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# Pension Systems and Reform Conceptual Framework

Robert Holzmann, Richard Paul Hinz and Mark Dorfman

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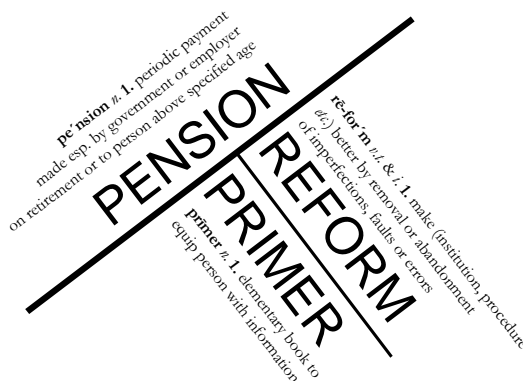
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## Abstract

The World Bank's conceptual framework to assess pension systems and reform options evaluates *initial conditions* and the *capacity to improve the enabling environment*, then focuses on how best to work within these to achieve the *core objectives* of pension systems--*protection against the risk of poverty in old age* and *smoothing consumption* from one's work life into retirement. The Bank applies a multi-pillared approach towards pension system *modalities* to address the needs of target populations including: (i) a *non-contributory "zero pillar"* extending some level of old-age income security to all of the elderly; (ii) an *appropriately sized mandatory "first pillar"* with the objective of replacing some portion of lifetime pre-retirement income through contributions linked to earnings; (iii) a *funded mandatory defined-contribution "second pillar"* that typically provides privately-managed individual savings accounts; (iv) a *funded voluntary "third-pillar;"* and (v) a *non-financial "fourth pillar."* The primary evaluation criteria are the ability of the system to maintain *adequacy, affordability, sustainability, equity, predictability* and *robustness*. The secondary evaluation criteria are the system's capacity to: minimize labor market distortions; contribute to savings mobilization; and contribute to financial market development. Because pension benefits are claims against future economic output, it is essential that over time pension systems contribute to growth and output to support the promised benefits. Going forward, the Bank is focusing on strengthening its support in: (a) establishing a clearer results framework to assess pension systems and reforms; (b) enhancing knowledge management, including research and learning; and (c) improving implementation capacity.

**JEL Classification:** H55, J14, J26

**Keywords:** public pensions, old age income security, elderly



## Table of Contents

Preface.....	iii
Executive Summary .....	iv
I. Introduction .....	1
II. The Bank’s Approach to Pension Reform.....	3
A. Conceptual Framework .....	3
B. Design Principles in Determining Reform Choices .....	9
III. Priority Issues Going Forward.....	12
Appendix 1: List of World Bank Documents .....	14
Appendix 2: Country-Specific Options for Reform: Policy Progression and Path Dependency .	15

## Tables

Table 1. The Bank’s Conceptual Framework .....	4
Table 2. Multipillar Pension Taxonomy .....	7
Table 3. Stylized Reform Choices for Countries: Matching Reform Needs with Constraints and Opportunities.....	17

## PREFACE

This document outlines the conceptual framework behind the World Bank's thinking on pension systems and reform. As our thinking has evolved over time, we thought it important to succinctly summarize our conceptual framework and make it available to the international public.

Much of the World Bank's conceptual framework is contained in the 2005 publication, "*Old Age Income Support in the 21st Century: An International Perspective on Pension Systems and Reform*" and other Bank publications. Our thinking was sharpened by a request from the Bank's Board of Executive Directors to produce a paper for informal Board discussion that would highlight the conceptual framework utilized by staff in their dialogue with member countries. Such paper was produced in a participatory process that included the Bank's regional staff, representatives from different sectors and multiple external reviewers. The paper was discussed by the Board in autumn 2007 and the framework received endorsement by its members as guidance for future work.

This Social Protection Discussion Paper has been prepared drawing verbatim from the 2007 Board Discussion Paper. Its aim is to share the framework the World Bank is applying with interested stakeholders including counterpart countries and other development partners. We hope that you find it to be a useful resource. As always, we welcome your comments and suggestions.

Washington, DC  
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## PENSION SYSTEMS AND REFORM CONCEPTUAL FRAMEWORK EXECUTIVE SUMMARY

**This report updates and sharpens the Bank’s conceptual framework used by staff in approaching pension diagnostic assessments and in designing reform options.**<sup>1</sup> The report suggests the Bank’s current thinking on the analytic framework used to assess pension needs and reform options. The report has been prepared by the Social Protection Team in the World Bank’s Human Development Network in consultation with regional and network staff in Human Development, Poverty Reduction and Economic Management (PREM), and the Financial and Private Sector Development networks. An earlier version was reviewed and comments provided by a distinguished panel of external reviewers.

**The Bank has applied a conceptual framework that is based on the importance of individual country conditions and the flexible application of a diversified five pillar model for pension systems in formulating its analysis and policy recommendations.** The framework starts with the *initial conditions* which establish both the motivation for reform and the constraints on feasible reform options. Initial conditions include *inherited systems*, the *reform needs* of such systems, and the *enabling environment* which may or may not be conducive to a reform process. Having determined the initial conditions, the framework focuses on the importance of identifying the core *objectives* of country pension systems--*protection against the risk of poverty in old age* and *smoothing consumption* from one’s work life into retirement. In setting out the objectives of pension systems, policymakers also need to consider broader questions of social protection and social policy towards the poor in the society at large.

**The Bank believes that a multi-pillared approach towards pension system modalities is best able to address the needs of the main target populations and provide security against the multiple risks facing pension systems.** The overall framework includes: (i) a *non-contributory “zero pillar”* that extends some level of old-age income security to all of the elderly where social conditions warrant and fiscal circumstances can sustain such a system and; (ii) an *appropriately sized mandatory “first pillar”* with the objective of replacing some portion of lifetime pre-retirement income through contributions linked to earnings, and which is either partially funded or financed on a pay-as-you-go basis; (iii) a *funded mandatory defined-contribution “second pillar”* that typically provides privately-managed individual savings accounts establishing a clear linkage between contributions, investment performance and benefits, supported by enforceable property rights and which may be supportive of financial market development; (iv) a *funded voluntary “third-pillar”* taking many forms; and (v) a *non-financial “fourth pillar”* that includes access to informal support such as from families, other formal social programs such as health and housing, and individual assets.

