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### World Bank Support for Pensions and Social Security

Mark Dorfman and Robert Palacios

Background Paper for the World Bank 2012-2022 Social Protection and Labor Strategy











March 2012



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Strategy

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Abstract

Pension and social insurance programs that prevent a substantial loss in consumption resulting

from old age, disability, or death are an integral part of any social protection system. The dual

objectives of such programs are to allow for the prevention of a sharp decline in income when

these life-cycle events take place and protection against poverty in old age. This background

paper reviews the World Bank's conceptual framework for the analysis of pension programs

and defines the major challenges facing low and middle income countries, namely, coverage,

adequacy and sustainability. The paper proposes a broad, forward-looking strategy to help

address these challenges.

**JEL Codes:** O15, O17, and E61

**Key Words:** social protection, social security, social insurance, pensions, aging

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#### **EXECUTIVE SUMMARY**

Pensions and social insurance programs aim to prevent a substantial loss in consumption resulting from old age, disability or death thereby forming an integral part of any social protection system.<sup>1</sup> The dual objectives of such programs are to allow for the *prevention* of a sharp decline in income when these life-cycle events take place and *protection* against poverty in old age. This background paper reviews the World Bank's conceptual framework for the analysis of pension programs, defines the major challenges facing low and middle income countries and proposes a broad, forward-looking strategy to help address these challenges.

This paper finds that while many aspects of the design and implementation of pension programs around the world can be improved in line with the criteria described in the next section, there are three strategic challenges that take precedence.

The first is addressing the **coverage** gap, defined as the share of workers that will not be able to count on any kind of pension income. In low income countries (LICs), roughly one in ten workers contribute to a pension program and this level has remained stagnant for decades, despite substantial growth in per capita income.<sup>2</sup> Meanwhile, despite the expansion of cash transfer programs that cover the elderly in some countries, less than one in four persons above the age of 60 receive a pension globally.<sup>3</sup> In middle income countries (MICs), contributory pension coverage has stalled and, in the case of the former socialist economies, has even declined. This will lead to huge numbers of the growing elderly population being unprotected.

One approach to addressing the coverage gap might be to look for ways to encourage coverage in traditional formal sector schemes. But the limits of this approach have become clear after attempts by social insurance schemes to expand their reach have failed over the course of last

<sup>1</sup> In addition, social insurance programs often insure against unemployment, work injury and illness.

<sup>&</sup>lt;sup>2</sup> Based on World Bank pension database covering 78 LICs, there were about 100 million contributors from a labor force of almost 900 million or about 11 percent.

<sup>&</sup>lt;sup>3</sup> This includes broad social assistance schemes that have been expanded in recent years as well as categorical transfers focused on the elderly, also referred to as 'social pensions'.

half century. More innovative and incentive-based approaches aimed at informal sector workers are being tested in countries like India and Thailand, but these initiatives are at an early stage. Another approach would be to delink pension provision from labor force participation through universal or targeted 'social pensions.' Here, there are important issues related to targeting and incentives that span across the pension and safety nets agendas. The two approaches – encouraging informal sector workers to save and providing non-contributory benefits to the elderly – need not be substitutes but can be viewed as complementary elements of a long term strategy.

A second and related challenge is **adequacy**. This is directly related to coverage in that many workers participate in contributory pension schemes for only part of their careers resulting in relatively low benefits. This is particularly true for low income workers that shift between the formal and informal sector as well as for women who tend to spend a greater share of their working age period caring for children and the elderly. Adequacy is also an issue where there is significant dependence on non-contributory social pensions if the benefit levels provided are too low. Finally, the third challenge, financial **sustainability**, can directly affect adequacy when financial shortfalls lead to reduced benefits and partial defaults on pension promises.

The challenge of ensuring long-run financial **sustainability** is particularly acute in those countries facing unprecedented population aging in the next few decades. While other social programs will be profoundly affected by aging, most notably health, pension policy involves multi-decade commitments; policy decisions today create long term liabilities that in some countries are already unsustainable. Sustainability is not necessarily a function of the amount of spending now or in the future, but rather the ability of the government to finance these obligations and this capacity varies widely across countries.

Broadly speaking, the policy variables involved in sustainability are those of benefit design and financing. In the demographically older countries, where payroll tax rates are generally high and demographic trends will further reduce the ratio of workers to pensioners, benefit parameters must be adjusted. In particular, changes that encourage later retirement, such as gradually increasing the retirement age in line with life expectancy and other factors affecting

sustainability. The Bank can support these efforts by providing technical advice on the impact of different changes not only on the pension system finances but also on the adequacy of benefits and the indirect impact on the economy.

The capacity to provide such assistance can be enhanced through further refinements of and access to the micro-simulation and actuarial projection tools such as the Axia Apex Model of Pension Entitlements (APEX) and the Pension Reform Options Simulation Toolkit (PROST). The latter has already contributed to Bank operations and technical assistance efforts in almost one hundred countries. In addition, the lessons from international experience can be synthesized as part of the Bank's knowledge management and training and provided to policymakers to inform these decisions. Through policy lending, the Bank can also provide budget support to recognize governments willing to tackle difficult structural reforms.<sup>4</sup>

The Bank can also play a role in addressing the challenge of better implementation. The need to identify and track members/beneficiaries is a common challenge to both social assistance and social insurance programs. There are also additional requirements for the efficient implementation of pension programs that are often missing or hinder reform efforts (for example, the ability to track individual accounts). As in other areas of social protection, pension systems are often fragmented. This tends to arise with multiple pension schemes covering different groups of workers. Many countries, for example, have separate schemes for public sector workers or other occupational groups.<sup>5</sup> This results in problems of labor market mobility in addition to the duplication of costs for basic infrastructure.

Another challenge is to strengthen the cooperation between Social Protection and Financial Sector staff in the management and supervision of public and privately managed pension funds. The reserves of these funds are often very large relative to the economy and to other domestic investors with implications beyond the pension system. Poor management of these funds, in

<sup>4</sup> For example, the Development Policy Loan (DPL) currently under preparation for Poland.

<sup>&</sup>lt;sup>5</sup> Extreme examples include Tanzania and Honduras with five and six pension schemes respectively, in the first case despite covering only five percent of the labor force and the second less than one fifth of the labor force.

terms of both cost efficiency as well as investment performance, is often a major threat to both the sustainability of these programs and the adequacy of benefits.

For most LICs and many MICs, the major challenge is addressing the coverage gap. The Bank's broader safety net agenda is an important part of policy options aimed at addressing the coverage gap issue. Large social assistance programs in countries like Brazil and Mexico cover many elderly and disabled members of poor households. In other cases, the Bank is providing support for the implementation of social assistance programs specifically targeted towards the elderly. As part of its analytical work, the Bank has also produced reports and generated research to assess the impact of these programs and ways that they could be improved. Going forward, there is a need for further analysis, particularly in terms of implementation details and policy parameters for these programs.

There is much less experience, both within and outside the Bank, with promoting voluntary pension coverage for workers outside the formal sector. The book entitled "Closing the Coverage Gap" published by the Bank in 2009 aimed to bring together the conceptual knowledge and select case studies of approaches to reform measures. In June 2011, a workshop was held to compile further information on approaches to so-called matching defined contribution schemes; a volume which summarizes the insights of the workshop will be published in 2012. Going forward, there is a need for further study of country experiences that are only now unfolding in places such as China, India and Kenya. The Bank will continue to advise on policy with regard to the relative emphasis on and coordination between policies to expand sustainable contributory pensions and social assistance programs as part of a long term pension strategy.

During the last decade, the Bank's pension agenda has focused much of its work on contributory pension schemes with an important emphasis on sustainability. The Bank has led

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<sup>&</sup>lt;sup>6</sup> See for example, Palacios and Sluchynskyy (2006).

<sup>&</sup>lt;sup>7</sup> See Holzmann, Robalino and Takayashi (eds.) (2009).

efforts to reform pay-as-you-go defined benefit schemes; including innovations such as notional defined contributions and in some cases supported the introduction of new, defined contribution elements. The Bank has evaluated these reforms as they unfolded to learn from the implementation experience and to provide better advice to clients. Much has been learned and this work will continue to be important and consume a significant share of the time of both central and regional staff, especially in the ECA region. It is also important to recognize the emerging problem in many countries where civil service pension programs consume a disproportionate share of limited fiscal resources.<sup>8</sup> These ongoing challenges require the improvement and application of existing tools such as APEX and PROST and further development of tools such as SP-ADEPT to harness the insights of micro-data in making policy choices.

Looking forward, this review suggests several concrete areas for further work. First, investing in strategic knowledge products particularly in areas related to coverage where there are significant gaps including, but not limited to:

- Old age poverty, informal support and pension systems, especially in countries with large agricultural and informal sectors such as in South Asia and Sub-Saharan Africa. This requires efforts in several areas including exploiting existing survey data, collecting administrative data from country sources and micro-simulations with the APEX model.
- Innovative mechanisms to expand voluntary social insurance programs and pension savings arrangements. In this area, there appears to be much to be learned from experiences with health insurance targeted to the poor and opportunities for further collaboration between the Social Protection and Health teams.9
- Approaches to dealing with coverage of migrant workers both internal (often ruralurban as in Brazil and China) and international (e.g., South Asian migrant workers in the Gulf countries).

