diversify and invest prudently to secure higher rates of return. ERISA § 404(a)(1)(B), (C), 29 U.S.C. § 1104(a)(1)(B), (a)(1)(C). Although ERISA does not apply to public plans, its fiduciary standards are often the model for all pension plans. ERISA § 2, 29 U.S.C. § 1003(b)(1).

41. *See* OKLA. RET. SYS. REP., *supra* note 24, at 49.

42. *Id.*

Similarly, Figure 1 shows the average asset allocation for 125 state retirement systems that were recently analyzed by Wilshire Consulting.[43] Table 4 shows that state pension plans have recently shifted their assets away from bonds and towards more aggressive investments in non-U.S. equity, real estate, and private equity. Of note, the average rate of return for state and local government plans from 1994 to 2004 was 9.3% per year.[44]

Figure 1.[45] Average Asset Allocation for State Pension Plans



43. *See also* ILANA BOIVIE & BETH ALMEIDA, NAT'L INST. ON RET. SAV., PATIENCE IS A VIRTUE: ASSET ALLOCATION PATTERNS IN DB AND DC PLANS 2 (2008), http://www.nvpers.org/public/documentation/Patience%20is%20a%20Virtue.pdf (comparing the allocation of funds in public pension plans to the allocation of funds in private defined public and defined contribution plans); Youngkyun Park, *Public Pension Plan Asset Allocations*, 30 EMP. BENEFIT RES. INST. NOTES 4, 2, 5 (2009), *available at* http://www.ebri.org/pdf/notespdf/ebri_notes_04-apr09.pblcpnsplns1.pdf (discussing further asset allocation in public pensions).

44. Alicia H. Munnell, Kelley Haverstick, Mauricio Soto & Jean-Pierre Aubry, *What Do We Know About the Universe of State and Local Plans?*, 2008 CTR. FOR RET. RES. at B.C. 4, 4 (2008), *available at* http://crr.bc.edu/briefs/what_do_we_know_about_the_universe_of_state_and_local_plans_.html.

45. WILSHIRE CONSULTING, *supra* note 39, at 11, Exhibit 12.

Table 4.[46] Asset Allocation for 125 State Pension Plans (in percentages)

	2003	2008	Change
Equity			
US Equity	42.3	38.1	-4.2
Non-US Equity	12.9	18.8	5.9
Real Estate	4.0	5.9	1.9
Private Equity	4.2	5.6	1.4
Equity Subtotal	*63.4*	*68.4*	*5.0*
Debt			
US Bonds	35.2	26.7	-8.5
Non-US Bonds	1.4	0.9	-0.5
Other	0.0	4.0	4.0
Debt Subtotal	*36.6*	*31.6*	*-5.0*
Return	7.3	7.5	0.2
Risk	10.3	10.9	0.6

3. *The Funding Levels of Public Pension Plans Before the Current Economic Recession*

The actuarial assumptions, methods, amortization periods, and smoothing periods vary from plan to plan. Consequently, the funding status of different public plans cannot be easily compared.[47] Moreover, as more fully discussed below, the assumptions and accounting methods used by public plans are also quite different from those used by private sector defined benefit plans subject to ERISA.[48] With these caveats in mind, it is nevertheless worthwhile to attempt to understand the funding status of state and local government pension plans.

According to the National Association of State Retirement Administrators, over three-fifths of the largest state and local pension plans were at least 80% funded in 2007—a level that many public plan experts say is enough to be "healthy."[49] Of course, funding levels varied dramatically across the 126 plans surveyed—from about 32% to 113%.[50] Also of concern, "the

46. *Id.* at 11, Exhibit 13.
47. Bovbjerg, *supra* note 4, at 6-7.
48. *Infra* Part II.B.
49. FUNDING FUTURE COSTS, *supra* note 23, at 30.
50. *Id.*; *see also* Alicia H. Munnell, Kelley Haverstick & Jean-Pierre Aubry, *Why Does Funding Status Vary Among State and Local Plans?*, 2008 CTR. FOR RET. RES. at B.C. 6, 2 (2008), *available at* http://crr.bc.edu/images/stories/Briefs/slp_6.pdf?phpmyadmin=43ac483c4de9t51d9eb41 (detailing the

percentage of plans with a funded ratio of 80% or better has decreased since 2000."[51]

According to a U.S. Government Accountability Office study of state and local pension plans that was completed before the stock market's recent troubles, state and local governments have arguably been doing an adequate job funding their pensions.[52] In that regard, Table 5 shows the level of contributions that the Government Accountability Office said was needed to fully fund state and local pensions at various rates of return on pension assets. On average, state and local governments contributed about 9% of wages to pension funds in 2006, and they could have fully funded their pensions that year by increasing their contributions slightly—to 9.3% of wages per year.[53] Historically, most public plans have earned fairly high rates of return on their assets. Of course, if future rates of return are lower, then higher contribution rates will be needed.[54]

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range in the funded ratio of state and local plans in 2006).

51. U.S. GOV'T ACCOUNTABILITY OFF., GAO 08-223, STATE AND LOCAL GOVERNMENT RETIREE BENEFITS: CURRENT FUNDED STATUS OF PENSION AND HEALTH BENEFITS 15-16 (2008).

52. Bovbjerg, *supra* note 4, at 24; *see also* Alicia H. Munnell, Kelley Haverstick, Steven A. Sass & Jean-Pierre Aubry, *The Miracle of Funding by State and Local Pension Plans*, 2008 CTR. FOR RET. RES. at B.C. 5, 5, *available at* http://crr.bc.edu/images/stories/Briefs/slp_5.pdf?phpMyAdmin=43ac483c4de9t51d9eb41 (stating that the funding levels in both private and public sectors were higher before the recent economic downturn).

53. *See also* STATE AND LOCAL GOVERNMENTS: GROWING FISCAL CHALLENGES WILL EMERGE DURING THE NEXT 10 YEARS, *supra* note 3, at 49 (finding that state and local government contributions would only need to increase a half-percent in order to fully fund pensions).

54. *See generally* David G. Hitchcoke & Robin Prunty, *Public Finance: How "Smoothing" Can Ease the Pain of Pension Fund Losses for State and Local Governments*, STANDARD & POOR'S RATINGS DIRECT, Jan. 27, 2009; *see also* Munnell, Aubry & Muldoon, *supra* note 37, at 6 (predicting increased contributions if equities remain at depreciated values for the next 5 years); TED HAMPTON & IDA CHAN, MOODY'S INVESTOR SERV., PENSION FUNDING MAY SUFFER FROM 2008 STOCK MARKET DECLINES 3 (2008) (speculating that states and municipalities may have to issue pension obligation bonds as a result of the downturn); NAT'L ASSOC. OF ST. RET. ADMINISTRATORS AND NAT'L COUNCIL ON TCHR. RET., NASRA/NCTR ISSUE BRIEF: MARKET DECLINES AND PUBLIC PENSIONS 3 (2008), *available at* http://www.nasra.org/resources/NASRA_NCTR_ISSUE_BRIEF0812.pdf (predicting higher contributions from both taxpayers and public employees).

Table 5.[55] Government Contributions Needed to Fully Fund State & Local Pension Benefits, 2006

Simulation assumption for the rate of return on investment	*Projected government contribution level needed to fully fund the liability*	*Difference between projected contribution level and the actual 9.0% of salaries*
Higher return scenario: 6% real rate of return	5.0% of salaries per year	- 4.0% of salaries per year
Base case: 5% real rate of return	9.3% of salaries per year	+ 0.3% of salaries per year
Lower-return scenario: 4% real rate of return	13.9% of salaries per year	+ 4.9% of salaries per year
Risk-free scenario: 3% real rate of return	18.6% of salaries per year	+ 9.6% of salaries per year

Before the recent downturn, local government plans also seemed to be pretty well funded. For example, a recent study of 104 city and county retirement systems found that their average funded ratio was 98% in 2007.[56]

4. Current Funding Levels

Extraordinary declines in U.S. and worldwide stock markets in 2007 and 2008 have meant huge investment losses for most investors. For example, the Standard & Poor's 500 index fell by 38.49% in 2008.[57]

Public pensions have shared in those investment losses. According to one estimate, the median investment return for public pension funds was a negative 24.91% in 2008.[58] Similarly,

55. FUNDING FUTURE COSTS, *supra* note 23, at 28.

56. WILSHIRE CONSULTING, 2008 REPORT ON CITY AND COUNTY RETIREMENT SYSTEMS: FUNDING LEVELS AND ASSET ALLOCATION 1 (2009) [hereinafter WILSHIRE CONSULTING, 2008 REPORT]; *see also* Alicia H. Munnell, Jean-Pierre Aubry & Kelly Haverstick, *The Funding Status of Locally Administered Pension Plans*, 2008 CTR. FOR RET. RES. at B.C. 1-2, 8, *available at* http://crr.bc.edu/briefs/the_funding_status_of_locally_administere d_pensio n_plans_4.html (finding that, in a survey of 84 plans from 38 states, state public pension plans' funded ratios averaged 86% and local plans' funded ratios averaged 90%).

57. HOWARD SILVERBLATT, STANDARD & POOR'S, MONTHLY REPORT: WORLD BY NUMBERS: DECEMBER 2008 3 (2009), *available at* http://www2 .standardandpoors.com/spf/pdf/index/123108_WorldbyNumbers-Report.pdf.

58. Standard & Poor's, *Market Declines Will Shake Up U.S. State Pension*

the aggregate market value of state and local government pension funds dropped from $3.2 trillion in 2006 to just $2.3 trillion as of October 31, 2008.[59] Also, according to Wilshire Consulting's 2009 report on state retirement systems, the funded ratio for the 59 state retirement systems that reported actuarial data for 2008 dropped from 88% in 2007 to 77% in 2008.[60]

As in past market downturns, most observers expect that public pension plans will continue to invest prudently.[61] Their investment losses will have to be made up with additional contributions from employers, employees, or both; however, because of the relatively long duration of their pension liabilities and because they use actuarially smoothed asset values rather than market values, public plans can phase in their corrections over a number of years.[62] In general, public pensions try to have

Fund Stability, STANDARD & POOR'S RATINGS DIRECT, Feb. 26, 2009, at 2, *available at* http://www.nasra.org/resources/S&P0903.pdf.