**The primary criteria for evaluating pension systems within this framework are adequacy, affordability, sustainability, equity, predictability, and robustness:** (i) an *adequate* system provides benefits sufficient to prevent old-age poverty (at a country-specific absolute

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<sup>1</sup> This report draws extensively from a report discussed by the World Bank Board of Directors on October 6, 2007 entitled: *Pension Systems and Reform Discussion Paper*. For a more in-depth and comprehensive discussion of the framework, concepts and issues presented, see in particular Robert Holzmann and Richard Hinz, *Old Age Income Support in the 21st Century: An International Perspective on Pension Systems and Reform*, The World Bank, 2005, <http://go.worldbank.org/NOHR1Y9LU0>.

level) to the full breadth of the population in addition to providing a reliable means to smooth lifetime consumption for the vast majority of the population; (ii) an *affordable* system is one that is within the financing capacity of individuals and the society and does not unduly displace other social or economic imperatives or have untenable fiscal consequences; (iii) a *sustainable* system is one that is financially sound and can be maintained over a foreseeable horizon under a broad set of reasonable assumptions; (iv) an *equitable* system is one that provides the income redistribution from the lifetime rich to the lifetime poor consistent with the societal preferences in a way that does not tax the rest of society external to the system and provides the same benefit for the same contribution; (v) a *predictable* benefit is provided by a system where the benefit formula is specified by law and not subject to the discretion, the defined benefit formula is designed to insulate the individual from inflation and wage adjustments prior to retirement or the defined contribution investment policy can insulate the beneficiary from material effects on benefits from asset price adjustments prior to retirement; and the benefit is automatically indexed during retirement so as to shield the worker from effects of price adjustments; and (vi) a *robust* system is one that has the capacity to withstand major shocks, including those coming from economic, demographic and political volatility.

**In addition to the primary criteria some secondary evaluation criteria related to the ability of the pension system to *contribute to output and growth*** are incorporated into the framework. These include the capacity to: (i) minimize labor market distortions; (ii) contribute to savings mobilization; and (iii) contribute to financial market development. A central tenet of the approach is the view that because pension benefits are claims against future economic output, it is essential that, over time, pension systems contribute to growth and output to support the promised benefits.

**Going forward, the Bank is focusing on strengthening its support of pension systems and reform in three main areas:** (i) establishing a clearer results framework to assess pension systems and reforms, including better baseline and benchmark data; (ii) enhancing knowledge management, including research and learning; and (iii) improving implementation capacity.

# **PENSION SYSTEMS AND REFORM CONCEPTUAL FRAMEWORK**

## **I. INTRODUCTION**

**Over the past decade, the importance of pension systems to the economic stability of nations and the security of their aging populations has been increasingly recognized by countries at all levels of development.** Many pension systems, primarily, although not exclusively, those with a dominant publicly managed defined-benefit design operated on a pay as you go basis have major fiscal consequences or are projected to be financially unsustainable over the long term. Many of these do not fully deliver on their social objectives of poverty alleviation and income smoothing, create significant distortions in the operation of market economies and result in redistribution in favor of higher income groups. Other countries have not yet developed meaningful pension and retirement savings systems or have not achieved access to these among the broad base of the population. This exposes many elderly to the risk of a severe decline in their living standard or descent into poverty when they are no longer able to work.

**The need to strengthen social insurance and contractual savings systems that provide income for the elderly is also driven by the pressures of global population aging, the erosion of informal and traditional family support systems, and weaknesses in the governance and administration of existing pension systems.** The importance of effective formal sources of retirement income is accentuated by changes in work and family patterns including the increasing participation of women in formal employment, rising divorce rates, diminishing job stability and increases in local and international labor migration.

**To address these demands the World Bank has become involved in reforming pension systems and supporting the development of contractual savings arrangements** in an increasingly diverse range of settings throughout the world. This has been undertaken through a variety of lending products, policy advice and technical assistance. Since the mid 1980's, support for pension reforms has become a significant and highly visible element of the Bank's activities.

**The objective of this report is to update and sharpen the Bank's conceptual framework used by staff in approaching pension diagnostic assessments and in designing**

**reform options.**<sup>2</sup> The report suggests the Bank's current thinking on the analytic framework used to assess pension needs and reform options. The report does not aim to chart new ground in the framework for pension assessment and therefore refers to the appropriate reference materials. The report has been prepared by the Social Protection team in the World Bank's Human Development Network in consultation with regional and network staff in Human Development, Poverty Reduction and Economic Management (PREM), and the Financial and Private Sector Development networks. An earlier version was reviewed and comments provided by a distinguished panel of external reviewers.<sup>3</sup>

**The Bank's conceptual framework and priority issues emerge from its experience in Bank-supported reforms and the changing needs now emerging in client countries.** By contributing to knowledge and lending products on a country level, regionally and internationally, the Bank has reevaluated and adjusted its position and the formal and informal guidance to staff. Central anchors provide an overall policy perspective in close collaboration with operational teams in the regions. The Bank's thinking thus embeds lessons from successful and unsuccessful experiences as well as the feedback from client countries. Following the important work of the mid-1990's, *Averting the Old Age Crisis* that established key principles and concepts, the Bank's attention has increasingly focused on refining system designs to adapt these principles to widely varying conditions and better address the needs of diverse populations to manage the risks in old age. The conceptual framework for the Bank's pension work is presented in the 2005 report, *Old Age Income Support in the 21st Century: An International Perspective on Pension Systems and Reform*. The findings of these and important regional reports illustrate the evolution of thinking

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<sup>2</sup> This report draws extensively from a report discussed by the World Bank Board of Directors on October 6, 2007 entitled: *Pension Systems and Reform Discussion Paper*. For a more in-depth and comprehensive discussion of the framework, concepts and issues presented, see in particular Robert Holzmann and Richard Hinz, *Old Age Income Support in the 21st Century: An International Perspective on Pension Systems and Reform*, The World Bank, 2005, <http://go.worldbank.org/NOHR1Y9LU0>.

