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Pension Reform and the Development of Pension Systems: An Evaluation of World Bank Assistance

Background Paper

Regional Summary: Latin America and the Caribbean

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Acronyms and Abbreviations

GDP	Gross Domestic Product
IEG	Independent Evaluation Group (formerly Operations Evaluation Department)
IMF	International Monetary Fund
OED	Operations Evaluation Department (changed its name to IEG in December 2005)
OECD	Organization for Economic Co-operation and Development
PAYG	Pay-As-You-Go
PROST	Pension Reform Simulation Toolkit
SA	Structural Adjustment
SAR	Retirement Savings System (Sistema de Ahorro para el Retiro)

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Preface

This paper belongs to series of 19 country and regional case studies commissioned as background research for the World Bank's Independent Evaluation Group (IEG) report "Pension Reform and the Development of Pension Systems." The findings are based on consultant missions to the country or region, interviews with government, Bank, donor, and private sector representatives involved in the pension reform, and analysis of relevant Bank and external documents.

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The loans covered in this paper were given to the governments of six countries: Argentina, Bolivia, Brazil, Mexico, Peru, and Uruguay. Other countries in this region made pension reforms during the same period but did not receive pension-related Bank support, for example, Chile, Colombia, Costa Rica, and El Salvador.

1. Introduction and Purpose of Overview

1.1 Since the early 1990s, and especially following publication of the World Bank's *Averting the Old Age Crisis* (1994), which offered a new framework for analyzing pension policy, the Bank and its staff have been active in offering advice on pension reform throughout Latin America.

1.2 The Bank's pension reform activities in each of the six countries considered here—Brazil, Mexico, Argentina, Peru, Bolivia, and Uruguay (listed in order of population size)—have been reviewed by IEG in separate reports. These activities take three general forms: studies performed by Bank staff and consultants under the direction of staff (called economic and sector work), Bank loans for structural adjustment, and Bank loans for technical assistance. Table 1.1 shows the loan amounts to each of these countries and some size indicators.

Table 1.1: Pension-Related Bank Operations in the Six Countries

	Amount of Loans 1994–2001 (US$ millions)		***Population (millions, 2002)***	***PPP Gross National Income per Capita (US$ per person, PPP)***	***PPP amount of pension loans per capita. (US$ per person, PPP)***
	Structural Adjustment	Technical Assistance			
Brazil	1,262.63	5.05	174	7,450	19.2
Mexico	800.00	6.00	101	8,800	11.9
Argentina	300.00	22.40	36	10,190	21.6
Peru	1,100.00	0	27	4,880	98.4
Bolivia	0	28.00	9	2,390	8.2
Uruguay	100.00	0	3	7,710	59.2
Total	3,624.08		350		

Sources: Second and third columns: country evaluations for IEG; fourth and fifth columns: World Bank 2004, table 1.1; last column: calculated as total loans from the sum of the second and third columns, divided by population, multiplied by the purchasing power parity index for the country. The purchasing power parity index is the ratio of gross national income per capita at market prices, divided by the gross national income at purchasing power parity, both taken from World Bank 2004, table 1.1.

Note: These figures exclude additional financing provided by the Inter-American Development Bank in some operations; these were especially large in Uruguay. This table also excludes loans given before 1993, especially important in Uruguay and Bolivia.

1.3 The distinction between structural adjustment (SA) and technical assistance loans is useful because of their different natures. Technical assistance loans direct the use of funds to specific purposes, such as detailed economic studies and policy advice. In contrast, structural adjustment loans are made to a country's government where appropriate, depending on the macroeconomic conditions of the country; the use of these loans is not restricted. Many Latin American nations have accepted SA loans, despite the conditions for obtaining them. These conditions are not related to the use of funds, but rather to the local approval of legal reforms in one or more sectors of the country (agricultural, financial, pension law, international trade, tax system, etc.). Attentive to the fact that most governments would reject obvious attempts to curtail their sovereignty, the Bank is usually delicate in these matters and tries to limit the number and extent of conditions specified by reforms to cases in which the government agrees with the Bank. Frequently, these reforms are approved during the period in which the loan is negotiated, so by the signing date, the conditions have already been met.

1.4 The SA loans also differ in the degree to which their conditions are multi-sectoral. Some conditions are focused in a single sector, but others cover many sectors. This is important for interpreting the figures in the last column in table 1.1. For example, the relatively large figure for Peru is explained by the much wider range of sectoral conditions for its SA loan, as compared with the SA loans for other countries, which were much more concentrated on pensions. The low figure for Bolivia in the last column is explained by the concentration of Bank support on technical assistance loans, which were much larger than for any other (more populous) country among these six.

1.5 The three largest countries obtained remarkably similar loans per capita, on a purchasing power parity basis (Table 1.1). Considering also the information contained in the individual evaluations, the distribution of Bank resources across countries was adequate.

2. Focus of Pension Policy

2.1 An important question is whether pension-related lending by the Bank focuses enough on supporting the elderly poor, as public opinion expects. More generally, the question is whether the themes observed in Bank pension-related lending are adequate. It turns out that pension policy can contribute to economic growth, which in turn, is a very effective method for reducing poverty over time. This implies that if the objective of pension policy is to help the elderly poor, it cannot be limited to assistance for the current poor. Policy should also take into account the impact on the future poor, mediated by economic growth. And some policies that influence the old-age income security of the middle classes may have a large impact on economic growth.

2.2 Abundant academic and policy studies suggest that the following features of pension plans for the middle classes can cut economic growth significantly:

- Fiscal crises caused by actuarial imbalances;
- Public dissaving caused by fiscal subsidies to those plans;
- Excessive taxation on formal earnings implicit in those plans;
- Distortions of retirement decisions and fraud (allowed by years-of-service benefit formulas);
- Labor distortions caused by rigidity and the lack of individual choice; and
- Excessive political risk owing to discretionary rather than rule-bound treatment of shocks that impinge on the plan.

2.3 Pension plans for the middle classes may also help to increase growth. For example, investment of fully funded plans in capital markets contributes more to the development of these capital markets than pay-as-you-go (PAYG) plans (which, in turn, increases growth). Allowing employers to include pension plans contingent upon an extended period of employment within labor contracts can increase the value of their investments in training and cut worker selection costs, thus improving productivity. Pension policies such as individual retirement accounts alleviate distortions caused by other policies, specifically income taxes, which reduce voluntary savings for old age. The tax treatment of pensions is also critical for income distribution policy.

2.4 Of course, pension policies that help the elderly poor directly are also important to the Bank. Examples are noncontributory pensions (universal or "assistance"), the rate of subsidies targeted at the elderly poor, the integration of these subsidies into pension plans for the middle class, exemptions for the self-employed from the mandate to contribute, and incentives to participate in jobs covered by the pension plan for the middle classes.

2.5 Even though needs and priorities vary substantially across countries, the following set of objectives of pension policy is illustrative of the range of topics that may have to be covered in pension-related lending by the Bank:

- *Policies that promote efficient performance of non-state institutions.* The most critical is of these are intra-family savings and insurance, such as voluntary transfers from grown-up children to their aged parents. The financial sector is also involved in voluntary individual savings for old age and voluntary insurance for disability and survivorship, justifying policies to assure solvency and competition among financial firms.

- *State-mediated redistribution toward the elderly poor.* Issues are the coverage and size of universal, minimum, and assistance pensions ("first-pillar" programs).The size of "poverty-trap" incentives caused by targeting represents a trade-off against the higher fiscal cost of universal pensions. An increase in general taxes, or a tax on the covered earnings of the middle classes, pushes some workers into the informal sector and low-productivity jobs.