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See OECD Social Policy Division (2011), Whitehouse and Palacios (2006).
 For example, Ghana and India.

 Evidence to better advise our clients on the policy design possible role of social pensions. Here, collaboration with the safety net team is critical, particularly on assessing the social policy rationale behind targeting social assistance to the elderly and on implementation tools and processes (e.g., ICT applications for identification and payment).

In addition, there are potential areas of collaboration with development partners to establish standards for reporting key indicators for financial sustainability and coverage, along with other useful indicators of the performance of pension systems. The collaboration with the Organization for Economic Cooperation and Development (OECD) and the Inter-American Development Bank (IADB) to produce APEX indicators for Latin American countries and initial discussions with the International Monetary Fund on reporting unfunded pension liabilities are two examples.

Producing internationally comparable indicators and a robust framework for measuring progress will contribute to operational support as the World Bank and other donors increasingly focus on results (including new lending products). As is the case with all knowledge products, a complete strategy would require better use of available communication media starting with a strengthening the delivery and communication of the Bank's pension products. This will include strengthening the social protection website, better integrating internal and external knowledge and lending products and updating pensions-related Social Protection Policy Notes that serve as tools of pensions analysis and pension core course materials.

This paper is structured as follows: The next section briefly reviews the World Bank's evolving conceptual framework for the analysis of pension and social insurance systems and the proposed indicators to be used in policy analysis and assessment of results. This is followed by a descriptive analysis of the challenges pension systems and the countries that sponsor them face around the world. The last section lays out a forward-looking strategy for World Bank support to low and middle income countries and explains its relationship to the broader Social Protection Strategy.

#### I. THE WORLD BANK'S CONCEPTUAL FRAMEWORK FOR PENSION SYSTEMS

#### A. Evolution and Current Approach

The origins of the World Bank framework for the analysis of pension systems can be traced to the 1994 publication entitled "Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth." This volume documented global pension provision, giving empirical evidence and exploring the key areas of the policy debate, including the role of government and the role of prefunding. For the first time, it gathered cross-country data on key indicators such as pension spending and coverage for a large number of developing countries. It also distinguished the different types of programs according to their objectives (redistribution, savings and insurance), their financing arrangements (general revenues, payroll taxes and prefunding) and whether they were publicly or privately administered. This conceptual framework and related terminology were extended a decade later to capture finer differences between contributory and non-contributory elements as well as other forms of old age income protection not directly within the scope of the contributory pension system itself.<sup>10</sup>

The conceptual framework was presented to the Bank Board of Directors in 2007 and is summarized in a 2008 report. <sup>11</sup> The now familiar terminology included five *pillars*. The *zero pillar*, sometimes referred to as 'social pensions' refers to non-contributory, cash transfers financed by the state. The *first pillar* is the more traditional social insurance model with mandated contributions typically aimed at insuring against the income risks associated with old age, disability and death. In some cases, *first pillar* programs are explicitly redistributive, aiming for higher replacement rates for lower income workers. These programs are publicly administered and are either partially funded or operate on a pay-as-you-go basis. In contrast, the term *second pillar* refers to a mandated, defined contribution plan, in most cases with the fund and data management at least partially handled by private sector entities. The *third pillar* refers to recognized modes of voluntary retirement savings, usually regulated and encouraged by the government and taking varied forms (individual retirement accounts, employer-

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<sup>&</sup>lt;sup>10</sup> See Holzmann, Palacios and Hinz (2005).

<sup>&</sup>lt;sup>11</sup> A detailed exposition is available in "Pension Systems and Reform Conceptual Framework," draft mimeo (2008).

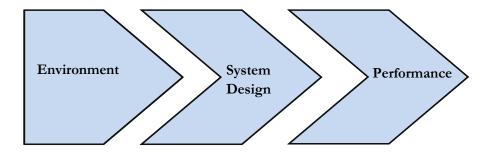
sponsored defined benefit or defined contribution plans, etc.). Finally, the *fourth pillar* captures a range of important non-pension sources of income support including family support (private intergenerational transfers), health insurance, housing subsidies and even emerging financial instruments such as reverse mortgages.

The pillars are a useful device for describing most of what is observed in practice across the world in a systematic manner. The characteristics of the systems can be broken down further into their specific financing, allocation of risks, redistribution within and between generations, governance and management arrangements. The conceptual framework considers pension systems in their country-specific economic and demographic context (see Annex Table 1).

#### B. Evaluating Pension Systems: Indicators and Performance Criteria

Three types of indicators are used in order to apply the conceptual framework and to evaluate pension systems. These are shown schematically in Figure 1 below, starting with indicators of the environment in which a pension system operates, followed by system design (the structure and organization) and finally, a set of performance measures. This structure reflects the reality that the same system design in one country context will produce different results in another.

Figure 1: Pension Indicators - Organizational Framework<sup>12</sup>



The first set of indicators is referred to as the environment in which the pension system operates. This includes demographic conditions (including long run projections based on the UN Population Projections database), labor force participation, macroeconomic conditions,

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<sup>&</sup>lt;sup>12</sup> For further technical information regarding these indicators, see World Bank (2012a).

fiscal space and financial sector development. One caveat is that this is clearly not an exhaustive list as it ignores cultural and political factors and other idiosyncratic features (for example, frequency of natural disasters).

The second set of indicators captures key design characteristics of the pension system structure and rules. These include the overall *architecture of the system*, (including the existing pillars, whether multiple pension systems are operating in parallel), the eligibility rules, contribution rates and implied benefits and associated risks.

The 2008 paper laid out a set of five main criteria that could be used to evaluate the need for reforms to the pension system.<sup>13</sup> These related to the system's ability to: (i) address poverty among the elderly (and where relevant, the disabled and survivors), (ii) affordability to enterprises, workers and the broader economy, (iii) current and future financial viability, (iv) equity in terms of both intra and intergenerational transfers, and (v) security against the risks of inflation, asset returns, longevity or discretionary changes made by governments. In addition, it was recognized that it was important to take into account indirect effects through the pension system's impact on savings, labor and capital markets.

The third set of environment indicators attempts to capture intermediate results and performance with these criteria in mind. It includes several indicators of coverage, financial sustainability, and adequacy as well as economic and administrative efficiency (Table 1). The demographic situation – current and projected over the long run – is an important starting point for any country analysis or cross-country comparison. In addition, labor market conditions both contribute to and are affected by the functioning of the pension system. Additional key factors to consider are the fiscal conditions and the state of the domestic financial sector.<sup>14</sup>

<sup>14</sup> While political economy, institutional capacity and governance are clearly major factors in the environment, they are particularly difficult to summarize with a small set of indicators.

<sup>&</sup>lt;sup>13</sup> The specific terminology used by the authors is adequacy, affordability, sustainability, equity, predictability and robustness.

Table 1: Pension Indicators – Environment

| Demographic                                     |   |
|---|---|
| Old-age dependency ratio                        | (% of total population aged over 65, 1960-2090)           |
| Life expectancy                                 | (by sex; at birth, 1960-2008; at age 60 and age 65, 2006) |
| Fertility                                       | (births per woman, 1960-2008)                             |
| Economic  |   |
| Labor force participation                       | (% of population, by sex and age, recent year)            |
| Public sector and publicly guaranteed debt      | (% of GDP, recent year)                                   |
| Public sector surplus/ deficit including grants | (% of GDP, recent year)                                   |
| Informal support                                |   |
| Older people living with their children         | (% of total, recent year)                                 |
| Course Pallares et al (2012)                    |   |

Source: Pallares et al., (2012).

Design indicators, shown in Table 2, have been refined in recent years in part from collaborative efforts between the World Bank and the Organization for Economic Co-operation and Development (OECD). Micro-simulations conducted with the APEX model and a series of summary indicators have allowed for cross-country comparisons that focus solely on pension system design. Apex measures include before and after tax replacement rates for full career workers (as a proportion of individual and average wages for full career workers), anticipated pension wealth during retirement. In addition, there are now indicators that summarize the share of the pension subject to investment risk or longevity risk and the proportion derived from government versus privately administered pension schemes. While these indicators are currently available only for a limited number of countries, the sample is being expanded

<sup>&</sup>lt;sup>15</sup> The Apex model measures the pension entitlements that are promised to full term workers at various income levels. The model serves as a means of evaluating country pension entitlements, comparing such entitlements across countries, and systematically evaluating the redistributive characteristics of the pension system. See World Bank (2011b) and Whitehouse (2007) and (2011).

rapidly; and it is possible to calculate these indicators for specific countries upon demand, provided that the basic information is made available.

