This is one of a series of analytic papers that supported the OECD’s ageing study, a “horizontal” project in the sense that it involved a number of OECD directorates. The results of the entire project are summarised in *Maintaining Prosperity in an Ageing Society*, OECD 1998. Chapter III of *Maintaining Prosperity*—on retirement income reforms—drew on this working paper which assesses the lessons that can be learned in the OECD area by reforms in Argentina, Peru, Columbia, Uruguay, Mexico, Bolivia and El Salvador. The study will published under the same title, (OECD 1998).

The second-generation pension reforms carried out in Latin America illustrate that a move to more pension funding is feasible in a democratic context and that the transition to a fully or partially funded pension system can be financed in various ways. The study also points out that, given the high operational costs of the Latin American model, countries planning to reform their pension systems should carefully consider the appropriate administrative structure. Finally, the study underlines the importance -- for OECD countries and transition economies as well as developing countries -- of arresting the financial deterioration of the pension systems early, instead of waiting for the systems to collapse.

The author is Monika Queisser (e-mail: monika.queisser@oecd.org) of the OECD’s Development Centre. This study was carried out under the Development Centre’s research project on “Macroeconomic Interdependence and Capital Flows”.

AGEING WORKING PAPERS

Maintaining Prosperity In An Ageing Society: the OECD study on the policy implications of ageing

THE SECOND-GENERATION PENSION REFORMS IN LATIN AMERICA

WORKING PAPER AWP 5.4
DEVELOPMENT CENTRE STUDIES

THE SECOND-GENERATION PENSION REFORMS IN LATIN AMERICA

BY
MONIKA QUEISSE
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Preface

Latin America is becoming a laboratory for social security reforms. More than a decade after Chile’s move from a public, pay-as-you-go to a private, funded pension system, seven Latin American countries have reformed their pension systems. This study analyses and evaluates the pension reform experiences of Argentina, Peru, Colombia, Uruguay, Mexico, Bolivia and El Salvador. It provides a detailed description of the second-generation pension reforms carried out in these countries, evaluates the first years of operation of the new systems and outlines the remaining problems and challenges. Analysis of Brazil’s important effort to introduce comprehensive pension reform is not included in the study because the system structure had not yet been finalised at the time of writing.

The basic, common feature of second-generation pension reforms in Latin America is a greater role for funded, privately-managed pensions. The move towards more funding, under discussion in several OECD countries, is one possible way of confronting the effects of ageing populations on pay-as-you-go pension systems. Therefore, the Latin American reform experience is valuable not only for other developing countries about to embark on pension reform but also for policy makers and pension experts in OECD countries and transition economies.

The second-generation pension reforms carried out in Latin America illustrate that a move to more pension funding is feasible in a democratic context and that the transition to a fully or partially funded pension system can be financed in various ways. The study also points out that, given the high operational costs of the Latin American model, countries planning to reform their pension systems should carefully consider the appropriate administrative structure. Finally, the study underlines the importance -- for OECD countries and transition economies as well as developing countries -- of arresting the financial deterioration of the pension systems early, instead of waiting for the systems to collapse.

This study was carried out under the Development Centre’s research project on “Macroeconomic Interdependence and Capital Flows”, and serves as an input to the OECD’s Ageing Populations Project. It benefited from close co-operation with and support from policy makers, in particular pension supervisors, as well as pension experts in all of the Latin American second-generation reform countries.

Jean Bonvin
President
OECD Development Centre
May 1998
Executive Summary

Introduction

Latin America has proven to be the most dynamic and innovative region in the area of pension reform. More than a decade after Chile moved from a public pay-as-you-go to a private funded pension system, seven more countries in Latin America have reformed their pension systems. No two of these “second generation” pension reforms are alike but their basic common feature is a greater role for funded, privately managed pensions. In the design of their new systems, the individual countries have made different choices depending on their initial conditions such as the pension systems’ financial viability, the fiscal situation as well as the political environment in which pensions were reformed. The varied nature of Latin America’s recent pension reforms and their mixed results hold valuable lessons for OECD and non-OECD countries alike.

Reform Models

The second-generation countries can be grouped according to the size and maturity of their public pension systems. Apart from Chile, Argentina and Uruguay have the oldest social security systems in the region. In both countries, the age profiles of the population are comparable to those of Western European countries and population growth is low or negative. Thus, by the 1990s their pay-as-you-go systems had reached high degrees of maturity. With increasing old-age dependency ratios and a rapidly deteriorating ratio between contributors and affiliates, both countries were faced with growing deficits in their pension system. The debt implicit in the pay-as-you-go system was estimated to be more than twice GDP in Uruguay and thus substantially higher than in most OECD countries.

Compared to Chile, pension reform had to be undertaken under much more difficult fiscal circumstances, since neither Argentina nor Uruguay was running budgetary surpluses. Thus, a full transition to a funded system was not a realistic option due to the extremely high costs involved. Further, in both countries the political power of trade unions and pensioners’ associations favoring the preservation of the pay-as-you-go system is strong. The Argentine pension reform was more comprehensive and far-reaching than the Uruguayan reform. Argentina established a true multi-pillar system where all workers must contribute both to a public pay-as-you-go pillar and to a second pillar which can be either a privately managed defined-contribution or a public defined benefit scheme. In Uruguay, only workers above a certain income threshold are required to contribute to the second pillar; since the threshold is set at a relatively high level, only few workers are mandatorily affiliated; nevertheless, the response of workers has been positive and voluntary affiliation to the new system has exceeded expectations.

Peru, Colombia and Mexico had relatively young and immature pension systems. Their schemes too were based on social insurance principles; originally established as partially funded schemes, the pension systems’ reserves were being drawn down rapidly due to generous benefit eligibility conditions and high non-pension expenditure coupled with high evasion of contributions. The financial pressure, however, was not yet due to ageing populations. Since the systems covered only a small part of the economically active population and real benefit levels had deteriorated as a result of inflation, the implicit debt of these systems was low compared to the Southern Cone countries.

All three countries established new funded pension systems with individual accounts managed by the private sector; the systems have many features of the Chilean system. The extent of these reforms,
however, reflect the political difficulties of passing a radical pension reform, even in Peru where the reform was decreed by an authoritarian government. Both in Peru and Colombia, the new system was originally meant to replace the existing public pay-as-you-go scheme. But due to the resistance of trade unions, the social insurance bureaucracy and other groups, the new schemes are offered only as an alternative to the existing public pension scheme and there is no obligation for new labour force entrants to join the private system. Only in Mexico the new system is mandatory for all private sector workers but it is still an incomplete reform given that the public sector workers keep their old, more generous systems and that the reformers have so far been unable to transfer the substantial mandatory contribution for the housing fund to the individual retirement accounts.

Bolivia chose a completely new approach of combining pension reform with the privatisation and capitalisation of state-owned enterprises. The old pay-as-you-go system was closed and all affiliates were automatically transferred to a privately managed funded system with individual accounts. At the same time, a universal pension was introduced to which all persons aged 21 or older will be entitled once they reach 65 years; it is financed out of a “collective capitalisation fund”. This fund was constituted during the privatisation process: the government sold 50 per cent of the public enterprises’ shares to capitalise the companies and retained the other half for the collective fund. The fund is managed by the same fund management companies and subject to the same investment rules as the pension funds thus minimising the danger of discretionary investment decisions by the government.

The most recent pension reform was launched in El Salvador. Of all the second-generation pension reforms, the Salvadoran reform is the one most similar to the Chilean pension reform. Although the law was passed in December 1996, the new system has not started operations yet. Due to a crisis in the financial sector and political controversies about the new system, the introduction was delayed. Affiliation, however, is expected to start in spring 1998.

**Financing the Transition**

The reform countries have chosen different ways of financing the transition to the funded systems depending on the financing requirements and the fiscal situation in the individual country. Estimates of the implicit debt of the old pension systems ranged between more than 200 per cent of GDP in Uruguay, around 90 per cent in Colombia, and around 30 per cent in Mexico. In Chile, the government issued recognition bonds to each worker who switched to the new system; the bond matures at retirement of the worker and the sum is deposited into the individual account. The same approach was used in Colombia and Peru and will also be applied in El Salvador. Argentina instead chose to use a compensatory pension payment for the recognition of past contributions to the old system. This benefit is paid out by the public pay-as-you-go pillar and it is financed out of current contributions and budgetary transfers for which certain taxes have been earmarked. This mechanism reflects Argentina’s limited capacity for additional public debt on the one hand, and the high implicit debt of the system on the other hand. By paying out a monthly pension instead of redeeming a recognition bond at the moment of retirement, the financial burden is stretched out over a longer period reducing cash-flow pressures for the government. Bolivia too decided to offer a compensatory pension to workers affiliated in the old system.

Uruguay has no explicit compensation for acquired rights but continues to pay all old benefit entitlements through the public pillar. The public system will continue to provide the bulk of pension benefits anyway since the second pillar is very limited in size and scope. Mexico decided to offer no compensation for acquired rights at all but to give all workers a “life-time switch” option. Workers nearing retirement are allowed to compare their benefit entitlements under the new and the old system and choose the more
advantageous option. If they opt for the public benefit, the balance accumulated in the individual account must be turned over to the public system.

**Fiscal Consequences**

The fiscal requirements and future cash flows due to pension reform are difficult to estimate in most of the second-generation reform countries. In Colombia, for example, cost projections are complicated by the fact that affiliates may switch between the new and the old system. In most second-generation reform countries, affiliation in the new systems is not mandatory for new workers and it is difficult to estimate what affiliation rates and thus contribution volumes in the future will be. In Argentina, future costs are also unclear, since the government passed an emergency law in which it commits itself to pay only what it can afford. In Mexico, where the life-time switch option is offered, the fiscal costs will not become clear until the workers with acquired rights reach retirement age.

Transition financing in Chile was facilitated by the strict budgetary policies of the government during the early eighties. The recognition bonds were issued between 1981 and 1984; in 1981, when the reform was introduced, the government was running an overall budget surplus. From 1982-84, an overall budget deficit was registered due to the severe economic crisis and due to a strong increase of social assistance pensions. If all pension expenditures are excluded from the budget, however, a surplus persists throughout the eighties and early nineties. These observations, however, do not imply that one can identify the financial resources used for the financing of transition. The Chilean economy has been undergoing profound structural changes during the last decades such as tax and trade reforms, privatisation, labour market and financial sector reforms. Not only pension reform but numerous other factors had an impact on the government budget. Therefore, it is impossible to say from which specific source – budget surpluses, taxes or government debt – the transition deficit was and it is being financed. The same holds true for most of the second-generation reform countries where pension reform was launched at the same time as other important structural reforms which had an impact on the fiscal situation of the countries. Similarly, using compensatory pensions instead of recognition bonds gives no indication for the source of financing since the government can issue debt to obtain the revenue necessary for transfers to the pension institution.

**Reform Results**

The first years of operations of the new pension systems in the second-generation reform countries show the following results and challenges:

- The introduction of the new funded systems has led to a rapid build-up of retirement capital. The Chilean pension funds now correspond to about 45 per cent of GDP; the Argentine system in only 3 years has already accumulated about 3 per cent of GDP with a contribution rate of only about 7.5 per cent compared to Chile’s 10 per cent. Fund accumulation has been slower in Peru and Colombia due to the much lower coverage of the labour force in these countries.
- The new systems have enjoyed high real rates of return. Real average yields have been more than 12 per cent in Chile, about 17 per cent in Argentina and 15 per cent in Colombia. But these results reflect high interest rate levels in these countries due to a substantial risk premium and it cannot be expected that these levels are maintained over the longer term.
- The acceptance of the new private systems has been high, particularly among younger age groups.
- The introduction of private pension funds has supported the development of the financial sector, particularly in countries with an underdeveloped financial and regulatory infrastructure. Almost all countries set up specialised regulatory and supervisory bodies for pensions and reformed the insurance
and securities markets. In Peru, for example, funds were initially invested only in bonds and deposits; today, already more than 30 per cent are invested in equity.

- The AFP industry in all countries has been incurring very high marketing costs. In most countries, the majority of AFPs have been struggling to break even and market concentration has been increasing due to mergers. Even in Chile, about half of all fund management companies are still not profitable.