- *Savings and insurance services to the middle classes, which minimize the impact of irreversible planning mistakes.* This objective can be attained by a mandate to save and purchase disability insurance, thereby financing *earnings-related* pensions ("second-pillar" programs). This objective can also be attained by special fiscal incentives for voluntary savings for old age, and not for other future needs ("third-pillar" programs). Many countries use both pillars simultaneously. These instruments may be provided by public and private institutions, which can be non-profit and for profit. Problems arise when programs impose restrictions on portability across employers, regions, or sectors of the economy. Fragmented second-pillar programs can lead to rent extraction by unions and by political parties that exchange private favors for electoral support.

- *Human resource management.* By adding pension plans contingent upon an extended period of employment to labor contracts, employers can protect their investments in training and in selection costs. There is a trade-off between these gains and the costs of reducing portability. In some cases, especially when the employer is the government (for civil servants, the police, and the armed forces), observed pension-as-compensation may reflect rent extraction.

2.6 In each country, the short-run macroeconomic and institutional situation must also be taken into account in the design of pension instruments. This is essential to assure that pension policy complements rather than interferes with the wider economic and social strategy being implemented by the country.

3. Impact of Bank Assistance in Latin America

PRELIMINARY OVERVIEW

3.1 The six individual country reports evaluate the impact of the assistance given by the Bank. These evaluations assess impact as a whole, that is, they do not evaluate each activity separately. The evaluations follow standard IEG methodology, but are adapted to pension policy. This methodology considers three aspects: outcome, institutional development, and sustainability.[1] In turn, outcome depends on two sub-criteria: relevance[2] and efficacy.[3] Table 3.1 summarizes the evaluations of relevance, efficacy, institutional development, and sustainability of the combined pension-related activities of the Bank in each Latin American country.

3.2 Table 3.1 shows that the Bank was quite good at institutional development in Latin America, but less good in the other criteria. The individual country studies explain this: the Bank finds few local obstacles when it offers to finance training, or specialized education for the civil servants in the regulatory institutions that supervise the local pension plans, and to support them with databases, simulation tools (such as Pension Reform Simulation Toolkit (PROST), and computer equipment. It also shows that the Bank's staff has learned to deal with local bureaucracies effectively, and has devised astute methods to replicate the lessons learned in other countries.

3.3 The "modest" relevance of the objectives of Bank assistance reflects a combination of facts, some of which are beyond the Bank's control. The Bank usually tries to limit conditions in SA loans to reforms proposed by the government in the first place, and with which the Bank agrees. A problem is that the pension policies favored by the local government usually suffer from internal conflict, confusion, or even conflicting priorities. For example, the Peruvian governments in power during the period were not willing to create a subsidy for the elderly poor (a first-pillar program), because they feared that the fiscal cost might destabilize the budget (a reminder of the hyperinflation of the late 1980s). This forced the Bank to choose between not participating in Peru and restricting itself to pension reforms for the middle classes, which might hasten economic growth. Confronted with this type of choice, the Bank usually prefers to engage the country and participate despite making concessions to the government. At the same time, it can be argued that in some countries, the Bank may not have devoted enough effort to demonstrating to the authorities that some pension policies deserve higher priority.

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[1] Sustainability is the extent to which the achievements of Bank assistance are likely to be sustained over time, in the face of future demographic, economic, and political shocks to the pension system.
[2] Relevance indicates the extent to which the overall assistance had objectives that furthered both Brazil's development needs in the short term, and the general aims of income security for old age, in a balanced way.
[3] Efficacy indicates the extent to which the objectives of the Bank's assistance were achieved, with an emphasis on the success of implementation. Assessing efficacy is harder because of the relatively short period since implementation of most pension reforms, combined with the long-run nature of most of the effects expected from a pension reform.

Table 3.1: Ratings of Pension-Related Bank Activities in Latin America

<table>
<tr><th rowspan="3"></th><th colspan="4">Impact</th></tr>
<tr><th colspan="2">Outcome</th><th rowspan="2">Institutional Development</th><th rowspan="2">Sustainability</th></tr>
<tr><th>Relevance of Objectives</th><th>Efficacy of Implementation</th></tr>
<tr><td rowspan="2">Brazil</td><td>High to Modest[a]</td><td>Modest</td><td rowspan="2">Substantial</td><td rowspan="2">Likely</td></tr>
<tr><td colspan="2">Moderately satisfactory</td></tr>
<tr><td rowspan="2">Mexico</td><td>Modest</td><td>Substantial</td><td rowspan="2">Highly Satisfactory</td><td rowspan="2">Likely</td></tr>
<tr><td colspan="2">Moderately satisfactory</td></tr>
<tr><td rowspan="2">Argentina</td><td>Modest</td><td>Substantial</td><td rowspan="2">Substantial</td><td rowspan="2">Likely</td></tr>
<tr><td colspan="2">Moderately satisfactory</td></tr>
<tr><td rowspan="2">Peru</td><td>Modest</td><td>Substantial</td><td rowspan="2">Substantial</td><td rowspan="2">Uncertain</td></tr>
<tr><td colspan="2">Moderately satisfactory</td></tr>
<tr><td rowspan="2">Bolivia</td><td>Substantial</td><td>Modest</td><td rowspan="2">Modest</td><td rowspan="2">Unlikely</td></tr>
<tr><td colspan="2">Moderately unsatisfactory</td></tr>
<tr><td rowspan="2">Uruguay</td><td>High</td><td>Negligible</td><td rowspan="2">Modest</td><td rowspan="2">Unlikely</td></tr>
<tr><td colspan="2">Moderately unsatisfactory</td></tr>
</table>

Source: Individual country evaluations of pension-related activities (see reference list).
a. The relevance of seven objectives was rated separately for Brazil, and the results ranged from high to modest.

INFLUENCE OF THE CHILEAN EXPERIENCE

3.4 The influence of the Bank in Latin America was less than would have been expected given the size and type of these loans. In contrast with other regions, Latin America had a local leader in pension policy, whose influence usually preceded the Bank's, but which could also collaborate with the Bank. This leader was the financial industry and, specifically, the Chilean pension fund management companies, created to provide services to the fully funded and defined-contribution, second-pillar plan adopted by the Chilean government in 1981. Before 1992–93, when the Bank became involved in pension reform in Latin America, important business groups in several countries had been contacted by Chilean firms to press for adoption of similar policies. Important public policy leaders had also been studying the new Chilean system, which was about 12 years old by then. The interest of local policy leaders was rooted in the problems faced by their own countries, but was further encouraged by the fact that those Chileans politicians who had opposed Pinochet's government, reversed their opposition to the new fully funded and defined-contribution plan when they were elected to power in March 1990. Even the officials of the supervisory agency of the Chile's fully funded plans offered consulting services around Latin America, sometimes to financial firms, sometimes to governments, with or without Bank support. The Bank itself was influenced by the Chilean model, as stated in *Averting* (World Bank 1994). One positive implication of this process was that most Latin American countries built substantial local capacity in pension policy analysis.

3.5 These elements help explain why so many of the six countries reviewed here legislated a reform along the lines of the Chilean model, although with important and valuable differences (discussed below). In fact, three countries (one-half of the total) did so *before* the Bank initiated participation in pension policy in that country. This was the case with Peru, Argentina, and Uruguay (in chronological order). Another two countries had already decided to reform along those lines, but received technical assistance and financial support before putting their reform into legislation. This was the case for Mexico and Bolivia, where the Bank was more influential. Throughout the period reviewed here, the government of the sixth country (Brazil) rejected the Chilean model. In this case, the Bank focused its advice on adjusting the parameters of the existing PAYG and defined-benefit plans.