**Table 2: Pension Indicators – System Design** 

| Structure of Pension Systems                             |   |
|--|---|
| Pillars  | Whether a pillar exists, type of scheme, financing mechanism.   |
| Civil service  | Integrated into national scheme or separate provision.  |
| Qualifying Conditions                                    |   |
| Pension eligibility ages                                 | Statutory, standard and early ages by sex.  |
| Contribution history                                     | Years of contributions required to receive a benefit.   |
| Parameters: Contributions                                |   |
| Pension contribution rates                               | Employee, employer and total.   |
| Social security contribution rates                       | Employee, employer and total.   |
| Ceiling on pensionable earnings                          | National currency, percentage of average earnings.  |
| Parameters: Benefits                                     |   |
| Target replacement rates                                 | Full career, gross and net, by sex and earnings level, percentage of individual earnings.               |
| Target pension wealth                                    | Full career, gross and net, by sex and earnings level, multiple of individual earnings.                 |
| Retirement incentives                                    | Change in pension wealth from an additional year's work, percentage of individual earnings, ages 50-70. |
| Investment risk  | Percentage of pension package subject to investment risk.   |
| Life expectancy risk                                     | Percentage of pension package subject to life expectancy risk.  |
| Role of public and private pensions                      | Percentage of pension package provided by private sector.   |
| Financing mechanisms                                     | Percentage of pension package financed pay-as-<br>you-go, partial funding or full funding.              |
| Benefit level from non-contributory and minimum pensions | Value of targeted, minimum and basic, percentage of average earnings.                                   |
|  |   |

Source: Pallares et al., mimeo (2012).

The final set of indicators focuses on performance and is shown in Table 3. The analysis of the design of pension schemes, while important, must be complemented by data that reveals the outcomes and performance of the systems in practice. These include the relative income or

expenditure levels and poverty rates of elderly households as well as indicators summarizing current and future spending burdens for pensions. The latter is the most difficult to measure due to the lack of a standard concept or methodology for the calculation of long term pension liabilities for public sector schemes. The European Union (EU) has recently issued guidelines for a supplementary account that will result in improved comparability among EU members. There are active discussions among the multilateral organizations including the IMF and the World Bank towards defining such indicators as the long term fiscal implications for low and middle income countries are beginning to gain attention. At least two caveats are worth noting: First, recent data are not available for all countries. Second, the database and indicators continue to evolve over time. The country indicators that are currently available will soon be accessible through the new pension website (<a href="www.worldbank.org/pensions">www.worldbank.org/pensions</a>). They are also documented in a separate paper. The country indicators are large through the new pension website (<a href="www.worldbank.org/pensions">www.worldbank.org/pensions</a>). They

Although further work is needed in both defining and gathering the required information to generate these indicators, they provide an empirical basis and a common language for policy discussion and, importantly, aim to assess results of policy actions (or inactions) through observed changes over time. The next section draws upon some of these indicators in order to assess the major challenges facing low and middle income countries.

<sup>&</sup>lt;sup>16</sup> There are also difficulties in comparing the level of unfunded pension liabilities for private sector entities due to differences in accounting and minimum funding rules across countries.

<sup>1&#</sup>x27; See IMF (2012)

For example, despite independent estimates there is no standardized measure of unfunded pension liabilities.

<sup>&</sup>lt;sup>19</sup> See Pallares et al., mimeo (2012).

Table 3: Pension Indicators - Performance

| Coverage  |  |
|---|--|
| Active members  | Number, % of labor force, % of working age population. |
| Recipients  | Number, % of total and over-65 population.             |
| Adequacy  |  |
| Empirical replacement rates by sex                            | Percentage of individual earnings.                     |
| Ratio of pension income to expenditures of elderly households |  |
| Incomes of older people by sex                                | Percentage of population incomes.                      |
| Poverty of older people by sex                                | Percentage of older people.                            |
| Financial sustainability                                      |  |
| Current pension spending                                      | Percentage of GDP.                                     |
| Current fiscal deficit  | Percentage of GDP.                                     |
| Present value of projected pension spending*                  |  |
| PV of spending to current total tax revenues                  | Percentage of GDP.                                     |
| PV of spending/PV contributions                               | Percentage of GDP.                                     |
|   |  |

Source: Derived from Pallares et al., mimeo (2012).

#### II. CHALLENGES FACING LOW AND MIDDLE INCOME PENSION SYSTEMS

#### A. Global Aging Patterns

Population aging presents a challenge for all World Bank client countries and a pressing challenge for those that have had the most precipitous declines in fertility rates along with increases in life expectancy over the past few decades. Projections of system and old age dependency ratios suggest that aging will have the most profound impact in many client countries in East Asia Pacific (EAP), Europe and Central Asia (ECA) and Latin America and the Caribbean (LAC) over the coming decade. As suggested in Figure 2, the ratio of those age 65 and above to those aged 15 to 64 will more than double from 2010 to 2050 in all regions with the exception of Sub-Saharan Africa which will nevertheless experience a steep increase of 57 percent.

Old Age Dependency Ratio (Pop. 65+/Pop. 15-64), by region 2010-2050 50 Old Age Dependency Ratio 40 30 20 10 2010 2015 2020 2025 2030 2035 2040 2045 2050 East Asia & Pacific — Europe & Central Asia

Middle East & North Africa

Sub-Saharan Africa

Figure 2: Projected Old Age Dependency Ratios (Population 65+/15-64)

Source: UN Population Prospects (2010 revision).

South Asia

**— — High income:** OECD

• Latin America & Caribbean

Acceleration of aging and old age and system dependency ratios will continue to increase the financial burden and stress on public defined benefit pension systems. Pension schemes financed on pay-as-you-go basis face increasingly unsustainable financial burdens and will often have to periodically adjust key parameters such as the contribution rate, accrual rate and retirement age in order to maintain financial balance in the face of aging. Funded defined contribution schemes also rely on greater contributions and years of contributions in order to support populations that are living longer. And families with little or no support from contributory pension schemes will face a greater burden to care for their elderly and will need savings vehicles to support this increasing need.

<sup>&</sup>lt;sup>20</sup> The effect of aging on pay-as-you-go NDC schemes will also be an increasing disparity over time between contributions received and benefits paid. In addition, growing longevity will reduce benefit adequacy.

#### **B.** Different Starting Points

Aside from demographic and other environmental differences (such as productivity growth and fiscal space), there is notable variation across countries in terms of the design and performance of existing pension schemes. In terms of design, while more than two thirds of countries depend mainly on partial funding or pay-as-you-go financing of defined benefit schemes, the benefit levels and associated risks vary widely. For example, promised replacement rates for workers contributing throughout full careers generally range from about 30 to 80 percent and workers in poorer countries are more likely to be subject to inflation risk both before and after retirement.

In practice, **adequacy** is often determined not by the benefit formula so much as the period spent by workers outside the formal labor market, thereby not contributing to and accruing benefits in a contributory pension scheme thus lowering their effective benefit levels. Even though this effect tends to be more pronounced the poorer the country, middle income countries have a wide variation in density of contributions in with many facing the challenge of insufficient contribution density to support the adequacy objectives. While the challenge of adequacy is closely related to coverage – of both contributory and non-contributory pensions – in demographically advanced countries such as those in Eastern Europe, East Asia and parts of Latin America, the issue is increasingly tied to pension system finances. Quite simply, this is because the ratio of the retired population relative to contributors is growing, and the period in retirement relative to a contributory work life is growing as well. Looking forward, the challenge for these countries will be to maintain adequate pension levels in the face of a dramatically declining ratio of contributors to pensioners. This is a challenge that all countries will eventually face regardless of their pension system design.

Perhaps the most important weakness in performance, especially for LICs and many MICs is in terms of **coverage** rates. Figure 3 below shows the well-documented relationship between

coverage of the working age population and levels of income per capita. <sup>21</sup> Very similar patterns hold when the denominator is defined as those participating in the labor force. Income per capita here (in PPP-adjusted dollars) is correlated with factors that determine the size of the informal sector such as the share of the workforce in agriculture, proportion of labor force that is self-employed or the ability of a government to collect taxes, all of which are correlated to per capita income levels. Poor countries would also have more difficulty saving for the long term, and poor workers and employers would have greater liquidity needs. More detailed analysis reveals that while these factors explain more than three fourths of the observed variation across countries, policy and history also play a role. In the ECA region, coverage rates have fallen since the transition to market economies began in the 1990s, but remain above levels in other non-ECA countries, especially in countries such as Belarus, where state employment is still dominant. In southern Africa (including South Africa, Lesotho, Namibia, Botswana and Malawi), coverage is lower than predicted due to the absence of any mandated pension scheme for private sector workers.

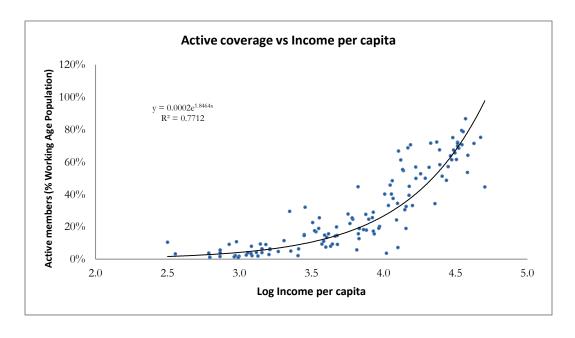


Figure 3: Coverage Rates of Working Age Persons across the World

Source: Derived from Pallares et al., mimeo (2012).

<sup>&</sup>lt;sup>21</sup> In this case, coverage refers to the number of active contributors in a recent year divided by the number of working age individuals.

