

Reimagining Pensions

Reimagining Pensions

The Next 40 Years

EDITED BY

Olivia S. Mitchell and
Richard C. Shea

OXFORD
UNIVERSITY PRESS

OXFORD

UNIVERSITY PRESS

Great Clarendon Street, Oxford, OX2 6DP,
United Kingdom

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

© Pension Research Council, The Wharton School,
University of Pennsylvania 2016

The moral rights of the authors have been asserted

First Edition published 2016

Impression: 1

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, by licence 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 work in any other form
and you must impose this same condition on any acquirer

Published in the United States of America by Oxford University Press
198 Madison Avenue, New York, NY 10016, United States of America

British Library Cataloguing in Publication Data
Data available

Library of Congress Control Number: 2015943025

ISBN 978-0-19-875544-9

Printed in Great Britain by
Clays Ltd, St Ives plc

Links to third party websites are provided by Oxford in good faith and
for information only. Oxford disclaims any responsibility for the materials
contained in any third party website referenced in this work.

Preface

The US Congress passed the Employee Retirement Income Security Act (ERISA) to protect pension promises for millions of American workers and their families over 40 years ago. Yet decades after that bill became law, retirement security remains an elusive goal for the nation. Social Security and Medicare face financial strain. Large private sector employers have terminated or frozen their traditional defined benefit pensions, while public sector plans are beset by extraordinary funding problems. And the rise of defined contribution plans poses a new set of challenges to financially illiterate employees who must decide how much to save, how to invest, and how to manage their money in retirement.

Against this challenging backdrop, this newest volume in the Pension Research Council/Oxford University Press series provides new research explaining shortcomings of traditional pension risk management and offers new alternatives. Lessons from international experiences described here include insights from Singapore, Australia, Switzerland, and the Netherlands. The volume will interest employees and retirees, consumers and researchers, and employers seeking to design better retirement plan offerings. Additionally, investment managers seeking new ways to manage pension risk and regulators interested in alternative pension structures will also find much to learn from.

In the process of preparing this book, many people and institutions played key roles. Co-editor Richard C. Shea contributed numerous helpful suggestions as we designed and structured the analysis presented herein. We thank our Advisory Board and Members of the Pension Research Council, for intellectual and financial support. Additional support was received from the Pension Research Council, the Boettner Center for Pensions and Retirement Research, and the Ralph H. Blanchard Memorial Endowment at the Wharton School of the University of Pennsylvania. We also offer deep appreciation to Oxford University Press which publishes this series on global retirement security. The manuscript was expertly prepared and carefully edited by Donna St. Louis and Joseph Brucker.

Our work at the Pension Research Council and the Boettner Center for Pensions and Retirement Research of the Wharton School of the University of Pennsylvania has focused on aspects of pensions and retirement

vi Preface

wellbeing for 60 years. This volume contributes to our mission, which is to generate research on and engage debate around policy for pensions and retirement security.

Olivia S. Mitchell
Executive Director, Pension Research Council
Director, Boettner Center for Pensions and Retirement Research
The Wharton School, University of Pennsylvania

Contents

<i>List of Figures</i>	ix
<i>List of Tables</i>	xiii
<i>Notes on Contributors</i>	xv
1. Introduction: Changing Frameworks for Retirement Security <i>Olivia S. Mitchell</i>	1
Part I. Assessing the Retirement System: Adequacy, Efficiency, and Stability	
2. Are Retirees Falling Short? Reconciling the Conflicting Evidence <i>Alicia H. Munnell, Matthew S. Rutledge, and Anthony Webb</i>	11
3. Retirement Plans and Prospects for Retirement Income Adequacy <i>Jack VanDerhei</i>	37
4. The Changing Nature of Retirement <i>Julia Coronado</i>	61
5. Entitlement Reform and the Future of Pensions <i>C. Eugene Steuerle, Benjamin H. Harris, and Pamela J. Perun</i>	74
Part II. New Thinking about Retirement Risk Sharing	
6. Risk Sharing Alternatives for Pension Plan Design: An Overview and Case Studies <i>Anna M. Rappaport and Andrew Peterson</i>	95
7. United States Pension Benefit Plan Design Innovation: Labor Unions as Agents of Change <i>David S. Blitzstein</i>	123
8. Back to the Future: Hybrid Co-operative Pensions and the TIAA-CREF System <i>Benjamin Goodman and David P. Richardson</i>	139