- All countries have been encountering problems with the frequency of account switching which causes high administrative costs. Several countries have allowed AFPs to give members loyalty discounts to discourage excessive account switching. These discounts do not seem to be an effective instrument to reduce transfers so far.

- In all countries, the AFPs are investing in practically identical portfolios. There is an ongoing discussion about the reasons for this phenomenon. The strict investment regulations and the state guarantees for minimum returns of the pension funds which are given in all countries (currently suspended in Peru) may be one reason for this herding behavior. Another reason may be that it is not worth the risk for a pension fund to deviate from the average because of the loss of business this might entail.

- The large discrepancy between affiliates and contributors which has been observed in Chile also exists in the second-generation reform countries. On average, only about 50 per cent of all account holders actually contribute regularly to their accounts which jeopardises the effectiveness of the new systems in providing old age income security. The risk of old age poverty is increased by the fact that most countries provide minimum pensions only to workers who have fulfilled a minimum contribution periods. Non-contributory social assistance pensions are either non-existent or very limited in scope and size in most Latin American countries.

- The annuities markets which play a crucial role in the distribution phase of the pension schemes have received little attention so far. Chile is the only country where a significant number of workers are beginning to receive their pension from the new system and many of them are choosing the annuity option. Annuities intermediation costs in Chile have increased from 1.5 per cent of the gross premium in 1988 to more than 5 per cent today. An important factor for the high costs is the fact that all annuities are contracted on an individual basis and group contracts are not allowed. Partly, the high costs of annuities are also due to information problems: Life insurance companies that are part of a group with a related AFP are in a position to charge commissions which are lower by about 100 basis points than the companies which are not related to any fund management company.

- For the second-generation countries, an additional problem will be the indexation of annuities which is only possible if the insurance companies can invest in CPI-indexed securities; in Chile, the entire financial sector and thus all long-term contracts are indexed but this is not the case in the other countries. A challenge for the second-generation reform countries will thus be to develop such instruments.

Lessons for OECD Countries

In OECD countries, the problems of social security are primarily due to the demographic transition; in recent years, high structural unemployment has aggravated the situation in Western European countries. The pension systems in Latin America confronted crisis much earlier than would be expected judging by their demographic dependency ratios. Some of the reasons for the financial imbalance of the Latin American social security systems are different from those in OECD countries. Evasion, for example, has as yet been much less of a problem in most OECD countries; the management of the pension institutions is usually quite efficient and administrative costs of pension systems are much lower. But the effects of the financial crisis are the same: rising contribution rates resulting in unsustainable levels of payroll taxes, increasing government subsidies to stabilize the systems, and gradual reductions of benefit levels.
The second-generation pension reforms in Latin America show that a partial transition to funding is feasible in a democratic context

The second generation reforms in Latin America have demonstrated that structural pension reform is possible under very different economic, political and social conditions. Up to the late 1980s, the Chilean pension model was still regarded as too closely connected to the authoritarian Pinochet government and thus impossible to implement in a democratic context. The Chilean example has attracted a lot of attention and its perceived success has reduced the resistance to reform among political interest groups in other Latin American countries. Partially funded solutions similar to the new pension model established in Argentina are now being adopted in modified forms even in Eastern Europe (Hungary, Poland).

The transition to a fully or partially funded pension system can be financed in different ways

Particularly in OECD countries it is often argued that a transition to a partially or fully funded pension scheme is impossible because current generations would have to pay twice – for the pensions of today’s retirees and for their own future retirement. The second-generation reforms show that this is not the case. The reforms demonstrate that governments have a considerable degree of freedom in the design of the financial transition path and that there are choices in distributing the fiscal burden of reform. The instruments used to cover the financing gap are crucial as well as the parameters set in the reforms such as the cut-off age for eligible workers, the integration or exclusion of certain occupational groups who have special, more generous pension regimes, and the calculation and recognition of rights acquired under the old system. Further, pre-reform measures streamlining the existing pension programs by increasing the retirement age, scaling down benefit entitlements and tightening eligibility conditions for old age and disability pensions were an important factor for cost reduction in all of the reform countries.

OECD countries should carefully consider the appropriate structure of the funded pillar given the high administrative costs of the Latin American models

The individual account management by specialised fund management firms has proven to be very costly and the competition among firms has led to an excessive switching of accounts. Some modifications of the rules and regulations for the fund management industry are currently being discussed in Latin America. Such changes may or may not be successful in lowering the costs to workers. For OECD countries considering the introduction of a mandatory second pillar, these experiences are useful when deciding on which providers to allow. Given that many OECD countries already have established employer-based second pillars, the Latin American model may not be the most suitable approach. The second-pillar solutions in OECD countries are likely to be much more diverse and shaped to individual country conditions than in Latin America where the funded pillars were built from scratch without any pre-existing structures to build on.

Successful pension reform requires consistency and consensus

The experience of Chile and the second-generation reform countries shows that the consistency of the pension reform concept was crucial to bring reform about and implement the adopted strategy. Consistency refers both to the internal consistency of chosen model and to consistency with the overall economic and social policy framework in the individual country. The importance of building consensus can be seen in the quality of the political discourse in Latin America in the early nineties. The overriding objective of pension reforms, regardless of the model proposed, must be the improvement of retirement income security; this should be kept in focus in the political debate. All other effects of pension reforms on capital markets, financial sector infrastructure, or privatisation, however beneficial they may be, are subordinated objectives of pension reform. A policy measure that has a positive impact on any of these
other areas but fails to improve the provision of pensions, should not be given the label of pension reform. Much confusion and unnecessary confrontation has arisen in the political arena because the primary aim of reform – to provide better and sustainable old age benefits – has not been spelled out clearly.

- **For OECD countries it will be important to arrest the financial deterioration of their pension systems now instead of waiting for the systems to collapse**

Although reform may be easier when the financial problems are more obvious to the electorate and to the political interest groups, measures have to be taken now. The longer reform is postponed, the more expensive the transition to a new system becomes. The history of failed reform attempts in Latin America shows that the political resistance to pension reform can stop all measures to restore financial equilibrium of the system until the situation has deteriorated so much that no interest group can gain any longer from postponing reform. The losers in this process are clearly current pensioners whose real benefit levels deteriorated dramatically before the reform and who have little chances of expecting any improvements during the transition process as additional financing requirements are imposed on the government.
Old age security systems have a long history in Latin America. The first pension schemes were set up as early as the 1920s making Latin America the first region outside Europe to adopt earnings-related social insurance schemes. According to the state of development of their social security systems the countries in the region can be grouped in pioneer, intermediate and latecomer countries (Mesa-Lago, 1978).

The **pioneer countries** (Argentina, Brazil, Chile, Uruguay) belong to the today most developed countries of the region. These countries established old age security programmes in the 1920s, with the exception of Argentina where the first pension programme started in 1944. The pioneer models were close copies of the social insurance schemes introduced by Chancellor Bismarck in Germany in the 1890s and later adapted to their individual characteristics by other European countries. The pioneer countries gradually expanded their social security programmes both in terms of benefits and population covered by the programmes. This expansion, however, was not conducted at a centralised level nor did it follow a comprehensive social policy approach. The social security systems’ coverage reflected political power structures rather than the different groups’ need for social protection. As a result, the pioneer countries had a large number of specialised pension institutions and programmes offering very diverse benefits. Some unification of pension regimes took place through the creation of centralised agencies but separate programmes along occupational lines (e.g. for teachers, public enterprise workers, and bank employees) continued to exist. The systems in pioneer countries had replacement rates which are comparable to levels in Western Europe: pensions replaced about 70 to 80 per cent of previous earnings and even more for privileged groups. Coverage rates were high at around 60 to 80 per cent of the labour force.

The **intermediate** countries (Mexico, Bolivia, Colombia, Peru, Costa Rica, Ecuador, Panama, Paraguay, Venezuela) launched their pension systems in the period from the 1940s to 1960s. Although certain occupational groups were still granted considerable benefit privileges, the systems are generally less fragmented than in the pioneer countries. The benefit levels are on average lower and the eligibility conditions, such as the retirement ages, minimum contribution requirements and early retirement rules, are often less generous. In most of the intermediate countries, the systems cover only a limited number of social risks but there are exceptions such as Costa Rica where social protection has reached the level of the pioneer countries. Many of the countries in this group have a predominantly rural population and large informal sectors; the sector social security systems which are tied to formal sector employment status thus reach only a much smaller share of the population; coverage rates range around 30 to 40 per cent of the labour force. As a result, pension expenditures as a share of GDP are also much lower than in the pioneer countries.

The **latecomer** countries, finally, are Central American and Caribbean countries where pension systems were established between 1950 and 1970. These systems usually are even smaller in size and scope than in the intermediate countries. They provide basic benefits with comparatively low replacement rates and a lower number of risks covered. The administration of the programmes is mostly centralised. Given their low degree of maturity and high population growth rates, these systems have very few old age pensioners and a comparatively large number of active contributors.

The pension systems in all three groups of countries have been suffering from a range of common problems. The distribution of benefits among the population was very uneven and inequitable. The politically most powerful groups exerted strong pressure on policy makers and lobbied for more generous
benefits and eligibility conditions. The urban and rural poor, who had no political power, were disadvantaged or even excluded from the systems. Most pension schemes were subsidised by the government out of revenue from predominantly indirect taxation. The poor thus contributed disproportionately to the financing of benefits to which they had little or no access.

In the majority of schemes the relation between benefits and contributions was unsustainable. Benefits had repeatedly been raised while retirement ages had been lowered. Most schemes had originally been partially funded with capital reserves to cover expenditures over an actuarially determined period (“scaled-premium” method). Arbitrary benefit increases, cross-subsidisation of other social insurance branches – particularly to finance the infrastructure needs for health care such as hospitals and clinics – and politically rather than economically motivated investments led to a rapid depletion of pension reserves. In addition, the pension systems suffered from repeated periods of high inflation, in some cases even hyperinflation, against which the reserves were inadequately protected. In the early phases of the schemes’ existence, these factors did not cause financial imbalances. Even with relatively low contribution rates, revenue was still sufficient to grant generous benefits to the few retirees.

By the end of the 1980s, however, the three groups of countries were experiencing varying degrees of financial difficulties. For the pioneer countries, pension reform was an urgent and pressing need. The system dependency ratios, i.e. the relation between pensioners and active contributors, were rising dramatically. Unemployment and the informalisation of the labour force had increased strongly because of the severe macroeconomic crisis and the successive failure of adjustment attempts during the eighties. Contribution revenue further declined because of increased evasion and a general loss of credibility of the pension systems.

At the same time, pension expenditures were growing rapidly. The number of pensioners increased as a result of generous early retirement and disability regulations. In Argentina and Uruguay the pension schemes had matured and the number of eligible beneficiaries was increasing fast. In both countries, ageing populations were putting an additional strain on pension financing; in Uruguay, high migration of younger workers to the neighbouring countries Argentina and Brazil reinforced the ageing process. Further, the formulae used for the calculation of benefits encouraged strategic manipulation. Since pensions were based on the last 3-5 years of earnings, employers and employees colluded to underdeclare incomes in earlier years and increase declared salaries just before the worker entered retirement.

As financial imbalances grew, contribution rates had to be increased; where this proved politically unfeasible, state subsidies were raised. Fiscal pressures, however, especially during economic crisis and adjustment, soon made this strategy impossible. In most countries, the government defaulted both on its contributions as employer and as third party payer. Despite generous legal benefit entitlements, average replacement rates declined dramatically due to partial indexation of pensions during periods of high inflation. In Chile during the late seventies, for example, 70 per cent of all pensioners were receiving only the minimum pension although pension spending accounted for half of the government budget (Valdés, 1996). In Argentina, the average replacement rate in 1989 was only about 40 per cent despite a defined benefit of at least 70 per cent of previous earnings (Vittas, 1997a). Some schemes defaulted on their pension promises and started to accumulate substantial debt towards the pensioners. This, in turn, led to even higher evasion of contributions, as workers began to realize that they might not receive any benefits upon retirement.