The key message, however, is that one of the major challenges for pension systems is the low coverage that characterizes social insurance schemes in low and middle income countries. In LICs, roughly one in ten workers contributes to a pension program and this proportion has remained stagnant for decades.<sup>22</sup> This exposes workers to a likely large decline in consumption as they grow old and leads to greater levels of poverty for widows, the disabled and elderly with no other sources of support.

Expanding contributory pension scheme coverage is an objective of many countries though often seen as less urgent than the current push for universal health insurance. However, even if labor force coverage rates were to increase dramatically in the short run, this would not address the needs of those that are currently or soon to be old. While insurance for disability and death can, in principle, be provided soon after a worker contributes, decades of participation are required in a contributory scheme in order to generate reasonable levels of income in old age. Even if coverage of contributory schemes were to become universal overnight, those close to retirement age would not have sufficient time to accumulate enough to generate adequate pensions. For this reason, many countries have introduced or are considering the introduction of programs where pension transfers are not tied to past contribution history so that elderly coverage and poverty protection can increase without waiting a generation for contributory balances or rights to sufficiently accumulate during one's work life.

Social assistance, through general safety net programs or categorical targeting is an increasingly popular response to the coverage gap. For older workers that do not have enough time to accumulate pensions in contributory programs, this is the only option available. Figure 4 shows a different coverage measure focused on the proportion of the elderly receiving any kind of pension income, including non-contributory or social pensions.<sup>23</sup> In contrast to the previous figure, the relationship between coverage and per capita income is much weaker. This is due to the fact that a number of poor countries have introduced or expanded their non-contributory

<sup>&</sup>lt;sup>22</sup> Based on World Bank pension database covering 78 LICs, there were about 100 million contributors from a labor force of almost 900 million or about 11 percent. See Pallares et al., mimeo (2012). See also, Robalino et al. (2011).

<sup>23</sup> Also referred to as *zero pillars*.

pension schemes. Thus, increasingly, part of the policy response to low coverage is to pay for targeted or universal benefits directly from general revenues.

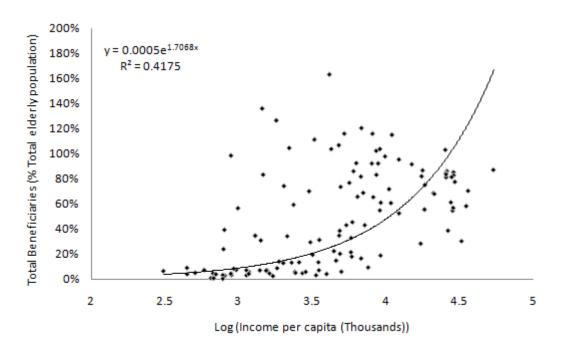


Figure 4: Coverage Rates of the Elderly across Countries

Source: Derived from Pallares et al., mimeo (2012).

In the longer run, encouraging voluntary participation may help address the coverage gap — the share of the population not covered by the pension system. To date, significant coverage expansion has been achieved in only a few countries including China and Sri Lanka, but several initiatives are under way in countries such as India and Thailand. In order to succeed, transaction costs must be kept low relative to the amounts involved and savings incentives are needed to compensate workers for sacrificing valuable liquidity. Even then, realistically it will be very difficult to create incentives for the youngest and poorest workers to save for old age. Credible institutions that can be entrusted with workers' savings over the long term are also required, ones that can provide greater assurance to workers that contributions are safeguarded.

Importantly, the role of prevention (social insurance) and protection (social assistance) can be complementary and can change over the long time horizon required for pension policy. As

populations shift from rural to urban areas and the size of the formal sector grows (along with income levels), the role of contributory schemes is also likely to grow. However, the unprecedented aging of much of the developing world suggests a race between the expansion of coverage and the aging process. In addition, while growth in per capita income is associated with increase in growth of the formal sector, there is wide variation over time in the composition of growth, with several MICs finding substantial growth in per capita income yet anemic growth in labor force coverage.

Arguably, the second major challenge facing pension systems in the context of rapid aging is financial **sustainability**. Once again, starting points differ with a wide variation across countries in the level of current pension spending due to demographics, pension system design and the stage of maturation of the system.

Pension policy is unique among social protection programs in terms of the very long time horizons involved. Many advanced economies with mature pension systems today are facing the prospect of painful reforms because the underlying financing arrangements did not achieve sustainability by responding to anticipated demographic change while many emerging economies will become old before they become rich.

The nature of the present challenge in any particular country reflects past policies as well as the stage of demographic aging the country has reached. In demographically advanced countries, pension obligations are often already large and the challenge is to maintain adequate pension levels even as the ratio of workers to pensioners declines dramatically. This is particularly true in the transition socialist economies in Eastern Europe and the Former Soviet Union<sup>24</sup> where pension spending is frequently the largest government expenditure as well as a major source of fiscal deficits.

In younger middle income countries, despite having somewhat lower expenditures, social insurance deficits are often significant and projected to grow over time as the population

<sup>&</sup>lt;sup>24</sup> Russia is an example.

ages.<sup>25</sup> Earmarked payroll taxes for social insurance are already high in most of these countries. In low income countries, pension spending may not be high in terms of GDP but still consumes a significant share of the limited resources available for social spending. Furthermore, this spending tends to be regressive as it is concentrated on a very small proportion of workers, especially civil servants who enjoy higher than average incomes.<sup>26</sup>

Sustainability may be compromised in the basic design of the program if the parameters lead to actuarial imbalances. The capacity to calculate and report both the short and long term financial status of the program is an important component and necessary to inform policy. This capacity, and even the basic information system to produce the required information, is often missing or underdeveloped.

Addressing sustainability issues leads to policy choices about how to finance pension obligations. There are several important distinctions to be made: The first is the degree to which pensions should be prefunded. There has been an enduring academic discussion on this question, but in practical terms, countries have generally pursued some combination of prefunding either by accumulating public pension reserves during the early years of the program or, more recently, through funded defined contribution components. The latter has been controversial with the rapid expansion over the last quarter century in the number of countries that have introduced privately managed, defined contribution schemes. While private pensions can clearly contribute to the overall pension system in many countries, the Bank's policy advice in this area has given increasing importance to the enabling conditions ranging from political consensus and fiscal space to finance the transition to institutional capacity to regulate and supervise the sector.<sup>27</sup>

The Bank's experience suggests that regardless of the type of prefunding chosen, it is crucial that governance arrangements and institutional capacity be conducive to sound investments, accountable administrative processes and reasonable administrative costs. There is wide

<sup>&</sup>lt;sup>25</sup> Brazil and China are examples.

<sup>&</sup>lt;sup>26</sup> India and several countries in Sub-Saharan Africa are examples.

<sup>&</sup>lt;sup>27</sup> See Rocha and Rudolf (2009).

variation in the capacity across countries to implement funding effectively and in many, the domestic capital markets lack the size and liquidity that would effectively channel these funds and provide reasonable returns. Working in conjunction with financial sector colleagues, the Bank has focused on improving fund management in public pension funds as well as increasing the capacity of private pension fund supervisors in those countries that have opted for private management.

A second set of financing issues relates to whether pensions are financed by earmarked payroll taxes or general revenues. The situation on the ground is less dichotomous, as mature social insurance programs in middle income countries (both for health and pensions) often generate deficits that are financed through general revenues and many low income countries spend large amounts on civil service pensions financed directly from the budget. Conversely, in countries with still-maturing pension schemes, social insurance reserves are often used to finance public deficits. The choice of financing source is also related to the relative emphasis given to contributory versus non-contributory or social pensions.

Just as the choice to prefund must consider the state of local capital markets, the choice to rely on payroll taxes to finance pensions must take into account local labor market conditions. Often financing other social insurance benefits including health, these taxes can create a significant 'wedge' between the cost of labor and the employee's take-home pay. This can lead to distortions that reduce employment and increase evasion. The benefits of shifting away from labor taxes (and towards consumption taxes) are currently an important part of the policy discussion surrounding social insurance and an area for collaboration between the pension and labor teams.

In addition to these key challenges, a number of specific issues are emerging as important for a subset of countries. These include, but are not limited to, the following issues:

- Reforming expensive and inequitable civil service pension schemes;
- Addressing the needs of millions of internal and international migrant workers in a globalized labor market;

- Improving the performance of privately managed, defined contribution schemes (second pillar);
- Increasing the transparency, accountability and efficiency and fund management of publicly managed schemes;
- Mitigating perverse labor market incentives due to tax wedges and incentives for early retirement; and
- More systematically taking into account elements of the fourth pillar, in particular how health insurance affects the adequacy of pension incomes and how other support mechanisms affect elderly poverty prevalence.

This set of challenges – coverage, adequacy and sustainability – has implications for World Bank support in the coming years. The next section briefly reviews the Bank's recent pension work and lays out a broad strategy going forward. This strategy is then placed in the context of the Social Protection Strategy.