<sup>3</sup> The reviewers were: Ian Vasquez, Director of the Center for Global Liberty and Prosperity, The Cato Institute; Christian Larroulet, Director, Institute of Liberty and Development, Chile; Youssef Boutros-Ghali, Minister of Finance, Arab Republic of Egypt; Stuart Leckie, Investment Actuary, Sterling Finance, Hong Kong; Edward Odundo, Chief Executive Officer, Retirement Benefits Authority of Kenya; and Jerzy Hausner, Professor, Cracow University of Economics and Former Undersecretary of State for the Social Security Reform and Chief Adviser to the Deputy Prime Minister of Poland.



within the Bank and the importance of a policy framework that is sufficiently flexible to address diverse country conditions.<sup>4</sup>

**This note is organized as follows:** Section II outlines the conceptual framework used in the Bank's approach to the analysis of pension systems and reform options. Section III discusses priority issues for the Bank going forward.

## II. THE BANK'S APPROACH TO PENSION REFORM

### A. Conceptual Framework

**The Bank's experience suggests that there are no universal solutions to the complex array of pension issues nor is there a simple reform model that can be applied in all settings.** The Bank has, however, developed principles of analysis and a conceptual framework to guide its' work in this area. This framework incorporates assessment of initial conditions and capacities in relation to a multi-pillar model of the potential modalities for pension systems that establish a broad but defined range of potential reform designs. These possible designs are then evaluated against a set of primary and secondary evaluation criteria in an attempt to reach an outcome that is contoured to country-specific conditions, needs and objectives.

**The conceptual framework starts with an assessment of the *initial conditions* that establish the motivation for, and constraints on, feasible reform options.** Initial conditions include *inherited systems*, the *reform needs* of such systems, and the *enabling environment* which may or may not be conducive to potential elements of a reform design and process (See Table 1). The *inherited system* includes existing mandatory and voluntary pension systems, the acquired rights of workers and retirees, related social security schemes, existing family and community support of retirees, and old age vulnerability and poverty prevalence. *Reform needs* are determined by applying the adequacy, affordability, sustainability, equity, predictability and robustness criteria discussed below to existing schemes. Finally, the *enabling environment* includes the demographic profile; the macroeconomic environment; the capacity of administrative, regulatory and supervisory institutions; and the breadth, depth and efficiency of financial markets, particularly with respect to long-term instruments.

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<sup>4</sup> See Appendix 1 for a list of central and regional reports with full citations. In the interest of brevity, we have not cited the many documents produced by Bank staff on country specific and issue specific pension reform issues.

**Table 1. The Bank’s Conceptual Framework**

<p><i>Initial Conditions</i></p>	<p><b>I. Inherited System</b></p> <ul style="list-style-type: none"> <li>▪ Elderly vulnerability and poverty prevalence in absolute terms and relative to other age groups</li> <li>▪ Existing mandatory and voluntary pension systems</li> <li>▪ Existing social security schemes</li> <li>▪ Existing levels of family and community support</li> </ul> <p><b>II. Reform needs</b> – such as modifying existing schemes in the face of fiscal unsustainability, coverage gaps, aging and socio-economic changes assessed against the primary and secondary evaluation criteria below</p> <p><b>III. Enabling environment</b></p> <ul style="list-style-type: none"> <li>▪ Demographic profile</li> <li>▪ Macroeconomic environment</li> <li>▪ Institutional Capacity</li> <li>▪ Financial market status</li> </ul>
<p>Core <i>Objectives</i> of Pension Systems</p>	<ul style="list-style-type: none"> <li>▪ Protection against the risk of poverty in old age</li> <li>▪ Consumption smoothing from work to retirement</li> </ul>
<p><i>Modalities</i> for achieving objectives</p>	<ul style="list-style-type: none"> <li>▪ <i>Zero Pillar</i> – non-contributory basic benefits financed by the state, fiscal conditions permitting</li> <li>▪ <i>First Pillar</i> – mandatory with contributions linked to earnings and objective of replacing some portion of lifetime pre-retirement income.</li> <li>▪ <i>Second Pillar</i> - mandatory defined contribution plan with independent investment management</li> <li>▪ <i>Third Pillar</i> - voluntary taking many forms (e.g. individual savings; employer sponsored; defined benefit or defined contribution)</li> <li>▪ <i>Fourth Pillar</i> - informal support (such as family), other formal social programs (such as health care or housing), and other individual assets (such as home ownership and reverse mortgages).</li> </ul>
<p><i>Primary Evaluation Criteria</i></p>	<ul style="list-style-type: none"> <li>▪ Adequacy</li> <li>▪ Affordability</li> <li>▪ Sustainability</li> <li>▪ Equity</li> <li>▪ Predictability</li> <li>▪ Robustness</li> </ul>
<p><i>Secondary Evaluation Criteria</i></p>	<p>Contribution to output and growth through:</p> <ul style="list-style-type: none"> <li>▪ Lowering labor market distortions</li> <li>▪ Contributing to savings</li> <li>▪ Contribution to financial market development</li> </ul>

Having evaluated the initial conditions and the capacity to improve the enabling environment, the policy framework then focuses on how best to work within these to achieve the *core objectives of pension systems--protection against the risk of poverty in old age and smoothing consumption from one’s work life into retirement*. In setting out the objectives of the pension system, policymakers need to consider broader questions of social protection and social policy which consider the poverty and vulnerabilities of different income groups. Key questions for consideration in this context are, for example, should scarce fiscal resources be devoted towards providing old-age poverty protection in those societies where data suggests that

there are other groups such as children that may face greater poverty prevalence or vulnerability? How much should a society aim to redistribute income through the pension system and how can it ensure that this redistribution is made transparent and progressive? What measures should be taken to strengthen the enabling environment that are conducive to reform options best satisfying the *core objectives*? Once these *core objectives* have been identified, one can then identify the mandate of the public pension system, the balance between insurance and adequacy functions and appropriate system design options.

