

The Future of Public Employee Retirement Systems

EDITED BY

Olivia S. Mitchell and Gary Anderson

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Contents

List of Figures	vii
List of Tables	ix
Preface	xi
Notes on Contributors	xiii
Abbreviations	xix
1. The Future of Public Employee Retirement Systems <i>Olivia S. Mitchell</i>	1
 Part I. Costs and Benefits of Public Employee Retirement Systems 	
2. Estimating State and Local Government Pension and Retiree Health Care Liabilities <i>Stephen T. McElhaney</i>	19
3. The Case for Marking Public Plan Liabilities to Market <i>Jeremy Gold and Gordon Latter</i>	29
4. Between Scylla and Charybdis: Improving the Cost Effectiveness of Public Pension Retirement Plans <i>M. Barton Waring</i>	58
5. Public Pensions and State and Local Budgets: Can Contribution Rate Cyclicalities Be Better Managed? <i>Parry Young</i>	75
6. Benefit Cost Comparisons Between State and Local Governments and Private Industry Employers <i>Ken McDonnell</i>	85
7. Administrative Costs of State Defined Benefit and Defined Contribution Systems <i>Edwin C. Hustead</i>	97
8. Thinking about Funding Federal Retirement Plans <i>Toni Hustead</i>	105

vi Contents**Part II. Implementing Public Retirement System Reform**

- | | |
|--|-----|
| 9. Reforming the German Civil Servant Pension Plan
<i>Raimond Maurer, Olivia S. Mitchell, and Ralph Rogalla</i> | 115 |
| 10. The Outlook for Canada's Public Sector Employee Pensions
<i>Silvana Pozzebon</i> | 143 |
| 11. Unifying Pension Schemes in Japan: Toward a Single Scheme for Both Civil Servants and Private Employees
<i>Junichi Sakamoto</i> | 164 |
| 12. Redefining Traditional Plans: Variations and Developments in Public Employee Retirement Plan Design
<i>Keith Brainard</i> | 187 |
| 13. Defined Contribution Pension Plans in the Public Sector: A Benchmark Analysis
<i>Roderick B. Crane, Michael Heller, and Paul J. Yakoboski</i> | 206 |

Part III. The Political Economy of Public Pensions

- | | |
|---|-----|
| 14. The Evolution of Public Sector Pension Plans in the United States
<i>Robert L. Clark, Lee A. Craig, and Neveen Ahmed</i> | 239 |
| 15. Pension Fund Activism: The Double-Edged Sword
<i>Brad M. Barber</i> | 271 |
| 16. The New Intersection on the Road to Retirement: Public Pensions, Economics, Perceptions, Politics, and Interest Groups
<i>Beth Almeida, Kelly Kenneally, and David Madland</i> | 294 |
| Index | 327 |

List of Figures

3-1	Comparison of Entry Age Normal (EAN) liabilities to Accrued Benefit Obligation (ABO) liabilities. Assumed salary scale: 0 percent	38
3-2	Comparison of Entry Age Normal (EAN) liabilities to Accrued Benefit Obligation (ABO) liabilities. Assumed salary scale: 5 percent	42
3-3	Nominal interest rates: actuarial versus market	44
3-4	Real interest rates: actuarial versus market	46
3-5	Treasury interest rates, real and break-even inflation rates (as of 3/31/2008)	46
5-1	Employer contributions as percent of state and local government payroll	77
5-2	Estimated impact of recommended method as if implemented 10 years ago	80
9-1	Age distribution of active civil servants in 2004	119
9-2	Range of pension costs under alternative asset allocations	130
9-3	Time paths of supplementary public pension contributions and cost savings under optimal asset allocation strategy. Panel A. Probabilities of supplementary contributions and contribution holidays over time. Panel B. Magnitudes (in billions of 2004 euros) of expected supplementary contributions and cost saving due to contribution holidays	133
10-1	Percentage of paid workers covered by a Registered Pension Plan (RPP), total and by sector, Canada: 1981–2006	146
10-2	Percentage of registered pension plan members in defined benefit and defined contribution plans by sector, Canada: 1974–2007 (at January 1)	148
10-3	Asset allocation of trustee public sector pension funds, Canada: 1992–2006 (percentage of total assets at market value)	155
10-4	Asset allocation of trustee private sector pension funds, Canada: 1992–2006 (percentage of total assets at market value)	156
11-1	Japan's current social security pension schemes	165

viii List of Figures

11-2	Financing basic pension benefits in Japan	173
11-3	Merging the Mutual Aid Associations (MAAs) for Japan Railway Company (JR), Salt and Tobacco Monopoly Enterprise (JT), and Nippon Telegraph and Telecommunications Enterprise (NTT) employees with the Employees' Pension Insurance (EPI) scheme	176
14-1	Mean income replacement rates, state pension plans, by years of service, 1982 and 2006	248
14-2	Mean income replacement rates of state pension plans, by social security coverage, 1982	249
14-3	Mean income replacement rates of state pension plans, by social security coverage, 2006	249
15-1	Relation between agency costs, monitoring expenditures, and portfolio value. Panel A. Agency costs and monitoring expenditures. Panel B. Shareholder expenditures on monitoring and portfolio value	275
15-2	Cumulative market-adjusted returns for CalPERS focus list firms, 1992 to 2007	283
15-3	Cumulative gains from CalPERS shareholder activism for different horizons	287
16-1	Effect of various factors on the probability of introducing a defined contribution plan	305

List of Tables

3-1	Summary of data from four public pension plans' Comprehensive Annual Financial Reports (CAFRs: \$mm for aggregate financial values)	37
3-2	Factors used to convert Entry Age Normal (EAN) Accrued Actuarial Liabilities (AAL) to Accumulated Benefit Obligation (ABO). Assumed salary scale: 0 percent	39
3-3	Factors used to convert Entry Age Normal (EAN) liabilities to Accumulated Benefit Obligation (ABO) liabilities. Assumed salary scale: 5 percent	40
3-4	Converting Entry Age Normal (EAN) liabilities to Accumulated Benefit Obligation (ABO) liabilities: various salary assumptions	43
3-5	First adjustment: converting the Actuarial Accrued Liability (AAL) to Accumulated Benefit Obligation (ABO)	43
3-6	Second adjustment: converting the Accumulated Benefit Obligation (ABO) to a Market Value Liability (MVL)	45
3-7	Comparison of funded status: Actuarial vs. Market	47
5-1	Employer contributions as a percent of state and local government payroll	77
6-1	Employer costs for employee compensation and percentage of full-time employees participating in employee benefit programs: state and local governments: 1998 and 2007	86
6-2	Employer costs for employee compensation and percentage of full-time employees participating in employee benefit programs: private industry	88
6-3	Employment and total compensation costs, by industry group and union membership, state and local governments and private sector: 2007	91
6-4	Employment and total compensation costs in state and local governments and private sector by occupation group, ages 16 and older	93
7-1	Annual administrative expenses for state retirement plans as a percentage of contributions and assets	99

x List of Tables

7-2	Administrative expenses of Federal plans	101
9-1	Projected benefit liabilities and contribution rates: deterministic model	122
9-2	Simulated parameters for stochastic asset case	128
9-3	Risk of alternative asset allocation patterns assuming fixed contribution rate	129
9-4	Optimal asset allocation patterns for alternative parameterizations	135
9-A1	Estimated quarterly VAR parameters	138
10-1	Overview of public and private sector Registered Pension Plans (RPPs), Canada, 2007 (at January 1)	145
10-2	General characteristics of public and private sector registered pension plans, Canada 2007, at January 1 (percent of members)	148
10-3	Design features of public and private sector Defined Benefit Registered Pension Plans, Canada 2007, at January 1 (percent of members)	150
10-4	Contributions to public and private sector Registered Pension Plans, Canada 2007, at January 1	151
11-1	Contribution programs for each scheme for employees	179
12-1	Earnings and dividend credit rates applied to accounts in the Nebraska Public Employee Retirement System cash balance plan, 2003–2007	189
12-2	Comparison of inflation-adjusted benefit with and without the Minnesota Teachers' Retirement Association deferred annuity benefit	198
12-3	Earnings credit applied to individual accounts in the Oregon Public Employee Retirement System, 2004–2007	200
12-4	Defined benefit plans with mandatory defined contribution components sponsored by state governments	201
13-1	Retirement income targets	209
13-2	Retirement income replacement projections under a defined contribution plan	211
13-3	Best practice recommendations for core defined contribution plan design in the public sector	212
13-4	Projected income replacement rates at retirement for selected public core DC plans	218

