

THE DECLINE OF THE TRADITIONAL PENSION

The traditional (final- or average-salary) pension that employers have provided their employees has suffered a huge decline in labor force coverage in the United Kingdom and the United States, and less severe declines in Canada and elsewhere. The traditional pension provides a precious measure of retirement security by paying retirees an annuity for life. This study compares developments in the countries just named and in Australia, Denmark, Germany, Japan, the Netherlands, Sweden, and Switzerland to explain the forces behind the decline of the traditional pension and to contrast the experience of public-sector employer-provided plans, where it remains dominant. Given the great value of the longevity insurance that the traditional plan provides, and the risks its diminished coverage entails, the book proposes a set of measures that either stem the decline or endow defined-contribution pensions with some of the attributes of the traditional plan.

George A. (Sandy) Mackenzie is Senior Strategic Policy Advisor in the Public Policy Institute of AARP in Washington, DC. A Rhodes Scholar, he spent 28 years with the International Monetary Fund (1978–2006) following a year of teaching and three years with the Canadian Department of Finance. Prior to joining the AARP Public Policy Institute, he was a lecturer at the University of California Washington Center. In addition to his book *Annuity Markets and Pension Reform* (2006, Cambridge University Press), Mr. Mackenzie has published articles in the *IMF Staff Papers*, *Public Finance/Finances Publiques*, *Finanzarchiv*, *IMF Occasional Papers Series*, *Public Budgeting and Finance*, and *Contingencies*, and studies with the Public Policy Institute of California and AARP PPI.

The Decline of the Traditional Pension

A Comparative Study of Threats to Retirement Security

GEORGE A. (SANDY) MACKENZIE

Public Policy Institute, AARP, Washington, DC



CAMBRIDGE UNIVERSITY PRESS
Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore,
São Paulo, Delhi, Dubai, Tokyo, Mexico City

Cambridge University Press
32 Avenue of the Americas, New York, NY 10013-2473, USA

www.cambridge.org
Information on this title: www.cambridge.org/9780521518475

© George A. (Sandy) Mackenzie 2010

This publication is in copyright. Subject to statutory exception
and to the provisions of relevant collective licensing agreements,
no reproduction of any part may take place without the written
permission of Cambridge University Press.

First published 2010

Printed in the United States of America

A catalog record for this publication is available from the British Library.

Library of Congress Cataloging in Publication data

Mackenzie, G. A. (George A.), 1950–

The decline of the traditional pension: a comparative study of threats to retirement
security / George A. (Sandy) Mackenzie.

p. cm.

ISBN 978-0-521-51847-5 (hardback)

1. Pensions. 2. Investments. 3. Portfolio management. I. Title.

HD7091.M16 2010

331.25'2–dc22 2010014784

ISBN 978-0-521-51847-5 Hardback

Cambridge University Press has no responsibility for the persistence or
accuracy of URLs for external or third-party Internet Web sites referred to in
this publication and does not guarantee that any content on such Web sites is,
or will remain, accurate or appropriate.

For Carolyn and Marjorie

Contents

<i>List of Tables</i>	<i>page</i> x
<i>List of Figures</i>	xi
<i>List of Boxes</i>	xii
<i>Acknowledgments</i>	xiii
Introduction	1
Traditional Pensions in Trouble	1
Chapter Outline and Plan of the Book	9
PART ONE	
1. The Development of Employer-Provided Pensions	15
Introduction	15
General Conditions for the Development of Employer-Provided Pensions	17
Main Features and Recent Trends: A Ten-Country Comparison	20
2. The Economics of Employer-Provided Pension Plans	36
An Overview of the Life-Cycle Model of Saving	36
Important Qualifications	39
The Rationale for Employer-Provided Pension Plans	42
The Impact of Contractual Saving on Personal Saving	45
The Economic Effects of Different Employer-Provided Pension Plans	47
The Do-It-Yourself Approach to Steady Income and Longevity Insurance	59
Problems with the Phased-Withdrawal Approach	60

3.	Issues in Funding and Investing	65
	Four Issues in Funding	65
	Issues in Investing for Traditional Plans	82
	Concluding Thoughts	93
4.	Current Regulatory Issues	94
	The Rationale for Regulation	94
	Activist Regulation	98
	Risk-Based Regulation of Pension Plan Balance Sheets	104
	Regulatory Forbearance When Plans Are Underfunded	112
	Conflict of Interest Issues in the Appointment of Trustees	113
5.	Public-Sector Employer-Provided Pensions and Recent Innovations in the First Tier	115
	Public-Sector Pensions – Introduction	115
	Basic Features of Public-Sector Plans	116
	The Survival of the Traditional Pension in the Public Sector	121
	Three Current Issues for Public-Sector Plans	124
	Innovations in Public-Pension Systems	130

