

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

*Background Paper*  
**Bolivia Country Study**

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## Abbreviations and Acronyms

AFP	Administradoras de Fondos de Pensiones
COSSMIL	Corporación del Seguro Social Militar
CPAC	Capitalization Program Adjustment Credit
CPI	Consumer Price Index
FC	Fondo Complementario
FOPEBA	Fondo de Pensiones Básicas
GDP	Gross domestic product
IADB	Inter-American Development Bank
IDA	International Development Agency
IEG	Independent Evaluation Group (formerly OED)
IMF	International Monetary Fund
OED	Operations Evaluation Department (changed its name to IEG in December 2005)
PAYG	Pay-as-you-go
UDAPE	Unidad de Análisis de Políticas Sociales y Económicas



# Contents

Preface.....	i
<b>1. Background .....</b>	<b>1</b>
Pension System Prior to Major Reforms .....	1
Fondo de Pensiones Básicas .....	1
Progressive Redistribution .....	2
Savings-Insurance .....	3
Complementary Pension System .....	3
Pension Plan for the Military .....	5
Performance of the Pension System before Reform .....	5
Coverage and Labor Market .....	5
Progressive Redistribution .....	7
Savings-Insurance .....	7
Cash Flow Projections in the Absence of Reforms .....	8
Government Policy .....	9
Privatization of State-Owned Firms and Creation of the Bonosol .....	9
Reforms to the Contributory Pension System and Its Redistributive Features .....	11
Paz Zamora Pension Policies (1989–93) .....	11
Sánchez de Lozada Pension Policies (1993–97).....	12
Redistribution toward the Elderly Poor .....	13
Savings-Insurance .....	13
Third-Pillar Policies and the Military Pension Plan .....	14
Transition Options and Recognition of Accrued Rights .....	15
Issues in Transition Finance.....	16
Banzer-Quiroga Administration Pension Policies, 1997–2002 .....	17
Sánchez de Lozada Administration Pension Policies, 2002– October 2003.....	19
<b>2. Evolution of World Bank Assistance .....</b>	<b>20</b>
Genesis of Bank Involvement.....	20
Description of Bank Assistance .....	22
<b>3. Impact of Bank Assistance .....</b>	<b>25</b>
Outcomes .....	25
Relevance.....	25
Relevance of the Bonosol Program.....	25
Relevance of the Reform to Contributory Pensions .....	27
Fiscal Conditions for Relevance of the Reform to Contributory Pensions .....	29
Including the Military in the New Contributory System .....	30
Efficacy .....	31
Efficacy of the Bonosol Program.....	31
Regulation and Supervision .....	32

Bidding for the Lowest Commission and Marketing Costs at AFPs.....	32
Financial Market Development.....	34
Coverage and Labor Market .....	35
Merger at Adulterated Valuations.....	35
Efficacy in Reforming Contributory Pensions: Fiscal Aspects .....	36
Quality of Pension Policy Implementation.....	36
Quality of Actuarial Projections .....	38
Management of Fiscal Events.....	38
Financial Aspects of Fiscal Planning.....	39
Institutional Development Impact.....	41
Sustainability.....	41
<b>4. Results .....</b>	<b>43</b>
Bank Performance.....	43
Borrower Performance.....	43
Other Contributors and a Counterfactual.....	44
<b>5. Lessons Learned.....</b>	<b>46</b>
<b>Appendix A: Interviews in La Paz .....</b>	<b>47</b>
<b>References.....</b>	<b>49</b>

*Tables*

1.1 Cash Flows in the Old Bolivian Pension System (FOPEBA plus FC).....	8
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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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# 1. Background

## PENSION SYSTEM PRIOR TO MAJOR REFORMS

1.1 The Bolivian social security system offered a full menu of pension services, including saving for old age, longevity insurance, early pensions, as well as insurance for disability, survivors, and workers compensation.<sup>1</sup> By contrast, private-sector employers did not set up pension plans for their employees<sup>2</sup> and financial firms did not offer individual, voluntary pension plans. Tax policy did not consider pension plans separately. Thus, a voluntary third pillar did not exist in Bolivia before the major reforms in 1997. Some employers, however, may have preferred to create a complementary fund with fiscal support (see below).

### Fondo de Pensiones Básicas

1.2 The Fondo de Pensiones Básicas (FOPEBA) was the first-tier pension plan before the reform. It only was mandatory for select workers and, even among those, few participated.<sup>3</sup> Most (65 percent) contributors were public-sector employees (including those in public-sector enterprises). At least 75 percent of the covered wage bill feeding the FOPEBA and the Fondos Complementarios belonged to government employees.<sup>4</sup> Essentially, FOPEBA served powerful public-sector unions and a few large, unionized private firms. The law granted exemptions from contributions for rural workers, the self-employed, artisans, occasional workers, and domestic workers. FOPEBA started operations in 1959.

1.3 The contribution rates to FOPEBA were 2.5 percent by the employee and 4.0 percent by the employer, totaling 6.5 percent. The employer also contributed 0.5 percent for work injury coverage.<sup>5</sup> In the case of public-sector employees, the total government-employer contribution was 6.5 percent,<sup>6</sup> but owing to modest cash deficits in a

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<sup>1</sup> Other institutions provide maternity and health benefits, collecting separate contributions from employers. Since 1988, medical service insurance has been provided by institutions with separate budgets, except funds at the public universities, which combined health and old-age funds until 1997.

<sup>2</sup> A few large firms and parastatals that include severance-payment clauses in their labor contracts may have paid those benefits as pensions.

<sup>3</sup> Only 15 percent of the firms registered with the Internal Revenue Office had workers contributing to the pension system (von Gersdorff 1997, p. 3).

<sup>4</sup> Wages and salaries paid by the government were 8.8 percent of GDP in 1994. Von Gersdorff (1997, p.3) maintains that the covered wage bill was 12 percent of GDP. If employees at state-owned enterprises are added, the figure is at least 75 percent.

<sup>5</sup> Source: Correspondence with Ramiro Gamboa. The contribution rates for FOPEBA are reported in most Bank documents (see World Bank, 2001b, annex G; von Gersdorff 1997 failed to subtract the contributions for work injury and therefore reported a 4.5 percent rate from the employer. World Bank (1995, page 1) strayed even further by asserting that the employer's contribution rate to FOPEBA was 5.0 percent, not 4.5 percent. Some groups such as university professors, some municipal workers, and judicial workers had different contribution rates to FOPEBA.

<sup>6</sup> The law required the government to contribute an additional 1.5 percent, making the theoretical contribution rate for government employees 9.0 percent.

defined-benefit context, the monthly transfer from the treasury was higher. FOPEBA had no maximum taxable income limit.

1.4 Since 1991 the replacement rate promised by FOPEBA was 30 percent of average earnings for the last 12 months of contributions,<sup>7</sup> plus an increment of two percent per year for contributions in excess of 15 years up to also a ceiling of 60 percent. With 35 years of service, the promised replacement rate would be 60 percent of the pensioners' final salary [Min (30 percent + (35 – 15) x 2 percent; 60 percent) = 60 percent]. Although the pension amount was paid 14 times per year, salaries were paid 14 times too, so these replacement rates are valid. Eligibility required 15 years (180 months) of contributions. Pensions in payment status were adjusted by 90 percent of wage inflation in the public sector, payable each time the government adjusted public employee salaries for inflation.

1.5 Pension ages were 50 for women and 55 for men. These ages were extremely low by international standards, even when adjusted for life expectancy once in the labor market. Even younger pension ages were possible (45 for women and 50 for men) subject to an eight percent annual reduction in the monthly benefit if the participant was involuntarily unemployed for an "extended" period. However, this provision was not well defined.

### **Progressive Redistribution**

1.6 Three provisions in FOPEBA were aimed at the progressive redistribution of pension benefits towards the elderly poor. The first was the minimum pension, available as of 1973 to FOPEBA members who met the following eligibility conditions: a 15-year contribution record and low enough earnings so that the resulting pension was below the minimum. If these conditions were met, a subsidy was provided equal to the difference between the minimum pension and the pension derived from the benefit formula. The second redistributive element helped individuals with between two and 15 years of contributions. They received a minimum pension for a limited period fixed at one month for every six months of contributions. The third redistributive element was through the taxation of high wage earners. If ones' average taxable salary exceeded B\$3,000, the earnings used to calculate the pension were reduced by 70 percent of the excess over B\$3,000 (US\$647 per month in July 1994).<sup>8</sup> The B\$3,000 threshold was quite high, however, compared with the average salary. Bolivia did not have old-age assistance or a universal flat pension before the reform, and the country had a very weak personal-income tax system.

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<sup>7</sup> In the case of workers with earnings above B\$900 per month (US\$194 in 1994), the averaging period was set higher at the last 24 months.

<sup>8</sup> Decree No. 23004 (December 6, 1991), Article 5, drastically reduced the threshold for the 70 percent tax to B\$3,000, from its previous value of 50 minimum salaries. During the pension reform in January 1997, this threshold was raised to B\$4,000 by the decree that set the rules for calculating the compensation for the pension rights earned under the old system.

## Savings-Insurance

1.7 FOPEBA's benefit formula was such that providing savings-insurance to the middle classes was clearly one of its major goals, for the system promised constant, substantial replacement rates as a proportion of taxable wages, regardless of pre-retirement earnings. However, FOPEBA's governance structure could not deliver savings-insurance at a minimum risk to workers. It was not an independent bureau, and it did not conduct publicly available, long-term actuarial projections. FOPEBA promised defined benefits but subject to the risk that future legislation would reduce them and future inflation would erode the base salary used in the benefit formula. FOPEBA's defined-benefit promise meant that it would have to receive fiscal transfers to cover the deficits incurred.

## COMPLEMENTARY PENSION SYSTEM

1.8 Occupational pension plans for economic sectors were created in stages, starting at the beginning of the 20th century. Those plans were integrated into FOPEBA in 1959. Since 1972, labor unions created new occupational plans, called *Fondos Complementarios* (FCs), which paid additional pensions to FOPEBA and were funded by contributions that were mandated by law (because employers could not opt out, these plans do not represent a third pillar). The 34 FC plans that existed in 1994 performed a wide and evolving range of insurance activities not limited to pensions. For example, public-university plans provided health insurance, while others provided severance pay and whole life insurance. This system has seldom been described in detail. It was made up of: (i) 24 plans<sup>9</sup> for occupational groups such as miners, railroad workers, drivers, petroleum industry workers, teachers, judiciary employees, health workers, etc.; (ii) eight pension schemes for public university employees; and (iii) two insurance schemes for pensions and health care to bank employees and the police. All 34 plans together made up the FC system.

1.9 The contribution rate to each FC ranged widely, from 4.5 percent to 15.5 percent. These rates always included 1.0 percent paid by the employer for work injury coverage (*riesgos profesionales*). The contribution rate for old age, disability (*riesgos comunes*) and survivors ranged from 3.5 percent to 14.5 percent, averaging 5.3 percent.<sup>10</sup> The average for private-sector FC was 3.5 percent. Most FOPEBA members working in the public sector were required to participate, as well.

1.10 The single aim of the FC was to deliver savings-insurance to all workers in each designated occupational group. Therefore, most FCs did not provide progressive redistribution. However, the FCs did not have governance structures to help them meet savings-insurance goals at minimum risk for all members. None of these plans published long-term actuarial projections signed by an independent auditor. All of the FC plans

<sup>9</sup> According to some sources, there were 27 separate plans.

<sup>10</sup> These figures are contradicted by Escobar (2003), who claims in Table 4 that the total contribution rate at the FC was 7.7 percent. We do not follow Escobar because his Table 6, Note A, asserts that disability and survivors' insurance (*riesgos comunes*) was financed by the government, and not with contributions, which contradicts the previously cited literature.

offered defined benefits for old age but, again, this promise was subject to the risk of future legislation and/or of delayed inflation adjustments.

1.11 The benefit formulas for old-age, disability, and survivors' pensions for the civilian FCs were unified in 1973 (Escobar 2003). By the early 1990s, the common benefit formula for old age was a flat replacement rate of 40 percent, plus an increment of one percent of the wage base per year of contributions in excess of 15, plus another increment of one percent in the wage base per year of retirement after the established pension age (50 for women and 55 for men), subject to a ceiling of 60 percent.<sup>11</sup> Those workers who contributed to the FC for fewer than 15 years did not get old-age pension benefits. Again, 14 monthly pensions were paid per year. Thus, with 25 years of service and at age 58, the replacement rate for a woman was 58 percent [ $\text{Min}(40 \text{ percent} + (25 - 15) \times 1 \text{ percent} + (58 - 50) \times 1 \text{ percent}; 60 \text{ percent}) = 58 \text{ percent}$ ] of the earnings base, paid 14 times per year.

1.12 This is extremely generous given the high replacement rate already paid by FOPEBA. For this reason, there existed *another ceiling on the combined FC and FOPEBA replacement rates*, equal to 100 percent of earnings, which prevented either the FOPEBA or the FC benefit formula from applying at the margin in many cases. In any case, 100 percent is an extremely generous combined replacement rate because the combined contribution rate was 11.8 percent on average (6.5 percent + 5.3 percent) (apart from 1.5 percent for work injury), and pension ages were only 50 for women and 55 for men. Pensions in payment in the FC received discretionary increases for inflation, provided the funds had the resources. No actuarial study was required before these increases.

1.13 The ceiling on the combined FC and FOPEBA replacement rates, along with the fact that in most cases it was binding,<sup>12</sup> created a strong financial link between the FC and FOPEBA. If the FOPEBA pension was reduced by law, or if it was replaced by an uncertain defined-contribution pension, then the FC pension would take up the slack, keeping the combined pension at 100 percent and within the defined-benefit family, even though one component was defined contribution. If the combined ceiling were to be eliminated, the combined replacement rate would balloon to nearly 140 percent for workers contributing for 40 years. (These financial links were not reported in Bank documents.)

1.14 Financing of the FCs was fragmented. The funding status differed as some plans were operating on a balanced pay-as-you-go (PAYG) basis, some were partially funded, and some faced PAYG cash deficits. According to projections made in 1993, the aggregate cash deficit of the FCs was 0.3 percent of gross domestic product (GDP) in 1995 and was expected to fall over time. In practice, it was 0.23 percent of GDP in 1995. Although there was no explicit budgetary guarantee, two FCs received direct cash infusions from the treasury in 1993, suggesting that implicit guarantees existed.

<sup>11</sup> Ramiro Gamboa and Federico Escobar kindly supplied this essential information.

<sup>12</sup> In the absence of a ceiling, the combined-benefit formula for men was [ $70 \text{ percent} + (S - 15) \times 3 \text{ percent} + (A - 55) \times 1 \text{ percent}$ ], where  $S > 15$  is the number of years of service and  $A$  is age. Even if  $A = 55$ , a mere 25 years of service was enough to reach the 100 percent ceiling.

1.15 Bolivia did not provide favorable tax treatment for the self-employed or employers who voluntarily set up pension plans.

