

The Future of Public Employee Retirement Systems

EDITED BY

Olivia S. Mitchell and Gary Anderson

OXFORD
UNIVERSITY PRESS

OXFORD

UNIVERSITY PRESS

Great Clarendon Street, Oxford ox2 6DP

Oxford University Press is a department of the University of Oxford.
It furthers the University's objective of excellence in research, scholarship,
and education by publishing worldwide in

Oxford New York

Auckland Cape Town Dar es Salaam Hong Kong Karachi
Kuala Lumpur Madrid Melbourne Mexico City Nairobi
New Delhi Shanghai Taipei Toronto

With offices in

Argentina Austria Brazil Chile Czech Republic France Greece
Guatemala Hungary Italy Japan Poland Portugal Singapore
South Korea Switzerland Thailand Turkey Ukraine Vietnam

Oxford is a registered trade mark of Oxford University Press
in the UK and in certain other countries

Published in the United States
by Oxford University Press Inc., New York

© Olivia S. Mitchell and Gary Anderson, 2009

The moral rights of the authors have been asserted
Database right Oxford University Press (maker)

First published 2009

All rights reserved. No part of this publication may be reproduced,
stored in a retrieval system, or transmitted, in any form or by any means,
without the prior permission in writing of Oxford University Press,
or as expressly permitted by law, or under terms agreed with the appropriate
reprographics rights organization. Enquiries concerning reproduction
outside the scope of the above should be sent to the Rights Department,
Oxford University Press, at the address above

You must not circulate this book in any other binding or cover
and you must impose the same condition on any acquirer

British Library Cataloguing in Publication Data
Data available

Library of Congress Cataloging in Publication Data
Data available

Typeset by SPI Publisher Services, Pondicherry, India
Printed in Great Britain
on acid-free paper by
Biddles Ltd., King's Lynn, Norfolk

ISBN 978-0-19-957334-9

1 3 5 7 9 10 8 6 4 2

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