Framework for Analysis of International Pension Objectives, Challenges and Reform Issues

Pension Core Course 2009 – Session 01

Robert Holzmann
World Bank
Public pensions – in most high-income countries and in many low-middle to middle income countries, it is the most important budgetary expenditure item (rivaling with health or defense outlays)

Many pension systems are in deficit and most schemes are financially unsustainable (i.e. their actuarial balance is negative)

Current financial problems of pension schemes are largely the result of too high system dependency ratio and too generous benefits, but are little due to population aging and deterioration in demographic dependency ratio so far

Further population aging is a world phenomena and the result of a reduction in fertility rate and an increase in life expectancy. But while the OECD countries became rich before becoming old, most of the other countries risk to become old before becoming rich.

While current and future fiscal problems are one main reason to reform pension programs, there are other important reasons linked to socio-economic changes and the challenges and opportunities of globalization

Pension reform is topical reform item in all countries of the world, and is likely to remain so in the decades to come.
### PUBLIC PENSION SPENDING by REGIONS
(as percent of GDP, early or mid 2000)

<table>
<thead>
<tr>
<th>REGION</th>
<th>AVERAGE PENSION EXPENDITURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD</td>
<td>10.5</td>
</tr>
<tr>
<td>EUROPE and CENTRAL ASIA</td>
<td>7.3</td>
</tr>
<tr>
<td>LATIN AMERICA and the CARIBBEAN</td>
<td>3.6</td>
</tr>
<tr>
<td>MIDDLE-EAST and NORTH AFRICA</td>
<td>3.2</td>
</tr>
<tr>
<td>ASIA</td>
<td>2.0</td>
</tr>
<tr>
<td>SUB-SAHARAN AFRICA</td>
<td>0.7</td>
</tr>
</tbody>
</table>
Relationship Between Percentage of the Population over 60 Years Old and Public Pension Spending

Percentage of population over 60 years old vs. Pension spending as percentage of GDP.
Population Pyramids: Age and Sex Distribution, 2000 and 2050

Source: The Sex and Age Distribution of the World Populations: the 1998 Revision, Volume II.

The Population Division, Department of Economic and Social Affairs, United Nations Secretariat.
Mali: Public Pension Expenditure and Wage Bill

- **approved**
  - 1994/95: 2.5
  - 1995/96: 3.6
  - 1996/97: 4.9
  - 1997/98: 6.1
  - 1998/99: 5.4
  - 1999/00: 9.3

- **actual**
  - 1994/95: 11.6
  - 1995/96: 13.2
  - 1996/97: 18.4
  - 1997/98: 22.7
  - 1998/99: 20.5
  - 1999/00: 35.5

- **revised**
  - 1999/00: 1.7
Variation in Coverage and Correlation with Per-Capita Income

\[ y = -0.15x^2 + 7.41x + 0.49 \]

\[ R^2 = 0.90 \]
Road Map

I. Society’s Role in Assisting in Retirement Income Provision
II. Determining the Set of Feasible Retirement Income options
III. Key Dimensions of Pension Systems and Reforms
I. Conceptual Considerations: Society’s role in retirement income (1/2)

- **Decline of intra-family support, due to**
  - Industrialization (away from agriculture)
  - Urbanization and migration

- **Double objectives for public intervention**
  - Poverty alleviation
    - Societies care for the most destitute
    - Societies fear the consequences of destitution
  - Consumption smoothing
    - Individuals prefer smoother consumption
      - Requires shifting resources from active to non-active periods
      - Has to deal with uncertainty of death
      - Implies an intertemporal exchange which has to rely on other individuals (social management of risk and Robinson Crusoe)
    - Welfare gains for lower income strata are higher

- **Double rational of public intervention**
  - Perceived market failure
  - Income redistribution
Addressing key imperfections

- **Short planning horizon, due to**
  - myopia
  - other risks and incomplete financial markets

- **Lack of adequate instruments/financial markets**
  - Savings and annuity products
  - Market development, regulation and supervision

