

ORIENTATIONS IN DEVELOPMENT SERIES

# Pensions in the Middle East and North Africa Time for Change

DAVID A. ROBALINO



THE WORLD BANK



# Pensions in the Middle East and North Africa Time for Change

David A. Robalino

with

Edward Whitehouse  
Anca N. Mataoanu  
Alberto R. Musalem  
Elisabeth Sherwood  
Oleksiy Sluchynsky



**THE WORLD BANK**  
Washington, D.C.

© 2005 The International Bank for Reconstruction and Development / The World Bank  
1818 H Street, NW  
Washington DC 20433  
Telephone: 202-473-1000  
Internet: [www.worldbank.org](http://www.worldbank.org)  
E-mail: [feedback@worldbank.org](mailto:feedback@worldbank.org)

All rights reserved.

1 2 3 4 08 07 06 05

This volume is a product of the staff of the World Bank. The findings, interpretations, and conclusions expressed herein are those of the author(s) and do not necessarily reflect the views of the Executive Directors of the International Bank for Reconstruction and Development / The World Bank or the governments they represent.

The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

### **Rights and Permissions**

The material in this publication is copyrighted. Copying and/or transmitting portions or all of this work without permission may be a violation of applicable law. The International Bank for Reconstruction and Development / The World Bank encourages dissemination of its work and will normally grant permission to reproduce portions of the work promptly.

For permission to photocopy or reprint any part of this work, please send a request with complete information to the Copyright Clearance Center Inc., 222 Rosewood Drive, Danvers, MA 01923, USA; telephone: 978-750-8400; fax: 978-750-4470; Internet: [www.copyright.com](http://www.copyright.com).

All other queries on rights and licenses, including subsidiary rights, should be addressed to the Office of the Publisher, The World Bank, 1818 H Street NW, Washington, DC 20433, USA; fax: 202-522-2422; e-mail: [pubrights@worldbank.org](mailto:pubrights@worldbank.org).

ISBN-10: 0-8213-6185-6

eISBN: 0-8213-6186-4/978-0-8213-6186-3

DOI: 10.1596/978-0-8213-6185-6

Cover design by Naylor Design, Inc.

Cover photo of a door in Morocco: World Bank/Curt Carnemark.

**TABLE 1**

**Main Economic Indicators in Middle East and North African Countries, 2003**

Country	GDP (US\$ millions)	GDP per capita (US\$)	GDP purchasing power parity per capita (US\$)	Exchange rate	Population (thousands)	Labor force (thousands)
Algeria	65,993	2,073	6,248	77.4	31,833	11,336
Bahrain	9,606	13,934	16,900	0.38	689	329
Djibouti	625	1,373	2,144	177.7	455	116
Egypt, Arab Rep. of	70,000	1,036	3,950	5.85	67,559	20,359
Iran, Islamic Rep. of	136,830	2,061	7,145	8,194	66,392	18,700
Iraq	13,500	547	1,500	2,000	24,700	6,100
Jordan	9,860	1,858	4,320	0.71	5,308	1,628
Lebanon	19,000	4,224	5,073	1,508	4,498	1,646
Libya	23,600	4,245	6,300	1.29	5,559	1,604
Morocco	44,491	1,477	4,012	9.57	30,113	12,413
Tunisia	24,282	2,454	7,083	1.29	9,895	4,050
West Bank and Gaza	3,455	1,026	727	4.54	3,367	600
Yemen, Republic of	10,831	565	889	183.5	19,173	6,120

*Sources:* All data, except as indicated, are from the World Bank World Development Indicators database (2003f, 2004f). Bahrain gross domestic product (GDP) and population data are from the Bahrain Monetary Agency. Djibouti population and labor data are from the recent population survey (National Statistical Office). GDP estimates for the Arab Republic of Egypt are based on National Statistical Office data; for Iraq and Libya, IMF data was used. GDP purchasing power parity (PPP) per capita for Bahrain, Iraq, Libya, and the West Bank and Gaza refer to U.S. government estimates (the West Bank and Gaza for 2002). Labor force data for the Islamic Republic of Iran are based on official historic labor force participation rates; for Iraq, the most recent data were used and provided by the government.

*Note:* Labor force data on the West Bank and Gaza assumes 450,000 employed and a 25 percent unemployment rate.



# Contents

<b>Preface</b>	<b>xiii</b>
<b>Acknowledgments</b>	<b>xv</b>
<b>About the Authors</b>	<b>xvii</b>
<b>Executive Summary</b>	<b>xxi</b>
<b>Acronyms and Abbreviations</b>	<b>xxvii</b>
<b>Glossary</b>	<b>xxviii</b>
<b>1. Overview</b>	<b>1</b>
Chapter 2: Initial Conditions for Pension Reform	2
Chapter 3: Taking Stock of Pension Systems in the Middle East and North Africa	6
Chapter 4: A Framework for Reform	10
Chapter 5: Improving the Management of Pension Funds	16
Chapter 6: Progress to Date and Prospects	16
<b>2. The Initial Conditions for Pension Reform</b>	<b>21</b>
Demographics	21
Macroeconomics	29
Overview of the Financial Sector	36
Conclusions	45
<b>3. Mandatory Pension Systems in the Middle     East and North Africa</b>	<b>49</b>
Institutional Organization and Coverage	49
Size and Shape of the Schemes	58
Incentives	70
Equity within and across Genders	73
Pension Costs, Financial Sustainability, and Fiscal Implications	79
Conclusions	86

