Pensions Diagnostic Assessment and Conceptual Framework

Pensions Core Course
Mark Dorfman
The World Bank

March 2, 2014
1. Diagnostic assessment process
2. Conceptual framework – design typology
Diagnostic Assessment
Diagnostic Assessment (1) – Evaluation Process & Criteria

Initial Conditions & Inherited System
- Demand – Need for consumption smoothing & elderly poverty protection
- Supply - mandatory & voluntary pension & social security schemes
- Family & community support

Enabling environment (Motivating reform, framing & constraining reform options)
- Existing design
- Demographic profile
- Macroeconomic environment
- Institutional Capacity
- Financial market status
- Political economy

Reform objectives
- Primary: improving coverage, adequacy, & sustainability for the long-term
- Secondary: improving labor markets, macro/fiscal position, & contributing to financial market development.

Reform Design & Implementation Options
- Design reforms - introduce new schemes, parametric & structural reforms
- Governance, Institutional and regulatory reforms
- Strengthening institutions & implementation
Diagnostic Assessment (2) – Data, Indicators and Tools

Initial conditions
Elderly incomes, vulnerability & poverty
Mandatory & voluntary pension systems & social security schemes
Additional state support

Information/ Data
- Country HH survey data
- ADEPT-SP x/country data

Indicators
- Environment
  - Demographic
  - Economic
  - Financial
  - Informal Support
- Design
  - Structure of pension system
  - Qualifying conditions
  - Parameters
- Performance
  - Coverage
  - Adequacy
  - Financial sustainability

Tools
- ADEPT-SP
- Apex
- PROST
- ASPIRE & ext. x-country data

- Administrative data from social welfare schemes, housing, health provision.
- HH survey data.

March 3, 2014
Diagnostic Assessment (3) Indicators

**Indicators**

<table>
<thead>
<tr>
<th>Environment</th>
<th>Design</th>
<th>Performance Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographic</strong></td>
<td><strong>Structure</strong></td>
<td><strong>Coverage</strong></td>
</tr>
<tr>
<td>Old-age &amp; system dependency ratios (historical &amp; projected)</td>
<td>Pillars (benefit design, financing, institutional structure)</td>
<td>Contributors/labor force or working-age population</td>
</tr>
<tr>
<td>Life expectancy at retirement age (projected)</td>
<td>Civil service (integrated vs. separate)</td>
<td>Recipients (% total &amp; % age 65+)</td>
</tr>
<tr>
<td>Fertility (historical &amp; projected)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Economic</strong></td>
<td><strong>Qualifying conditions</strong></td>
<td><strong>Adequacy</strong></td>
</tr>
<tr>
<td>Labor force participation</td>
<td>Eligibility ages</td>
<td>Replacement rates</td>
</tr>
<tr>
<td>Public &amp; Publicly guaranteed debt (% GDP)</td>
<td>Vesting</td>
<td>Pension income/elderly expenditures</td>
</tr>
<tr>
<td><strong>Financial &amp; Institutional</strong></td>
<td></td>
<td>Elderly incomes</td>
</tr>
<tr>
<td>Financial sector development indicators</td>
<td><strong>Parameters</strong></td>
<td>Elderly poverty (before &amp; after benefits)</td>
</tr>
<tr>
<td><strong>Government effectiveness</strong></td>
<td>Pension contribution rates + caps</td>
<td><strong>Sustainability</strong></td>
</tr>
<tr>
<td>Informal support</td>
<td>Social insurance contribution rates</td>
<td>Pension spending (% GDP)</td>
</tr>
<tr>
<td>Co-residence rates</td>
<td>Target replacement rates</td>
<td>PV of financing gap (% GDP)</td>
</tr>
<tr>
<td></td>
<td>Target pension wealth</td>
<td>PV spending/PV contributions (%)</td>
</tr>
</tbody>
</table>

March 3, 2014
Diagnostic Assessment – 4. Tools

Tools

ADEPT-SP
- Elderly welfare
- Elderly poverty
- Co-residence
- Elderly income generation
- Comparisons of welfare, poverty across elderly, non-elderly & household types.

PROST
- **Baseline.** Long-term projections of *financing gap* for existing schemes + *replacement rates* for current and future retirees
- **Reform scenarios.** Long-term projections *financing gap* + *replacement rates* for parametric and/or structural reforms
- Outputs to simulate *other instruments* (social pensions, voluntary savings)

APEX
- Evaluation of individual level benefits across instruments + for different income groups.
- Individual replacement rates
- Replacement of average wage
- Pension wealth

WB Database & External X-Country Data
- Cross-country comparisons
  - Demographics
  - Coverage
  - Adequacy
  - Affordability
  - Sustainability

March 3, 2014
Conceptual Framework – Design Typology
**Objective**

- Voluntary savings to smooth consumption
- Mandatory savings to smooth consumption
- Mandatory co-insurance against consumption shocks
- Elderly poverty protection
- Protection against poverty & consumption shocks