### **Pension Plan for the Military**

1.16 Military members of the Corporación del Seguro Social Militar (COSSMIL) did not participate in FOPEBA. COSSMIL provided a benefit formula with a 100 percent replacement rate after 35 years of service, regardless of age. COSSMIL included economic penalties for officers who quit before meeting a minimum service period of 25 years and penalties for those who failed to retire after reaching a certain age. These (standard) features are consistent with the desire of employers to protect their investments in staff training. It is likely that pensions at COSSMIL had a substantial deferred-wage component, defined as the excess of the actual pension over the amount that would have been financed with imputed individual savings--the difference between take-home pay in an alternative uncovered job and the take-home pay in the military.

### **Performance of the Pension System before Reform**

#### ***Coverage and Labor Market***

1.17 FOPEBA (and the FC) had 296,943 contributors in 1993, about 16 percent of total employment.<sup>13</sup> In Bolivia, coverage is frequently reported as a proportion of the economically active population, but this includes many people that are not supposed to contribute, such as housewives, students, retirees and the unemployed.<sup>14</sup> One reason for low coverage was that the law granted exemptions to rural workers, the self-employed, artisans, tradespeople, temporary workers and domestic workers. Contribution rates for pensions were not high. For members of the FC that worked at private-sector jobs, the combined contribution rate was just 10.0 percent (6.5 percent + 3.5 percent, excluding workers compensation). This was modest in comparison with the present value of promised benefits, which was large because of young pension ages (50 for women, 55 for men) and high replacement rates (effectively 100 percent).

1.18 Coverage may have been low owing to a low marginal benefit-contribution link. For those with more than 15 years of contributions, the benefit formulas created a weak link between contributions and benefits at the individual level. The cap on the replacement rate was reached with relatively few years of service, so subsequent contributions were taxed at an implicit rate of 100 percent. The subsidy at FOPEBA for those workers contributing between two and 15 years increased with each year of contribution, thus stimulated coverage but only for those earning close to the minimum pension. Those that earned more than twice the minimum pension were taxed by being

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<sup>13</sup> This is about 32 percent of urban employment. Urban employment came to 921,338 in 1993, according to Table 2 in Martinez de Bujo (1998). Rural employment was about the same as urban employment, according to this source.

<sup>14</sup> Even employment may be an inadequate basis for measuring coverage in Bolivia because the law itself exempts rural workers, the self-employed, artisans, trades people, occasional workers, and domestic workers from the mandate to contribute.

covered, provided they did not exceed 15 years of contributions. In addition, benefits from the FC were zero for workers who contributed less than 15 years, compensating for the FOPEBA subsidy. The short averaging period (either one or two years) allowed workers to collude with employers to underreport salaries that did not enter the average wage base and over-report salaries that did enter into it.<sup>15</sup>

1.19 Portability was low, despite the fact that within FOPEBA there was full portability between employers since the 34 civilian FCs permitted portability only among those employers required to contribute to the same plan. Because most FCs (with three exceptions) had fewer than 10,000 members, labor mobility was heavily hampered by the FC. The rules for portability are not available in detail,<sup>16</sup> but the diversity of contribution rates among the FCs required a limited degree of portability to prevent massive arbitrage.

1.20 A complementary hypothesis is that coverage was low because of inefficient administration. The collection of contributions was very lax outside of the realm of government employees, with only 8,000 employers paying contributions. FOPEBA was operated by a single government organization. No individual registries of contributions or taxable salaries were maintained by FOPEBA or the 34 FCs. A final hypothesis is that coverage was low mainly due to educational attainment and social capital.

1.21 There is some controversy about the administrative costs of the combined pension system. According to one source, they were low: US\$ 6.3 per contributor per year in 1994 in FOPEBA, plus US\$18.6 per active contributor, on average, for 24 FCs.<sup>17</sup> Another source asserts that administrative expenses at FOPEBA alone consumed 17 percent of contribution revenue,<sup>18</sup> equivalent to about US\$92 per contributor per year. In either case, administration was costly relative to the quality of service. Reserves in the FC were not provided professional management. Most FCs were controlled by unions or guilds. The FCs had been free of real Ministry of Finance supervision until 1994. Attempts to control them failed repeatedly owing to their political connections

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<sup>15</sup> One may think that for government workers these tactics presumably were not met with employer approval. Von Gersdorff (1997) reports a low degree of underreporting. However, when budget controls are weak and a big opportunity arises, these tactics may proceed with the collusion of just the section chief.

<sup>16</sup> Some of the members transferring from one FC to another may have captured large rents.

<sup>17</sup> Escobar 2003, table 1. Costs at the public university funds were higher because they also managed health insurance.

<sup>18</sup> Von Gersdorff 1997, page 4.

### ***Progressive Redistribution***

1.22 The minimum pension was a subsidy targeted to help the elderly poor who had worked in the covered sector for at least 15 years. Other poor, such as the rural elderly, did not receive support from this provision. Those who contributed between two and 15 years received a subsidy of 5.2 percent of salary in the most favorable case.<sup>19</sup> However, the subsidy turned into a tax when declared earnings were about 1.52 times the minimum pension.<sup>20</sup> In addition, the absence of any benefit for those who contributed to the FC for less than 15 years implied a labor tax equal to the FC contribution rate at all earning levels. Thus, it is unclear if Bolivia's old pension system actually redistributed income to the poor. For high earners, the high marginal tax rate on their benefits made FOPEBA appear to be a universal flat pension financed at a constant contribution rate.<sup>21</sup>

### ***Savings-Insurance***

1.23 Benefit promises were high but delivery was dismal. With 35 years of service the promised replacement rate was 70 percent, much higher than the one offered by U.S. social security, which is about 41 percent. However, most FOPEBA members received small pensions. In 1992, 81 percent of FOPEBA's pensioners received monthly benefits below US\$56. The combined FOPEBA and FC pensions paid in 1993 ranged from US\$41 to US\$400 per month. This may be explained by the fact that higher pensions were not adjusted during the 1985 hyperinflation and the density of contributions associated with low coverage, that is the continuity of contributions across a career span, was also low.

1.24 FOPEBA's cash deficit amounted to 18 percent of contribution revenue in 1994.<sup>22</sup> Low pension ages (50/55), high promised replacement rates (60 percent), and low contribution rates (6.5 percent) explain why FOPEBA ran cash deficits despite paying very modest average benefits and having 2.7 contributors per pensioner from 1992 to 1995.<sup>23</sup> Nonetheless, the short-term financial condition of FOPEBA and the FC was not buoyant, although it was not disastrous either. Pension expenditures of both FOPEBA and the FC were 2.5 percent of GDP in 1995, way below the 4.7 percent average for middle-income countries. This can be explained by relatively low pension coverage in

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<sup>19</sup> This is the case of a person that contributes for just two years, collects the benefits immediately (and meets the age requirement) and earns a salary equal to the minimum pension. The contribution rate is 10 percent and the real interest rate is 10 percent per year.

<sup>20</sup> The 1.52 figure is valid for those that contribute for two years. If contributions last slightly for fewer than 15 years, the equivalent figure is 1.33.

<sup>21</sup> The Social Security system in the United States uses a similar approach, with an 85 percent tax rate but a higher threshold. As *Averting the Old Age Crisis* (World Bank 1994) suggested, payroll taxes can be the most progressive option for collecting revenue if most high earners are covered by FOPEBA, and other tax bases are small or inefficient.

<sup>22</sup> In 1994, the stock of treasury arrears to FOPEBA was about six months of revenue.

<sup>23</sup> Escobar 2003.

Bolivia. The combined cash deficit was 0.23 percent of GDP in 1995, as shown in Table 1.1. If collection had been more efficient, a cash surplus might have existed.<sup>24</sup>

**Table 1.1: Cash Flows in the Old Bolivian Pension System (FOPEBA plus FC)**

<i>Year</i>	<i>Benefits (percent of GDP)</i>	<i>Contribution revenue (percent)</i>	<i>Deficit (percent of GDP)</i>
1993	2.35	2.20	0.15 percent
1994	2.50	2.28	0.22 percent
1995	2.49	2.26	0.23 percent

Source: von Gersdorff 1997, page 5.

### *Cash Flow Projections in the Absence of Reforms*

1.25 Gamboa (2002) reports that the government projection available for 1996 put the present discounted value of the cash pension deficit from 1995 to 2060 at US\$3.4 billion, or 46 percent of GDP.<sup>25</sup> This projection asserted that the cash deficit would reach about 1.6 percent of GDP by 2030, and then would rise much further--to 2.7 percent of GDP by 2040 and more until 2060. Most of the present value of the cash deficits would occur in the far future, after 2020. When cash deficits approach 3.0 percent of GDP in a pension plan with coverage of just 16 percent, a fiscal problem is at hand and should be tackled sooner rather than later.<sup>26</sup>

1.26 This increase in the deficit seems to be due to the interaction of a demographic transition with very low pension ages (50/55). FOPEBA started operations in 1959. The first generation of urban workers with a full contribution record retired in the 1990s, which led to a projected increase in expenditures. However, by the early 1990s the pensioner/contributor ratio was still 2.5 (or 2.7, according to another source), which did not yet reflect the demographic burden of a fully mature system.<sup>27</sup> The sector schemes had been introduced in the 1970s, so they were at least one decade away from maturity, even if most of their reserves would vanish earlier. The financial balance of any PAYG plan requires large parametric adjustments in response to system maturation. In Bolivia, these adjustments essentially had been avoided, as pension ages remained at 50/55, and the replacement rate remained at 100 percent in most cases. Parametric adjustments could

<sup>24</sup> In fact, after the reform, the number of employers paying in jumped from 8,000 to 17,600, and contribution revenue rose substantially.

<sup>25</sup> The 46 percent figure is an estimate of the actuarial imbalance, which must be added to the implicit pension debt that remains in any PAYG plan that achieves cash balance. The study cited by Ramiro Gamboa seems to have been von Gersdorff (1997, p. 4).

<sup>26</sup> A further controversy arises in some aspects of detail. The projections made by UDAPE (Unidad de Análisis de Políticas Económicas, an elite department within the Ministry of Finance) in 1993 assumed that: (i) the growth rate of real wages would be zero from 1995 to 2005; and (ii) private sector contributors would *fall*, in absolute terms, starting in 2005 at 0.3 percent per year, and gradually accelerate to 1.5 percent per year by 2020. Both assumptions were quite unrealistic and reduced projected contribution revenue. Other sources report that coverage of contributors *rose* steadily during 1990–94 (See Escobar 2003, table 1), possibly because of rapid economic growth. The annual growth rate in the number of contributors was 8.5 percent during 1990–94. Such high rates are not unusual when coverage is so low. The point here is that it was highly positive, contradicting the assumptions made by UDAPE.

<sup>27</sup> The references often cite the argument that solvency of a PAYG finance plan requires a 10:1 ratio in pensioners to contributors. This is a myth because it leaves out parametric adjustments.

be delayed for some years in Bolivia because hyperinflation in 1985 ate away most of the value of the pensions issued between 1959 and 1982 owing to less than full indexation. One natural response to projections with increasing deficits would be to raise pension ages to 65 in the old system, for example, over a 10-year period; the reform included such an increase.

1.27 It is an analytical mistake, however, to attribute the desirable fiscal impact of an increase in pension ages as a reform toward full funding, when the same increase in pension ages can be made within the old FOPEBA and FC, retaining PAYG financing. This mistake is what drove the government's interpretation of the projections in 1996. After noting that without reform, the present value of the cash deficits up to 2060 would be 46 percent of GDP, the government compared this figure to the present value of cash deficits with reform, which was expected to be just 32 percent of GDP. However, most of the cut was due to the increase in pension ages, not the shift to funding or other aspects of the proposed reform.<sup>28</sup> Despite this methodological mistake, the government had other good reasons to consider a reform consisting of a fully funded, defined contribution and privately managed system.

## GOVERNMENT POLICY

### Privatization of State-Owned Firms and Creation of the Bonosol

1.28 The Bolivian pension reform derived from a massive privatization program inaugurated by the Sánchez de Lozada administration elected in 1993. The initial program included the privatization of state-owned firms in four productive sectors: hydrocarbons, mining, telecommunications, and electricity. In the privatization chosen, called "capitalization," state-owned firms issued a large block of new shares, selling them in a single package designed to allow the buyer to gain control of the board. The cash infusion by the new controller was expected to be used by the firm to invest in new physical or commercial assets, in combination with new know-how and expertise. Because several of the firms to be capitalized were monopolies, the plan included the creation of a new regulatory framework before each privatization. Despite the complexity of these sectoral reforms, the government managed to put them into practice, attracting about US\$1.7 billion in new foreign direct investment (25 percent of GDP) for 10 capitalized and privatized firms. This was credited to be perhaps the most remarkable achievement of the Bolivian structural reform period (1985–97). At least 30 international firms participated in the bidding, and the country achieved a big institutional marketing gain.

1.29 The government decided to give away the shares that the state continued to hold in these 10 firms as a gift to all adult Bolivians. Therefore, in contrast to regular privatizations, Bolivian-style capitalization *worsened* the government's fiscal position because the state lost the dividend revenue it could have earned by not giving away the

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<sup>28</sup> Many made this mistake, starting with Claro y Asociados (1992), local economists, and Guerard and Kelly (1997, pages 332 and 342). Bank reports also failed to detect this mistake when evaluating the Bolivian reform.

shares. It was hoped that faster growth and higher profits would raise tax revenue, thus mitigating this impact.

1.30 In a separate decision, the government refused to allow individuals the freedom to sell their shares. Based on Eastern European experience, it chose instead to require each individual, by law, to hold the grant in a new mutual fund, assuring professional and orderly sales of the underlying equities.

1.31 The problem that remained was how to transfer the shares to the new owners without stimulating a drop in private savings. The solution adopted by the government created the first link between privatization and pension policy: the mutual fund would give the shares to individuals in the form of a lifetime annuity starting at age 65. Thus, Bolivia decided to create the first universal, flat, old-age pension in the world that was not financed on a PAYG basis but was a fully funded plan. This pension (paid once per year), called *Bonosol* (later *Bolivida*, and now *Bonosol* again), would reach 3.5 million people. In 1997–2000, this benefit was given to 340,000 elderly per year, triple the number of pensioners in the old system despite its being granted at age 65 rather than 50/55. It was financed with the dividend income and asset sales of a mutual fund invested in non-controlling equity in 10 formerly state-controlled enterprises. This is the "non-contributory" pension fund, was expected to be depleted by 2060 after the deaths of Bolivians who were 21 years old at the end of 1995. Given the distribution of income in Bolivia, this new universal flat pension was very progressive.

1.32 Serious operational obstacles had to be faced. First, the limited quality of civil records in Bolivia allowed people to change their ages and even to invent beneficiaries of the *Bonosol* program. Although a special effort was made to improve civil registries, fraud was substantial.<sup>29</sup> Second, Bolivia did not have in a place a state bureaucracy capable of actually distributing the *Bonosol* to old people, many of whom had to travel on foot from the countryside to the provincial capitals to collect payments in person.