<b>4. General Guidelines for a Comprehensive Reform Program</b>	<b>93</b>
Choosing the Mandate of the Public Pension System and Implementation Mechanisms	94
Bringing Current Defined-Benefit, Pay-As-You-Go Systems up to the Standard	102
Benefits and Costs of Higher Funding	116
Expanding Coverage to the Vulnerable and Poor: A Role for Social Pensions?	123
Improving the Institutional Configuration, Administration, and Regulation of Pension Systems	130
<b>5. Management of the Public Pension Funds</b>	<b>139</b>
Lessons from International Experience in Pension Fund Management	140
Pension Fund Management in the Middle East and North Africa Region	146
Improving the Management of Public Pension Funds: Constraints and Opportunities	159
Conclusions	167
<b>6. Progress to Date and Prospects</b>	<b>169</b>
Countries in the Early Stages of Reform	169
Countries in Motion	171
Countries Leading Pension Reform	173
Conclusions	178
<b>Appendices</b>	<b>181</b>
<b>A Demographic Indicators</b>	<b>181</b>
<b>B Methodology for Demographic and Employment Projections</b>	<b>185</b>
Life Expectancy, Total Fertility Rate, and Population Projections	185
Labor Force Projections	187
Unemployment Projections	187
Economic Effects of the Demographic Transition	190
Coverage Rate Projections	191
<b>C Main Parameters of Pension Schemes in the Middle East and North Africa</b>	<b>194</b>
<b>D Tax Treatment of Pension Systems</b>	<b>211</b>
<b>E Basic Formulas and Mathematical Results Used in the Analysis</b>	<b>217</b>

Equivalence of the Standard Defined-Benefit Pension Formula and the Formula Used in a Points System	217
Rates of Return in Earning-Related Schemes	218
<b>F Demographic and Financial Data on Pension Funds</b>	<b>223</b>
<b>References</b>	<b>225</b>
<b>Index</b>	<b>233</b>
<b>Boxes</b>	
1 Glossary of Key Technical Terms	xxviii
5.1 Provisions of the Draft Law on the Public Pension Scheme in the West Bank and Gaza	163
<b>Figures</b>	
2.1 Average Population Growth Rate, by Region, 1960–2002	22
2.2 Old-Age Dependency Ratio, by Region, 1960–2003	23
2.3 Average Population Growth Rate in Middle East and North African Countries, 1960–2002	23
2.4 Young- and Old-Age Dependency Ratios in Middle East and North African Countries, 2000	24
2.5 Life Expectancy and Total Fertility Rate in Middle East and North African Countries, 1985 and 2002	25
2.6 Estimated Difference in the Average Growth Rate of the Working-Age and Dependent Populations in Middle East and North African Countries, 2000–20	26
2.7 Projected Growth Rate of the Labor Force in Middle East and North African Countries, 2002–30	28
2.8 Key Macroeconomic Indicators in Select Middle East and North African Countries, 1993–2003	34
2.9 Banking and Credit as a Percentage of GDP in Select Middle East and North African Countries, 2002	37
2.10 Domestic and External Debt as a Percentage of GDP in Select Middle East and North African Countries, 2002	42
2.11 Market Capitalization and Credit to the Private Sector as a Percentage of GDP in Select Middle East and North African Countries, Various Years, 2000–2	43
2.12 Turnover as a Percentage of GDP in Select Middle East and North African Countries, Various Years, 2000–2	44
3.1 Coverage of the Mandatory Pension System in Select Middle East and North African Countries	54
3.2 Projected Coverage Rate in Middle East and North African Countries, 2003–30	57
3.3 Gross Replacement Rate as a Percentage of Average Earnings in Select Middle East and North African Countries	59
3.4 Net Replacement Rate as a Percentage of Average Earnings in Select Middle East and North African Countries	61

3.5	Gross and Net Replacement Rates as a Percentage of Average Earnings in Schemes for Civil Servants in Select Middle East and North African Countries	61
3.6	Gross Pension Wealth as a Multiple of Average Earnings in Schemes for Civil Servants in Select Middle East and North African Countries	63
3.7	Gross Replacement Rate as a Percentage of Average Earnings in Select Countries around the World	65
3.8	Minimum Pension Guarantee as a Percentage of Average Earnings in Select Countries around the World	66
3.9	Ceiling on the Covered Wage as a Multiple of Average Earnings in Select Countries around the World	67
3.10	Gross Pension Wealth as a Multiple of Average Earnings in Select Countries around the World	67
3.11	Changes in the Internal Rate of Return as a Function of Retirement Age in the SSC in Jordan and the CNSS in Morocco	71
3.12	Internal Rate of Return and Enrollment and Evasion Strategies in the GOSI in Bahrain and in Egypt	73
3.13	Internal Rate of Return and Wage History in the CNR in Algeria and the SSC in Jordan	74
3.14	Internal Rate of Return and Enrollment Age in the SSO in the Islamic Republic of Iran and the RSNA in Tunisia	75
3.15	Real Implicit Rate of Return for a Representative Plan Member in Select Middle East and North African Countries, by Fund	80
3.16	Pension Expenditures as a Percentage of GDP in Mandatory Schemes in Select Middle East and North African Countries	81
3.17	Normalized Implicit Pension Debt in Select Countries around the World	82
3.18	Projected Dependency Ratio in Private and Public Pension Schemes in Select Middle East and North African Countries, 2002–74	84
4.1	“Adequacy” versus “Insurance” Functions in Select Pension Systems around the World	96
4.2	Minimum Pension and General Poverty Line in Select Middle East and North African Countries	97
4.3	Share of the Elderly Living with Their Children in Select Countries around the World	98
4.4	Links between Accrual Rates, Retirement Ages, Rates of Return, and Contribution Rates	104
4.5	Incentive Effects of Top-Ups and Flat Pensions	127
5.1	Pension Assets as a Percentage of GDP in Middle East and North African Countries and World Regions	140