viii Contents

9. Retirement Shares Plan: A New Model for Risk Sharing <i>Donald E. Fuerst</i>	161
10. The Portfolio Pension Plan: An Alternative Model for Retirement Security <i>Richard C. Shea, Robert S. Newman, and Jonathan P. Goldberg</i>	174
11. Cultivating Pension Plans <i>John M. Vine</i>	183
Part III. Pension Reform: Lessons from Abroad	
12. The Promise of Defined Ambition Plans: Lessons for the United States <i>A. Lans Bovenberg, Roel Mehlkopf, and Theo E. Nijman</i>	215
13. Insights from Switzerland's Pension System <i>Monika Büttler</i>	247
14. The Australian Retirement Income System: Comparisons with and Lessons for the United States <i>Rafal Chomik and John Piggott</i>	274
15. Singapore's Social Security Savings System: A Review and Some Lessons for the United States <i>Benedict S. K. Koh</i>	298
<i>Endmatter</i>	341
<i>Index</i>	345

List of Figures

2.1	Ratio of wealth to income by age from the Survey of Consumer Finances, 1983–2010	13
2.2	Percentage of all households falling short of target by age at retirement, base case, and with a reverse mortgage	17
2.3	Illustrative consumption by age, SSK, and NRRI as percent of income	20
2.4	Percentage of households aged 51–61 at risk, 2004	21
2.5	Illustrative consumption by age, SSK, and NRRI as percent of income, with children	22
2.6	Mean income and spending by income decile at time of retirement for Hurd-Rohwedder (2011) sample of households	24
2.7	Average actual and corresponding consumption-to-income ratio at time of retirement by income decile for Hurd-Rohwedder sample of households	25
3.1	Years in retirement before Boomers and Gen Xers run short of money, by pre-retirement income quartile: simulations with the 2014 version of the EBRI Retirement Security Projection Model [®]	50
3.2	Years in retirement before Boomers and Gen Xers run short of money, by relative longevity quartile: simulations with the 2014 version of the EBRI Retirement Security Projection Model [®]	51
3.3	Years in retirement before Boomers and Gen Xers run short of money, by quartile of stochastic health care cost: simulations with the 2014 version of the EBRI Retirement Security Projection Model [®]	52
4.1	More workers expect to work longer, but retirement ages are not yet following	63
4.2	Workers are retiring earlier than planned (% , 2 yr avg.)	64
4.3	Most workers expect to work for pay, but few retirees do	65
4.4	Real spending per capita by age of head of household. Older households have experienced the greatest increase in standard of living	66

x List of Figures

4.5	Income from public and private pensions by age of head of household (% of total household income). Pension support is fading for older households	67
4.6	Income from work by age of head of household (% of total household income). More income support derives from work for older households	68
4.7	Households with a mortgage by age of head. Older households are taking on more leverage	69
4.8	Unemployment rates by age for men. Unemployment is still elevated among older men	70
4.9	Unemployment rates by age for women. Unemployment is still elevated among older women	71
4.10	Percentage of persons 55+ who left the labor force but want a job. Some discouragement remains among older workers	71
8.1	TIAA Average Crediting Rates versus Consumer Price Index: 1964–2013	144
8.2	Monthly returns to TIAA and Barclays aggregate: 1984–2013	146
8.3	TIAA monthly income per \$100,000 for various cohorts	150
8.4	Real CREF stock annuity payments for various cohorts	155
8.5	Initial income choices by TIAA-CREF participants: 1988–2012	157
9.1	Diversified share vs. CPI 4 percent hurdle rate 1970–2013 logarithmic scale	171
9.2	Stable share vs. CPI 4 percent hurdle rate 1970–2013 logarithmic scale	172
12.1	Average total (employee plus employer) contributions to Dutch occupational pensions as percentage of gross wage income, 1980–2013	220
12.2	Average nominal funding rate of Dutch occupational pension funds, 1988–2013	221
12.3	Number of participants affected by cuts in Dutch occupational pensions in 2013	224
12.4	Risk profile of future real pension income in DA scheme	231
12.5	Horizon-dependent discount rate of a DA scheme	232
13.1	Interest rates for Swiss occupational pension plans	255
13.2	Labor force participation of elderly individuals in Switzerland	257
13.3	Divorce rates for couples between 55 and 75 and total Swiss divorce rates	260