**The Bank’s policy framework flexibly applies a five-pillar model defining the range of design elements that is summarized in Table 2 below to determine the pension system modalities and reform options that should be considered.** Country-specific conditions require a tailored and tactically sequenced implementation of the model that will substantially define the range of feasible options. Consideration of the full range of possible elements at this stage and seeking to incorporate multiple elements of the model in design is based on the view that a diversified system can deliver retirement income more effectively and efficiently. Multipillar designs provide more flexibility than monopillars and are therefore typically better able to address the needs of the main target groups in the population and provide more security against the economic, demographic, and political risks faced by pension systems. Single pillar schemes are also less effective than multipillar designs when measured in terms of the four evaluation criteria discussed below (See para. 12).<sup>5</sup> The five pillars are:

- *A non-contributory or “zero pillar”* (e.g. in the form of a demogrant,<sup>6</sup> social pension, or general social assistance typically financed by the local, regional or national government), fiscal conditions permitting, to deal explicitly with the poverty alleviation objective in order to provide all of the elderly with a minimal level of protection. This ensures that people with low lifetime incomes are provided with basic protection in old age, including those who only participate marginally in the formal economy. Whether this is viable—and the specific form, level, eligibility and disbursement of benefits depends upon the prevalence and need of other vulnerable groups, availability of budgetary resources and the design of complementary

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<sup>5</sup> It should be pointed out that the weaknesses of monopillars apply equally to defined-contribution and defined-benefit schemes.

<sup>6</sup> A demogrant is the same as a universal flat benefit, where individuals receive an amount of money based solely on age and residency.

elements of the pension system;

- *a mandatory “first pillar”* with contributions linked to varying degrees to earnings with the objective of replacing some portion of lifetime pre-retirement income. First pillars address, among others, the risks of individual myopia, low earnings, and inappropriate planning horizons due to the uncertainty of life expectancies, and the lack or risks of financial markets. They are typically financed on a pay-as-you-go basis and thus are, in particular, subject to demographic and political risks;
- *a mandatory “second pillar”* that is typically an individual savings account (i.e. defined contribution plan) with a wide set of design options including active or passive investment management, choice parameters for selecting investments and investment managers, and options for the withdrawal phase. Defined contribution plans establish a clear linkage between contributions, investment performance and benefits; support enforceable property rights; and may be supportive of financial market development. When compared to defined benefit plans they can subject participants to financial and agency risks as a result of private asset management, the risk of high transaction and administrative costs, and longevity risks unless they require mandatory annuitization;
- *a voluntary “third-pillar”* taking many forms (e.g. individual savings for retirement, disability or death; employer sponsored; defined benefit or defined contribution) but is essentially flexible and discretionary in nature. Third pillars compensate for rigidities in the design of other systems but include similar risks as second pillars; and
- *a non-financial fourth pillar* which includes access to informal support (such as family support), other formal social programs (such as health care and/or housing), and other individual financial and non-financial assets (such as home ownership and reverse mortgages where available). The availability and type of such support for the aged has a major bearing on the design and implementation of the other pillars, including target benefit levels.

**Table 2. Multipillar Pension Taxonomy**

Objective	Pillar	Target groups			Main criteria		
		Life-time poor	Informal sector	Formal sector	Characteristics	Participation	Funding/collateral
Elderly poverty protection	0	<b>X</b>	<b>X</b>	x	“Basic” or “social pension,” at least social assistance, universal or means-tested	Universal or residual	Budget/general revenues
Elderly poverty protection and consumption smoothing	1			<b>X</b>	Public pension plan, publicly managed, defined benefit or notional defined contribution	Mandated	Contributions, perhaps w/financial reserves
Consumption smoothing and elderly poverty protection through minimum pension.	2			<b>X</b>	Occupational or personal pension plans, fully funded defined benefit or fully funded defined contribution	Mandated	Financial assets
Consumption smoothing	3	x	<b>X</b>	<b>X</b>	Occupational or personal pension plans, partially or fully funded defined benefit or funded defined contribution	Voluntary	Financial assets
Elderly poverty protection and consumption smoothing	4	<b>X</b>	<b>X</b>	X	Access to informal (e.g. family support), other formal social programs (e.g. health) and other individual financial and nonfinancial assets (e.g. homeownership)	Voluntary	Financial and non-financial assets

*Note:* The size of x or **X**, normal or bold, characterizes the importance of each pillar for each target group.  
Source: Holzmann and Hinz, *Old Age Income Support in the 21st Century*, Table 1, p. 10.

**An essential feature of the multipillar taxonomy is that certain pillars are better suited to address the needs of target populations (the lifetime poor, informal sector workers at risk of becoming poor once they stop working, and workers covered by formal pension arrangements) while also providing diversification for all income groups.** For example, a zero pillar social pension is well suited to address the need for basic income support of the lifetime poor while also providing a foundation that covers gaps in coverage and benefit adequacy in societies with mandatory first and second pillar schemes that may not be reaching workers through their full working lives due to their movement in and out of formal employment. Similarly, in societies that have only been able to achieve limited coverage of mandatory first and second pillar schemes, developing well-supervised voluntary (third pillar) schemes may effectively reach the informal sector and provide an efficient means to supplement and diversify benefits for higher income

groups. Some of the same societies may find that mandated first and second pillar schemes present obstacles to increased formalization of the labor force and achieve better outcomes with a combination of a social pension and a more extensive voluntary system. Finally, public policies which are supportive of transfers of family wealth such as through land and asset titling, registries and inheritance laws, can strengthen old-age income security of both the lifetime poor and informal sector.

**The policy framework evaluates the range of overall systems designs through the application of a combination of primary and secondary criteria.** The primary criteria are the ability of the reform to maintain *adequacy, affordability, sustainability, equity, predictability* and *robustness* while achieving welfare-improving outcomes in a manner appropriate to the current and expected environment of the individual country:

- An *adequate* system is one that provides benefits sufficient to prevent old-age poverty (at a country-specific absolute level) to the full breadth of the population in addition to providing a reliable means to smooth lifetime consumption for the vast majority of the population;
- An *affordable* system is one that is within the financing capacity of individuals and the society and does not unduly displace other social or economic imperatives or have untenable fiscal consequences;
- A *sustainable* system is one that is financially sound and can be maintained over a foreseeable horizon under a broad set of reasonable assumptions;
- An *equitable* system is one that provides the income redistribution from the lifetime rich to the lifetime poor consistent with the societal preferences in a way that does not tax the rest of society external to the system; and one that provides the same benefit for the same contribution.
- A *predictable* benefit is provided by a system where (i) the benefit formula is specified by law and not subject to the discretion of policymakers or administrators, (ii) the defined benefit formula is designed to insulate the individual from inflation and wage adjustments prior to retirement or the defined contribution investment policy can insulate the beneficiary from material effects on benefits from asset price adjustments prior to retirement; and (iii) the benefit is automatically indexed during retirement so as to shield the worker from effects of price adjustments; and
- A *robust* system is one that has the capacity to withstand major shocks, including those coming from economic, demographic and political volatility.