- **Dealing with poverty and moral hazard**
  - Old-age and incapacity to work
  - Basic income support, protecting the government, and mandating

- **Unequal income/wealth distribution**
  - Redistribution from life-time rich to poor (inter- and intrapersonal effects)
  - Achieving solidarity ...through redistribution, or pooling of risks (with or without risk differentiation), or open risk coverage
II. The Set of Feasible Retirement Income Options Reflects

- The more specific goals of a (new) retirement systems
- The reform needs of the existing system beyond fiscal crises
- The inherited system and the path dependency of reform
- The enabling environment to reform the old and to implement the new system (economic, institutional, political)
i. Goals of a Pension System (Reforms)

- **Primary goals:** To provide adequate, affordable, sustainable and robust old-age income
  - Adequate refers to both access to (coverage) and benefit level (absolute and relative, i.e. re poverty alleviation and income replacement)
  - Affordable refers to the financing capacity of individuals and the society
  - Sustainable refers to the financial soundness of the scheme, now and in the future
  - Robust refers to the capacity to withstand major shocks, including those coming from economic, demographic and political risks

- **Secondary goals:** To create developmental effects by
  - minimizing negative impacts (e.g. labor market)
  - leveraging on positive impacts (e.g. financial market develop.)
ii. Reform needs of the existing system beyond demographic crisis (1/2)

- **Fiscal Pressure**
  - Short-term pressure and consequences of unsustainability: macro instability and crowding-out of other social expenditure
  - Long-term pressure and aging of population: the challenge for developing countries
  - The opportunities and challenges of migration

- **Delivering on Promises**
  - The unfairness, over-promise and low coverage of formal schemes
  - Poverty alleviation among the elderly
Reform needs of the existing system beyond demographic crisis (2/2)

- **Aligning systems with Socioeconomic Changes**
  - Increase in life-expectancy and old-age pension
  - Increase in life-expectancy and disability pension
  - Female labor force participation, divorces and widow’s pensions

- **Challenges and Opportunities in Globalization**
  - Reacting to shocks – the need of flexibility
  - Mobility across professions and countries
  - Financial Sector development – a crucial element to absorb shocks and to diversify risks
iii. The inherited system and the path dependency of reform country background matters . . . .

- **Key characteristics of a pension system**
  - Defined benefit (DB) vs defined contribution (DC) plans
    - actuarial and risk sharing characteristics
  - Unfunded (Pas-as-you-go) versus funded schemes
    - narrow and broad funding
  - Public versus private administration
    - polar cases but increasingly mixed approaches
The inherited system and path dependency (2/2)

- **The starting position of a country matters**
  - Case 1: Middle (-high) income country with comprehensive and expensive unfunded public scheme and core financial markets
  - Case 2: Post conflict low income country with no inherited pension system, weak administration and no financial market
  - Case 3: Low-middle income country with unfunded public schemes with low coverage (> 10% of population) and core financial market

- **Some decisions about systems are difficulty to reverse**
  - Having pension systems for too many special groups
  - Being too generous to people at young age
  - Moving from unfunded to funded systems
iv. The Importance of an Enabling Environment

- State of country development such as level of (in-) formality, income and urbanization
- Legacy of existing schemes, including the scope of coverage and level of explicit or implicit liabilities
- Administrative capacity to collect contributions, administrate files, disburse benefits and manage financial reserves
- Financial market condition such as sound core banking system and public debt market, and regulatory and supervisory capacity
- Macroeconomic stability, including sound public finance, external accounts, and low inflation rate
- Government determination and capacity to start a reform and to make it successful
<table>
<thead>
<tr>
<th><strong>Initial Conditions</strong></th>
<th><strong>I. Inherited System</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>▪ Elderly vulnerability and poverty prevalence in absolute terms and relative to other age groups</td>
</tr>
<tr>
<td></td>
<td>▪ Existing mandatory and voluntary pension systems</td>
</tr>
<tr>
<td></td>
<td>▪ Existing social security schemes</td>
</tr>
<tr>
<td></td>
<td>▪ Existing levels of family and community support</td>
</tr>
</tbody>
</table>

