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# COMPARATIVE FEATURES AND PERFORMANCE OF STRUCTURAL PENSION REFORMS IN LATIN AMERICA\*

*Carmelo Mesa-Lago*<sup>†</sup>

## INTRODUCTION

From 1981 through 1998, the following eight Latin American countries enacted laws and implemented structural social insurance pension reforms: Argentina, Bolivia, Chile, Colombia, El Salvador, Mexico, Peru, and Uruguay. This Article analyzes those reforms in a comparative fashion, focusing on four issues: (1) concepts, cases and importance; (2) general reform models and their fundamental features; (3) financing and transitional costs; and (4) reform performance.

## I. CONCEPTS, CASES AND IMPORTANCE

Structural reforms radically transform an existing social insurance pension system ("public") by either substituting, supplementing or providing an alternative mandatory "private" system to it. Non-structural reforms try to improve or "perfect" the public system in order to preserve and strengthen it without changing its public nature. This article deals with structural reforms only.

For simplicity purposes, pension systems are divided herein into two groups: (1) public and (2) private. These two terms, nevertheless, are imprecise and ideologically loaded. In order to develop a more neutral classification and explain the exact nature of the two systems, Table 1 (segment A) exhibits their

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four major characteristics concerning: contributions, benefits, financial method and administration.

A "public" system has defined benefits (pensions) as they are regulated by law which also sets the formula to calculate them (the benefit, however, may not be financially feasible and could be eroded by inflation and other factors). The system contribution is non-defined because it tends to increase in the long run due to the maturation of the pension system and demographic causes. The financial method is either partly funded (i.e., it keeps the system in actuarial equilibrium for a given period of time instead of indefinitely) or is pay-as-you-go ("PAYG") in which income is used to pay expenses on an annual basis. Most Latin American countries rely on the former method while the pioneering countries use the latter (in the current international debate it is often incorrectly stated that all public systems are on PAYG). Finally, the administration is public, that is, carried out by the social insurance institution.

Conversely, a "private" system is based on a defined contribution: fixed indefinitely and going into an individual account. It provides non-defined (uncertain) benefits because, at the time of retirement, the insured receives whatever sum has accumulated in his or her individual account. The financial method is fully funded, and the administration is either by private for-profit corporations of exclusive dedication or by multiple institutions (e.g., public, social insurance, cooperatives, etc.).<sup>1</sup>

Table 2, column 2 illustrates the year that was pension reform was implemented in the eight Latin American countries. Usually it took at least one year to elaborate the legal draft of the reform and approve it, and four to seventeen months from the time that the law was enacted until the system became operational. There was a twelve-year gap between the implementation of the pioneer structural pension reform in Chile (1981) and the next reform that occurred in Peru (1993). The main reason for this hiatus was political: the authoritarian nature of the Chilean regime made its pension reform unpopular in the rest of the region. When democracy was rein-

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<sup>1</sup> For more elaboration on these issues see Carmelo Mesa-Lago, *Pension System Reforms in Latin America: The Position of International Organizations*, CEPAL REV. 60, 73-98 (1996).

stated in Chile in 1990, the new government basically ratified the pension reform; it then became politically palatable in the region, and seven reforms were implemented from 1993 through 1997.

Most of the remaining twelve Latin American countries are either studying or elaborating their own pension reforms, among them Brazil, Costa Rica, Guatemala, Honduras, Panama and Venezuela. Thus, Latin America is important because it experienced the first case of pension privatization (Chile), and the region is fast becoming a testing ground for different types of reforms. The regional experience shows, however, that there is no one single model of reform; three general models of reform will be identified below, and all eight Latin American cases are proven different.

## II. GENERAL MODELS AND FEATURES OF THE REFORM

The eight pension reforms can be clustered into three general models: substitutive, mixed and parallel (see Table 1, segment B). In the substitutive model, the old public pension system is closed (new affiliations are not allowed) and replaced by a new private system. Chile is the pioneer and prototype of this model, which is largely followed by Bolivia, El Salvador and Mexico. The first two countries basically share all the Chilean features, but Mexico is different; its administration is multiple, and those insured at the time of the reform can choose at retirement between the amount accumulated in the individual account or a defined benefit according to the rules of the old public system. In all four countries new entrants into the labor force must join the new system, but those insured in the old system faced the following divergent alternatives: in Chile they obtained a period of time to decide between staying and moving to the new system; in El Salvador only an intermediate group, in terms of age, had such an option (old insured had to stay in the public system while the young had to move to the new); and in Bolivia and Mexico all the insured workers in the old system had to move to the new.

In the mixed model, the public system is not closed but reformed, and it becomes one of the two integrated components of the new system: the public component pays a basic pension, while a new component finances a supplementary pension.

Argentina and Uruguay have applied this model and, in both, the public component has non-defined contribution, defined benefit, is financed by PAYG and publicly administered. The supplementary component incorporates three of the features of the prototype private system (defined contribution, non-defined benefit and fully-funded), but its administration is multiple. In Argentina new entrants into the labor force can choose to join the reformed public system or the mixed one, while in Uruguay they must join the mixed system. Those insured at the time of the reform in Argentina have the same option as entrants in the labor force, while in Uruguay they are divided according to age and wage—young insured with relatively high salaries may stay or move, while old and low-salary insured must stay.