List of Figures xi

13.4	Annuitization rates for six pension providers prior to the reform of the occupational pension law in 2005 (which triggered a number of changes). Stable parameters (exception: decrease in supermandatory conversion rate for Insurance I in 2004)	262
13.5	Percentage of capital annuitized as a function of accumulated second pillar wealth (upper curves). Percentage of individuals opting for a mixed payout (10% capital or more, plus 10% annuity or more)	265
14.1	Comparison of population, economy, and government budget	275
14.2	Comparison of population incomes	277
14.3	Comparison of demography	278
14.4	Comparison of pension system structure	279
14.5	Comparison of targeting and poverty	284
14.6	Comparison of income replacement	285
14.7	Comparison of alternate sources of income	286
14.8	Comparison of fiscal projections: central government expenditure on age-related pensions, 2002–2050 (% of GDP)	287
14.9	Comparison of coverage rates of private pensions	290
15.1	Central Provident Fund (CPF): overview	302
15.2	Comparative home ownership statistics	307
15.3	Cumulative use of Central Provident Funds. (Ordinary Account and Special Account combined)	308
15.4	Singapore property price indexes over time	309
15.5	CPF interest rate and Singapore's inflation rate over time	314
15.6	Portion invested and balance remaining in Singapore's CPF Ordinary (OA) and Special (SA) Accounts	323

List of Tables

2.1	Percentage of households ‘at risk’ at age 65 by age group over time	15
2.2	Percentage ‘at risk’ using the NRRI versus the ‘optimal saving’ approach: 1992 and 2004	18
2.3	Median respondent spending by retirement status for respondents aged 50 to 70	26
2.4	Median respondent spending by retirement status for respondents aged 50 to 70	27
2.A1	NRRI target replacement rates by household type and drawdown alternative	32
3.1	2014 Retirement Readiness Ratings™ with and without long-term care (LTC) and home health costs (HHC)	42
3.2	Probit estimates of the probability of running short of money in retirement	48
3.3	2014 retirement savings shortfalls (US\$) by age cohort, marital status, and gender	53
3.4	2014 unconditional retirement savings shortfalls (US\$), by years of future eligibility for participation in a defined contribution plan	54
4.1	Older households doing well	66
6.1	Major risks facing plan sponsors and participants in retirement plans	99
6.2	Strategies for managing and sharing risk	101
6.3	Risks assumed by various stakeholders under selected plan designs	103
6.4	Summary of methods for managing key selected risks	109
6.5	Principles for reformed New Brunswick pensions	114
8.1	TIAA-CREF asset classes, inception dates, and total assets under management for TIAA-CREF pension accounts and mutual funds, as of December 31, 2013	141
8.2	Average return performance of TIAA and the Barclays Aggregate	146
8.3	Weighted average of yearly accumulations and interest earnings by vintage	147
8.4	Current payout rate by vintage	148
8.5	Current payout rates by age	149