PART TWO

6.	The Causes of Decline	139
	Introduction	139
	Some Issues of Method	139
	The Analytical Framework	141
	Analysis of the Supply-Side Influences	145
	Analysis of the Demand-Side Influences	172
	A Summing Up	177
7.	Policies to Address the Decline of the Traditional Pension	179
	Introduction	179
	The Traditional Pension Plan's Role in Broadening Second-Tier Coverage	180
	Addressing the Decline of the Traditional Pension	184
	Patching Up or Replacing the Traditional Pension	185
	Default Setting to Encourage Annuitization	200
	Remarks on Public-Sector Pension Plans	202
	Reforms to Tier-One Plans	203
8.	Summary and Conclusions	205
	What Happened...	205
	A Basic Observation on Coverage Drawn from the Ten Countries' Experiences	206

Four Issues in Funding	206
Investing	207
Regulation of Plan Design	208
Regulation of Investments	209
Why Did the Traditional Pension Fall from Favor?	209
What Needs to Be Done	210
The Range of Possible Policies	211
Recent Reforms to First-Tier Plans	213
Public-Sector Employer-Provided Plans	213
Final Thoughts	213
<i>Appendix 1: Ten Country Profiles</i>	215
Introduction	215
Australia	215
Canada	220
Denmark	224
Germany	227
Japan	231
The Netherlands	236
Sweden	238
Switzerland	240
United Kingdom	242
United States	248
<i>Appendix 2: Mathematical Treatments and Derivations</i>	255
Derivation of Certain Conclusions in Chapter 3	255
Simulating the Variability of ISA Premiums (Chapter 7)	256
<i>Glossary</i>	259
<i>References</i>	263
<i>Index</i>	275

Tables

I.1	Quantitative structural features of defined-benefit and defined-contribution pension plans in ten countries	<i>page 2</i>
1.1	Portability, vesting, and benefit preservation in ten countries	31
1.2	Taxation of employer-provided pensions in ten industrial countries	33
2.1	Comparative performance of the phased withdrawal rules	62
6.1	Trends in life expectancies for 65-year-old men and women in ten industrial countries	145
6.2	Selected OECD countries: Percentage share of employed persons by age with tenure of ten years or more	174
7.1	Comparative performance of a defined-contribution plan with guarantee (DC _G)	195
7.2	Frequency distribution of average and single premiums	199
7.3	Frequency distribution of replacement rate	199
A1.1	Australia: Superannuation assets by functional and regulatory classifications, June 2007	217
A1.2	Germany: Forms of employer-provided pension plans	229
A1.3	Germany: Summary of pension vehicle taxation	230
A1.4	Japan: Summary of pension-plan taxation	235

Figures

1.1	Replacement ratios in percent	<i>page</i> 25
2.1	Consumption over the life cycle	37
2.2	Comparison of value of pension benefit at retirement with value at early separation of a cash-balance and a traditional DB plan	58
6.1	Performance of broad stock-market indexes in major financial centers, May 1997 to May 2008	149
6.2	Consumer price inflation in four large industrial countries, 1980 to 2008	153
6.3	U.S. real and nominal bond rates, 1963 to 2008	154
A1.1	Canada: Plan membership and labor-force coverage	221
A1.2	United Kingdom: Active plan members and labor-force coverage, 2000 to 2007	244
A1.3	United Kingdom: Employer-provided pension coverage by income level, 2007	244
A1.4	United States: Pension coverage by type of plan under current job, 1989 to 2007	249
A1.5	United States: Pension/retirement plan coverage by annual salary, 2007	249

Boxes

2.1	The cost of short tenures	<i>page</i> 51
2.2	Four rules for phased withdrawal	60
2.3	Assumptions used in Monte Carlo simulations of four phased-withdrawal strategies	61
3.1	Two examples of the accrued-benefit method	69
3.2	Funding with indexed debt when real-wage growth is perfectly predictable	76
7.1	Hedging against unexpected changes in longevity	189
7.2	Assumptions used in Monte Carlo simulations of the DC _G plan	194
7.3	The pricing of deferred annuities	197

Acknowledgments

In writing this book, I have benefited immensely from the assistance of and useful comments from friends and colleagues around the world. In particular, I am grateful to David Blitzstein, Bruce Cain, Kevin Laughlin, Anna Rappaport, Doriana Ruffino, Allison Schragger, Gene Steuerle, and John Turner for comments on an early version of Chapter 6. I am also grateful to Rudy Penner, Eric Toder, and other former Urban Institute colleagues for their participation in a seminar on that version of the chapter. For comments on the treatment of specific countries (apart from the United States), I am indebted to Alan Borowski, Doug Andrews, Rob Brown, Klaus Blendstrup, Christina Wilke, Stephanie Siering, Junichi Sakamoto, and David Howdon.