5.2	NIB and Market Interest Rates in Egypt, 1979–2000	151
5.3	Structure of the Portfolio of Investments of the SSO in the Islamic Republic of Iran, 1989–2000	153
5.4	Composition of the Portfolio of the SSC in Jordan, 1980–2002	155
5.5	Governance Indicators in Middle East and North African Countries: Voice, Accountability, and Regulatory Quality, 2002	160
B.1	Age-Specific Survival Rate Forecasts in Middle East and North African Countries, 2002 and 2030	186
B.2	Projected Old-Age and Total-Dependency Ratio in Middle East and North African Countries, 2000–40	188
B.3	Projected Female and Male Participation Rates in Middle East and North African Countries, 2000–30	189
B.4	Projected Unemployment Rates in Middle East and North African Countries, 2000–30	192
E.1	Share of Cohort Surviving to Age in Morocco	218

## Tables

1	Main Economic Indicators in Middle East and North African Countries, 2003	iii
2.1	GDP Growth in Select Middle East and North African Countries, 1990–2003	30
2.2	Distribution of Output and Employment in Middle East and North African Countries, by Sector, 2003	32
2.3	Overview of Banking Sector and Financial Reforms and Stability in Select Middle East and North African Countries	38
2.4	The Insurance Sector in Select Middle East and North African Countries, Various Years, 2000–2	40
3.1	Structure of the Pension System in Middle East and North African Countries	50
3.2	Replacement Rate and Pension Wealth in Public and Private Pension Schemes in Select Middle East and North African Countries	62
3.3	Gross Replacement Rate around the World, by Level of Earnings and Region	68
3.4	Gross Pension Wealth around the World, by Level of Earnings and Region	69
3.5	Earliest Eligibility Age and Pension Wealth for Full-Career Workers, by Gender, in Schemes for Private Sector Workers in Select Middle East and North African Countries	77
4.1	Systemic Reforms in Select Countries in Latin America and Europe	100

4.2	Best Practices in the Design of a Defined-Benefit, Pay-As-You-Go System	108
4.3	Social Pensions in Select Countries around the World	125
4.4	Cost of a Flat Pension of 15 percent of National GDP per Capita in Select Middle East and North African Countries, by Eligibility Age, 2004–40	126
4.5	Age and Poverty in Select Middle East and North African Countries	130
4.6	Administrative Expenditures for Select Middle East and North African Countries	135
5.1	Balance Sheet of the National Investment Bank in Egypt, 2002–4	151
5.2	Structure of Reserves of the CSRO in the Islamic Republic of Iran, 2001	154
5.3	Distribution of NSSF Assets in Lebanon, 2002, 2003	156
5.4	Distribution of Reserves of the Social Security Fund in Libya, 2002	157
5.5	Portfolio Allocation of CDG Assets in Morocco, 2003	158
A.1	Population Size in Middle East and North African Countries and World Regions, 1960–2000	182
A.2	Average Growth Rates, by Region and Period, 1960–2003	183
A.3	Average Population Growth Rates in Middle East and North African Countries, 1960–2003	183
A.4	Labor Force Participation Rate, by Gender, in Middle East and North African Countries and World Regions, 1960–2003	184
B.1	Projected Population Growth Rates, 2003–39	187
B.2	Excess Growth Rate of Working-Age Population over Dependent Population, 2003–39	190
C.1	Characteristics of the CNR and CASNOS in Algeria	194
C.2	Characteristics of the GOSI and PFC in Bahrain	195
C.3	Characteristics of the OPS and CMR in Djibouti	196
C.4	Characteristics of CNR in Djibouti after Implementation of Reform Law 155/AN/02/4L	197
C.5	Characteristics of the Government Pension Fund, Public and Private Enterprises Employee Pension Fund, and the Scheme for the Self-Employed in Egypt	198
C.6	Characteristics of the Scheme for Egyptians Working Abroad and the Casual Employment Sector/ Comprehensive Scheme in Egypt	199
C.7	Characteristics of the CSRO and the SSO in the Islamic Republic of Iran	200
C.8	Characteristics of the SEP and SSW in Iraq	201

---

C.9	Characteristics of the SSC, Civil Service System, and Military Pension System in Jordan	202
C.10	Characteristics of the Military Scheme, the Civil Service Scheme, and the Private Sector End-of-Service Indemnity Program in Lebanon	203
C.11	Characteristics of the SSF in Libya	204
C.12	Characteristics of the CMR and the CNSS in Morocco	205
C.13	Characteristics of the CMR and the RCAR in Morocco	206
C.14	Characteristics of the CNRPS and CNSS in Tunisia	207
C.15	Characteristics of the West Bank Scheme, the Gaza Scheme, and the Security Forces Scheme in the West Bank and Gaza Prior to the Reform	208
C.16	Characteristics of the GCSS, GASS, Police Pension Fund, and the Army Pension Fund in the Republic of Yemen	209
D.1	Tax Treatment of Pensions in Select Middle East and North African Countries	213



## Preface

This is the first comprehensive assessment of pension systems in the Middle East and North Africa. While other regions—Central and Eastern Europe, Central Asia, and Latin America, in particular—have been actively introducing reforms to their pension systems, Middle East and North African countries have lagged behind. This is explained, in part, by the common belief that, because demographics remain favorable—the countries are young and the labor force is expanding rapidly—financial problems are still far in the future and therefore pension reform does not have to be a priority within the broad policy agenda.