List of Tables xi

13-A1	Comparison of best practice benchmarks to major public sector core DC plans	223
14-1	Descriptive statistics, means, and standard deviations of independent variables	252
14-2	Multivariate models of replacement ratios for state and local employees, with 20 years of service, 1982 and 2006	253
14-3	Explanation of the percentage change in replacement ratios for state employees with 20 years of service, between 1982 and 2006	255
14-A1	Benefit formulas and retirement ages for state employee pension plans, by state, 1982 and 2006	257
14-A2	Plan contributions and vesting requirements	263
15-1	Announcement day market-adjusted returns and valuation impact for CalPERS focus list firms by year, 1992 to 2007	281
15-2	Daily abnormal returns (Alpha) to value-weighted portfolios of CalPERS focus list firms at different holding periods, 1992 to 2007	285
16-1	Empirical determinants of the public's self-reported preferences for plan type and plan features	303

Preface

Many millions of pension plan participants all over the world have recently awakened to the sad fact that financial market collapse can—virtually overnight—erode a lifetime of saving for old age. The shock is made worse by the fact the global age wave is also cresting, with rising numbers of elderly and declining working-age populations to support them. This volume focuses on the retirement systems provided to public sector employees, paying careful attention to their costs, their benefits, and their future in light of these current financial and demographic challenges.

There is no question but that those covered by public pensions are often the subject of ‘pension envy’: that is, their benefits might seem more generous and their contributions lower than those offered by the private sector. Yet this volume points out that such judgments are often inaccurate, since civil servants hold jobs for with few counterparts in private industry, such as firefighters, police, judges, and teachers. Often these are riskier, dirtier, and demand more loyalty and discretion than would be required of a more mobile labor force in the private sector. In any event, there remains ample room for comparative and analytic judgment. Accordingly, one focus of this book is on financial aspects of these schemes, addressing the cost and valuation debate. Another is the political economy of how public pension asset pools are perceived and managed, an increasingly important topic in times of global financial turmoil. And finally we undertake an international comparison of public retirement system reform, exploring ways that public pensions can be strengthened in the United States, Japan, Canada, and Germany. We are thus happy to represent the vigorous debate currently underway by academics, financial experts, regulators, and plan sponsors, all seeking to define a new future for public retirement systems.

Previous research studies directed at the Pension Research Council and the Boettner Center of the Wharton School of the University of Pennsylvania have focused on public and private pensions as well as retirement adequacy in the United States and around the world. As with all of our research volumes, we owe much to our fine contributors, coeditors, and conference participants. In this instance, Gary Anderson served as a wonderful co-organizer and we owe him many thanks. The Senior Partners and Institutional Members of the Pension Research Council are also very much appreciated for their intellectual and financial support. The Wharton School provided conference facilities and funding, permitting the initial research findings to be reported. Additional financial sustenance

Preface xiii

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On behalf of these institutions and individuals, we thank all of our fine collaborators and supporters for their help and intellectual guidance in these times of financial turmoil.

Olivia S. Mitchell

Pension Research Council
Boettner Center for Pensions and Retirement Research
The Wharton School

The Pension Research Council

The Pension Research Council of the Wharton School at the University of Pennsylvania is an organization committed to generating debate on key policy issues affecting pensions and other employee benefits. The Council sponsors interdisciplinary research on the entire range of private and social retirement security and related benefit plans in the United States and around the world. It seeks to broaden understanding of these complex arrangements through basic research into their economic, social, legal, actuarial, and financial foundations. Members of the Advisory Board of the Council, appointed by the Dean of the Wharton School, are leaders in the employee benefits field, and they recognize the essential role of social security and other public sector income maintenance programs while sharing a desire to strengthen private sector approaches to economic security. More information about the Pension Research Council is available on the Internet at <http://www.pensionresearchcouncil.org> or send email to prc@wharton.upenn.edu.

Notes on Contributors

Neveen Ahmed is a doctoral candidate in Economics at North Carolina State University studying US financial markets and public pensions. She received her MA in economics from North Carolina State University and her BSc in Economics from Cairo University.

Beth Almeida is the Executive Director of the National Institute on Retirement Security, a not-for-profit organization that conducts research and education programs on US pensions. She has worked previously with the International Association of Machinists and Aerospace Workers and led research initiatives at the University of Bonn's Center for European Integration Studies; the European Institute for Business Administration; and the Center for Industrial Competitiveness at the University of Massachusetts-Lowell. She received her bachelor's degree in International Business from Lehigh University and her master's degree in economics from the University of Massachusetts-Amherst.

Gary Anderson is a consultant on public pension issues; previously he served as Executive Director of the Texas Municipal Retirement system which covers municipal employees and retirees for many Texas cities. He is also an Advisory Board member of Wharton's Pension Research Council, and has served with the National Association of State Retirement Administrators and the Government Finance Officers Association. He received his BA in Political Science from Texas A&M University, and his MA in Public Management from the University of Houston-Clear Lake City.

Brad M. Barber is a Professor of Finance at the Graduate School of Management, UC Davis. His recent research focuses on pension fund activism, analyst recommendations, and investor psychology. At UC Davis, he teaches courses in investment analysis and corporate financial policy. He received his Ph.D. in Finance and his MBA from the University of Chicago, and his BS in Economics from the University of Illinois.

Keith Brainard is the research director for the National Association of State Retirement Administrators. His work focuses on governmental pension plans and defined benefit pensions; he also maintains the Public Fund Survey, an online compendium of public pension data. Mr. Brainard previously served as manager of budget and planning for the Arizona State Retirement System, and he provided fiscal research and analysis for the

Notes on Contributors xv

Texas and Arizona legislatures. He received his MA from the LBJ School of Public Affairs at the University of Texas-Austin.

Robert L. Clark is Professor of Economics and Professor of Management, Innovation, and Entrepreneurship at North Carolina State University. His research examines retirement decisions, the choice between defined benefit and defined contribution plans, the impact of pension conversions to defined contribution and cash balance plans, the role of information and communications on 401(k) contributions, government regulation of pensions, the development of public sector retirement plans, and Social Security. He also studies economic responses to population aging in developed countries and international retirement plans, especially Japan. He serves on Wharton's Pension Research Council Advisory Board and is a Governor of the Foundation for International Studies on Social Security. Professor Clark earned his BA from Millsaps College and his MA and Ph.D. from Duke University.

Lee A. Craig is Alumni Distinguished Professor of Economics at North Carolina State University. His research focuses on long-run changes in US agricultural productivity growth, the evolution and integration of agricultural commodity markets, the gold standard and the history of business cycles, and the history of public sector pensions and pension finance. He has been affiliated with the National Bureau of Economic Research; a trustee of the Economic History Association and the Cliometric Society; a fellow of the Center for Demographic Studies at Duke University; a fellow of the Seminar für Wirtschaftsgeschichte, Universität München, Germany; and a member of the North Carolina Academy of Outstanding Teachers. Professor Craig received his BS and MA from Ball State University and his MA and Ph.D. from Indiana University.