My indebtedness to my colleagues in AARP is heavy indeed. Susan Reinhart and Janet McCubbin, the head of the Public Policy Institute and the Economics Team Director, respectively, have been strongly encouraging of my efforts to write this book. Without their support, finishing it might have presented an insuperable challenge. Matt Suntag of AARP International provided me with valuable advice on country experts. I should also thank Monica Ekman and Eunice Cash of AARP's Research Information Center for help with literature searches and requests, and Charlotte Nusberg for her tireless efforts to keep me informed of current international pension developments. I must note, however, that the views the book expresses do not necessarily represent those of AARP.

I hope that *The Decline of the Traditional Pension* will contribute to the enhancing of retirement security in the countries it surveys, and perhaps in other countries as well. Despite all the help I have received, I assume full responsibility for any errors that remain in it.

Introduction

Traditional Pensions in Trouble

The defined-benefit plan has been the preeminent pension form for over a century. Virtually all of the national pensions of industrial countries are defined-benefit plans, as are many of the national pensions in developing and emerging-market countries.¹ It remains the dominant second-tier plan for public-sector employees (i.e., civil servants, teachers, and other occupations working for governments at any level, and employees of public-sector enterprises and decentralized public agencies). Similarly, until recently it has been the dominant form in the private sector of those countries where the second tier covers a significant share of the workforce. Employer-provided defined-benefit plans are invariably average- or final-salary plans.

The labor force coverage of employer-provided plans varies greatly from one country to another, mainly because of variations in the coverage of private-sector employees. In some advanced economies, and notably in France and Italy, coverage is low.² However, in a group of ten advanced countries that includes five G-7 members (the United States,

¹ The book uses *national pension* to refer to the first tier of a country's pension system – the mandatory government-financed system that covers all or virtually all of a country's residents. It may be flat-rated, earnings-related, or a combination of both. The American equivalent is Social Security; the Canadian equivalent is the Canada/Quebec Pension Plan; and the Japanese equivalent is the National Pension (a flat rate scheme), plus the Employees' Pension Insurance (EPI) for private sector employees and Mutual Aid Associations (MAA) for public-sector employees. The EPI and MAA are earnings-related. The plans that governments and other public-sector employers provide their employees are referred to as *public-sector employer-provided plans*. They are part of the second tier.

² France has two economy-wide plans run by the private sector, one for blue-collar workers, and the other for white-collar workers and managers. However, these plans are PAYG, and in many respects they function more like a public than a private plan.

Table I.1. *Quantitative structural features of defined-benefit and defined-contribution pension plans in ten countries (in percent except for column 5, which is expressed in percentage points)*

	All employer plans		Role of defined-benefit plans			
	Assets in relation to GDP	Labor force coverage	Share of defined benefit in total as of date shown		Change in defined benefit share since date shown	
Australia	105.4	90.1	3.0	FY2007	...	...
Canada	55.3	34.2	79.6	2007	9	1995
Denmark	32.4	90.5	2.0	2005	...	...
Germany	4.1	59.0	100.0	2006	...	...
Japan	20.0	62.0	93.0	2008	-7	2001
Netherlands	132.2	100.0	97.0	2005	-3	1998
Sweden	8.7	90.0	14.0	2006	-30	2003
Switzerland	119.4	86.0	26.0	2005	-14	1990
United Kingdom	86.1	29.6	89.8	2007	2	2004
Open DB schemes only	...	...	36.0	2007	-36	2000
United States	74.3	50.0	17.0	2007	-16	1989

Sources: Column 1: OECD: Private Pension Outlook (2008b)

Column 2: National authorities and author's estimates; for Denmark, denominator is full-time employees; includes both public- and private-sector employees.

Columns 3 & 4: National authorities, country studies, and author's estimates.

Columns 5 & 6: National authorities, country studies and author's estimates.