1 Godoy and Valdés-Prieto (1994) point out in the 1950s the Southern Cone countries (Argentina, Chile, Uruguay) also undertook deliberate moves towards more redistribution and a stronger reliance on pay-as-you-go funding in line with the trend towards interventionist social and economic policies in Western Europe which were adopted based on the recommendations of the Beveridge Report.
While the pension systems in the pioneer countries Argentina and Uruguay were technically bankrupt by the end of the 1980s, the systems in most intermediate countries were running large actuarial deficits but still recorded overall cash surpluses. In those countries, the need for reform often arose not from the pension programme, but from the health and maternity programmes which were requiring increasing transfers from the other insurance branches and eating into the pension reserves. The latecomer countries in general are in less financial difficulties due to the fact that the systems are still very recent. In several Central American countries, however, the pension systems are already encountering serious financial problems due to a depletion of reserves and large numbers of disability pensioners caused by decades of civil wars.

Reform attempts: Failure of the Piecemeal Approach

Throughout the 1980s, the pioneer countries Argentina and Uruguay made numerous unsuccessful attempts to reform their pension systems. Since all proposals to cut pension expenditures or tighten eligibility conditions failed, the contribution rates reached unsustainable levels. To alleviate the burden on employers, the employers’ share of contributions was temporarily suppressed and replaced by state transfers financed out of general tax revenue. But these measures were not sufficient to arrest the financial deterioration of the pension systems.

In Argentina, the deficit of the pension system fluctuated around 1 to 1.5 per cent of GDP in the eighties (Vittas, 1997b). As more and more pensioners brought judicial claims against the social security system, the government declared a state of social security emergency in 1986. The calculation base for the defaulted pension payments was renegotiated to reduce the debt owed to pensioners. In addition, the government tried to improve the finances of the pension system by levying new taxes on fuel, telephone services and gas. Despite the emergency measures, pensions continued to lag behind the legally established increases. After the state of emergency was lifted and the system returned the previous pension rules, the situation deteriorated again. Claims and law suits increased once more and a new debt rescheduling agreement was reached between the government and the pensioners (Queisser et al., 1993).

The financial collapse of the Argentine pension system paved the way for systemic reform. For several years, reform proposals had been floated by different groups for a total or partial transition to a funded, privately managed defined-contribution system. In the early nineties a more detailed concept was elaborated by a government-appointed team of experts and presented to Parliament. Benefit cuts, increases in the retirement age and tightening of eligibility conditions which had been impossible in earlier years were now accepted. Partly, political acceptance was facilitated by the introduction of a completely new system which departed radically from the old structure and seemed more credible in its promise of new and better benefits. Further, it had become clear to the electorate and policy-makers that piecemeal reforms would not be sufficient to put the pension system back on track.

In Uruguay, pension expenditure reached 15 per cent of GDP in 1996 (Davrieux, 1997). The implicit debt of the old pay-as-you-go system was estimated to be more than 200 per cent of GDP (Kane and Palacios, 1996) and thus much higher than in most Western European countries. As contribution rates reached almost 30 per cent, it became clear that more fundamental reforms could no longer be avoided. Some partial reform measures were introduced to contain pension expenditures. But in 1994, there was a plebiscite after which all budgetary decisions with respect to the social security system were declared unconstitutional. The social security authorities were forced to review the pensions in payment and make upward adjustments. Finally, in September 1995, a law establishing a new pension system in April 1996 was passed.
The reform efforts in the intermediate countries were less pronounced. Most countries took only minor adjustment measures and reforms focused more on institutional restructuring of social security systems than on the financing of benefits. Since the number of pensioners is comparatively small, the immediate concern was more often with the provision and financing of health care services. But with health financing reform becoming more pressing, the reform of old age insurance automatically became an issue. In some of the intermediate countries (e.g. Colombia, Peru) pension reform was part and parcel of a larger reform of the public administration and the social sectors. The latecomer countries, with the exception of El Salvador, have not embarked on structural reform programmes yet; however, pension reform options are being discussed and analysed in most Central American countries.

Finally, the demonstration effect of the Chilean pension reform promoted a wave of pension reform in Latin America. As the other countries in the region observed 12 years of operations with high rates of return and rapid accumulation of retirement capital in the new Chilean pension system, many governments in the region perceived this as an incentive to explore reforms along the same path.
Chapter 2

Adapting the Chilean Model: The Second-Generation Pension Reforms in LAC

More than a decade after the Chile moved from a public pay-as-you-go to a private funded pension system, seven more countries in Latin America have reformed their pension systems. No two of these “second generation” pension reforms are alike but their basic common feature is a greater role for funded, privately managed pensions. In the design of their new systems, the individual countries have made different choices depending on their initial conditions such as the pension systems’ financial viability, the fiscal situation as well as the political environment in which pensions were reformed.

The Reference Model

Chile was the first country in Latin America to introduce fundamental structural reforms to its social security system. In 1981, the Pinochet government replaced the pay-as-you-go financed public pension scheme by a fully funded, privately managed scheme with individualised mandatory savings accounts. The model adopted was the first of its kind not only in the region but worldwide. The new scheme is financed exclusively from employees’ contributions. As it is a defined-contribution scheme, the pension depends on the amount of individual contributions and the interest accrued in the individual account. The role of the state has been reduced from directly providing old age security to regulating, supervising and, up to a certain extent, guaranteeing the provision of old age security by the private sector.

The pension system is administered by private pension fund management companies, the Administradoras de Fondos de Pensiones (AFPs) which compete in the market for members. Membership in the AFP system is mandatory for all private and public sector employees entering the workforce and optional for the self-employed. When the system was introduced, existing affiliates were given the choice to remain with the old system or join the new scheme. The military is excluded from the new scheme and retains its old pension programme. All members are free in selecting their AFP and employers are explicitly forbidden to intervene or influence the workers’ decisions. All workers contribute 10 per cent of their earnings, subject to a ceiling, for old age, and on average an additional 3 per cent to pay for disability and survivors’ insurance as well as the fund management commissions. Each fund management company takes out group life and disability insurance with authorised private insurance companies for its affiliates. The mandatory contributions are exempted from income tax, and voluntary contributions are tax-exempt up to a ceiling. Pension payments are subject to income taxation.

The retirement age is established by law at 65 years for men and 60 years for women. Upon retirement, members have the choice of using their account balance to purchase an annuity from a life insurance company or to leave the account with the AFP and draw down the balance according to the individual life expectancy. Early retirement is allowed as soon as the balance of the individual account is sufficient to finance a monthly pension of at least 50 per cent of earnings. The government guarantees a minimum pension for all members who have contributed at least 20 years to the system but whose savings are insufficient to reach the minimum level.

The AFPs are not allowed to conduct any business other than pension fund management. The companies are licensed, regulated and supervised by a specialised public agency, the AFP Superintendency. The retirement capital managed by an AFP is a separate legal entity and has to be held in trust by an independent authorised custodian. The separation of the pension fund’s assets from the AFP’s capital ensures that members’ accounts are protected in case of an AFP’s bankruptcy. In addition to the minimum
capital requirements, AFPs must hold a reserve (encaje) of 1 per cent of the assets under management which belongs to the company’s capital but must be invested in the same portfolio as the members’ assets. Strict regulations for the investment of the funds specify investible financial instruments and maximum investment limits by instrument and issuer.

The fund managers charge the members fees for their services. The fees are partially fixed and partially related to the covered wages. Commissions on average amount to about 2 per cent of the base salary, i.e. 20 per cent of contributions. The AFPs further collect the premium for disability and survivors’ insurance from the members to purchase insurance coverage. At the beginning of the new system, this premium amounted to about 1.5 per cent of wages; since then it has come down substantially to approximately 0.6 per cent of wages today. The decline of the insurance premium has not resulted in a reduction of costs for members. Instead, the AFPs continue to charge about 3 per cent and destine a larger share to cover their own operating costs.

The government backs the provision of benefits by the private financial institutions involved in pension provision. The state subsidises the payment of minimum pensions for members with insufficient balances if they have at least 20 years of contributions. Further, the contractual payments of AFPs and insurance companies are guaranteed in case of bankruptcy. In case of a default on old age annuities, disability or survivors’ pensions, the government guarantees benefit payments fully up to the minimum pension and thereafter 75 per cent of the payable benefit up to a ceiling. The AFP system also must guarantee a minimum profitability, defined as the lesser of the average performance of all AFPs minus 2 per cent of 50 per cent of the average real return of all AFPs. If an AFP is below this limit, the shortfall has to be made up from its fluctuation reserve or, if insufficient, from the mandatory reserve. If both reserves are exhausted, the government will intervene, close the AFP, and subsidise the members’ accounts. If an AFP “over”performs on the basis of the benchmark, the excess returns have to be placed in the fluctuation reserve.

Upon establishment of the AFP system in 1981, the member of the old pension system were given the choice of remaining in the public scheme or moving to a private AFP. For those who chose to switch systems, previous contributions to the old scheme were honoured through recognition bonds. The bonds were issued by the public umbrella institution comprising all of the old public pension schemes with the exception of the military scheme. The bonds are calculated to correspond to the present value of a pension replacing 80 per cent of earnings for a full contribution period; they are adjusted for inflation and carry a real rate of return of 4 per cent annually. The bonds are calculated at the moment of transfer and mature at retirement of the eligible member. The resulting sum is placed into the individual account. Current and future pensions for members who chose to remain in the public system are financed from current contributions to the public scheme and from general budget subsidies.\(^2\)

Especially for the younger members of the old system, there was a strong income incentive to switch over to the new pension system. To compensate for the abolition of employers’ contributions in both the old and the new system, all affiliates were given a 17 per cent gross salary increase (10 per cent for old age and 7 per cent for health insurance). Since contribution rates in the new system were lower than in the public scheme, switching to the AFPs increased take-home pay by more than 10 per cent. In addition, the public system had been reformed in the late 1970s resulting in less generous pensions and eligibility conditions. Thus the incentive to remain in the public system had been reduced considerably.

**The Second-Generation Pension Reforms**

\(^2\) For more details on the calculation of the recognition bonds, see discussion of transition financing in Chapter 3.
In the early to mid-1990s, seven other countries in Latin America launched structural pension reforms. The first of the second-generation reforms was undertaken in Peru in 1993, Colombia and Argentina followed in 1994, Uruguay in 1996 and Mexico in 1995, Bolivia in 1997 and, most recently, El Salvador in 1998.

The second-generation reform countries set off from quite different starting points. Argentina and Uruguay had the oldest, most mature, and financially most troubled pension systems. Coverage was high in both systems, though heavily affected by evasion, and system dependency ratios were rapidly increasing. Peru and Colombia had immature pension systems with coverage rates of only 20 to 25 per cent of the economically active population. Their systems were not yet subject to demographic pressures but already beginning to experience financial imbalances due to high evasion. Mexico’s pension system was still solvent but reserves were rapidly declining; the first pension reform attempt in Mexico which introduced supplementary individual accounts, had failed and gave the incentive for a more substantial reform. In Bolivia and El Salvador, finally, pension reform was less urgent but it was part of an overall state reform and modernisation program supported by the international financial institutions.

Offering a Private Alternative: Peru and Colombia

Peru and Colombia reformed their pension systems in 1993 and 1994, respectively. Both countries introduced a privately managed defined-contribution scheme as an alternative to the existing public pension system. Existing affiliates in the old system and new entrants to the labour force can opt either for the public defined-benefit system or for the new private system. Workers who do not express any preference are automatically enrolled in the public system. Colombia went even further than Peru in allowing choices: workers are permitted to switch back and forth between the public and the private system every three years.

The structure of the new private systems in Peru and Colombia is very similar to that of the Chilean pension system. The system is managed by decentralised private fund management companies with the single purpose of managing retirement funds. Like in Chile, the companies are called Administradoras de Fondos de Pensiones (AFPs). Members pay their pension contributions into individual accounts and are free to switch their accounts between companies. The benefit options upon retirement are the same as in Chile: workers can choose the programmed withdrawal of their balance or purchase an annuity from a private insurance company. The private systems are regulated tightly and supervised closely by the government. In Peru, a separate specialised agency for pension supervision was established; in Colombia, a new department for pension supervision was set up in the Superintendency for Banking.