xiv List of Tables

8.6	Asset class participation and proportion of contributions invested from 1993 to 2013	156
11.1	Number of plans	197
11.2	Number of active plan participants	197
11.3	Fortune 100 company offerings to new hires	198
11.4	Allocation of risks under DB and DC plans	201
11.A1	ERISA committee reports	206
12.1	Average indexation shortfall, 2008–14	224
12.2	Confidence in pension funds, the government, banks, and insurers (% of Dutch people that have some or a lot of confidence)	225
13.1	Features of the Swiss old age pension system	249
13.2	Size and structure of occupational pension plans	252
13.3	Demographic trends in Switzerland	256
13.4	Political support for a reduction in the conversion rate (annuity factor), individual data from telephone survey after the ballot	269
14.1	Choice in defined contribution schemes in OECD countries, 2013	292
15.1	Contributions and balances in the Singapore's CPF system	300
15.2	Singapore CPF contribution rates by employers and employees age 35 and under (% of monthly wage)	301
15.3	2014 contribution rates for various age groups (% of monthly wage)	302
15.4	Singapore CPF interest rates paid over time	303
15.5	Singapore CPF schemes	305
15.6	Dependent Protection Scheme (DPS) and MediShield Schemes under Singapore CPF over time	310
15.7	Contributions to MediSave Account by age groups (% of monthly wage)	311
15.8	CPF Minimum Sum Scheme (MSS)	313
15.9	Singapore CPF member average balances by age and sex	315
15.10	Performance statistics of Singapore CPFIS-included unit trusts	318
15.11	Summary data on costs associated with unit trust investment in Singapore	320
15.12	Simulation study showing the percentage of \$1 investment eroded by expenses assuming zero investment return, by fund type and holding period (%)	320
15.13	Realized profits/losses for investments held under the Singapore CPF investment scheme Ordinary Account (CPFIS-OA): FY04–13	322

Notes on Contributors

David S. Blitzstein established Blitzstein Consultancy where he provides professional trustee services and strategic advice to labor unions and employee benefit trust funds. Previously he served as a collective bargaining expert on pension and health insurance for the United Food and Commercial Workers (UFCW) and the United Mine Workers of America, and he was the UFCW's Special Assistant for Multiemployer Plans. He is a Governor-appointed trustee of the Maryland State Retirement System and a Presidential appointee to the PBGC Advisory Committee. He received his undergraduate degree in History from the University of Pennsylvania and a Master of Science degree from the University of Massachusetts in Amherst.

A. Lans Bovenberg is a Professor of Economics at Tilburg University; he also serves as an independent member of the Social Economic Council in the Netherlands, the most important advisory body of the Dutch government on socio-economic matters. He also served on an important government committee advising the government on how to raise labor force participation in the Netherlands (the so-called 'committee Bakker'). Previously he worked as an economist at the International Monetary Fund and the Dutch Ministry of Economic Affairs in The Hague. He earned his Ph.D. from the University of California, Berkeley.

Monika Büttler is a Professor of Economics and Public Policy and the Managing Director at the Swiss Institute for Empirical Economic Research at the University of St. Gallen. She is a research coordinator for the international Network on Ageing and Pensions, Netspar, an affiliated researcher at CESifo, and an Associate Investigator at CEPAR. She has been a visiting professor at the University of New South Wales and a visiting scholar at the Universities of Virginia and Southern California and the Federal Reserve Bank of Richmond. She is a member of the Board of Management for the International Institute of Public Finance and an editor of the *Journal of Pension Economics and Finance*. She earned her degrees in Mathematics/Physics and Economics and her Ph.D. in Economics from the University of St. Gallen.

Rafal Chomik is an economist with experience in the public, private, and NGO sectors in the UK and France; he specializes in policy related research, tax-benefit modelling, and policy development across the fields of poverty, the labor market, and pensions. Currently he serves as Senior Research

xvi Notes on Contributors

Fellow at the ARC Centre of Excellence in Population Ageing Research, Australian School of Business at the University of New South Wales. He earned his Bachelor's degree from the University of Western Australia and his Master's from London Metropolitan University.

Julia Coronado is based in New York and is currently Chief Economist for Graham Capital Management. She has been Chief Economist, North America, for BNP Paribas since 2009. Prior to joining BNP Paribas, Julia was a Senior US Economist at Barclays Capital. She has also served as an Economist for the Federal Reserve Board of Governors in Washington, DC, in the Flow of Funds and Macroeconomic Analysis sections in the Division of Research and Statistics. Her current work focuses on forecasting the US economy, as well as monetary and fiscal policy. Her expertise and research interests lie in understanding the interactions between financial markets and the real economy. She currently serves on the Advisory Board of the Pension Research Council at the Wharton School and is a member of the Economic Advisory Panel of the Federal Reserve Bank of New York.