**Application of these criteria requires consideration of the linkages between the various elements and the associated tradeoffs among them.** For example, contribution rates for a mandatory first pillar system that are deemed to be *affordable* to employers and employees may result in issues of the *adequacy* of benefits or *sustainability* of the systems financing. In addition, other public policy provisions can materially affect the ability of a particular country to fulfill these criteria. *Adequacy* in preventing old-age poverty is, for example, closely linked to the manner in which health care for the elderly, typically representing a very large component of consumption for this age group, is financed. Evaluation and resolution of these tradeoffs further highlights the country specific nature of the decision process.

**Once a system and/or reform has been assessed in relation to the primary criteria, secondary evaluation criteria should be considered to evaluate the system's contribution to output and growth.** This is based on the understanding that the capacity of any pension system to provide effective sources of retirement income is inextricably linked to its ability to support economic stability and development. The relevant criteria in this respect include: (i) minimization of labor market distortions; (ii) contribution to savings mobilization; and (iii) contribution to financial market development. Regardless of the design of the system pension benefits are effectively claims against future economic output. It is, therefore, essential that, over time, the systems contribute to growth and output to be able to provide the promised benefits. To achieve this, a reform should support labor and capital market efficiency, reinforce measures to improve savings mobilization and facilitate financial market development.

## **B. Design Principles in Determining Reform Choices**

**Although there is no simple template for determining the relative pillar size and instrumentality appropriate to the diverse array of country circumstances, several basic principles are used to guide these choices.** As indicated above, relevant and feasible reform options depend on country-specific circumstances which are broadly linked with the development status and income level of a country. While capacity and reform potential are linked, the relationship between income level and reform options are substantially influenced by non-income factors. Reform paths are therefore highly complex depending upon inherited system, reform needs, the enabling environment and substantially dependent upon incremental policy decisions in the process. This path dependency therefore results in variation between a country's income level

and development status on the one hand, and suitable policy reform options on the other. A more in-depth discussion of path dependency and policy options and a stylized representation of the linkages are indicated in Appendix 2.

**In addition to the relationships with the level of development and income several other principles are incorporated into the decision process on an appropriate pension system design.** Key overarching principles include:

- ***Prefunding of future pension commitments for all pillars is generally advantageous for economic and political reasons provided conditions are right.***<sup>7</sup> The key to determining whether prefunding is advantageous is a comparison of the expected benefits (such higher capital stock and future output) with the expected costs (such as transition costs and intergenerational equity). Politically, prefunding may better guarantee the capacity of society to fulfill pension commitments because it ensures that pension liabilities are backed by assets protected by legal property rights.
- ***A mandatory and fully-funded second pillar provides a useful benchmark (though not a blueprint) against which the design of a reform should be evaluated. A well-designed second pillar will generally satisfy the adequacy, affordability, sustainability and robustness criteria when implemented under the appropriate conditions.***<sup>8</sup> As a benchmark, a second pillar serves as a reference point for the policy discussion and as a means to evaluate the potential welfare improvement. The efficiency and equity of alternative approaches to retirement savings, such as voluntary individual or occupational schemes can also be evaluated in relation to this benchmark.
- ***In order for first pillars to satisfy the affordability and sustainability criteria, such schemes should be relatively small, simple and universal.*** *Small* refers to the mandated

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<sup>7</sup> Prefunding refers to establishing a pool of assets for the exclusive purpose of financing future pension benefits. Narrow prefunding refers to the matching of individual pension claims with assets, while broad prefunding refers to with a corresponding increase in the capital stock.

<sup>8</sup> Most members of the academic and development communities as well as within the Bank agree that certain enabling conditions including macroeconomic, financial market and institutional characteristics are supportive of second pillar reforms. There is a spectrum of views however, as to what constitute the minimum conditions conducive towards success with some placing greatest importance on the clarity of the policy framework while others placing equal importance on environmental considerations. The Bank is working on guiding diagnostic criteria for assessing the enabling conditions for establishing privately-managed second pillar reforms.



replacement rate, which should be modest enough to ensure sustainable financing and support compliance. *Simple* refers to the design of benefits and the advantage of a close link between contributions and benefits. *Universal* refers to the application to all sectors of an economy in order to allow mobility across professions. Redistribution in the pension system in favor of lower-income groups should be provided in a transparent manner. A system fulfilling these principles should help to minimize distortions in the labor market and deal with population aging in an incentive-oriented manner.

- **A broader assessment of risk, vulnerability and poverty of all age groups has important implications for the desired objectives and characteristics of pensions systems:** (i) Mandating the participation of the very poor in a public, earnings-related pension schemes is likely to be welfare decreasing and difficult to enforce. Faced with so many other life course risks against which they lack risk management instruments, mandatory contributions to a pension scheme for the very poor is not optimal; (ii) The most damaging everyday risks for poor people are those that prevent them from working to sustain themselves and their families. A non-contributory social pension applicable to the disabled and to elderly beginning at an age when work is not feasible anymore caters to these needs and priorities in countries where these risks are more prevalent than risks of old-age poverty and where there are the resources to provide such remedies; and (iii) Since unemployment and old-age-related risks are imperfectly correlated, more-developed countries may gain from pooling these risks over time. Further, in view of the moral hazards associated with unemployment insurance, introducing unemployment savings accounts that become old-age savings accounts upon retirement may create efficiency gains.

**The experience of the Bank also suggests that a major emphasis should be given to the *process* of pension reform, including what are commonly termed the *political economy aspects*.** Three process criteria are therefore relevant:

- *A long-term, credible commitment by the government.* The reform needs to be effectively aligned with the political economy of the country and supported by a clear political mandate. Political conditions under which the reform will be implemented need to be sufficiently stable to provide a reasonable likelihood for a full implementation and maturation of the reform;
- *Local buy-in and leadership.* This includes credibility with the population at large. The preparation of a pension reform has to be undertaken primarily by the country itself, by its

politicians and technicians, and be effectively communicated to, and accepted by, the population at large; and

- *Sufficient capacity-building and support for implementation arrangements.* These include, as necessary, reforms in governance, the collection of contributions, record keeping, client information, asset management, regulation and supervision, and benefit disbursement. Establishment of a legal framework is only an initial and potentially insufficient step that needs to be followed-up with extensive local capacity and institution building.

