Pension systems in Latam: DC schemes

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Workshop on Pension System of China and Latin America
CNCB
Beijing
July 14th 2010

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The introduction of social policies in Latin America

Section II
Defined contribution schemes in Latin America

Section III
Goals and outcomes

Section IV
Lessons from the Latin American experience
The introduction of social policies in Latin America

In Latin America, “pay as you go” pension systems were introduced in different periods during the last century.

**Pioneering countries:**
Uruguay, Argentina, Chile and Brazil
Pension systems were introduced between 1910-1930

**Intermediate countries:**
Mexico, Peru, Colombia, Bolivia, Ecuador,
Paraguay, Costa Rica y Venezuela
Pension systems were introduced between 1940-1950

**Late countries:**
El Salvador, Nicaragua, Dominican Republic,
Guatemala, Honduras.
Pension systems were introduced between 1960-1970

But pension systems were not effectively managed:

- They offered many benefits with generous payments
- No relation between contributions and pensions
- Unpaid contributions by private and government employers
- Pensions were given in generous amounts without taking into account fiscal sustainability
- Pension parameters such as retirement age, years of contribution, contribution rate and others were not adjusted on time for economic and demographic changes
- Low and negative returns
- Pension funds were used for other activities such as infrastructure, health programs and current government expenses.
- High administrative costs
- Fiscal and political pressure
- Actuarial and financial imbalance
The introduction of social policies in Latin America

Unsustainable pension systems forced to pursue very realistic parametric changes but mainly new structural changes:

**PARAMETRIC CHANGES**

Important changes in terms of delaying retirement, increasing contributions, limiting anticipated retirement, incorporating more realistic benefits.

**STRUCTURAL CHANGES**

The introduction of a mandatory individual savings account systems as an important pillar of the pension systems.

Index

- Pension systems in Latam: DC schemes
- Defined contribution schemes in Latin America
- Goals and outcomes
- Lessons from the Latin American experience

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Defined Contribution schemes in Latin America

<table>
<thead>
<tr>
<th>Country</th>
<th>Government at the moment of creation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile: 1981</td>
<td>Autocratic Democratic</td>
</tr>
<tr>
<td>“Bóvina” 1997</td>
<td>Democratic</td>
</tr>
<tr>
<td>Mexico: 1997</td>
<td>Democratic</td>
</tr>
<tr>
<td>El Salvador: 1998</td>
<td>Democratic</td>
</tr>
<tr>
<td>Peru: 1992</td>
<td>Autocratic</td>
</tr>
<tr>
<td>Colombia: 1993</td>
<td>Democratic</td>
</tr>
<tr>
<td>Uruguay: 1996</td>
<td>Democratic</td>
</tr>
<tr>
<td>Argentina: 1994 (Until 2008)</td>
<td>Democratic</td>
</tr>
</tbody>
</table>

Social component: varies from nothing to effectively universal (the case of Chile)

### Pension reform models

<table>
<thead>
<tr>
<th>Pension Plan</th>
<th>Management</th>
<th>Substitute model</th>
<th>Parallel model</th>
<th>Integrated model “Mixed Model”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual savings account</td>
<td>Private</td>
<td>Substitute model</td>
<td>Pay as you go</td>
<td>Pay as you go component</td>
</tr>
<tr>
<td>Public</td>
<td>Private</td>
<td>Individual savings account</td>
<td>Individual savings account component</td>
<td></td>
</tr>
</tbody>
</table>

### Individual capitalization:

Each worker keeps an individual savings account with his contributions.

### Private management:

Private firms (AFPs) take part by managing funds and retirement benefits.

### Insurance policy for death and labor disability:

The reform established an insurance policy that covers affiliated workers (all paying a similar fee).