## III. WORLD BANK SUPPORT FOR PENSION REFORM – LESSONS AND STRATEGIC DIRECTIONS

#### A. Reflecting on Bank Pension Work over the Last Decade

Since 2002, the World Bank has supported pension reforms in more than 140 projects in over 60 countries (See Table 4).<sup>28</sup> As a cross-sectoral area, pension interventions were supported by projects originating in multiple sectors. Bank lending has been largely concentrated in the ECA and LAC regions and increased during the financial crisis. The peak periods of lending were in

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<sup>&</sup>lt;sup>28</sup> There are neither sectoral nor thematic codes for pensions. These estimates have been made by searching project documents and determining if the loans support measures aimed at improvements in pension systems or pensions for particular groups such as civil servants or teachers. See Hinz, Egelmelzer and Biletsky (2008) and Holzmann (2009).

2004-2005 (with substantial fiscal restructuring in ECA and LAC) and in 2009-2010 with pension reform measures supported in the face of the financial crisis.<sup>29</sup>

A sizeable proportion of the Bank's role in supporting pension reform is through Analytical and Advisory Services. These Bank products can be categorized as follows: (i) flagship publications which either have a thematic or regional focus; (ii) discussion papers, working papers and technical notes; (iii) country-specific pension policy reports and sections or chapters of broader reports such as public expenditure reviews; (iv) Financial Sector Assessment Program (FSAP) technical notes; (v) diagnostic tools such as the Pensions Reform Options Simulation Toolkit (PROST) and technical notes on pensions indicators; and (vi) training and dissemination programs including core courses, regional training programs, contractual savings symposia and PROST training.

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<sup>&</sup>lt;sup>29</sup> In its review of loans that were made between 1984 and 2004, IEG found that three quarters of the performance outcome of 139 projects was rated satisfactory with only 13 percent of the projects rated unsatisfactory. A subsequent review of 112 loans between 2002 and 2007 found 83 percent were rated satisfactory for development objectives with only four projects rated marginally unsatisfactory. See Independent Evaluation Group-World Bank, *Pension Reform and the Development of Pension Systems: An Evaluation of World Bank Assistance* (2006).

Table 4: Summary of Bank Lending for Pensions 2002-2010

|       |             |             |             | Fiscal `    | Year        |             |             |             |             |              |                |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|----------------|
|       | 2002        | <u>2003</u> | 2004        | <u>2005</u> | <u>2006</u> | <u>2007</u> | 2008        | <u>2009</u> | <u>2010</u> | <u>Total</u> | <u>Percent</u> |
| SSA   | 5           | 6           | 18          | 17          | 9           | 0           | 61          | 11          | 20          | 147          | 2.7%           |
| EAP   |             |             |             |             |             |             |             |             |             | -            |                |
| ECA   | 101         | 85          | 252         | 62          | 173         | 16          | 22.57       | 1,456       | 1,101       | 3,269        | 59.6%          |
| LAC   | 86          | 62          | 82          | 601         | 100         | 62          | 35          | 268         | 72          | 1,368        | 25.0%          |
| MNS   | 7           | 4           | 3           |             | 50          | 1           | 85          |             | 305         | 455          | 8.3%           |
| SAR   | 14          |             | 185         | 11          | 10          | 12          |             | 3.8         | 7.5         | 243          | 4.4%           |
| Total | 213         | 157         | 540         | 691         | 342         | 91          | 204         | 1,739       | 1,506       | 5,482        | 100.0%         |
|       |             |             |             |             |             |             |             |             |             |              |                |
|       |             |             |             |             |             |             |             |             |             |              |                |
|       |             | Numb        | er of P     | rojects     | with P      | ension      | s Comp      | onents      |             |              |                |
|       |             |             |             | Fiscal `    | Year        |             |             |             |             |              |                |
|       | <u>2002</u> | <u>2003</u> | <u>2004</u> | <u>2005</u> | <u>2006</u> | <u>2007</u> | <u>2008</u> | <u>2009</u> | <u>2010</u> | <u>Total</u> |                |
| SSA   | 2           | 3           | 2           | 4           | 6           | 2           | 3           | 2           | 1           | 25           | 17%            |
| EAP   |             |             |             |             |             |             |             |             |             |              |                |
| ECA   | 10          | 7           | 12          | 7           | 6           | 3           | 3           | 8           | 5           | 61           | 42%            |
| LAC   | 6           | 6           | 6           | 7           | 2           | 5           | 3           | 2           | 1           | 38           | 26%            |
| MNS   | 2           | 1           | 1           |             | 1           | 1           | 1           |             | 3           | 10           | 7%             |
| SAR   | 3           | 1           | 2           | 2           | 1           | 1           |             | 1           | 1           | 12           | 8%             |
| Total | 23          | 18          | 23          | 20          | 16          | 12          | 10          | 13          | 11          | 146          | 100%           |

Source: Bank staff estimates (2012).

During this period, the Bank's knowledge products addressed many of the issues relevant to the countries where lending was also concentrated. The Bank prepared over 160 books, reports, discussion papers, working papers and technical notes from FY06 to FY10 that have pension reform as either the primary or an important part of the focus.<sup>30</sup> Of these, about 60 pertained to pension issues in countries in the ECA region followed by 30 reports pertaining to the LAC region. Thirty eight of these reports focused on global issues, of which most were prepared as part of the Pension Primer Series – Social Protection Discussion Papers or Pension Primer Notes and background reports for the IEG report.

To some extent, the Primer Series had earlier focused on the policy and design questions most relevant for countries introducing funded schemes. Topics such as investment of pension

<sup>&</sup>lt;sup>30</sup> Limitations in the coding of Bank knowledge products make it difficult to have a comprehensive picture of the Bank's analytical work. In addition, many of the notes and reports prepared for programmatic technical assistance are not coded into the Bank's business warehouse database and are therefore very difficult for staff to identify.

funds, annuity provision and individual transitions from unfunded to funded schemes were produced. In the recent past, however, a shift towards issues such as civil service pension reforms and social pensions emerged in response to perceived gaps in knowledge and emerging reform priorities. Major studies on pensions in Latin America and the Caribbean, the Middle East and North Africa and South Asia were published in 2005. Emerging models, such as the notional defined contribution plans, were also the subject of major studies initiated by the Bank. Other studies included books on annuities, private pension scheme performance, governance and public pension fund management. Finally, the conceptual framework that emerged in the latter part of this period (as described earlier in this paper) was revised to reflect the evolving policy discussion including the greater emphasis on the *zero pillar* or social pension agenda.

#### B. A Forward-looking Strategy for World Bank Support for the Pension Sector

During the last decade, the Bank's lending for pension work largely focused on middle income countries. Knowledge products and technical assistance initially reflected this and focused extensively on reforms to the design of programs that covered formal sector workers. In addition, parametric and systemic changes aimed at making these schemes more sustainable in the long run took place and were supported by the Bank in many countries.

This work will continue to be important and consume a significant share of the time of both central and regional staff, especially for the LAC and ECA regions where some reforms have been reversed, others have not performed well and still others have either been incomplete or faced additional challenges. Moreover, the projected stagnancy or decline of the working age population in the region is likely to keep pension reform high on the social policy agenda in many of the countries in these regions. In addition, issues of coverage and the design and financing of social pensions has become more prominent in these regions.

<sup>&</sup>lt;sup>31</sup> See Intermit Gil, Packard, and Yermo (2005), World Bank (2005), Robalino (2005).

<sup>&</sup>lt;sup>32</sup> See Holzmann, Palmer and Robalino eds. (2012).

See Rocha, Vittas, and Rudolph (2011), Rocha and Thorburn (2007), Hinz et al. (2010), Holzmann (2009), Musalem and Palacios (2004), Rajkumar and Dorfman (2010).

In the last few years, demand from younger and poorer countries as well as non-traditional pension clients has been increasing while considerable ongoing demand for pension advisory assistance continues. For several years' time, the largest number of participants attending the Bank's pension course has been from Sub-Saharan Africa. The Bank has projects supporting pension policy and implementation in Afghanistan, , Iraq, Jordan, Lebanon, the Maldives, and Vietnam and technical assistance (TA) in Indonesia, Jamaica, Mongolia, South Africa, Tanzania, Timor Leste and Uganda. In addition, demand is growing in the form of reimbursable TA in such countries as Cyprus, Dubai, Egypt, Kazakhstan, Malaysia, Malta and Trinidad and Tobago.<sup>34</sup>

The emerging demand tends to focus on the three challenges described in the last section, namely coverage, adequacy and sustainability. (Annex Table 2 provides some detailed policy examples.) Unsurprisingly, sustainability issues tend to be most important in demographically advanced countries like Cyprus and Malta. Another example is the proposed policy loan under development for Poland. In several countries, the increasing costs of civil service pension schemes that are now maturing have become an important part of the pension agenda. The Bank can contribute here by helping these countries work through the difficult tradeoffs involved in balancing the fiscal burden against benefit adequacy. Bank support in the traditional investment loan model has tended to concentrate on building administrative systems and institutions particularly in post-conflict and fragile economies such as Afghanistan or Iraq.

Perhaps the most often cited issue, however, is coverage. In both low and middle income countries, Bank clients are seeking policy advice on the instruments that can expand coverage of elderly poverty protection in the short term and instruments that support savings for old age income protection for a much larger population in the medium term.