BANK CRITICISM OF THE CHILEAN MODEL

3.6 Although the Bank has not published a comprehensive critique of the Chilean model, some were suggested in *Averting* itself. An example is *Averting's* emphasis on promoting intra-family support for the old, an issue that was ignored by the Chilean model. However, this critique did not lead to specific policy recommendations or conditions for Bank loans, at least in the six countries reviewed here.

3.7 Criticism continued in the second half of the 1990s. For example, the regulation that forced each private fund management company to offer a single portfolio to all members was criticized. This was successful, as shown by the fact that Chile reformed its law in 2002 requiring management companies to offer several balanced funds, as did Mexico and Peru.

3.8 Although the focus of Chile's 1981 reform was on the second pillar, it contained one first-pillar provision that proved to be a mistake: the requirement for entitlement to a minimum pension subsidy was raised from 10 to 20 years of contributions. The aim of this reform was to reduce abuse by middle-class contributors, for example, spouses of higher-income professionals that claimed minimum pension subsidies despite receiving large intra-family transfers. However, given the exemption for the self-employed to contribute (most of them poor in Latin America) and the high turnover between covered jobs, uncovered jobs, and inactivity among the poor, many low earners that could muster 10 years failed to complete 20 years of contributions. This provision, therefore, reduced the coverage of this first-pillar program (the minimum pension subsidy) among the poor, in addition to reducing perceived abuses by middle-class contributors. When the Bank advised Latin American governments in the 1990s, it encouraged this tightening of eligibility. Argentina copied this mistake (raising the requirement from 20 to 30 years), and poverty among the old increased after the pension reform of 1994. Only in 2001 did the Bank begin developing a critique of this particular policy when it prepared a study for Argentina, but an optimal strategy has not yet been identified.

3.9 The Bank is slowly developing a critique of third-pillar policies as well. In the original Chilean reform, the tax incentives for voluntary saving for old age were restricted to savings held at the private fund management companies, excluding savings held in other financial intermediaries such as commercial banks, mutual fund companies, and life insurance companies. This restriction was copied in several countries. Brazil had a much more advanced tradition in this area,[4] and of course so had the Anglo-Saxon countries, Western Europe, and Japan. However, the Bank failed to take advantage of those experiences to develop an alternative policy proposal that limits the regressive impact of some designs, and would extend pensions to the lower-middle classes to have a wider impact on income security. In the past few years, the Bank embraced this critique and proposed liberalization of those restrictions.[5] The Bank had moved in that direction in 1997, when it added conditions to develop the third pillar in Mexico, but those measures failed to attract employer interest. In 1999 it also supported Brazil's efforts to strengthen company-level, complementary, defined-benefit pension plans.

3.10 Bank experiences in specific countries are reviewed below, identifying the innovations that may justify revisions to recommendations in *Averting* (1994), and experiences that show how to improve on policies.

BANK IMPACT ON THE MEXICAN PENSION REFORM

3.11 Mexico is the second largest country in Latin America, and its proximity to the United States gives it additional leverage in relation to the Bank. Since 1944, Mexico has had a unified pension plan for the private sector. The other main pension plan is for federal civil servants.[6] The Mexican plan for private-sector workers[7] had a joint budget with health insurance (in-kind medical services), child care services, work accident insurance, subsidized cultural and sport activities, and vacation resorts.

3.12 There were provisions in the Mexican plan to help the elderly poor. First, replacement rates embedded in the benefit formula were steeply progressive, as a result of the level of the base salary.[8] Second, there was a minimum guaranteed pension. However, access to these two provisions was limited by a requirement of 500 weeks (9.6 years) of contributions. For the many workers that contribute fewer than 9.6 years in the formal sector, no benefit whatsoever was paid. This implicit tax affected mostly women and poor workers. Mexico did not provide non-contributory pensions to the elderly poor.[9]

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[4] Although Mexican law established this option in 1973, until 1997, there was no regulatory agency in charge of supervising these plans. There were no regular statistics about plan type or their financial condition.

[5] However, the Bank could do much more to identify and promote policies that help private employers manage their human resources to increase productivity.

[6] Not only do Mexican states have 32 independent plans for civil servants, there are also separate plans for university professors, for workers at several parastatals including Petroleos Mexicanos (the national oil company), for Instituto Mexicano del Seguro Social, for the police, and for the armed forces.

[7] Pension benefits included old age, disability, survivorship, and, unusually, health insurance for pensioners.

[8] For a base salary equal to 1.01 times the minimum salary and 9.6 years of contributions, the promised replacement rate was 80 percent. For a base salary equal to the median (2.8 times the minimum salary), achieving the same 80 percent replacement rate required 34.9 years of contributions.

[9] In 2000, the Mayor of Mexico City, Manuel López Obrador, created the first universal, noncontributory, old-age pension for the elderly in Mexico, at a rate of Mex$ 600 per month (US$ 70 per month).

3.13 Until 1992, the contribution rate for old age in the private sector plan was very low, as is common in immature pension plans: 3.0 percent of earnings. The parameters of the old plan remain generous (as shown below). The pension age is 60, if the worker is fired or arranges to be fired, and 65, if the worker quits. A member was entitled to a pension with just 500 weeks (9.6 years) of contributions. The promised replacement rate ranged between 40 percent and 80 percent, plus health benefits. The averaging period for the earnings base was only the last 250 weeks (4.8 years).

3.14 Evasion was rampant, because the declared taxable wage bill was just seven percent of GDP in 1994. The total effective payroll tax rate *as a proportion of the employer cost*, including a contribution for housing, was about 28 percent. This rate is modest when compared with the volume of services promised in exchange. However, it may still have been too high under Mexican conditions, where covered employment was just 40 percent, and where the marginal link between contributions and benefits was pushed to zero by inflation, needs-based health services, and favoritism in housing. Old-age benefits covered just 20 percent of the urban elderly and possibly 10 percent of the elderly nationwide, failing to fulfill all functions of income security for old age.

3.15 Pension spending in the private-sector plan was ravaged by inflation in the 1980s, to about 0.40 percent of GDP. Inflation was never below 50 percent per annum during 1982–88 and, at the time, the government repeatedly chose to avoid consumer price indexation to protect both the real value of pensions in payments and the earnings average. Comparable contribution revenue was about 0.60 percent of GDP, leaving a small cash surplus. However, pension expenditure was projected to explode to 14 percent of GDP in 2047 (if inflation is kept low). Although the liability to the generations that received pensions as of 1994 was just 7.62 percent of GDP (it had been cut by inflation), projections showed that cash flows would turn substantially negative in the long run: for members active as of 1994 the present value of expected future contributions was 14.1 percent of GDP, while that of expected future benefits was 80 percent of GDP.

3.16 The first Mexican pension reform occurred in 1992 because the supply of a savings-insurance services for the middle classes had been a failure. The Mexican government reacted by creating the Retirement Savings System (SAR) and a specialized supervisory entity. This reform mandated the saving of two percent of earnings in a complementary individual account, for all employees, in both the private and public sectors. The benefit was a lump sum drawn at age 65. All the funds were invested at the central bank, which paid interest at the rate set by law—two percent real, much below market rates.[10] The SAR was effectively a defined benefit financed with PAYG finance because the central bank lent the funds to the government. However, its benefits formula was actuarial (individual accounts). This design was close to notional accounts, although it differed because it used a fixed notional interest rate.