1.33 A major governance problem existed if future governments could vote the non-controlling shares in the "capitalized" enterprises, as they would be able to interfere in corporate management by extorting "political donations." Future governments might also influence the chief executive officers of the agencies that set regulated prices for enterprises that were natural monopolies. Thus, the scope for extortion and corruption was large. A related governance problem was how to safeguard the "non-contributory" pension fund from political interference in its investment decisions. Future governments might attempt social investing schemes to influence elections. They might also increase the size of *Bonosol* payouts in election years. In fact, the government sought 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 nevertheless won that particular election, this bad start may have helped transform the *Bonosol* from a social program into a populist handout.

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<sup>29</sup> There are 74 beneficiaries of the *Bonosol* that claim to be 105 years or older, but few believe this is true.

1.34 The governance and operational problems faced by the new universal pension program generated a second link between privatization and pension policy: The government's response was to privatize the management of the "noncontributory" pension fund and entrust private firms with the distribution of *Bonosol* benefits. It was hoped that these new private firms—the Administradoras de Fondos de Pensiones (AFPs)—would reject attempts at political interference in their portfolio decisions, would be unable to interfere in the administration of the capitalized firms, and would deliver annuities efficiently. In the Bolivian privatization, it was natural to select the AFP in an international bidding contest.

1.35 Up to this point, there were no links between the *Bonosol*, the AFP that managed the non-contributory fund, and reform of the old pension system, including FOPEBA and the FC. However, it was natural to link them, and the Sánchez de Lozada administration did so

### **Reforms to the Contributory Pension System and Its Redistributive Features**

1.36 Although the financial condition of FOPEBA and the FC was far from disastrous, Bolivian governments since Paz Zamora (1989–93) had seriously considered a fully funded, privately managed, defined contribution system for reasons discussed in Chapter 3. Unfortunately, the pension policies adopted from 1993–2003 raised the pension-related fiscal deficit from 0.2 percent of GDP to 5.0 percent.<sup>30</sup> The attribution of this cumulative outcome to a single policy measure, specifically to the shift from PAYG finance to full funding, is an increasingly common mistake in Bolivia and elsewhere. Pension policy cannot generate a deficit larger than the diversion of contribution revenue to the new pension funds. Excluding contributions for insurance, this diversion ranged from 1.75 percent to 1.88 percent of GDP during 1998–2001.<sup>31</sup> Thus, 60 percent of the cumulative fiscal impact is owed to other policies.

#### ***Paz Zamora Pension Policies (1989–93)***

1.37 Beginning in 1991, the Paz Zamora government hired consultants to produce the first projections of fiscal costs with and without a transition to full funding. A technical team with financing from USAID was created to draft a pension reform. The Ministry of Finance's Unidad de Análisis de Políticas Sociales y Económicas (UDAPE) developed its own detailed actuarial projection model.<sup>32</sup> In 1992, UDAPE found that the PAYG-financed old system was not financially sustainable in the long term and made a reform

<sup>30</sup> The fiscal deficit (on a cash basis) attributed to the pension reform was 2.5 percent of GDP in 1997, 4.0 percent of GDP in 1998, 4.1 percent in 1999, 4.5 percent in 2000, 4.8 percent in 2001, and 5.0 percent in 2002; for the 2001–02 figures, see IMF 2003.

<sup>31</sup> These figures are obtained as follows: table 13 "Total Recaudaciones Globales desde la fecha de Inicio" in the statistical bulletin of the Superintendencia de Pensiones, Valores y Seguros, reports total revenue collected by the AFP. This amount is multiplied by 10/14.5 to get the revenue available to buy government bonds: 0.5 percent is a commission, 2.0 percent went to disability and survivorship insurance, and 2.0 percent went to workers compensation. The result is divided by nominal GDP.

<sup>32</sup> According to one interview, this model was the basis for the World Bank's PROST model. However, some reformers in Mexico make a similar claim.

proposal to President Paz Zamora. However, the amount of time until the next election was too short, and opposition by the ministers of labor and health won the day.<sup>33</sup>

### ***Sánchez de Lozada Pension Policies (1993–97)***

1.38 The Sánchez de Lozada administration proposed the capitalization policy and the *Bonosol*. Paz Zamora’s pension policy team was relocated in the new Ministry of Capitalization and asked to make another reform proposal within the new policy context. In all of these proposals, the AFP would serve workers who were mandated to contribute to a pension fund (about 16 percent of total employment) and several million owners of *Bonosol* annuities. These proposals suggested separate budgets for the two programs, distinguishing between a “non-contributory fund” to finance *Bonosol* annuities and a “contributory fund” formed by contributions of FOPEBA and FC members.

1.39 The reform team's baseline proposal in mid-1995 was to reform FOPEBA alone, adopting a fully funded scheme, and to finance the fiscal impact of the transition by selling 20 percent of the non-controlling shares in the privatized firms. The team’s alternative proposal was to reform both FOPEBA and the FC, but in this case there would be no *Bonosol* program because 100 percent of the non-controlling shares would be sold to finance the transition cost. The latter alternative was rejected at the political level. The main argument against including the FC was that it raised the fiscal cost of the transition. According to updated projections made by UDAPE in mid-1996, a reform of FOPEBA alone would have had a cash cost of only 0.69 percent of GDP per year over the first four years. Including the FC raised the estimate of the cash impact of the transition to an average of 2.44 percent of GDP per year.<sup>34</sup>

1.40 The reform team did not develop ties with the management teams of the different FCs or with their controllers, such as the unions. Therefore, these groups saw the pension reform as being imposed on them and objected. Conversely, the reform team did not have access to internal data of the FC, in part, owing to the initial assumption that the reform would cover FOPEBA alone.

1.41 In the second half of 1996, the Sánchez de Lozada government surprised observers by proposing that Congress include the FC in the reform and *simultaneously* - devote all the non-controlling shares to finance the *Bonosol* program. The transition would be financed 100 percent by new government *debt* sold to the new pension funds. This was counter to the reform team's advice, in part, because there were no fiscal measures (or plans) to finance the interest on this new debt. There were no concrete measures to introduce fiscal savings to cover the transition cost. Congress accepted and the proposed reform became *Law 1.732* on November 29, 1996. Detailed regulations were published on January 22, 1997, and operations began on May 1, 1997.

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<sup>33</sup> Escobar 2003.

<sup>34</sup> Von Gersdorff 1997, p. 20.

### ***Redistribution toward the Elderly Poor***

- 1.42 Two policies introducing progressive redistribution were adopted in the reform:
- (i) The 100 percent ceiling on the combined FOPEBA and FC replacement rate was replaced by a ceiling on the absolute amounts of both the base salary and the pension, set at 20 times the minimum wage. This meant that replacement rates could now be way above the base salary for members with lower earnings. For example, because the replacement rate was  $0.70 \times (N/25)$ , where  $N$  is the years of service, a worker with 40 years of service got a replacement rate of 112 percent, which was above the old ceiling but could be lower than the new absolute ceiling. The fiscal cost of this measure has not been quantified.
  - (ii) The compensation for past contributions to those that contributed less than 15 years to the FC was raised from zero to a lump sum (*pago global*) upon reaching pension age. Apparently this payment included the lump sum paid earlier by FOPEBA alone. The aggregate fiscal cost was low according to Gamboa (2002).

### ***Savings-Insurance***

1.43 The new pension system includes individual accounts and full funding. During the accumulation phase, participants face the normal risks of a defined-contribution plan, but during the distribution phase, individuals can select a defined benefit option (nominal annuities set in U.S. dollars, subject to inflation risk) or a defined contribution option (variable annuities).<sup>35</sup> Early pensions are allowed if the individual can finance a replacement rate of 70 percent of the average of the last five years of covered earnings. At age 65, members are allowed a pension with whatever replacement rate can be financed, in addition to *Bonosol* benefits. The new system pays 13 pensions per year (in December an “extra” pension is paid) rather than 14. The new pension plans were opened to the self-employed on an individual basis, giving them access to favorable tax treatment for the first time, but with no access to their funds before age 65, contrary to successful third-pillar plans in other countries.

1.44 The new system required a contribution of 12.5 percent to be fully paid by the worker,<sup>36</sup> which is not much of a difference from the 11.8 percent average combined contribution to FOPEBA and the FC. At the same time, the total contribution for work injury insurance paid by the employer was raised (temporarily, until new rates were set in 2002) from 1.5 percent to 2.0 percent, making the total contribution rate 14.5 percent. Take-home salaries had to fall because overall contribution rates rose, but they also fell because the combined share paid by the worker rose to 100 percent from 58 percent ( $2.5 + 4.3$ )/11.8). The latter shift would have cut take-home wages by 5.7 percentage points ( $12.5 - 6.8$ ) had the contractual wage not been renegotiated. To prevent large transitory

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<sup>35</sup> The *Mensualidad Vitalicia Variable* pensions are variable annuities recalculated annually according to observed investment returns and observed mortality. They copy the CREF annuity's design, pioneered by TIAA-CREF in the United States.

<sup>36</sup> The worker paid 12.5 percent, of which 10.0 percent was saved in the individual account, 2.0 percent was the premium for disability and survivors' insurance, and 0.5 percent was one of the commissions earned by the management companies.

losses for workers, the reform law raised nominal salaries, but only for government employees and not for workers at covered private firms. The net result of the increase in contribution rates was an rise in government expenditures, estimated at US\$34.6 million per year (0.40 percent of GDP) from 1998 onward (Gamboa, 2002). Surprisingly, this expense was not taken into account in the actuarial projections of the fiscal cost of the transition made by UDAPE.

1.45 The eligibility rules for disability insurance were changed by the reform. Total expenditures on disability and survivors' pensions more than doubled between 1997 and 2002,<sup>37</sup> suggesting that the old rules were too tough or that bureaucratic red tape prevented legitimate claimants from obtaining benefits. This increase was despite the elimination of the old-system "partial disability pension".

### ***Third-Pillar Policies and the Military Pension Plan***

1.46 Unexpectedly, the military and the police were "included" in the reform. More precisely, the government formally agreed with COSSMIL to cover ex post 100 percent of the difference between the benefits promised by the military's formula and the benefit paid by the new system.<sup>38</sup> This implied that the rate of return earned by the individual accounts would be irrelevant for members of the military because the larger benefit is normally the one included in the military's formula (100 percent replacement after 35 years of service). Therefore, the military gained—if the rate of return on individual accounts turned out to be high enough to make that pension the highest; only then would this provision become operational. The only fiscal gain was that the guarantee did not cover members who joined the armed forces after the reform date, transferring the downside investment risk to future military personnel. However, as this exclusion creates a huge expected benefits reduction for 1997 recruits, it is unlikely to be politically sustainable; as such, the fiscal gain may be illusory.

1.47 The costs of low mobility are likely to be more than compensated by efficiency gains when the armed forces invest substantial amounts in training the military and police officers, because early attrition would negate these investments. However, labor market efficiency favors greater mobility in other military occupations, such as lawyers, secretaries, and drivers, where investment in training is modest. The fact that COSSMIL's pension liabilities retained their defined-benefit nature for the transition generation implies that portability between military and civilian jobs will continue to be as difficult as ever. This is a good outcome for training-intensive jobs but undesirable for other employees.

1.48 The agreement between COSSMIL and the government also allowed COSSMIL to have the treasury cover pension expenditures at about US\$32 million per year

<sup>37</sup> See Escobar 2003, table 6 and section 4.3.

<sup>38</sup> Point no. 8 in the agreement among the Capitalization Minister, the Defense Minister, COSSMIL, and the armed forces (November 20, 1996). Point 8 establishes a special account from which these resources would be paid. In addition, COSSMIL pensions had their indexation changed to the price of the U.S. dollar, a move that raised pensions considerably. The administrative work of paying pensions was transferred from COSSMIL to the new private AFP.

beginning in 2001 (0.37 percent of GDP). In exchange, COSSMIL stopped receiving contributions from the Ministry of Defense. Because the government had to pay the new higher contribution rate to the new pension funds, the net fiscal cash flow worsened by 12.5 percent of the military wage bill.

1.49 The boards of the 34 FCs, dominated by unions and employers, managed to keep control over the assets of the FC, rather than turning them over to the treasury. This outcome may have raised overall private consumption. Judiciary employees obtained an exemption from the 100-percent ceiling on the combined replacement rate for FOPEBA and FC pensions, in exchange for accepting inclusion in the reform (Escobar 2003). Another exception was that the cutoff date for the current generation of active COSSMIL members to qualify for an early pension under the old rules for the military (25 years of contributions with no age minimum) was postponed from 1997 to 2002.

### ***Transition Options and Recognition of Accrued Rights***

1.50 The reform law did not allow non-pensioned members of FOPEBA and the FC to remain in the old system. Active members caught at mid-career by the reform were given a “compensatory pension,” which acknowledged contributions to the old system. This method of payment delayed the fiscal impact, relative to paying a lump-sum recognition bond. Of course, the old system remained in operation under the old rules for those already pensioned.

1.51 In practice, the members of several transition generations aged 40 and over at the reform date *could* choose to remain in the old system by taking an early pension. If this design decision is taken as a given, the next question is whether benefits in the old system were comparable to the benefits in the new system, including the compensatory pension.

1.52 The new system had some attractive features. The main one was that the formula that recognized contributions to the old system was generous. It was based on each individual's actual wage as of October 1996, which, on average, was relatively high after several years of economic expansion.

1.53 However, the old system also held attractions. Pension ages under the old system were 50 for women and 55 for men, while under the new system the suggested retirement age was 65. It is true that the compensatory pension under the new system included an early-pension option, but the requirement was to self-finance a combined replacement rate of 70 percent—compensatory pension plus pension, self-financed from contributions made since the reform date—which for most people was very difficult to meet. For many women making the transition, the economic incentive to take an early pension under the old system was worth 15 extra years of pension payments.

1.54 The new system and its compensatory pension did not include a “minimum pension” guarantee, because it was assumed that its role would be taken up by the new universal pension (*Bonosol*). However, those who chose an early pension and remained in the old system received both the minimum pension *and* the *Bonosol*.

1.55 The target replacement rate was 100 percent under the old system, but under the new system the compensatory-pension replacement rate was only 70 percent. This asymmetry can be represented as follows: the old system required 15 years of service to reach a 70 percent replacement rate, while the new system required 25 years of service to receive a compensatory pension with the same replacement rate.<sup>39</sup>

1.56 The old system was "improved" for high earners in January 1997, by raising the threshold of the base salary, above where the 70 percent tax applied, from B\$3,000 to B\$4,000.

1.57 For the many members of the transition generation who could choose an early pension, the net economic incentive to remain in the old system was great, as shown by the resulting massive wave of early pension applications. This, in turn, had a large impact on fiscal cash flow. The number of new pensions issued *tripled* from an average of 7,000 per year to 22,000 for the first two years after the reform. Among new retirees, 45 percent of early pensions were subject to the 8 percent per annum early retirement reduction.