**Instrument**

- **Third pillar** - Voluntary occupational & individual pension arrangements
- **Second pillar** - Mandatory contributory earnings-related pension savings
- **First pillar** - Mandatory contributory earnings-related pension insurance
- **Zero pillar** - Non-contributory elderly social assistance
- **Fourth pillar** - Other assistance programs (e.g. health or housing) assisting elderly income protection

**Diagaram Description**

- **Voluntary Pension Savings**
- **Mandatory Pension Savings**
- **Mandatory Pension Insurance**
- **Elderly Social Assistance**
- **Other Assistance Programs**
Stylistic Illustration of possible Multi-pillar design

- Mandatory, contributory scheme – DB, DC; PAYG, funded.
- Social assistance for households &/or elderly.
- Special incentives for pension savings for informal sector (e.g. MDC, ex-post subsidies).
- Occupational & Individual Pensions Savings
- Individual pre-retirement wage as a % of the average wage in the economy

March 3, 2014
The coverage challenge

Stylistic Illustration of current benefits from an individual perspective

- Occupational Pension Scheme
- Contributory pension
- Minimum Pension
- Social assistance / elderly assistance

Individual Pre-retirement Income as a % of Average

March 3, 2014
A. Design options – Non-Contributory Schemes

**Instrument Types**

1. *Elderly social assistance*
   - Universal
   - Pensions-tested
   - Resource/means tested
   - Subsidized minimum social insurance benefit

2. *Household social assistance*

**Benefit Parameters**

- Qualification criteria - eligibility age, means testing
- Benefit level
- Indexation
- Clawback or other benefit adjustments
A. Design considerations – non-contributory schemes

- Universal vs. targeted
- Integration w/contributory schemes – minimum benefit
- Elderly assistance vs. household social assistance
- Targeting methods – weighing targeting effectiveness
- Benefit level considerations
  - Reconciling coverage vs. adequacy & fiscal envelope
  - Fiscal affordability w/aging.
- Incentive effects of different designs & benefit levels
B. Design options – Earnings-related Contributory Schemes

**Contributions**
- Mandatory
- Quasi-voluntary
- Voluntary

**Benefit Design**
- Earnings related
  1. Defined benefit (Conventional DB Points)
  2. Defined contribution
  3. Hybrid (Non-earnings related)

**Financing**
- Pay-as-you go
  - Partially funded
- Fully funded

**Institutional Design**
- Centralized account and financial management
- Decentralized account and financial management
### B. Weighting the Advantages & Disadvantages of PAYG DB & FDC Schemes

#### PAYG Defined Benefit Schemes

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simplicity of design</td>
<td>Parameters need to be adjusted over time to respond to and anticipate demographic changes. Changes in parameters can result in an effective partial default in pension promises.</td>
</tr>
<tr>
<td>Limited information and infrastructure requirements</td>
<td>Unsustainable benefit promises invite both partial default in pension promises and severe fiscal burdens.</td>
</tr>
<tr>
<td>Longevity risks covered by plan sponsor; indexation risks may be covered in benefit formula</td>
<td></td>
</tr>
<tr>
<td>Scaled premium financing enables more generous benefits for the current generation than would be the case for an immature scheme.</td>
<td>Poorly designed DB schemes have weak incentives for working longer and can inequitably provide somewhat regressive benefits for higher income workers</td>
</tr>
<tr>
<td>Can compensate for risks of individual myopia, inappropriate planning, and financial market risks.</td>
<td>Central management can contribute to weak disclosure and participant accountability, poor service standards and weak investment returns.</td>
</tr>
</tbody>
</table>
B. Weighing the Advantages and Disadvantages of PAYG DB vs FDC Schemes (2)

### Funded Defined Contribution Schemes

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address population aging (compared to PAYG-DB)</td>
<td>Transitioning requires the payment of both current benefits and contributions on behalf of current workers resulting in a financing challenge for “transition costs”</td>
</tr>
<tr>
<td>Can improve benefits for retirees if returns after fees greater than wage growth.</td>
<td>Administrative costs of individual choice materially affect pension benefits.</td>
</tr>
<tr>
<td>Can insulate members from political risk - ensure that pension benefits are fully delivered</td>
<td>Requirements for sufficient enabling conditions - fiscal conditions; depth, breadth and contestability of financial markets; regulation and supervision of financial markets &amp; pension providers.</td>
</tr>
<tr>
<td>Eliminates a contingent fiscal obligation to make good on pension claims</td>
<td>Significant institutional requirements including information systems, regulation and supervision.</td>
</tr>
<tr>
<td>Strong incentives for work and contributions as benefits linked to contributions and life expectancy.</td>
<td></td>
</tr>
<tr>
<td>Incentives for strong investment and account management through consumer choice &amp; regulation.</td>
<td>Subjects participants to financial market volatility and risk yet under a mandatory regime. Regulators generally need to constrain the investment choices of members</td>
</tr>
<tr>
<td>Can assist in achieving secondary objectives of labor market efficiency and financial market development</td>
<td></td>
</tr>
</tbody>
</table>
Hybrid approach of 1\textsuperscript{st} & 2\textsuperscript{nd} pillars can diversify risks to individuals.