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[10] Although the SAR reform gave favorable tax treatment for additional voluntary savings for old age, it is not surprising that this attracted a very limited amount of funds.

3.17 The SAR started operations in January 1, 1993. The private banks that collected contributions and the National Commission of the Retirement Savings System failed to sort out operational difficulties and members began to accumulate multiple accounts as they switched employers. Despite this critical failing, the SAR reform is the only one during the 1990s that increased the total contribution rate for old age in Mexico. The Bank did not participate in the SAR reform with either technical assistance or structural adjustment loans, although some recommendations from a 1990 report were adopted. There was widespread dissatisfaction with the SAR reform, and the Mexican government continued studies to identify additional measures.[11]

3.18 The big Mexican pension reform was legislated in 1996 and started in July 1, 1997. The Bank supported the Mexican program and granted its first SA loan, conditional upon a nationwide pension reform. The Bank got involved because of a macroeconomic crisis. Following 10 months of mounting pressure against the ceiling of Mexico's exchange rate band, the just-installed Zedillo government was forced to allow the exchange rate to float freely in December 1994. Investors reacted with panic and chaotically, and reduced their exposure to other emerging economies. On January 12, 1995, the executive branch of the U.S. government announced that it would seek up to US$ 40 billion of liquidity support for Mexico. When the U.S. Congress failed to approve the funds, the U.S. authorities assembled an even larger alternative package. In May 1995, the Mexican government announced policies to respond to the structural weaknesses that had contributed to the crisis and could support a resumption of growth and a trend toward poverty reduction. A pension reform that would "move toward a fully funded, defined-contribution, privately directed scheme" was promised, to counteract the fall in domestic savings,[12] the low marginal linkage between payroll taxes and benefits, and the limited development of domestic capital markets. All the private sector contributions for old age were diverted to new funded plans, including the SAR contribution, so the contribution rate in the new system was 6.5 percent before fees.

3.19 The Bank contributed little to the overall design set in the pension laws approved in December 1995 and implemented in 1997. The Bank's priorities were to ensure effective implementation—a large task, as shown by the failure of SAR on this count—and to improve the financial aspects of the new pension plan that could help in the effort to rehabilitate Mexican commercial banks.

3.20 The reform is expected to help the elderly poor in the long term in several ways. The most innovative was the creation of a "social quota," which is a flat subsidy for each contribution, financed with general revenue. The social quota is not universal because 60 percent of workers do not contribute (this reduces the fiscal cost

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[11] During the first half of 1994, the Bank prepared a pension-policy options paper for the incoming Zedillo administration, but only in the aspects where pension reform touched on capital-market development issues.

[12] However, it was impossible to improve domestic savings by about 6 percent of GDP (the drop observed up to 1994) by tinkering with a pension plan whose covered wage bill was 7 percent of GDP.

too). However, it responds to the prevalence of informal activities and may induce some workers to choose covered jobs, increasing access to on-the-job training, which raises productivity. However, it may be regressive because higher-income workers contribute anyway. The defined-contribution nature of the "social quota" burdens the elderly poor with investment risk, contradicting *Averting*. The effect of the social quota on the welfare of the elderly poor and on the incentives for poorer workers to participate in covered employment still needs to be assessed by the Bank prior to replication in other countries.[13]

3.21 In exchange for the new social quota, the 1997 reform eliminates, in the long term, the first-pillar parameters present in the old plan: (i) the redistributive replacement rate embedded in the Instituto Mexicano del Seguro Social benefit formula will disappear; and (ii) the minimum pension disappears because the required number of contributions was raised from 9.6 to 33.7 years, and because the amount of the minimum pension was indexed to prices rather than wages.

3.22 Another innovative aspect of the Mexican reform was that it granted a "lifetime-switch" option to the transition generations. This option allows members that joined before 1996 to choose at retirement time between the benefits offered by the old system and those realized under the new system. The lifetime-switch option goes beyond recognizing contributions made to the old system, because it also applies to contributions made after 1997. The justification was that the Constitution fully vested the old benefit formulas when the worker first becomes a member of the old plan, not later. Subsequent legal opinions, however, reversed this option. Maybe the real justification was the inability during a recession to withstand the political pressures of the 1997 democratic elections.

3.23 Because of the lifetime-switch option, the benefit promises of the old plan are still alive. However, the impact on long-term fiscal sustainability is hard to assess. On the one hand, when the individual claims the old system's benefit, the government collects the full account balance, improving *its* cash flow in the short term. This may create a perverse incentive for a populist government in the future, to encourage the selection of the old system's annuity, despite its larger present-value cost.[14] On the other hand, the reform created an incentive for renouncing the right to the old system's benefits formula. Benefits paid by the new system are a lump sum, rather than an annuity, but lump sums sacrifice income security for old age.

3.24 The Bank did not add conditions to limit the fiscal cost of the lifetime-switch option, not just in 1996 but up until 2000.[15] For example, the Bank could have

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[13] Coverage remained at about 40 percent of employment during the five years after the 1997 reform.
[14] Some interviews argue that this incentive surfaced in 2002, regarding disabled members.
[15] Instead, the Bank focused on the fiscal cost of the minimum pension guarantee in the new system's benefit package, which was believed to depend on the rate of return for the housing fund within the pension system. That return is irrelevant for members covered by the *old* minimum pension guarantee, but not by the *new* one. This is expected to be the most frequent combination because of the much higher contribution requirements in the new minimum pension. The Bank's worry about the housing fund's returns was correct for the long term, not for the transition deficit.

formally proposed that contribution rates be increased gradually for transition members that did not renounce their rights to the old system's benefits, minus recognition of contributions made before 1997. Contribution rates for old age were low in Mexico, so replacement rates will be modest even if all benefits are taken as annuities. This means that the savings-insurance aim of pension policy may not be adequately served in the long run by the new system. The Bank failed to produce independent projections of transition costs under such alternative scenarios.

3.25 A comparison with the recommendations in *Averting* (1994) shows that that book did not influence the Mexican pension reform. This shows up even in the regulation of the financial aspects of the new funded system. The Bank did not insist against prohibitions to invest in domestic equities and in foreign securities. These regulations forced the pension funds into an excessive concentration in government securities and in bank deposits. The Bank accepted these restrictions because the stock-market collapse of 1994–95 assured a negative political reaction to allowing equity investments, and because the Mexican commercial banks were near insolvency. The policy bet was that public opinion needed time to be reassured. It turned out well because laws that relax the investment regime were approved in 2002 and 2004.

3.26 Administrative fees charged by management companies are another area where the Mexican experience may yield wider lessons. On the one hand, the government created a centralized but privately managed network to collect contributions and associated information, thus achieving low costs. On the other hand, since 2002 the regulator has allocated new members who are undecided in their choice of a management company—about 200,000 per month—to the two companies with the lowest commissions. This rule, which comes close to a permanent bidding system, as opposed to the initial bidding invented in Bolivia, created a way to enter the pension industry at low costs. However, the rule has not induced the companies that serve the older contributors to cut commissions significantly, because the cut must be extended to all members. Instead, two new companies entered the market for "undecided" new members in 2003.