In the parallel model, the old public system is not closed but becomes an alternative option to a private system. Colombia and Peru follow this model but with important differences among them. In Colombia the public system was thoroughly reformed to strengthen it, and is partially funded, while the private system has multiple types of administrators. Conversely, in Peru the public system was not initially but later reformed, albeit partially and in piecemeal fashion, and it is based on PAYG, while the private system meets all the four features of the Chilean prototype. Both old insured and new entrants into the labor force can select any of the two systems and move among them.<sup>2</sup>

The three models and eight cases briefly described above exhibit important differences concerning three freedoms of choice: (a) to select the system; (b) to choose administrators; and (c) to determine how the pension is paid.

On the freedom to select between the public and private or mixed systems, the countries may be ordered as follow: (i) maximum freedom exists in Argentina, Colombia and Peru (because both old insured and new entrants in the labor force can select and move among systems); (ii) intermediate freedom in Chile (new entrants in the labor force must join the private system, but the old insured had a period to stay or move) and El Salvador and Uruguay (new entrants in the labor force must enter private and mixed system respectively, and the old insured are divided by age, and only some of them have an

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<sup>2</sup> See *id.*

option); and (iii) minimum freedom in Bolivia and Mexico (both old insured and new entrants in the labor force must enter the new system).

Addressing the liberty to select administrators, in Argentina, Colombia, Mexico and Uruguay, there are multiple administrators, while in Bolivia, Chile, El Salvador and Peru, only private for-profit corporations of exclusive dedication are allowed. Restrictions to change administrators (see last column of Table 2) are not legally existent in Chile and Peru (but one year is required in practice due to bureaucratic procedures); two changes per year are permitted in Argentina, Colombia, Uruguay and El Salvador, and one change per year in Mexico. Changes are prohibited in Bolivia until the year 2000.

Finally, at the time of retirement, no country allows a lump-sum payment of the fund accumulated in the individual account. Usually three options are open to the insured: an annuity paid by a commercial insurance company, a programmed pension paid by the administrator of the pension fund, or a combination of both. In Bolivia only an annuity is available (fixed or variable, paid by an insurance company or administrator of a pension fund), while the combination of the two is not possible in Mexico. The insured in the latter actually has the greatest freedom as he or she can select either a pension based upon the accumulated fund in the individual account or calculated according to the rules of the vanished public system.

### III. FINANCING AND TRANSITIONAL COSTS

Financing of pension systems is done not only by payroll contributions imposed on employers and insured workers but also by investment yields and state subsidies. Undoubtedly, workers pay their own contributions, but there is a theoretical and empirical debate on whether the employer actually pays his contribution or transfers it either to consumers via prices or to his or her employees. Such transfers should not have an impact on employment, although they might have an effect on income distribution. However, one side in the debate alleges that, if the employer indeed pays his contribution, it causes a

distorted effect on the labor market: an incentive for the employer to substitute capital for labor with adverse consequences on employment creation.<sup>3</sup>

The above argument was used in Chile to eliminate the employer's contribution in the pension system, and the same was done in Bolivia and Peru (see Table 2, column 3). This has not been the case in the other five countries. One slightly reduced the employer's contribution (Uruguay), three did not change it (Argentina, El Salvador, and Mexico), and one actually increased it (Colombia). Such differences have been the result of two factors: the constitution that in some countries establishes the obligation of employers to contribute (hence the abolition of such contribution would have required a difficult constitutional amendment) and strong opposition from trade unions and some political parties.

The insured contribution has not been eliminated in any country, but it was somewhat reduced in Chile (see Table 2, column 4). This was possible due to a 1979 reform that tightened and standardized entitlement conditions among numerous pension funds, thus generating significant savings that were assigned to reduce the insured contribution in the private system. Such cut was not granted to workers insured in the old system; hence, it operated as an incentive to move them to the new private system. Out of the other seven reforms, the insured contribution remained unchanged in Argentina and Mexico and was increased in Bolivia, Colombia, El Salvador (the highest raise), Peru and Uruguay (the smallest).

The above analysis indicates that pension reform is not cheap and is largely financed by the insured. Three countries eliminated the employer's contribution, and one reduced the insured's, while one country raised the employer's, and five augmented the insured's contribution. In Mexico both the employer's and insured's contributions were not changed but, the state payroll contribution (as a third party) was substantially enlarged. The next segment of this section proves that fiscal subsidies are a major source of reform financing, particularly during the transition period.

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<sup>3</sup> For further study, see CARMELO MESA-LAGO, *CHANGING SOCIAL SECURITY IN LATIN AMERICA: TOWARDS THE ALLEVIATION OF SOCIAL COSTS OF ECONOMIC REFORM* 4 (Lynne Rienner ed., 1994).

The state shares a good part of reform transitional costs in three ways: (a) covering the pension deficit of the old system, (b) financing the transfer of contributions made to the old system by insured who moved to the new ("recognition bond"), and (c) paying the difference to guarantee a minimum pension in the new system to those insured who have not accumulated a fund large enough to finance such minimum pension. In addition, the state often provides other guarantees to the insured. Chile is the most generous country in terms of those state subsidies and guarantees; the remaining seven have restricted those benefits in order to reduce fiscal costs.