The contribution rates to the individual accounts amount to 10 per cent of wages in Colombia. In Peru, contributions are still only 8 per cent; an increase to 10 per cent was planned but has been delayed until at least December 1998). In both countries, workers pay between 3 and 3.5 per cent of wages to cover the premium for disability and survivors’ insurance as well as the AFPs’ management fees. The Colombian scheme has an interesting special feature to benefit low-income workers outside of the formal social security system: All members who earn more than four times the minimum wage must contribute an additional 1 per cent of their income as a solidarity tax. This revenue will be matched by budget transfers and used to subsidise the contributions of targeted poor groups in an attempt to extend the coverage of the system. Entitlement to contribution subsidies, however, is not systematic but determined on a case-by-case basis. The beneficiaries of the subsidies are free to join either the public or the private system.

The regulations for the investment of the pension funds’ assets are much more relaxed in Colombia than in Peru and Chile. In Colombia, for example, foreign investment of assets was allowed from the start of the
system while in Chile investment abroad was not permitted during the first years. Colombia and, initially, Peru both followed the Chilean example of guaranteeing a minimum rate of return. In Peru, this minimum rate was established as a band around the average performance of the AFP industry. In Colombia, the minimum rate is determined as a combination of the performance of a synthetic reference portfolio and the average performance of the AFPs. The minimum rate of return guarantee was de facto abolished in Peru in 1997 since it was made subject to regulations which to date have not been issued. Members who have contributed for at least 22 years are guaranteed a minimum pension in Colombia; the minimum entitlement is identical in the public and the private system and amounts to one minimum wage. In Peru, the private pension law theoretically envisages a minimum pension but again regulation is pending.

Both Peru and Colombia are taking the same approach as Chile in compensating existing affiliates for rights acquired under the old system. Colombia is using recognition bonds with the same features as the Chilean bonds, i.e. indexation and a 4 (later reduced to 3) per cent real rate of return. The bonds issued in Peru are indexed but they carry no positive real interest rate. Current pensions as well as future pensions for those workers who chose the public pension option will be financed by the revenue from contributions to the public system supplemented by transfers from the government.

Peru and Colombia reformed and scaled down their public pension systems by unifying retirement regimes, reducing preferential treatment for individual groups, raising the retirement age and tightening eligibility conditions. In Colombia, the new stricter rules and eligibility conditions are only being phased in very slowly. Therefore, there is still a strong incentive, particularly for older workers, to remain in the public system. In Peru, the changes in the public system were too minor or too gradual compared to the stricter rules in the private system; due to the “unfair” competition between the public and the private systems, the incentives to join the new system were very small. In 1997, the rules were equalised for both systems creating a level playing field for the public and the private system.

**Putting the Eggs in Two Baskets: Argentina and Uruguay**

The new pension models in Argentina and Uruguay introduced in 1994 and 1996, respectively, are combinations of a public pay-as-you-go system supplemented by a mandatory funded second pillar. Both countries modeled their second pillars closely on the Chilean example; it consists of a system of privately managed individual accounts. In Argentina, workers may also opt for a supplementary defined-benefit programme if they do not want to contribute to the defined-contribution pillar. Members are allowed to switch from this public second pillar to the private system but not the other way around. If workers do not express a preference, they are automatically enrolled in the private pillar. In Uruguay, the second pillar is mandatory only for workers above a certain income threshold. For all other workers, participation is voluntary but some monetary incentives are given to low-income workers to join the second pillar.

Due to their combined structure, the new pension systems of Argentina and Uruguay are far more complex than the pure individual capitalisation models of Peru and Colombia. Further, the legislation for the new systems has been undergoing frequent changes which, in the case of Argentina, is affecting the benefit structure of the public pay-as-you-go component considerably. Also, Argentina’s provincial pension systems are currently being integrated into the national pension system which is putting further financial stress on the system and might lead to more benefit adjustments in the future. In Uruguay, the new system has been challenged as non-constitutional and there are legal suits pending which may jeopardise the structure of the system.

In Argentina, all dependent workers and the self-employed are mandatorily covered by the pension system. The first public pillar pays a basic pension to all workers who have contributed for at least 30 years. This
pension corresponds to about 30 per cent of the average covered wage and is increased by 1 per cent for each year of additional contributions. The level of the basic pension was initially linked to the average covered wage but, due to the financial difficulties of the public system, it will now be fixed at the discretion of the government. The “solidarity law” which was passed as a consequence of the fiscal crisis stipulates that lower pensions will receive greater protection against inflation than higher pensions. The contribution rate for the first pillar is 16 per cent of wages and payable by the employers. It is complemented by transfers from the government.

The second pillar offers either a pension benefit from the private system (like in Chile as programmed withdrawal or annuity) or an unfunded pension benefit amounting to 0.85 per cent of earnings per year of contributions. The contribution rate for the second pillar amounts to 11 per cent of wages regardless of the option chosen, and is payable by the workers. If the private option is chosen, about 7.7 per cent are saved in the individual account and the remainder goes to disability and survivors’ insurance as well as management fees of the pension fund management companies. If the public second pillar is chosen, the contributions are paid to the public system.

The competing pension fund management companies in Argentina are called Administradoras de Fondos de Jubilaciones y Pensiones (AFJPs) and must be single-purpose companies. Like in most other reform countries, the private system is supervised by a specialised agency which issues investment, accounting and disclosure regulations and monitors compliance with these rules. Investment rules are less strict than in Chile in the early years; foreign investment and a higher share of investment in equities were permitted from the start. While in Chile banks, insurance companies and other financial institutions are prohibited from owning fund management companies directly, Argentina allows such direct ownership. Like the Chilean system, the Argentine system has a minimum rate of return guarantee based on the average performance of the AFJP industry.

Unlike its reform predecessors in Latin America, Argentina did not choose to issue recognition bonds. Instead, pensioners receive a compensatory pension in recognition for past contributions to the old system. This compensatory pension is calculated as 1.5 per cent of indexed average earnings per year; there is a ceiling of 35 years, i.e. the maximum compensatory pension amounts to 52.5 per cent of previous earnings. This way, the cash flow burden of repaying the implicit debt of the old system is stretched out over a much longer period than it would be if recognition bonds were used. The net impact on costs, however, is not clear; its calculation depends on actuarial assumptions and indexation mechanisms.

An important administrative difference from the Chilean model is the centralised collection of contributions in Argentina and in Uruguay. In Argentina, contributions are collected by the tax authority and transferred to the national social security administration (ANSeS) which manages the public components of the pension system. ANSeS then distributes the contributions to the different AFJPs. This mechanism was meant to combat the endemic evasion of contributions in Argentina but so far seems to have met with limited success. In Uruguay, the public social security institution (BPS) collects contributions and transfers the second pillar share to individual fund management companies.

In Uruguay, the new pension system consists of two pillars defined according to the contributors’ income levels. The first pillar is a publicly managed pay-as-you-go pension scheme to which all workers must contribute. The second pillar is a privately managed funded scheme with individual accounts which is mandatory only for workers earning between 5 000 and 15 000 pesos; these limits are adjusted to inflation and corresponded to about US$800 and US$2 400, respectively, in May 1995 when the new system was

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3 The solidarity law is described in greater detail in Annex 3.
4 The transition financing arrangements of all reform countries are examined in Chapter 3.
launched. The cut-off age for the pension reform was set at 40 years. All workers above 40 years (about 28 per cent of contributors) were given the choice to remain in the old system or join the new one while workers below the age of 40 were automatically made subject to the new rules. Workers who earn less than 5,000 pesos may join the second pillar if they wish. In that case, they can pay half of their contribution to the second pillar and the remainder to the first pillar.

All workers earning more than the threshold contribute to the first pillar on the first 5,000 pesos of their income and to the second pillar on the portion of their salary above the threshold. The income threshold is high in relation to salary levels in Uruguay and only about 11 per cent of all contributors earn more than 5,000 pesos. Further, since the cut-off age is set at 40 years, less than 5 per cent of all contributors are mandatorily enrolled in the second pillar. This shows that the reform is rather limited in principle and its impact depends primarily on the voluntary choice of workers to move to the mixed system.

The contribution rate payable by employees is 15 per cent of salaries. Employers’ contribution rates vary depending on the sector of activity; the total contribution rate for pensions ranges between 27.5 and 39.5 per cent. Employers’ contributions are paid fully into the first pillar and it is only the employees’ part of contributions that is split between the first and second pillar. The retirement age for men is set at 60 years; for women it is currently still 55 years but will be 60 years by 2003. There is a basic pension payable by first pillar for workers who have contributed at least 35 years; it amounts to 50 per cent of earnings with increases for longer contribution periods with a minimum level. There is also an advanced age pension for retirees who do not fulfil the requirements for the basic pension; in order to access this benefit, they have to be at least 70 years old and have contributed for at least 15 years.

The new system has a built-in incentive for low-income affiliates to voluntarily join the new private system. While the contribution to the private system can be made on up to half of the salary, the benefit from the first pillar is calculated on the basis of 75 per cent of their individual salary instead of only 50 per cent. This means that effectively, the public system is paying a subsidy for low-income workers to divert part of their contributions away from the public to the private system.

The provisions for the management of the second pillar are very similar to those governing the private pension systems in other Latin American countries. The private pension fund management companies are single-purpose companies and are called Administradoras de Fondos de Ahorro Previsional (AFAPs). Affiliates of AFAPs are allowed to switch fund managers up to twice a year. Fund managers are allowed to charge commissions which can be fixed or calculated as a percentage of collections. Contrary to the other new pension systems in Latin America, the Uruguayan system allows AFAPs to deduct the commissions from the individual account. There is no fixed and legally required amount that must be accumulated for retirement purposes. AFAPs are allowed to grant their affiliates commission discounts if workers remain with the manager for a minimum period but no other types of fee discrimination are permitted. All fees and commissions are exempt from value-added taxes. Contributions are deductible from income taxes up to a ceiling of 20 per cent of earnings.

Unlike in Chile, the supervision of the Uruguayan pension system is not organised in a separate supervisory agency but exercised by the Central Bank. The investment regulations for the Uruguayan pension system are more restrictive than in any other Latin American country requiring AFAPs to invest a minimum in government securities. The Uruguayan system also has a minimum rate of return which is defined as the lower of 2 per cent real and the average performance of the AFAP industry minus 200 basis points. In setting an absolute rate of return in real terms, the Uruguayan system differs from all other countries in the region.
The commissions and insurance premiums in Uruguay on average add up to 2.9 per cent of salaries which corresponds to 21 per cent of contribution collection. The premiums for disability and survivors’ insurance amount to about 0.8 per cent of salaries. Like in Argentina, coverage for disability and survivors’ pensions is pro-rated and provided partly by the second pillar and partly by the first pillar. The second pillar coverage is organised through group disability and joint life survivors’ policies with private insurance companies. In Uruguay, the purchase of an annuity is mandatory for the second pillar old age benefit. Unlike other countries, the system does not allow workers a programmed withdrawal of the accumulated balance in the individual accounts. The annuities are mandatorily indexed to average wages.

The Uruguayan reformers decided not to offer any compensatory benefits to transition workers. The salary thresholds for mandatory participation in the new system were deliberately set at a level which corresponded to the ceiling on pensionable income in the old pension system. This way, the maximum benefit payable by the first pillar would be equal to the maximum benefit paid by the old system. Since the ceiling had not been adjusted regularly to inflation, the maximum pension was quite low and amounted to only US$93 before the reform. (Davrieux, 1997). Since the second pillar is mandatory only for workers who earn more than the threshold income, the second pillar in effect provides a top-up benefit to the old pension. This approach was chosen in order to avoid massive compensatory payments to transition workers. Current pensions in payment are not touched by the reform. But the replacement rates are scaled down for persons over the age of 40 years, so that “normal” retirement age, i.e. the age at which workers become eligible for the replacement rates of the old system approaches 65 years. In addition, workers are given incentives to work beyond the age of 65 to 70 years. The reform also aims at more income redistribution through the adjustment of minimum and maximum pensions.

Switching for the Life-Time: Mexico

The Mexican pension reform law was passed in 1996 and the new defined-contribution pension system was launched in September 1997 with the mandatory affiliation of all dependent private sector workers. The new system consists of fully-funded individual accounts. Like in Chile, the old pay-as-you-go system is closed to new entrants. But unlike Chile, existing affiliates are not given any choice; all of them must move to the new system.