The authors show, however, that pension systems in the Middle East and North Africa are facing important structural problems. Their current design imposes unnecessary distortions on the economy and, contrary to general perceptions, can be a source of adverse distributional transfers. Basically, pension funds today favor middle- and high-income workers at the expense of low-income workers. Indeed, the systems cover a relatively modest share of the labor force (33 percent), mostly workers in the public sector and the formal private sector. Moreover, in the majority of systems, the returns that individuals receive on their savings depend on career and wage histories and on enrollment and on retirement strategies. Hence, although redistribution takes place—some individuals receive higher returns than others—it is nontransparent and can be regressive.

But financial problems are starting to develop as well. Even if favorable demographic conditions persisted, pension systems in the Middle East and North Africa would run into trouble eventually. The reason is simple: the benefit promises are not in line with the contribution rates and the retirement ages. The fact is, however, that as in other regions, the populations in Middle East and North African countries will grow older and aggravate the financial problem. Today, most schemes have accumulated large implicit pension debts, ranging between 30 and more than 100 percent of GDP. This debt is related to the promises made to current retirees and contributors and is often larger than the explicit government

debt. Unfortunately, this implicit pension debt is seldom taken into account when setting macroeconomic and monetary policies, thus biasing policy choices and affecting the credibility of the fiscal framework. In the absence of rapid interventions, this debt will continue to grow, threatening the welfare of future generations. Indeed, governments will have to default on this debt by abruptly reducing benefits for future generations, increasing revenues (imposing higher taxes on future generations), or reducing expenditures on other items (such as education and health). Thus waiting to intervene can be costly and unfair.

The authors put forward a comprehensive framework to guide discussion about pension reform. They emphasize the need to differentiate between two types of policy choices: (a) those related to the objectives and the mandate of the pension system and (b) those related to the mechanisms to implement this mandate. Regarding the mandate, countries need to make explicit choices about the level of benefits that the pension system will provide, in particular, which share of preretirement income should be replaced by the public system and which share should be the responsibility of individuals. Various factors that influence these choices are discussed. Ultimately, these reflect social and cultural preferences but, at the same time, face economic and biological constraints. Pension benefits that need to be financed by a 50 percent contribution rate or by working 60 years or more are not affordable. When it comes to the design of the system, the authors emphasize that there are many options that could be considered. There is no universal model that should be adopted by all countries: on the contrary, the structure of the pension system needs to respond to local conditions. What is important is that basic principles of design are respected in all cases, so that whichever system is chosen is able to work properly and deliver on its promises.

My hope is that this book will raise awareness about the need to rapidly address the problems facing pension systems in the region in order to minimize negative fiscal, macroeconomic, and welfare impacts. Readers—policy makers, academics, and all of those interested in pension reform—will find an objective analysis of the current situation and useful principles for designing and implementing a sustainable, efficient, and equitable pension system.

CHRISTIAAN J. POORTMAN  
VICE PRESIDENT  
MIDDLE EAST AND NORTH AFRICA REGION

# Acknowledgments

This report was written by David A. Robalino (senior economist, MNSHD) on the basis of inputs and analytical work prepared by Edward Whitehouse (consultant, Axia Economics), Anca N. Mataoanu (consultant, MNSHD), Alberto R. Musalem (lead economist, MNSHD), Elisabeth Sherwood (MNSIF), Oleksiy Sluchynsky (pension economist, MNSHD), Tatyana Bogomolova (social protection specialist, HDNSP), Montserrat Pallarès (social protection specialist, HDNSP), Massimo Sabbatini (consultant), Anne-Marie Vilamovska (consultant), and Rawan Abdel Razek (consultant). Darcy Gallucio edited the first draft of the document, and Rougiata Bah-Sanchez provided excellent administrative support. Peer reviewers were Robert Holzmann (director, HDNSP), Hermann Von Gersdorff (sector manager, Social Protection, ECAHD), and Robert Palacios (senior economist, SASHD). The team would like to thank Michal Rutkowski, Setareh Razmara, Mustapha Nabli, George Schieber, Jacques Baudouy, Yasser El-Gammal, Richard Hinz, Gustavo Demarco, Josephine Bassinette, Warren McGillivray, Ibrahim Muhanna, David Lindeman, Christopher Bender, and Claire Dosner for providing comments, guidance, and valuable insights at various stages of the production process.