Roderick B. Crane is the Director of Institutional Client Services at TIAA-CREF, where he develops and executes strategies for the state and local government 401(a), 457, 401(k), and 403(b) markets. He was previously a senior consultant with The Segal Company and Mercer Human Resources Consulting where he worked with large state and local governments on the design and administration of their defined benefit and defined contribution retirement programs as well as their deferred compensation and retiree health savings plans. He has also served as staff legal counsel for the North Dakota Legislative Assembly and its public employee retirement oversight committee. He earned his BA in economics from the University of North Dakota and the Juris Doctor from the University of North Dakota School of Law.

Jeremy Gold provides pension finance consulting to sponsors of defined benefit pension plans on investment analysis from an asset/liability point

xvi Notes on Contributors

of view, and strategic benefit advice from a corporate finance perspective. He previously headed Morgan Stanley Pensions, served as Consulting Actuary/Account Executive at Buck Consultants, and worked with pension consulting firms and insurance companies. He is a Fellow of the Society of Actuaries; an Elected Board Member of the Society of Actuaries; a member of the Pension Practice Council of the American Academy of Actuaries; and a member of the Financial Economics Task force of the International Actuarial Association. He received his Ph.D. from the Wharton School of the University of Pennsylvania.

Michael Heller is Vice President of Actuarial Consulting Services at TIAA-CREF, where he manages a number of actuarial functions primarily focused on providing advice and assistance in the design and funding of both defined benefit and defined contribution retirement plans. He earned his BS in mathematics from the City College of New York; he also is a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, and an Enrolled Actuary.

Edwin C. Hustead is former Senior Vice President in charge of the Arlington, Virginia Hay Group actuarial practice and all Hay governmental actuarial and benefits consulting. He is responsible for analyzing the financial condition of governmental employee retirement plans such as the Pennsylvania State Employee's Retirement System. He has consulted with Congress in the design and implementation of the Federal Employees Retirement System and has worked with the Society of Actuaries committees generating the UP94, GAR94, and RP2000 mortality tables. He was previously Chief Actuary of the Office of Personnel Management of the US Government. He received his BA in Mathematics from Franklin and Marshall College. He is also a Fellow of the Society of Actuaries, a member of the American Academy of Actuaries, and an Enrolled Actuary.

Toni Hustead was Chief of the Veterans Affairs and Defense Health Branch at the US Office of Management and Budget (OMB) in the Executive Office of the President where she was in charge of assisting the President in creating and implementing policies and budgets associated with veterans' benefits and defense health issues, overseeing the management of these programs, and ensuring that they aligned with other Presidential priorities. As OMB's only actuary, she was involved with accrual budgeting of Federal entitlement programs. She was previously an international benefits consultant for the Hay Group where she served as European Director of Benefits Consulting. She also was Chief Actuary for the Department of Defense and assisted the House Legislative Counsel's Office in its drafting of the legislation that actuarially funded the Military Retirement System. She is

Notes on Contributors xvii

a member of the American Academy of Actuaries and an Associate of the Society of Actuaries.

Kelly Kenneally is a communications advisor to the National Institute on Retirement Security, a not-for-profit organization conducting research and education programs on US pensions. Her expertise is in the areas of finance, corporate affairs, technology, energy and environment, and retirement security. She has previously served as White House deputy director of the President's Commission on Fellowships, and as communications director with Micron Electronics; she held prior positions at MCI WorldCom, Edelman Public Relations, and the American Nuclear Energy Council, and the Maryland General Assembly. Kelly earned her BA in Government and Politics from the University of Maryland and she has undertaken graduate coursework in Political Management at George Washington University.

Gordon Latter is head of Pension and Endowment Strategy in the Merrill Lynch Global Securities Research and Economics Group where he provides expertise on retirement programs and provides risk management and strategic asset allocation advice. He has previously served as a primary consultant for pension clients at an actuarial consulting firm, Leong & Associates, Actuaries & Consultants Inc. where he performed sophisticated forecasts and asset/liability modeling. He earned a Bachelor of Commerce degree in Mathematics at the University of Manitoba. Mr. Latter is also a fellow of the Society of Actuaries, a fellow of the Canadian Institute of Actuaries, and a member of the Society of Actuaries Task Force on Financial Economics.

David Madland is the Director of the Work/Life Program at the Center for American Progress. His research interests include retirement, economic insecurity, health care, campaign finance, taxes, and public opinion. He received his BS from the University of California at Berkeley and his Ph.D. in Government from Georgetown University.

Raimond Maurer holds the endowed Chair of Investment, Portfolio Management, and Pension Finance in the Finance Department at the Goethe University of Frankfurt. His research focuses on asset management, lifetime portfolio choice, and pension finance. He serves in professional capacities for the Society of Actuaries, the Association of Certified International Investment Analysts, and the Advisory Board of the Wharton School's Pension Research Council. He received his habilitation, his Ph.D., and his Diploma in business from Mannheim University.

Ken McDonnell is Program Director of the American Savings Education Council in Washington, DC, a nonprofit national coalition of public and private sector organizations seeking to raise public awareness about long-

xviii Notes on Contributors

term personal financial independence. His research interests include pension investments and employee benefits. He received his BA and his MA from Northern Illinois University.

Stephen T. McElhaney is Mercer's senior public sector actuary where he serves as a lead public sector retirement consultant for US retirement plans providing actuarial, design, compliance and strategic consulting services. He has assisted the Governmental Accounting Standards Board during its development of several key accounting standards and he also serves on the Board of Directors of the Conference of Consulting Actuaries. Steve received his BA in mathematics from Washington and Lee University, and he is a fellow of the Society of Actuaries, a member of the American Academy of Actuaries, a fellow of the Conference of Consulting Actuaries, and an Enrolled Actuary.

Olivia S. Mitchell is the International Foundation of Employee Benefit Plans Professor and the Chair of the Department of Insurance and Risk Management; Executive Director of the Pension Research Council; and Director of the Boettner Center on Pensions and Retirement Research at the Wharton School. Concurrently, Dr. Mitchell is Research Associate at the National Bureau of Economic Research and a Co-Investigator for the AHEAD/ Health and Retirement Studies at the University of Michigan. Her areas of research and teaching are private and public insurance, risk management, public finance and labor markets, and compensation and pensions, with a US and an international focus. She received her BA in Economics from Harvard University and her MA and Ph.D. in Economics from the University of Wisconsin-Madison.

Silvana Pozzebon is Associate Professor in the Department of Human Resources Management at HEC Montréal (École des Hautes Études Commerciales de Montréal). Her research and publication interests include pensions as well as occupational health and safety management. She earned her bachelor's degree in economics from Concordia University, and her MS and Ph.D. from Cornell University's School of Industrial and Labor Relations.

Ralph Rogalla is a Research Associate in the Department of Finance at the Goethe University of Frankfurt. His research focuses on the management of assets and liabilities of pension funds. He received his Diploma in Economics from Technical University Berlin and he worked as a research intern at the European Central Bank. He earned his Ph.D. from the University of Frankfurt.

Junichi Sakamoto is the Chief Adviser to the Pension Management Research Group of the Nomura Research Institute. He was previously the

Notes on Contributors xix

Director of the Actuarial Affairs Division, Pension Bureau of the Ministry of Health, Labour and Welfare, in the Japanese Government. In that capacity, he was responsible for the actuarial affairs of the 2004 reform of social security pension schemes in Japan. He is also a part-time lecturer at the University of Tokyo, the Nihon University and the Sophia University. He received his BS and MS in Mathematics from the University of Tokyo, Japan.