Bank Impact on the Argentinean Pension Reform

3.27 The Argentinean pension reform process focused on the three mandatory plans for the middle classes at the federal or national level (second pillar). It began formally in June 1992, when the government presented a proposal to Congress. After intense debate with political parties, interest groups, and many nongovernmental organizations, and after substantial modifications, the proposal led to the law that was approved in October 1993. This reform might be defined as a roundabout method to adjust parameters in the national plans that were unsustainable. Examples are pension ages of 60/55 for men/women, a replacement rate of 82 percent for a full career, and a benefit formula highly vulnerable to fraud, which exhibited an average career wage equal to the average of the best three annual salaries (indexed to prices). The reform went further than parametric adjustment because it encouraged the dominance of a fully funded option, which would apply an automatic rule rather than discretionary delays to adapt to future aggregate financial shocks. The reform also innovated in a progressive direction, as it created a "universal" basic pension payable to all members, so each pensioner would obtain a flat amount plus an earnings-related amount.[16] The reform also finalized unification of old-age security at the national level.

3.28 The reform was developed by sophisticated Argentinean policy makers with little outside support. They were driven by the effective default on pension promises, which began during the 1986 hyperinflation. As of June 1990, the actual ratio between benefits and salaries was 55 percent, much below the statutory replacement rate. The courts ruled in favor of pensioners, forcing the executive branch to issue emergency decrees to delay compliance with those rulings. These lawsuits were settled only in 1995 (with resources obtained through the privatization of the state-owned oil company). In 1990, every political party agreed that pension reform was a matter of fiscal survival.

3.29 The Bank did not participate in the design of the Argentinean reform; the International Monetary Fund (IMF) did not play a significant role, although it had an active stand-by agreement. The Bank did not give SA loans with conditions attached to the proposal, so its opinions had secondary influence, at best. The Bank chose to endorse the reform through a modest study issued in mid-1993, when the law was already under political negotiation. The study, *Averting,* probably drew on the Argentinean reform rather than vice versa. The Bank's low-key approach helped the pension reform, because it was seen even by opponents as a local initiative, in contrast to other reforms supported by SA loans that were seen by opponents as being imposed from abroad. After approval of the reform, the Bank did not refer again to pension policy in its numerous reports until 2001, suggesting that other issues were seen as more strategically pressing.

3.30 The Bank correctly identified one of the major problems that remained after the 1993 law was approved—rampant fragmentation. The national plan coexisted with 23 separate regimes for employees of provincial governments, 20 regimes for employees of municipalities, 74 regimes for provincial-level associations of independent professions, and special regimes for judiciary workers, national congressional workers, the police and the armed forces. Together, their contributors were 30 percent of those of the national system. The main objectives of the Bank were to prevent runaway expenditure in provincial plans from undoing the fiscal gains at the national level. Another objective was to stop the regressive redistribution within the middle class created by political and union-set parameters in the different regimes.

3.31 To achieve these aims, the Bank approved an SA loan to Argentina in late 1996. The loan imposed conditions such as approval by provincial congresses of reforms that would allow unification of their employees' pension regimes with the

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[16] This is not part of the Chilean model.

national regime, and also privatization of provincial enterprises and banks, and tax reform at the provincial level. The leading lender was the Inter-American Development Bank, who lent a slightly larger amount than the Bank. The most powerful provinces rejected the deal outright, so only those that were fiscally weak remained.

3.32 The evaluation shows that the Bank failed to realize that the political parties in some of those provinces compete on the basis of private favors, so taking away one set of favors is likely to trigger the use of the next best set of favors. In any event, the provinces used the loan's resources to expand other expenditures. Most provinces also took advantage of some implementation mistakes by the national government and the lenders, allowing them to fill the old plans with ineligible beneficiaries. When the situation became obvious in 1997, the national government stopped this reform, leaving 14 of the 24 provinces with their original fragmented plans. Despite these problems, the savings obtained thereafter have been substantial, most of them provided by the new fraud-control mechanisms applied after unification.

3.33 In retrospect, the Bank might have also helped Argentina at the end of the 1990s by providing PROST simulations of the transition deficit of the national plans, under alternative responses to scenarios that become increasingly likely. These scenarios were recession, high unemployment, increases in sovereign-risk premiums, and devaluation. It must be recognized, however, that the transition deficit was small as compared with the savings achieved by the parametric reforms embedded in the 1993 legislation, to the improvements in administration and to savings from ending the fraud and regressive redistribution allowed by the old benefit formulas.[17] Still, it is not clear that the transition deficit was well managed because too much of the public sector borrowing requirement was financed with public debt denominated in dollars.

3.34 One of the criticisms of fully funded, defined-contribution, mandatory, savings plans is that asset values fluctuate too much to provide income security for the old. Although it is usually levied against equity investment, Argentina's experience has shown that the critique can also apply to investments in debt. For the period August 1994–February 2005, the average compound rate of return earned by Argentinean pension funds was 14.68 percent in nominal terms, or 9.88 percent after inflation.[18] Argentina defaulted on its sovereign debt in December 2001. In February 2005 a rescheduling that cut the value of the outstanding public debt by approximately 67 percent was completed. Taking into account that about 75 percent of the Argentinean pension funds were invested in such debt, this rescheduling may have cut the accumulated value by 50 percent. A hypothetical contributor that saved a fixed real amount per month since July 1994 would have obtained an internal rate of return on investment equal to –4.3 percent per year,[19] before commissions. The rescheduling thus more than compensated for the high returns of the good years.

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[17] See estimates by Rofman 2002.

[18] Figures are affected by the valuation criteria defined by the supervisory agency.

[19] Obtained as the solution X to: $(1/2)\cdot\left[(1.0988)^{(127/12)}-1\right]/(0.0988) = \left[(1+X)^{(127/12)}-1\right]/X$

3.35 However, there is an alternative reading: when a country experiences a macroeconomic and institutional crisis the size of Argentina's, no pension plan can hope to resist it. Argentina offers a natural experiment for this hypothesis, since its second pillar offers a PAYG, defined-benefit alternative alongside the fully funded defined-contribution one. The fact is that an alternative hypothetical contributor who chose to remain in the alternative was doing *even worse*, at least until early 2005. The inflation triggered by the December 2001 devaluation cut benefits to those in the PAYG option, but did not affect the benefits of those in the funded option. Emergency regulations delayed payment of some PAYG pensions during 2002, but not of funded pensions.[20] Meanwhile, the funded plan obtained some protection from its equity and foreign currency investments, and the denomination of a part of its public debt holdings was changed to consumer price indexing. The property rights in the funded pillar have provided constitutional protection not available to benefit promises in the other option.

3.36 After the December 2001 crisis, the Bank could have acted in two directions. One was to start studies to identify preventive methods that might protect defined-contribution plans from the most extreme consequences of crises. Possible ideas are the development of local consumer-price-indexed bonds, issued by corporations and households (consumer-price-indexed mortgage bonds),[21] and opening opportunities for class-action lawsuits against management companies that concentrate the portfolio in a few debt instruments. A second direction of research concerns emergency solutions. In the event, the authorities manipulated the defined-contribution rule by setting the valuation of government bonds at levels different from those observed in the secondary markets. The challenge is to identify objective rules that set a valuation path that minimizes intergenerational inequities (the Argentinean stock market is booming, helping those not yet pensioned), but still allows convergence toward market valuation.

3.37 Another area of concern is first-pillar policies. The Argentinean debacle induced the Bank to react much faster in this area. A 2002 study focused on coverage and proposed the creation of safety-net pensions for those that fail to be eligible for the basic "universal" pension (that is, most of the low-earning workers and self-employed, because 30 years of contributions are now required). However, the financing of this subsidy is unclear and further analytical and policy work is needed.