The preparation of this report would have not been possible without the support of policy makers, managers, and technical staff in the various countries, who shared their institutional knowledge and responded to innumerable requests for information. The team is particularly indebted to Mr. Hacene Boubedra in Algeria, Mr. Rashid Ismail, and Mr. Shaikh Essa Al Khalifa in Bahrain; Mr. Arbahim All Hamad in Djibouti; Mrs. Amina Ghanem, Mr. Hisham Pawfik, Mr. Ahmed Darar, and Mr. Mahmoud Maged Khattab in the Arab Republic of Egypt; Mr. Majid Yarmand, Mr. Vaez Mahdavi, Mr. Hossein Raghfar, Mrs. Monirosadat Kordestanchi, Mr. Saber Sheibani, Mrs. Fariba Keshavars, Mrs. Zahra Niksirat, Mr. Kamran Gorbanali, Mr. Mohammadi Torbati, and Mr. Mehdi Karbasian in the Islamic Republic of Iran; Mr. Noury Al Hilfi and Mr. Mowafaq Attisha in Iraq;

Mr. Khalid Al-Wazani, Mr. Basem Awadacch, Mr. Taisfer Al Smadi, Mr. Mohamed Sartawi, Mr. Basel Hindawi, and Mrs. Dana Jamboulat in Jordan; Mr. Mohammad Karaki, Mr. Joseph L. Khalife, Mr. Nabil Semaan, Mr. Samer Sinno, Mr. Said Kaakour, Mr. Izzat El Dada, Mr. Rami Sukkar, Mr. Fouad Sinora, Mr. Jihad Azour, and Mr. Nahas in Lebanon; Mr. Mohamed Bendris, Mr. Mounir Chraibi, Mr. Omar Aroussi, Mr. Thami El Barki, Mr. Thami Yahyaoui, Mr. Khalid Cheddadi, Mr. Mimoun Zbayer, Mr. Mohamed Sabah, Mr. Lotfi Boujendar, Mr. Salah-Eddine Benjelloun, and Mr. Abder Janani in Morocco; Mr. Mohamed Chaabane in Tunisia; and Mr. Mohammed Almourda in the Republic of Yemen.

## About the Authors

*David A. Robalino* is a senior economist at the World Bank in the Middle East and North Africa Region. Since joining the Bank, he has been providing policy advice to several countries, including Algeria, Bahrain, Djibouti, Egypt, the Islamic Republic of Iran, Iraq, Jordan, Kenya, Libya, Lebanon, Morocco, and Thailand. Prior to joining the Bank, he was a researcher at the RAND Corporation, where he was involved in the development of quantitative methods for economic analysis under conditions of deep uncertainty. He also served on the Presidential Committee for Social Security Reform in Ecuador. Mr. Robalino has published on issues related to macroeconomics and labor markets, social insurance and pensions, health financing, the economics of HIV/AIDS, and the economics of climate change. Mr. Robalino holds a PhD in economic analysis from the RAND Graduate School in Santa Monica, California, a DEA in macroeconomics and econometrics from the Sorbonne University in Paris, France, and a BA in economics, mathematics, and computer science from the Central University in Quito, Ecuador.

*Edward Whitehouse* is the director of Axia Economics, a consultancy firm based in London that specializes in the microeconomic analysis of public policy. Axia Economics has been involved in numerous projects with the Organisation for Economic Co-operation and Development (OECD) and the World Bank. Analysis provided by Axia Economics covers more than 60 countries. Mr. Whitehouse is also the joint editor of the World Bank's pension reform primer series. He was previously with the *Financial Times* as lead writer and social affairs correspondent. Before that, he worked in the Fiscal Affairs Division of the OECD in Paris and at the Institute for Fiscal Studies in London. He has taught at University College, London, and Oxford University. Mr. Whitehouse has published extensively on topics related to pensions, financial sectors, and labor markets.

*Anca N. Mataoanu* is an economist with expertise in social insurance and finance. She works for the World Bank as a consultant in social

protection policies for the Human Development Department of the Middle East and North Africa Region. Prior to joining the Bank, she conducted research on pension supervision and regulation as a visiting scholar at the Wharton School, University of Pennsylvania. She also worked as an adviser to the deputy minister of labor in Romania, providing support on various policy, financial, and legal aspects of pension reform. Ms. Mataoanu holds an MA in public administration and finance from the University of Pennsylvania and a BA in economics from the Academy of Economic Studies in Bucharest.

*Alberto R. Musalem* is the chief economist of the Financial Stability Center in Argentina. From 1985 to 2004, he was a staff member of the World Bank. At the Bank, he was an adviser on contractual savings (pension and life insurance) and the tax treatment of financial instruments in the Financial Sector Development Department. He has advised many countries including Argentina, Bahrain, Bulgaria, Costa Rica, Egypt, India, Republic of Korea, Lebanon, Morocco, Philippines, Russia, Saudi Arabia, Sri Lanka, Thailand, and Uruguay. Mr. Musalem also contributed to the research and analysis of the effects of contractual savings on national saving and financial markets, and he led the dialogue on economic, trade, and financial sector policies in several countries of Latin America, the Middle East, and Eastern Europe. Prior to joining the World Bank, he worked for The Rockefeller Foundation and the Ford Foundation as a visiting professor in graduate economics programs in South America and the United States (1971–84) and for the Harvard Institute for International Development as an adviser to the Economic Planning Department of the Government of Colombia on macroeconomics, trade, and financial sector policies (1968–70). He is the author of numerous publications and working papers in Argentina, Brazil, Colombia, Chile, Germany, and the United States. Mr. Musalem holds a PhD in economics from the University of Chicago.

*Elisabeth Sherwood* is a financial sector specialist in the Middle East and North Africa Region of the World Bank, where she has worked since 1996, focusing on general financial sector development issues and on housing and corporate finance. Ms. Sherwood holds a BA from Princeton University and an MA from Columbia University. She is a CFA charter holder.