Well designed PAYG DB schemes & NDC schemes can
- align contributions & benefits
- ensure appropriate indexation
- ensure long-term sustainability
- establish automatic adjustment mechanisms.

Yet PAYG schemes still
- Require substantial buffer funds & pre-funding (aging + ensure payment in the face of shocks)
- Face challenges of adequacy in the face of aging
Weighing the Tradeoffs in Pension Design

Sustainability & long-term affordability (Long-term contribution rate & fiscal costs)

Adequacy (Target Replacement Rate)

Work-retirement balance (Retirement Age)
C. Voluntary Occupational & Individual Schemes – Policy Considerations

**Occupational schemes** - important for formal sector employees –
- compensate design rigidities of other schemes
- enables deferred compensation which supports investments in human capital

**Individual schemes** - important role for middle and upper income self-employed
- Both entail financial and agency risks resulting from private pension management
- Strong regulation essential
- Tax incentives requires income limitations.
C. Occupational Schemes for Civil Servants – Policy Considerations

- **Harmonization & integration** with national schemes for labor mobility - portability losses and labor market effects

- **Fiscal cost**. Often substantial deferred compensation with a high *fiscal cost* the expense of other critical fiscal priorities. *Consider in context of compensation review.*

- **Final pay schemes** - weak incentives & higher effective income replacement for the highest paid workers.

- **Weak/discretionary indexation** leaves retirees insufficiently protected.

- **Technical issues** – commutation, annuity factors, wage base.

March 3, 2014
## D. Institutional Issues

<table>
<thead>
<tr>
<th>Administrative Infrastructure and Institutional Arrangements</th>
<th>Governance and Accountability</th>
<th>Legal and Regulatory</th>
<th>Supervision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-contributory pensions or old age assistance</td>
<td>• Unique identification</td>
<td>• Rules, roles and controls.</td>
<td>• External audit and evaluation</td>
</tr>
<tr>
<td></td>
<td>• Means-testing infrastructure</td>
<td>• Transparent disclosure</td>
<td>• Periodic independent assessment</td>
</tr>
<tr>
<td></td>
<td>• Application and eligibility certification</td>
<td>• Complaint redress</td>
<td>• M&amp;E evaluation processes</td>
</tr>
<tr>
<td></td>
<td>• Record-keeping and data management</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Disbursement mechanisms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st Pillar Mandatory Defined-benefit scheme</td>
<td>• Unique ID</td>
<td>Above + Governing body &amp; policies for managing institutions</td>
<td>• External oversight of managing institution useful.</td>
</tr>
<tr>
<td></td>
<td>• Record-keeping and data management</td>
<td></td>
<td>• External audit and accountability processes.</td>
</tr>
<tr>
<td></td>
<td>• Funds management infrastructure and governance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Contribution and disbursement mechanisms + payment systems.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd Pillar funded defined benefit scheme</td>
<td>Administrative systems + infrastructure for competitive individual choice of fund managers &amp; custodians</td>
<td>• Governance policies &amp; oversight to address principle-agent issues</td>
<td>Competent, empowered &amp; independent pension supervisory authority authorizing &amp; supervising all necessary agents, instruments and processes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Accounting, audit and valuation infrastructure.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Depth, breadth and contestability for pension fund investments.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>“</td>
<td></td>
</tr>
</tbody>
</table>
Multi-pillared pension systems - *elements with varying risk characteristics*.

**Portfolio approach** can accommodate the diversity of societal needs and economic characteristics. Multiple instruments can optimize desired individual and societal benefits while minimizing relative risks.

**Mix of instruments** (& pillars) depends upon:
- Objectives (income replacement & poverty protection)
- Inherited policies and institutions
- Environmental conditions (demographic, fiscal, admin systems, financial markets)
- Policy choices who bears what risks
E. Combining Multi-Pillar Design Options (2)

- Earnings-related 1\textsuperscript{st} & 2\textsuperscript{nd} pillar schemes generally only been effective for formal sector workers with wages or in countries with strong tax net coverage.

- Occupational schemes (3\textsuperscript{rd} pillars) generally cover established firms & often the least poorest workers.

- Individual schemes (3\textsuperscript{rd} pillars) considered for workers of all incomes (formal & informal) though often only cover workers with relatively high and/or stable incomes.

- Non-contributory schemes (Zero pillars) generally aim to assist at least the poorest elderly.

March 3, 2014
Conclusions
Conclusions

*Diagnostic assessment* – existing programs, reform needs & reform scenarios based on:

- Coverage
- Adequacy
- Sustainability

*Simulation and modeling tools* are employed to ensure an evidence base for policy evaluation including ADEPT, PROST and APEX; comparative data is also reviewed.

*Menu of mandatory and voluntary pensions savings and insurance instruments* - appropriate to its needs and enabling conditions.

*Elderly social assistance* – can address gaps in coverage but needs to be considered against other needy populations.