Looking forward then, the pension strategy should address these new sources of demand, much of which involves non-lending services. It should address the three challenges described in the last section – coverage, adequacy and sustainability (CAS). The corresponding indicators, both from the perspective of design and performance, were shown earlier. The Bank's strategy

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This is not an exhaustive list.

in the pension area should contribute to assisting countries to meet these criteria. Looking forward, this has implications for the Bank's strategy in at least five areas – *knowledge* management, operational support, communication and training, and partnerships:

**Knowledge management**. Supporting countries' pension reform agendas requires a combination of improvements to existing tools and the generation of new knowledge products. These can be grouped into three categories – data management, analysis and evidence for policymaking, and developing tools.

In terms of data management, four sources of data are useful for generating evidence and tracking results. The first is *administrative data* taken from secondary sources, typically pension funds, social insurance reports or government accounts. This kind of data has been the major source of cross-country comparisons of pension schemes for the last 15 years and is often cited in project documents, Bank AAA and country policy dialogue. This data, along with demographic data from the UN Population Projections unit, has been compiled into a database using the indicators described above. Such data has been used by Bank staff and in the coming months will be made more widely available for public access.

Over the past five years, another source of data stems from the collaboration with the OECD to generate micro-simulations using the APEX model. The output of this exercise allows for cross-country comparisons of pension system design in ways not previously possible. APEX simulations are excellent for cross-country comparisons of pension system design, benefits and redistribution. Over the next three years, the objective will be to generate simulations for more than 100 countries.

Measurement of performance must come from systematic evidence provided by household survey data. The surveys provide information on the incidence of benefits and the impact of programs on household poverty, among other things. Recent progress in harmonizing household survey data and using the *Adept interface* provide an opportunity for the first time to produce systematic evidence on key pension policy issues for a large number of countries.

Adept pensions will provide access to preformatted tables and analysis of pension data using household surveys.

The Bank has also gathered detailed, cohort-specific information for its PROST modeling in dozens of countries over the years. Although to date, these data have not been systematically stored and mined, over the next few years, certain key indicators such as age—sex—earnings profiles and distribution of covered earnings will be systematically collected and reported. All of these indicators will be maintained in the pension database and a subset will be made available to the public via downloadable spreadsheets on the website.

Responding to client reform needs suggests that efforts be made to fill certain knowledge gaps with evidence that will be useful for Bank operational staff and policymakers. Perhaps the largest knowledge gap is in the area of coverage. The 2009 book entitled "Closing the Coverage Gap" was an initial foray into this policy area, but three years later, there is little empirical evidence on how to expand coverage to the informal sector. In 2012, a new publication on matching defined contribution (MDC) programs will be published, adding to the evidence base. However, there is scope for much more evidence gathering as well as learning from the experiences of initiatives a number of countries are undertaking, including in the area of health insurance. Given similar challenges, to expand coverage, greater collaboration between health and social protection seems warranted.

A very specific type of coverage issue that is expected to command more attention in the next decade is the lack of coverage for migrant workers. This is especially important for the receiving Gulf Countries and for the sending South Asian countries, but it is also an issue that will affect Eastern Europe and Central Asia where large numbers of younger cohorts work for significant portions of their working life in Western Europe or elsewhere. A related challenge is rural—urban migration, especially in China.

The role of social pensions – cash transfers targeted to the elderly, widows and disabled – are, along with broad social assistance programs, the only direct intervention that can reduce poverty rates among those already old or close to old age. There is relatively little evidence of

the impact and efficiency of social pension programs. In the coming year, a new Working Paper and Primer Note on social pensions will be produced, but more evidence will be required in coming years as more and more countries consider taking this route.

In line with the broader Social Protection Strategy to address implementation issues and contribute to integration of systems, there is a need to fill the gap in knowledge with regard to how individual contributors and beneficiaries are identified and their histories are tracked. This requires better understanding of the Management Information Systems (MIS) of pension and social insurance systems and ultimately, in the development of guidelines for minimum standards and functionality of information systems for pensions. This effort should be coordinated across units, especially those working with social insurance agencies that may encompass other programs such as health insurance.

There are also gaps in the Bank's understanding of pension *adequacy*. Notwithstanding the expansion of the conceptual framework to encompass non-pension sources of support (the *fourth pillar*), evidence on the subject to date is minimal. In particular, studies of the interaction between formal and informal (family) sources of support are rare and intrahousehold allocation of resources in elderly households is almost non-existent. Also, the most commonly cited adequacy indicators – replacement rates – do not take into account the most important age-related expenditure, health care. Working together with health sector colleagues, a measure of adequacy that takes into account out-of-pocket spending for health care will contribute to a better understanding of pension benefit adequacy.

Finally, the most important tool for assessing long run financial sustainability is the PROST model. The model has evolved over time and this process will continue. It has been used to project pension spending and revenues in more than 100 countries and there have been instances where the internal capacity of the Bank team has been stretched by a concentration of client requests. This experience suggests that there may be a rationale to review the way PROST is supported and find other ways of building in-country capacity for the longer run.

In addition to the country-specific operational support that is its main function, global knowledge products related to the challenge of aging populations are envisioned in the coming years. Two priorities stand out. First, there is strong demand across institutions including the IMF and EU for standardized indicators of pension sustainability. In the next few years, the Bank will work with other interested institutions to define and report pension liabilities. Second, there is a growing perception of the need to look at the range of social programs in the aging context. The most important expenditures are health and pensions (both contributory and non-contributory), and there is scope for collaborating to produce long run projection scenarios using the same underlying demographic data and modeling approach. This goal, however, is likely to require significant resources, possibly through external funding sources. Annex Tables 3 and 4 provide more detail and examples.

Operational support in pensions. The coverage, adequacy and sustainability (CAS) focus areas have implications for operations. Policy responses that would support increasing coverage would include multiple measures including strengthening the design of social pension programs, mandatory contributory programs and supplementary voluntary arrangements. It may also include the provision of policy advice in the design of voluntary pension savings arrangements involving public subsidies and/or guarantees in the accumulation or decumulation phases.

Technical assistance would also likely be required to assess the cost and the impact of different design options as well as in the establishment of implementation and supervision mechanisms. Measures established to increase coverage of the informal sector would have costs, benefits and measured results that could be informed by cross-country experience as well as inform the policy options in other countries.

Investment lending operations could also support the coverage expansion agenda such as financing basic infrastructure for administrative systems, collections, recordkeeping and disbursement. Results-based lending operations can support institutional development and policy implementation subject to verified expansion in the number of contributors to a pension system or a larger share of elderly poor receiving a social pension. Generating reliable

information about individuals will become more important in a results-based environment. This suggests that the knowledge products supporting strong management information systems and lending operations to support putting them in place go hand-in-hand with Bank support for coverage expansion.

Operational support for *sustainability* is likely to continue to take the form of policy lending to support structural changes in pension systems (such as phasing in higher retirement ages) and technical assistance to provide projections and policy options to strengthen pension finances. Such technical assistance will continue to be provided to middle and upper income countries through reimbursable technical assistance.

Communication and training. A key objective of Bank support is to create country capacity and disseminate existing knowledge. Looking forward, the pension score course would be adapted to meet the new types of demand and reflect client country priorities. In order to reach a larger local audience, consideration will be given to holding mini-regional courses, more tailored to the particular needs of the region. For example, a regional course in the ECA region would focus more on sustainability issues while a mini-course in SSA would focus on coverage issues. To the extent possible, Bank staff working in pensions should participate in regional events organized by other institutions such as the OECD, ILO or IDB both to increase their own knowledge, disseminate the Bank's work and strengthen existing and future partnerships (see below). The Bank will also use mini-core courses to support the training of its own staff.

A second major conduit for the Bank's knowledge products is the pension website. This site will need to be overhauled both in terms of content, site design and user interface in the coming year. Among other functions, it will allow users to access downloadable data on key pension indicators.

**Partnerships**. A number of ongoing external partnerships will continue at least for the next few years. A Memorandum of Understanding between the Bank and the OECD was signed in November 2011. The staff sharing agreement will result in collaboration on an expanded set of APEX model indicators over the next two years as well as OECD staff support for technical

assistance in several countries. Related to this arrangement, the Bank, OECD and Inter-American Development Bank (IDB) are joining forces to produce a volume with microsimulations and analysis for Latin America. The Bank has also collaborated with Hitotsubashi University and Grupo BBVA in the development of a volume on matching defined contribution schemes and has been supported by the Swedish Social Insurance Agency in the development of a volume evaluating the design and implementation experience of notional defined contribution schemes. Looking forward, there is potential for collaboration with the IMF in the area of long term fiscal sustainability measures and with the ILO on minimum data/MIS standards.

Internally, there are a number of areas where increased collaboration and partnership across sectors and units will be needed during the coming years in order to address the knowledge gaps already mentioned. Common issues face health and social protection teams in terms of expanding coverage of health insurance and pensions as well as assessing long run fiscal sustainability. There are also common interests in implementation issues between the Pension, Labor Market and Safety Nets teams.<sup>35</sup> Finally, important synergies remain to be tapped through collaboration between the Social Protection, Financial Sector and PREM teams working in pensions. This is true both in terms of knowledge management as well as operational support. Given the lack of institutional incentives that often hamper inter-sectoral collaboration, it is incumbent upon senior management to provide clear direction so that these synergies can be exploited.