*Oleksiy Sluchynsky* is an economist with expertise in pension policy and reform. He works for the World Bank Group as a specialist in social protection policies for the Middle East and North Africa Region. Most recently, in the capacity of a resident pension reform adviser, he provided support to the pension reform process in Kosovo, developing and advocating the concept for reform, implementing the new pension legislation, and advising the Ministry of Economy and Finance and the

Kosovo Pension Savings Trust on various policy, financial, legal, and administrative matters of the reform. Mr. Sluchynsky has worked as a consultant with the World Bank's Social Protection Team for the Europe and Central Asia Region, researching legal and administrative aspects of pension reform policies in Central and Eastern European countries. He has extensive expertise in administrative and information technology issues in funded pension systems, having researched and written on international best practices, costs, and efficiency of various administrative models for the collection and management of pension contributions. He also worked for the Harvard Institute for International Development's Macroeconomic Reform Project in Ukraine. Mr. Sluchynsky holds an MA in public administration and international development from Harvard University's Kennedy School of Government and an MA in economics and an MSc in computer sciences from the Economics Education and Research Consortium in Kiev, Ukraine.



# Executive Summary

Most countries of the Middle East and North Africa set up their current national pension schemes in the 1970s, and no major changes or reforms have been introduced since then. This report shows why pension reform is needed and why it is urgent. It sets out the options and the arguments for different ways forward.

The report highlights six general problems with pension systems in the region: the pension promise is large and unaffordable; schemes are financially unsustainable; badly designed rules introduce unnecessary distortions in labor supply and savings decisions; the schemes are fragmented and administration is weak and costly; coverage rates are modest, with important gaps among the self-employed and in rural areas; and governance structures are not designed to ensure that the funds are managed in the best interests of plan members.

This is a stark prognosis, but there is some room for optimism. Middle East and North African countries do have time to act before the financial problems bite, but the window for action will not last long. It is, indeed, “time for change.”

## The Prognosis

*Pension promises in Middle East and North Africa are large and unaffordable.* Pension systems in the Middle East and North Africa target, on average, a pension for full-career workers of nearly 80 percent of earnings before retirement. This is much higher than the pension promise in 24 high-income Organisation for Economic Co-operation and Development (OECD) countries, in 10 countries in Eastern Europe and Central Asia, and 9 countries in Latin America and the Caribbean, where pension replacement rates average 57 percent.

Middle East and North African countries rarely impose a cap on the level of earnings eligible for pensions (or these ceilings are very high). For higher-income workers, earning double the average, the target replacement rate averages more than 75 percent in the Middle East and

North Africa region, compared with less than 50 percent in 43 countries in other regions.

The size and scope of the pension mandate mean that few people will want to provide for retirement outside the mandatory pension system, including middle and high earners. This means that retirement savings are not diversified, making them more risky for individuals than they need be and hampering the development of capital markets through long-term savings institutions. Finally, high mandates are simply unlikely to be affordable.

*Pension systems are financially unsustainable as a result not of future aging of the population but of poor system design.* Because pension schemes in the Middle East and North African countries are “young,” they are still running cash flow surpluses, meaning that contribution revenues exceed benefit expenditures. But this happy position cannot and will not last for long. The financial projections in this report show that the future flow of pensions already promised (that is, the implicit pension debt) adds up to, on average, 80–90 percent of gross domestic product (GDP). This is often larger than conventional government debt. Even where there are pension reserves, these probably will be depleted in 10 years or so.

The financial problem is basically explained by the fact that promised benefits are not in line with retirement rules and contribution rates. Adjusting these parameters—for instance, by increasing the contribution rate—could improve financial sustainability, but the necessary adjustments are unlikely to be feasible.

As an illustration, to pay for pensions of the size that is promised without changing the retirement rules, the pension contribution rate will need to rise to 30 percent or more, just to cover old-age pensions: adding in survivors’ and disability benefits, the contribution rate will need to be higher still. A rise in contribution rates of this degree will have substantial effects on labor costs and so on competitiveness. Even without demographic change, pension systems will soon encounter financial problems.

*Pension schemes have badly designed rules that damage incentives and arbitrarily redistribute income between members.* Basing pension entitlements on final salary, rather than the average of pay over the lifetime, is unfair and open to abuse. The history of earnings recorded by the pension scheme can be manipulated so that the final salary, which determines the pension, is high, while pay in earlier years, on which contributions are levied, is lower. Moreover, individuals whose earnings rise rapidly over their career, who tend to be relatively well paid, receive relatively more from the pension system than those whose earnings rise slowly (that is, they receive larger benefits relative to their contributions).

Pension schemes in the Middle East and North Africa also favor and thus encourage early retirement. While the normal age for pension eligibility is typically 60, people often can draw the pension at age 50 or earlier. Early retirees see no adjustments of their benefits or pay a penalty

that does not reflect the cost of paying the pension for a longer period. Again, this implies that workers retiring earlier get a better return on their contributions than those who retire at the normal age or earlier.

Because the implicit returns on the contributions that members pay depend on their wage history and strategies regarding enrollment and retirement, the redistribution that takes place within the pension system is not transparent. Basically, middle- and high-income individuals can receive better treatment than low-income individuals.

*Administration of pensions is fragmented, often with two or more schemes for different groups of workers. This is unnecessarily costly and limits the mobility of the labor force across sectors.* There are economies of scale in managing pension plans, so running multiple programs means that administrative costs are higher than they need be. An integrated approach, with a single program for all workers, is more efficient.