### ***Issues in Transition Finance***

1.58 The diversion of contributions to the new funded plans naturally created a budgetary deficit. The government's plan to finance the transition was to require the new contributory pension funds to devote the lower of either 100 percent of contribution revenue or US\$180 million per year to purchase new government bonds. In practice, 100 percent of contribution revenue in the new system has always been the smaller of the two. For example, contribution revenue was US\$144 million in 2002.

1.59 The new government bonds that the pension funds had to purchase by law were 15-year maturity bonds denominated in U.S. dollars (nominal) with a promised 8 percent (fixed) interest rate that would make interest payments at the end of each year and whose capital would be paid only in the last year. There is no secondary market for these bonds. The eight percent interest rate was close to domestic market rates (dollar deposit interest rates in the Bolivian banking market in late 1996 were 7.18 percent for savers and 9.30 percent for big deposits), suggesting that the eight percent rate included Bolivia's country risk premium. The interest rate set by this law affects both the rate of return obtained by contributors and the government's fiscal stance.

1.60 The decision to denominate the bonds in U.S. dollars was coordinated with two other decisions: (i) the amount of pensions paid by the old system and (ii) the indexation of compensatory pensions to the U.S. dollar. This seemed to cover the government from exchange rate risk and additionally allowed the government to argue that the reform was granting dollar pensions, an important political selling point given the damage caused by hyperinflation in 1985. However, this arrangement exposed pensioners to losses in purchasing power caused by the unexpected real appreciation of the local currency

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<sup>39</sup> The ceilings were different as well. The compensatory pension was subject to a ceiling of 20 minimum wages (i.e., a 100 percent tax on the excess). The old-system pensions were subject to a 70 percent tax on average earnings above B\$4,000 per month.

(*boliviano*) and also by U.S. inflation. On the other hand, current pensioners could gain a lot at the expense of active contributors who owned the new pension funds if the *boliviano* depreciated (which it duly did: the *boliviano* depreciated by 28 percent in real terms from the end of 1997 to 2002).<sup>40</sup> For this reason, this denomination arrangement was a bet that *created* risk.

1.61 Because other design features increased the pension-related deficit way above that which was diverted for contribution revenue, the government financed the excess by issuing more debt to voluntary and official buyers, cutting the non-pension budget, and, during the first years, even by increasing taxes. This additional debt was also denominated in dollars, but tax revenue was not. The denomination decision, therefore, exposed the treasury to exchange rate risk.

### ***Banzer-Quiroga Administration Pension Policies, 1997–2002***

1.62 The Banzer-Quiroga administration inherited the reform. The coalition behind Banzer was represented in Congress when the pension law was initially discussed, and it approved many of the measures described earlier. Initially, the Banzer government focused on dealing with the lack of resources to pay the next *Bonosol*.

1.63 As to the choice between taking an early pension under the old system or accepting the new system, the Banzer government tilted the balance even more toward accepting an early pension. It must be noted that the government was under substantial social pressure to do so, partly because of the asymmetries resulting from the previous government.

- (i) In December 1997, the administration eliminated a long-established requirement for receiving a pension under the old system—quitting one’s current job. This move facilitated applications for early pensions.<sup>41</sup>
- (ii) The same decree issued a warning that “pensions in the old system would be *lost*” for members of the old system who failed to accept a pension before December 1998. This warning may have scared some active members into claiming early pensions.
- (iii) The deadline to claim an early pension under the old system’s rules was postponed twice until December 2001, which became the final date. These extensions facilitated the wave of early pensions because they effectively reduced the minimum age for a pension under the old system’s rules by five years. Some observers argued that, in addition, these extensions multiplied the opportunities for fraud.

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<sup>40</sup> A law enacted in December 2002, during the second Sánchez de Lozada administration, switched the indexation to CPI inflation. It has a gradual phase-in, so it will not have its full impact until 2004.

<sup>41</sup> Later, the government backpedaled in prohibiting state employees from earning both a pension and a salary at the same time. However, the backpedaling was modest because, in this case, the pension was merely “suspended” and was paid back when the worker retired from the job.

- (iv) In 2000, *Law 2064* made the new system's compensatory pension even less desirable by limiting early pensions under the *new* system. Up until then, the compensatory pension was paid to individuals who could self-finance a combined replacement rate of 70 percent at any age and to individuals 65 years old, regardless of their combined replacement rate. This law added an age requirement of 50 for women and 55 for men claiming compensatory pensions under the new system.

1.64 As a result of social unrest led by union leaders and political opponents to the Banzer government, first-pillar benefits were raised substantially. The minimum pension under the old system for covered women over age 50 and men over age 55 in 1997 was raised from B\$355 per month to B\$550 per month in 2001 under the *Caracollos* agreement (August 2000), and to B\$850 under the *Patacamaya* agreement (December 2000). This latter amount was far above the minimum salary for active workers (B\$430), suggesting that these increases were fiscally unsustainable.<sup>42</sup> In addition, these agreements extended higher pensions to those close to, but above, the minimum through a so-called “inversely proportional” formula. Moreover, these agreements allowed more people to start receiving pensions. The overall impact was an increase in fiscal costs of US\$29 million per year (0.33 percent of GDP).

1.65 Since 1998, FC managers have shifted their remaining pension reserves to the other branches of social security, which they still provide. They have also gained the political support of members, advising them that they would lose these other benefits if the state took over the old pension reserves. The Banzer government was unable to transfer assets and reserves from the FC.

1.66 The Banzer government also decided to pursue the control of administrative fraud. The high proportion of pensioners who collect their benefits through a third party (20 percent) is also suspected of contributing to systemic abuse. Fraud includes: false claims about years of service, false claims about one's age (in a country where civil registries are weak), the receipt of two pensions, and dependents who continue to receive a pension after their eligibility expires.<sup>43</sup> The transition rule was also vulnerable to fraud because it was based on a single month's taxable salary, not on an average of the taxable salaries received over several years, thus maximizing the economic incentive to manipulate and to raise the salary base.

1.67 The basic pension at FOPEBA, increased in 1996 by an administrative decision of FOPEBA's board, was reversed by the government. Later, during the Banzer administration, a court resolution awarded the increase again and mandated retroactive payments. A number of other administrative decisions granted more generous eligibility to members of several FCs—judiciary employees, teachers, and miners.

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<sup>42</sup> By early 2003, these values had risen to B\$930 and B\$600, respectively.

<sup>43</sup> Contrary to IMF's position (2003), cases in which a pensioner continues to work for pay should not be counted as a form of fraud. When the informal sector and self-employment are relatively large, the state is unable to track whether a pensioner continues to work. In that case, an attempt to tax benefits for those pensioners that work creates large efficiency losses and yields little savings.

1.68 In mid-2001 the Banzer government called for international bids from insurance companies to manage the disability and survivors' insurance, and workers compensation programs. The winners of the competitive bidding began operations on October 6, 2001. This move succeeded and allowed a reduction in the premium rate from 2.00 percent to 1.71 percent. Starting in October 2001, the total contribution rate to the new system fell from 12.50 percent for workers and 2.00 percent for employers, to 12.21 percent for workers and 1.71 percent for employers. The winners of the bids accepted the liabilities of pensions in payment in exchange for receiving a portion of the reserves accumulated since 1997 with the 2.00 percent contributions. The remainder was allocated to contributors' individual accounts.

1.69 One of the 2001 bidding parameters was a new commission to be paid to the existing AFP for the service of collecting and transferring the insurance premia for both disability and survivors', and workers compensation by the winning insurers.<sup>44</sup> The winning bids included an 11 percent commission on premium income for this purpose, which effectively allowed the existing AFP to charge a new commission of 0.38 percent of covered wages in addition to the 0.50 percent commission set in the 1997 bidding contest. The rate of return on equity earned by the owners of the two Bolivian AFPs jumped from 14.4 percent in 2001 to 36.5 percent in 2002.<sup>45</sup>

### ***Sánchez de Lozada Administration Pension Policies, 2002–October 2003***

1.70 During the brief Sánchez de Lozada administration, a law was passed in late 2002 to merge the non-contributory and the contributory pension funds. In this merger, the shares in the privatized enterprises were priced *by law* at the values set in the privatizations of 1995–97 adjusted for domestic inflation. These prices were considered excessive by some observers.

1.71 The motivation for this law was to provide the non-contributory funds with more bank deposits and other liquid assets, which were necessary to increase the size and frequency of the *Bonosol*.

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<sup>44</sup> The bidding rules included a cap on this transfer commission, but this cap was set at the high level of 15 percent of premium income, i.e., potentially at  $[0.15 \times (2.00 + 2.00) = 0.60]$  percent of covered wages, which is much larger than the cost of performing this service.

<sup>45</sup> Escobar 2003.

## 2. Evolution of World Bank Assistance

### GENESIS OF BANK INVOLVEMENT

2.1 Since the end of Bolivia's hyperinflation in 1985, the World Bank's International Development Agency (IDA) has given substantial assistance to Bolivia through a diversified portfolio of loans.<sup>46</sup> In 1993, there was widespread concern about the modest growth rate achieved by Bolivia since 1985, despite the adoption of fiscal discipline and a number of structural reforms. The four-percent average annual growth rate achieved in 1990–93 was considered unsatisfactory because 70 percent of the population remained poor and the poverty gap had widened. Bolivia is among the poorest countries in the Western hemisphere with an annual income per capita in 1990 of US\$2,061 (in terms of purchasing power parity).

2.2 Slow growth was attributed to the dominance of state-owned enterprises, a low domestic savings rate (6.4 percent of GDP in 1992), and a very low private-sector savings rate (0.7 percent of GDP in 1992). Bolivia had little financial infrastructure in 1990, and the supply of financial services was modest and unreliable. For example, only one life-insurance company was active, and no shares were traded on the local stock exchange. Most bank deposits were denominated in dollars and their average maturity was 130 days in 1992. Several banks became insolvent during the 1990s.

2.3 The Bank's strategy acknowledged that economic growth in Bolivia had been slower than expected since 1993. The privatization and regulatory reforms of natural monopolies proposed by the Sánchez de Lozada government—the *Plan de Todos* (Everybody's Plan)—were accepted as a sound strategy for overcoming this situation. This plan proposed to reform the hydrocarbon, mining, telecommunication, and electricity sectors. It also had social components: an educational reform, an integrated child-development program, and a civil service reform.

2.4 The Bank and the International Monetary Fund (IMF) noted, however, that the seven reforms in the original *Plan de Todos* would have a major negative impact on fiscal and current account balances. This was worrisome because Bolivia's fiscal and current account positions were considered unsustainable. The consolidated fiscal deficit (before foreign transfers) was 4.7 percent of GDP over 1990–92 and had risen to 6.4 percent in 1993 (an election year). The balance-of-payments current account deficit (before foreign transfers) had risen to 12.0 percent of GDP in 1992 and then to 12.8 percent in 1993 (foreign transfers were about 4.0 percent of GDP).

2.5 The Bolivian government is large compared with countries at similar levels of income. The government sector provided 20 percent of urban employment in 1990, and salaries and other labor compensation paid by the government in 1994 took up 9.7 percent of GDP. Tax revenue was 17.3 percent of GDP in 1994, but because six

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<sup>46</sup> The Bank's involvement in the Bolivian financial sector started in 1988 with a financial sector adjustment credit, which promoted prudential bank supervision and financed bank restructuring. It was followed by a structural adjustment credit in 1991.

percentage points came from the hydrocarbon sector, the rest of the private sector was lightly taxed. Other revenue amounted to 5.3 percent of GDP, which included the net operating surplus of public enterprises, the central bank's surplus, and "other current revenues." Grants and donations brought in another 2.5 percent of GDP. Government expenditures were still higher (25.6 percent of GDP, of which capital expenditures amounted to 9.0 percent of GDP), leading to an overall fiscal deficit of 2.8 percent of GDP in 1994.

2.6 The Bank and the IMF estimated that the fiscal cost of these seven reforms was 3.0 percent of GDP, on average, for each year from 1994–97, excluding pension reform (discussed below). Therefore, the Bank suggested financing the ambitious *Plan de Todos* by raising domestic taxes (introducing corporate income taxes, excise taxes on gasoline and diesel, and raising other tax rates) and by cutting public investment by two percentage points of GDP, hopefully in sectors unrelated to poverty or education. An obvious alternative was to obtain additional concessional loans from abroad, but lenders and donors insisted that more such loans would be provided only if domestic taxes were raised and public investment was cut. The domestic political obstacles were significant.

2.7 The government's decision to give away its shares in the privatized companies was supported by the Bank, despite the fiscal cost in terms of lost dividend revenue. The Bank considered that the establishment of a universal old-age pension in Bolivia would have a substantial positive impact on the welfare of the elderly poor. It should be noted that initially the *Plan de Todos* was *not* related to contributory pensions, and the Bank did not object to this.

2.8 The 1994 study, *Averting the Old Age Crisis*, seems to have supported those Bolivian leaders that insisted on the need to speed up the development of the financial sector by introducing a new funded pension system. Several local leaders and experts were knowledgeable about pension policy because the pension reform analysis had started in 1991. These counterparts were as sophisticated as the Bank staff and obviously were capable of maintaining a dialogue with the Bank. The Bank's resident mission was directed by staff members who were in close contact with the UDAPE group that was developing a cash-flow projections model, forming a sort of "pension reform community." Therefore, the Bank's assistance was driven by both country officials and Bank staff, working in substantial agreement with one another.

2.9 The addition of a pension reform covering FOPEBA and the FC to the already expensive *Plan de Todos* raised further fiscal concerns. The concerns were soothed by the Ministry of Finance's (UDAPE) projections, which claimed in 1994 that the incremental impact on pension-related fiscal spending of a reform would average just 0.50 percent of GDP over the first four years (starting at 0.20 percent in the first year, rising to a maximum of about 0.80 percent in the fourth and fifth years, and decreasing thereafter). However, the assumptions underlying these projections were questionable and, in fact, estimates of the negative fiscal impact were raised significantly in subsequent projections made by the UDAPE group before the reform was enacted. In a major report dated

October 14, 1994, the Bank accepted the original low figures and included pension reform in the overall fiscal planning underlying the *Plan de Todos*.<sup>47</sup>

2.10 In the following years, the dominant elements of the Bank's pension strategy were concerns that insufficient financial development in Bolivia might constrain the safety and efficiency with which new pension funds could be invested. Upgrading the financial sector was also expected to have a direct beneficial impact on economic growth.<sup>48</sup> The Bank insisted on speeding up the development of the financial sector during the early phases of the new funded pension system. This strategy was well received by the government, so the Bank devoted its attention to upgrading the financial laws and supervisory capacity.