M. Barton Waring is the Chief Investment Officer for Investment Strategy and Policy at Barclays Global Investors, Emeritus, having expertise in pension investment policy. He earned his JD in law from Lewis and Clark College, and his MPPM in Finance from Yale University.

Paul J. Yakoboski is Principal Research Fellow at the TIAA-CREF Institute, where he conducts research on retirement income security, saving and planning for retirement, and retiree health insurance. He was previously Director of Research for the American Council of Life Insurers, Senior Research Associate with the Employee Benefit Research Institute, Senior Economist with the US General Accounting Office, and Director of Research for the American Savings Education Council. He received his BS in economics from Virginia Tech, and his MA and Ph.D. in economics from the University of Rochester.

Parry Young is an independent consultant on pension and other postemployment benefit issues related to US state and local governments. He previously worked as a credit analyst in Standard & Poor's Public Finance Department in New York, specializing in municipal bond ratings in the Western states as well as the credit implications of retirement issues. He served in a variety of rating areas including short-term debt, structured, housing, and corporate. He is an associate member of the Government Finance Officers Association and the Governmental Accounting Standards Board Pension Accounting Research Project Advisory Committee. He earned his BA in English Literature from New York University and his MBA in Finance and Investments from Baruch College.

Abbreviations

AAL	Actuarial Accrued Liability
AARP	American Association of Retired People
ABO	Accumulated Benefit Obligation
AGA	Association of Government Accountants
AICPA	American Institute of Certified Public Accountants
ALEC	American Legislative Exchange Council
ARC	Annual Required Contribution
ASB	Actuarial Standards Board
ASOPs	Actuarial Standards of Practice
ASRS	Arizona State Retirement System
ATR	Americans for Tax Reform
bcIMC	British Columbia Investment Management Corporation
BLS	US Department of Labor Bureau of Labor Statistics
bps	basis points
CAFRs	Comprehensive Annual Financial Reports
CalPERS	California Public Employees Retirement System
CalSTRS	California State Teachers' Retirement System
CDC	Collective Defined Contribution
COLA	Cost-of-Living Adjustment
CPP	Canada Pension Plan
CRSP	Center for Research in Security Prices
CSRS	Federal Civil Service Retirement System
CVaR	Conditional Value at Risk
DB	Defined Benefit
DC	Defined Contribution
DoD	Department of Defense
DOL	US Department of Labor
EAN	Entry Age Normal
ELSAs	Earnings Limitation Savings Accounts
EPI	Employees' Pension Insurance
ERISA	Employee Retirement Income Security Act
FAS	Financial Accounting Standard
FAS	Final Average Salary
FERS	Federal Employees Retirement System
FMAA	Federation of National Public Service Personnel Mutual Aid Associations
GAO	US General Accounting Office

Abbreviations xxi

GASB	Government Accounting Standards Board
IAP	Individual Account Plan
IASB	International Accounting Standards Board
IT	Information Technology
JFMIP	Joint Financial Management Improvement Program
JNR	Japan National Railway Company
JR	Japan Railway Company
JT	Salt and Tobacco Monopoly Enterprise
MAA	Mutual Aid Association
MVA	Market Value of Assets
MVABO	Market Value of the Accumulated Benefit Obligation
MVL	Market Valuation for Liabilities
NASRA	National Association of State Retirement Administrators
NP	National Pension
NPERS	Nebraska Public Employee Retirement System
NRA	Normal Retirement Ages
NTT	Nippon Telegraph and Telecommunications Enterprise
NYCERS	New York City Employees' Retirement System
OMB	Office of Management and Budget
OPEB	Other Post-employment Benefits
OPTrust	Ontario Public Service Employees Union Pension Trust
PAYGO	pay-as-you-go
PBI	Permanent Benefit Increase
PBO	Projected Benefit Obligation
PERA	Public Employee Retirement Association
PERF	Indiana Public Employees' Retirement Fund
PERS	Public Employees' Retirement System
PPCC	Public Pension Coordinating Council
PVFB	Present Value of Future Benefits
PVFEC	Present Value of Future Employee Contributions
PVFNC	Present Value of Future Employer Normal Costs
QPP	Quebec Pension Plan
REITs	Real Estate Investment Trusts
RPPs	Registered pension plans
RRSPs	Registered Retirement Savings Plans
SERA	State Employees' Retirement Association
SERS	Nebraska School Employees Retirement System
SSA	Social Security Administration
TCRS	Tennessee Consolidated Retirement System
TIPS	Treasury Inflation-Protected Securities
TPC	Total Pension Costs
TRA	Teachers' Retirement Association
TRF	Teachers' Retirement Fund

xxii Abbreviations

TRP	Thrift Savings Plan
TRS	Alaska Teachers Employee Retirement System
UFCW	United Food and Commercial Workers
URS	Utah Retirement Systems
USBLS	US Bureau of Labor Statistics
VA	Veterans Affairs
VaR	Value at Risk
VAR	Vector Autoregressive
VBO	Vested Benefit Obligation

Chapter 1

The Future of Public Employee Retirement Systems

Olivia S. Mitchell

Pension systems are a central component of the compensation package for workers in virtually every developed nation, and nowhere is this more important than for public sector employees. In the United States, for instance, state and local pension systems cover over 27 million active and retired workers (GAO 2008) and federal pensions cover 10 million active and retired workers. In other countries, as we detail in the following text, public sector pensions are also taking center stage, wielding impressive financial and political clout, while at the same time portending huge costs.

The growth of these public pension systems has spurred hot debate of late, for several reasons. First, some private-sector employees envy their public sector counterparts due to the relatively generous benefits negotiated by strong unions that traditionally represent civil servants. Second, some politicians argue that pension and healthcare benefits paid to police and firefighters, schoolteachers, and other civil servants, have become too expensive for the public purse. In the private sector benefits costs have been cut by replacing defined benefit (DB) pensions by defined contribution (DC) plans; this has not yet occurred to any large extent in the public arena. And finally, the costs of maintaining public sector pension plans have come under the microscope of late, as municipalities, states, and other governmental units facing difficult financial times and volatile capital markets realize they must cut corners. These stresses are challenging many aspects of the public employee labor contract and raise questions about how such employees are attracted to the public sector, retained and motivated on the job, and retired, via the entire compensation package of wages and benefits.

This volume takes up these and other themes pertinent to the future of public employee retirement systems. In the first section, we build on our prior work (Mitchell and Husted 2000) to focus on financial aspects of these schemes, addressing the cost and valuation debate in the public arena. Next, we offer an examination of public retirement system reform, exploring actual and proposed efforts to bring public pensions into better financial status in countries from the United States to Japan, and Canada to

2 Olivia S. Mitchell

Germany. Several chapters provide case studies illustrating specific aspects of risk management and the process of reform. Last, we take up the political economy of how these asset pools are perceived and managed, an increasingly important topic in times of global financial turmoil.

This volume will be of substantial importance to a wide range of readers. Public sector employees and their representatives will find the comparisons and arguments over pension asset and liability valuation of keen interest. Public administrators and policymakers seeking an explanation of what makes these plans so costly will gain a new understanding of how the arguments stack up. In addition, private sector employers and plan sponsors can learn much from efforts to reform these retirement systems in states and countries around the world. Finally, investors and the taxpaying public more generally may be at risk to cover these long-term promises, so it behooves them to pay close attention to the financing and investment practices of these plans, along with their valuation. In what follows we offer an overview and summary of key findings.