**The use of a multi-pillar model may be interpreted to indicate an infinite range of acceptable outcomes.** In reality, however, this has not proven to be the result. The application of the broader policy principles and the constraints imposed by individual country circumstances has the practical effect of focusing the Banks advice and support for pension reforms to a constrained set of outcomes that are generally recognized as a clear, although evolving, World Bank perspective. This is a view that continues to assign a high priority to parametric reform of unsustainable pay as you go systems and to rely on diversification of instruments to manage long term risks and the introduction of innovations such as Non-financial Defined Contribution (NDC) schemes. The approach has consistently led to reforms that incorporate advanced funding as highly advantageous to the equity, sustainability and developmental synergies of pension reform. It has been characterized by an increasing focus on consideration of the inclusion of minimum benefits to strengthen the poverty alleviation outcomes in settings not conducive to broad coverage of social insurance arrangements or contractual savings based designs.

### **III. PRIORITY ISSUES GOING FORWARD**

Going forward, the Bank is focusing on strengthening its support of pension systems and reform in three main areas: (i) establishing a clearer results framework to assess pension systems and reforms, including better baseline and benchmark data; (ii) enhancing knowledge management, including research and learning; and (iii) improving implementation capacity.

**Results framework:** The conceptual framework established the primary evaluation criteria (i.e. adequacy, affordability, sustainability, equity, predictability, robustness) and secondary criteria (lowering labor market distortions, contributions to saving, and contributions to financial market development, respectively) for assessing pension systems and their reforms. However, application of these criteria requires the development of a detailed set of indicators and

strengthening of evaluation techniques. The broad range of next steps to strengthen the results framework includes: (i) refining the Bank's Pension Reform Option Simulation Toolkit (PROST), including stochastic simulation; (ii) broadening the Axia APEX model which projects benefit entitlements across countries according to a unified framework through inclusion of the contribution dimension in addition to the benefit dimension; and (iii) major improvements in cross-country indicators and the quality of underlying data for baseline development and evaluation.

**Knowledge management, including learning and research.** The topics identified and to be addressed during the coming years in a cross-sector approach include: (i) designing pension systems; (ii) implementing pension reforms; (iii) governance, administration, regulation and supervision; (iv) economic and social impact; and (v) country cases and regional studies. This knowledge agenda is guided by recent trends in client countries that include: introduction of measures to further strengthen the basic elderly income support through changes to minimum pension guarantees and social pensions; actions to diminish the future role of second pillars, either by constraining the flow of new entrants to the second pillar or facilitating the switch of existing contributors back to the defined-benefit system; measures to improve coverage of mandatory schemes, including through inducements such as government contributions and improved linkages to social pensions; parametric and structural reforms to first pillars both in reformed multi-pillar schemes and in schemes that have yet to undertake such reforms; and increasing measures by countries improve financial literacy through financial education.

**Implementation capacity.** Many country efforts at applying relevant knowledge and external experience in their country setting are hampered by limitations in implementation capacity. Priority support by the World Bank for strengthening such implementation capacity includes: (i) creating region-specific learning programs which emulate the Bank's highly successful Pensions Core Course for staff in client countries; (ii) enhancing cooperation with international and bilateral partners, including professional organizations, in order to improve the consistency of policy advice and avoid duplication; and (iii) improving readiness indicators for pension reform, including self-diagnosis by client countries.

## APPENDIX 1: LIST OF WORLD BANK DOCUMENTS

### **I. Bank Reports on Global Issues and Strategy**

1. Holzmann, Robert and Richard Hinz, *Old Age Income Support in the 21st Century: An International Perspective on Pension Systems and Reform*, The World Bank, 2005; <http://go.worldbank.org/NOHR1Y9LU0>.
2. Holzmann, Robert and Joe Stiglitz, eds., *New Ideas about Old Age Security*, The World Bank, 2001.
3. Holzmann, Robert and Edward Palmer, editors, *Pension Reform: Issues and Prospects for Non-Financial Defined Contribution (NDC) Schemes*, The World Bank, 2006, <http://go.worldbank.org/K9HH10CS70>.
4. Musalem, Alberto and Robert J. Palacios, eds., *Public Pension Fund Management: Governance, Accountability, and Investment Policies*, The World Bank, 2003.
5. The World Bank, *Averting the Old Age Crisis*, Oxford University Press, 1996.
6. The World Bank, *Economic Growth in the 1990s: Learning from a Decade of Reform*, the World Bank 2005, <http://intresources.worldbank.org/INTPREMNET/Resources/frontmatter.pdf>.
7. The World Bank, *Social Protection Sector Strategy: From Safety Net to Springboard*, The World Bank, 2001, <http://go.worldbank.org/EB87QBYJG0>.
8. Whitehouse, Edward, *Pensions Panorama: Retirement Income Systems in 53 Countries*, The World Bank, 2007, <http://siteresources.worldbank.org/INTPENSIONS/Resources/PensionsPanorama.pdf>.