The old public system deficit is most significant in the substitutive model, particularly if all the insured are mandated to move or the large majority of the insured shifts. The reason is that either no insured or a minority of insured remain in the old system, but all current pensions (as well as those generated by those covered in the old system who gradually retire) must be paid by the old system. Such deficit is significantly reduced in the mixed model because all those insured either stay in the reformed public pension system or move to the mixed one and continue contributing to the public system or component. The deficit is reduced in the parallel model (although less than in the mixed model) because a part of the insured stays in the public system (the majority in Colombia).

The recognition bond is named differently in the six countries that award it, and their conditions also diverge (see Table 2, column 6). Neither Mexico nor Uruguay awards it—the former due to the generous option granted to insured workers to choose their pensions and the latter because the insured does not move but stays in the public component of the mixed system (Argentina also has a mixed model but the prodigal legislature inappropriately awarded a "compensatory benefit" to those insured who moved, as well as an "additional benefit" to those who stayed). In Peru only a tiny fraction of those who moved to the private system have been credited the recognition bond. The Chilean conditions for this benefit are clearly the most generous. Only one year of previous contributions is required in Chile (and Bolivia) to be entitled to the recognition bond, but the number of years increases to three to four in Colombia, El Salvador and Peru, and to thirty in Argentina. No ceiling is imposed on the recognition bond in Chile and El



Salvador but such a top is established in the other four countries. All six countries adjust the recognition bond to inflation, but Chile on top pays a real annual interest yield of 4 percent (Colombia 3 percent), while Argentina, El Salvador and Peru pay nothing.

The state-guaranteed minimum pension is not granted in Bolivia and is established by law but has neither been regulated in Peru nor awarded in practice. Argentina and Uruguay guarantee a basic pension in the public component of the mixed system. The remaining four countries (Chile, Colombia, El Salvador and Mexico) grant this benefit to those who moved to the private system (see Table 2, column 7).

There are three additional state guarantees which are provided by four countries (see Table 2, column 8); Bolivia, El Salvador, Mexico and Peru do not offer these. A minimum investment yield (a capital return rate) is guaranteed by the state in Chile and Colombia when a pension administrator fails to meet such minimum and has exhausted all its reserves; this guarantee is also provided by Argentina and Uruguay but only for public administrators. In these four countries the state is also responsible for pensions paid by either an administrator of pension funds or a commercial insurance company when they go bankrupt and their insured cannot be transferred to another administrator/company (in Uruguay this guarantee is restricted to a publicly-managed pension fund). Finally, there is an independent, ad hoc superintendency of pension administrators in Chile and Mexico fully financed by the state. Such agency also exists in Argentina, Bolivia and Peru but is financed by the administrators themselves and in El Salvador with dual financing. In Colombia and Uruguay another institution exercises the supervision of the system and no additional financing is required.

The above analysis demonstrates that the eight Latin American pension reforms are different, and none of them (including Chile's) really led to a fully private pension system because of their mandatory nature, as well as their triple fiscal costs, state guarantees, and supervision. Bolivia, El Salvador, Mexico, and Peru have reduced the triple fiscal costs of the transition as much as possible, and do not offer additional state guarantees. However, there is a tradeoff here, which is

that these four countries equally restrict insured workers' benefits and rights. Conversely, Chile provides the most generous fiscal subsidies, state guarantees and supervision but with very high fiscal costs which are financially unfeasible in most of the other countries of the region.

#### IV. PERFORMANCE OF THE REFORM

Performance of the pension reform in the eight Latin American countries may be evaluated based on five indicators: (1) labor force coverage; (2) shifts of insured from the old to the new system; (3) compliance; (4) competition and cost reduction; and (5) capital accumulation, yields, and impacts on national saving and financial markets. Most indicators assess performance by comparing assumed and real results; in some of them it is possible to contrast outcomes under the old and new systems. Table 3 presents all the data available on the five selected indicators.<sup>4</sup>

The analysis of performance is restricted by availability of data and the time span of the systems operation in the eight countries. Only three of them publish statistics on a regular basis (monthly, bimonthly, annually) and covering the most important indicators: Chile is the best, followed by Argentina, and Peru a distant third. In the other countries there is either no data available yet because the system was implemented recently (Bolivia, El Salvador and Mexico), or statistics are not regularly published and are difficult to obtain (Colombia and Uruguay). The Chilean system has been in operation more than seventeen years, but in El Salvador it started to function half a year ago.

##### A. Coverage of the Labor Force

Two crucial questions about any national mandatory pension system, be it public or private, are: what is the current coverage of the labor force and, if only a small proportion of it

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<sup>4</sup> For more details on this section, see Carmelo Mesa-Lago, *Comparative Analysis of Structural Pension Reform in Eight Latin American Countries: Description, Evaluation and Lessons*, in CAPITALIZATION: THE BOLIVIAN MODEL OF SOCIAL AND ECONOMIC REFORM 381-461 (Margaret H. Peirce ed., 1997).

is covered, what is the chance to expand such protection? Structural reforms are expected to improve many aspects of the old system and, therefore, attract uninsured workers into the new system. One axiom is that the lower the initial coverage, the more difficult it is to expand it by reform.

Before the reforms, there were significant differences in coverage among the eight countries, which still persist in virtually all of them (see Table 3, No. 1). The pioneering countries, which had the oldest schemes and were the most socially developed (Argentina, Chile and Uruguay), had about 80 percent of their labor force covered. These three countries also had, and not by chance, the highest percentages of both the salaried labor force and formal employment, which facilitated the extension of coverage under a conventional social insurance system. We have seen that the latter is financed by payroll contributions from both the insured and the employer as well as the state as a third party in some countries.