BANK IMPACT ON BRAZILIAN PENSION POLICY

3.38 Brazil is the largest country in Latin America, one more reason for the Bank to be careful not to insist too much on its own agenda. By 1980, Brazil had advanced toward unification of pension plans for the middle classes, so only two main plans

[20] In addition, in July 2001, a 13 percent reduction was applied to pensions above Arg$ 500 paid by the PAYG option, although it was reversed in late 2002.
[21] Elimination of limits on international diversification is useless when the local government is forcing the pension-fund management companies to switch to government bonds.

remained: one for private sector employees, and one for federal civil servants.[22]

3.39 Euphoria reigned at the end of military rule in 1988, when the Brazilian political establishment included *in the Constitution* parametric reforms that raised pension expenditure. The legislation that implemented the 1988 Constitution eliminated eligibility requirements different from age for claiming pensions in the rural sector, *reduced* the pension age by 5 years in the rural sector to 55 for women and 60 for men, doubled the rural pension amount and indexed it to the minimum salary. As of 2000, the cost of the rural pension was about 2.2 percent of GDP, establishing it as one of the developing world's most progressive and expensive first pillars.

3.40 The 1988 Constitution also set unsustainable parameters for the benefits formula for the middle classes. They included a requirement of just 25 years of service for women and 30 years for men to attain a replacement rate equal to almost 2.9 percent (males) times the number of years of service. Alternatively, members could claim some pension at ages 65/60 (men/women) with just nine years of service. The averaging period was just the three final years, facilitating fraud. This was also among the most generous plans for the middle classes in the world.

3.41 In the first Cardoso administration (1995–98), fiscal policy was expansive. The government financed a major increase in expenditure by expanding the consolidated public debt from 26 percent of GDP in 1994 to 39 percent in 1998, and by raising tax revenue from 25 percent of GDP in 1992 to 34 percent in 2001. Marginal payroll tax rates were raised from 37 percent in 1980 to 50 percent in 2002 (among the highest in the world).[23] Rising contribution rates took their toll: coverage of contributions *fell* by 10 percentage points from 1990 to 1999, and the private sector moved part of production to the informal sector. The result of this fiscal policy was low investment[24] and slow growth, as shown by an average annual per capita income growth rate of 1.4 percent for 1994–2002. Slow growth put in jeopardy the ultimate objective of poverty alleviation.

3.42 Pension-related Bank lending to Brazil originated after a string of debt crises that besieged Brazil since the 1997 Asian crisis, soon followed by the 1998 Russian crisis. International investors reduced exposure to emerging markets, in general. Subject to closer scrutiny, the Brazilian fiscal position revealed its weaknesses. The social security budget was the major source: in 1996, pension expenditures in Brazil were 9.8 percent of GDP, way above the average for emerging countries with comparable coverage, which was 4.7 percent of GDP. The pension plans had a consolidated cash deficit of 4.8 percent of GDP in 1998.

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[22] The rules that set transfer values for workers that switch between these two types of employers were manipulated and allowed for abuses. In addition, each Brazilian state has a separate plan for its civil servants, and there is a separate plan for the armed forces. State-owned enterprises have complementary plans, so they also participate in the private sector plan.
[23] This includes 31 percent for pensions (rural, old-age, disability, survivorship, work injury), health benefits, and maternity benefits. The other 19 percentage points pay health insurance and housing.
[24] Firms that move to the informal sector lose access to loans from commercial banks.

3.43 Within Brazil, the string of debt crises changed the perceptions of the public, pressure groups, and political parties about the value of fiscal stability for economic growth. During the second Cardoso administration (1999–2002), there was substantial fiscal adjustment at all levels of government, as indicated by a shift in the primary balance (excluding interest), from deficits to surpluses of more than 3.5 percent of GDP. This was the period during which the Bank made two large SA loans, contingent on pension policy reforms. However, these two loans were part of a US$ 41.5 billion rescue package led by the IMF. The Bank promised US$ 4.5 billion in SA loans with conditions linked to diverse sectors, including two SA loans linked to pensions alone. The mandate of preventing the repercussions that a possible "Brazilian crisis" might have in other emerging countries around the world cut the Bank's limited bargaining power. But Brazil was also desperate for foreign finance.

3.44 When the options boiled down to cut the rural pension (first pillar) or to cut the earnings-related pensions (second pillar), Brazil had no doubts. Rural poverty has been a national preoccupation in Brazil for decades, fed in part by the skewed distribution of income. Pensions for the rural old, which are effectively a noncontributory semi-universal flat pension, achieved substantial coverage by 1974. By 2001, they had reduced the participation of those aged 60 or more in the poorest 5 percent of the population to just 1 percent.[25]

3.45 Although the Bank agreed fully with protecting the rural pension from tax cuts, it failed to use this experience to reconsider its pension policy framework. The Bank should evaluate where the Brazilian "rural-pension" model could be used in other developing countries, in place of assistance pensions or minimum pension subsidies. Its fiscal cost of 2.2 percent of GDP may be reduced with some targeting tricks, and some alternative should be devised for the old widows that cannot leave the cities for practical reasons, such as taking care of grandchildren.

3.46 Studies commissioned by the Bank proved that the level of benefit entitlements for the middle-income elderly was much higher than proportional to their past contributions. After subtracting the estimated cost of rural pensions, and on a "GDP-points-per-contributor" basis, Brazilian earnings-related pensions were 70 percent higher than the Organisation for Economic Co-operation and Development (OECD) average.[26] High-quality economic and sector work showed that this excess in pension expenditure occurred mostly because of the generous parameters. Opponents put this in doubt noting that the private sector plan was almost in cash equilibrium (the federal public servants' plan had more than half of the current deficit), so there was no need to reform benefits in the private sector plan. However, PROST projections showed that the cash balance in the private sector plan was bound to

[25] In 1998, among the rural population aged 67, the proportion with no income from work or pensions was 6 percent for men and 17 percent for women. The analogous proportion for those aged 30 was much higher: 16 percent for men and 66 percent for women.
[26] This simple calculation uses the fact that coverage of contributions was 47.2 percent of employment in Brazil in 1996 and almost 100 percent in OECD countries, except Mexico, and that pension expenditure amounted to 9.5 percent of GDP in the OECD. Calculation: (9.8-2.2)/(0.472)/(9.5/1.0) = 1.695.

deteriorate to a 9 percent of GDP deficit by 2050. These long-term deficits were raising the risk premium on the *current* public debt and increasing *current* interest expenses. In this episode, the PROST projection tool proved once again its power to inform and improve pension policy.

3.47 The Bank started the study of its first large SA loan in mid-1998. The government offered a diverse portfolio of pension-related reforms as possible conditions. The main condition chosen for this loan was a change in the Constitution that would eliminate specific benefit rules from its text, and would make them ordinary laws. This condition was highly relevant. In the event, Congress approved taking the private sector plan's benefit formula out of the Constitution. However, Congress rejected the analogous move for the pension plan for federal civil servants, thus showing the power of the unions and their influence on political parties. Economic and sector work showed how that huge power allowed substantial rent extraction by civil servants. This setback (which had not been reversed as of 2003) explains the modest rating of this loan.

3.48 The second pension-related SA loan (1999) was made conditional upon ordinary legislation that would balance the private sector plan's budget in the long term, by improving the benefits formula. Three options were in competition: (a) to legislate a higher averaging period within the length-of-service formula traditionally used by the Brazilian plans; (b) to adopt notional accounts, adapted from the Swedish, Italian, and Polish reforms of the 1990s; and (c) to create a fully funded and defined-contribution plan, as espoused in *Averting* (World Bank 1994).

3.49 Again, the Brazilian political establishment had no doubts: the defined-contribution and fully funded plan were rejected. The best objection was diversion of a portion of contribution revenue to new funded pension plans, which would create "transition" costs, but no debt at all could be used to finance them because of the debt crisis under way.[27] Financing all the transition cost with immediate benefit cuts was politically suicidal; this was clear to the Bank as well, so there was no disagreement.