Mexico has chosen a different approach to transition financing than other countries: Workers with acquired rights do not receive recognition bonds or compensatory pensions for their past contributions. Instead, upon retirement, all transition workers are given the option of a “life-time switch”: They can choose between a pension calculated according to the rules of the old system and a pension corresponding to the balance in their individual accounts. All workers retiring under the new and the old rules are entitled to a minimum pension guaranteed by the government. Compared to the transition rules in other reform countries, the Mexican solution is the least generous, since transition workers in other countries are entitled to the newly accumulated balance plus a compensation for previous contributions.

The individual accounts of the new system are administered by fund management companies called Administradores de Fondos de Ahorro para el Retiro (AFORES) which can be established by the private sector, trade unions and, as a novelty in Latin America, the public pension institution IMSS. Like in Argentina and Uruguay, contribution collection is centralised: IMSS will continue to collect contributions which are then distributed to the various AFORES. It will pay out benefits to existing pensioners and to transition pensioners who choose the old benefit option, and make payments arising out of the minimum pension guarantee. All other reform countries chose to transfer disability and life insurance to the private sector but in Mexico the public pension institution will continue to cover these risks.
The contribution structure in the new system is rather complicated: 6.5 per cent of wages are payable to the individual retirement account. This contribution is supplemented by a flat government subsidy amounting to 5.5 per cent of the minimum wage per day which all workers receive regardless of their income level. In addition, 5 per cent of wages must be contributed to a mandatory housing finance fund called INFONAVIT. The housing account is managed separately from the retirement account and will be integrated with the AFORE account upon retirement. A further 4 per cent of wages are payable to IMSS to finance disability and survivors’ insurance as well as pensioners’ health insurance. This leads to total contribution rate of 16.5 per cent of wages plus the government subsidy.

The eligibility conditions for pensions are a retirement age of 65 years and a minimum of 25 years of contributions (instead of previously 10 years). The benefits of the old system depend on the number of weeks of contributions exceeding the required 500 weeks of contributions; the formula is based on the average pensionable income during the last five years before retirement. In 1995, the replacement rate for a worker earning the average wage and a 20 year contribution period amounted to 50 per cent; for 45 years of contributions, the benefit corresponded to a replacement rate of 100 per cent. (Sales et al., 1996) Under the rules of the new system, pensioners can opt either for a scheduled withdrawal of their account balance – into which the INFONAVIT account is integrated at retirement – or purchase an annuity from a private life insurance company. The minimum benefit is equal to one minimum wage in Mexico City fixed at the level of December 1996 and price-indexed thereafter. For transition workers, the guarantee is still calculated under the old, more generous rules where the benefit is not price-indexed but dependent on the evolution of the minimum wage.

The new system is regulated and supervised by a specialised pension supervisory agency, CONSAR. The agency licences the fund management companies, authorises their directors and managers, and monitors the operations of the companies. AFORES are single-purpose companies which can be owned by banks and other financial institutions provided these fulfill all solvency requirements and other financial standards. Foreign majority ownership is allowed. The investment regulations for pension funds are similar to those in other Latin American countries. But the Mexican system does not offer any minimum rate of return nor does it give return-related government guarantees. At the moment, only one fund per company is allowed. But it is envisaged to allow more than one fund per management company starting in mid-1998. Each AFORE will however be required to offer one fund which is at least 51 per cent invested in inflation-indexed securities.

**Capitalising for the People: Bolivia**

The Bolivian pension reform law was passed in November 1996. The new system consists of fully-funded individual defined-contribution accounts. It incorporates many elements of the Chilean pension system but constitutes a completely new approach in its combination of “capitalisation” and pension reform. The old defined-benefit pay-as-you-go system is closed down and all affiliates are transferred to the new system. The reform simultaneously establishes a social programme called “Bonosol” which provides old-age assistance to all Bolivians above 65 years of age.

Under the “capitalisation” scheme, 50 per cent of the capital of the six largest state-owned enterprises was transferred to private partners. The proceeds from these sales stay with the companies to finance future investment. The strategic investors and the government each hold 50 per cent of the shares; the government’s shares were transferred to the new privately managed pension system. The shares are managed as “Collective Capitalisation Fund” together with and by the same companies as the newly established individual retirement accounts. The dividends of the collective capitalisation fund are earmarked to finance the Bonosol programme.
The Bonosol programme provides an untargeted annual pension benefit to people over the age of 65 years. All Bolivians who were at least 21 years old at the end of 1995 (about 3.5 million persons) will be entitled to this benefit when they reach 65 years of age. In 1997, the first year of the programme, the benefit amounted to about US$250 and was paid to approximately 300 000 persons. The Bonosol corresponds to about a third of the Bolivian per capita income. While the benefit amounts to only 11 per cent of the average wage, it constitutes a significant income subsidy for the poor. According to a World Bank study (von Gersdorff, 1997), the Bonosol replaces 85 per cent of income for the extreme poor and 50 per cent for the poor.

The new pension system was launched in May 1997 when approximately 300 000 existing affiliates were transferred to the new system. All dependent workers are required to participate; self-employed workers earning at least the minimum wage can join voluntarily. The retirement age is 65 years but workers are allowed to retire earlier if their balance is sufficient to finance a pension of at least 70 per cent of earnings. The pensions paid by the old and the new system are indexed to the US-Dollar. The government does not guarantee any minimum pension from the system. After pensioners have exhausted their savings, they will receive only the Bonosol benefit. Disability and survivors’ insurance are provided by private insurance companies.

Due to the small number of formal sector workers, the Bolivian authorities decided to limit the market for fund management to initially only two companies. Two Spanish-led consortia were selected in an international bidding process. The two companies share the market in the four largest Bolivian cities and operate exclusively in the Northern and Southern regions of the country, respectively. Competition between AFPs is supposed to start in January 2000 when all workers will be allowed to choose between the companies. In 2002, the market will be further opened to new AFPs.

The contributions to the new pension system amount to 12.5 per cent of wages of which 10 per cent are saved in the individual accounts, 2 per cent are destined to disability and survivors’ insurance and 0.5 per cent are paid as commission to the fund management companies. The commissions for fund management, on which the selection of fund managers was based, are the lowest of all Latin American private pension systems. The employee is charged 0.5 per cent of wages for the management of the individual account. Further, the AFPs receive fees from investment management which are paid out of the fund’s profits. Thus, the average monthly management fee according to the calculations of the successful bidders corresponds to about 1 per cent of the affiliates’ average wages.

The new pension system is supervised by the pensions department of the Financial Sector Superintendency. The AFPs have to invest their funds following the investment guidelines issued by the Central Bank. During the transition from the old to the new system, the AFPs are required to invest a certain amount in the government bonds issued specifically for the transition. The law requires that investment regulations allow for at least 10 per cent and at most 50 per cent of assets to be invested abroad; admitted foreign securities must be traded at the New York or London Stock Exchange.

The benefit options under the new system are a programmed withdrawal of funds according to the individual life expectancy or the purchase of an annuity from a private life insurance company. In addition, the transition workers will receive a compensatory pension when they reach retirement. A worker who has contributed for 25 years, for example, will receive a compensatory pension equivalent to 70 per cent of his or her earnings before the reform. The reference salary and the benefit itself are indexed to the US dollar. The pensions of the old system will continue to be paid according to the previous rules. The payments will be financed by transfers from the general budget.
Replicating the Reference Model: El Salvador

The new Salvadoran pension law was passed in December 1996. In mid-1997, the financial sector in El Salvador experienced a severe crisis after some major incidents of fraud. As the climate was not judged favourable for the introduction of the new pension system and the interest of foreign investors to participate in the new system was small, the introduction of the new pension system was delayed. By March 1998, however, five fund management companies had been authorised by the Superintendency and affiliation is expected to begin in April 1998. Of all the second-generation pension reforms, the Salvadoran reform is the one most similar to the Chilean pension reform. The new system will eventually replace the existing defined-benefit pay-as-you-go system which will be phased out. It consists of fully funded individual accounts managed by competing private pension funds, the Instituciones Administradoras de Fondos de Pensiones (IAFP).

Participation in the new system will be mandatory for all new labour market entrants as well as for all affiliates of the existing system up to the age of 35. Male workers over 55 and female workers over 50 must remain in the old system institutions ISSS (for private sector employees) and INPEP (for public sector employees); workers between these age limits will be able to choose whether to transfer to the new system or to remain in the old system. According to government estimates, the new system will start with about 400 000 affiliates. Workers who switch over to the new system will receive a “transfer bond” to honour their past contributions to the old system. In order to provide for transition financing, the government has set up a “transition fund” to which funds will be transferred annually; in 1998, the transfer amounted to 0.5 per cent of the government budget; this fund will be invested by the fund management companies in the same way as the pension funds.

These recognition bonds will carry a real interest rate of 0 per cent, i.e. they will be indexed to prices. They will be calculated applying a formula very similar to that used in Chile. The retirement age in the new system will be 60 years for male workers and 55 years for female workers. Originally, an increase of the retirement age to 65 and 60 years for men and women, respectively, had been proposed for the new and the old system. This proposal, however, was rejected by Congress. In addition, Congress introduced a new provision allowing workers to retire after 30 years of contributions regardless of age in both systems.

The contribution rate in the new system will start out at 4.5 per cent and gradually increase by 2002 to 10 per cent of the monthly salary; approximately two thirds of this are payable by the employers and one third by the workers. In addition, workers will have to pay an insurance premium to cover the risks of disability and survivorship as well as a fee charged by the IAFP for fund administration. Based on the experience of other Latin American countries, it is estimated that the premium and the administrative fee will amount to about 3.5 per cent of salaries which is the maximum allowed by the supervisors. Workers are allowed to make additional voluntary contributions. Workers will be allowed to switch between fund management companies every six months, including the processing delay of three months effectively every nine months.

In order to rationalise the existing system, contribution rates will be increased for ISSS affiliates from currently 3.5 per cent to ultimately 14 per cent of wages. In order to provide an incentive for affiliates to switch over to the new system, the contribution rate for ISSS will be 8 per cent in 1997 while the new system will require only 4.5 per cent during the first year. For INPEP affiliates and teachers who stay in the public system, contribution rates will increase from currently 9 per cent and 12 per cent, respectively, to 14 per cent. If they choose to go to the new system, however, their contribution rate will be 8 per cent in the first year.
The law contains investment provisions very similar to those in Chile. Ranges are prescribed within which the limits for investment in each instrument will be set through regulations; taking account of the low level of financial sector development in El Salvador, the proposed ranges are wider than in Chile. Investment in foreign securities and shares is not allowed. The draft law envisaged the possibility of foreign investment but this was modified in the political process. During the first ten years of operations, the new system will be required to invest a declining percentage of assets in the public housing fund, Fondo Social de Vivienda (FSV). This provision was seen as necessary in order to integrate the previously mandatory contributions to the FSV into the pension system. Originally, the share of FSV investment was proposed to start out at 25 per cent of the pension funds’ assets; Congress changed this to 30 per cent, however.

Like in Chile, there is a relative rate of return guarantee and a minimum pension set by the Ministry of Finance. It had been proposed to index the minimum pension to prices but this was rejected; instead, adjustments will be made at discretion of the Ministry of Finance. Upon retirement, workers will have the same benefit choices as in Chile: programmed withdrawal of funds, an annuity or a combination of the two. The pension fund management companies will be regulated and supervised by a specialised supervisory agency. The IAFPs must be established as joint stock companies with a minimum capital of C. 5 million corresponding to about US$570 000. All of the five authorised AFPs have been established with capital that exceeds this amount by five times.