Costs and benefits of public retirement systems

Policymakers and scholars have recently become embroiled in a debate over what valuation and accounting methodology should be used for pension plan assets and liabilities. In the case of *corporate* pensions, there is relatively widespread agreement regarding how to do this valuation. In the United States, for instance, the Financial Accounting Standards Board (FASB) requires mark-to-market reporting of corporate pension assets and liabilities, and the UK Financial Reporting Council and the European International Accounting Standards Board (IASB) have similar views. Though the implementation of the approach regarding timing and details may differ slightly across countries, the general movement over the last decade has been to adopt a market-based approach to valuing private sector pension assets and liabilities.¹

In the case of public employee pensions, however, there is far more controversy about whether an *actuarial* or *market-based* approach should be preferred and by whom (the latter is often termed the Market Valuation for Liabilities or MVL for short). As an example, Andrew Wozniak and Peter Austin (2008: 3) argue that '[g]iven the long-term nature and security of public pensions, plan management is generally focused on long-term cost, not short-term market related solvency. Many practitioners take the view that long-term cost is minimized if investment earnings are maximized thus reducing contributions while covering future benefit payments and plan expense.' A similar view is offered by a former member of the Government Accounting Standards Board (GASB), Girard Miller

1 / The Future of Public Employee Retirement Systems 3

who states (2008: 2): ‘By retaining the traditional practice of using reasonably probable investment returns as the basis for discounting future obligations . . . actuaries and accountants faithfully support the primary purpose of a public pension plan—which is to establish a funding plan that has the best possible chance of equitably balancing the interests of today’s taxpayers and tomorrow’s retirees. Many . . . would agree with me that using risk-free rates of return to value public plans (which enjoy a long-term horizon and capacity to prudently assume equity risks) will almost assuredly overburden today’s taxpayers.

Such an MVL regime would perversely shift the entire normal market risk premium to the benefit of future generations at the expense of their forebears.’ But other experts disagree, including David Wilcox (2008: 1) who notes:

Some have argued that because state and local governments do not exist to generate a profit, or because public plan sponsors cannot go out of business or be acquired by a competitor, market-based estimates are irrelevant for them. Others have argued that policymakers need other information aside from market-based estimates in order to make sound decisions on behalf of their constituents . . . in order to be useful, an estimate of plan liabilities must provide an analytically sound answer to a coherent, well-specified question. Market-based estimates of plan liabilities meet that test.

The first section of this volume provides several perspectives and insights into this vexed question. In his chapter, Stephen McElhaney notes that US public sector entities are permitted wide choice over cost methods and assumptions. This, in effect, allows them not to mark to market either their pension promises or their retiree health benefit obligations. One result is that it is not possible to compare public pension scheme liabilities, assets, and therefore funding rates across the broad array of states, cities, and municipalities with each other, nor with their private sector counterparts. For instance, on average, public pension plans use an 8 percent discount rate, while private sector firms must use lower long-term bond rates to determine the market value of liabilities. Given current practice, the author calculates that promised state and local government pension and health-care liabilities total about \$2.4 trillion, versus dedicated pension assets of less than \$2 trillion. Underfunding would be far greater in public sector plans if discount rates comparable to those used in the private pension arena were adopted.²

These and other differences between public and private pension accounting practice are permitted by the Governmental Accounting Standards Board on the argument that private businesses can go bankrupt, whereas governments financed via the involuntary payment of taxes are much less likely to default. Nevertheless, the governmental accounting

4 Olivia S. Mitchell

group has announced its intention to review its public pension financing rules in the next several years, to determine whether changes in practice are required. McElhaney does not believe that GASB will, however, move to a fully mark-to-market framework. Instead he suggests that public plans should at a minimum be asked to certify that the assumptions they use in valuating these plans reflect their actuary's best judgment. Currently, the plan actuary must certify that his assumptions are reasonable and in compliance with accepted standards, but he need not confirm that the results are congruent with his best estimate.

Another contrarian view to traditional public sector pension valuation practice is offered by Jeremy Gold and Gordon Latter. In their chapter, these authors contend that actuaries are skilled at developing long-term projections and budgets, but they worry that the projections tend not to be tightly linked to economic realities and market conditions. Their gravest concern arises when pension asset and liability figures differ which produces a misallocation of resources. To illustrate their case, the authors select four defined benefit plans from different regions of the United States and report both actuarial and market value measures of plan liabilities and funding ratios. The chapter shows that the four plans have funding ratios ranging from 66 to 106 percent using the conventional actuarial accrued liability approach. By contrast, using the authors' preferred measure of market value of liabilities, the plans are only 50–80 percent funded. What this means is that the costs of offering a pension promise when interest rates are 4 percent is massively more expensive than when rates are 12 percent.

A defense of the traditional public employee DB plan is central to M. Barton Waring's chapter where he alludes to the mythical Greek sea monsters Scylla and Charybdis, who inspired the expression 'between a rock and a hard place.' He argues that DB plans are important to retain despite the perception that they may be risky and expensive, since in his view, the DC model does not work particularly well either. The author finds that the average balance in a DC plan today is only about \$150,000, so that DC participants cannot expect to live well in retirement with such a small accrual. While DC plans could, in theory, provide as much income security as DB plans, they would need to have much higher mandatory contributions than usually found and annuitization features that are not often automatic. In terms of the mark-to-market debate, he contends that the MVL approach must prevail inasmuch as public and private plans borrow in the same capital markets and face the same interest rates.

In his view, a 'tough love' plan of action is needed to control risk in underfunded plans and change reporting, contribution, and benefit policy. Most crucially, in his view, public plans would do well to simply agree to adopt a regular reduction in the discount rate used until they reach the long-term government bond rate. When it comes to benefits, he suggests

1 / The Future of Public Employee Retirement Systems 5

that labor and management must review existing levels using current market data to fend off possible legislation that might be tougher on the overall package. Waring further argues that the real reason public pension systems adopt a traditional actuarial viewpoint is not that they do not understand the economic discount rate. Rather, he suspects that plan sponsors are 'worried about what the legislature is going to do if they walk in and say the pension liability is 40 percent more than what they said it was.' Since the majority of state pensions make explicit in the state constitutions a commitment to pay public sector employee benefits (GAO 2008), marking the liabilities to market would impose a rude shock to managers seeking to smooth contribution flows.

Pension funding volatility is the subject of Parry Young's chapter, which notes that state and local governments have experienced substantially higher volatility in pension funding ratios, and hence contributions, of late than ever before. In many jurisdictions, he finds that this volatility has been a substantial burden for the planning and budgeting process. Young points out that annual required contributions to public plans can vary due to many factors such as benefit and demographic changes, larger than anticipated investment gains or losses, and changes in the actuarial assumptions. He cites data showing that state and local government employers' plan contributions rose from 10.5 percent of payroll in fiscal 1997, to 6.8 percent in 2002, to 14.7 percent in 2003, and 29.5 percent in 2004. Yet, state revenue patterns are such that money has not always been available to boost government contributions over the last decade. Young also notes that recent declines in capital market values have created serious funding shortfalls for many public pension funds. He argues that rate volatility is the natural result of holding riskier assets, implying that by addressing market values and volatility with wise choice of assets, plan sponsors can immunize themselves substantially against such shocks.

In a chapter devoted to a comparison of the relative costs of hiring public versus private sector employees, Ken McDonnell shows that the average state and local worker costs employers substantially more in wages and benefits than in the private sector. For instance, total compensation costs were 51 percent higher for state and local employers compared to private firms, which results from 43 percent higher wages and salaries, and 73 percent higher employee benefits including pensions. The author outlines possible explanations for these differences and concludes that they are in part due to higher unionization rates raising wages and benefits in the public sector. In addition, there are differences with regard to both occupation and industry mix: for example, public sector workers in the 'service sector' category include skilled and risky jobs such as police and firefighter, whereas private sector service workers tend to be less skilled waiters/waitresses, and work in cleaning and building services functions

6 Olivia S. Mitchell

with traditionally lower wages. The compensation differences are even larger for health insurance benefits, where state and local government employer costs are 235 percent higher per hour than for private employees, and 330 percent higher for state and local government employers.