59. NASRA/NCTR ISSUE BRIEF: MARKET DECLINES AND PUBLIC PENSIONS, *supra* note 54, at 3; *see also* U.S. Census Bureau, Cash and Security Holdings of Major Public Employee Retirement Systems: Quarter Ending June 30, 2009, and Prior Periods, tbl.1 (Oct. 29, 2009), http://ftp2.census.gov/govs/qpr/table1.txt (displaying the cash and security holdings of major public employee retirement systems); Munnell, Aubry & Muldoon, *supra* note 37, at 2 (noting that equities declined by 42% from October 9, 2007, to October 9, 2008, and estimating that state and local government plans lost $1.0 trillion of value); Jack VanDerhei, *The Impact of the Recent Financial Crisis on 401(k) Account Balances*, 2009 EMP. BENEFIT RES. INST. ISSUE BRIEF 326, 1 (noting that "major U.S. equity indexes were sharply negative, with the S&P 500 Index losing 37.0 percent for the year, which translated into corresponding losses in 401(k) retirement plan assets"); Michael Barry, *Market Forces: Pension Policy, Market Turmoil, and the Post-October 2008 World*, PLAN SPONSOR, Mar. 2009, *available at* http://www.plansponsor.com/magazine_type3_print.jsp?RECORD_ID=44552 (discussing modern pension policies in light of the recent market troubles); Barry Kozak, *The Funding of Public Sector Pension Plans: Are They Truly in Crisis Mode?*, 2008 BENEFITS L. J. 21, 32-37 (2008) (weighing in on the true status of public sector pensions); *see generally* MOODY'S GLOBAL CREDIT RES., PENSION FUNDING MAY SUFFER FROM 2008 STOCK MARKET DECLINES (2008).

60. WILSHIRE CONSULTING, *supra* note 39, at 1. Wilshire estimates that the funded ratio for all 125 plans was 84% in 2008, down from 96% in 2007. *Id.*

61. NASRA/NCTR ISSUE BRIEF: MARKET DECLINES AND PUBLIC PENSIONS, *supra* note 54, at 3-4; CHRISTIAN E. WELLER & JEFFREY WENGER, NAT'L INST. ON RET. SEC., IN IT FOR THE LONG HAUL: THE INVESTMENT BEHAVIOR OF PUBLIC PENSIONS 1, 7 (2008), *available at* http://www.nirsonline.org/storage/nirs/documents/In%20it%20for%20the%20Long%20Haul.pdf; Christian E. Weller & Jeffrey B. Wenger, *Prudent Investors: The Asset Allocation of Public Pension Plans* 1, 3-4 (Univ. of Mass. Pol. Econ. Res. Inst., Working Paper No. 175, 2008), *available at* http://www.peri.umass.edu/236/hash/99f4915c13/publication/314.

62. *See, e.g.*, Munnell, Aubry & Muldoon, *supra* note 37, at 4 (predicting the extent to which public pensions will be funded in the upcoming years).

"contribution rates that remain relatively level as a percentage of employer payroll from generation to generation of taxpayers."[63] Still, it seems likely that contributions will have to increase in coming years.[64]

II. MAJOR FINANCIAL, ACCOUNTING, AND LEGAL ISSUES RELATED TO FUNDING

A. Financial Pressures on Public Plans

1. Fiscal Pressures on State and Local Governments

According to the Government Accountability Office, state and local governments will face operating deficits of about $131 billion for 2009 and about $181 billion for 2010 unless they make substantial policy changes.[65] Even larger fiscal challenges are expected to emerge within a decade.[66] That is, absent any change in their policies, state and local governments will face a growing gap between their receipts and their expenditures in the coming decades.[67] The biggest driver of this wedge between receipts and expenditures is the growing cost of health care for employees, retirees, and Medicaid recipients.[68] State and local governments

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The authors estimate that under pessimistic assumptions, public plans will be around 59% funded in 5 years, while under optimistic assumptions they should be 75% funded. *Id.* at 6.

63. NASRA/NCTR ISSUE BRIEF: MARKET DECLINES AND PUBLIC PENSIONS, *supra* note 54, at 5.

64. *See, e.g.*, Marlene Prost, *Underfunded Public Pensions?*, HUM. RES. EXEC. ONLINE, Dec. 17, 2008, http://www.hreonline.com/HRE/story.jsp?storyId=156523274 (forecasting a rise in pension contributions in the years to come); Knowledge@Wharton, *Not So Golden: Employees — and Employers — Feel the Pinch from Shortfalls in Retirement Funding*, Apr. 1, 2009, *available at* http://knowledge.wharton.upenn.edu/article.cfm?articleid=2193 (explaining the respective effects of the financial crisis on employees and employers); Katie Benner, *The Public Pension Bomb*, FORTUNE, May 12, 2009, *available at* http://money.cnn.com/2009/05/12/news/economy/benner_pension.fortune (predicting a rise in public pension funding); Rich Connell, *L.A.'s Biggest Pensioner Is Also Its Harbinger of Doom*, L.A. TIMES, May 21, 2009, *available at* http://www.latimes.com/news/local/la-me-parks-pension21-2009may21,0,7737972.story (using one of L.A.'s largest pensions as a model of risk in pension systems in the near future).

65. U.S. GOV'T ACCOUNTABILITY OFF., GAO 09-320R, UPDATE OF STATE AND LOCAL GOVERNMENT FISCAL PRESSURES 2-3 (2009), *available at* http://www.gao.gov/new.items/d09320r.pdf.

66. STATE AND LOCAL GOVERNMENTS: GROWING FISCAL CHALLENGES WILL EMERGE DURING THE NEXT 10 YEARS, *supra* note 3, at 1.

67. *Id.* at 5.

68. *Id.* at 1. The Government Accountability Office estimates that over the next 30 years, Medicaid expenditures will grow 1 percentage point faster than the growth in gross domestic product per capita, and that employee and retiree health expenditures will grow by as much as 1.4 percentage points

will also need to increase their pension contributions in order to fully fund pension costs for their employees.[69] The recent recession has only magnified the fiscal pressures on state and local governments.[70] In particular, state and local government revenues have declined and will not recover until long after the recession is over.[71]

2. Demographic Pressures

Another pressure on public pensions results from the fact that Americans are living longer but retiring earlier. At the outset, Table 6 shows that the life expectancy for a male born in 2008 was 75.4 years, up from just 61.4 years in 1940, and the average life expectancy for a 65-year-old male in 2008 was 16.9 years, up from just 11.9 years in 1940. Figure 2 shows greater detail about how life expectancies for men have changed at various ages from 1900 until 2100; women have shown a similar improvement.[72]

faster than GDP per capita. *Id.* at 18; *see also* Franzel, *supra* note 20, at 6 (explaining that the rising cost of health care will pose a significant "fiscal challenge" to state and local governments).

69. In that regard, the bond ratings agencies are beginning to exert significant pressure on states by downgrading the bonds of those states that have significant long-term pension and benefit liabilities. *See, e.g.*, James P. Miller, *S & P Downgrades Illinois' GO Bond Ratings*, CHI. TRIB., Mar. 10, 2009, *available at* http://archives.chicagotribune.com/2009/mar/10/business/chi-illlinois-bond-rating-mar10 (discussing, generally, the status of Illinois' bond rating).

70. *See, e.g.*, Nicholas Johnson, Phil Oliff & Jeremy Koulish, *An Update on State Budget Cuts: At Least 34 States Have Imposed Cuts that Hurt Vulnerable Residents, but the Federal Recovery Package Is Reducing the Harm*, CTR. ON BUDGET AND POL'Y PRIORITIES, Oct. 12, 2009, at 1 (2009), *available at* http://www.cbpp.org/files/3-13-08sfp.pdf (detailing budget cuts on the national level and the subsequent effect of the Federal Recovery Package).

71. *See, e.g.*, Girard Miller, *Outlook for Retirement Plan Investments*, GOVERNING, Jan. 22, 2009, *available at* http://www.governing.com/articles/0901gmillerd.htm.

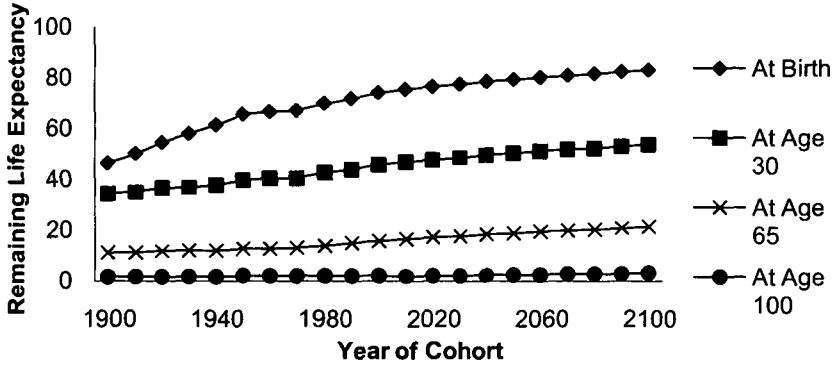
72. Life expectancy also varies by socioeconomic factors, such as race and educational level. *See, e.g.*, Joyce Manchester & Julie Topoleski, *Growing Disparities in Life Expectancy*, CONG. BUDGET OFF., Apr. 17, 2008, at 1-2.

Table 6.[73] Life Expectancy for Men and Women, 1940–2080

	Life expectancy at birth		*Life expectancy at age 65*	
Year	*Male*	*Female*	*Male*	*Female*
Actual				
1940	61.4	65.7	11.9	13.4
1960	66.7	73.2	12.9	15.9
1980	69.9	77.5	14.0	18.4
2000	74.0	79.4	15.9	19.0
2008	75.4	80.0	16.9	19.3
Projected				
2020	77.0	81.0	17.8	19.9
2040	79.2	82.9	19.0	21.1
2060	81.1	84.5	20.2	22.3
2080	82.7	86.0	21.2	23.3

Note: The period life expectancy at a given age for a given year represents the average number of years of life remaining if a group of persons at that age were to experience the mortality rates for that year over the course of their remaining lives.

Figure 2.[74] Remaining Life Expectancies for Males at Various Ages, by Cohorts from 1900 to 2100



73. THE BD. OF TRUSTEES, FED. OLD-AGE AND SURVIVORS INS. AND FED. DISABILITY INS. TR. FUNDS, 2009 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND FEDERAL DISABILITY INSURANCE TRUST FUNDS 88 tbl.V.A3 (2009), *available at* http://www.ssa.gov/OACT/TR/2009/tr09.pdf.