### C. Pensions and the Bank's Social Protection Strategy

Classifications of different types of pension programs can be broadly mapped into two functions — insurance/savings and redistribution/poverty alleviation. These functional categories correspond, in turn, with the concepts of *prevention* and *protection* in the Social Protection Strategy.

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<sup>&</sup>lt;sup>35</sup> An area of collaboration worth exploring is with those working on the financial inclusion agenda such as CGAP.

By their nature, contributory pension programs help prevent poverty by smoothing lifetime consumption through savings and insuring against the risks associated with death, disability and longevity. Non-contributory schemes referred to as *zero pillars* in the most recent conceptual framework (and also known as 'social pensions' in the wider international discussion) aim to provide protection and overlap with the social safety nets both conceptually and functionally. Most pension systems combine these two functions in some way and performance, as measured by indicators listed in Table 2, reflects how successfully the prevention and protection functions have been achieved.

Support for the pension and social security reform is aligned with the four pillars of the Social Protection Strategy as follows:

The social protection systems approach can be a vehicle for establishing and strengthening the focus of multiple instruments supporting the strategic objectives of responding to the challenges of aging and closing the coverage gap. By applying a systems approach, policy reforms and design of schemes can support the needs of the elderly, disabled and survivors while achieving the economic efficiency of considering the impact on non-targeted groups and the financial efficiency of supporting other poor or vulnerable groups.

A systems approach towards social protection focuses on how instruments such as savings, insurance and redistribution are linked to the core pension objectives of consumption smoothing, elderly poverty protection and redistribution.<sup>36</sup> Under such an approach, multiple instruments could be mobilized to manage a given risk or shock. While in the traditional view of social protection the typology is organized around programs that operate independently, focusing on different risks/shocks, under the systems view, the typology is organized around basic instruments that interact and complement each other across risks/shocks. This implies combining the three social protection functions in different degrees, depending on the type of risk or shock that needs to be addressed.

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<sup>&</sup>lt;sup>36</sup> This section draws directly from Robalino et al. (2011).

To operationalize such an approach, old age income protection would need to be supported by:
(i) savings vehicles (mandatory and voluntary) for all forms of social protection including smoothing consumption into old age would be evaluated on an integrated basis; (ii) training and lifelong learning mechanisms would support individuals to continue working in old age; (iii) all forms of transfers such as through health and housing programs would be assessed on an integrated basis with other savings and insurance mechanisms; (iv) access to public services and regulation of private service providers would include an assessment of the special needs of the aged; (v) risk pooling mechanisms such as through social insurance and private life insurance regulations would evaluate the objectives and instruments to serve the elderly in a way that is integrated with serving the needs of other groups such as for the working population, the young, the unemployed and the poor; (vi) credit programs, consumer protection and regulation of instruments such as reverse mortgages would consider the needs of both the young and old; and (vii) wage subsidies would be considered both for their impact during work lives and the implications for retirement. At a programmatic level, a systems approach can be a useful means of reducing fragmentation and promoting systematic coordination.

The needs of *Low Income Countries and Fragile States* are largely addressed in the pensions support measures to close coverage gaps. Many LICs have large informal and/or agricultural labor forces, small formal civil service and military pensions and social security schemes covering a very small proportion of the labor force. Measures to promote voluntary savings arrangements and possibly targeted social pensions provisions could align to the needs of LICs and fragile states. In addition, measures to improve the equity and constrain the costs of civil service pension schemes in such countries are often an additional priority proposed.

Well-designed pensions provisions can contribute towards or serve as a barrier to **promotion opportunities and livelihoods**. Well-designed pensions savings and insurance arrangements can create incentives (or at least minimize disincentives) for work and savings including through old age. Furthermore, systems with strong provisions for portability can be supportive of labor mobility between jobs and sectors.

**Strengthening knowledge** is essential to the role of the World Bank as a trusted advisor and support of pension reforms in its client countries. The commitment to strengthening knowledge includes developing new approaches to pension provision, new and modified instruments to conform to country needs, developing analytical tools such as modeling techniques, developing cross-country indicators and benchmarks, and working to establish stronger indicators which can track results and outcomes as discussed above.

### D. Summary

Over the last two decades, the World Bank has supported pension reform efforts around the world. Lending has been concentrated in the LAC and ECA regions historically and a large portion of analytical work focused on pension arrangements for formal sector workers, including the growing importance of privately managed, defined contribution schemes. More recently and looking forward, the main challenges facing policymakers in most countries are coverage, adequacy and sustainability (CAS). In addition, a greater focus on implementation issues related to monitoring and efficient service delivery is warranted. In most low and many middle income countries, coverage is top priority, with a special urgency in those countries undergoing rapid aging such as China where the race between population aging and pension coverage unfolds. For many MICs, stagnant or declining coverage is also a concern but an equally if not more important challenge is maintaining adequacy of benefits in the face of difficult reforms required to address unsustainable pension finances.

In order to address the CAS agenda and respond to new client demands, a strategy of support for pensions and social security was presented that focused on filling in the knowledge gaps, using appropriate operational instruments for different objectives, developing internal and external partnerships that help meet specific gaps in knowledge and expanding internal capacity with the appropriate skills mix to meet the anticipated demand. Support to pensions and social security proposed was also shown to be consistent with the overall Social Protection Strategy.

### Annex Table 1: The Bank's Conceptual Framework for Pensions<sup>37</sup>

|                             | T   |
|-----------------------------|---|
| Initial Conditions          | I. Inherited System   |
|                             | <ul> <li>Elderly vulnerability and poverty prevalence in absolute and relative terms</li> </ul>                       |
|                             | <ul> <li>Existing mandatory and voluntary pension systems and social security schemes</li> </ul>                      |
|                             | <ul> <li>Existing levels of family and community support</li> </ul>   |
|                             | II. Reform needs –modifying unsustainable existing schemes, coverage gaps, aging and socio-                           |
|                             | economic changes assessed against the primary and secondary evaluation criteria below                                 |
|                             | III. Enabling environment   |
|                             | <ul> <li>Demographic profile</li> </ul>   |
|                             | <ul> <li>Macroeconomic environment</li> </ul>   |
|                             | <ul> <li>Institutional capacity</li> </ul>  |
|                             | ■ Financial market status   |
| Core Objectives             | Consumption smoothing from work to retirement   |
|                             | Protection against the risk of poverty in old age   |
|                             | Redistribution of resources within or between cohorts   |
| Types of Instruments        | Saving  |
| Types of mistraments        | <ul><li>Insurance</li></ul>   |
|                             | Redistribution  |
| Financing                   |   |
| _                           | I. Types:  Contributory   |
| Arrangements                | 50.11.10.11.1   |
|                             | The sent actory (managed norm general revenues)   |
|                             | II. Sources:  |
|                             | <ul> <li>Workers, employers, governments, families and households</li> </ul>  |
|                             | III. Designs:   |
|                             | ■ Pay-as-you-go   |
|                             | <ul> <li>Partially funded</li> </ul>  |
|                             | Fully funded  |
| Institutional               | Governance structure and process  |
| Arrangements                | Regulation and supervision  |
|                             | Payment systems   |
|                             | Data management   |
|                             | Funds management  |
| Modalities for              | <ul> <li>Zero Pillar – non-contributory basic benefits financed by the state, fiscal conditions permitting</li> </ul> |
| <b>Achieving Objectives</b> | • First Pillar – mandatory with contributions linked to earnings and objective of replacing some                      |
|                             | portion of lifetime pre-retirement income   |
|                             | Second Pillar - mandatory defined contribution plan with private administration                                       |
|                             | Third Pillar - voluntary taking many forms (e.g. individual savings; employer sponsored;                              |
|                             | defined benefit or defined contribution)  |
|                             | Fourth Pillar - informal support (such as family), other formal social programs (such as health                       |
|                             | care or housing), and other individual assets (e.g., home ownership and reverse mortgages).                           |
| Primary Evaluation          | Adequacy  |
| Criteria                    | Affordability   |
| Criteria                    | Sustainability  |
|                             | Equity  |
|                             | 1 ' '   |
| Casandam, Fredrick          | Predictability  Contribution to autout and growth through   |
| Secondary Evaluation        | Contribution to output and growth through:  |
| Criteria                    | Lowering labor market distortions   |
|                             | Contributing to savings   |
|                             | Contribution to financial market development  |

<sup>&</sup>lt;sup>37</sup> See World Bank (2008b).