### **II. Major Reports on Regional Reform Issues**

9. Chawla, Mukesh, Gordan Betcherman and Arup Bannerji et. al., *From Red to Grey: The Third Transition of Aging Populations in Eastern Europe and the Former Soviet Union*, The World Bank, 2007.
10. Gil, Indermit, Truman Packard and Juan Yermo, *Keeping the Promise of Social Security in Latin America*, World Bank, 2004, <http://www.worldbank.org/keepingthepromise>.
11. Hinz, Richard, Milike Egilmezler and Sergiy Biletsky. *Pensions in World Bank Lending and Analytical Work- FY2002-FY2007*. Social Protection Discussion Paper, forthcoming.
12. Holzmann, Robert, Mitchel Orenstein and Michal Rutkowski, eds. *Pension Reform in Europe: Process and Progress*, The World Bank, 2003, [http://publications.worldbank.org/ecommerce/catalog/product?item\\_id=1676310](http://publications.worldbank.org/ecommerce/catalog/product?item_id=1676310).
13. Holzmann, Robert, Ian W. MacArthur and Yvonne Sin, *Pension Systems in East Asia and the Pacific: Challenges and Opportunities*, Social Protection Discussion Paper, June 2000, <http://siteresources.worldbank.org/SOCIALPROTECTION/Resources/SP-Discussion-papers/Pensions-DP/0014.pdf>.
14. Robalino, David A., *Pensions in the Middle East and North Africa: Time for Change*, The World Bank, 2005, [http://siteresources.worldbank.org/INTMENA/Resources/MENA\\_Pension\\_Reform\\_Complete.pdf](http://siteresources.worldbank.org/INTMENA/Resources/MENA_Pension_Reform_Complete.pdf).
15. The World Bank, *South Asia: Pension Schemes for the Formal Sector: Emerging Challenges and Opportunities for Reform*, The World Bank, 2005, <http://go.worldbank.org/TFSNWWMX40>.
16. Whitehouse, Edward, *Pensions Asia*, OECD, 2008, forthcoming.

## APPENDIX 2: COUNTRY-SPECIFIC OPTIONS FOR REFORM: POLICY PROGRESSION AND PATH DEPENDENCY<sup>9</sup>

Choices selected amongst reform options depend on a number of country-specific considerations, the most important being the existing pension scheme (and other related public programs); the special reform need(s) of schemes; and the (enabling or disabling) environment. All these considerations are broadly linked with the development status and income level of a country. This has led to suggestions that the Bank offer a policy framework or progression that presents the breadth of reform options in relation to the enabling environment, addressing linkages to such factors as development status and fiscal and institutional capacity. This appendix addresses this suggestion, although, in order to condense the many potential combinations and variations, the result is more stylized than prescriptive.

While it is generally true that poorer countries with lower fiscal and administrative capacity have fewer options and that richer countries with a more supportive environment have more options, the progression of options is not linear. This is due to the legacy or absence of the existing system(s). Most critically, while a rich OECD country with full fiscal and administrative capacity could, from an enabling environment point of view, move toward any system, the actual (best) choice will have to consider the inherited system, including the implicit pension debt and institutional setup. As a result, the introduction of a second pillar may be a potential option, but not the best or even a feasible policy choice. In contrast, in a reform-minded middle-income country with moderate implicit debt and sufficient fiscal and administrative capacity, such a choice may be viable and desirable.

A stylized representation of choices would limit constraints to three broad areas—the existing system, the need for reform, and reform environment—and, within each set, to a few central features with limited properties (See Table 3). Going through a larger set of features and properties would create a decision or choice tree of a few thousand entries, but not necessarily produce a better understanding of the operative principles. The choice of constraints, features, and properties is clearly influenced by actual experience with reform. For the inherited system, the crucial features are the existence or absence of pension systems, their heterogeneity, the level of coverage (and implicit debt), and the type of benefit and funding. For reform needs, the suggested crucial features are fiscal issues, low rate of return, multiplicity of systems, and coverage. With regard to the enabling environment, the suggested key features are macro and fiscal room, administrative capacity, minimum financial sector, and government commitment to reform.

The suggested progression of policy choice for *low-income countries* is relatively straightforward, but perhaps less simple than might be expected. In post-conflict countries without a prior scheme, the emphasis for the elderly should clearly be on poverty relief for the most vulnerable. However, the elderly may not be the most vulnerable, and the most vulnerable may include persons of all ages who are disabled by civil strife, including many children. In these circumstances, war veterans expect compensation for their efforts, preferably in the form of a pension, which risks becoming mixed with the perceived need to provide some pension to civil servants, in part to reduce the vulnerability to corruption. If obligations toward public sector employees under a pre-conflict scheme need to be honored, in what form and how should they be linked to a new system and what should it look like?

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<sup>9</sup> This appendix is reprinted from *Old Age Income Support in the 21<sup>st</sup> Century*, op. cit., pp. 84-92.

**Most low-income countries have a pension system for at least a subset of their population—public sector employees** (that is, civil servants and workers in parastatals). These systems are typically in dire financial condition and urgently require reform. The reform direction will be very much determined by the reform environment. With low capacity and political willingness for reform, little more than minimum adjustments of the existing scheme(s) and stronger community support for the vulnerable elderly can be expected. However, in a reform-oriented environment with some, albeit limited, capacity, the reform options are much more comprehensive: a comprehensive parametric or even a notional defined-contribution-oriented reform of the unfunded scheme; improved governance of funded schemes; the introduction or at least the testing of a noncontributory pension scheme; and the introduction and improved regulation of emerging voluntary schemes are appropriate to these conditions.

**Middle-income countries generally have a wider set of feasible policy choices.** The limitations for this quite heterogeneous group of countries are derived more from the capacity constraints than from inherited systems. As a result, for countries with limited capacity and political willingness to reform, the basic reform choices boil down to damage control and basic adjustments. Strongly reform-oriented countries with sufficient capacity at the fiscal and administrative levels have the full array of options open to reform an unfunded or funded (mandated) public scheme. As the coverage—and hence implicit debt—of the inherited system is typically small, the move toward a full second pillar can be envisaged. If the inherited unfunded scheme is large (as in most transition economies), the set of options is restricted and the move toward a funded, mandated pillar may be partial.

**For high-income countries, the set of feasible policy choices may appear to be even more enhanced, but this may not be the case.** For these countries, which are also quite heterogeneous in their composition, the limitations are quite likely to derive from the inherited system rather than from capacity issues, although the latter can be significant. As in middle-income (and low-income) countries, a rich country under (macro and fiscal) stress, with a government not fully committed to reform, will be restricted to damage control and incremental parametric reforms. A reform-oriented country, with all of the needed capacity but with an inherited Bismarckian system with high implicit debt, is likely to exclude a move toward a funded (second) pillar among its choices, even if it is only partial. Presumably, many countries in continental Europe fall into this category. Those few economies with full capacity but only basic income provisions will move toward mandated funded provisions.