Despite the fact that life expectancies went up throughout the twentieth century, there was a trend toward earlier and earlier retirements until around 1985. For example, Table 7 shows that the average ages at which workers begin receiving their Social Security retirement benefits fell dramatically from 65.9 in 1965 to 63.6 in 1985, about where it is today.[75] Figure 3 shows how life expectancies at birth have changed compared to the relatively modest increase in the Social Security full retirement age from 65 to 67.

Table 7.[76] Percentage of Workers Electing Social Security Retirement Benefits at Various Ages, Selected Years

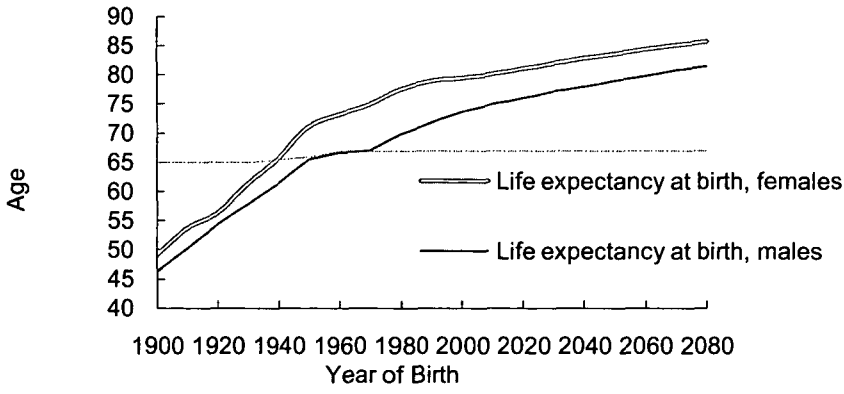
Year	*Age 62*	*Ages 63–64*	*Age 65*	*Ages 66+*	*Average age*
1965	23.0	17.7	23.4	35.9	65.9
1975	35.7	24.5	31.1	8.7	63.9
1985	57.2	21.1	17.7	4.0	63.6
1995	58.3	19.5	16.3	6.0	63.6
2004	57.5	19.0	18.6	4.8	63.7

74. FELICITIE C. BELL & MICHAEL L. MILLER, SOC. SEC. ADMIN., LIFE TABLES FOR THE UNITED STATES SOCIAL SECURITY AREA 1900-2100 165 tbl. 10 (2005).

75. *See also* Murray Gendell, *Older Workers: Increasing Their Labor Force Participation and Hours of Work*, 131 MONTHLY LAB. REV. 1, 51 tbl.10, (2008), *available at* http://www.bls.gov/opub/mlr/2008/01/art3full.pdf (displaying the increase in older workers and their hours worked); *but see* Dan Muldoon & Richard Kopcke, *Are People Claiming Social Security Benefits Later?*, 2008 CTR. FOR RET. RES. AT B.C. 8-7, 1-2, *available at* http://crr.bc.edu/images/stories/ib_8-7.pdf (showing that the share of workers claiming benefit awards at age 62 is starting to fall, with just 56% of women and 52% of men claiming benefits at 62 in 2006).

76. Gayle L. Reznick, Dave Shoffner & David A. Weaver, *Coping with the Demographic Challenge: Fewer Children and Living Longer*, 66 SOC. SEC. BULL. 4, 43 tbl.4 (2005/2006).

Figure 3.[77] Life Expectancies at Birth versus Social Security Full Retirement Age



Pertinent here, public sector pension plans often permit public employees to retire at relatively young ages, and many workers do. For example, many public employees have "thirty years and out" pension plans, and "twenty years and out" arrangements are fairly common among law enforcement plans.[78] One can easily imagine someone joining a police force at age 20, working for 20 years until retiring at age 40, and drawing a pension (and retiree health benefits) for 40 years until dying at age 80.[79] Needless to say, increased life expectancies and early retirements can drive up benefit costs, and state and local governments will be hard-pressed to come up with the funds to pay benefits over ever-longer retirements.[80] At the very least,

77. THE BD. OF TRUSTEES, FED. OLD-AGE AND SURVIVORS INS. AND FED. DISABILITY INS. TR. FUNDS, 2005 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND FEDERAL DISABILITY INSURANCE TRUST FUNDS 80 tbl.V.A3, 102 tbl.V.C3 (2005).

78. The normal retirement age for most public employees covered by the Oklahoma Public Employees Retirement System is age 62 (or when age plus years of service equals 80 [90 for recent hires]), but certain law enforcement officers can retire with 20 years of service. OKLA. RET. SYS. REP., *supra* note 24, at 70.

79. *See, e.g.*, Chuck Bennett, *Time Bomb of Young Cops*, N.Y. POST, Feb. 23, 2009, *available at* http://www.nypost.com/seven/02232009/news/regional news/time_bomb_of_young_cops_156516.htm (describing the drawbacks of the current pension system through the example of a hypothetical young police officer retiring early).

80. Early retirement incentives are also sometimes used to fix short-term budget problems, even though they have long-term costs. *See, e.g.*, Valerie Bauman, *Will State Workers Get an Early Out?*, TIMES UNION, Dec. 3, 2008, *available at* http://www.timesunion.com/AspStories/story.asp? storyID=746130

plans must make realistic assumptions about length of service, age of retirement, and longevity of retirees.

3. Pension Envy

Another pressure on public pensions has to do with the fact that the pensions that public employees receive are much more generous than the pensions that are available today in the private sector. This creates a certain amount of pension envy among the taxpayers who are called upon to contribute to the generous pensions of their public sector counterparts.[81]

Today's public sector workers generally came to their jobs knowing that government work paid less—but that benefits were more generous.[82] Needless to say, a lot has changed since then. Many state and local government workers now make more than their private sector counterparts, and the gap is widening every year.[83] For example, Table 8 shows that in 2008 compensation

&category=STATE (noting the financial issues that state and local governments will encounter when they encourage early retirement of employees).

81. *See, e.g.*, PROMISES WITH A PRICE: PUBLIC SECTOR RETIREMENT BENEFITS, *supra* note 5, at 10-11 (explaining this pension envy and noting the taxpayers' call for reduction in public employee benefits); Pension Res. Council, *The Future of Public Employee Retirement Systems* 1 (Pension Res. Council, Working Paper No. 2008-08, 2008), *available at* http://www.pensionresearchcouncil.org/publications/document.php?file=434 (comparing and contrasting the public-sector and private-sector benefits); Stephanie Fitch, *Gilt-Edged Pensions*, FORBES, Feb. 16, 2009, *available at* http://www.forbes.com/forbes/2009/0216/078.html (discussing the disparity in benefits for the public sector employees); James M. Odato, *6-Figure Club for School Retirees*, TIMES UNION, June 1, 2008, *available at* http://www.timesunion.com/ASPStories/story.asp?StoryID=692650 (noting some public-sector retirees with high pensions attain other jobs for even more income); Cal. Found. for Fiscal Resp., California Pension Reform's "The CalPERS 100K Club," http://www.californiapensionreform.com/calpers (last visited Sept. 25, 2009) (identifying the number of retired public-sector employees in California who receive pensions in excess of $100,000).

82. State and local government workers comprised around 12% of the nation's workforce in 2006. FUNDING FUTURE COSTS, *supra* note 23, at 1. As already mentioned, state and local governments typically provide their workers with a traditional defined benefit pension plan, a supplemental defined contribution plan for voluntary savings, and a partially-paid retiree health benefit. In 2006, state and local government pensions covered 18.4 million members and paid out $151.7 billion in benefits to 7.3 million beneficiaries. STATE AND LOCAL GOVERNMENT RETIREE BENEFITS: CURRENT FUNDED STATUS OF PENSION AND HEALTH BENEFITS, *supra* note 51, at 4.

83. For example, from 2000 to 2007, public employees saw a 16% increase in compensation after adjusting for inflation, compared with just 11% for private workers. Dennis Cauchon, *State, Local Government Workers See Pay Gains*, USA TODAY, Feb. 1, 2008, *available at* http://www.usatoday.com/news/nation/2008-02-01-civil-servants_N.htm.

costs averaged $39 an hour in the public sector but just $27 an hour in the private sector.[84] At least part of this difference is likely attributable to the higher average levels of education and training that are expected for public sector workers (e.g., teachers), and public sector workers are more likely to be unionized than private sector workers.[85]

Table 8.[86] Public and Private Sector Compensation, 2008

	Cost per Hour	*Benefits*	*Retirement and Savings*
State and local government	$39.18	$13.41 (34.2%)	$3.09 (7.9%)
Private sector	$27.07	$7.93 (29.3%)	$0.79 (3.0%)

Similarly, Table 9 shows that public employees are also far more likely to have traditional defined benefit pension plans and retiree health care benefits than private sector workers.[87] As already mentioned, however, public sector employees typically contribute to their traditional defined benefit plans, while private sector employees do not.[88]

84. *See also* Ken McDonnell, *Benefit Cost Comparisons Between State and Local Government and Private-Sector Employers*, 29 EMP. BENEFIT RES. INST. NOTES 6, 2 (2008), *available at* http://www.ebri.org/pdf/EBRI_notes_06-2008.pdf/ (identifying the table demonstrating that the cost of total public-employee compensation is greater than total private-employee compensation).

85. *Id.*; *see also* Franzel, *supra* note 4, at 2-3 (finding that state and local government employees tend to be older and better educated than private workers).

86. U.S. DEP'T OF LAB., U.S. BUREAU OF LAB. STAT., EMPLOYER COSTS FOR EMPLOYEE COMPENSATION—SEPTEMBER 2008 9 tbl.4 (2008), *available at* http://www.bls.gov/news.release/archives/ecec_12102008.pdf.

87. *See also* BOIVIE & ALMEIDA, *supra* note 43, at 1 (estimating that 80% of state and local government workers are covered by traditional defined benefit plans, compared with just 14% of private sector workers); Alicia H. Munnell, Kelly Haverstick & Mauricio Soto, *Why Have Defined Benefit Plans Survived in the Public Sector?*, 2007 CTR. FOR RET. RES. at B.C. 2, 6 (noting that defined benefit plans are disappearing in the private sector but are still dominant in the public sector); Press Release, Watson Wyatt Worldwide, Majority of Fortune 500 Companies Offer Only Defined Contribution Plans to New Salaried Employees, Watson Wyatt Finds: Hybrid Pension (Cash Balance) Plans Become More Prevalent than Traditional Pension Plans for the First Time (May 11, 2009), http://www.watsonwyatt.com/news/press.asp?ID=21177 (noting the less desirable benefits of private sector employees).