Donald E. Fuerst is the American Academy of Actuaries' Senior Pension Fellow; in this role he serves as the actuarial profession's chief policy liaison on pension, Social Security, and other retirement issues. His work promotes sound retirement policy by providing nonpartisan technical assistance to legislators and regulators. Previously he served as a member of the American Academy of Actuaries Committee on Accounting for Pension Costs, and the Society of Actuaries Education and Examination Committee. He earned his Bachelor of Science in Mathematics from Regis University in Denver and he is a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, a Fellow of the Conference of Actuaries, and an Enrolled Actuary.

Jonathan P. Goldberg is a Project Attorney in the Employee Benefits and Executive Compensation practice group of Covington & Burling LLP, a multinational law firm headquartered in Washington, DC. Mr Goldberg is a 1994 *magna cum laude* graduate of Harvard University and a 2007 graduate of the University of Pennsylvania Law School, where he served as Senior Editor of the *University of Pennsylvania Law Review*. Prior to joining Covington & Burling, he worked as a litigator for six years in both the public and private sector, most notably as a Law Clerk in 2008–9 for Senior Judge Norma L. Shapiro of the United States District Court for the Eastern District of Pennsylvania.

Benjamin Goodman is a Director and Actuary at TIAA-CREF, where he has worked in a variety of positions, including Institutional Plan Pricing, Advice, Pension Plan Design, and Product Development. He graduated from Touro

Notes on Contributors xvii

College, and he is a Member of the American Academy of Actuaries and a Fellow of the Society of Actuaries.

Benjamin H. Harris is the Policy Director of the Hamilton Project; a Fellow in Economic Studies at Brookings; and Deputy Director of the Retirement Security Project at Brookings. Previously, he was a Senior Research Associate with the Urban Institute and the Urban-Brookings Tax Policy Center. Prior to joining the Urban Institute, he worked at the White House as a Senior Economist with the Council of Economic Advisers, where he specialized in fiscal policy and retirement security. He has also served as a Research Economist at the Brookings Institution and as a Senior Economist with the Budget Committee in the US House of Representatives. He earned his BA in economics at Tufts University, his Ph.D. in Economics from the George Washington University, his Master's degree in Economics from Cornell University, and another Master's degree in Quantitative Methods from Columbia University.

Benedict S. K. Koh is Professor of Finance and Associate Dean of the Lee Kong Chian School of Business at the Singapore Management University; he is also the Director of the Centre for Silver Security at the Sim Kee Boon Institute for Financial Economics. He has served on the board for the NUS Academic Staff Pension Fund and as associate editor of the *Asia Pacific Journal of Finance* and *Asia Pacific Journal of Management*. He is active in management consultancy as well as executive training for banks, companies, and government agencies. He earned his Ph.D. in Finance from the Wharton School of the University of Pennsylvania.

Roel Mehlkopf is a postdoctoral researcher at Tilburg University in the Netherlands and research fellow at Netspar. He is also affiliated with the Ministry of Social Affairs and Employment of the Netherlands, where he works as an economic advisor on the design of the new solvency framework for pension funds. Previously, he worked at the Netherlands Bureau for Economic Policy Analysis (CPB) where he was project leader of a value-based generational accounting analysis of the Dutch pension reform. He earned his Ph.D. degree in Finance from Tilburg University and he was a visiting scholar at the University of Pennsylvania. He also holds a Master of Science degree in Financial Econometrics from Tilburg University.

Olivia S. Mitchell is the International Foundation of Employee Benefit Plans Professor, as well as Professor of Insurance and Risk Management and Business Economics and Public Policy; Executive Director of the Pension Research Council; and Director of the Boettner Center for Pensions and Retirement Research, all at the Wharton School of the University of Pennsylvania. Concurrently she serves as a Research Associate at the NBER; Independent Director on the Wells Fargo Advantage Fund Trusts Board;

xviii Notes on Contributors

Co-Investigator for the Health and Retirement Study at the University of Michigan; Member of the Executive Board for the Michigan Retirement Research Center; and Senior Scholar of the Centre for Silver Security at the Sim Ki Boon Institute of Singapore Management University. She also advises the Centre for Pensions and Superannuation UNSW and serves on the Scientific Board for Netspar in the Netherlands; she is also Faculty Affiliate of the Wharton Public Policy Initiative. She currently is a Senior Editor of the *Journal of Pension Economics and Finance*. She received the MA and Ph.D. degrees in Economics from the University of Wisconsin-Madison, and the BA in Economics from Harvard University.