**While there is, indeed, a link between capacity and reform space, the link is not linear.** The feasible options and actual choices will be (co)determined by the inherited system. This suggested path dependence of reform space implies that reform-oriented, middle-income countries need to assess their choices carefully and work diligently on their capacity for reform if they do not want to be constrained in the future. By extension, the same applies to low-income countries and their need to find the appropriate moment to introduce and better regulate and supervise voluntary systems.

**Table 3. Stylized Reform Choices for Countries: Matching Reform Needs with Constraints and Opportunities<sup>10</sup>**

<i>Type of country</i>	<i>Existing system</i>	<i>Reform needs</i>	<i>Reform environment</i>	<i>Central reform options</i>
<i>Low income</i> Post conflict	No system and coverage	Protect the most vulnerable	All capabilities essentially absent	Provide basic support and services via social funds, nongovernmental organizations, and international aid and avoid the introduction of costly civil servant schemes and the compensation of freedom fighters via pensions
Low-level equilibrium	Notional defined benefit for public sector with limited coverage	Deal with fiscal costs; extend coverage	No macro and fiscal room, limited administrative capacity, no financial sector, some government willingness to reform	Undertake a parametric adjustment of the unfunded system and provide community-based support for the vulnerable elderly
Emerging and reform oriented	Notional defined benefit for public sector with limited coverage	Deal with fiscal costs; extend coverage	Limited macro and fiscal room, administrative capacity, and financial sector, but willingness to reform	Undertake parametric reform of the unfunded system (perhaps with a view to notional defined contribution); introduce, regulate, and supervise the voluntary system; introduce and test noncontributory pensions
	Funded defined contribution or defined benefit for public sector with limited coverage	Improve rate of return; extend coverage	Limited macro and fiscal room, administrative capacity, and financial sector, but willingness to reform	Improve governance of the central or provident fund; introduce, regulate, and supervise a voluntary system; introduce and test noncontributory pensions
<i>Middle income</i> Under stress	Multiple notional defined benefit (and funded defined contribution) with moderate coverage	Deal with fiscal costs, low rate of return, multiplicity of systems, and labor market issues; extend coverage	Limited fiscal room, administrative capacity, financial sector, as well as willingness to reform	Undertake parametric adjustment or reforms of the unfunded systems; improve governance of central and provident fund; regulate and supervise a voluntary system

<sup>10</sup> Source: *Old Age Income Support in the 21<sup>st</sup> Century*, Table 5.2, op. cit. pp. 85-90.

**Table 2. Stylized Reform Choices for Countries: Matching Reform Needs with Constraints and Opportunities (cont.)**

<i>Type of country</i>	<i>Existing system</i>	<i>Reform needs</i>	<i>Reform environment</i>	<i>Central reform options</i>
Emerging and reform oriented	Multiple notional defined benefit with moderate coverage (and implicit pension debt)	Deal with fiscal costs, multiplicity of systems, and labor market issues; extend coverage	Some fiscal room, administrative capacity, and financial sector and strong willingness to reform	Introduce a single unfunded system (such as notional defined contribution), move toward a fully funded system, or adopt a mixture of both; introduce, regulate, and supervise a voluntary system; introduce noncontributory pensions (social pension)
	Multiple funded defined contribution with moderate coverage	Deal with low rate of return (and captive public bond market); extend coverage	Some fiscal room, administrative capacity, and financial sector and strong willingness to reform	Introduce a single funded system (funded defined contribution); introduce, regulate and supervise voluntary system; introduce noncontributory pensions (social pensions)
<i>High income</i> Under stress	Multiple notional defined benefit with high coverage (and implicit pension debt)	Deal with fiscal costs, multiplicity of systems, and labor market issues; keep or extend coverage	Some administrative capacity and financial sector, but limited macro and fiscal room and political willingness to reform	Undertake coordinated parametric reforms of the unfunded systems; improve regulation and supervision of the voluntary system; improve the existing noncontributory pension systems
Maturing tiger	Basic income support but not mandated earnings-related scheme	Deal with current and future fiscal costs (aging); improve consumption smoothing for population	Strong administrative capacity, macro and fiscal position, financial sector, and willingness to reform	Introduce a (limited) mandated and fully funded scheme; improve regulation and supervision of the voluntary system
	Centralized funded defined contribution (provident fund) with limited basic income support	Deal with low rate of return; keep or extend coverage	Strong administrative capacity, macro and fiscal position, financial sector, and willingness to reform	Improve governance of the centralized scheme, including opting out after minimum balance; improve regulation and supervision of the voluntary system; improve the existing and introduce noncontributory pension systems
With continuous reforms	Multiple notional defined benefit with high coverage (and implicit pension debt)	Deal with fiscal costs, multiplicity of systems, and labor market issues; keep or extend coverage	Strong administrative capacity, macro and fiscal position, financial sector, and willingness to reform	Move toward a single unfunded system (such as notional defined contribution); strengthen regulation and supervision of the voluntary system; introduce and strengthen noncontributory pensions

*Note:* Level of income loosely refers to the classification used by the World Bank, with low income referring to International Development Association countries and high income referring to OECD-type economies.



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The World Bank's conceptual framework to assess pension systems and reform options evaluates initial conditions and the capacity to improve the enabling environment, then focuses on how best to work within these to achieve the core objectives of pension systems--protection against the risk of poverty in old age and smoothing consumption from one's work life into retirement. The Bank applies a multi-pillared approach towards pension system modalities to address the needs of target populations including: (i) a non-contributory "zero pillar" extending some level of old-age income security to all of the elderly; (ii) an appropriately sized mandatory "first pillar" with the objective of replacing some portion of lifetime pre-retirement income through contributions linked to earnings; (iii) a funded mandatory defined-contribution "second pillar" that typically provides privately-managed individual savings accounts; (iv) a funded voluntary "third-pillar;" and (v) a non-financial "fourth pillar." The primary evaluation criteria are the ability of the system to maintain adequacy, affordability, sustainability, equity, predictability and robustness. The secondary evaluation criteria are the system's capacity to: minimize labor market distortions; contribute to savings mobilization; and contribute to financial market development. Because pension benefits are claims against future economic output, it is essential that over time pension systems contribute to growth and output to support the promised benefits. Going forward, the Bank is focusing on strengthening its support in: (a) establishing a clearer results framework to assess pension systems and reforms; (b) enhancing knowledge management, including research and learning; and (c) improving implementation capacity.

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