However, in less developed countries, the bulk of the labor force is not salaried and formal but made up of self-employed, informal workers, peasants and others who do not have an employer and, hence, lack the latter's contribution which averages two-thirds of total contribution revenue in Latin America. This is the most important explanatory factor behind the low coverage of most countries in the region, e.g., 12 percent in Bolivia and 23 percent in El Salvador, the two least developed among the eight analyzed herein. To become covered, a self-employed worker normally must pay the sum of the insured's and employer's percentage contributions on the payroll or about twice the percentage assigned to a salaried worker. Establishing the minimum wage as a tax base does not correct the problem because a large majority of the self-employed has an income well below such minimum. The heavy financial burden imposed on the self-employed thus becomes a significant barrier for coverage.

In Argentina and Uruguay the self-employed are proportionally small and mandatorily incorporated into the system. However, in Chile, also with a relatively small number of self-employed, coverage is voluntary, and only 11 percent of them are affiliated, mostly professionals with high income. If after seventeen years of successful operation, the Chilean system has been unable to solve this problem, it would be impossible

to extend coverage in less developed countries in which the majority of the labor force is self-employed, informal, peasant and so forth.

The problem discussed above is exacerbated in those countries that have significantly increased the insured's contribution (e.g., five times in El Salvador) because, contrary to the reformers' claim, evasion and noncompliance will probably rise, and fewer workers will be covered by the system. In Bolivia, which has the lowest coverage of the region except for Haiti and the Dominican Republic, the elimination of the employer's contribution and the increase in the insured's contribution (combined with one of the largest informal sectors in the region and voluntary coverage of the self-employed) will probably also lead to a decrease in protection.

### *B. Shift of the Insured from the Old to the New System*

If indeed the new system is much better than the old, an assumption is that most of those currently insured should shift. Table 3, No. 2 exhibits significant differences among the eight countries, in terms of the proportion who has actually moved, ranging from 100 percent in Bolivia and Mexico to 38 percent in Colombia. Three factors may explain those differences: the time of operation of the new system, its real or perceived virtues (financial soundness, guarantee for delivery of benefits, success) compared with the old system, and the freedom of the insured to move between the two systems. In Bolivia and Mexico the main factor influencing movement is unrelated to the virtues of the new system, which only recently started to function, but simply is that the law closed the old system and mandated the transfer of all its insured to the new system. Thus, the insured had no choice to stay and was forced to move.

In the case of Colombia, nevertheless, the public system was the subject of a substantial reform which reportedly strengthened its finances, improved its efficiency and services, and increased its reserves considerably; hence, the majority of the insured decided to stay. A second factor may have been the lack of accurate and easy-to-understand information on the private system's real investment yields, which made it not very attractive. The outcome has been facilitated by the freedom

granted to all the insured to move between the parallel public and private systems. Whatever the reasons are, after more than four years following the implementation of the reform, the majority of insured remains affiliated to the public system.

Among the remaining five countries, the percentage of those who have moved ranges from 96 percent in Chile, to 75 percent in Argentina and Peru, to 65 percent in Uruguay (hard data are not available for El Salvador, only projections). The very high proportion reported by Chile is marred by statistical deficiencies, e.g., double counting of insured in the private system, resulting from too many shifts in a short period of time, which could not be caught fast enough by the accounting system and the lack of a central clearing house. These problems surfaced in 1996 when the superintendency published that 107 percent of the labor force was covered by the new system; such figure did not take into account that 89 percent of the self-employed were not covered, a small percentage of insured remained in the old system, and the armed force's coverage was not included because they have a separate system. As a result, the controversial figure has been corrected and total coverage is now grossly estimated as 80 percent, 90 percent of which is reported to be in the private system. Still, this percentage is high and a current study is under way to accurately calculate coverage.

### *C. Compliance*

Another assumption of a private pension system is that, because insured workers own individual accounts which cannot be diverted for purposes other than the pension (and funds in the accounts are invested and their returns added to such accounts), it is in the interest of those insured to pay their contributions on time. As an outcome, compliance should be strong, thus reducing evasion and payment delays. Yet, data available for six countries (Table 3, No.3) indicate the opposite. The percentage of affiliates that are active contributors (pay on time) averages 54 percent and ranges from 65 to 61 percent in Mexico and Uruguay to 49 to 45 percent in Argentina and Peru. Furthermore, in Chile, the proportion of active contributors over affiliates steadily decreased from 76 percent in 1983

to 56 percent in June 1998. The proportion in Argentina declined from 53 to 49 percent from January 1996 through August 1998 (there are no data on Peruvian trends).

Explanations for the above phenomenon in Chile are multiple and complex, among them: (a) part of the affiliates has left the labor force either temporarily or permanently (unemployment is not a cause because it steadily declined from 1986 through 1997); (b) part of the employers delay the transfer of contributions deducted from their employees; (c) the high number of insured changes among administrators, combined with poor accounting, lead to double counting and a higher number of affiliates than in reality; and (d) low-income insured minimize their contributions just to qualify for a pension and thus maximize the state subsidy to guarantee them a minimum pension. No explanations are available from the other countries.