The Government maintains responsibility for the system by assuming its subsidiary and regulatory role.
### Defined Contribution schemes in Latin America

#### Objectives
- Redistribution
- Saving + insurance
- Mandatory
- Saving + insurance
- Mandatory DC
- Voluntary DC

#### Administration
- Social component
- Government
- National Budget
- Basic pension
- Contributions + Government
- Savings + insurance
- Individual capitalization
- Pension as a function of saving
- Fully-funded

#### Benefit
- Minimum pension
- Minimum pension
- Pension as a function of saving
- Fully-funded

#### Financing
- Contributions
- Government
- National Budget
- Contributions + Government
- Contributions + Government
- Fully-funded

### DC contribution Scheme in Latin America

#### Pension Funds companies must collect contributions of its affiliates

- Collect contributions
- Invest resources in the best portfolios
- Mitigating conflicts of interest and agency problems
- Insurance policy for death and labor disability:
  - An insurance policy that covers affiliated workers (all paying a similar fee)
- Better results and Lower costs for Affiliates and Pensions

#### Very strict regulation on:
- Risk and return (central risk agency)
- Multifunds regime
- Authorized assets that depend on legal framework given by regulatory institutions
- Capital markets
- Prudent investment decisions
- Investment based on expertise

#### Contracts:
- Insurance companies to pay annuities
Defined Contribution schemes in Latin America

Advantages

- One stop shopping arrangement that reduces transaction costs.
- A sense of property rights by establishing individual savings accounts.
- Better expertise and prudent management, considering the historical bad performance of Latin American governments.
- Fiscal consolidation
- Efficient use of resources.
- Increase in national savings and potential GDP.
- Spur capital market development

However, it is important to deepen structural reforms in macroeconomics (labor market reform, capital markets reform, very focused social programs, institutional reforms, etc.) in order to get the best outcomes: coverage, replacement rate and sustainability.

Pension Funds companies have fiduciary obligations with the funds and must follow best practices in corporate governance and mitigate conflicts of interest.

Regulatory mandates

- Mitigate conflicts of interest and agency problems.
- Aligns interests with those of the affiliates
- Responsibilities defined at governing, managerial and operational levels.
- Fiduciary obligation with the fund
- Prudent Investor
- Investment and decision professionals

Pension Funds companies implement corporate governance rules according to regulatory requirements.
Defined Contribution schemes in Latin America

Asset management: the case of “multifunds” in Chile

Basic characteristics

<table>
<thead>
<tr>
<th>Type of Fund</th>
<th>US$ Millions*</th>
<th>% of the Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fund A</td>
<td>25375.8</td>
<td>21.33%</td>
</tr>
<tr>
<td>Fund B</td>
<td>24608.6</td>
<td>20.69%</td>
</tr>
<tr>
<td>Fund C</td>
<td>50055.9</td>
<td>42.08%</td>
</tr>
<tr>
<td>Fund D</td>
<td>14534.7</td>
<td>12.22%</td>
</tr>
<tr>
<td>Fund E</td>
<td>4377.1</td>
<td>3.68%</td>
</tr>
</tbody>
</table>

% of Equity

<table>
<thead>
<tr>
<th></th>
<th>% Maximum</th>
<th>Current</th>
<th>% Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>80%</td>
<td>78%</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>60%</td>
<td>58%</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>40%</td>
<td>38%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>23%</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td>9%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Type of Fund

Women < 35 years and Men < 35 years

Women between 36 and 50 years and Men between 36 and 55 years

Women > 51 years and Men > 56 years

Retired workers

<table>
<thead>
<tr>
<th>Type of Fund</th>
<th>Women &lt; 35 years and Men &lt; 35 years</th>
<th>Women between 36 and 50 years and Men between 36 and 55 years</th>
<th>Women &gt; 51 years and Men &gt; 56 years</th>
<th>Retired workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>(-)</td>
<td>(-)</td>
<td>A</td>
<td>(-)</td>
</tr>
<tr>
<td>B</td>
<td>default</td>
<td>default</td>
<td>B default</td>
<td>default</td>
</tr>
<tr>
<td>C</td>
<td>default</td>
<td>default</td>
<td>C default</td>
<td>default</td>
</tr>
<tr>
<td>D</td>
<td>default</td>
<td>default</td>
<td>D default</td>
<td>default</td>
</tr>
<tr>
<td>E</td>
<td>default</td>
<td>default</td>
<td>E default</td>
<td>default</td>
</tr>
</tbody>
</table>