Turning to administrative costs of public sector plans, Edwin Husted reviews a set of DB and DC plans offered in different states in America to explore the range and diversity of pure, hybrid, and individual account schemes. He notes that in the public sector, most US pensions were originally established as DB programs. Hence the systems that today have DC elements have usually added these features alongside a traditional DB plan. In his analysis, he finds that DB annual plan expenses are rather low, totaling only about 0.1 percent of assets. One reason they are so low is that these plans are large and have been in place for decades. By contrast, the public DC plans are typically much newer and hence smaller. Here he finds that annual administrative costs amount to about 0.2 to 0.3 percent of assets. Husted's research also captures costs in the federal government retirement systems, which differ from the states in having a separate administrative organizational structure for DC and DB plans. Here administrative costs are small and similar across plan types. For the Federal DB case, he reports annual costs of 0.3 percent of contributions or 0.02 percent of assets, while DC expenses are 0.4 percent of contributions or 0.04 percent of assets. His overview suggests that large public sector retirement systems which are either exclusively defined benefit or exclusively defined contribution would have similar administrative costs, holding constant plan size.

In the final chapter in this section, Toni Husted takes up the question of how policymakers, participants, and taxpayers might think more clearly about how to report and finance Federal employee pensions. In the United States, there are more than 30 Federal pension plans that cover over 10 million active and retired participants; the two largest of these are for Federal civilian employees, namely the Federal Civil Service Retirement System (CSRS) which covers civilian employees who entered service before 1984, and the Federal Employees Retirement System (FERS) which covers all new hires after 1983 (plus employees who elected to transfer from CSRS to FERS). A third large plan covers military participants and their families, the Department of Defense (DoD) Military Retirement System. The author notes that recent changes in federal government pension accounting now require each employing US Federal agency to budget for the accruing liability of retirement for its current personnel. And the US Congress has set up Federal trust funds which are supposed to receive annual payments sufficient to cover benefits earned that year and amortization amounts to pay off past unfunded liabilities. Nevertheless, as these trust funds are invested in Federal securities, the Treasury is permitted to spend the receipts similar to

1 / The Future of Public Employee Retirement Systems 7

Social Security Trust Fund bonds. Ultimately then, these Federal schemes can be described as at least partially funded, though in fact they still depend on policymakers' willingness to raise money to pay the bills when retirees need to be paid.

Implementing public retirement system reform

Public pension reforms are also underway in other developed nations. Raimond Maurer, Olivia Mitchell, and Ralph Rogalla review civil servant pension systems in Germany, where most state schemes are tax-sponsored, non-contributory unfunded DB plans. State governments finance the programs by raising taxes and sometimes by investing in government bonds that they typically issue themselves. Their chapter goes on to explore an alternative approach using a model that lays out some of the risks and rewards of moving from a pay-as-you-go (PAYGO) system to a partially funded pension plan. The analysis begins with an actuarial valuation of pension promises due to current and retired workers. Next the authors project 50 years out, to estimate the payroll-related contribution rate necessary to fund the pension obligation. Then, using a Monte Carlo framework and a stochastic present value approach, combined with a conditional value at risk measure, the authors can determine what asset allocation minimizes the worst-case pension costs. The authors report that pre-funding the plan at 20 percent of payroll and investing 30 percent of the assets in equities and 70 percent in bonds sharply curtails the worst-case pension costs. Finally, they outline contribution rates and asset allocation when a plan sponsor is required to stick to a set level of risk. They point out that debate on whether to pre-fund public pension obligations will require being explicit about the level of risk that the plan fiduciary is willing to take on. This, in turn, requires a hard look at risk bearing for future and present generations.

In her study on Canadian public plans, Silvana Pozzebon notes that Canadian public employees are relatively free of pension envy. That is, there has been no backlash against public sector employees due to their generous pensions; instead, these plans continue to be seen as a way to attract workers to the fields of education and health care. These plans do, however, face challenges, as provincial governments seek to protect budgets against sharp increases in unfunded pension liabilities and demographic pressure due to workforce aging. The Canadian public sector exploded between the 1960s and 1970s, and now a large group of workers is nearing retirement age. As one example, the Ontario Teachers' Pension Plan began investing in equities in 1990 and has been seen as one of the best-performing retirement programs in Canada. Yet it now faces deficits and they cannot expect the government to pick up the tab.

8 Olivia S. Mitchell

How Japan copes with the demographic shift is the subject of much interest due to that nation's status as the most rapidly aging country on earth. Junichi Sakamoto describes the foundation and development of Japan's civil service pension systems, which from 1985 have been gradually merged with systems covering private sector workers. The author traces the development of Japan's pension system back to the new government after Meiji Restoration in the nineteenth century, which initiated Japan's transformation to an industrial economy. The government established a superannuation system for civil servants and members of the armed forces on the theory that they had given their lives to the nation. In the early twentieth century, other public employees began to form mutual aid associations around their workplaces. After World War II, the two types of public pension plans merged, and local government workers gained coverage in 1962. Meanwhile, private sector employees had no pension coverage until 1942 when Japan created the Employees' Pension Insurance (EPI) scheme, modeled after the German pension insurance system. As the nation went through industrial change in the 1960s, the system was stressed. As employees were made redundant by changing technology in some schemes, fewer workers remained to support older beneficiaries. The mutual aid association for Japan Railway employees nearly collapsed and eventually was absorbed by the EPI scheme. Responding to growing imbalances, the government called for consolidation of private and government sector plans in 1985; only in 2007 was a bill introduced calling for all four remaining schemes to merge. One continued sticking point is whether to require the self-employed and farmers to join the scheme.

Just as public pension schemes around the world have experienced change, so too have US public pension plans continued to evolve. Keith Brainard's chapter contends that the prevailing retirement plan model in public sector jobs is still a DB pension, but his further examination shows that many public systems also offer a DC plan alongside the DB plan. His work provides examples from states introducing hybrid plans and other innovations, including Nebraska which in 2003 introduced a cash balance plan for state and county workers. Existing DC participants received a one-time opportunity to switch, and 30 percent chose to take advantage of the offer. In 2007, the plan offered a second chance to participate and an additional 4 percent opted in. The Minnesota Teachers' Retirement Association offers so-called 'Earnings Limitation Savings Accounts' that comply with Internal Revenue Service rules and encourage teachers to return to work after retiring. These plans are designed to provide added income security for the teachers and improve the pool of educators for the state. Brainard notes that permitting employees to return to work is sometimes criticized as encouraging 'double dipping,' but the Minnesota plan overcomes this argument by depositing pension benefits into an individual account that

1 / The Future of Public Employee Retirement Systems 9

becomes accessible as a lump sum at age 65. The Arizona State Retirement System has an investment earnings-based Cost of Living Allowance (COLA) paid for through earnings that are greater than actuarial assumptions. About two-thirds of state and local plans have automatic COLAs and others rely on ad hoc COLAs granted by legislation, but the author argues that dropping a new COLA into a defined benefit plan where it has not been pre-funded over the years proves quite expensive. Another innovative approach is seen in Oregon, where the legislature established a new hybrid plan that mandates individual contributions. The DC contributions are professionally managed by the DB fund managers, giving participants the chance to hold a portfolio that they otherwise would not have access to, and it avoids having participants navigate the investment market on their own.