Canada, Germany, the United Kingdom, and Japan), as well as Australia, the Netherlands, Denmark, Sweden, and Switzerland, employer-provided pensions cover a significant share of the labor force. The absolute number of employees covered by public- and private-sector plans in these countries is large, and private-sector plan assets amount to about 70 percent of the group's GDP (Table I.1).³ The book's analysis of developments in employer-provided pensions concentrates on these ten countries.⁴

³ The combined GDP of these ten countries amounts to 70 percent of the combined GDP of OECD members and over half of global GDP. Their combined labor force exceeds 340 million.

⁴ There are not many countries in which employer-provided pensions cover a significant share of the labor force with assets that are large in relation to GDP. The ten countries that are the object of this study include all the industrial countries whose employer-provided pension plans have assets equivalent to at least 15 percent of GDP, apart from Finland, Iceland, and Ireland, which were excluded because of the small size of their economies

Until recently, defined-benefit plans held most of the assets of private-sector employer-provided plans in the ten countries, and the number of defined-benefit plan participants was much greater than the number of defined-contribution plan participants. These plans usually took the form of career-average or final-salary plans, and these are the *traditional* plans to which the book's title refers. However, the traditional pension's coverage of private-sector workers is falling, and in some countries, its future looks bleak.

In the United States and the United Kingdom, the decline in labor force coverage of plans that are still open has been precipitous, so much so that many observers believe that the defined-benefit plan cannot survive as an institution in the private sector. In 1989, defined-benefit plans in the United States covered 32 percent of the work force against 28 percent covered by defined-contribution plans. By 2007, coverage of defined-benefit plans had declined to 17 percent, and coverage of defined-contribution plans had increased to 41 percent.⁵ In the United Kingdom, membership in open private-sector defined-benefit plans dropped from about 4 million in 2000 to 1.3 million (about 4 percent of the labor force) in 2007. In Australia, the demise of the defined-benefit plan is virtually complete, hastened by the pension reform of 1992, which introduced the Superannuation Guarantee, a compulsory employer-administered plan. Small- and medium-sized enterprises that had previously offered no pension plan to their workers now chose to offer defined-contribution plans, probably because they were cheaper to administer and less risky. They proved to be popular.

Defined-benefit plans may not have suffered so dramatic an erosion of membership in the other countries, but some declining trend is evident. In Canada in 1995, 87 percent of the members of private-sector employer-provided plans were covered by defined-benefit plans. By 2007, the share of defined-benefit membership in the private sector had fallen to less than 75 percent (Statistics Canada 2009). In Germany and Japan, a reform permitting defined-contribution or hybrid pensions was passed only eight years ago. Defined-benefit pensions remain preeminent, but defined-contribution plans have begun to spread.⁶

(OECD 2006). Germany, with externally invested assets of less than 15 percent of GDP, is also included because of its size and because it is an interesting case in light of its recent introduction of hybrid plans.

⁵ These figures include participants covered by both types of plans, so there is some double counting.

⁶ In Germany, the new plans have a guarantee on contributions and are classified legally as defined-benefit plans.

In the Netherlands, defined-contribution plans remain rare, but traditional pension plans now include a mechanism that changes the way risk is shared among the sponsor, workers, and pensioners to forestall the emergence of financial imbalances. In Sweden, the full implementation of a notional defined-contribution national pension system (NDC system) in 1999 prompted a wholesale move away from defined-benefit plans in the private sector. In Denmark and Switzerland, defined-contribution pensions, albeit with features that make them resemble defined-benefit plans, have been dominant for two decades.

In the realm of national pensions, the financial strains caused by increasing longevity have threatened to dislodge the defined-benefit plan from its prominent position. In countries like France and Germany, the effect of aging has been reinforced by the impact of declining labor force utilization on collections of the payroll taxes that finance the national pension plan. Aging has also affected the finances of the defined-benefit plans provided by public-sector employers.

Despite the financial pressures to which national pension plans have been subject, most countries have maintained the basic, typically earnings-related form of the plan, although some of them have enacted reforms that have raised average retirement ages and reduced accrual rates. Others have added an adjustment mechanism to offset the financial impact of aging. For example, Germany has added a “sustainability factor” to the adjustment formula for pensions that reduces pensions when the increase in the old-age dependency ratio increases (International Monetary Fund 2004a).

Sweden’s reform of its first tier is more fundamental than Germany’s. Sweden’s NDC system was complemented by an individual account system. Of a total contribution rate of 18.5 percent, 16.0 percentage points finances the NDC system, leaving 2.5 percentage points for the individual account scheme, known as the premium pension. The premium pension may be invested in one or more of as many as 700 investment funds. In addition, the reform made the pension that members of a particular age cohort receive a function not only of members’ earnings history, but also of the cohort’s life expectancy, and incorporated an automatic balancing mechanism that suspends the indexation of pensions to restore balance (Könberg, Palmer, and Sundén 2006, 455–7; Turner 2009).