3.50 The Bank did not need to update its pension policy framework in response to this experience because *Averting* was clear in stating that the transition should not be financed with debt if the additional debt was expected to push market interest rates to infinity.

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[27] This objection is valid even when the initial plan is solvent (i.e. not expected to request support from the government in present discounted-value terms), provided there is a debt crisis. When public debt pays real interest rates above 10 percent per year on a permanent basis, it becomes obvious that issuing additional public debt requires procuring new revenue to pay the interest of the new debt. Therefore, a new tax must be created at the start of the transition for it to be sustainable. Auerbach and Kotlikoff (1987, p. 150) showed that the high expected return earned by the new fully funded plan allows a cut in the contribution rate, without any sacrifice in the replacement rate, and that this cut creates space for introducing a new explicit tax on earnings that leaves take-home wages constant; and if the initial plan was solvent, that revenue covers the interest cost of the new debt exactly. In Brazil in 1998, the new debt could have pushed market interest rates to infinity, and the plan was not solvent to begin with.

3.51 A less convincing objection was also raised: that option would separate the budget for earnings-related pensions for middle-class private sector employees, from the budget for the semi-universal flat pension. About 5 percentage points of the 31 percent contribution rate financed the semi-universal rural noncontributory pension. And it was argued that a separate budget would increase the vulnerability of the first-pillar pension. However, at the time of budget separation, an explicit 5 percent tax on earnings could be established to finance the rural pension. In addition, the general tax system might be able to finance it with smaller distortions than an earnings tax, a possibility taken up by many countries. Moreover, as the Brazilian Constitution retains the rural pension in its text, the political argument is weak. The Bank has failed to evaluate this objection because it has not measured the capacity of different Brazilian taxes to finance rural pensions and the marginal efficiency costs of doing so. Such evaluations could become a standard component of the pension policy evaluation framework used by the Bank in other countries.

3.52 The Brazilian choice was to adopt notional accounts, adapted from the Italian reform of 1995, and modified to a hybrid formula called "*fator previdenciario.*" This shows the high level of sophistication of the Bank's Brazilian counterparts. The Bank reacted constructively to this Brazilian choice, emphasizing that incentives and equity would be better than with a simple parametric reform. The Bank also recognized the political advantage of hiding benefit cuts behind a formula that even experts took a year to assess fully. This outcome shows that by 1999 the Bank had incorporated notional accounts as a valid option in its pension policy portfolio, despite the fact that when *Averting* was written, notional accounts were unknown to most Bank experts.

3.53 However, at the last minute a mistake was made in the *fator* formula: the contribution rate credited to the notional account was the full 31 percent, including the 5 percentage points used to subsidize rural old age pensions, plus the percentages that finance disability, survivorship and work injury insurance, and maternity and sickness pay. This leads to excessive balances in the individual accounts and to excessive pensions. After the *fator previdenciario* was legislated, Bank projections found that the private sector plan's cash deficit would rise to six percent of GDP by 2050, rather than to nine percent without this reform. Since a six percent deficit is still unsustainable by far, the second SA loan failed to achieve its main condition, which was decisively cutting the long-term budget deficit in the pension plan for private sector employees.

3.54 The Bank still contributed to improved pension policies in Brazil, while helping to build the IMF-led rescue package that saved Brazil from its 1998 and 2000 debt crises. If the public sector plan is eventually taken away from the Constitution, and if the *fator previdenciario* formula in the private sector plan is improved, these two SA loans may be more effective than they appeared to be in 2003.

Bank Impact on Pension Reforms in Peru, Bolivia, and Uruguay

3.55 This section focuses on episodes whose impact was wider than the country involved.

Peru

3.56 In Peru, the government legislated in 1991–92 a reform to provide income security in old age to the middle classes that suffered the default of the older system owing to the hyperinflation of the 1980s. The middle class sector referred to here comprised about eight percent of employment by 1996, but its average wage prevents denominating it as rich. According to a survey, the proportion of Lima's labor force working as "permanent" workers declined from 66 percent in 1990 to 27 percent in 1997, while real wages declined almost 50 percent. Peru has always exempted the self-employed from the mandate to contribute, both because most self-employed are poor and because the state cannot enforce a mandate on them.

3.57 The Bank's support for this reform triggered an interesting debate. Peru did not have first-pillar programs to protect the elderly poor in 1990; it did not introduce them at least until 2002, and the Bank did not complain. Although a large SA loan granted in 1999 established a large set of conditions on social protection and vulnerable protection programs, it excluded the elderly poor. Income security in old age was never a priority in the Bank's strategy in Peru during this period. One defense for the Bank's approach is that the young poor are much more numerous than the elderly poor, and that providing income security to the middle class, however small, furthers fiscal stability and capital market development. If these gains encourage economic growth, the poor will benefit eventually. Of course, we cannot resolve this debate in this paper.

3.58 One specific episode regarding competition between private pension management companies is also of wider interest. A number of reforms to collection and operations reduced these companies' operational costs from 27 percent of contribution revenue in 1998 to 17 percent in 2001. However, fees remained unchanged, boosting the reported return on equity from 23 percent in 1998 to 59 percent in 2001. Other studies have argued that most profits are hidden through transfer pricing to affiliated insurance companies. This natural experiment confirms evidence from other countries asserting that price competition between pension management companies is minimal. Identifying market-based solutions to this should be an important topic for Bank research.

Bolivia and the *Bonosol* for the Poor

3.59 As in Peru, the Bolivian government designed a reform to restore income security in old age for the middle classes, after the default of the older system owing to the 1980s hyperinflation. In contrast to Peru, Bolivia created a first-pillar program that provided a universal flat benefit. For the first time in Latin America, a flat old-age benefit was distributed on the basis of nationality alone. This was innovative too because it was financed from a fund built with the proceeds of privatization, rather than on a PAYG basis. Its failure owing to political economy reasons may offer significant lessons.

3.60 The privatization program allowed the setting up of a pension fund of US$1.7 billion, equal to 25 percent of GDP, to finance the new universal old-age benefit. This benefit (paid once a year), called *Bonosol* (later *Bolivida*, and now *Bonosol* once again), will reach 3.5 million people eventually. The amount granted in 1997 was US$250 apiece. In 1997–2000, this benefit was paid to 340,000 persons above age 60, a figure that triples the number of pensioners in the old system. The fund is invested in a non-controlling equity in 10 formerly state-controlled enterprises. The pension fund was originally expected to be depleted when the generation of Bolivians who were 21 years old at the end of 1995 eventually died off. Given the distribution of income in Bolivia, this new universal flat pension is very progressive.

3.61 The operational obstacles were serious. The limited quality of civil records in Bolivia allowed people to change their age and even to invent beneficiaries of the *Bonosol* program. Second, the Bolivias state did not have a bureaucracy in place that was capable of actually distributing the *Bonosol* to the elderly, many of whom had to travel from the countryside on foot to collect the benefit in person. In addition, the pension fund created a political-incentive problem: if future governments controlled the vote of the pension fund in the "capitalized" enterprises, they would be able to interfere in their administration, and could extort the controllers requesting, say, political donations. Future governments might also attempt social investment schemes with electoral implications. Both governance and operational problems were solved by privatizing the management of the "noncontributory" pension fund, and by entrusting these same firms with distribution of the *Bonosol* benefits.