88. *See supra* note 13 and accompanying text.

Table 9.[89] Public and Private Sector Retirement Benefits

	Public Sector Employees	*Private Sector Employees*
Defined benefit plan	90%	20%
Median pension in 2005	$17,640	$7,692
Retiree health benefit of any kind	82%	33%

B. Accounting for Public Pension Plans

Public plans are certainly different from private sector plans. In particular, while it is not unusual for private companies to go bankrupt, state and local governments tend to exist perpetually.[90] In any event, the accounting rules applicable to public pension plans are quite different than those that apply to private sector pension plans.

As already mentioned, ERISA imposes funding requirements on private sector pension plans, but it does not apply to public sector plans.[91] Private sector plans are also subject to strict accounting rules from the Financial Accounting Standards Board ("FASB"), while public pensions are governed by the more flexible rules from the GASB.[92] Nowhere are these accounting differences more apparent than when one considers the funding status of pension plans.

Ideally, pension plans should be 100% funded, and funding status should be determined by comparing the fair market value of a plan's assets with the fair market value of its liabilities. If you hire a worker to do a job today, it makes sense to pay all of the costs for that worker out of current revenues. That is the whole purpose of having proper accounting rules and abiding by them. In the public sector, however, many experts believe that public plans are "healthy" if they are at least 80% funded,[93] and funded status is based on flexible actuarial valuations of assets and liabilities, rather than on their actual market values.

89. PROMISES WITH A PRICE: PUBLIC SECTOR RETIREMENT BENEFITS, *supra* note 5, at 11 tbl.1-3.

90. Of note, however, the city of Vallejo recently declared bankruptcy "after it was swamped by salary and pension costs." David Cho, *Revisions Considered for Valuations of Public Pension Fund Payouts*, WASH. POST, Sept. 5, 2008, *available at* http://www.washingtonpost.com/wp-dyn/content/article/2008/09/04/AR2008090403280.html.

91. *See supra* notes 18-19 and accompanying text.

92. *See supra* notes 20-23 and accompanying text.

93. FUNDING FUTURE COSTS, *supra* note 23, at 30.

Because governments tolerate an 80% funding level and use actuarial valuations instead of market valuations, public pensions are almost guaranteed to be underfunded. Public sector workers tend to get larger pensions as a result, but much of the cost of those larger pensions is pushed onto future generations of taxpayers.[94]

1. The Eighty Percent Target

The only reason that anyone thinks that 80% funding may be "good enough for government" is that we all recognize that when public pension plans get anywhere close to 100% funded, bad things happen.[95] First, if a public plan is fully funded or overfunded, beneficiaries will lobby for, and usually get, more generous benefits, thereby restoring the funded ratio from a good level to a bad, but politically tolerable, underfunded level.[96] In Oklahoma, for example, the state provides much of the funds for primary and secondary education.[97] At the same time, the Oklahoma Teachers' Retirement System is only about 50% funded.[98] Nevertheless, Oklahoma teachers spend most of their lobbying efforts trying to get pay increases, which almost invariably worsen the funded ratio.[99] When Oklahoma teachers do lobby about pensions, they usually just ask for ad hoc cost-of-living adjustments and other benefit enhancements; lobbying for larger

94. Richard Mattoon, *Issues Facing State and Local Government Pensions*, FED. RES. BANK OF CHI. ECON. PERSP., 2, 12 (2007); Robert Novy-Marx & Joshua D. Rauh, *The Intergenerational Transfer of Public Pension Promises* 17-21 (Nat'l Bureau of Econ. Res., Working Paper No. 14343, 2008), *available at* http://www.nber.org/papers/w14343; Richard W. Johnson, *Pension Underfunding and Liberal Retirement Benefits Among State and Local Government Workers*, 50 NAT'L TAX J. 1, 113 (1997), *available at* http://ntj.tax.org/wwtax/ntjrec.nsf/21e776ed1fa8133885256863004a5940/$file/v50n1113.pdf.

95. To be sure, a funded ratio of less than 100% can be appropriate when the pension costs grow slower than the tax base. On the other hand, if pension liabilities are growing faster than the tax base, overfunding is required. Mattoon, *supra* note 94, at 12; Munnell, Aubry & Muldoon, *supra* note 37, at 7 n.14 and sources cited therein.

96. Mattoon, *supra* note 94, at 12.

97. *See, e.g.*, Oklahoma State and Local Spending, usgovernmentspending.com, http://www.usgovernmentspending.com/Oklahoma_state_spending.html.

98. GABRIEL ROEDER SMITH & CO., TEACHERS' RETIREMENT SYSTEM OF OKLAHOMA ANNUAL ACTUARIAL VALUATION FOR THE YEAR BEGINNING JUNE 30, 2008, at 2 (2008), *available at* http://www.ok.gov/TRS/documents/2008%20Actuarial%20Valuation.pdf (showing a funded ratio of 50.5% as of June 30, 2008).

99. To be sure, actuarial reports include a salary increase assumption that should, over the long run, correspond to the actual pay increases that are awarded. *Id.* at 64.

government contributions to the underfunded pension plan is just an afterthought.[100]

The second disadvantage to fully funded or overfunded public pension plans is that governors and legislatures call for contribution cuts and holidays. Politicians would rather spend money on projects that will bring them more immediate campaign contributions and votes.[101]

2. *Actuarial Versus Market Valuation of Assets and Liabilities*

Perhaps the hottest debate in public pension plan accounting has to do with the proper valuation of plan assets and liabilities.[102] It has evolved into a debate between financial economists and pension plan actuaries.[103] Financial economists generally believe

100. *See, e.g.*, Steven Brull, *Pensions: Ohhhklahoma*, INSTITUTIONAL INVESTOR, Aug. 2006, *available at* http://www.iimagazine.com/article.aspx?articleID=1051439.

101. *See, e.g.*, Frederick M. Hess & Juliet P. Squire, "But the Pension Fund Was Just Sitting There. . .": The Politics of Teacher Retirement Plans, Conference Paper Presented at Rethinking Teacher Retirement Benefit Systems (Feb. 19-20, 2009), *in* NAT'L CTR. ON PERFORMANCE INCENTIVES, Feb. 2009, at 3-4, *available at* http://www.performanceincentives.org/data/files/news/ConferencePapers2009News/Hess_and_Squire_200909.pdf (using public-choice theory and interest-group analysis to show how teachers and politicians cannot help but underfund their public pensions).

102. *See, e.g.*, Mary Williams Walsh, *Government Rule Makers Looking at Pensions*, N.Y. TIMES, July 11, 2008, *available at* http://www.nytimes.com/2008/07/11/business/11gasb.html?_r=1&oref=slogin (noting the debate among actuaries); *The Future of Public Employee Retirement Systems*, *supra* note 81, at 4-8 (analyzing how to properly measure liabilities in the most cost effective manner); Frank Todisco, *Mark-to-Market Valuation at a Crossroads?*, 33 AM. ACAD. OF ACTUARIES ENROLLED ACTUARIES REP. 4, 3 (2008), *available at* http://www.actuary.org/ear/pdf/winter_2008.pdf (stating that The Pension Protection Act of 2006 tightened smoothing on both the asset and liability sides, instigating a debate among practitioners).

103. *See, e.g.*, Jeffrey R. Brown & David W. Wilcox, *Discounting State and Local Pension Liabilities*, 99 AM. ECON. REV. 2, 538, 542 (2009) (comparing and contrasting the practices of financial economists and pension plan actuaries); Richard M. Ennis, *What Ails Public Pensions?*, 63 FIN. ANALYSTS J. 6, 38-39 (2007) (illustrating the arguments for both theories); David R. Kass, *Self-Regulation Requires Hard Choices*, CONTINGENCIES, July-Aug. 2006, at 14-16, *available at* http://www.contingencies.org/julaug06/commentary_0706.pdf (noting the recent difficulties experienced by actuaries in today's practice); KEITH BRAINARD, NAT'L ASSOC. OF ST. RET. ADMINISTRATORS, NASRA WHITE PAPER: PUBLIC PENSIONS AND MARKET VALUE OF LIABILITIES 1 (2008), *available at* http://www.nasra.org/resources/MVL/NASRA%20MVL%20white%20paper.pdf (introducing each party's various standards to the debate between financial economists and pension plan actuaries); SOC'Y OF ACTUARIES AND AM. ACAD. OF ACTUARIES, PENSION ACTUARY'S GUIDE TO FINANCIAL ECONOMICS 8 (2006), *available at* http://www.actuary.org/pdf/pension/finguide.pdf (providing an overview of the application of financial

that pension assets should be valued at their current market price and that liabilities should be valued using a "risk-free" rate of return,[104] like the roughly 4% rate of return on long-term Treasury Bonds. This is sometimes referred to as the mark-to-market approach.[105] On the other hand, pension plan actuaries like to use smoothed values for assets, with market values averaged out over a period of years; they also like to use discount rates that are often substantially higher than the risk-free rate of return.[106]

In the private sector, the difference between the market value of pension assets and pension liabilities, however calculated, shows up as part of the annual financial reports of the corporations that sponsor private pension plans. These days, pension actuaries advise corporations to smooth the value of their pension assets out over 24 months and to value their assets using a discount rate based on the interest rate for long-term corporate bonds, around 6.38% in 2008.[107] Financial economists generally believe that this approach distorts the value of corporations.[108] In

economics to pension plans); Nat'l Conf. on Pub. Emp. Ret. Sys., *The Advantages of Using Conventional Actuarial Approaches for Valuing Public Pension Plans*, NCPERS RES. SER., Nov. 2008, at 1-4, *available at* http://www.ncpers.org/News/PageText/documents/ResearchSeriesIII.pdf (noting the advantages of using conventional actuarial approaches); Andrew D. Wozniak & Peter S. Austin, *U.S. Public Pensions at a Crossroad: Which Way Forward?*, BANK OF N.Y. MELLON ASSET MGMT., May 2008, at 1, 4-5 (criticizing the public plan actuarial method).