#### **DESCRIPTION OF BANK ASSISTANCE**

2.11 The World Bank Group was most heavily involved with overall fiscal planning, and the privatization and regulatory components of the *Plan de Todos* (with different teams involved in each activity). These reforms were extremely complex and consumed a great deal of resources. For example, in 1994 the Bank produced a large analytical study of the overall fiscal impact of the *Plan de Todos*. The largest IDA credit (not discussed here) was devoted to assisting Bolivia in the planning, design, and execution of the capitalization program for the hydrocarbons, mining, electricity, transport, and telecommunications sectors, including assistance to design and start the operation of a new regulatory framework for each of these sectors. By contrast, few resources were devoted to pension reform.

2.12 Bank assistance to pension reform focused from the beginning on strengthening the financial market infrastructure that the new funded plans would require. However, other areas of the pension reform such as benefit design and transition design were not considered.

2.13 In 1992, the Bank hired Price Waterhouse to review ways to improve the financial sector, especially securities and insurance legislation, which were recognized as weak links for pension reform, as well as being of interest for their own sake. In 1992 the Bank Office in La Paz financed detailed studies of some financial aspects of a funded pension system. Bringing these inputs together with others developed inside the government, the *Secretaría Nacional de Pensiones* produced the first draft law for a new funded pension scheme as early as 1993. Later, the Bank's contribution to the Bolivian pension reform of 1997 took the form of technical assistance for financial sector reform and support for the establishment of a Superintendent of Pensions. All officials interviewed for this report appreciated the Bank's assistance in these areas. The Bank provided assistance through a technical assistance loan and a multi-sector adjustment credit, the Capitalization Program Adjustment Credit (CPAC), devoting approximately US\$19 million to the financial sector through these two operations. A parallel IADB loan with identical conditions as

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<sup>47</sup> World Bank 2001b.

<sup>48</sup> It was also hoped that pension reform would reinforce financial development because of the funding and the long-term investment horizon of the new pension funds.

the CPAC leveraged the Bank's investment by an additional US\$14 million, for a combined sum of US\$33 million.

2.14 The focus of the financial sector component of CPAC was to improve the regulation of the financial institutions charged with managing the capitalization program, including the AFPs, insurance companies, and securities-related institutions. The conditions for the release of the financial sector tranche of CPAC included: (i) approval of a pension law providing for reform of the existing funds, (ii) establishment of non-contributory accounts for share distribution from capitalization, and promulgation of key regulations; and (iii) establishment and staffing of a strong Superintendent of Pensions.

2.15 The Bank projected the total fiscal cost of pension reform to be US\$28 million for 1997 and US\$37 million for 1998. There was no analysis of transition provisions, however, or of methods to finance the transition. This is not surprising because in late 1994 UDAPE had projected transition costs to be very modest.

2.16 Even as late as March 1999, the fiscal sustainability of the pension reform was considered to be solidly grounded, despite the fact that transition costs had risen to between three and four percent of GDP, higher than expected. This assessment was based on the expectation that the non-pension fiscal balance would move to a small surplus by late-1999, and that the government would deliver on its promise to keep the non-pension surplus growing until it reached its pre-reform level (two percent of GDP) by the year 2002.

2.17 The initial aim of the Financial Markets and Pension Reform (FMPR) loan was to inject resources into the operational and the regulatory requirements of the financial sector needed to implement the pension reform. Later, 50 percent of this loan was redirected toward the operations of the universal old-age pension, the *Bonosol*, including the establishment of a transparent and efficient process for international bidding to identify AFPs—private firms which would distribute the *Bonosol*, as well as a private trustee (Citibank was chosen) to hold the government's shares during the interim period between capitalization and transfer to the non-contributory pension funds. Another 32 percent of the FMPR was also redirected to establishing the information systems needed to distribute the *Bonosol*. The emphasis on making the *Bonosol* work was predicated on the need to meet the country assistance strategy objective of broadening the benefits of economic growth.

2.18 Later analysis criticized the decision to finance the pension transition deficit by selling treasury bonds to the pension funds on the grounds that such mandated investments created a bad precedent. In addition, treasury-bond investment was faulted as risky for pensioners because the government might fail to meet its obligations on time. In addition, the first Sánchez de Lozada administration neglected to devote some of the shares in the capitalized firms to finance the transition, preferring to increase the amount of the *Bonosol* instead.

2.19 However, the sustainability of the Bolivian pension reform was considered to be solidly grounded, despite acknowledgment that transition costs would rise to levels much

higher than initially anticipated, that is, to between three and four percent of GDP. This assessment was founded on the belief that the Banzer administration would deliver on its promises to reduce the fiscal deficit to its pre-reform level by 2002.

2.20 Only in the May 10, 2001 CAS Progress Report did the Bank acknowledge that the unexpectedly high fiscal cost of the pension reform "reduced flexibility" for Bolivian policy makers because the pension-related fiscal deficit reached 3.7 percent of GDP in 2000. By this date, the projection of the pension-related deficit reform was 4.3 percent of GDP for 2001, growing to 4.5 percent in 2002, and then starting a slow decrease. Still, among the ongoing challenges listed in the progress report, fiscal management of pension reform financing was absent.

### 3. Impact of Bank Assistance

3.1 This chapter evaluates the outcomes, institutional development impact, and sustainability of the results of Bank assistance. It differs from Chapter 2 as it rates Bank assistance as a whole.

#### OUTCOMES

3.2 The assessment of outcome takes into account relevance and efficacy.

#### Relevance

3.3 Relevance indicates the extent to which the objectives of the overall assistance and the individual projects were consistent with the country's initial conditions and development priorities and, at the same time, whether they were consistent with the attainment of pension policy goals, such as the provision of progressive redistribution toward the elderly poor and the provision of savings-insurance.<sup>49</sup>

#### *Relevance of the Bonosol Program*

3.4 The decision to create Bolivia's first universal old-age pension program, financed by a grant of the government's shares in 10 privatized enterprises, is different from the privatization decision itself. This grant appears to have generated a conflict between different objectives. On the one hand, this policy furthered an aim of universal pension, namely progressive redistribution toward the elderly poor. On the other hand, it appeared to be detrimental to the government's fiscal position because of the loss of dividend revenue (1.48 percent of GDP in 1994). An alternative privatization scheme in which the government kept these shares would have allowed the government to stop making capital expenditures to the former state-owned enterprises and charge them corporate taxes. However, this alternative method raised the risk of political interference with the boards of the former state-owned enterprises, thereby reducing the dividend revenue expected. Another alternative would have been for the government to sell its shares, but the revenue could not have been preserved by purchasing a diversified international portfolio without triggering some loss of international aid. If the government had sold its shares, the outcome would have been a short-lived spending binge. Therefore, the grant did not really pose a dilemma in present-value terms. For this reason, the relevance of the country assistance strategy to approve the granting of government shares to finance the *Bonosol* program and requiring an increase in taxes is rated as high.

3.5 In terms of the impact of the *Bonosol* on national savings and, through it, on economic growth, the initial idea in the *Plan de Todos* was simply to give away the shares in the privatized firms to all Bolivians. This would have reduced private savings

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<sup>49</sup> In more advanced countries, another aim is to provide an institutional framework for employers to offer deferred compensation in the form of pensions. In the case of Bolivia, this issue was raised in COSSMIL.

substantially. The idea of paying the privatization proceeds in the form of old-age annuities was devised to minimize this negative savings impact by drawing on the deferred aspect of old-age pension expenditures. The remaining impact on private savings was negative, equal to the well-known negative impact of introducing a universal flat pension. The direct negative impact on savings was still substantial—if the 360,000 subsidies, at US\$250 apiece, granted in 1997 were fully used, national savings would have fallen by 1.14 percent of GDP. The indirect negative effect on voluntary savings for old age by the younger members of the population should be added to this. However, the concentration of the *Bonosol* payment in a single lump sum per year favored its use for purchases of consumer durables, relaxed credit constraints, and simultaneously mitigated the impact on true private savings. The Bank's strategy in 1994 accepted this resolution of the tradeoff between promoting the welfare of the poor and promoting private savings and economic growth. Given the options, the relevance of this decision is rated as substantial.

3.6 However, the Bank and many other outside experts failed to notice that the deferral of expenditures created opportunities for future governments to time handouts just before elections, enabling them to increase the size of the lump sum by aggregating several years' payments. The *Bonosol* paid in 1997 was so large in comparison with cash available that the 1998 payment had to be suspended. Faced with this problem, the next government devised an alternative scheme called the *Bolivida*. At one point, it considered eliminating the right to the *Bolivida* for those younger than age 50 in 1995 who would be compensated with shares of privatized firms, but this was not put into practice. Eventually, the Banzer-Quiroga government also found a way to turn the *Bolivida* to its electoral advantage. It concentrated four years' payment of the *Bolivida* (1998–2001) in the period leading up to the 2002 election. For example, both the 1998 and 1999 *Bolividas* were paid starting December 20, 2000 and ended September 30, 2002. The 2000 and 2001 *Bolividas* were paid starting December 2001 and ended September 30, 2002. The total amount of *Bolividas* paid in the six months before the election -- was about half the amount of the 1997 *Bonosol*, which had been too high. In response, in his 2002 presidential campaign Sánchez de Lozada promised that he would reinstate the *Bonosol* program for at least four years at a value of B\$1,800 per year (US\$240), similar to the 1997 *Bonosol*. He won the election and in November, Congress passed a law that reinstated the *Bonosol* at the new high level for four years (only for the duration of his presidency), which made it impossible to pay the *Bonosol* regularly for many years.

3.7 To finance the large *Bonosol* payouts for 2003–06, a December 2002 law ordered the merger of the non-contributory and contributory pension funds. Effectively, this merger allowed the diversion of the liquid investments owned by contributors of the new pension plan to pay for the unsustainably high *Bonosol*.<sup>50</sup> Another planned measure was to pass a law to force the 10 privatized firms to distribute at least a third of each years' profits as dividends. Although similar laws in other countries improved the liquidity of privatized shares, some observers suspect that, in this case, another objective was to raise

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<sup>50</sup> Another problem with this merger is that the equity share in the portfolio owned by contributors jumped from 0 percent to 60 percent, at current valuations. The investment risk now borne by contributors may be excessive.

dividend income to finance higher *Bonosol* payments. The unsustainably large *Bonosol* payments during this period suggest that the negative impact on private savings would be larger than anticipated.

3.8 The social policy evaluation of *Bonosol* is also important. The *Bonosol* is actually being paid to many poor Bolivians, and the scale of this help is very significant and without historical precedent in Bolivia. However, by 1999 it was already clear that the *Bonosol* amount changed dramatically in response to political shocks, so its promise was highly uncertain. The income security of older Bolivians does not appear to have been improved much by this program, despite its size.

3.9 Overall, the relevance of the Bank's strategy regarding the *Bonosol* is rated as substantial, at least until 2000.

3.10 Since the shortcomings became painfully obvious in 2001, the Bank failed to devote resources toward technical assistance to devise alternatives to achieve a reliable social *insurance program and, at the same time, minimize the negative impact of the Bonosol* on private savings and economic growth, as well as its perverse electoral incentives.<sup>51</sup>

### ***Relevance of the Reform to Contributory Pensions***

3.11 This section discusses the relevance of the separate policy of replacing the old contributory pension system, which covered just 16 percent of employment, with a fully funded, defined-contribution, privately managed new system. One factor that slowed down economic growth in Bolivia was the fragility of the fiscal budget. A good example during 2001–02 is when the recession and other factors reduced public revenues by 5.6 percent of GDP, while expenditures remained constant. A high degree of political mobilization by various organizations—whose rallies frequently turned into violent rampages—was another factor that weakened fiscal policy. Development strategies for Bolivia need to try to strengthen the fiscal budget.

3.12 Pension policy can contribute to this aim by insulating the fiscal budget from pension-related shocks. Meeting this goal required a reform which shifted risk from future generations to current generations by means of a defined-contribution system. The alternative, a defined-benefit system, might have reduced economic growth for many years due to the combined effects of unfavorable economic and demographic trends such as population aging. Defined benefit plans protect pensioners and older workers from sharing in the financial costs of unfavorable trends by shifting the tax burden to future generations through higher pension deficits financed by higher taxes, higher contribution rates and/or higher pension ages. In defined-benefit systems, workers in the formal sector become subject to excessive labor taxes that promote informal activity in the labor market, which is already a serious problem in Bolivia, limiting employer-provided

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<sup>51</sup> Admittedly, it may be hard to design a progressive, universal, old-age pension when the financing source is as unstable as the revenue from infrequent sales of highly illiquid assets. But even in such a case, it is likely that other uses of those asset sales will be more productive than current uncertain handouts.

training and reducing labor productivity. Therefore, the relevance of the reform to adopt defined-contribution risk allocation in Bolivia is rated as high.

3.13 Low domestic savings was also a major constraint to Bolivian growth, as was the lack of willing investors to buy long-term domestic financial assets. Before the reform, Bolivian contributory pension plans followed a sure path to reducing national savings because the hidden liabilities in the PAYG plans increased in response to increases in coverage brought about by future economic growth. Population aging was also a factor that was projected to damage savings by simply allowing PAYG plans to continue. Pension reform could thus contribute to economic development if it was shifted toward greater funding.

3.14 Tax financing of the transition cost would have contributed a larger positive impact for savings, but it is possible to argue that this was not essential. If the initial hidden liabilities of up to 16 percent of employment were refinanced with public debt alone, essentially retaining PAYG finance for that portion, but coverage increased due to fully funded benefits, the future reduction in savings due to a continuation of PAYG finance could be avoided. It is only because the initial coverage rate was as low as 16 percent that the second effect could be more important than the first for Bolivian savings and economic growth, making debt finance admissible. In addition, when the sovereign risk premium on the public debt is large, as in Bolivia, voluntary debt finance becomes infeasible. The risk premium alters the relative benefits of debt financing or tax financing the transition deficit, in favor of tax financing. Alternatively, such a risk premium may be managed by a mandate for pension funds to accept debt finance at interest rates that exclude sovereign risk premia. Assuming that debt financing is mandatory, the critical condition is that the additional pension funds created by coverage increases not be negated by equivalent growth in government consumption plus private consumption. This condition is hard to supervise, so the mid-1996 decision of the Sánchez de Lozada government to debt-finance the transition cost should have put the Bank on alert.

3.15 Even this last fiscal condition would not have assured an increase in savings if pension funds were not adequately protected from political manipulation of investment decision and not strongly protected from inept and fraudulent private managers and employees. Given initial conditions in Bolivia, the full list of requirements for the Bank's activities to be relevant was formidable.

3.16 The Bank devoted its efforts to ensuring that the last two requirements were met: (i) pension funds had to be protected from inept and fraudulent private managers and (ii) the bidding process to choose the two AFPs had to be conducted under the highest standards of transparency. The focus of both Bank loans was on establishing the appropriate financial regulatory conditions for pension funds and on supporting the bidding process. This focus seems to have been driven by concerns at the Bank that Bolivia's financial development was close to the minimum threshold required to support a funded pension plan.