**II. Reform needs** – 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

<table>
<thead>
<tr>
<th><strong>III. Enabling environment</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Demographic profile</td>
</tr>
<tr>
<td>▪ Macroeconomic environment</td>
</tr>
<tr>
<td>▪ Institutional Capacity</td>
</tr>
<tr>
<td>▪ Financial market status</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Core Objectives of Pension Systems</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Protection against the risk of poverty in old age</td>
</tr>
<tr>
<td>▪ Consumption smoothing from work to retirement</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Modalities for achieving objectives</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ <strong>Zero Pillar</strong> – non-contributory social assistance financed by the state, fiscal conditions permitting</td>
</tr>
<tr>
<td>▪ <strong>First Pillar</strong> – mandatory with contributions linked to earnings and objective of replacing some portion of lifetime pre-retirement income.</td>
</tr>
<tr>
<td>▪ <strong>Second Pillar</strong> - mandatory defined contribution plan with independent investment management</td>
</tr>
<tr>
<td>▪ <strong>Third Pillar</strong> - voluntary taking many forms (e.g. individual savings; employer sponsored; defined benefit or defined contribution)</td>
</tr>
<tr>
<td>▪ <strong>Fourth Pillar</strong> - 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).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Primary Evaluation Criteria</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Adequacy</td>
</tr>
<tr>
<td>▪ Affordability</td>
</tr>
<tr>
<td>▪ Sustainability</td>
</tr>
<tr>
<td>▪ Robustness</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Secondary Evaluation Criteria</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Contribution to output and growth through:</td>
</tr>
<tr>
<td>▪ Lowering labor market distortions</td>
</tr>
<tr>
<td>▪ Contributing to savings</td>
</tr>
<tr>
<td>▪ Contribution to financial market development</td>
</tr>
</tbody>
</table>

---

Table 1. The Bank’s Conceptual Framework
III. Dimensions of Reform Options

- Parametric reforms such as ...
  - Increase in retirement age
  - Reduction in annual accrual factor
  - Change benefit indexation
  - Increase in contribution rate
- ... or paradigmatic (systemic) reform with changes in key aspects
  - From defined benefit to defined contribution plans
  - From unfunded to funded
  - Form public to private administration
- Single versus multi-pillar reforms
- Target group of system and reform
Table 1. Multi-Pillar Pension Taxonomy

<table>
<thead>
<tr>
<th>Pillar</th>
<th>Target groups</th>
<th>Main criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lifetime poor</td>
<td>Participation</td>
</tr>
<tr>
<td>0</td>
<td>X</td>
<td>Residual</td>
</tr>
<tr>
<td></td>
<td>Informal sector</td>
<td>Budget/general revenues</td>
</tr>
<tr>
<td></td>
<td>Formal sector</td>
<td>Funding/collateral</td>
</tr>
<tr>
<td>1</td>
<td>X</td>
<td>Mandated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contributions, perhaps with financial reserves</td>
</tr>
<tr>
<td>2</td>
<td>X</td>
<td>Mandated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Financial assets</td>
</tr>
<tr>
<td>3</td>
<td>X</td>
<td>Voluntary</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>Financial assets</td>
</tr>
<tr>
<td>4</td>
<td>X</td>
<td>Voluntary</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>Financial assets</td>
</tr>
</tbody>
</table>

**Characteristics**

- **0**: "Social pension," at least social assistance, universal or means-tested
- **1**: Public pension plan, publicly managed, defined-benefit or notional defined-contribution
- **2**: Occupational or personal pension plans, funded defined-benefit or funded, defined-contribution
- **3**: Occupational or personal pension plans, funded defined-benefit or funded, defined-contribution
- **4**: Homeownership, family support and so forth

*Note:* The size of x or X characterizes the importance of each pillar for each target group.
References