104. PENSION ACTUARY'S GUIDE TO FINANCIAL ECONOMICS, *supra* note 103, at 25.

105. *See, e.g.*, Todisco, *supra* note 102, at 3 (noting an increased resistance to the market-to-market approach).

106. Wozniak & Austin, *supra* note 103, at 4.

107. *See* Fin. Acct. Standards Bd., Summary of Statement No. 158: Employer's Accounting for Defined Benefit Pension and Other Postretirement Plans—An Amendment of FASB Statements No. 87, 88, 106, and 132(R), http://www.fasb.org/summary/stsum158.shtml (last visited Oct. 24, 2009) (discussing the effective dates for measurement and the specific facets of what pension actuaries advise their clients to do). The Internal Revenue Service permits defined benefit plans to smooth the market values of assets over 24 months. Rev. Proc. 2009-22, 2009-14 I.R.B. 741; Florence Olsen, *Pension Actuaries Welcome IRS Guidance on Applying 24-Month Asset Smoothing Rules*, 36 BUREAU OF NAT'L AFF. PENSION & BENEFITS REP. 12, 669 (2009); Rob Kozlowski, *5 Years of Corporate Funding Gains Gone*, PENSIONS & INVESTMENTS, June 1, 2009, *available at* http://www.pionline.com/article/20090601/PRINTSUB/306019980; *see also* WILSHIRE CONSULTING, 2009 WILSHIRE CONSULTING REPORT ON CORPORATE PENSION FUNDING LEVELS 7-9 (2009), *available at* http://www.wilshire.com/ BusinessUnits/Consulting/Investment/2009_Corporate_Funding_Report.pdf (considering the annual effect on the growth of assets and liabilities).

108. *See generally* Gale E. Newell, Jerry G. Kreuze & David Hurtt, *Corporate Pension Plans: How Consistent Are the Assumptions in Determining Pension Funding Status?*, 17 AM. J. OF BUS. 22 (2002), *available at* http://www.bsu.edu/mcobwin/majb/?p=201.

particular, using a discount rate higher than the risk-free rate can understate the magnitude of corporate pension plan liabilities.[109]

To be sure, financial economists reserve most of their rancor about the understatement of pension liabilities for public sector pension plans. In that regard, public sector pension plans tend to use actuarially smoothed values for their assets, with market values averaged out over anywhere from three to 15 years.[110] More significantly, instead of using the risk-free Treasury Bond rate to discount their liabilities, or even the somewhat higher corporate bond rate used by private sector plans, public pension plans typically use discount rates based on their own, much higher investment return assumptions, typically around 8%.[111] According to the financial economists, choosing such high discount rates invariably leads to much lower estimates of pension plan liabilities and so results in significant overstatements of the funded status of most public plans.[112] For example, a plan that was 100% funded under the actuarial approach might be just 80- or 85% funded under the financial economics approach.[113] Of course, public plans that purport to be a "healthy" 80% funded under the conventional actuarial approach are really just 65% or 70% funded when viewed from the financial economics approach.[114]

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109. *See generally id.*

110. As already mentioned, OPERS uses five-year smoothing. *See supra* note 24 and accompanying text.

111. *The Future of Public Employee Retirement Systems*, *supra* note 81, at 5. Appendix Table 1 shows the investment return assumptions for 109 state pension plans, ranging from 7.0% to 8.5%. *See also* Pub. Fund Surv., Key Actuarial Assumptions, http://www.publicfundsurvey.org/publicfundsurvey/index.htm (last visited Apr. 6, 2009) (surveying the retirement system annual financial reports and interviewing the retirement system staff members).

112. Gabriel Roeder Smith & Co., *Valuing Public Pension Plans: Comparing Financial Economics with Conventional Approaches*, GRS INSIGHT, Apr. 2008, at 2, *available at* http://www.gabrielroeder.com/news/pdf_insight/insight2008_04.pdf. In general, the financial economics approach "produces a measure of . . . pension liability that [is] roughly 15% higher" than the conventional actuarial approach. *Id.*

113. *Id.*

114. Another difference between public and private plan accounting has to do with the measurement of benefit obligations. Ennis, *supra* note 103, at 39-40. The FASB requires private plans to disclose both the plan's accumulated benefit obligation ("ABO") and its projected benefit obligation ("PBO"). *Id.* at 39. Both measure benefits accrued to date, discounted at the long-term bond rate. *Id.* PBO is larger than ABO because PBO takes into account projected wage increases, whereas ABO reflects the plan's liability if it terminated now. *Id.* On the other hand, the GASB requires public plans to disclose actuarial accrued liability, which like PBO, incorporates projected wage increases. *Id.* But, of course, public plans can use the much higher actuarial discount rate (typically around 8%). *Id.* Pertinent here, a recent National Association of State Retirement Administrators survey of 101 state retirement plans found that those plans were, on average, 87% funded in 2005 using the conventional

While the debate has a lot more wrinkles, financial economists argue that when public pension plan actuaries use high discount rates, they inevitably understate plan liabilities and push costs onto future generations of taxpayers.[115] Most public pension plan actuaries, on the other hand, contend that it is completely appropriate to use those high discount rates because state and local governments will be around for the long haul, they have historically earned those high rates of return on plan assets, and they can reasonably be expected to earn these high rates of return in the future.[116] Public sector actuaries even assert that using the risk-free rate to discount liabilities would lead to an overstatement of the funded status of plans and so result in overcharging current taxpayers to the benefit of future generations of taxpayers.[117]

This debate has been raging for years and shows no sign of letting up any time soon. The GASB and the Actuarial Standards Board are both studying the issue.[118] As more information is

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actuarial approach permitted by GASB. *Id.* Using the same data, and a 5.5% discount rate, Richard M. Ennis, CFA, estimated that those plans were really just 62% funded under a PBO FASB-type approach and just 75% funded under an ABO FASB-type approach. *Id.* at 39-40.

115. *See, e.g.*, *id.* at 38-40 (discussing the negative consequences of actuarial conventions); Jeremy Gold & Gordon Latter, *The Case for Making Public Plan Liabilities to Market* 6-7 (Pension Res. Council, Working Paper No. 2008-20, 2008), *available at* http://www.pensionfinance.org/papers/TheCaseforMarking PublicPensionPlanLiabilitiestoMarket.pdf (analyzing discount rates).

116. *See, e.g.*, Dimitry Mindlin, *In Support of the Weatherman*, CONTINGENCIES, May/June 2008, at 36, *available at* http://www.contingencies.org/mayjun08/weatherman.pdf (discussing the contentions of financial economists and actuaries); Stephen T. McElhaney, Presentation, *Estimating State and Local Government Pension and Retiree Health Care Liabilities*, PENSION RES. COUNCIL, May 1, 2008, at 7 (noting the various arguments of pension plan actuaries).

117. *See generally* Mindlin, *supra* note 116; McElhaney, *supra* note 116.

118. *See, e.g.*, Governmental Acct. Standards Bd., The User's Perspective: Looking Back at Ten Years of Pension Reporting (Dec. 2008), http://www.gasb.org/newsletter/pension_reporting_dec2008.html (noting the Board's research and its implications); Governmental Acct. Standards Bd., *Invitation to Comment: Pension Accounting and Financial Reporting*, 2009 GOVERNMENTAL ACCT. STANDARDS SER. 34, 26-37, *available at* http://www.gasb.org/exp/itc_pension_accounting_and_finafinan_reporting.pdf (addressing the issues associated with pension accounting and financial reporting from the perspective of the GASB); Actuarial Standards Bd., *Request for Comments – Actuarial Standard of Practice (ASOP) No. 27*, Mar. 27, 2008, at 1-4, http://www.actuarialstandardsboard.net/pdf/ASOP_27_RFC.pdf (outlining a selection of economic assumptions for measuring pension obligations); Paul Zorn, *The GASB's Invitation to Comment on Pension Accounting and Reporting Standards*, GRS INSIGHT, May 2009, at 7-8, *available at* http://www.grsnet.com/news/pdf_insight/insight2009_05.pdf (noting the alternatives to the present system); Keith Brainard, *Plan Sponsors: Orthodoxy? Actuaries Follow Current Standard*, PENSIONS &

usually better, some observers believe that the best approach is to provide both types of liability and funded ratio estimates. In that regard, for example, the New York City Retirement System includes both actuarial and market valuations in its annual reports.[119]

Another difference between private and public pension plans has to do with how quickly they are required to reach full funding. As already mentioned, ERISA generally requires private pension plans to make up any funding shortfall in 7 years, but that rule does not apply to public plans.[120] Instead, the GASB permits plans to use an amortization period of up to 30 years.[121]

All in all, accounting matters, and properly accounting for pension liabilities is likely to result in better funding of public pension plans.[122]

INVESTMENTS, May 4, 2009, *available at* http://www.pionline.com/article/20090601/PRINTSUB/306019998 (stating that the GASB and the Actuarial Standards Board have been slow to deal with the valuation issue, but nonetheless are addressing it).

119. *See, e.g.*, Mary William Walsh & Michael Cooper, *New York Gets Sobering Look at Its Pensions*, N.Y. TIMES, Aug. 20, 2006, *available at* http://www.nytimes.com/2006/08/20/nyregion/20pension.html?_r=1&pagewanted=print (discussing New York's retirement system); THE N.Y. CITY EMP. RET. SYS. AND N.Y. CITY PUB. EMP. GROUP LIFE INS., COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR THE FISCAL YEAR ENDED JUNE 30, 2008 155 (2008), *available at* http://www.nycers.org/(S(cxnnws45ixaok245ihj5l355))/Pdf/cafr/2008/NYCERS_final.pdf (analyzing the New York City Retirement System for the fiscal year 2008).

Even providing alternative numbers may not provide sufficient information about the distribution of possible funding outcomes. *See, e.g.*, DAVID BLAKE, ZAKI KHORASANEE, JOHN PICKLES & DAVID TYRRALL, THE PENSIONS INST., AN UNREAL NUMBER: HOW COMPANY PENSION ACCOUNTING FOSTERS AN ILLUSION OF CERTAINTY 5, 40-41 (2008), *available at* http://www.pensions-institute.org/reports/unrealnumber.pdf (suggesting that so-called fan charts do a better job than any single number at conveying useful information about the range of possible funding outcomes, particularly over the decades of pension promises).

120. *See supra* notes 18-19 and accompanying text (explaining applicable ERISA funding rules and employer obligations).