#### *D. Competition and Cost Reduction*

Another fundamental assumption of a private pension system is that it will be competitive and thus reduce costs, improve efficiency and maximize investment yields, all benefits on behalf of the insured. The latter are expected to select the best administrator among several, but that requires a reasonable number of them, which in turn is directly related to the size of the labor force. In Chile, Argentina and Mexico, the number of those insured ranges from six to eleven million, and the corresponding number of administrators oscillates from twelve to seventeen, which means that there are a fair number of them (see Table 3, No. 4).

Conversely, as the number of insured declines, there is a decrease in the number of administrators: in Bolivia, there are 356,000 insured and all of them were mandated to move (if they had the choice of staying, fewer of them would be in the new system). The government realized that there would not be enough administrators to promote competition, and decided to have an international bidding and select only two. All the insured were divided by the government between the two administrators, based on residence, and the insured were prohibited to change until the year 2000 unless they moved to another location. The base of the whole private system is competi-

tion, but it obviously does not function in Bolivia which has a duopoly or two half monopolies. It has been argued, however, that the Bolivian system has the advantage of eliminating marketing costs and salespeople; hence, its administrative costs are the lowest in Latin America.<sup>5</sup> This might be true, but still there is no freedom of choice in the Bolivian system. Furthermore, one could argue that similar or better results could have been obtained with either a state monopoly that functions efficiently or auctioning off a complete monopoly to a large and efficient private provider.

In order to increase the number of pension fund administrators, as well as competition, in countries with a small labor force, a World Bank official has recommended dropping the requirement that such administrators be private corporations of exclusive dedication, and allow financial intermediaries to enter the market.<sup>6</sup> For instance, in Chile, a bank may have shares in a pension fund administrator but both institutions must be separated, and the bank infrastructure cannot be used by the administrator. This restriction forces pension administrators to spend considerable sums in developing an infrastructure from scratch, which in turn increases costs.

Even in countries where there are a reasonable number of pension administrators, an important question is whether the insured really select the best ones, that is, those that pay the highest real investment yields and charge the lowest commissions. The degree of insured concentration in the eight countries declines from 100 percent in Bolivia, to between 75 and 73 percent in Peru and Chile, between 68 and 61 percent in Uruguay and Colombia, 52 percent in Argentina and 43 percent in Mexico (see Table 3, No. 4).

In Chile there was a concentration of 73 percent in June 1998 and that percentage exhibited an increasing trend from 1983 through 1998. The three administrators with the largest proportion of insured are not, historically, those that have paid the highest investment yield and charged the lowest commis-

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<sup>5</sup> MONIKA QUEISSER, *THE SECOND-GENERATION PENSION REFORMS IN LATIN AMERICA* 131 (1998).

<sup>6</sup> Hemant Shah, *A Critical Analysis of the Current Designs of Private Pension Systems in Latin America: Cause of Concern?*, in CONFERENCE ON SOCIAL SECURITY AND PRIVATE PENSION FUND REFORM IN LATIN AMERICA (Miami: Inst. for Int'l Research, 1997).

sion. The market, therefore, has not functioned properly due to two reasons. First, there exists a lack of knowledge or insufficient information about the performance of the administrators. Another possibility is that the information is available but the insured cannot use it due to a lack of skills. Second, the role of salespersons whose work is to change the insured between administrators and get a commission paid for each shift may cause a malfunction within the market. As the salesperson moves more insured, the higher his or her commission is, but the salesperson's interest does not necessarily coincide with the interest of the insured. About half of all active contributors in Chile changed administrators between 1996 and 1997, mainly through salespersons, and 40 percent of total costs went to salespersons and marketing (the number of salespersons multiplied five-fold from 1990 through 1997). In Argentina such changes were 29 percent, and in Peru less than 2 percent due to restrictions to change and incentives to stay.<sup>7</sup>

The outcome of all this is that administrative costs have not declined. What has decreased is the premium for disability and survivor insurance which is managed by commercial insurance companies. In Chile the premium decreased from 1.22 to 0.62 percent from 1990 to 1998, but the commission rose from 1.73 to 2.34 percent from 1990 to 1995 and then declined to 2 percent (still higher than in 1990). Conversely, the commission for old-age insurance has oscillated but tended to increase in the long run. The net result has been rising or at best stagnant administrative costs, a strong indication that competition does not work properly.

#### E. *Capital Accumulation, Yields, and Impacts on National Saving and Financial Markets*

Virtually all structural pension reforms in Latin America have been sold on the assumption that they increase national saving.<sup>8</sup> Indeed, capital accumulation has been impressive. In Chile it reached U.S. \$29 billion in June 1998 (down from a

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<sup>7</sup> José Manuel Quijano, *Los Traspasos de Fondos de Pensiones en América del Sur*, 48 COMERCIO EXTERIOR 761-63 (Mexico City, 1998).