Alicia H. Munnell is the Peter F. Drucker Professor of Management Sciences at Boston College's Carroll School of Management. She also serves as the Director of the Center for Retirement Research at Boston College. Previously she was a Member of the President's Council of Economic Advisers and Assistant Secretary of the Treasury for Economic Policy. She also worked at the Federal Reserve Bank of Boston where she served as Senior Vice President and Director of Research. She earned her BA from Wellesley College, an MA from Boston University, and her Ph.D. from Harvard University.

Robert S. Newman is a partner in the Employee Benefits and Executive Compensation practice of Covington & Burling LLP, where he represents clients ranging from small employers to some of the nation's largest employers, including for-profit and tax-exempt entities. His practice includes designing, drafting, and amending a range of retirement plans (including 401(k) plans, ESOPs, and traditional and hybrid defined benefit plans) and welfare plans (including health, severance, and cafeteria plans). His research interests include pension plan policy, pension de-risking, and participant protections. He received a BA from Brown University and a JD from the New York University School of Law.

Theo E. Nijman is a Professor on Econometrics and Finance at Tilburg University in the Netherlands; he is also Scientific Director of Netspar, a Network for Studies on Pensions, Aging and Retirement, a consortium of ten universities and several insurance companies and pension funds. He is also Academic Coordinator of Inquire Europe, which brings together investment professionals interested in understanding and developing quantitative solutions to investment problems. Previously he served on the government-appointed Goudswaard committee on structural reforms in the Dutch second pillar pension provision to assure sustainability of the system, and he was a member of the Expert Committee of the Actuarial Society on 'Validity of the Actuarial Society's projected survival tables.' He is currently a member

Notes on Contributors xix

of the government committee on Valuation of Pension Liabilities (UFR Committee).

Pamela J. Perun is a psychologist and a lawyer who is self-employed as an employee benefits policy consultant. Previously she was an ERISA lawyer for large law firms in Boston and Washington, DC; currently she consults with the TIAA-CREF Institute in their thought leadership work on retirement policy, with the AARP Public Policy Institute in its work on state-based retirement plans for private sector workers, and with the Urban Institute, where she is participating in an analysis of tax preferences for retirement saving by low- and moderate-income Americans. She is also a Senior Fellow at WISER where she consults on improving the long-term financial security for women most at risk. She earned her BA from Wellesley College, a Ph.D. in Human Development (Adult Development and Aging) from the University of Chicago, and a JD from the University of California at Berkeley.

Andrew Peterson is Staff Fellow for Retirement Systems at the Society of Actuaries (SOA), where he serves as staff partner to the Pension Section of the SOA, directing volunteer activities. In addition, he provides retirement expertise to the SOA's education and research functions and provides a liaison between the SOA and other organizations in the retirement arena. He is a Fellow of the Society of Actuaries, an Enrolled Actuary, a Member of the American Academy of Actuaries, and a Fellow of the Conference of Consulting Actuaries. He is also a member of the National Academy of Social Insurance. He earned his BS degree in mathematics from Taylor University.

John Piggott is Director of the ARC Centre of Excellence in Population Ageing Research (CEPAR) at the University of New South Wales, where he is also Scientia Professor of Economics; he also holds an ARC Australian Professorial Fellowship. His Australian policy experience includes membership of both the Henry Tax Review Panel and the Ministerial Superannuation Advisory Committee. Internationally, he worked for nearly a decade with the Japanese government on pension and ageing issues, and he consulted with several other governments on pension issues, including Russia and Indonesia. He is a Visiting Professor at Zhejiang University, China, and previously was Visiting Scholar with the Department of Insurance and Risk Management, Wharton School of Business, University of Pennsylvania. He earned his Ph.D. and M.Sc. from the University of London and a BA from the University of Sydney.