121. *See, e.g.*, Munnell, Aubry & Muldoon, *supra* note 37, at 5 (noting that in 2006 the amortization period was reduced to thirty years). Pertinent here, as of June 30, 2008, the Oklahoma Public Employees Retirement plan had 19 years left in the thirty-year amortization period that it had earlier adopted with respect to its unfunded actuarial accrued liability. OKLA. RET. SYS. REP., *supra* note 24, at 64.

122. *See, e.g.*, Paraskevi (Vicky) Kiosse & Ken Peasnell, Have Changes in Pension Accounting Changed Pension Provision?: A Review of the Evidence, Conference Paper Presented at The Institute of Chartered Accountants in England and Wales 2008 Information for Better Markets Conference 27-29 (Mar. 11, 2009), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1365368 (presenting and considering alternatives to the current system).

C. Legal Limitations on Public Pension Plan Reform

Most state and local workers also have better legal protections for their pensions than their private sector counterparts. Through state constitutional provisions and court interpretations of property and contract rights, most states essentially guarantee that their public workers will get the pensions that they were promised when they were hired.[123] The effect of this "anti-reduction" rule is that public employers can rarely cut pension benefits for current workers or retirees.[124] Instead, pension and benefit changes typically only apply to newly hired workers. Insert worker, and wait 30 or 40 years to see any financial savings.[125] This anti-reduction rule is unduly generous.

On the other hand, the benefit-protection rule that covers private sector workers seems more realistic for promises that can last for decades. ERISA's so-called "anti-cutback" rule protects pension benefits that have already been earned, but it does not guarantee that an employee will receive future benefit accruals.[126] More specifically, employers are generally free to cut future benefit accruals, or even terminate their pension plans, but they cannot take away an employee's already accrued benefits. Needless to say, we have seen a remarkable number of freezes and terminations of private sector plans in recent years.[127]

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123. *See, e.g.*, Amy Monahan, Legal Limitations on Pension Plan Reform, Conference Paper Presented at Rethinking Teacher Retirement Benefit Systems (Feb. 19-20, 2009), *in* NAT'L CTR. ON PERFORMANCE INCENTIVES, Feb. 2009, at 1, 3-11, *available at* http://www.performanceincentives.org/data/files/news/ConferencePapers2009News/Monahan_200908_Final.pdf (discussing how significant changes in the last century have taken place in regards to the legal protections of public pensions); Bovbjerg, *supra* note 4, at 11-14 (explaining state and local government sectors); *see also* FUNDING FUTURE COSTS, *supra* note 23, at 18-20 (discussing the current status of state and local government pension plans and noting that policy makers and voters will need to decide how to control future costs and the appropriate level of benefits); Nat'l Conf. on Pub. Emp. Ret. Sys., State Constitutional Protections for Public Sector Retirement Benefits, http://www.ncpers.org/Files/News/031 52007RetireBenefitProtections.pdf (last visited Nov. 19, 2009) (summarizing all fifty states' laws on public sector retirement benefits).

124. FUNDING FUTURE COSTS, *supra* note 23, at 20-21.

125. *Id.* at 21, 32.

126. ERISA § 204(g)(1), 29 U.S.C. § 1054(g)(1), I.R.C. § 411(d)(6).

127. *See, e.g.*, U.S. GOV'T ACCOUNTABILITY OFF., GAO 08-817, DEFINED BENEFIT PLANS: PLAN FREEZES AFFECT MILLIONS OF PARTICIPANTS AND MAY POSE RETIREMENT INCOME CHALLENGES 1, 4-8, 25 (2008), *available at* http://www.gao.gov/new.items/d08817.pdf (discussing generally the freezing of defined benefit plants); Jack VanDerhei, *Defined Benefit Plan Freezes: Who's Affected, How Much, and Replacing Lost Accruals*, 2006 EMP. BENEFIT RES. INST. ISSUE BRIEF 291, 1, 3-6, *available at* http://www.ebri.org/pdf/briefspdf/EBRI_IB_03-20063.pdf (discussing the effect freezing defined benefit plans have on its participants); Alicia H. Munnell & Mauricio Soto, *Why Are*

State and local governments were unwise to promise generous pensions without adequately funding them, or without at least reserving the right to cut future benefit accruals.[128] But state and local governments did make those generous pension promises, and now they will have to honor them. Integrity and contracts are about doing what you promised to do even when it becomes inconvenient. Still, it would make sense for the states to adopt constitutional amendments or statutes that embrace an ERISA-style anti-cutback rule for new state and local government workers. New workers should be able to count on pension benefits as they earn them, but state and local governments should be free to cut future benefit accruals for those new workers.

III. HOW TO ENSURE ADEQUATE FUNDING

If you find yourself in a hole, the first thing to do is to stop digging. Next you need to climb out. Finally, you need to avoid falling into holes in the future.

A. Stop Digging: Stop Promising Benefits Without Paying for Them

At the outset, state and local governments need to stop enhancing benefits without paying for them. To be sure, it is difficult for legislators to resist enhancing the benefits of current workers at the expense of future taxpayers. One approach would be to require strict actuarial review of pension legislation as a way to achieve some measure of fiscal self-discipline in the short term. For example, in 2006 Oklahoma enacted actuarial limits on pension benefit increases.[129] Under this approach, which followed

Companies Freezing Their Pensions? 13-14 (Ctr. for Ret. Res. at B.C., Working Paper No. 2007-22, 2007) (addressing employers' choice to freeze plans rather than terminate them). Economic forces are responsible for much of the increase in freezes and terminations of traditional private sector defined benefit plans, but other negatives include the ever-increasing costs to comply with ERISA and the PBGC premiums. Munnell & Soto, *supra* at 4-7.

128. Again, if you hire a worker to do a job today, it makes sense to pay all of the costs for that worker out of current revenues, not push the liability onto future generations of taxpayers. *See, e.g.*, Mattoon, *supra* note 94, at 2, 12-13 (noting that pension costs may be "shifted to future workers").

129. Oklahoma Pension Legislation Actuarial Analysis Act, OKL. ST. ANN. tit. 62, §§ 3101-14 (West 2006). The legislation applies to most state public pension plans. Tit. 62, § 3102.

> The legislation has three (3) prominent features. All retirement bills with fiscal impact must be introduced in odd years and voted on in even-numbered years. This can be bypassed for an "emergency" bill by a 3/4 vote of each house. Each such bill must be analyzed for actuarial fiscal impact by a "Legislative Actuary." The actuary is hired by the Legislative Service Bureau. Finally, any retirement bill with fiscal impact must contain adequate funding either through a lump-sum

earlier legislation in Georgia, retirement bills with a fiscal impact can only be introduced in the first year after an election, and those bills can only be enacted in the following year, after actuarial review.[130]

Moreover, no amendments that increase the cost of the bill can be made after it has been actuarially reviewed.[131] Furthermore, if no specific provision is made to fund the legislation, the bill is automatically repealed.[132] The Georgia legislation went even further: Georgia is required to maintain minimum funding standards for its pension plans, and each year it must contribute the pension plan's normal cost plus the amount needed to amortize the plan's unfunded liability.[133] Along the same lines, a handful of states have constitutional provisions that require actuarial funding of their state retirement plans.[134]

Every year, legislators in the several states introduce dozens of bills affecting pensions, and many of those bills enhance benefits and hurt funded ratios.[135] With strict actuarial review of pension legislation, state and local governments would be better informed of the actuarial costs of pension benefit increases and would have to take the time to consider all proposed changes.

> appropriation or an increase in contributions sufficient to pay the cost of the change. The bill permits the Legislature to grant [COLAs] without following the restrictions in the bill. COLAs can be given by the Legislature as long as they do not exceed the actuarial assumption of the System. [For example,] OPERS assumes it will pay a 2% COLA each year for actuarial purposes.

Okla. Pub. Emp. Ret. Sys., Legislation: 2006 Legislation, http://www.opers.ok.gov/legislation (last visited Nov. 19, 2009). *See also* Ronald K. Snell, *Pensions and Retirement Plan Enactments in 2007 State Legislatures*, NAT'L CONF. OF ST. LEGISLATURES, Oct. 2007, http://www.ncsl.org/default.aspx?tabid=13404.

130. Tit. 62, §§ 3106-11.

131. *Id.*

132. *Id.*

133. *See generally* Public Retirement Systems Standards Law, GA. CODE ANN. § 47-20 (West 2009).

134. *See* ME. CONST., art. IX, §§ 18-A & 18-B (establishing that all retirement and ancillary benefits must be annually funded and on an actuarially sound basis); MONT. CONST., art. VIII, § 15 (stating that public retirement systems shall be "funded on an actuarially sound basis"); S.C. CONST., art. X, § 16 (outlining that the General Assembly of South Carolina will "appropriate funds" from all "state-operated retirement system[s] which will insure the availability of funds to meet all normal and accrued liability of the system on a sound actuarial basis as determined by the governing body of the system").

135. *See, e.g.*, RONALD SNELL, NAT'L CONF. OF ST. LEGISLATURES, STATE PENSION AND RETIREMENT LEGISLATION IN 2009 15-18 (2009), *available at* http://www.ncsl.org/print/standcomm/sclaborecon/StatePensionLegJanMar2009.pdf (summarizing numerous 2009 bill proposals aimed at increasing benefits without necessarily providing for adequate funding).

B. Climb out: Make the Actuarial Required Contributions Each Year

Of course, the best way to ensure that public pension plans are fully funded would be to require them to pay the actuarial required contributions ("ARC") in full each year.[136] This annual pension cost is the amount of funding needed to pay for the new liabilities that accrue each year (i.e., normal cost), and pay off a portion of the plan's unfunded liabilities accrued in previous years (i.e., its unfunded actuarial accrued liability). Only about half of state pension plans made their actuarial required contributions in 2006.[137]

Improving plan governance could also have a significant impact on investment performance and funding status.[138] The composition of the board can also make a difference, and the best boards are probably dominated by independent experts (i.e., nonemployees). For example, one study found that boards that have more retired employee participation tend to have lower investment performance, and boards that have more active employee participation tend to have relatively lower allocations to stocks.[139] Better reporting of financial, actuarial, statistical, and

136. Mattoon, *supra* note 94, at 15.

137. PROMISES WITH A PRICE: PUBLIC SECTOR RETIREMENT BENEFITS, *supra* note 5, at 25; *see also* Alicia H. Munnell, Kelly Haverstick, Jean-Pierre Aubry & Alex Golub-Sass, *Why Don't Some States and Localities Pay Their Required Pension Contributions?* 2008 CTR. FOR RET. RES. AT B.C. 7, 1-3 (discussing the funding of public pensions plans and why some plans fail to meet target contributions amounts).