<sup>8</sup> For a theoretical discussion of the impacts of pensions on saving in OECD countries, see LAWRENCE H. THOMPSON, OLDER AND WISER: THE ECONOMICS OF PUBLIC PENSIONS 51-69 (1998).



peak of U.S. \$32.6 billion in September 1997) and 39 percent of GDP in 1997 (it should be recalled, however, that the Chilean system has been in operation for more than seventeen years, hence, the accumulation ought to be higher than in Argentina and Peru whose systems have functioned only four to five years). Furthermore, Chilean pension funds have generated a very high real investment yield—an annual average of 11.2 percent in July 1981 through June 1998. Actually, the average was higher from 1981 through 1994 (13.8 percent), but it turned negative in 1995 (-2.5 percent). It increased in 1996 (3.3 percent) and 1997 (4.8 percent) but was well below the historical average and sharply declined from July 1997 through June 1998 (-5.4 percent) due to the emerging economies crisis in Asia and Latin America.<sup>9</sup>

Two other countries have significant capital accumulation, although lower than Chile: in Argentina (U.S. \$9.4 billion and 3 percent of GDP) and in Peru (U.S. \$1.8 billion and 2 percent of GDP). Annual average investment yield in these two countries has been: in Argentina 15.4 percent from July 1994 through July 1998 (from September 1997 through September 1998, it was -13.1 percent) and in Peru 6.8 percent (from July 1997 through July 1998, it was -0.8 percent).<sup>10</sup> The emerging economies crisis have also affected these two countries in the last year.

The conclusion often derived from the previous facts (excluding negative yields in the last year) is that structural pension reforms have had a significant positive impact on national saving. This is correct if one only looks to the accumulation in the private system, but not if the fiscal costs of the transition are taken into account. In order to know what is the NET impact of the pension reform, therefore, both sides must be considered.

The only long-run econometric study available on Chile (commissioned by the International Monetary Fund) states that the empirical evidence coincides with the assumption that pension reform has contributed to financial market develop-

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<sup>9</sup> Superintendencia de Administradoras de Fondos de Pensiones, Nos. 1-145 BOLETÍN ESTADÍSTICO (1981-1998).

<sup>10</sup> Superintendencia de Administradoras de Fondos de Pensiones, 4 BOLETÍN ESTADÍSTICO MENSUAL (Oct. 1998); MONTHLY INFO. BULL. (Superintendency of Private Pension Funds Administrators), July 31, 1998.

ment, but cautions: "all this evidence does not establish watertight proof that the establishment of pension funds has been the decisive factor in the impressive development of financial markets since the mid-1980s," the latter "may simply reflect changes in legislation and other lessons learned from the experiences and mistakes of the late 1970s and early 1980s." The study reaches the following stronger conclusions on the impact on national saving:

contrary to the common belief about the effects of the pension reform, the empirical findings suggest that the direct effect on financial market developments on the private saving rate was negative . . . . The data indicates that net pension savings were negative until 1989 and small afterward. These approaches independently suggest that the conventionally assumed impact of a Chilean-type pension reform on private (and national) saving may not hold . . . . These results also temper the optimism reigning in Latin America and Eastern Europe, where pension reform is seen as an easy vehicle to boost national saving, and thus capital accumulation and growth.<sup>11</sup>

Another study done by a Chilean economist, also for the first fourteen years of the Chilean pension system, shows that the net effect on national saving was always negative, that is, in all years the fiscal cost was higher than the capital accumulation, and the annual average in the period was -2.4 percent of GDP.<sup>12</sup> At best, one can say that the impact of pension reform on national saving, under the longest and most successful system, has been negative so far. Perhaps it will have a positive impact when most of the transition is over, but this remains to be proven. It is a disservice to developing countries, therefore, to recommend pension reform based on the assumption that it will immediately generate a boom in national saving.

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<sup>11</sup> ROBERT HOLZMANN, PENSION REFORM, FINANCIAL MARKET DEVELOPMENT, AND ECONOMIC GROWTH: PRELIMINARY EVIDENCE FROM CHILE 163, 175 (IMF Staff Paper No. 44, 1997).

<sup>12</sup> Alberto Arenas de Mesa, *Learning from the Privatization of the Social Security Pension System in Chile: Macroeconomic Effects, Lessons and Challenges* 1997 (unpublished Ph.D. dissertation, University of Pittsburgh) (on file with the University of Pittsburgh Library).

F. *A Final Point of Debate: Market Freedom Versus State Regulation*

A challenging observation made to the Author at the presentation of his paper was that some of the performance flaws pinpointed in this section could be the result not of administrative flaws but of excessive government restrictions imposed on the pension system which increase its costs and reduce its capital returns. The competition introduced in many of the pension markets in Latin America, continues the argument, has been regulated or limited significantly, a point illustrated by the three following examples:

First, in most countries, the law has imposed on pension administrators the obligation to pay an annual minimum investment yield to the insured, which results in excessive caution in avoiding risks because market fluctuations may adversely affect the investment yield in a given year. In turn, this leads to a "herd mentality" of administrators and fairly similar portfolios among them, which harm competition and may adversely affect capital returns. One extreme solution to cope with that problem is to free administrators from paying the minimum yield, while a moderate solution is to extend the base period to calculate such minimum from one to two (or three) years.

A second example is the legal prohibition or restriction to invest in foreign instruments, although these could actually help to diversify the portfolio and increase capital returns, particularly in countries that have poorly developed financial markets. For instance, foreign investment is prohibited in El Salvador, Mexico and Uruguay, or has a ceiling of 5 percent of the portfolio in Peru and 9 to 10 percent in Argentina, Colombia and Chile, while it is allowed up to 50 percent in Bolivia. Both El Salvador and Bolivia endure some of the least developed financial markets in the region, but the law treats foreign investment in radically opposite ways in these two countries, mainly as an outcome of political pressures on the legislators. In the case of Chile, in spite of the 9 percent legally allowed and a need to diversify the portfolio, only 0.7 percent was actually invested in foreign instruments by June of 1997, but the economic and financial crisis led to a sharp decrease in investment on local stocks and a jump in foreign investment to 5.3

percent in October 1998. The latter percentage is still well below the maximum permitted by the law, and such phenomenon is explained by the obligation to guarantee the minimum yield.