Ownership of IAFP shares has to be authorised by the Pension Superintendency; foreign ownership is allowed but subject to several restrictions and allowed only together with national or Central American shareholders. All national and foreign banks, financial institutions and insurance companies established or operating in El Salvador or, in the case of foreign financial institutions, holding shares in national financial institutions are prohibited from owning shares or operating an IAFP. This restriction does not apply to subsidiaries of foreign financial institutions. Of the five pension fund administrators authorised by March 1998, only one company is purely domestic. Foreign investors include Chilean pension fund management companies and several European and American banks.
### Table 2.1. The Second-Generation Pension Reforms: Main Features of the New Models

<table>
<thead>
<tr>
<th></th>
<th>Chile</th>
<th>Peru</th>
<th>Colombia</th>
<th>Argentina</th>
<th>Uruguay</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public PAYGO system</strong></td>
<td>closed</td>
<td>remains</td>
<td>remains</td>
<td>remains</td>
<td>remains</td>
</tr>
<tr>
<td>Affiliation of new workers</td>
<td>mandatory</td>
<td>voluntary</td>
<td>voluntary</td>
<td>voluntary</td>
<td>voluntary'</td>
</tr>
<tr>
<td>Fund management companies</td>
<td>AFP</td>
<td>AFP</td>
<td>AFP</td>
<td>AFJP</td>
<td>AFAP</td>
</tr>
<tr>
<td>Contribution rate for savings (% of wage)</td>
<td>10</td>
<td>8°</td>
<td>10</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Commissions + insurance (% of wage)</td>
<td>2.94</td>
<td>3.72</td>
<td>3.49</td>
<td>3.45</td>
<td>2.62</td>
</tr>
<tr>
<td>Contribution collection</td>
<td>decentralised</td>
<td>decentralised</td>
<td>decentralised</td>
<td>centralised</td>
<td>centralised'</td>
</tr>
<tr>
<td>Past contributions</td>
<td>RB</td>
<td>RB</td>
<td>RB</td>
<td>CP</td>
<td>no recognition</td>
</tr>
<tr>
<td>Disability/survivors insurance</td>
<td>private</td>
<td>private</td>
<td>private</td>
<td>private</td>
<td>private</td>
</tr>
<tr>
<td>Supervision</td>
<td>specialised</td>
<td>specialised</td>
<td>integrated</td>
<td>specialised</td>
<td>integrated</td>
</tr>
<tr>
<td>Account transfers°</td>
<td>2 x p.a.</td>
<td>2 x p.a.</td>
<td>2 x p.a.</td>
<td>2 x p.a.</td>
<td>2 x p.a.</td>
</tr>
<tr>
<td>Minimum rate of return</td>
<td>relative</td>
<td>unregulated</td>
<td>relative</td>
<td>relative</td>
<td>absolute</td>
</tr>
<tr>
<td>Minimum pension</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>

**Notes:**

a. Participation in the funded system in Uruguay is mandatory only for high-income workers.

b. Contribution rate will be increased gradually to 10 per cent.

c. Due to administrative delays, transfers may be more limited.

d. Guarantees are required from the fund management companies.
Chapter 3

Financing of the Transition towards Funded Systems

This chapter outlines the issues involved in the transition from a pay-as-you-go to a funded pension system as well as the possible financing strategies to manage the shift to a funded system. It then examines how the pension reformers in Latin America designed their transition strategies and discusses first evidence on the implementation of the transition process in those countries.

Coping with Transition

A pay-as-you-go financed pension system is based on the promise that future generations will pay the pensions for today’s workers; in return, today’s workers pay contributions to finance the payments for today’s pensioners. Thus, there is a liability for the government, agency or enterprise running the pension scheme to honour this promise in the future. This liability is commonly referred to as the “implicit debt” of a pension scheme. The concept of implicit pension debt describes the stock of the government’s liabilities towards current and future pensioners and is useful to outline the magnitude of the transition problem. For practical policy purposes, however, the financial flows associated to different transition paths towards the new pension system are more relevant. Once the general decision for more funding has been taken, pension reform requires policy decisions at two levels. First, policy makers need to define a transition strategy to structure the cash-flows required for repayment of the implicit pension debt; the transition strategy determines the depth and speed of reform. Then, the transition cash-flows can be fine-tuned by choosing the appropriate mix of instruments.\(^5\)

In the transition from a pay-as-you-go to a fully or partially funded system, pension liabilities which are implicit in the old scheme are being made explicit. The current workers’ contributions can no longer be used for the payment of current pensions, as they must be accumulated to build retirement capital. At the same time, previous contributions of workers to the pay-as-you-go scheme have to be honoured. Thus, the sponsor of the pension scheme, i.e. usually the government, has to come up with a financing mechanism to repay the implicit debt.

The size of the implicit debt is measured by adding up the present value of benefits that will have to be paid to current pensioners plus the present value of pension rights that current workers have already earned. Its magnitude depends on several important factors: (i) the coverage of the pension system, i.e. the number of pensioners and workers who have acquired rights in the pension system, (ii) the age distribution of the covered population, (iii) the level of benefits, and thus on real wage growth or any other indicator to which pension benefits are pegged, and (iv) the discount rate applied in the calculation of the implicit debt.

The most commonly used method of calculating the implicit pension debt is based on the “termination hypothesis”, which assumes that the unfunded system would be terminated immediately and all pensioners and workers would have to be compensated for their future pensions and accrued rights. It does not take account of possible new obligations or income from future contributions or interest. Other calculation methods assume that the system is closed to new entrants but continues to exist until the last current

\(^5\) Financing strategies for a shift from pay-as-you-go to funding started to be discussed in the late 1960s and early 1970s for the case of the U.S. social security system, see Buchanan, 1968; Friedman, 1972; and Browning, 1973.
contributor dies, or assume an open system by estimating the present value of all future pension payments including those to new entrants.\(^6\)

There is much debate on which discount rate should be used for the calculation of the implicit pension debt. For many countries, calculations have been conducted using a rate of 4 per cent approximating the average long term real interest rate on government bonds in the major OECD countries. At the same time one could argue that the long-term interest rate is higher and that a rate closer to the returns of private pension funds should be used. If beneficiaries regard promised benefits as risk-bearing assets, on the other hand, it might be more appropriate to use the average real rate of return on equities. But a case could also be made for a discount rate lower than the capital market returns due to the public provision of annuities in social security schemes (Van den Noord and Herd, 1993). The results of pension debt calculations are very sensitive to the assumed discount rate which should be taken into account in the interpretation of the numbers obtained.

Calculating the unfunded liabilities of a pension system further requires a set of assumptions about various factors such as economic and population growth, wage growth and the future rules of the pension system. Vesting rules, i.e. regulations about a minimum contribution period before pension rights accrue, should also be taken into account. This shows that calculations of implicit debt should be treated cautiously and only used as broad indication of the size of the transition problem; inter-country comparisons are problematic unless the calculations are conducted on the basis of the same assumptions.

Using the termination hypothesis, the pension debt ranges between 100 and 200 per cent of GDP in most OECD countries with an average of about 130 per cent of GDP in the seven major economies (Roseveare et al., 1996). In Hungary and Uruguay, countries which both have pension systems with high coverage, high system dependency ratios, i.e. relatively few workers to support a growing number of pensions, and generous benefit formulae, pension debt corresponds to more than 200 per cent of GDP (Kane and Palacios, 1996).

### Strategies for Transition Financing

In most countries, systemic pension reforms are not launched until the systems are experiencing substantial financial difficulties. In this situation, contribution rates have usually reached or are rapidly approaching unsustainable levels and often governments are already subsidising the pension systems. Moving towards a more funded system, thereby making all or part of the implicit debt explicit, exacerbates the financial problems in the short to medium term. Most countries therefore need to devise transition strategies which reduce the costs of transition or at least reduce the annual cash-flows to manageable levels.

A first strategy for transition financing – albeit the politically most difficult – is the downsizing of the pay-as-you-go-systems. A smaller public system will reduce the cost of transition, particularly if most of the transition workers are affected by the change of rules. If the public pay-as-you-go system is kept in existence after the reform, like in the case of the mixed and optional models in Latin America, the downsizing measures will also contribute to the financial sustainability of the reformed public system.

Benefit commitments are downsized by tightening the pension eligibility conditions, such as the retirement age, the minimum years of contributions for access to full benefits, the rules under which early retirement options may be taken, and by modifying the accrual rate for future pensioners. Pensions

currently in payment and the benefits of workers close to retirement are usually not affected; pensioners and older workers should not be subjected to sudden changes in their retirement income since they are unable to adjust their financial planning in the short term. One commonly used policy variable, however, that does affect current pensions is the indexation mechanism for pensions in payment. Many countries are cutting public pension expenditure by switching from wage to price indexation or by moving to a more discretionary adjustment mechanism.

The impact of the pay-as-you-go downsizing measures on the transition cost obviously depends on the magnitude of the changes but also on the speed with which the new, tighter regulations are phased in. Ideally, the downsizing measures should be taken before the shift to a funded system is made. But since cutting benefits has proven politically very difficult, many countries have only been able to downsize the old system simultaneously with the introduction of a new system; if changes in the benefit structure are combined with cutting entitlements in the old system, winners and losers of the reform are less easily identified which lowers resistance to systemic reforms.

The second strategy is to reduce the speed of transition, thus stretching out the move from pay-as-you-go to funding over a longer period and reducing the annual financing requirements. This can be achieved by setting limits, i.e. cut-off ages, for workers’ participation in the new funded system. The most gradual transition to a funded system would be to allow only new entrants to the labour force to join the funded system; the cash-flow requirements for the government would then consist initially only in covering the gap caused by the diversion of the new entrants’ contributions. Deficits would increase gradually as more and more workers retire from the old system. The most radical transition, on the other hand, would be to close the old system immediately and oblige all workers to join the new system. Countries that have strongly fragmented public pension systems may also decide to switch only part of the affiliated workers to a new system and postpone the transfer of other groups to a later date; but in most cases, the exclusion of certain groups of workers is due to political pressures of such groups rather than to financial considerations.

If a country prefers to leave the switching decision entirely up to the individual worker, the cash-flow requirements can still be influenced by the government through the design of appropriate incentives to switch or to remain in the old system. The main incentives to induce a switch from a pay-as-you-go to a defined-contribution funded system are differences between the two systems such as variations in the level of contribution rates resulting in increases or reductions of take-home pay, differential retirement ages, and the level of average and minimum pension benefits.

A third strategy to cope with the problem of transition financing is a partial shift to a funded system. Partial shifts from pay-as-you-go to funded schemes can take different forms. One type of partial shift would be to keep a pay-as-you-go financed public pillar and shift only part of the contributions to the funded system. The pay-as-you-go pillar would continue to pay out current pensions and the government would have to make up for the share of contributions diverted into the funded pillar. Depending on their budgetary constraints, governments could choose to gradually increase the contribution rate to the funded pillar while lowering the rate for the unfunded pillar until the desired relation between the two pillars has been reached.

Another way of achieving a partial shift would be to introduce an optional funded system as alternative to the existing pay-as-you-go system; then the speed of the shift depends on the reaction of workers to the two options. This option, however, provides very little certainty for governments in terms of their

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1 For simulations of the impact of different downsizing measures on the implicit pension debt see Holzmann, 1997; Chand and Jaeger, 1996; Roseveare et al., 1996.
financial planning, particularly if workers are allowed to switch back and forth between the pay-as-you-go and the funded system. The countries that have adopted such optional systems have indeed done so primarily in response to political resistance to a full-fledged shift from pay-as-you-go to funding rather than explicitly choosing this strategy to manage cash-flows.

Once the strategy has been defined, the cash-flow requirements of transition can be fine-tuned by the choice of mechanism to compensate workers for past contributions to the old system. The largest cash-flows would be required in a solution where all the workers switching from the old system would be compensated with immediate lump-sum payments corresponding to the present value of their acquired rights at the moment of reform. If past contributions are recognised through the issue of bonds which mature at retirement of the individual worker, the pressure on cash-flows is reduced since workers retire gradually. But, since there are lump-sum payments due at retirement, cash-flows are still high compared to using a compensatory pension. Under this solution, past contributions are honoured through the payment of a monthly pension, either from the old system or directly from the government budget, which supplements the benefit of the new pension system.

The total cost of transition, however, does not depend so much on the instrument used but on the way the recognised rights are calculated and on the discount rate applied. Some countries, such as Chile and Colombia, were relatively generous in the recognition of acquired rights; the recognition bonds to existing affiliates carry real rates of interest of 4 and 3 per cent while the Peruvian government, for example, chose not to give workers a positive real rate of return; instead, recognition bonds are only indexed to prices. In some cases, countries chose to recognise accrued rights only up to a maximum ceiling. While the cost of recognition bonds is clearly defined, the total cost of using a compensatory pension is difficult to predict since the financing of transition is stretched out over a long period of time. The cost projections depend on a host of actuarial assumptions used for the calculation of this pension as well as the benefits payable to survivors and are thus subject to considerable uncertainty.