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Annex Table 2: Regional Policy Issues

| Region | Potential Str   | rategic Direction  |
|--------|---|--|
|        | Sustainability  | Coverage and Adequacy  |
| SSA    | <ul> <li>Reform of the benefit design and financing of public sector pension arrangements.</li> <li>Parametric reforms to mandatory contributory schemes to ensure that the pension promise is limited, affordable and appropriate to the enabling conditions.</li> </ul>   | <ul> <li>Establishment of policy and institutional arrangements for voluntary pension savings arrangements.</li> <li>Exploration of the economic merits of family-based social assistance and elderly social assistance if economically and fiscally justified.</li> <li>Strengthening the regulation and supervision of occupational and individual pension arrangements.</li> </ul>  |
| EAP    | <ul> <li>In several countries in the region, a growing role of contributory pensions is anticipated, including old age income protection.</li> <li>Growth anticipated in demand for parametric design modifications for existing mandatory provident funds and pension schemes.</li> </ul>  | <ul> <li>Efforts likely to be made to address the gaps that exist across the region between different types of pension provisions for different workers.</li> <li>Measures may be taken to more pro-actively encourage broader coverage for pension schemes as well as establishing schemes better adapted to the needs of the informal sector.</li> <li>Establishment of the policy framework, institutional arrangements, regulatory and supervisory framework for voluntary occupational and individual pensions. savings arrangements.</li> <li>In some countries, strengthening of social assistance for the elderly will be considered, along with measures to increase coverage.</li> </ul> |
| ECA    | <ul> <li>Parametric reforms of public pension and social security schemes in an effort to reconcile benefit adequacy with fiscal sustainability.</li> <li>Addressing the realities of ongoing transition costs in the face of constrained fiscal resources.</li> <li>Strengthening the policy design for risk management and the payout phase of funded defined contribution schemes.</li> </ul>  | <ul> <li>Measures needed to respond to substantial declines in coverage of the working population (compliance enforcement, voluntary savings arrangements for self-employed and informal sector workers, extending working lives).</li> <li>Declining elderly coverage will require elderly social assistance consistent with fiscal constraints.</li> </ul>   |
| LAC    | <ul> <li>Strengthening the links and coordination between pensions and other social insurance schemes (e.g., disability, health insurance, UI and social assistance programs), to maximize effectiveness of social protection policy and avoid negative incentives across programs and in the labor market.</li> <li>Parametric reforms to improve adequacy, equity and sustainability.</li> <li>Strengthening of risk management of funded defined contribution schemes.</li> <li>Strengthening the design of the payout phase in funded schemes, including the role of annuities and the system of guarantees and regulations specific for the pension programs.</li> </ul> | <ul> <li>Refinement of country strategies to provide old age income protection for the elderly poor; development and/or expansion of non-contributory schemes and integration of social pensions with contributory pension schemes.</li> <li>Parametric reforms to social security schemes to improve incentives for participation.</li> </ul>   |
| MNA    | Parametric reforms to social security schemes to<br>improve pension sustainability, predictability and  | Establishment of a stronger voluntary occupational and personal contributory pensions savings  |

| equity while at the same time maintaining adequacy and affordability in gradually aging societies.  • Harmonization and integration of civil service pension and social security schemes. | provisions.   |
|---|---|
| Reforms of civil servants schemes to provide stronger labor market incentives.  | <ul> <li>Establishment of the policy and institutional arrangements for voluntary pension savings provisions.</li> <li>Development of the institutional foundation for broader coverage of social insurance.</li> <li>Establishment of the policies and institutional arrangements for economically efficient and effective public transfers for old age assistance.</li> </ul> |

### Annex Table 3: Knowledge Management

| Knowledge Gap                  | Strategic Measures Addressing the Gap   |
|--------------------------------|---|
| Diagnostic indicators,         | • Expand database on public and private pensions and link to other databases. |
| measurement tools, cross-      | Strengthen the diagnostic indicators and evaluation criteria.                 |
| country benchmarks and         | Strengthening the results measurement framework for evaluating the            |
| results framework.             | impact of Bank-supported reforms.   |
| Platform of cross-country      | User portal for (i) country-specific parameters, laws, and indicators; (ii)   |
| information on pension         | operationally relevant external research and analysis; and (iii) access Bank- |
| systems, reform approaches.    | generated knowledge.  |
| Results framework measuring    | Indicators that can track results in adequacy, sustainability, affordability, |
| the impact of reform measures. | equity, predictability, operational efficiency and effectiveness.             |
|                                | Impact evaluation framework for measuring results.                            |
| Elderly poverty assessment     | Development of a diagnostic methodology for assessing elderly poverty and     |
| methodology, toolkit, cross-   | vulnerability, including a intra-household transfers.                         |
| country database; toolkit and  | Est. of a cross-country database on elderly poverty.                          |
| inventory of social pension    | Est. of a common methodology for impact evaluation of elderly social          |
| programs and indicators.       | pensions programs, their behavioral effect on contributory pension            |
|                                | participation; and est. of an inventory of these programs including           |
|                                | parameters, coverage, poverty protection impact. Compare cost of              |
|                                | providing contribution incentives to social pensions.                         |
|                                | Est. of a more systematic means of estimating the impact of old age health    |
|                                | care costs, subsidies for health care, housing subsidies and other social     |
|                                | programs which impact elderly livelihoods.                                    |
| Evaluation of schemes and      | Design characteristics and institutional settings under which mandatory       |
| measures promoting coverage    | contributory pension schemes have been successful in extending coverage of    |
| expansion.                     | mandatory contributory pensions to the self-employed, small enterprises,      |
|                                | temporary, migrant and agricultural workers.                                  |
|                                | Impact on participation and compliance of matching contributions.             |
|                                | Design characteristics and institutional settings by which voluntary pension  |
|                                | savings schemes have been successful in extending labor force coverage.       |
| Core enabling conditions and   | Strengthen the work on enabling conditions, legal, institutional and          |
| institutional requirements.    | oversight requirements for funded pension schemes; establish a diagnostic     |
|                                | checklist for enabling conditions, legal and institutional requirements for   |
|                                | first pillar pension schemes.   |
|                                | Common principles for the development of institutional arrangements           |
|                                | including (a) collection and payments systems; (b) account and database       |
|                                | management; and (c) investment management functions including best            |
|                                | practice for maximizing administrative efficiency.                            |
|                                | Core governance, accountability and transparency standards. 38                |

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<sup>&</sup>lt;sup>38</sup> See Bassett, Giannozzi, Pop and Ringold (2011); See OECD, *Guidelines for Pension Fund Governance* (2008).

### Annex Table 4: Anticipated Client Needs and Response

| Client Needs   | Suggested Strategic Response  |
|--|---|
| <ul> <li>Need for policy advice in parametric reforms will likely continue in the face of aging and the continuing tension between adequacy of benefits and societal affordability.</li> <li>Policy advice in reforming established funded defined contribution schemes, regions will likely be needed to address fiscal challenges, design characteristics of the payout phase, and improve risk management and oversight.</li> </ul>             | <ul> <li>Continued investments in the upgrading and application of PROST modeling.</li> <li>Investments in knowledge, including regional flagships to identify common trends and potential successful approaches to reform.</li> <li>Research on pension adequacy, including how living expenses of the elderly compare to those of the working age population especially with regard to out of pocket health spending.</li> <li>Research on incentives -how much respond to incentives in the pension system including increases or decreases in pension contribution rates, changes in the overall tax wedge, a tighter link between contributions and benefits, and benefit generosity.</li> <li>Research on how health status and productivity decline with age and whether there are factors like seniority-based wage structure that work against continuing to work when productivity declines.</li> <li>Research to improve design of the payout phase, risk management and oversight.</li> <li>Improved cross-sectoral collaboration between PREM, FPD and HDN teams.</li> <li>Cross-regional staff deployment as needed.</li> </ul> |
| Advice in establishing regulated voluntary retirement savings provisions, including potential matching subsidies for the poorest contributors in both countries with large informal sectors.   | <ul> <li>Further investments in the evaluation of: (i) the impact of different savings incentives on workers of different incomes and subject to varying enabling conditions; (ii) parameters that can match modest levels of guaranteed retirement income support with incentives to save for retirement; and (iii) the impact of different social pension parameters on incentives and behavior in respect to work, savings and family support.</li> <li>Empirical assessment of the key characteristics of voluntary retirement savings provisions.</li> </ul>   |
| Civil service reform and reforms of public service pension provisions as many of these schemes mature and increasing public expenditures.      Strengthening old age social assistance and linking such assistance to contributory pensions will be  | <ul> <li>Investments in knowledge, including further evaluation of measures to harmonize and integrate social security and civil service schemes.</li> <li>Elaboration of a framework for supplemental pension arrangements for public servants.</li> <li>Evaluation the special needs and approaches to workers in select professions including military, police, correction officers, etc.</li> <li>Further internal and external training in policy assessment and actuarial modeling.</li> <li>Continued investments in knowledge products.</li> </ul>  |
| <ul> <li>important areas of dialogue for countries seeking to address coverage gaps.</li> <li>Developing institutional foundations of pensions provisions,</li> <li>as more countries seek to extend basic income support to a wider scope of the population.         Technology is driving dramatic changes in account access, mobile-phone based transactions, payment systems and development of unique identification systems.     </li> </ul> | Continued investments in the institutional dimensions of unique identification systems, collection and payment systems, and database management options.  |

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#### **Abstract**

Pension and social insurance programs that prevent a substantial loss in consumption resulting from old age, disability, or death are an integral part of any social protection system. The dual objectives of such programs are to allow for the prevention of a sharp decline in income when these life-cycle events take place and protection against poverty in old age. This background paper reviews the World Bank's conceptual framework for the analysis of pension programs and defines the major challenges facing low and middle income countries, namely, coverage, adequacy and sustainability. The paper proposes a broad, forward-looking strategy to help address these challenges.

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