A third example of potentially adverse regulation is the method to fix commissions to administer the pension fund: often they are imposed as a percentage of insured wages and a ceiling is fixed. This method does not provide incentives to reduce administrative costs and commissions, and a percentage on profit has been proposed as an alternative.

The above examples illustrate that the pension market has been restricted in all eight countries by state intervention and limitations; furthermore, we have seen that most countries have a supervisory agency empowered to regulate and control, while in several of them the state provides some guarantees (e.g., against bankruptcy, to pay a minimum pension, to pay a minimum yield). A crucial reason for all these restrictions is that the market cannot be left to operate completely free because it could be exposed to very high risks that could harm the safety of a mandatory national pension program: if a disaster strikes then either the insured and pensioners will be left unprotected or the state will have to take care of them. There is a trade off, therefore, between the regulations and restrictions imposed on the market, in order to provide minimum safety in a pension system, and total freedom with high risks and potential lack of protection. The ultimate trick is to develop a pension system that optimally combines both factors of that equation.

TABLE I  
CLASSIFICATION OF EIGHT PENSION REFORMS IN LATIN AMERICA  
ACCORDING TO GENERAL MODELS AND KEY FEATURES: 1998

A. Features	Systems				
	1. "Public"		2. "Private"		
Contributions	Non-defined		Defined		
Benefits	Defined		Non-defined		
Financial Method	Pay-as-you-go, partly funded		Fully Funded		
Administration	Public (social security)		Private or Multiple <sup>a</sup>		
B. Models	Countries	Systems <sup>b</sup>	Contributions	Benefits	Financial Method
Subsistive <sup>c</sup>	Chile, Bolivia and El Salvador	2	Defined	Non-defined	Fully-funded
	Mexico		Defined	Non-defined <sup>d</sup>	Fully-funded
Mixed <sup>e</sup>	Argentina	1 +	Non-defined	Defined	Pay-as-you-go
	Uruguay	2	Defined	Non-defined	Fully-funded
Parallel <sup>f</sup>	Colombia	1 or	Non-defined	Defined	Partially-funded
		2	Defined	Non-defined	Fully-funded
	Peru	1 or	Non-defined	Defined	Pay-as-you-go
		2	Defined	Non-defined	Fully-funded
					Private

<sup>a</sup> Public, private (for and not-for profit), cooperatives, banks, unions, etc.

<sup>b</sup> The "private" system/component in all countries is defined-contribution undefined-benefit and fully-funded, but its administration could be private or multiple.

<sup>c</sup> "Public" system closes and is substituted by a "private" system.

<sup>d</sup> "Public" system reformed and becomes a component of a mixed system that also has a "private" component (both mandatory).

<sup>e</sup> "Public" system (thoroughly or partly reformed) continues as an alternative of "private" system.

<sup>f</sup> Those insured at the time of the reform can choose at time of retirement between entitlement conditions of closed "public" system (defined-benefit) and accumulated fund in individual account (non-defined benefit).

TABLE 2  
COMPARISON OF LEGAL CHARACTERISTICS OF THE SOCIAL SECURITY (PENSION) STRUCTURAL REFORM IN EIGHT COUNTRIES, 1998

Countries	Date of Reform Implementation	Payroll Contribution		Covers Deficit in Public Program		State Financial Support <sup>a</sup>		Other State Guarantees	Authorized Changes of Administrator by the Insured
		Employer	Insured	Yes	No	Recognition Bond	Minimum Pension		
Argentina	July 1994	No change	No change	Yes	Yes	Ceiling, no interest, requires 35 yrs. previous contribution (paid by social insurance)	Yes (paid by social insurance)	Same as Chile, but minimum yield limited to public administrators	Two per year
Bolivia	May 1997	Eliminated <sup>b</sup>	Increased <sup>b</sup>	Yes	Yes	Ceiling, adjusted to inflation, real interest (?), requires 1 yr previous contribution	Not	None	Can't change until year 2000; thereafter can once a year
Chile	May 1981	Eliminated	Reduced	Yes	Yes	No ceiling, adjusted, 4% annual real interest, requires 3 yrs. previous contributions	Yes	Minimum yield, protection against bankruptcy of administrators and insurance companies	No limit (legal draft considering one per year)
Colombia	April 1994	Increased	Increased	Yes	Yes	Ceiling, adjusted, 3-4% annual real interest, requires 3 yrs. of previous contributions	Yes (with limitations)	Same as Chile	Two per year
El Salvador	May 1998	No change	Increased	Yes	Yes	No ceiling, not adjusted, real interest equal to inflation, requires previous contribution	Yes	None	Two per year
Mexico	September 1997	No change <sup>c</sup>	No change <sup>c</sup>	Yes <sup>d</sup>	Yes <sup>d</sup>	Not	Yes	None	One per year
Peru	June 1993	Eliminated <sup>d</sup>	Increased <sup>d</sup>	Yes	Yes	Ceiling, adjusted, no interest, requires 4 yrs. of previous contribution (few have received it)	Not initially (recognized by law in 1996 but not enforced)	None	No limit (one per year in practice)
Uruguay	April 1996	Reduced	Increased	Yes	Yes	Not	Yes (paid by social insurance)	Same as Chile, but limited to public administrators	Two per year

<sup>a</sup> When not specified, the state is directly responsible for cost.