It is often impossible to transfer pension rights between different pension schemes, or the procedures are cumbersome at best. This makes labor markets rigid because the movement of the labor force between sectors is less fluid. Both public and private sectors could benefit from a flow of workers between employers.

Finally, benefit formulas and eligibility conditions vary considerably among the schemes. Fragmentation then becomes another source of inequalities, as the mandatory pension system treats workers in different sectors differently.

*Much of the workforce remains uncovered by a formal pension scheme, reflecting the structure of labor markets.* Around a third of the workforce in Middle East and North African countries is covered by the pension system. Coverage rates are higher in predominantly public sector economies, such as Libya, or in countries with special programs for agricultural workers and the self-employed, such as the Arab Republic of Egypt and Tunisia.

While better incentives for individuals to contribute and for systems to improve their administrative capacity to track contributions could expand coverage and reduce evasion at the margin, the main driver will be the capacity of the economy to generate jobs in the formal sector. Prospects today are not encouraging, and a considerable part of the labor force will continue to lack access to appropriate income security during old age.

*Governance and administration of pension schemes are weak. In particular, pension reserves are not managed in the best interests of their members.* Tripartite boards, with representatives of government, employers, and trade unions, are common. Nominated members often lack the expertise necessary to manage large and complex financial institutions, and responsibilities are blurred.

The result is that, where there are pension reserves, investment policies are risky, governed more by political influence than by the interests of pension scheme members. Most reserves are in the form of government debt,

in part reflecting the state of development of capital markets. However, the debt is rarely formal or marketable. Holdings in private sector enterprises are often in companies managed directly by the pension fund. Their value is difficult to determine, the relative performance of the companies is difficult to assess, and the companies' solvency is often questionable.

In addition, administrative capacity is generally weak, amplifying the problems. Although no survey of administrative capacity has been conducted across countries, the quality of management raises issues regarding the administration of collection and record keeping, identification of plan members, payment of benefits, information technology infrastructure, and administrative costs. In particular, information technology systems are either outmoded or nonexistent. This makes it impossible for workers to check the accuracy of records and to know the pension entitlement that they have earned.

Finally, *pensions involve a long-term commitment: today's policies have implications for years and decades to come.* Middle East and North African countries are making pension promises that will be difficult or impossible to keep. With serious financial problems impending, the time for a change in pensions is now.

## The Way Forward

Countries considering pension reform ought to differentiate policy discussions at two levels: (a) general principles and objectives for the pension system and (b) mechanisms for implementation.

Regarding the objectives, pension systems around the world concentrate on guaranteeing a basic level of income at retirement (adequacy function) and/or ensuring a minimum level of replacement of before-retirement income (insurance function). Middle East and North African countries will need to make explicit choices about the objectives of the pension system. Thus societies will need to determine the level of pension entitlements that the system will guarantee at various levels of income. These choices reflect social preferences and cultural factors (such as family structure and the capacity of individuals to save on their own for retirement). In all cases, choices need to be affordable. Replacement rates that require a 30 percent contribution rate are neither affordable nor sustainable. In general, there is little rationale for the pension system to be the only source of retirement income, particularly among middle- and high-income workers.

Regarding implementation, countries have a large pool of pension systems from which to choose. These systems can be classified along three dimensions: how they are financed (pay-as-you-go, fully funded, government budget, or some combination), how pensions are calculated and risks distributed (earnings-related schemes, defined-contribution

schemes, or some combination), and how the system is managed (for example, private or public management, centralized or decentralized management). There is no unique model that should be implemented. Choices need to respond to local economic, political, and social conditions. These choices, however, need to be based on sound economic analysis. In all cases, basic norms for the proper operation of the system should be respected. In the Middle East and North Africa, the following principles should guide the reform:

- The pension system should provide benefits that are adequate and affordable to all workers.
- The pension system should be financially self-sustainable, thus guaranteeing that pension promises can be kept.
- If redistribution takes place, it should be transparent and progressive (that is, from high- to low-income workers).
- The pension system should not distort incentives, and this requires a closer link between contributions and benefits.

In most Middle East and North African countries, current defined-benefit schemes are likely to remain an important part of the mandatory pension system. An integrated reform strategy will then involve interventions in the following areas:

- *Improving financial sustainability, incentives, and equity of current earnings-related schemes.* This will imply realigning promised benefits with contribution rates and retirement rules and establishing a closer link between the earnings on which contributions are paid and the earnings on which pension entitlements are calculated.
- *Mitigate the impacts of the reforms on women and review policies that discriminate against them.* The necessary changes in benefit formulas and eligibility conditions are likely to affect more women than men. Thus it is necessary that adjustments for them will be more gradual. In addition, women should have the same rights when it comes to transferring pensions to their survivors. Special interventions will also be required to better protect the rights of divorced women and those married to men with multiple wives. Finally, it is important to identify and cost mechanisms to maintain a minimum level of contributions to the pension fund during the child-bearing years.
- *Identifying mechanisms to finance the current implicit pension debt in a transparent manner while making future liabilities explicit.* Pension reform will ensure that the pension rights accrued by new contributions will be sustainable. The reform, however, will not eliminate the current implicit pension debt—that is, the flow of pension promises to current

retirees and current contributors. It is important to make this implicit debt explicit (that is, in the form of formal government debt) and to design transparent financing mechanisms. In addition, to improve the credibility of the fiscal framework, it is desirable that new implicit pension liabilities be backed by explicit government debt.