A discussion of best practices in the public DC pension arena is taken up in the chapter by Roderick Crane, Michael Heller, and Paul Yakoboski. The authors review key features of state plans for general employees as well as several public higher education plans, and they highlight several practices they deem innovative. These include defaulting participants into target date life cycle funds and providing a limited (15–20) set of participant-directed investment choices. They argue that this menu, linked with investment advice and investment education, is likely to enhance retiree well-being. They also contend that it is useful to ensure that pension contributions total at least 12 percent of pay if the workers are covered by Social Security, or 18–20 percent of pay if not. In terms of the payout process, they laud the fact that all but three of the state plans and all of the higher education plans offer an annuity option at retirement, and most offered some exposure to equities after retirement.³

The political economy of public pension reform

An understanding of the political economy of public pension reform is facilitated with an historic overview of how these systems have evolved over time. The chapter by Robert Clark, Lee Craig, and Neveen Ahmed describes how US public pensions date back to the Colonial Era, when Britain's North American colonies established disability pensions for members of the militia. The chapter traces how municipalities began to offer pensions to teachers, firefighters, and police officers during the mid-nineteenth century, and these plans grew with civil service reforms that curbed patronage. States then offered pensions to employees beginning in the early twentieth century and were spurred by the 1935 Social Security Act, which specifically excluded public employees. In the 1950s, the Social Security Act was amended to include public sector employees, allowing government units to enter or withdraw from the system voluntarily.

10 Olivia S. Mitchell

By 1961, all but five states had public pension plans; as of 1991, Social Security became mandatory for public employees with no pension plan.

Turning to an analysis of today's public employee pensions, the authors report that public sector employee DB pensions offer benefit replacement rates of around 56 percent of the worker's income at the time of retirement. The majority of public sector workers are also covered by Social Security. Meanwhile, and by sharp contrast, private sector DB plans have been on the wane, and many corporate employers have now terminated or frozen them, with a switch to DC plans. Clark and colleagues examine trends in replacement rates over time, where they find that state plans tend to be more generous relative to private-sector plans. The key question is whether states can continue to afford the relatively generous benefits in view of rapid population aging and fiscal stress.

A different view of the political nature of public pensions is offered by Brad Barber (2009), who explains that management adds one level of costs for shareholders seeking the maximum value for their investment in a corporation. Good governance typically limits those costs as shareholders in scandal-ridden companies, such as Tyco and Enron, learned firsthand in recent years. For pension funds, an extra layer of costs is associated with the portfolio manager that accumulates investments and then acts as a shareholder for the beneficiaries. Another cost can occur if fund managers have a political, moral, or personal agenda that does not align directly with shareholder value. In public funds, he adds, the portfolio manager is actually a triumvirate of the investment manager, the pension board, and the legislative body overseeing public-sector retirement plans. When it comes to activism, fund managers can have varying effects. Some may be self-serving autocrats forcing their own political agendas, while others can be a benevolent enforcer reducing agency costs, which benefits not only for investors but the market as a whole.

Barber offers as an example the California Public Employees' Retirement System (CalPERS) with its history of activism since 1984, when the system gained authority to invest 25 percent of its assets in equities. Three years later, CalPERS launched its governance program aimed at improving corporate performance by using its weight as a shareholder to block corporate poison pills. In 1992, it became more aggressive, publishing an annual focus list of companies it would attempt to influence. In addition to public crusades, CalPERS does extensive behind-the-scenes negotiations at companies to influence governance. Barber has tracked the performance of the CalPERS focus list over the past 15 years and finds a slight advantage, but not enough to be scientifically determinative. Nonetheless, he says, interventions in corporate governance such as fighting a poison pill or eliminating classes of stock have sound theoretical underpinnings to suggest they do create shareholder value. Beyond corporate governance

1 / The Future of Public Employee Retirement Systems 11

issues, pension fund managers have become involved in other forms of activism. Barber notes that CalPERS has been ordered by legislation to use its influence to demand corporations divest from businesses in South Africa, Sudan, and Iran. In addition to legislative demands, the CalPERS board has also taken stands against corporations on social grounds. In 2000, overriding the recommendation of its staff, the board ordered the fund to divest from tobacco companies, stating that tobacco stocks were risky because of litigation. The CalPERS board has become involved in labor strife with a grocery chain, which in his view, imposed reputational consequences on the pension fund.

Barber does believe that activism originating from a fund's investment committee aimed at governance, which he calls *shareholder activism*, can be rational. And when funds take on broader social causes, what he terms *social activism*, beneficiaries and taxpayers may pay a price. Divestment policies, he notes, automatically put funds at a disadvantage in terms of investment performance. In his view, there is no question that constraints on investment opportunity hurt the fund; rather the only question is how much and whether it is material. He believes that public pension funds can endanger their returns with such action, meaning that they may lose their original objective of protecting retirees.

An alternative different perspective is offered by Beth Almeida, Kelly Kenneally, and David Madland (2009) who note that public plan retirement assets per participant are twice those in the private sector. They also indicate that existing public employee pension obligations could be met with an increase in contributions of less than 1 percent of payroll. At the same time, they acknowledge that opposition to traditional DB pensions is moving into the public arena. Public sector plans are influenced by public opinion because voters and taxpayers have a say in the design of the plans, either through ballot issues or the representatives they elect. Almeida adds, however, that most voters know very little about the issue. For instance, many workers cannot say whether their own retirement scheme is a DB or a DC plan. The authors analyze survey data and find that among the voting public, public sector employees, women, and those who have DB plans themselves tend to be most supportive of public sector pensions, while those with an individualistic ideology are less supportive. Republican-party affiliation has no effect, after controlling for other factors including ideological perspective. Other research indicates that states with Republican-controlled legislatures have been more aggressive than other states in attempting to change public plans from defined benefit to defined contribution. The authors find the results interesting because it would appear that individual voters are not clamoring for change, so they attribute the debate at least in part to partisan politics.

12 Olivia S. Mitchell

The authors then provide four case studies, for Alaska, Colorado, California, and Utah, where there have been recent debates about switching from DB to DC plans. In those states, they argue that anti-tax, libertarian groups have taken an ideological stand against public defined benefit plans. Yet these efforts had only mixed success in drawing the public and elected representatives to their cause. The authors conclude that the challenges to public defined benefit plans do not appear to stem from well-articulated critiques or well-established economic consideration, nor from widespread public dissatisfaction. Rather, interest groups seek to dismantle defined benefit plans as part of their agenda.

Conclusion

At present, most US public employee plans appear to have sufficient assets to continue paying retirement benefits for some time. In fact, as the GAO (2008: 19) notes, some analysts suggest that a public plan funding level of 80 percent could be a sensible target, since ‘... it is unlikely that public entities will go out of business or cease operations as can happen with private sector employers, and state and local governments can spread the costs of unfunded liabilities over a period of up to 30 years under current GASB standards. In addition . . . it can be politically unwise for a plan to be overfunded; that is, to have a funded ratio over 100 percent. The contributions made to funds with “excess” assets can become a target for lawmakers with other priorities or for those wishing to increase retiree benefits.’

Nevertheless, the doomsayers also have a point. The current economic environment has produced a ‘perfect storm’ for public pensions, where low interest rates are spiking liabilities, depressed equity markets are whittling away assets, and economic recession is drying up state and local tax revenue. In fact, the GAO (2008) has noted that almost two-thirds of the plans it reviewed contributed less than necessary to meet annual required levels, with the shortfalls being most pronounced among the worst-funded plans. Such behavior implies that taxpayers and public employees will have to pay more in the future, and it may also lead to curtailed retiree benefits (Barrett and Green 2008). Inasmuch as public employee pensions are not guaranteed by the federal government, it is even possible that public sector plans might default. Whereas this has not happened to date in the United States, it is true that a few cities and towns (including Cleveland, OH, and Bridgeport, CT, as well as Vallejo, CA) have declared bankruptcy.