The decision on how to compensate workers for past contributions to the old pension system is thus chiefly political. If the new system is expected to provide workers with higher pension levels than the old system, it could be argued that, as long as the older transition workers are guaranteed the old system’s benefit, no recognition of past contributions would be necessary. Younger workers would be better off than under the conditions of the old system. This approach is obviously considerably less expensive than compensating everyone for past contributions – but “fair” only if the new system does produce better benefits. In many countries, this approach would be considered as expropriation since pension contributions are often regarded as constituting a material claim which must be honoured by the government.

**Debt versus Tax Financing**

The problem of how to compensate workers through the use of different payment mechanisms needs to be separated from the question of how governments finance the gap caused by the transition to a funded system. The government’s options for financing the transition are in principle the same as for any other kind of public expenditure. The gap can be covered by issuing debt, selling off government assets such as public enterprises, real estate or other holdings, raising taxes, and reducing public expenditure in other areas.

Selling off government assets and increasing government debt both constitute a swap of pension liabilities for government assets. In the first case, the government foregoes returns on the sold assets, in the second case interest payments have to be made on debt issued for transition. In both scenarios, future generations
will be affected by the shift to funding through higher taxes. If the implicit pension debt is fully financed by these two instruments, the macroeconomic impact, i.e. the effect on savings and growth, is equivalent to the situation where the debt is implicit in the pay-as-you-go system, even if the intergenerational distribution might have changed.

But despite the theoretical equivalence between implicit pay-as-you-go debt and explicit government debt, the reality is different. As explained earlier, the calculation of the implicit pension debt is subject to several key actuarial assumptions which may change in the future and lead to changes in the level of implicit debt while explicit debt is securitised and non-negotiable. Further, the equivalence of implicit pension debt and explicit government debt is not necessarily perceived as such by the electorate, policy makers and markets. Therefore, a swap of implicit for explicit debt cannot be expected to be completely neutral with respect to interest rate moves on the financial markets (Schmidt-Hebbel, 1997), as this would imply total absence of fiscal illusion with respect to the pension debt.

Raising taxes or cutting public expenditure, on the other hand, puts the burden of transition on the current generations which are living through the transition process. Thus, the initial income redistribution in favour of the first pensioner generation at the introduction of the pay-as-you-go system is being undone through this type of transition. The effect of these financing measures is essentially equivalent to that of a contractionary fiscal policy in the absence of Ricardian equivalence. The active generations have to reduce their consumption to pay for the transition. If the reduced consumption is not compensated through intergenerational transfers from pensioners to the active generation, the move to a partially or fully funded pension system will have a positive effect on savings. Future generations will thus benefit from increased economic growth and higher income levels.

Evidence from Latin American Reform Countries

Given the large difference of Latin American pension systems in terms of maturity and coverage there is also a considerable variation of implicit pension debt levels between the various countries. The implicit pension debt in the second-generation reform countries ranged from less than 40 per cent in Peru where the population is very young and pension coverage is low to more than 200 per cent of GDP in Uruguay, the country with the oldest population and the most extensive and mature pension system in the region. For Argentina, no comparable calculations exist due to the fact that the government already began to make the implicit debt explicit before the actual pension reform. Due to the insolvency of the old system, pensioners were given bonds to cover the benefits owed by the government. In 1992, the recognised debt already amounted to 5.5 per cent of GDP (FIEL, 1997). Table 3.1 gives an overview of the implicit debt and transition strategies in the eight Latin American reform countries.

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*Ricardian equivalence implies debt neutrality: it does not matter whether the government tax- or debt-finances expenditure since public debt will eventually have to be serviced by future tax increases.*
### Table 3.1. Implicit Pension Debt and Transition Strategies in Latin America

<table>
<thead>
<tr>
<th></th>
<th>Implicit Pension Debt (% of GDP)</th>
<th>Year</th>
<th>Shift to Funding</th>
<th>Financing Instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>126</td>
<td>1981</td>
<td>Full</td>
<td>Recognition bonds</td>
</tr>
<tr>
<td>Peru</td>
<td>37</td>
<td>1995</td>
<td>Partial (optional)</td>
<td>Recognition bonds</td>
</tr>
<tr>
<td>Colombia</td>
<td>86</td>
<td>1994</td>
<td>Partial (optional)</td>
<td>Recognition bonds</td>
</tr>
<tr>
<td>Argentina</td>
<td>n.a.</td>
<td>1994</td>
<td>Partial (mixed)</td>
<td>Compensatory pension</td>
</tr>
<tr>
<td>Uruguay</td>
<td>214</td>
<td>1995</td>
<td>Partial (mixed)</td>
<td>No compensation</td>
</tr>
<tr>
<td>Mexico</td>
<td>141.5</td>
<td>1994</td>
<td>Full</td>
<td>Life-time switch</td>
</tr>
<tr>
<td>Bolivia</td>
<td>40</td>
<td>1997</td>
<td>Full</td>
<td>Compensatory pension</td>
</tr>
<tr>
<td>El Salvador</td>
<td>n.a.</td>
<td>1996</td>
<td>Full</td>
<td>Recognition bonds</td>
</tr>
</tbody>
</table>


**Note:** The debt calculations used different assumptions and methodologies and are therefore not strictly comparable.

### Downsizing the Old Systems

All reform countries in Latin America used the strategy of downsizing their public defined-benefit systems either before they undertook systemic reform or simultaneously with the introduction of the new system. Systemic reform was possible only after decades of failed reform attempts in Chile, Argentina and Uruguay. While the military government under Pinochet can be regarded as an important facilitating factor for the implementation of the pre-reform downsizing measures in Chile, the total collapse of the existing pension system was probably the most important factor in Argentina to lower resistance to comprehensive restructuring of the pension system, including considerable downsizing of the old system. This shows that benefit reductions are possible in a democratic context once the necessity of reform is generally accepted and such reductions are integrated into a larger concept. In Peru, Colombia, Mexico, Bolivia and El Salvador there had been much less previous reform attempts and the systems were generally in a better financial condition; it is thus noteworthy that these countries undertook reform early despite a comparatively favourable situation and were nonetheless able to convince interest groups of the necessity of reform.

In Chile, several changes to the old pension scheme were introduced in the late seventies before the actual pension reform took place. The retirement age was raised, the pension indexation mechanism was unified, the special early retirement regimes and pensions based on years of service were abolished. These measures led to a significant reduction of pension expenditure in the old system. In addition, the previously fragmented system of numerous different pension schemes was unified under one umbrella institution which reduced administrative expenditures.

The second generation reform countries too reduced the generosity of their public pension schemes substantially by reducing preferential treatment for individual groups, raising retirement ages and curtailing benefit levels. Most of the downsizing measures in the second-generation reform countries had originally been more ambitious and aimed at much larger cost reductions in the public systems. The reform proposals encountered such strong political resistance, however, that governments were forced to make numerous concessions.

In Argentina, the retirement age will be gradually raised by five years to 65 and 60 years for men and women, respectively; also, the contribution period necessary to receive the minimum pension was doubled...
from 15 to 30 years. In Uruguay, only the retirement age for women was increased from 55 to 60 years but since the replacement rate was lowered, the full benefit now only becomes accessible at 65 years which makes the change equivalent to an increase of the retirement age. In Colombia, the retirement ages were also increased but only by two years to 62 and 57 years, respectively.

**Slowing the Speed of Transition**

Cut-off ages were introduced in several of the second-generation reform countries. Partly, this measure was taken to explicitly slow the speed of transition, partly however it was also a reaction to political pressures of interest groups who wanted to maintain old rules and privileges. In Colombia, for example, all transition workers above the ages of 35 and 40 years for women and men, respectively, will be allowed to retire under the previous, more generous conditions if they choose to remain in the old system. In Uruguay, the cut-off age for the pension reform was set at 40 years. All workers at and above this age were given the choice to remain in the old system or join the new one while workers below the age of 40 years were automatically made subject to the new rules.

In El Salvador, a cut-off age was set for entirely different reasons. Instead of slowing down the transition process, the Salvadorans decided to speed up transition to the new funded system by obliging all workers under the age of 35 years to join the new system. One of the reasons for speeding up transition was the desire of the government to set up a competitive private pension system in a small market. In this respect, the Salvadoran reform was even more radical than the Chilean reform where all existing workers were given a choice and only new labour force entrants were compulsorily affiliated in the new system.

Unintentional incentives to remain in the old system were given in Peru. The retirement conditions in the old system were generally so much more advantageous than the rules of the new system that only the very young workers saw it beneficial to shift to the new system. But the differences in incentives were largely due to flaws in the design of the reform and the law was modified later to enable a “fairer” competition between the two systems (Ruggero Villena, 1993; Queisser, 1997).

In all Latin American countries, with the exception of Bolivia, the military pension schemes were excluded from the reforms. This exclusion can be explained partly by the transition costs of integrating these much more generous schemes into the new structures. Partly, the exclusions are also due to the particularities of the military service which, like police, pilots and other age-dependent occupations, is characterised by very early retirement at high benefit levels. Another reason for the exclusion is the political power of the military which makes benefit cuts difficult. In Mexico, the reformers did not succeed in integrating the public sector and parastatal workers into the new pension system. The exclusion of the public sector and parastatal social security institutions, however, was due entirely to political pressures and not to cost considerations, especially since the Mexican authorities decided not to offer compensation for past contributions. The pay-as-you-go pension institutions for public sector workers and employees of parastatals could present a significant financial burden for the government in the future. The portability of benefits for workers who switch employment between sectors is also not ensured.

A large number of exclusions was also granted in Uruguay where bankers, notaries and professors were permitted to keep their own, more generous schemes. Given the political importance of the Uruguayan Pensioners’ Party, it is not surprising that the Uruguayan reform is the least radical and most gradual of all the reforms adopted in Latin America. The exclusions of several important occupational groups reflect the power of political pressure groups. But they can also partly be attributed to the inability of the Uruguayan government to finance a pension reform encompassing all workers, simply because the transition costs would have been prohibitively high.
Partial Shifts

Two of the second-generation reform countries, Argentina and Uruguay, undertook partial shifts to funding by introducing two pillar systems in which only part of the contributions is shifted to the funded component. Argentina introduced a mixed pension system consisting of a public pay-as-you-go pillar and a funded defined-contribution component. Thus, part of the contributions are used to finance current pension payments. In addition, workers can opt out of the private second pillar and join the public defined-benefit top-up scheme instead. Uruguay also established a mixed system in which the second pillar, however, is more limited than in the Argentine model. In both countries, the full amount of employers’ contributions go to the first pillar, regardless of whether the employees participate in the funded private pillars. This strategy ensures that only part of the current pensions are financed out of budgetary transfers.

Despite this approach, the benefit structure Argentine public pillar has already been modified several times in order to cope with the fiscal constraints of the government. Only a few months after the new pension system was launched, all of Latin America was shaken by the Mexican peso crisis which erupted in December 1994. As the Argentine economy faced the adverse impact of the Tequila crisis, Congress approved the so-called “Solidarity law” aiming at cost containment in the public pension system. The law overrides all respective provisions made in the previous pension law and basically stipulates that the state will only pay transfers to the pension system at the level it can afford. To that end, the indexation mechanism which linked pensions to wage increases was abolished and replaced by an ad-hoc indexation to prices according to the situation of the fiscal budget. Further, a maximum ceiling on public pensions was introduced and provisions were made to allow differential adjustment rates which would grant higher increases to lower pensions. Then, in late 1997, the public pension provisions were changed again. While the benefit payable by the unfunded pillar was originally linked to wages, it is now completely discretionary and will be determined by the government in line with the fiscal situation.

Two other countries, Peru and Colombia, also shifted only partially in the sense that the reformed public defined-benefit systems are kept as a permanent full-fledged alternative to the new systems. Most new labour force entrants opt for the new systems while the older workers predominantly choose to remain in the old systems. In Colombia, their retirement conditions are better in the old system due to the above described cut-off ages; the fiscal implications of maintaining a dual system in Colombia while granting full freedom to switch will not be seen fully until several decades into the future when workers may switch over to the public system again in large numbers if they find the old benefit to their advantage. In Peru, the two systems are now competing on a level playing field and the majority of younger workers is opting for the private funded system.