3.17 The decision to upgrade the general financial system in order to protect the new funded plans from financial fraud and expand the range of alternatives in which to invest

the emerging pension funds served other objectives as well: (i) protecting the fragile Bolivian state from the fiscal costs of implicit guarantees associated with a mandate to contribute to a pension plan, and (ii) improving the financial infrastructure to have a positive independent impact on economic development and growth. For both reasons, the relevance of this policy objective is rated as high.

3.18 Other objectives of the reform were to improve labor mobility across jobs covered by different FCs, and to reduce total administrative costs by avoiding small scale pension fund operations. This required unification of the 34 FC plans. In addition, as the different FCs had the same benefit formula but with widely varying contribution rates, ranging from 3.5 percent to 14.5 percent, unification would achieve horizontal equity across workers covered by different FCs. The relevance of these objectives is rated as high.<sup>52</sup>

### ***Fiscal Conditions for Relevance of the Reform to Contributory Pensions***

3.19 The fiscal condition to assess the relevance of the Bank's activities was that the shift to funding be accompanied by a sound plan to manage the fiscal impact (transition cost) to assure that domestic consumption would not rise over and above the increase in the deficit resulting from the introduction of the new first-pillar program—the *Bonosol*. With low initial pension coverage rates, a sound plan would not necessarily require an increase in the primary fiscal surplus ("tax" financing) and would allow for considerable mandatory debt financing.

3.20 The Bolivian reform team's baseline proposal of mid-1995, when the conditionality of the two Bank loans was being decided, was to reform FOPEBA alone, adopting a fully funded scheme, and to finance the fiscal impact of the transition by selling 20 percent of government's non-controlling shares in privatized firms. The team's alternative proposal was to reform both FOPEBA and the FC, but in this case there would be no *Bonosol* program because 100 percent of the non-controlling shares would be sold to finance the transition cost. By late 1995, it was completely clear to Bolivian policy makers and to the Bank that including the FCs tripled the fiscal cash cost of the transition. According to UDAPE's updated projections, by mid-1996 inclusion of the FC raised the estimated fiscal transition deficit on average by 2.44 percent of GDP per year over the first four years. The cost of a reform attributed to FOPEBA, was an estimated 0.69 percent of GDP per year over the first four years, and the increment assigned the FC was 1.75 percent of GDP per year.<sup>53</sup> To avoid this extra fiscal cost, the Bolivian reform team settled for only reforming FOPEBA. In any case, because no other team made quantitative projections for Bolivia, these figures were not subject to independent review.

3.21 The Bank's fiscal analysis focused on the consequences of the privatization program and the associated regulatory reform of seven other sectors of the economy. For example, when the Bank assessed the *Plan de Todos* in 1994 (see World Bank 2001b),

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<sup>52</sup> It might be thought that unification of the contribution rates at the 34 FCs was possible within the old system. However, that same reasoning justified the creation of FOPEBA in 1959, and political demands prompted the reemergence of the FC later on. A durable unification could be achieved with a structural reform of the old pension system, without having to wait for major changes in Bolivian politics.

<sup>53</sup> Von Gersdorff 1997, p. 20.

the pension reform analysis simply used the government's fiscal projections, which assured that the incremental transition deficits would not surpass an average of 0.50 percent of GDP over the next four years.<sup>54</sup> The condition established by the CPAC loan in May 1995 was a very general one—the passage of a pension law to reform the existing funds. The FMPR loan in November 1995 did not establish fiscal conditions. It is understandable that most of the attention was devoted to reforming the hydrocarbon, electricity, telecommunication, and banking sectors, as well as a host of others. In part, this may have been owed to the fact that the IMF was in charge of fiscal planning, focusing most of its attention on the fiscal consequences of the privatization program. In part, it may also have been because the Bank was in the middle of the development of its projection tool—the Pension Reform Options Simulation Toolkit (PROST)—at the time of the Congressional debate in Bolivia during the second half of 1996.

3.22 In any case, the Bank's objectives gave an appropriate weight to fiscal stability. Considering all these aspects, the relevance of the Bank's strategy regarding fiscal planning of the reform to contributory pensions is rated as substantial.

### *Including the Military in the New Contributory System*

3.23 The November 1996 decision to include new generations of the military in the contributory pension system for civilians had fiscal implications but was also important for the career incentives of the military and for the rate of return to training them. In a country where control of cocaine production and drug trafficking is an important element of military service, these manpower issues are extremely important for economic development and growth.

3.24 In most countries, the military has a separate pension plan that puts a premium on a high commitment to staying in the force. Such a requirement assures the institution that its investment in training personnel is less likely to be lost through early attrition. Other clauses ensure that older employees leave the institution when they reach ages at which they face physical limitations. Consequently, Bolivia's policy to end the widespread use of pensions to reduce early attrition—that is, one conditional on longevity—is questionable. The upside may be that in the future, it may be easier to pass legislation to keep only those military personnel in the contributory civilian pension system that do not receive expensive training—such as lawyers, secretaries, and truck drivers.

3.25 The decision on military pensions was not considered in any Bank loan, and the Bank has not produced subsequent economic and sector work analyzing this policy. We do not rate this decision because the Bank never took part in it.

3.26 Combining the ratings of the components reviewed in this section, overall relevance is rated as substantial.

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<sup>54</sup> This 1994 projection by UDAPE was later recognized as being incoherent. The 1994 projection had a low fiscal impact but it reformed both FOPEBA and the FC. The 1996 reports by UDAPE show the figures reported in the previous paragraphs (including the FC) implied a transition cost of 2.44 percent of GDP.

## **Efficacy**

3.27 Efficacy indicates the extent to which the objectives of the assistance were achieved.

### ***Efficacy of the Bonosol Program***

3.28 The main success in connection to the *Bonosol* program has been the distribution of significant funds to the elderly, most of whom are poor. For the first time, benefits were distributed to help elderly farmers and herders in remote areas who live on their own production. This success can be largely attributed to the bold decision to hire foreign companies to set up a completely new benefit distribution network. The Bank supported the government in this process.

3.29 Fraud in the reporting of age when applying for the *Bonosol* became a serious implementation problem as age conditioned eligibility. This problem intensified in 2002 when new regulations allowed applicants to simply declare their age to the Superintendent of Pensions, eliminating the earlier requirement for crosschecking against the electoral court's database. Also on the downside, the amount of the *Bonosol* has been highly variable, and, in some years, no payments were distributed at all. This seriously undermined the value of the program for the elderly poor because they could not dependably rely on it for support, and the problem has grown over time. Contrary to optimistic expectations, politically motivated payments turned from being an unexpected cost of the 1997 campaign to a permanent feature of Bolivian politics. The *Bonosol* is also a major government program with off budget expenditures which escapes routine IMF review.

3.30 Ideas to correct the problems of the *Bonosol* abound. The actuarial and financial parameters that set the size of the benefit could be delegated by Congress to a council with independent status similar to that of the central bank. This council could be required by law not to change the value of the benefit in real terms close to elections and to limit any changes to gradual ones over periods of at least six or eight years. The *Bonosol* should be transformed into an insurance program that pays smaller amounts more frequently (for example, quarterly or monthly, not annually) at a level of about half the minimum pension. If this payment were counted as a liability of the non-contributory funds, as they are in insurance companies providing annuities, the AFP would respond by auctioning off the required portion of the non-controlling shares held by that fund in the privatized firms. Bolivians that have a pension from the contributory pension program, property owners in cities, and owners of cars could be excluded from the *Bonosol* program. However, during this crucial implementation period, the Bank failed to devote economic and sector work to improving implementation of the *Bonosol* reform. Therefore, efficacy of the *Bonosol* component of the reform is rated as modest.

3.31 Efficacy of the reform for contributory pensions: financial and labor market aspects.

### ***Regulation and Supervision***

3.32 That the new system was put into practice was a major feat given the initial conditions in Bolivia. Unlike many other Latin American reforms, administrative charges are significantly lower than under the old system, and the quality of service is much better as individual records began to be kept on a monthly basis. The first old-age pension under the new system was issued in June 2002.

3.33 A tradition of strong financial supervision has been established in Bolivia. This judgment is supported by several indicators, such as the actual establishment of superintendent offices, the number of professional personnel, and the actual issuance of operational regulations.

3.34 The strength of financial supervision is attested to by the fact that the new regulators succeeded in managing the situation created by the merger in Spain of two banking groups that won the international bidding contest to provide AFP services. The regulators found out that Spanish monopoly laws may have had jurisdiction, inducing the merged Spanish bank to auction off one of its two Bolivian AFPs. The purchaser was Zurich Financial Group, so the impasse was resolved.

3.35 Supervision of the old system, which continues in operation, is also very important. One of the Bank's loans offered assistance to the *Dirección de Pensiones*, the agency in charge of FOPEBA and the FC. However, in practice, this assistance was not effective. The Bank also failed to require that the government develop ties with the management of the FC, or with their controlling groups, such as the unions. This lack of oversight may have encouraged extensive fraud. It certainly facilitated the decision by managers of the FC to remove the remaining assets/reserves from the treasury's reach. A detailed examination of pension fraud, and the consequent development of tough penalties, such as the termination of benefits and reimbursement of wrongly paid pensions, had not been conducted. In early 2003, about 30,000 pension claims for the old system remained unprocessed at the *Dirección de Pensiones*.

3.36 The efficacy of the Bank's support to establish strong regulators in Bolivian pensions is rated as modest; this is the combined result of a high rating for the performance of the regulators of the new system and a negligible rating for the efficacy of Bank assistance to the old system.

### ***Bidding for the Lowest Commission and Marketing Costs at AFPs***

3.37 High marketing costs have been a problem in pension reforms adopting a Chilean design that allow individuals to choose their own AFPs. Costs increase when fund managers employ armies of salespeople to steal contributors from each other. Another problem is related to agreements among AFPs to set quotas on the number of salespeople that an AFP may retain—a practice that has emerged in some countries to save on marketing. Such agreements are characteristic of monopsonistic cartels—saving on the cost of an input by hiring fewer units and/or paying less for them. There may be

substantial social losses when salespeople cut switching costs, save on search costs, and attempt to educate the middle classes on financial planning for old age.

3.38 The Bolivian solution to this problem followed from the bidding competition organized to distribute the *Bonosol*, which added the job of managing the contributory pension system to the list of the AFP's duties. It defined the best bid as the one that charged the smallest commission. Bolivia, therefore, replaced the system of member-selected AFPs with an initial state-managed allocation of members to the AFPs that won the international bid by offering to charge the lowest prices. This was just the initial allocation because the call-for-bids had established that most contributors would be granted the right to switch AFPs after allocation.

3.39 In practice, there was an extensive two-stage selection process of candidate managers in which nine international managers advanced to the second stage. The outcome was that Bolivian pension plans charged the lowest commission levels among Latin America's AFPs by far—0.50 percent of earnings per contribution, plus 0.2285 percent of assets per year. This latter commission also is charged to the non-contributory pension fund. Cross-subsidies between the contributory plan and the *Bonosol* program are likely to exist. With commission rates close to average costs, the economic value of a Bolivian client is rather modest, and thus the economic incentive to invest in salespeople to acquire more clients is negligible. The marketing expenditures of the two Bolivian AFPs have been minimal, reducing costs significantly.<sup>55</sup>

3.40 However, some problems in the bidding process emerged because the concession contracts were renegotiated just after the contest was decided in early 1997. This occurred with less publicity than what an open tariff-setting process would have entailed, setting a bad precedent. According to the original plan, after being assigned to an AFP, contributors residing in the four central cities where the concession areas overlapped (La Paz, El Alto, Cochabamba, and Santa Cruz) would be free to switch AFPs. However, as a result of the early 1997 renegotiation, the option to switch providers was taken away from these members for the first four years. This renegotiation forced Bolivia to delay the implementation of the central element of its new policy.

3.41 The bidding contract set commission rates for the first five years (until 2002) and after this period, entry was opened to other new AFPs. According to the contract, commission rates could not be raised until actual entry of a third AFP occurred. In practice, this clause was not followed because the regulators allowed the AFP to charge a fee to the private insurance companies that had bid in 2001 to manage the disability and survivors' insurance, as well as workers compensation. These fees were supposed to cover the AFP costs of collecting and transferring the insurance premiums. However, the fees turned out to be 0.38 percent of covered wages, effective since October 2001, much higher than the marginal cost of collection.

3.42 Matters later improved; the new regulators managed the difficult issues that arose after the five years of exclusivity. One AFP made a formal request to renegotiate its

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<sup>55</sup> In part, this may be because of monopsonistic collusion in Bolivia to save on marketing expenditures.

contracts asking for higher commissions. However, the government held the right to impose the status quo, and in one of our interviews it was suggested that the 34 percent return on equity earned by the AFPs then was already too high. The creation of a new fee that rewards the financial performance of the fund management team at each AFP was also considered in late 2002. This renegotiation was conducted with some degree of transparency toward public opinion.<sup>56</sup>

3.43 After supporting the original bidding processes, the Bank did not conduct economic and sector work to help Bolivia deal with episodes requiring complex renegotiation. Nonetheless, the efficacy of the Bank's support to the bidding process and subsequent renegotiation is rated as substantial.

### ***Financial Market Development***

3.44 The domestic capital market has advanced substantially. A domestic corporate bond market emerged, where five out of 11 registered private issuers have sold stocks amounting to about US\$140 million (about two percent of GDP) to the pension funds, with terms of up to 12 years. A similar amount has been invested in medium-term bank deposits and another comparable amount in voluntarily held, long-term bond issues by the treasury and the central bank. These instruments are denominated in U.S. dollars and in the *unidad de fomento de vivienda*, a unit that indexed to the local consumer price index (CPI). The number of active life insurance companies rose from one to six. One pension fund invested US\$15 million abroad, a first step toward international diversification.

3.45 Investments in contributory pension funds, including the funds for disability, survivors', and workers compensation insurance, have risen to US\$1.1 billion (14 percent of GDP). If the non-contributory pension fund is added, the total equals the aggregate amount of bank credit (33 percent of GDP). A centralized custody arrangement is being organized with the AFPs and life insurance companies as the principal participants.

3.46 The rate of return earned by the contributory funds in 2001 and 2002 was in the range of 7–8 percent per year in U.S. dollars (nominal).<sup>57</sup> (There are no studies available that adjust this rate for risk.) The return in domestic currency is higher, but this is mostly owing to the real depreciation of the *Boliviano*, combined with a reduction in CPI inflation from 6.7 percent in 1997 to 2.5 percent in 2002. The rate of return achieved by the pension funds has been acceptable. The dividend yield over the book value of the investments in the ten privatized firms averaged 1.9 percent in 1997–2001. The capital gains or losses on those investments are unknown, but the accounting rate of return over the book value was 4.4 percent per year during 1997–2001. The efficacy of the Bank's support to financial reform in Bolivia is rated as high.

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<sup>56</sup> In 2002, the new regulators began to organize a bidding contest for the management of one-third of the noncontributory fund, but this was delayed and was later dropped.

<sup>57</sup> Before comparing it with the interest on retail, dollar bank deposits, the commissions charged by the AFP must be subtracted.