Accordingly, the task ahead is to ensure that public sector retirement systems do have a future, one that is both affordable and resilient to economic and demographic pressures. It is incumbent not only on plan fiduciaries and the politicians to whom they report, but also the taxpaying

1 / The Future of Public Employee Retirement Systems 13

public and those in the investment arena, to ensure that these commitments are transparently valued and financed in the most cost-effective and generationally fair manner.

Notes

- ¹ Nevertheless, recent research (Coronado et al. 2008) on US corporate pensions suggests that corporate pension liabilities and assets are not yet fully reflected in company share prices.
- ² For instance, a recent study by Novy-Marx and Rauh (2008) contends that accrued benefits under the 50 US state retirement systems are underfunded by \$2 trillion, on the assumption that the benefit promises can be valued at a risk-free discount rate. They suggest that this is reasonable if the pension payouts cannot be abrogated, consistent with the fact that many public pension payments are backed by the full faith and credit of the sponsoring state governments.
- ³ An alternative model called the Collective Defined Contribution (CDC) scheme advanced by the Dutch is also of some relevance, though not taken up in this volume in detail. See Bovenberg (2008).

References

- Almeida, Beth, Kelly Kenneally, and David Madland (2009). 'The New Intersection on the Road to Retirement: Public Pensions, Economics, Perceptions, Politics, and Interest Groups,' in O.S. Mitchell and G. Anderson, eds., *The Future of Public Employee Retirement Systems*. Oxford: Oxford University Press.
- Barber, Brad M. (2009). 'Pension Fund Activism: The Double-Edged Sword,' in O.S. Mitchell and G. Anderson, eds., *The Future of Public Employee Retirement Systems*. Oxford: Oxford University Press.
- Barrett, Katherine and Richard Green (2008). *Promises with a Price*. Pew Charitable Trusts' Center on the States. Philadelphia, PA.: Pew Charitable Trusts.
- Bovenberg, Lans (2008). 'Frontiers in Pension Finance and Reform: Institutional Innovation in the Netherlands,' in D. Broeders, S. Eijffinger and A. Houben, eds., *Frontiers in Pension Finance*, Edward Elgar.
- Brainard, Keith (2009). 'Redefining Traditional Plans: Variations and Developments in Public Employee Retirement Plan Design,' in O.S. Mitchell and G. Anderson, eds., *The Future of Public Employee Retirement Systems*. Oxford: Oxford University Press.
- Clark, Robert L., Lee A. Craig, and Neveen Ahmed (2009). 'The Evolution of Public Sector Pension Plans in the United States,' in O.S. Mitchell and G. Anderson, eds., *The Future of Public Employee Retirement Systems*. Oxford: Oxford University Press.
- Crane, Roderick B., Michael Heller, and Paul J. Yakoboski (2009). 'Defined Contribution Pension Plans in the Public Sector: A Benchmark Analysis,' in O.S. Mitchell and G. Anderson, eds., *The Future of Public Employee Retirement Systems*. Oxford: Oxford University Press.

14 Olivia S. Mitchell

- Coronado, Julia, Steven Sharpe, Olivia S. Mitchell, and S. Blake Nesbitt (2008). 'Footnotes Aren't Enough: The Impact of Pension Accounting on Stock Values.' *Journal of Pension Economics and Finance*, 7(3): 257-276.
- Gold, Jeremy and Gordon Latter (2009). 'The Case for Marking Public Plan Liabilities to Market,' in O.S. Mitchell and G. Anderson, eds., *The Future of Public Employee Retirement Systems*. Oxford: Oxford University Press.
- Government Accounting Office (GAO) (2008). *State and Local Government Pension Plans: Current Structure and Funded Status*. Statement of Barbara D. Bovbjerg, Director of Education, Workforce, and Income Security, before the Joint Economic Committee of the US Congress. July 10.
- Hustead, Edwin (2009). 'Administrative Costs of State Defined Benefit and Defined Contribution Systems,' in O.S. Mitchell and G. Anderson, eds., *The Future of Public Employee Retirement Systems*. Oxford: Oxford University Press.
- Hustead, Toni (2009). 'Thinking About Funding Federal Retirement Plans,' in O.S. Mitchell and G. Anderson, eds., *The Future of Public Employee Retirement Systems*. Oxford: Oxford University Press.
- Maurer, Raimond, Olivia S. Mitchell, and Ralph Rogalla (2009). 'Reforming the German Civil Servant Pension Plan,' in O.S. Mitchell and G. Anderson, eds., *The Future of Public Employee Retirement Systems*. Oxford: Oxford University Press.
- McDonnell, Ken (2009). 'Benefit Cost Comparisons Between State and Local Governments and Private Industry Employers,' in O.S. Mitchell and G. Anderson, eds., *The Future of Public Employee Retirement Systems*. Oxford: Oxford University Press.
- McElhaney, Stephen T. (2009). 'Estimating State and Local Government Pension and Retiree Health Care Liabilities,' in O.S. Mitchell and G. Anderson, eds., *The Future of Public Employee Retirement Systems*. Oxford: Oxford University Press.
- Miller, Girard (2008). 'Presentation by Girard Miller: Comments before the Public Interest Committee of the American Academy of Actuaries.' Washington, DC: September 4. http://www.actuary.org/events/2008/forum_statements_sept08/oral/miller.pdf
- Mitchell, Olivia S. and Edwin Hustead (2000). *Pensions for the Public Sector*. Pension Research Council. Philadelphia, PA: University of Pennsylvania Press.
- Novy-Marx, Robert and Joshua Rauh (2008). 'The Intergenerational Transfer of Public Pension Promises.' University of Chicago GSB Working Paper No. 08-13. Chicago, IL: University of Chicago Graduate School of Business.
- Pozzebon, Silvana (2009). 'The Outlook for Canada's Public Sector Employee Pensions,' in O.S. Mitchell and G. Anderson, eds., *The Future of Public Employee Retirement Systems*. Oxford: Oxford University Press.
- Sakamoto, Junichi (2009). 'Unifying Pension Schemes in Japan: Toward a Single Scheme for Both Civil Servants and Private Employees,' in O.S. Mitchell and G. Anderson, eds., *The Future of Public Employee Retirement Systems*. Oxford: Oxford University Press.
- Waring, M. Barton (2009). 'Between Scylla and Charybdis: Improving the Cost Effectiveness of Public Pension Retirement Plans,' in O.S. Mitchell and

1 / The Future of Public Employee Retirement Systems 15

- G. Anderson, eds., *The Future of Public Employee Retirement Systems*. Oxford: Oxford University Press.
- Wilcox, David (2008). 'The Disclosure of Market Value of Assets and Liabilities by Public-Sector Defined-Benefit Pension Plans: Comments before the Public Interest Committee of the American Academy of Actuaries.' Washington, DC: September 4. http://www.actuary.org/events/2008/forum_statements_sept08/oral/wilcox.pdf
- Wozniak, Andrew and Peter S. Austin (2008). *US Public Pensions at a Crossroad: Which Way Forward?*, May. New York, NY: BNY Mellon Asset Management. http://www.melloninstitutional.com/public/library/documents/knowledge/pdfs/US_Public_Pensions_final.pdf
- Young, Parry (2009). 'Public Pensions and State and Local Budgets: Can Contribution Rate Cyclicity Be Better Managed?' in O.S. Mitchell and G. Anderson, eds., *The Future of Public Employee Retirement Systems*. Oxford: Oxford University Press.