138. Pertinent here, Hess and Squire outline numerous recent instances of incompetence and self-dealing by some public pension plan boards. *See generally*, Hess & Squire, *supra* note 101; David Hess, *Protecting and Politicizing Public Pension Fund Assets: Empirical Evidence on the Effects of Governance Structures and Practices*, 39 U.C. DAVIS L. REV. 187 (2005); Susan Saulny & Karen Ann Cullotta, *Illinois Enacts Post-Blagojevich Reform of Public Worker Pension Boards*, N.Y. TIMES, Apr. 3, 2009, *available at* http://www.nytimes.com/2009/04/04/us/04illinois.html; David Evans, *Hidden Pension Fiasco May Foment Another $1 Trillion Bailout*, BLOOMBERG.COM, Apr. 7, 2009, http://www.bloomberg.com/apps/news?pid= 20601109&refer=home&sid=alwTE0Z5.1EA; Alicia Munnell, *Should Public Plans Engage in Social Investing?*, 2007 CTR. FOR RET. RES. AT B.C. 7-12; *see also* Tim V. Eaton & John R. Nofsinger, *The Effect of Financial Constraints and Political Pressure on the Management of Public Pension Plans*, 23 J. OF ACCT. & PUB. POL'Y 161, 164-68 (2004) (finding that public plans subject to financial constraints and political pressures tend to have more optimistic actuarial assumptions and tend to be more underfunded).

139. Tongxuan (Stella) Yang & Olivia S. Mitchell, *Public Pension Governance, Funding and Performance: A Longitudinal Appraisal*, *in* PENSION FUND GOVERNANCE: A GLOBAL PERSPECTIVE ON FINANCIAL REGULATION 179 (John Evans, Micheal Orszag & John Piggott eds., 2008); *but see* Joel T. Harper, *Public Sector Pension Governance in the United States: Up to the Task?*, 1 ROTMAN INT'L J. OF PENSION MGMT. 1, 22 (2008) (failing to find

investment information is also correlated with higher investment returns.[140] Better training of board members should also result in better investment performance and funding.[141]

C. Avoid Future Holes: Restructure Public Pensions

Finally, to avoid future holes, state and local governments should think about completely restructuring their pension plans, at least for new workers. State and local governments should continue to provide adequate retirement incomes for their workers, but workers should have to work longer to earn those benefits.[142] In that regard, most state and local governments will want to increase the age and service requirements for pension benefits, and many will want to increase employee contributions. States should also correct any abuses, such as the pension "spiking" that occurs when workers are able to artificially inflate their final-average-pay in order to jack up their pension benefits.[143] Similarly, it would make sense to require actuarial neutrality for early retirement benefits and for dependent and survivor benefits.[144] As already mentioned, states should also abandon the anti-reduction rule (where promised pensions can never be changed) in favor of an ERISA-style anti-cutback rule for new state and local government workers (where accrued benefits are protected but future benefits can be cut).[145]

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a direct relationship between board composition and investment returns); *see generally* Roberta Romano, *Public Pension Fund Activism in Corporate Governance Reconsidered*, 93 COLUM. L. REV. 795 (1993); Julia L. Coronado, Eric M. Engen & Brian Knight, *Public Funds and Private Capital Markets: The Investment Practices and Performance of State and Local Pension Funds*, 56 NAT'L TAX J. 579, 580, 584-86 (2003).

140. *See generally* Yang & Mitchell, *supra* note 139.

141. *Id.*

142. *See, e.g.*, Danny Hakim, *Paterson and Unions Agree on Limits for New Pensions*, N.Y. TIMES, June 6, 1999, at A1 (raising the retirement age for future New York state employees from 55 to 62).

143. *See, e.g.*, Matt Viser, *Responding to Outcry, Senate Unveils Pension Reform Plan*, BOSTON GLOBE, Mar. 30, 2009, *available at* http://www.boston.com/news/local/breaking_news/2009/03/responding_to_o.html (describing legislative proposals in Massachusetts aimed at comprehensively reforming the State's public pension plan); Girard Miller, *How to Avoid Audit and Avoid Pension 'Spiking,'* GOVERNING, Nov. 6, 2008, *available at* http://www.governing.com/articles/0811gmillera.htm (advocating reform of public employee retirement systems to prevent pension spiking); Nicole Milstead, *Lawmakers' Pension Perk Scrapped; Now They're Like Other State Workers*, DAILY HERALD, May 13, 2009, *available at* http://www.dailyherald.com/story/?id=293497 (curbing the lucrative pension perks of state legislators in Illinois).

144. Girard Miller, *Taking on the Sacred Cows*, GOVERNING, Mar. 5, 2009, *available at* http://www.governing.com/articles/0903gmillera.htm.

145. *See supra* note 123-28 and accompanying text (encouraging States to

Of course, more dramatic restructuring of public pension plans is probably necessary. Many analysts have suggested replacing the traditional defined benefit plans with defined contribution plans, which, by their nature, are fully funded.[146] In that regard, a few states have replaced their primary pension plans with defined contribution plans, and many states have added supplemental defined contribution plans.[147]

But I think there is a better approach: state and local governments should gradually shift from traditional final-average-pay defined benefit plans to cash balance plans. A cash balance plan is a defined benefit plan that looks like a defined contribution plan.[148] Like defined contribution plans, cash balance plans

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adopt constitutional amendments or statutes that embrace ERISA-style anti-cutback rules for new state and local government workers).

146. *See, e.g.*, Karen Eilers Lahey & T. Leigh Anenson, *Public Pension Liability: Why Reform Is Necessary to Save the Retirement of State Employees*, 21 NOTRE DAME J.L. ETHICS & PUB. POL'Y 307, 309, 320-32 (2007) (proposing that states not only adopt defined plans but also disclose the financial status of their public pension plans); Alicia H. Munnell, Alex Golub-Sass, Kelly Haverstick, Mauricio Soto & Gregory Wiles, *Why Have Some States Introduced Defined Contribution Plans?*, 2008 CTR. FOR RET. RES. AT B.C. 3, 2-5 (describing the overall benefits of public pensions that utilize defined contribution plans in comparison to public pension plans that employ the more traditional defined benefit plans); see also Jonathan B. Forman, *Public Pensions: Choosing Between Defined Benefit and Defined Contribution Plans*, 1999 L. REV. MICH. ST. U. DET. C.L. 187 (2000) for the citations referenced within the Article. Also see the discussion of funding levels and defined contribution plans in note 17 *supra*.

147. *See, e.g.*, Judy Ward, *State Plan Sponsor of the Year: A Lesson in Funding*, PLAN SPONSOR, Mar. 2009, at 48-49 (noting that the West Virginia teachers' plan recently shifted from a defined benefit plan to a defined contribution plan, and now has shifted back); *see also* Timothy Inklebarger, *Pension Funds: Alaska Grows Cold on Its 401(a) Plan; State Legislation Could Bring Back Defined Benefit Plan for State, Municipal Workers*, PENSIONS & INVESTMENTS, Mar. 9, 2009, at 4, 25, *available at* http://www.pionline.com/apps/pbcs.dll/article?AID=/20090309/PRINTSUB/303099984&crit=alaska%20grows%20cold (describing Alaska's decision to revert back to defined benefit plans from defined contribution plans and identifying 10 states—Oregon, Indiana, Florida, Washington, Ohio, Montana, North Dakota, Colorado, South Dakota, and Vermont—that use defined contribution plans either in addition to or as an optional alternative to defined benefit plans); Elayne Robertson Demby, *Buyer's Remorse?: Defined Contribution Getting the Cold Shoulder in Alaska*, PLAN SPONSOR, May 2009, at 51-54 (noting that Alaska, which recently shifted from a defined benefit plan to a defined contribution plan, is now thinking about shifting back).

148. *See* Jonathan Barry Forman & Amy Nixon, *Cash Balance Pension Plan Conversions*, 25 OKLA. CITY U. L. REV. 379, 380 (2000) (noting the current trend in which some companies are replacing their traditional pension plans with cash balance plans); JANET S. HANSEN, TEACHER PENSIONS: A BACKGROUND PAPER, COMM. FOR ECON. DEV. 32-34 (2008), *available at* http://www.ced.org/images/library/reports/education/report_educ200806pensions.pdf (stating that cash balance plans strike a balance between defined

provide workers with individual accounts (albeit hypothetical accounts).[149] Like traditional final-average-pay defined benefit plans, however, the assets would be pooled and managed by professional investors, and benefits should be paid out in the form of lifetime annuities.[150]

For example, a simple cash balance plan might allocate 10% of each worker's salary to his/her account each year and credit the account with 5% interest on the balance.[151] Under such a plan, a worker who earned $30,000 in a given year would get an annual cash balance credit of $3,000 ($3,000 = 10% × $30,000), plus an interest credit equal to 5% of the balance in her hypothetical account as of the beginning of the year.[152]

Why move to a cash balance plan? There are three principal reasons. First, defined contribution plans are simply poor retirement savings vehicles.[153] In general, individuals are lousy investors. They either invest too conservatively or take too much risk. Individual investors also pay much higher fees than large public pension plans. And while traditional final-average-pay pensions pay benefits out as lifetime annuities, defined contribution plans typically make lump-sum distributions that are all too quickly spent.

Second, as we have seen in this Article, traditional final-average-pay defined benefit plans tend to become dramatically underfunded, particularly as an employer's workforce ages. Pension benefits typically accrue differently under traditional final-average-pay plans and cash balance plans.[154] Indeed, one of the most obvious features of traditional final-average-pay plans is that they are "backloaded."[155] That is, traditional plans tend to disproportionately favor older workers who have stayed with an employer for 25 or 30 years.[156] On the other hand, cash balance plans (and defined contribution plans) typically provide more

benefit and defined contribution plans).

149. Forman & Nixon, *supra* note 148, at 380-81.

150. Like traditional defined benefit plans, employer contributions are based on actuarial valuations, and the employer bears all of the investment risks and responsibilities. *Id.* at 385-86.

151. *Id.* at 396.

152. *Id.*

153. *Id.* at 397-98.