- *Improving governance and administration.* Reforms include improving the mechanisms to select the governing body, accountability, and investment policies to ensure that pension schemes are run in the best interests of members. In addition, work is needed on improving institutional capacity and administration, which will include investments in information technology systems. Finally, it is important to review the institutional organization of the pension system to ensure a gradual integration of the various schemes. In the meantime, “bridges” are needed to facilitate mobility across schemes.
- *Expanding coverage.* Efforts are needed to explore ways of extending the formal pension system to vulnerable groups. However, this policy should follow reforms that put the pension system on a financially sustainable footing.
- *Diversifying the retirement-income provision.* Countries with a core of sound banks and insurance companies and a clear agenda to support financial sector development (for example, Jordan, Lebanon, and Morocco) should consider higher levels of funding in the mandatory scheme. It is also desirable to promote the development of voluntary private pensions, which implies having in place the appropriate regulatory and supervisory framework.

The report is organized in six chapters. Chapter 1 discusses motivations and objectives and details the main findings and messages of each of the chapters. Chapter 2 discusses the initial conditions for pension reform, including demographics, macroeconomic prospects, and the level of development of the financial sectors. Chapter 3 takes stock of the public pension system in the region and identifies the main problems that necessitate attention. Chapter 4 introduces a general framework for pension reform. It describes a set of minimum conditions that any reform program will have to meet: the specific content of these programs clearly will have to reflect local economic, social, and political conditions. Given the relevance for most countries in the region, chapter 5 treats separately the issue of how to improve the management of public pension funds to serve the interests of plan members. Finally, chapter 6 provides a brief overview of where Middle East and North African countries stand in the reform process and discusses future prospects.

# Acronyms and Abbreviations

CASNOS	Caisse d'Assurance Sociales des Non-Salariés, Algeria
CDG	Caisse de Dépôt et de Gestion, Morocco
CIMR	Caisse Interprofessionnelle Marocaine de Retraite, Morocco
CMR	Caisse Marocaine de Retraite, Morocco
CNR	Caisse Nationale de Retraite, Djibouti
CNR	Caisse Nationale des Retraites, Algeria
CNRA	Caisse Nationale de Retraite et d'Assurance, Tunisia
CNRPS	Caisse Nationale de Retraite et de Prevoyance Sociale, Tunisia
CNSS	Caisse Nationale de Sécurité Sociale, Morocco
CNSS	Conseil National de Sécurité Sociale, Tunisia
CNSS	Conseil National de Sécurité Sociale, Djibouti
CPP	Canadian Pension Plan
CSEA	Comité de Suivi des Etudes Actuarielles, Morocco
CSRO	Civil Servant Retirement Organisation, the Islamic Republic of Iran
EOSI	End-of-service indemnity, Lebanon
GASS	Civil service pension fund, Yemen
GCC	Gulf Cooperation Council
GCSS	Private Pension Fund, the Republic of Yemen
GDP	Gross domestic product
GEPF	Government Employees Pension Fund, Egypt
GOSI	General Organisation for Social Insurance, Bahrain
IRR	Implicit rate of return
MPO	Management and Planning Organization, the Islamic Republic of Iran
NIB	National Investment Bank, Egypt
NSSF	National Social Security Fund, Lebanon
OECD	Organisation for Economic Co-operation and Development
OPS	Organisme de Protection Sociale, Djibouti

PFC	Pension Fund Commission, Bahrain
PPEEPF	Public and Private Enterprises Employees Pension Fund, Egypt
PPP	Purchasing power parity
PROST	Pension Reform Options Simulation Toolkit
RCAR	Régime Collectif d'Assurance et de Retraite, Morocco
RNS	Régime des Non-Salariés, Tunisia
RSA	Régime Salaries du Secteur Agricole, Tunisia
RSAA	Régimes Salaries Associés du Secteur Agricole, Tunisia
RSNA	Régime des Salariés Non-Agricoles, Tunisia
SSC	Social Security Corporation, Jordan
SSF	Social Security Fund, Libya
SSIU	Social Security Investment Unit, Jordan
SSO	Social Security Organization, the Islamic Republic of Iran
SSW	Social Security and Welfare, Iraq

**BOX 1****Glossary of Key Technical Terms**

*Accrual rate.* The share of the preretirement income (income measure) that the worker receives on retirement for each year of contribution.

*Full-career worker.* An individual who joins the system at age 20 and contributes until the normal retirement age or until the maximum replacement rate is reached.

*Implicit rate of return.* Technically, the rate of return that equates the present value of contributions to the present value of future pension payments. Since individuals pay contributions (an operation similar to depositing savings in a bank account) and, on retirement, receive pensions (an operation similar to withdrawing savings from a bank account), it is possible to compute the implicit rate of return on the contributions.

*Income measure.* The income used as the basis for computing the pension—for instance, the average of the last 10 years of salaries. Technically, the pension is equal to the income measure times the accrual rate times the number of years of contributions.

*Pension wealth.* The value at the time of retirement of discounted future pension payments.

*Replacement rate.* The pension divided by the last wage.

*Vesting period.* The number of years during which individuals have contributed and accumulated pension rights.

*Indexation of pensions.* The process by which the value of pensions is adjusted over time—for instance, as a function of inflation.

*Revalorization of wages.* The process by which the wages included in the calculation of the pension are adjusted—for instance, by inflation.