### ***Coverage and Labor Market***

3.47 Pension coverage increased from about 300,000 contributors in 1995 (see Bank reports) to about 450,000 in 2001. The 2001 figure is supported by the findings in Escobar (2003) that contributors numbered 449,466 in 2001;<sup>58</sup> this figure was also given by a knowledgeable interviewee.<sup>59</sup> To get an estimate of the changes in the coverage rate,<sup>60</sup> the implied average annual growth rate of 7.0 percent must be adjusted (if participation remained constant) by the population growth rate. Given that population growth was 2.7 percent per annum,<sup>61</sup> the coverage rate is estimated to have grown by 4.2 percent per year. Contribution revenue figures are less favorable because revenue rose from 2.26 percent of GDP in 1995 to 2.68 percent in 1998, at which time it stabilized until 2001. Total contribution rates going to the AFPs were approximately the same in 1995 and 1998, indicating an average coverage growth rate of 2.9 percent per annum, which is lower than 4.2 percent. In any case, the average of these two numbers is 3.5 percent growth during six years, which is encouraging, but not too significant, given a low initial coverage rate of 16 percent. According to the Superintendent of Pensions, the number of contributing *employers* also rose with the reform, from 8,000 to about 17,600.<sup>62</sup>

3.48 This body of evidence suggests that coverage increased in Bolivia from 1995–2001. Although part of this gain may be owed to the high economic growth rate observed until 1998, a portion should also be credited to pension reform. This outcome may be a result of the credibility of the individual accounts, the vigilance of the regulators, and the diligence of the AFP. The efficacy of Bank activity related to coverage is rated as high.

### ***Merger at Adulterated Valuations***

3.49 During the late-2002 merger of the noncontributory and the contributory pension funds, the shares of the privatized enterprises were priced *by law* at the values set in the privatizations of 1995–97 adjusted for domestic inflation. These prices were considered excessive by some observers, who correctly pointed out that the large drop in GDP growth since 1999 and the rise in political risk, owing to rioting and civil disobedience,

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<sup>58</sup> See Escobar 2003, table 8 and section 5.1.

<sup>59</sup> Helga Salinas, former Superintendent of Pensions, reported 450,000 contributors for 2001. She also reports that contributors were measured only sporadically by the Office of the Superintendent of Pensions.

<sup>60</sup> The coverage rate is defined as the ratio of contributors to employment. The number of members or “affiliates” is not relevant because it is a function of the switching rate between the covered and uncovered sectors of employment, and of switching to inactivity and unemployment. The number of affiliates was about 800,000 in 2002. The old system did not keep records on the number of people that had contributed at least once in their lifetime, i.e., its affiliates.

<sup>61</sup> The population in 1995 was 7.410 million. In 2001, the population was 8.695 million. Therefore, population growth rate was 2.7 percent for this period.

<sup>62</sup> Another independent but non-comparable figure is provided by the data on employment for 1999. According to official figures (available at [www.ine.gov.bo](http://www.ine.gov.bo)) the employer population was 2,017,044 in 1999, the last year data is available. This included 1,065,261 fully employed; 539,481 with hidden underemployment; 170,451 with visible underemployment; 238,152 in a special group; and 3,699 unaccounted for. Dividing 450,000 contributors by the sum of the first two subcategories yields a coverage rate of 28 percent.

should have cut the market price of those shares substantially. A valuation conflict on this large a scale is a major development. If large enough, it negates the transparency of individual accounts, subjects the defined-contribution risk allocation to arbitrary political interference and cuts to zero the marginal benefit-contribution link, thus turning the mandated contribution into a simple tax on declared earnings. This merger may put in jeopardy the aims of second-pillar pension policy, namely the provision of reliable savings-insurance for the middle classes.

3.50 The two privately managed AFPs did not take a position expected of professional fiduciaries. The AFPs failed to conduct independent assessments of this valuation, with the possibility of court action suing for adequate compensation for their members in the event that the price was excessive. One interpretation is that the Bolivian AFPs bear a very small risk of being abandoned by clients, i.e., by contributors. This, in turn, may be due to the high entry barriers to the AFP business, whether natural, legal, or strategic.

3.51 Similarly, contributors failed to claim compensation in the Bolivian courts against the AFPs for breach of fiduciary responsibility or against the state for uncompensated expropriation. One interviewee suggested that because the Bolivian AFPs are subsidiaries of Spanish and Swiss financial conglomerates with worldwide reputations to protect, contributory clients might succeed in obtaining compensation in foreign courts. Our interviewees were not aware of any Bank effort to offer advice in this connection. As long as current conditions for this merger continue, the efficacy of the reform of contributory pensions is rated as modest.

## **Efficacy in Reforming Contributory Pensions: Fiscal Aspects**

### ***Quality of Pension Policy Implementation***

3.52 The Bank failed to notice that the pension reform proposal had the following fiscal weaknesses.

3.53 The proposal did not reform the parameters of the old system so as to "balance" it in actuarial terms before introducing the new system. This is a standard condition for a safe shift to funding, although other reforms, such as the one in Mexico, also did not comply. For example, transition provisions failed to raise pension ages under the old system (50/55) to maintain parity with the pension age under the new system (65). In the case of women, this difference was worth 15 years of pension payments. The transition provisions also failed to reduce the replacement rate in the old system (100 percent), to maintain parity with the replacement rate offered by the "compensatory pension"<sup>63</sup> plus the self-financed amount in the new system, which was about 70 percent. The reform also granted U.S. dollar indexing to the old system pensions, while the new system pensions were indexed to risky asset returns.<sup>64</sup> Those that chose the old system were eligible for the

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<sup>63</sup> This amount recognized past contributions to the old system for members that switched in mid-career.

<sup>64</sup> The contributions would be invested in Bolivian securities until retirement, and under the defined-contribution design, all of this investment risk is borne by the individual member. One of the pension options, the *Mensualidad Vitalicia Variable*, also passes on to pensioners the realized investment returns.

minimum pension guarantee in addition to the *Bonosol*, but those in the new system could not get a minimum pension in addition to the *Bonosol*.

3.54 Allowing the choice of an early pension in the old system to those aged 40 and over before a deadline date was fiscally very costly because of the lack of parametric reforms in the old system.<sup>65</sup> The asymmetry in incentives in favor of early pensions operated in at least three ways: (i) it led many people to request early retirement under the old system despite the eight percent reduction in the replacement rate per year of deferment, tripling the number of new pensions per year; (ii) it seems to have triggered a wave of fraud with regard to birth certificates, service records, and reference earnings; and (iii) it mobilized unions, guilds, and politically connected people to press the political parties to extend the period in which old-system members could claim an early pension. This pressure spawned the term “sandwich generation,” which gave the impression that its members were victims of the reform rather than the last group with access to the unsustainable entitlements under the old system. After successive extensions of the initial deadline for choosing an early pension in the old system, which initially was set for December 1998 (already excessive), the “window was closed” in December 2001, four and a half years after the reform date. The flow of new pensioners by 2001 was still 50 percent larger than projected. Any wave of early retirements in a PAYG-financed plan has extremely onerous fiscal implications in the short term, regardless of a transition to funding.<sup>66</sup>

3.55 The fiscal consequences of the pension reform were not well understood. Some Bolivian experts maintained in interviews that *all* pension-related expenditures could and should be reported “below the line” in fiscal accounts. This is a mistake because interest costs in excess of GDP growth must be included, as well as extra costs caused by unexpected early pensions and unexpected increases to the minimum pension under the old system, either by instituting new taxes or cutting other expenditures. Moreover, when the initial condition is an actuarial imbalance, for example, because a substantial cash deficit is expected in the coming decades, as in Bolivia, it is not true that debt financing the transition merely makes explicit a pre-existing public debt that was hidden in continuously balanced PAYG finance. On the contrary, when such a plan is replaced by a fully funded plan, and 100 percent of the transition cost is financed with new public debt, the state is obligated to issue more new debt as the future cash deficits become a reality over time. The interest cost of this extra public debt cannot be financed by reshuffling the initial taxes hidden in PAYG financing. Substantial new taxes have to be introduced merely to prevent the total public debt from spiraling out of control. This was precisely the situation of the old Bolivian pension system. Although current deficits were negligible, future deficits were projected to approach 3.0 percent of GDP in the following decades, while population aging interacted with the 50/55 pension ages. However, the conceptual mistake indicated above was repeated in interviews at the Ministry of Finance and presumably led to overconfident fiscal planning. Other examples of the absence of fiscal planning are discussed under the section on institutional development.

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<sup>65</sup> Mexico did not allow the choice of an early pension under its old system, and avoided this interaction.

<sup>66</sup> However, the 8 percent reduction in the replacement rate per year of deferral (required from FOPEBA members) improves cash flow in the long term.

3.56 The Bank knew, at least since the publication of *Averting the Old Age Crisis* (World Bank 1994), that pension policy is among those with the greatest potential for medium and long term fiscal destabilization. However, the Bank did not devote resources to clarifying the fiscal impact of the Bolivian pension reform.<sup>67</sup> In addition, the Bank did not devote resources to analyzing incentives created on the benefit side that would have detected the problem raised by allowing early pensions in the old system. Therefore, efficacy in this area is rated as modest.

### ***Quality of Actuarial Projections***

3.57 The actuarial projections for the reform scenario that included the FC made in 1996 differed widely from reality for four reasons: methodological mistakes, subsequent reforms adopted between mid-1996 and the end of the first Sánchez de Lozada government, subsequent reforms adopted by the Banzer-Quiroga government, and macroeconomic surprises. Among the methodological mistakes, the main one was the underestimation of the wave of early pensions caused by the asymmetry discussed above. This was partly because UDAPE's projection model did not take into account the early pension option in exchange for an eight percent discount per year of deferment. It also forgot the early pension option in the new system, the exercise of which brings forward the payments for compensatory pensions. Other mistakes were underestimation of the increases in contribution revenue achieved by the AFP, and overestimation of mortality among pensioners (or underestimated fraud with regard to mortality)

3.58 All projections made by UDAPE in 1996 assumed that GDP growth would rise gradually from 3.5 percent (real) per year to 7.0 percent (real) per year to 2017.<sup>68</sup> This growth rate is larger than the real interest rate on the 15-year bonds issued by the treasury (8 percent minus U.S. CPI inflation) and creates a macroeconomic inconsistency—it implies that the debt/GDP ratio falls to zero in the long term *even if all* interest costs are financed by issuing more debt without ever raising taxes. This combination of assumptions held in perpetuity also implies that the Bolivian economy is dynamically inefficient, i.e., there is an *excess* of physical capital, an untenable proposition. Such assumptions may also explain why the maximum projected transition deficit did not surpass 3.5 percent of GDP.

### ***Management of Fiscal Events***

3.59 The sequence of pension policies adopted during 1993–2003 raised the pension-related fiscal deficit from 0.26 percent of GDP to 5.0 percent.<sup>69</sup> Part of this increase was planned but the projections made in 1996 were overshot by 2.6 percentage points of

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<sup>67</sup> One interviewee asserted that in the case of Bolivia, the Bank normally delegated fiscal analysis to the IMF. However, pension reform was a Bank responsibility.

<sup>68</sup> According to an interview with Rodrigo Gamboa.

<sup>69</sup> For the 2002 figure, see IMF 2003. If the interest accrued in the new government bonds which were issued to finance the transition, is also assigned to the pension reform, the pension-related deficit was almost 6.0 percent of GDP in 2002, and is projected to rise further during the next few years. This does not take into account the interest cost of new debt undertaken by the government to finance the difference between the pension-related deficit and the US\$144 million per annum in bonds that the pension funds are forced to purchase.

GDP. This disastrous outcome calls for identification of design and implementation mistakes in the pension reform. Sixty percent of the cumulative fiscal impact is due to other pension policies adopted over an extended period. However, a large share of this 2.6 percent overhang was absorbed by a contraction in the non-pension budget, whose balance improved by 1.5 percent of GDP from 1998 to 2000 (IMF 2003). Therefore, if this expansion of pension expenditure had been the only fiscal shock, Bolivia's budget would have retained its fiscal balance.

3.60 Bolivia suffered *even larger non-pension shocks* 2001 and 2002, which caused the non-pension budget deficit to deteriorate by a massive 4.3 percent of GDP according to the IMF (2003). Escobar (2003) maintains that the main shock was a 5.6 percent of GDP shortfall in public revenue. During these two years, the pension-related deficit rose by just 0.5 percent of GDP. The combination of the unexpected 2.6 percentage-point increase in the pension deficit by 2000 and the massive revenue 5.6 percentage point shortfall in revenue pushed the actual budget deficit to 8.9 percent of GDP in 2002, precipitating the fiscal and political crises of 2003. As a result, President Sánchez de Lozada's second term ended abruptly with his resignation on October 17, 2003 and Carlos Mesa assumed the presidency.

3.61 The Bolivian budget risked becoming unsustainable in 2003. In such a setting, economic growth is less likely to be revived. This has indirect pension policy implications by undermining the growth outlook for the early-2003 official projections of the pension-related deficit.<sup>70</sup> With slower growth, the pension-related deficit would be higher.

3.62 Some observers blamed the fiscal crisis of 2003 on the pension reform and the subsequent pension policy decisions taken by the Banzer-Quiroga government. This attribution seems to be unwarranted given the size of the shocks to fiscal revenue from 2001–2002 and the fact that the government managed to absorb a large share of the additional pension deficit by 2000. However, because the sequence of pension policy reforms adopted in Bolivia significantly increased fiscal vulnerability, these reforms should carry part of the blame.

3.63 The shift from PAYG finance to funding was one of the few components of the pension-related deficit whose fiscal impact was predicted correctly. That shift cannot generate a deficit larger than the diversion of contribution revenue to the new pension funds. Excluding contributions for insurance, this diversion ranged from 1.75 percent to 1.88 percent of GDP in 1998–2001. Therefore, the other components of pension policy should get the full blame for fiscal instability.

### ***Financial Aspects of Fiscal Planning***

3.64 The 15-year maturity of the treasury bonds sold to the pension funds was much shorter than the duration of the pension liabilities in the old system, which may have been

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<sup>70</sup> It appears unlikely that the Bolivian GDP growth rate will rise (as the projection assumed) to 4.3 percent in 2003, then to 5.6 percent by 2007, and stabilize at 4.8 percent from 2010 onward.

at least 30 or 40 years. To protect the fiscal position from the risk of credit non-renewal, to the same extent as in the old system, the 15-year maturity should be lengthened,<sup>71</sup> not cut (as planned in 2003). The objection that a longer duration would make this debt less liquid is incomplete on two counts. First, a shorter duration *raises* the risk of credit non-renewal for the government and thus raises the country risk premium. Second, liquidity should be provided by a secondary market, not by the primary market. Raising the liquidity of pension funds is part of the fiduciary responsibility of the AFP. They could work together with the government to organize an international bidding process to sell large blocks of assets they wish to unload. Bolivian bonds would also have a liquid secondary market abroad if the government invested in dispersing its ownership among many international investors. However, the presence of such a market may reduce the inflow of foreign aid.