Anna M. Rappaport is an actuary, consultant, author, and speaker, and a recognized expert on the impact of change on retirement systems and workforce issues, with Anna Rappaport Consulting. Previously she worked with Mercer Human Resource consulting. She serves on the Board of the

xx Notes on Contributors

Women's Institute for a Secure Retirement (WISER), and the Advisory Board of the Pension Research Council; she is also a member of the GAO's Retirement Security Advisory Panel. She is a past-President of the Society of Actuaries and chairs its Committee on Post-Retirement Needs and Risks. She is a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, and a member of the National Academy of Social Insurance. She earned her MBA from the University of Chicago Booth School of Business.

David P. Richardson is a Senior Economist at the TIAA-CREF Institute. Previously he held the New York Life Chair in Risk Management and Insurance at Georgia State University and served as Senior Economist for Public Finance at the White House Council of Economic Advisors. He also worked as a Financial Economist in the Office of Tax Policy at the US Treasury, and he taught at the Department of Economics at Davidson College. He earned an MA and a Ph.D. in economics from Boston College, and a BBA from the University of Georgia.

Matthew S. Rutledge is a research economist at the Center for Retirement Research at Boston College, where he conducts research on health insurance coverage, disability insurance application, the long-run effects of public disability receipt, unemployment insurance, Social Security claiming behavior, income volatility, and the effect of the macro economy on older workers. Previously he also worked for the Economic Research Initiative on the Uninsured and the Federal Reserve Bank of Boston. He earned his doctorate in economics from the University of Michigan in the fields of health economics, labor economics, and public finance.

Richard C. Shea is chair of Covington & Burling LLP's Employee Benefits and Executive Compensation practice, where he is widely regarded as a leading authority on cash balance, pension equity, and other complex benefit plan designs. Previously, he served as Associate Benefits Tax Counsel at the Treasury Department, where, together with his colleagues at the Treasury Department and the Internal Revenue Service, he was responsible for developing federal tax legislation and regulations governing employee benefits and executive compensation. He received his AB from Amherst College and his JD from the University of Virginia School of Law.

C. Eugene Steuerle is the Richard B. Fisher Chair at the Urban Institute. Previously, he served as Deputy Assistant Secretary of the Treasury for Tax Analysis, President of the National Tax Association, chair of the Technical Panel advising Social Security on methods, Vice-President of the Peter G. Peterson Foundation, and economic coordinator of the Treasury Department's efforts leading to the Tax Reform Act of 1986. He co-founded the Urban-Brookings Tax Policy Center, the Urban Institute Center on

Notes on Contributors xxi

Nonprofits and Philanthropy, and Act for Alexandria, a community foundation that he now also chairs. He earned his Ph.D. with distinction in public finance from the University of Wisconsin-Madison in 1975.

Jack VanDerhei is the Research Director of the Employee Benefit Research Institute (EBRI), a private, nonprofit, nonpartisan organization committed to original public policy research and education on economic security and employee benefits. He is also the director of both the EBRI Defined Contribution and Participant Behavior Research Program and the EBRI Retirement Security Research Program, and the co-director of the EBRI Center for Research on Retirement Income. He received his BBA and MBA from the University of Wisconsin-Madison and his MA and Ph.D. from the Wharton School of the University of Pennsylvania.

John M. Vine is the senior member and former head of the Employee Benefits Group at Covington & Burling LLP; his practice covers incentive compensation, deferred compensation, stock option, and fringe benefit programs, as well as pension, 401(k), employee stock ownership and stock purchase plans, severance programs, and health and welfare plans. He has also served as counsel to the ERISA Industry Committee (ERIC), an association of over 100 of the nation's largest employers. He has represented ERIC and corporate clients before the Treasury Department, the Internal Revenue Service, the Department of Labor, the Pension Benefit Guaranty Corporation, the Equal Employment Opportunity Commission, and the Congress on a wide variety of employee compensation and benefit issues. He received his AB degree from Amherst College and JD from Harvard Law School.

Anthony Webb is a Senior Research Economist at the Center for Retirement Research at Boston College. Previously, he was a senior research analyst at the International Longevity Center (ILC)-USA. His research focuses on the impact of pension type on the age of retirement and a number of studies of the role of annuities in managing retirement asset decumulation. He earned his doctorate in Economics from the University of California, San Diego, and his BA in Industrial Economics from the University of Nottingham and an MA in Economics from the University of Manchester.