• Voluntary selection. Fund A is forbidden for people older than 50/55 as well as Funds A and B for retired workers.
• Default option is applied if the worker do not take an option.
• Default and prohibitions are only for the obligatory component.
• People can chose to have two kind of different funds.
• The age-mobility from one fund to another is progressive (20% annually).
**Goals and outcomes: a new pension system and the interaction with other factors**

**Macro and Micro economics**
- Improvement of potential GDP
- Necessity of structural reforms (labor markets, barriers to market development, others)

**Fiscal sustainability**
- Evolution of actuarial deficit of pension system

**Capital Markets**
- Development
- Returns

**Pension Reform**
- Design of the new system
  - Contribution rate
  - Period of contribution
  - Exposure to risk

**Pension System Outcomes**
- Coverage
- Benefits

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**Design of the reform: a pension according to how much you save**

<table>
<thead>
<tr>
<th>Country</th>
<th>Contribution rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The first 10 years</td>
</tr>
<tr>
<td>Chile (1986)</td>
<td>10,0</td>
</tr>
<tr>
<td>Colombia (1994)</td>
<td>9,7</td>
</tr>
<tr>
<td>México (1997)</td>
<td>8,0</td>
</tr>
<tr>
<td>Peru (1993)</td>
<td>10,0</td>
</tr>
</tbody>
</table>
Goals and outcomes: a new pension system and the interaction with other factors

Macro and microeconomics

### Average GDP %

<table>
<thead>
<tr>
<th>Country</th>
<th>The first 10 years</th>
<th>From the beginning of the system</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile (1986)</td>
<td>7.9</td>
<td>4.6</td>
<td>3.2</td>
</tr>
<tr>
<td>Colombia (1994)</td>
<td>2.6</td>
<td>3.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Mexico (1997)</td>
<td>3.2</td>
<td>2.7</td>
<td>1.4</td>
</tr>
<tr>
<td>Peru (1993)</td>
<td>4.4</td>
<td>5.4</td>
<td>9.8</td>
</tr>
</tbody>
</table>

During the first 10 years Chile experienced a better performance than its peers in the region.

Growth in Latam has been improving, especially in Peru.

Growth is a fundamental factor behind savings and financial market development.

A 10 percent increase in the size of the pension funds has an impact of one tenth in aggregated savings.

Corbo y Schmidt-Hebbel (2003) found that a one percent point increase in pension funds, relative to GDP, has an impact between 1 and 5 points of GDP in savings.

Growth is a fundamental factor behind savings and financial market development.
Goals and outcomes: a new pension system and the interaction with other factors

Macro and microeconomics

<table>
<thead>
<tr>
<th></th>
<th>Chile</th>
<th>Colombia</th>
<th>Mexico</th>
<th>Peru</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per capita GDP</td>
<td>10,197</td>
<td>2,954</td>
<td>6,688</td>
<td>2,317</td>
</tr>
<tr>
<td>Labor informality</td>
<td>24%</td>
<td>52%</td>
<td>61%</td>
<td>71%</td>
</tr>
<tr>
<td>Protectionism (index)</td>
<td>18</td>
<td>27</td>
<td>41</td>
<td>61</td>
</tr>
<tr>
<td>Population of 65 years old and over</td>
<td>8%</td>
<td>5%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>22%</td>
<td>18%</td>
<td>21%</td>
<td>16%</td>
</tr>
</tbody>
</table>

Source: BBVA ERD

Demographics and economic structural variables are the main determinants of the current and future performance of pension schemes

Goals and outcomes: a new pension system and the interaction with other factors

Capital Markets

Pension Funds Size as a % of GDP

<table>
<thead>
<tr>
<th>Country</th>
<th>Average return %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1996</td>
</tr>
<tr>
<td>Chile</td>
<td>10.4</td>
</tr>
<tr>
<td>Colombia</td>
<td>11.5</td>
</tr>
<tr>
<td>Mexico</td>
<td>7.2</td>
</tr>
<tr>
<td>Peru</td>
<td>7.2</td>
</tr>
</tbody>
</table>
Social policies in Latin America: the introduction of PAYG schemes