154. *See, e.g.*, FORMAN, *supra* note 6, at 227-28.

155. *Id.*

156. *Id.* The primary reason for this back-loading is that the value of benefit accruals typically increases as a percentage of pay as workers approach retirement age. In fact, well over half the value of a worker's pension can accrue in the last 5 or 10 years of service. *Id.*

uniform accruals over a worker's career. That uniformity makes it easier to predict and fund the employer's liability.[157]

Third, traditional final-average-pay plans have perverse work incentives and disincentives.[158] For example, final-average-pay plans penalize workers who change jobs frequently.[159] Final-average-pay plans also create large financial incentives for workers to stay on the job at least until they are eligible for early retirement.[160] Worst of all, however, final-average-pay plans impose large financial penalties on older workers that push them into early retirement just when those workers should instead be encouraged to work longer and save more for their eventual retirements.[161]

To be sure, state and local governments should honor the traditional final-average-pay pension promises that they have made to current public employees. Having paid relatively lower salaries to public employees when they were young, state and local governments need to provide the generous pensions that were promised to those workers when they are old.[162]

But it would certainly make a lot of sense for state and local governments to adopt a more rational compensation system for their new employees. That is where cash balance plans come in. State and local governments should amend their pension plans so that new workers earn pension accruals under the cash balance approach. At the same time, state and local governments need to adopt laws to ensure that they make contributions that are adequate to fully fund their liabilities to current and past workers and to fully fund their benefit promises to new workers.[163]

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157. *Id.* at 227.

158. *See, e.g.*, *id.* at 227-31 (explaining that workers who reach retirement age yet continue to work often lose a significant amount of their pension wealth as a result); Robert M. Costrell & Michael Podgursky, *Peaks, Cliffs & Valleys: The Peculiar Incentives of Teacher Pensions*, 8 EDU. NEXT 1, 22 (2008) (describing the incentive for teachers to remain employed until they reach a certain step on their district's pay scale so that they can maximize their pension benefits, and the disincentive that exists if a teacher continues to work after they reach a certain step based on over-taxation in relation to salary).

159. FORMAN, *supra* note 6, at 228.

160. *Id.* at 227-31. While it makes sense to keep employees in the work force until they have adequate retirement savings, it is not at all clear that employees should be incented to stay with any particular employer.

161. *Id.*

162. *See, e.g.*, Bernard Casey, *Incentives and Disincentives to Early and Late Retirement* 6 (Org. for Econ. Cooperation and Dev., Working Paper No. AWP 3.3, 1997), *available at* http://www.oecd.org/dataoecd/22/5/2428694.pdf (referring to these kinds of final-average-pay plans as implicit contracts under which workers take less pay when they are young in exchange for greater pension benefits later).

163. Plans might also develop mechanisms to allow current employees to

IV. CONCLUSION

The recent economic downturn will present challenges for state and local government pension plans. These plans were underfunded before the downturn, and the recession has, and will, exacerbate their funding shortfalls. The silver lining in this otherwise dark economic cloud is that state and local governments will finally have the political motivation to restructure their traditional pension systems.

shift toward the cash balance approach. Such elections could be particularly attractive to older workers who would rather keep working than retire and to younger workers who expect to change jobs before earning the late-in-career benefit increases that are implicit in back-loaded traditional defined benefit plans. *See, e.g.*, Richard W. Johnson, Gordon Mermin & C. Eugene Steuerle, *Work Impediments at Older Ages*, *in* THE RETIREMENT SERIES 2006, at 18-20, 34 (The Urb. Inst., Discussion Paper Series No. 06-02, 2006) (noting that making it easier for employers to convert their traditional defined benefit plans to cash balance plans would help eliminate work disincentives from their plans).

Appendix Table 1.[164] Public Plan Investment Assumptions and Funded Ratios 2006

Plan Name	Valuation Date	Investment Return Assumption	Funded Ratio
Alabama ERS	9/30/2006	8	81.1
Alabama Teachers	9/30/2006	8	82.8
Alaska PERS	6/30/2006	8.2	78.2
Alaska Teachers	6/30/2006	8.2	67.8
Arizona Public Safety Personnel	6/30/2006	8.5	77
Arizona SRS	6/30/2006	8	84.3
Arkansas PERS	6/30/2006	8	83.4
Arkansas Teachers	6/30/2006	8	80.3
California PERS	6/30/2006	7.7	87.2
California Teachers	6/30/2006	8	87
Colorado Municipal	12/31/2006	8.5	79.5
Colorado School	12/31/2006	8.5	74.1
Colorado State	12/31/2006	8.5	73
Connecticut SERS	6/30/2006	8.5	53.2
Connecticut Teachers	6/30/2006	8.5	63
DC Police & Fire	10/1/2006	7.2	100
DC Teachers	10/1/2006	7.2	100
Delaware State Employees	6/30/2006	8	101.7
Florida RS	7/1/2006	7.7	105.6
Georgia ERS	6/30/2006	7.5	94.5
Georgia Teachers	6/30/2006	7.5	96.5
Hawaii ERS	6/30/2006	8	65
Idaho PERS	7/1/2006	7.7	95.2
Illinois Municipal	12/31/2006	7.5	95.3
Illinois SERS	6/30/2006	8.5	52.2

164. Ctr. for Ret. Res. at B.C., State and Local Pension Data, http://crr.bc.edu/frequently_requested_data/state_and_local_pension_data_4.html (last visited Nov. 19, 2009) (follow "Data" hyperlink under "Defined Benefit Plans" section).

Illinois Teachers	6/30/2006	8.5	62
Illinois Universities	6/30/2006	8.5	65.4
Indiana PERF	6/30/2006	7.2	97.6
Indiana Teachers	6/30/2006	7.5	44.3
Iowa PERS	6/30/2006	7.5	88.4
Kansas PERS	12/31/2006	8	69
Kentucky County	6/30/2006	7.7	81.4
Kentucky ERS	6/30/2006	7.7	61.3
Kentucky Teachers	6/30/2006	7.5	73.1
Louisiana SERS	6/30/2006	8.2	64.3
Louisiana Teachers	6/30/2006	8.2	67.5
Maine Local	6/30/2006	7.7	112.2
Maine State and Teacher	6/30/2006	7.7	71.3
Maryland PERS	6/30/2006	7.7	80.4
Maryland Teachers	6/30/2006	7.7	84.2
Massachusetts SERS	1/1/2007	8.2	85.1
Massachusetts Teachers	1/1/2007	8.2	71
Michigan Municipal	12/31/2006	8	76.4
Michigan Public Schools	9/30/2006	8	87.5
Michigan SERS	9/30/2006	8	85.1
Minnesota PERF	7/1/2006	8.5	74.7
Minnesota State Employees	7/1/2006	8.5	96.2
Minnesota Teachers	7/1/2006	8.5	92.1
Mississippi PERS	6/30/2006	8	73.5
Missouri DOT and Highway Patrol	6/30/2006	8.2	55.5
Missouri Local	2/28/2006	7.5	95.3
Missouri PEERS	6/30/2006	8	80.5
Missouri State Employees	6/30/2006	8.5	85.3
Missouri Teachers	6/30/2006	8	82.6
Montana PERS	6/30/2006	8	88.3
Montana Teachers	7/1/2006	7.7	76.1
Nebraska Schools	7/1/2006	8	87.2
Nevada Police Officer and Firefighter	6/30/2006	8	68.9
Nevada Regular Employees	6/30/2006	8	76.5
New Hampshire Retirement	6/30/2006	8.5	61.4

System			
New Jersey PERS	7/1/2006	8.2	78
New Jersey Police & Fire	7/1/2006	8.2	78.4
New Jersey Teachers	6/30/2006	8.2	78
New Mexico PERF	6/30/2006	8	92.1
New Mexico Teachers	6/1/2006	8	68.3
New York State Teachers	6/30/2006	8	100
North Carolina Local Government	12/31/2006	7.2	99.5
North Carolina Teachers and State Employees	12/31/2006	7.2	106.1
North Dakota PERS	7/1/2006	8	88.8
North Dakota Teachers	7/1/2006	8	75.4
NY State & Local ERS	3/31/2006	8	100
NY State & Local Police & Fire	3/31/2006	8	100
Ohio PERS	12/31/2006	8	93
Ohio Police & Fire	1/1/2007	8.2	78.2
Ohio School Employees	6/30/2006	8	75.6
Ohio Teachers	7/1/2006	8	75
Oklahoma PERS	7/1/2006	7.5	71.4
Oklahoma Teachers	6/30/2006	8	49.3
Oregon PERS	12/31/2006	8	110.5
Pennsylvania School Employees	6/30/2006	8.5	81.2
Pennsylvania State ERS	12/31/2006	8.5	92.7
Rhode Island ERS	6/30/2006	n/a*	53.4
Rhode Island Municipal	6/30/2006	n/a*	87.125
South Carolina Police	7/1/2006	7.2	84.7
South Carolina RS	7/1/2006	7.2	69.6
South Dakota PERS	6/30/2006	7.7	96.7
Texas County & District	12/31/2006	8	110.2
Texas ERS	8/31/2006	8	95.2
Texas LECOS	8/31/2006	8	101.7
Texas Municipal	12/31/2006	7	82.1
Texas Teachers	8/31/2006	8	87.3
TN Political Subdivisions	7/1/2005	n/a*	92.672
TN State and Teachers	7/1/2005	n/a*	99.832

University of California	7/1/2006	7.5	104.1
Utah Noncontributory	1/1/2005	8	96.4
Vermont State Employees	6/30/2006	8	99.3
Vermont Teachers	6/30/2006	8.2	84.6
Virginia Retirement System	6/30/2006	7.5	80.8
Washington LEOFF Plan 1	9/30/2006	8	116
Washington LEOFF Plan 2	9/30/2006	8	100
Washington PERS 1	9/30/2006	8	73
Washington PERS 2/3	9/30/2006	8	100
Washington School Employees Plan 2/3	9/30/2006	8	100
Washington Teachers Plan 1	9/30/2006	8	80
Washington Teachers Plan 2/3	9/30/2006	8	100
West Virginia PERS	7/1/2006	7.5	86.8
West Virginia Teachers	7/1/2006	7.5	31.6
Wisconsin Retirement System	12/31/2006	7.8	99.6
Wyoming Public Employees	1/1/2007	8	94.4

*Data not available