The United Kingdom is undertaking a major reform of its pension system. The current form of the first tier will be retained but made more generous, although starting pensions will be reduced over time to compensate for the fiscal impact of aging. The employer-provided system will

be substantially changed by requiring employers to offer a pension to their employees. Employees not wishing to be covered will need to opt out (Department of Work and Pensions 2006a).

The Decline of the Traditional Pension is motivated by concerns over the consequences of the diminished standing of traditional pension plans. Despite certain shortcomings, these plans have served as a strong second pillar in pension systems that cover a large number of workers in some of the world's largest economies. Their diminished role may jeopardize retirement security for millions of workers around the world.

Working people who plan for a secure income in retirement confront three risks, apart from the risk that saving rates will fall when spells of unemployment, illness, or disability reduce earned income. First, they may save too little, either because of miscalculation or a failure or inability to stick to a saving plan. Second, even if they save enough, either underperforming financial markets or their own ill-considered investment decisions may prevent them from accumulating sufficient savings by the time they retire. Finally, even if workers skirt these perils and retire with an adequate nest egg, they may still suffer a needless diminishment of their welfare if they either neglect or are unable to purchase a life annuity, or some other form of longevity insurance.

Maintaining a traditional defined-benefit plan is not the only possible policy that employers can adopt to enhance the retirement security of their employees. However, it does provide protection against these three specific risks to a secure retirement. The capacity of other pension plans to do likewise is untested, and whether the arrangements that replace traditional defined-benefit pensions will be adequate in this respect is far from certain. A defined-contribution plan, if the contribution rate is high enough and if participation in the plan is a condition of employment, undoubtedly does achieve one important goal of a program of retirement income security: By forcing the participant to save, it mitigates the first risk.

Unfortunately, defined-contribution plans do not necessarily address the second and third risks. They may not even mitigate the first risk, that of inadequate saving, effectively. With 401(k) plans in the United States – now the dominant pension form in that country – the employee is free to decide whether or not to participate and what his or her contribution rate (up to a limit that the plan specifies) should be. These plans are also vulnerable to the second risk, because the investment decision is typically left to plan participants. The collapse of global equity markets in the fall of 2008 has brought home this risk as nothing else could to members of

defined-contribution plans everywhere. Moreover, distributions from 401(k) plans are usually not annuitized, which increases the risk that the participant may outlive his or her resources in retirement. The failure of these and other alternatives to a defined-benefit plan to deal with all of the risks confronting retired people can, in principle, be addressed or at least mitigated. That they can does not mean they will, however.

Participation in a defined-benefits plan does entail risks of its own, notably the risk that the plan sponsor may not be able to honor its commitments to plan participants, and the risk that plan participants may need to relinquish their employment before they have become fully vested. However, a well-designed defined-benefit plan should substantially reduce the risks faced by plan members in saving for retirement and managing their finances once they have retired. As this book will explain, the pension plans that will replace them may not be capable of replicating the features that allow them to reduce effectively the risks to a secure income in retirement.

In light of these concerns, *The Decline of the Traditional Pension* has three main aims. The first is to explain as fully as possible the forces behind the decline in the traditional pension and account for the staying power of traditional pensions in the public sector, as well as assessing whether they can retain their dominant position given the pressures they are under. The second aim is to propose reforms that would reduce the risks to the retirement of private-sector workers and possibly public-sector workers that the erosion of the traditional pension's position has created. The private-sector reforms would aim to revive the traditional pension if possible, encourage variants of it that would provide a substantially similar degree of protection, or develop alternative forms that preserve its most valuable features should revival not be in the cards. The public-sector reforms would consider ways in which public-sector pensions might be put on a more sound financial footing. The third aim is to review some recent innovations in first-tier plans, notably the Swedish reform mentioned above.

The forces behind the decline of the traditional plan. Pension experts have identified many different causes of the decline of traditional plans, especially the decline of the traditional plan in the United States. Even before the collapse of global equity markets in the fall of 2008, some observers had fingered financial market volatility, and in particular the decline in long-term interest rates that has taken place in global markets since the late 1990s, coupled with the collapse of the high-tech stock market boom (the dot.com boom) in the early 2000s. Other experts have fingered complex and changeable regulatory frameworks, which have caused excessive