<sup>b</sup> Salaries are increased once (at the beginning of the system) to compensate the increment in contributions.

<sup>c</sup> The state increased its contribution.

<sup>d</sup> In the private program, contributions in the public program were not changed until July 1995 when they were uniformed with those of the private program.

<sup>e</sup> The state payroll contribution is increased also

Sources: Laws and regulations from the eight countries.

TABLE 3  
PERFORMANCE OF PENSION REFORM IN EIGHT COUNTRIES: 1997-1998

INDICATORS	ARGENTINA	BOLIVIA	COLOMBIA	CHILE	EL SALVADOR	MEXICO	PERU	URUGUAY
1. % of labor force covered by both systems	82	12	35	80	23	38	32	80
2. <u>Insured</u>								
<i>Old System</i>								
Number (thousands)	2,000	0 <sup>a</sup>	3,400	250	52 <sup>b</sup>	0 <sup>a</sup>	600	300
% of total	25	0 <sup>a</sup>	62	4	10 <sup>b</sup>	0 <sup>a</sup>	25	35
<i>New System</i>								
Number (thousands)	6,222	356	2,100	5,812	475 <sup>c</sup>	11,200	1,800	602
% of total	75	100	38	96	90 <sup>c</sup>	100 <sup>d</sup>	75	65
3. % of affiliates who are active contributors	49 <sup>a</sup>	n.a.	50-53	56 <sup>f</sup>	n.a.	65	45	61
4. No. of administrators	17 <sup>n</sup>	2 <sup>e</sup>	9	12 <sup>i</sup>	5 <sup>k</sup>	17 <sup>j</sup>	5 <sup>m</sup>	6
Insured concentration in the 3 main administrators (%)	52 <sup>a</sup>	100	61	73 <sup>i</sup>	n.a.	43	75 <sup>m</sup>	68
5. <u>Accumulated fund</u>								
Million US\$	9,445 <sup>a</sup>	180 <sup>g</sup>	820 <sup>f</sup>	29,176 <sup>i</sup>	n.a.	700 <sup>l</sup>	1,767 <sup>m</sup>	190 <sup>i</sup>
% of GDP	3 <sup>a</sup>	2.6 <sup>g</sup>	1.0	39 <sup>h</sup>	n.a.	3.6 <sup>j</sup>	2 <sup>h</sup>	0.9 <sup>i</sup>
Average annual real investment yield (%).	15.4 <sup>g</sup>	n.a.	6.7 <sup>r</sup>	11.2 <sup>o</sup>	n.a.	3.6 <sup>k</sup>	6.8 <sup>p</sup>	7.3 <sup>r</sup>

Footnotes and Sources on next page

Table 3 Footnotes and Sources

Note: 3, 4 and 5 refer to the "private" system/component.

Footnotes: <sup>a</sup>None; all must transfer to the new system <sup>b</sup>Minimum projected 'Maximum projected' 'In old age program, in 4 years' 'In the first five years of operation' 'End of 1996' 'May 1997 (there is also a solidarity bond with a much higher accumulation)' 'Average 1997' 'December 1997' 'March 1998' 'April 1998' 'June 1998' 'July 1998' 'August 1998' 'July 1981-June 1998' 'June 1993-April 1998' 'July 1994-July 1998' 'July 1995-March 1996' 'August 1996-July 1997'.

Sources: Banco Central del Uruguay, *Memoria Trimestral del Régimen de Jubilación por Ahorro Individual Obligatorio*, Nos. 3 to 6 (March-December 1997); Banco de Previsión Social, *Informe de Asesoría Económica y Actuarial* (Montevideo, 1997) and "Resumen de Afiliaciones al 13/02/98" (Montevideo, 1998); Carmelo Mesa-Lago, "Comparative Analysis of Structural Pension Reform in Eight Latin American Countries: Description, Evaluation, and Lessons," in Margaret H. Pierce, ed., *Capitalization: The Bolivian Model of Social and Economic Reform* (La Paz: Ministerio de Capitalización, 1997), pp. 379-461; Rodolfo Saldán and Marcos Lorenzelli, "Reforma previsional en el Uruguay: Análisis y reflexiones a dos años de vigencia," Montevideo: CLAEH, March 1998; Superintendencia Bancaria, *Informe de Coyuntura de Entidades Administradoras de Pensiones y Cesantías* (Bogotá, 1996); Superintendencia de Administradoras de Fondos de Pensiones, *Boletín Estadístico* (Santiago, 1996 to June 1998); Superintendencia de AFJP, *Reporte Financiero* (Buenos Aires, 1996 to August 1998) and *Boletín Estadístico Mensual* (1996 to September 1998); Superintendency of Private Pension Funds Administrators, *Monthly Information Bulletin* (Lima, 1996 to July 1998); Superintendencia de Pensiones, *Boletín Estadístico* (San Salvador, 1997).