3.62 The Bank endorsed the creation of the *Bonosol* fund. The government would lose the dividend revenue from the just-privatized enterprises, but the government would also be able to stop making capital expenditures in former state-owned enterprises and would still charge them corporation tax. An alternative was for the government to sell those shares in the markets, but if the revenue had been locked up by purchasing a diversified international portfolio to limit spending, some loss of international aid would have resulted. Thus, the fiscal grant to the *Bonosol* fund did not really pose a fiscal dilemma.

3.63 The Bank, the designers of the *Bonosol* program and outside observers failed to see one pitfall. Future governments could increase the size of *Bonosol* payouts in electoral years to win elections. In fact, the government chose to maximize the electoral impact of this reform, by paying out the first *Bonosol* (a single annual lump sum) just one month before the 1997 election. Apart from creating bitterness among political rivals (who nonetheless won the election), this bad start may have helped transform the *Bonosol* from a social program into a populist handout.

3.64 The *Bonosol* amount paid in 1997 was so large compared with available cash that the 1998 payment had to be suspended. Faced with this major political cost, the next government (Banzer-Quiroga) devised an alternative scheme, called *Bolivida*. Eventually, it also found a way to turn the *Bolivida* to its electoral advantage—the payment of the *Bolivida* amounts corresponding to four years (1998–2001), were concentrated in the electoral period leading to the 2002 election. In response, presidential candidate Sánchez de Lozada promised in his 2002 campaign to reinstate the *Bonosol* program at a value of Bs 1,800 per year (US$ 240). He won the election; and in November, Congress passed a law that reinstated the *Bonosol* at this new high level for 4 years, that is, just during his presidency, but it was impossible to pay the *Bonosol* subsequently.

3.65 In order to finance the large *Bonosol* payouts for 2003–06, a December 2002 law ordered the merger of the noncontributory pension fund with the contributory fund accumulated by the covered middle class since 1997. This merger allowed the diversion of the liquid investments owned by contributors, toward the payment of unsustainably high *Bonosol* amounts.

3.66 The Bank should make a social policy evaluation of this program. The *Bonosol* is actually being paid to many poor Bolivians, and the scale of this help is significant. However, by 1999 it was clear that the *Bonosol* amount changed dramatically in response to political shocks, so its promise was highly uncertain. The security of older Bolivians does not appear to have been improved much by this program. In addition, the stability of the Bolivian political system, which was in jeopardy for other reasons, seems to have been further reduced by the *Bonosol* electoral games. The impact of political instability on economic growth is negative, and the growth-based trend in poverty alleviation is now in jeopardy. However, the Bank has not devoted resources to devise alternatives both in prevention and in crisis management.

Bolivia and Bidding to Cut Pension Company Commissions

3.67 The problem of excessive marketing costs in privately managed pension industries around the world was shown by Bolivia to be solvable: the lowest-bid competition in 1997, in which two pension companies were granted an initial allocation of members was extremely successful and could be adapted elsewhere. Bolivia also used the approach again in 2001 to obtain disability, survivorship, and work-accident insurance at decent prices.

3.68 The bidding approach avoids the collusive monopsonistic practice whereby the pension companies agree on quotas of salespeople, so as to save on marketing expenditures. Another lesson is that ex post contract renegotiation is the main problem with bidding for pension company services, ,but better designs could likely solve this. For example, consider a division that would split the contract into two components: one for operational services, where most sunk costs are located, and another for portfolio choice and fund management, which would be almost free from renegotiation pressures owing to low sunk costs. The Bank should assess these possibilities, for use in other countries.

Transition Finance in Bolivia

3.69 The Bolivian pension plan for the middle classes was replaced by a fully funded defined-contribution savings plan in 1997. The pension law required the new contributory funded plans to devote the smaller amount between the contribution revenue needed to finance benefits in the old system, and US$ 180 million per year, to purchase new government bonds at a preset nominal interest rate of 8 percent.

3.70 The good news is that this transition path was not necessarily unstable. If the increment in coverage is large enough, then total contribution revenue would be more than needed to finance the old-system's benefits, and the pension funds would have resources to invest in other assets. This combination also would also avoid the long-term cash deficits that would have occurred under a continuation of the old PAYG financed plan. This was an admissible possibility in Bolivia, because the initial coverage rate was just 16 percent, a condition present in many other developing countries. The mandate to purchase the new government bonds at a low interest rate is justified when the sovereign risk premium on public debt is large enough, as in Bolivia, to make debt finance feasible. If interest payments on the public debt are not far from the growth rate of the GDP, the public debt/GDP ratio can be managed without levying new taxes.

3.71 Bolivia almost made it. Coverage increased from 300,000 contributors in 1995 to 450,000 in 2001. The implied average annual growth rate of contributors was seven percent, above the real interest rate on the new debt. However, the government and the Bank allowed other design mistakes[28] to increase pension spending to three or four times more than expected. Obviously, a shock of this size threatened fiscal solvency. The lesson is that this was not owing to the financing strategy, but to mistakes in design.

Uruguay

3.72 The Bank failed in Uruguay because it did *not* follow the advice in *Averting*. The oldest mandatory pension system in Latin America was suffering unsustainable cash deficits (5.6 percent of GDP in 1995) and was projected to remain at 4.5 percent of GDP in 2040. The cause was aging, and also the fraud allowed by a 3-year averaging period to set the base salary. In response, Uruguayan politicians had tried for at least a decade to find an acceptable reform method, achieving some small parametric changes and suffering setbacks along the way.

3.73 By the mid-1990s, local leaders decided to try a deeper reform, which they

[28] The first mistake was that the parameters of the old system were not reformed, to "balance" it in actuarial terms. The second mistake was that the reform law allowed members of the old system aged 40 and older, to claim an early pension under the old system at huge fiscal cost. The third mistake was that the military and the police were unexpectedly "included" in the reform.

themselves had designed. An Inter-American Development Bank loan financed a technical commission, which produced a reform proposal in 1995, and after congressional approval, it started operations in 1996. The new system pays a two-tier pension. The second (and new) tier is financed with a proportion of contributions, which can be diverted to a fully funded defined-contribution new plan. The diverted contribution is a piecewise-linear function of earnings, which prohibits diversion for low-wage workers and allows more diversion for higher earners.

3.74 In the first half of the 1990s the Bank took a strong position against the reform, which was finally approved and implemented.[29] The main criticism was that the insolvency and fiscal problems had not begun to be solved, not even in the long run, but no cash-flow projections were done.[30] Observers believe that the goal of the Bank in the early 1990s was to adopt a fully funded, defined-contribution plan to replace the PAYG plan. However, Uruguay refused to abandon wholesale the income distribution supplied by the old system's design. The Uruguayan tradition of social welfare and redistribution demanded such a program to be part of the overall package. But the Bank failed to follow the advice in *Averting*, which clearly proposed retaining a first-pillar program for income-distribution purposes. During this period, the Bank had negligible efficacy.[31] This outcome should be disseminated within the Bank.

3.75 Starting in 1998, the Bank revised its position and encouraged the reform. Much work remains to be done. Transition financing in Uruguay demands continuous monitoring in the face of shocks connected with the Argentinean default. Subsequent Bank reports, however, have not projected the long-term cash balance for the overall pension system.

[29] An internal Bank document criticized the reform in writing, and pointed out that the PAYG component that remained was too large.
[30] Another part of the Bank's opposition was owing to a misinterpretation of the incentive for most workers to divert revenue to the new funded pillar, believing that total benefits would fall for those that participated.
[31] The Bank did not lend support to the Colombia's 1994 pension reform. Colombia's reform was one of the most interesting, but the Bank has not published studies about it.

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