Capital Markets

Real return of public pension funds in 1980s

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Costa Rica</td>
<td>-10.5</td>
<td>-10</td>
<td>-11.7</td>
<td>-4.8</td>
<td>-37.4</td>
<td>-5.2</td>
<td>-23.8</td>
<td>-4.8</td>
</tr>
<tr>
<td>Ecuador</td>
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<td>Egipto</td>
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<td></td>
</tr>
<tr>
<td>Jamaica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peru</td>
<td>-15.3</td>
<td>-10</td>
<td>-4.8</td>
<td>-37.4</td>
<td>-4.8</td>
<td>-37.4</td>
<td>-4.8</td>
<td>-10.5</td>
</tr>
<tr>
<td>Trinidad y Tobago</td>
<td>-23.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turquía</td>
<td>-5.2</td>
<td>-10</td>
<td>-4.8</td>
<td>-37.4</td>
<td>-4.8</td>
<td>-37.4</td>
<td>-4.8</td>
<td>-10.5</td>
</tr>
<tr>
<td>Estados Unidos</td>
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<td></td>
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<td></td>
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<tr>
<td>Venezuela</td>
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</tr>
</tbody>
</table>


Goals and outcomes: a new pension system and the interaction with other factors

Capital Markets

Diversificación del portafolio de Fondos de Pensiones

- El Salvador
- Bolivia
- Mexico
- Argentina
- Uruguay
- Colombia
- Peru
- Chile

- Deuda pública
- Instituciones financieras
- Acciones
- Fondos de inversión en el exterior
- Otros
Goals and outcomes: a new pension system and the interaction with other factors

Fiscal sustainability

Estimated pension deficit with and without reform, as a % of GDP

**Colombia**

Source: Zviniene & Packard 2004

**Chile**

Source: Zviniene & Packard 2004

The reforms significantly reduced the pension deficit in several countries. The amount depends on the models used and on other reforms.

Fiscal sustainability is an important step before pursuing a universal pension scheme as in the case of Chile.
Goals and outcomes: a new pension system and the interaction with other factors

Replacement Rates

**Replacement Rates**

<table>
<thead>
<tr>
<th>Country</th>
<th>0%</th>
<th>20%</th>
<th>40%</th>
<th>60%</th>
<th>80%</th>
<th>100%</th>
<th>120%</th>
<th>140%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chile*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peru</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Colombia</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

* Men

EPA coverage by quintiles

**EPA coverage by quintiles**

(Q1=poorest, Q5=richest)

- **Chile** (2003)
- **Mexico** (2004)
- **Argentina** (2006)
- **Colombia** (1999)
- **Peru** (2003)

Source: BBVA, PMAF, AOS, Rofman y Luchetti (2006)
Goals and outcomes: a new pension system and the interaction with other factors

Pension Coverage

Latam Average (millions of people)

0 5 10 15 20 25 30 35
0 20% 30% 40% 50%

Número total jubilados LATAM
Cobertura vejez promedio LATAM

Goals and outcomes: a new pension system and the interaction with other factors

Diagnostic

- Poverty risk at old-age (coverage)
- Low density of contribution among self-employed
- Low projected replacement rates for women
- Low competition

Law 20.255 (March 2008)

- New redistributive pillar (SPS)
- Gradual compulsory contribution / Fiscal advantages (same as dependent)
- Public contributions in case of maternity
- Auctioning for new affiliates (based on fees) / Join bidding for survivors and disability insurance

Chilean pension system: diagnosis and reform in 2008
Pension Coverage

Reformed old age pension system in Chile

Fiscal sustainability is a pre requisite for success

Projection of beneficiaries of the solidarity pension in Chile

Fiscal sustainability is a pre requisite for success
Lessons from the Latin American experience

An ideal system

A  Individual saving account system
   Employed labor force = contributors
   Labor Force

B  PAYG/Collective System
   A focused solidarity pension system
   Unemployed or informal workers = no contribution
   Labor Force

C  Pension System
   Contribution Coverage
   Labor Force
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