3.65 The 15-year treasury bonds were originally denominated in U.S. dollars, involving the state in currency speculation because most tax revenue is denominated in domestic *Bolivianos*. This speculation was fiscally favorable during 1997–98 but the *Boliviano* subsequently depreciated creating large fiscal costs. In 2002, a new law changed the denomination of future mandatory bonds to the *unidad de fomento de vivienda*, an index linked to local CPI inflation. This change has the advantage of avoiding speculation by the issuer and investors located in Bolivia.<sup>72</sup>

3.66 The interest rate offered by the 15-year treasury bonds at face value was set by law at eight percent. A 2002 law established that future bond issues would pay five percent on the *unidad de fomento de vivienda* (real) basis.<sup>73</sup> Both interest rates incorporate the Bolivian country-risk premium at its original 1997 level, but this risk had risen as of 2002. As discussed earlier, it is essential for fiscal stability that the government be protected from paying risk premia in the voluntary market, so these interest rates should be mandated, and their levels should be reasonable. Because pension funds have few alternative investments, gradual reduction of the legal mandate to purchase government debt, combined with wise management of the supply of debt, possibly would allow the state to cut the interest rate paid.

3.67 Better fiscal planning could have led to the creation of a new wage tax of 0.58 percent starting in October 2001, when the bidding for the disability, survivors', and workers compensation insurance allowed for a reduction of the same size in contribution rates. This new tax would not have cut take-home wages.

3.68 Continuing assistance in fiscal planning might have allowed for taxation of the windfall gain (at fiscal expense) received in recent years by current pensioners because of

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<sup>71</sup> Really long durations can be obtained with perpetuities with a constant principal amount. The duration is even longer with perpetuities where the principal amount grows at the rate at which tax revenue grew in the previous five years.

<sup>72</sup> Because the issue of the new UFV-denominated bonds will be distributed over time, the risk posed by a sudden appreciation of the *Boliviano* from 2003 onward is being hedged.

<sup>73</sup> This interest rate is similar to the original interest rate because dollar inflation is at about two percent per year now.

the dollar denomination of pensions. In turn, this gap could have been used to justify a freeze of pensions in nominal terms, until cumulative inflation pushed back the real level of pensions.

3.69 Considering the mixed record of high, substantial, and modest ratings for different aspects of the Bank's assistance, the overall efficacy in the pension area is rated as modest. Considering the ratings of both relevance (substantial) and efficacy (modest), the overall outcome is rated as moderately unsatisfactory.

### **INSTITUTIONAL DEVELOPMENT IMPACT**

3.70 This section assesses the extent to which Bank assistance helped Bolivia build institutional capacity in the area of pension policy.

3.71 As discussed in detail earlier, the Bank provided substantial help for the establishment of adequate supervisory institutions in the financial sector, ranging from pensions and securities to insurance and banking. The two Bank loans to Bolivia were at least partially directed toward this aim. These institutions acquired substantial capacity to formulate policies and some independence from political pressure.

3.72 Bank assistance failed to help Bolivia develop supervisory capacity for the old system. The *Dirección de Pensiones* was abandoned. The announcement that the Bolivian reform had “completely closed” the old system may have suggested that it was not necessary to invest in managing a nonexistent system; the reality was different. The compensatory pension is a large social insurance program in and of itself, requiring detailed management. The option for an early pension under the old rules maximized the administrative difficulties posed by this program. Maintaining relationships with the 34 FCs is still needed because these institutions continue to operate in other branches of social security. Finally, COSSMIL, the police plan, and the judiciary employees' plan required specialized management.

3.73 In this sense, the Bank did not provide balanced and comprehensive assistance. The lack of subsequent assistance from 1998–2002 may be interpreted as the Bank having “abandoned” the country once the two original loans supporting the 1997 reform were closed. The institutional development impact of Bank assistance is rated as modest.

### **SUSTAINABILITY**

3.74 This section assesses the extent to which the positive outcomes of the Bank's assistance are likely to be sustained over time.

3.75 First, we consider the *Bonosol* program, which is aimed at progressive redistribution to help the elderly poor. Although the *Bonosol* program is not permanent—since 1997, it has not covered Bolivians younger than 18—a duration of 47 (= 65 – 18) years is very lengthy indeed. It is likely that by 2044 Bolivia may be able to finance a continuation program for the elderly poor. In this wider sense, the *Bonosol* design is essentially sustainable.

3.76 However, initial progress towards poverty reduction among the elderly has been lost to a significant degree because *Bonosol* payments are unreliable and dominated by political risk. This may lead to the elimination or reduction of the *Bonosol* program in the near future, which could be a significant setback.

3.77 Regarding contributory pensions, the largest threat to the sustainability of the reform comes from the overall fiscal scenario triggered in 2000. Pension policy and pension promises would be in jeopardy in any country that ran a PAYG-financed plan, in which the government suffered a loss in public revenue of 5.6 percent of GDP over two years, combined with violent rallies, which prevented politicians from cutting expenditures. Conversely, sustainability of the contributory pension reform would not be in doubt had Bolivia's real GDP had continued to grow at 5.2 percent per annum (as in 1997–98), provided taxes were sustained.

3.78 This suggests that in 1997 Bolivia failed to take the opportunity afforded by a buoyant economy to increase the sustainability of its pension policy. Instead, Bolivia chose 100 percent debt financing and rejected the use of at least a portion of the non-controlling shares in the 10 privatized companies to cancel pension debt.

3.79 The Bolivian reform became more vulnerable than a standard, balanced, PAYG-financed plan after a major flaw in design encouraged a surge in early pensions and after a sequence of pension policy decisions raised the actual transition deficit by 2.6 percentage points of GDP (as of 2002) above the level planned in mid-1996.

3.80 The 2002 reforms that merged the noncontributory and contributory pension funds (at asset prices deemed inconvenient for contributors) was a major development that put into doubt the sustainability of the contributory pension reform. Valuation conflicts on this scale negate the transparency of individual accounts, subject the defined-contribution risk allocation to arbitrary political interference, and cut the marginal benefit-contribution link, thus turning the mandated contribution into a simple tax on earnings. The aim of the second-pillar pension policy, namely provision of reliable savings-insurance for the middle classes, was put in jeopardy by Sánchez de Lozada's second administration trying to keep his electoral promise of granting four large *Bonosols* during his presidency.

3.81 The potential to recover lost ground exists, but the sustainability of the Bolivian reform for both noncontributory and contributory pensions is rated as unlikely.

## 4. Results

### BANK PERFORMANCE

4.1 The Bank's performance is rated on quality-at-entry and quality-of-supervision. For quality-at-entry, Bank assistance was rated high with regard to the *Bonosol* program, its focus on the elderly (who are mostly poor), and its links to the state-owned-enterprise privatization program and its initial implementation. Regarding the contributory pension system, the quality-at-entry of Bank assistance was rated high for financial market development and the supervision requirements for reform to fully funded pensions.

4.2 However, quality-at-entry was rated modest for the design of transition provisions regarding the choice of early pensioning in the old system and regarding fiscal planning, because these aspects of reform were not well covered.

4.3 The first Sánchez de Lozada government owned its reform fully, but ownership may have been too high because the Bank lacked actuarial projections independent of those from the authorities on the cash-flow impact of the reform. In addition, the reform was later disowned by the Banzer government, mainly because of the perceived use of the *Bonosol* program by the outgoing Sánchez de Lozada government for electoral advantage.

4.4 Professionals within the Bolivian government were technically able to absorb Bank assistance and to implement the reform. The 1997 reform was reasonably understood and supported by the elected representatives because Congress discussed the law for six months, and it won the approval of the opposition coalition, which was led by Banzer. Taking all of this into account, overall quality-at-entry is rated as unsatisfactory.

4.5 The Bank supported implementation in the financial regulatory area with remarkable effectiveness. The quality of advice in this area was highly satisfactory. However, implementation of other critical aspects of the reform was not followed up by the Bank for several years. Many opportunities to avoid subsequent policy measures that raised the pension deficit by 2.7 percent points of GDP were lost; the Bank failed to provide counsel and assistance. Moreover, the Bank did not respond when successive governments used the *Bonosol* program for electoral advantage, thus alienating the opposition group. Supervision is therefore rated as unsatisfactory.

4.6 To sum up, the Bank's performance is rated as unsatisfactory.

### BORROWER PERFORMANCE

4.7 The borrower's performance is based on the extent to which the borrower assumed ownership and responsibility to ensure the quality of preparation and implementation, and complied with the covenants and agreements.

4.8 For the two loans related to pension policy, the Bolivian government took account of economic, financial, technical, and policy considerations in preparing them, so the

preparation was satisfactory. Bolivia complied with the few covenants related to pension policy, so compliance is rated as highly satisfactory.

4.9 Implementation (which refers to the extent to which the government supported the implementation of the reform) was affected by the 1997 change in the governing coalition. The Banzer government, which had been in the opposition, did not like the perceived use of the *Bonosol* program in mid-1997 for the electoral advantage of the outgoing administration. Consequently, it assigned a reduced priority to the implementation of pension reform, which was felt to have been captured by its opponents. Later on, the Banzer government reversed its position and made important strides forward in the area of insurance and in putting an end to early pensions under the old system; but the damage of the *Caracollo* and *Patacamaya* agreements it signed in 2000 had already been done. In late 2002, the merger of the non-contributory and contributory pension funds, at prices that were unfavorable for contributors, showed that not even Sánchez de Lozada in his second term could provide quality-of-implementation. For this reason, quality-of-implementation is rated as modest.

4.10 To sum up, the borrower's performance is rated as unsatisfactory.

#### **OTHER CONTRIBUTORS AND A COUNTERFACTUAL**

4.11 As noted in Chapter 2, the IADB provided a loan in parallel to the CPAC with identical conditions. The IADB loan was directed toward supporting the financial sector for an additional estimated US\$14 million. Although the IADB loan was 42 percent of the combined loan amounts for pension reform from the IADB and the World Bank Group, the IADB delegated most decisions to the Bank.

4.12 The IMF was the principal player in charge of overall fiscal policy. By omitting a detailed fiscal analysis of pension policy, and subsequently omitting timely support, the IMF and the Bank made similar negative contributions to the outcome.

4.13 What would have happened if the Bank had not been present? Given the large presence of the Bank in the state-owned-enterprise privatization program and in the setting up of the sectoral regulatory agencies, this question must be interpreted in a narrower sense: What would have happened if the Bank had omitted support for the pension reform component of the *Plan de Todos*?

4.14 Regarding first-pillar programs, the deeper reasons that led to the creation of the *Bonosol* would have remained—namely, if the government had kept the shares in the state-owned enterprises, the sale price would then have been much lower. Privatization required the creation of a private-sector institution to hold these shares, so an institution would have been created anyway. Although alternatives to the creation of a non-contributory old-age annuity exist—for example, Italy created foundations when it privatized many regional and municipal banks in the 1990s—the political attraction of an old-age annuity was hard to beat. Therefore, the *Bonosol* program would have emerged even without the Bank's presence.

4.15 As for contributory pensions, concerns about the ability of Bolivia to create a solid financial supervisory framework in the areas of banking, insurance, and securities may have been more important in the absence of the Bank's expertise in this area. Such a constraint would have limited reforms to a much needed (but less ambitious) change in the parameters of the old system such as the gradual increase in pension ages from 50/55 for women and 60/65 for men. Nonetheless, Bolivia had been planning to switch to a funded, defined-contribution and privately managed pensions since early 1991. For this reason, only a parametric reform might have been considered too modest, and partial funding of FOPEBA toward might have been approved even without Bank support.

4.16 The course recommended by UDAPE in mid-1996 was modest because it involved reform of FOPEBA alone. President's Sánchez de Lozada's decision to press ahead with full reform, which included the 34 FCs and even COSSMIL, was what created the huge macroeconomic impact of the pension reform .

## 5. Lessons Learned

5.1 Some of the lessons from this evaluation are not original and simply reinforce conventional wisdom in pension policy, for example, careful fiscal planning is essential for success. In addition, successive changes in governments can weaken implementation if insufficient work is devoted to developing a shared understanding of the value of the assistance program among all stakeholders. The newer lessons from this report are the following.

5.2 Careful reform of the old system's benefit rules to achieve a configuration of parameters that is sustainable in the long run is a precondition for reform leading to a funded, defined-contribution and privately managed system. Parametric reforms that balance the PAYG plan in the long term should be identified as a separate, important component of any reform.

5.3 Careful analysis of incentives for early pensions is essential for the existing plan, the new plan, and especially for those who can switch plans to avoid losses or to access higher benefits. This lesson is rather original and focuses on the fact that any PAYG-financed plan will create serious fiscal instability if a wave of early pension entitlement is triggered.

5.4 Careful fiscal evaluation of implementation decisions taken *after* the main reform may be essential to increasing the political responsibility of successor governments. In the absence of a public institution that issues independent actuarial projections, it is very easy for successor governments to make short-term decisions and then blame the outcomes on reforms legislated by a previous government.

5.5 Bolivia showed that excessive marketing costs in AFP industries, a problem seen around the world, could be solved by conducting a lowest-bid competition in which winning AFPs were granted an initial allocation of members. Bolivia showed this solution was extremely successful and could be adapted elsewhere. Bolivia used this approach again in 2001 to obtain disability, survivors', and workers compensation insurance at reasonable prices. This approach also avoided collusive practices among AFPs to agree on quotas for salespeople to save on marketing expenditures. Another lesson is that the main problem with bidding for AFP services is ex-post contract renegotiation. It is likely that this problem can be reduced by dividing the supply contract into two components: one for the operational services, where most sunk costs are located, and another for fund management, which would be almost free of sunk costs and, thus, free from renegotiation pressures.

## **Appendix A: Interviews in La Paz**

*(January 8–10, 2003)*

Guillermo Aponte	Vice Minister of Pensions, Ministry of Pensions
Sara Calvo	Team member, public expenditure review for Bolivia (World Bank, IMF, and IADB)
Julio Loayza Cossio	Undersecretary of the Treasury, Ministry of Finance
Simón Cuevas	Team member, public expenditure review for Bolivia
Javier Estenssoro	Superintendent of Securities, Pensions, and Insurance
Ramiro Gamboa	Formerly with UDAPE, Ministry of Finance; currently a consultant
Leonardo García	Superintendent of Pensions
Pablo Gottret	Team member, public expenditure review for Bolivia
Evelyn Grandy	Superintendent of Pensions during the reform; Vice Minister for Pensions afterward
Francisco Mejía	Team member, public expenditure review for Bolivia
Carlos Mollinedo	Economist, World Bank resident mission in La Paz
Isabel Pantoja	Director General of Pensions, Ministry of Pensions
Rafael Rofman	Team member, public expenditure review for Bolivia
Helga Salinas	One of the designers of the reform since 1991; has held many posts over the years including UDAPE, Superintendent of Pensions until mid-2002



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