Compensation Mechanisms

Chile and three of the second-generation reform countries (Peru, Colombia, El Salvador) have chosen to honour rights acquired under the old system through the issue of recognition bonds. These bonds are calculated at the moment when the worker switches to the new system. They are then placed under custody of the pension fund management company that the worker has chosen. If the worker switches to a different pension fund later, the bond is transferred to the new fund manager along with the balance accumulated in the worker’s individual account. The bonds are redeemable when the worker reaches retirement age or earlier, if the beneficiary dies prematurely. The resulting sum is placed in the individual account.

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9 For a detailed discussion of the evolution of the public pillar in Argentina, see Vittas, 1997a and 1997b.
Recognition bonds are issued in the name of the individual worker. Trading of recognition bonds is allowed for early retirement; workers who wish to retire early may cash in the recognition bond before maturity by trading it on the stock market or endorsing it to a life insurance company to obtain a life annuity.

Both Peru and Colombia have been experiencing implementation problems with the recognition bonds. In contrast to the other Latin American countries, which reformed their pension systems either prior to the transition or simultaneously, Colombia is faced with a special difficulty due to its extremely fragmented system for public sector employees and the fiscal decentralisation of the country (Queisser, 1995). Unlike Chile, which unified the different systems in an umbrella organisation, Colombia has kept most of its different public pension institutions with the result that there is not one single institution responsible for issuing the bonds. While those bonds, for which the central government is responsible, are now being issued without major delays, the regional governments are still not fully complying with their obligation to issue bonds for affiliates switching from regional public sector funds to the new private system. The option of switching back and forth between the public and private systems will further complicate the management of recognition bonds.

Box 3.1. Two different approaches towards recognition bonds: the cases of Chile and Colombia

The recognition bonds were calculated according to the following method: First, 80 per cent of the members’ average monthly income, adjusted for inflation, in the 12 months prior to June 1979 was converted into an annual income and multiplied by the individual member’s contribution years with a maximum of 35 years. By annualising the last monthly income, Chile solved the problem of incomplete records of workers’ career earnings, a problem often encountered in Latin American countries. This amount was then divided by 35 and multiplied by a commutation factor of 10.35 for men and 11.36 for women to obtain the present value of the stream of future pension payments. The result was multiplied by a factor between 1 and 1.3, depending on the age of the worker at the moment of switching; this factor was higher for older workers than for younger workers. Lastly, the amount was adjusted to inflation during the period between June 1979 and the worker’s transfer to the new system. The bonds are expressed in inflation-adjusted index units (“unidades de fomento”) which are applied to most financial transactions in Chile. Recognition bonds carry a real rate of return of 4 per cent annually.

In Colombia, the bond is calculated as the amount that should have been saved in the individual account in order to accumulate the necessary capital to finance an annuity equal to the corresponding pension entitlement in the old system. First, the future pension entitlement of a worker remaining in the public system is estimated. This projection takes into account the current salary of the worker and the ratio of pre-retirement salaries and the national average salary. There is a maximum ceiling set on the projected benefit: 90 per cent of the last salary or 15 minimum salaries whichever is lower. Then, the net present value of the projected pension is calculated. The value of the bond is determined as the amount that the worker would have had to save corresponding to his or her period of contributions to the public system in order to finance the reference pension assuming a constant pace of accumulation. For the calculation, a constant real rate of return of 3 per cent per year is assumed.


The Chilean government chose to finance the recognition of past contributions with public debt issue for several reasons. The alternative of cash transfers to the AFPs to compensate workers for past service was seen as too expensive. By issuing recognition bonds at the moment of switching and redeeming the bonds upon retirement, the financing of the gap is extended over a longer period of time. But with a compensatory pension the financial burden could have been stretched out even longer, since the cash-flows required for pension payments would have been lower than for the redemption of bonds. The government, however, wanted to phase out the pay-as-you-go system completely and move as quickly as possible to a
capitalised system with individual retirement savings (Piñera, 1991). Therefore, the recognition of past contributions through payment of a pay-as-you-go or budget financed compensatory pension was rejected. The government decided that a combination of domestic debt financing and transfers from the general budget was the most viable approach to cover the transition gap.

Two countries, Argentina and Bolivia, pay transition workers compensatory pensions which are calculated on the basis of the workers’ past contributions to the old systems. The accrual rates for these pensions are 0.85 per cent of previous earnings per year of contributions in Argentina and 2.8 per cent in Bolivia. In Argentina, the compensatory pension is added to the basic pension payable by the first pillar which explains the relatively low accrual rate of the compensatory pension. In Bolivia, transition workers receive the compensatory pension and whatever benefit they have accrued in the new private defined-contribution system; the compensation benefit is fairly generous since workers need only 25 years of contributions to receive a replacement rate of 70 per cent of previous earnings; the calculation, however, is subject to ceilings on the reference salary and the pension benefit (von Gersdorff, 1997).

As described earlier, Mexico has decided to take a completely different approach: instead of compensation for previous contributions, workers are given a life-time switch option. Upon retirement, all transition affiliates can choose between a pension calculated according to the rules of the old system and a pension corresponding to the balance in their individual accounts. If they choose the public pension, the balance in their individual account must be surrendered to the government. Compared to the transition rules in other reform countries, the Mexican solution is the least generous, since transition workers in other countries are entitled to the newly accumulated balance plus a compensation for previous contributions.

In Uruguay, the implicit pension debt was not made explicit and transition workers are not compensated for a switch to the new mixed system. Workers of 40 years or older are not required to join the new system but can do so if they regard it as beneficial. But the replacement rates will be reduced so that, despite an official retirement age of 60 years, workers will have to work until age 65 to reach the benefit levels of the previous system; at the same time, the minimum and maximum pension levels are increased. Workers younger than 40 years who come under the rules of the new system receive no recognition of past contributions since the basic benefit of the first pillar already corresponds to the maximum benefit they would have been entitled to under the old system. (Camacho, 1997)

Sources of Transition Financing

The sources of transition financing are not as readily identifiable as the transition strategies and compensation mechanisms applied. Since the second-generation pension reforms were launched recently in the early to mid-nineties, the only case which offers longer-term evidence is the Chilean example. Looking at transition financing in Chile, however, it becomes clear that government expenditures for pension reform cannot be isolated from the general fiscal policy with respect to their sources of financing.

As described earlier, the transition gap in Chile is financed by a combination of government debt, pension contributions, and budgetary transfers. Current and future pensions for the members of the old system are partly financed by the workers who chose to remain in the old system and contribute about 20 per cent of wages; these contributions are supplemented by transfers from the general budget. To these expenditures the cost of the recognition bonds must be added.

At the moment of reform, the present value of the transition cost was estimated to correspond to about 126 per cent of GDP (Schmidt-Hebbel, 1997). The combined transition gap for current pension and redemption of recognition bonds, i.e. the necessary cash-flow to finance the transition gap, corresponded
to about 6.5 per cent of GDP annually during the eighties and 4.4 per cent during the nineties. For the next 20 years, the annual expenditure necessary to redeem the recognition bonds is estimated to be about 1 per cent of GDP with an expected peak in the year 2005 when 1.2 per cent of GDP will be required. The last recognition bond is expected to be redeemed in 2037; the value of bonds outstanding in mid-1994 was calculated to be equivalent to US$ 12 billion or about 22 per cent of GDP in the same year. The government subsidies to the old system have been fluctuating around 3 per cent of GDP per year and are expected to decline to 1.5 per cent by the year 2010. By the year 2020, the deficit of the old system is expected to have disappeared.

Transition financing in Chile was facilitated by the strict budgetary policies of the government during the early eighties. The recognition bonds were issued between 1981 and 1984; in 1981, when the reform was introduced, the government was running an overall budget surplus. From 1982-84, an overall budget deficit was registered due to the severe economic crisis and due to a strong increase of social assistance pensions. If all pension expenditures are excluded from the budget, however, a surplus persists throughout the eighties and early nineties.

These observations, however, do not imply that one can identify the financial resources used for the financing of transition. As Schmidt-Hebbel (1997) points out, attempts to establish causal relations from the changes in pension transition deficits and the non-pension fiscal position during transition are futile in the case of Chile. The Chilean economy has been undergoing profound structural changes during the last decades such as tax and trade reforms, privatisation, labour market and financial sector reforms. All of these structural reforms affected the fiscal situation. Not only pension reform but numerous other factors had an impact on the government budget. Therefore, it is impossible to say from which specific source – budget surpluses, taxes or government debt – the transition deficit was and is being financed. The same holds true for Colombia and Peru where pension reform was launched at the same time as other important structural reforms which had an impact on the fiscal situation of the countries. Similarly, using compensatory pensions instead of recognition bonds gives no indication for the source of financing since the government can issue debt to obtain the revenue necessary for transfers to the pension institution.

Several countries have established government funds which will be earmarked to finance the transition. In Peru, for example, a transition financing fund was established with the proceeds from privatisation. In Bolivia, the government is issuing special bonds to finance the compensatory benefits. In El Salvador, the pension reform law requires the government to set up a separate fund to ensure transition financing. Some countries such as Argentina have earmarked shares of certain taxes for this purpose but the financing requirements of pension reform go far beyond the amounts allocated. In the Argentine case the determination of transition financing is particularly difficult, since the pension reform coincided with the integration of the provincial pension systems into the national system; the provincial schemes are more generous than the national scheme and the integration thus increased financing requirements further. In addition, the employers’ contribution payable to the public pay-as-you-go pillar was temporarily reduced because of the economic crisis and high unemployment rates. Therefore, the Argentine system has been running increasing deficits which were not exclusively caused by the shift from an unfunded to a partially funded pension system.

In all of the second-generation reform countries, the government, to a certain extent, used the funds accumulating in the new pension system itself to finance part of the pension obligations. In Chile, throughout the eighties, the annual inflows into the new system corresponded on average to about 60 per cent of the pension deficit. In the beginning, the retirement capital was invested mainly in government bonds which indicates that the new pension system itself was a source of financing for the transition gap. In Bolivia and Uruguay, a minimum share of the pension funds’ assets must initially be invested in government securities. As the financial sector develops and more instruments become available, the
investment of the funds is increasingly diversified; this diversification is particularly striking in the case of Peru where, only five years after the introduction of the new system, already more than 25 per cent of the assets were invested in equities. In all countries, however, the pension systems remained an important source of financing for the government. In Chile, the pension funds were also invested in central bank bonds which indicates that the pension system at least helped to finance the large quasi-fiscal deficit which the Central Bank incurred when it bailed out the banking sector during the crisis of 1982, although the share held by the private pension funds was fairly small. In all countries, the private pension funds were also invested in newly privatised enterprises thus supporting the overall economic reform programme of the various governments.
Chapter 4

Reform Results and Performance of the New Systems

This chapter reviews the first years of operations of the new pension systems in the second-generation reform countries. It discusses the coverage of the new systems, the market concentration of the private pension providers, their performance in the management of assets and the costs related to private pension provision. The problems and main challenges that the new pension systems are facing will be discussed in Chapter 5.

Coverage and Affiliation

The overall coverage of the Latin American pension systems has increased slightly through the pension reforms but it is still mainly dependent on the state of economic development of the respective country and, in particular, the size of the formal sector. While Chile, Argentina and Uruguay have maintained high coverage rates, pension coverage remains low in the poorest of the reform countries. In Peru and Colombia, only about 30 per cent of the economically active population are reached by the pension programmes. In Bolivia, the situation is different through the unique combination of pension reform and the introduction of a universal pension benefit linked to the capitalisation of previously state-owned enterprises. While the pension system covers only a small share of the labour force, the Bonosol programme reaches all Bolivian citizens over the age of 65 years. This programme, however, was introduced as an old age assistance complement to the systemic pension reform and should therefore be compared to the other countries only in a wider social policy context.

The extension of pension coverage to the self-employed has not been particularly successful; even in Chile, with the most established and long-running system, affiliation rates of the self-employed are very low ranging around only 20 per cent. In Argentina, the self-employed are mandatorily insured in the pension system but evasion of contributions both by the self-employed and dependent workers continues to be a serious problem (Vittas, 1997b). The Colombian programme of subsidising contributions of informal sector workers in order to integrate them into the formal social security systems is not being applied universally but only targeted towards certain groups; therefore, its impact on coverage extension has been limited.

The coverage figures in Table 4.1 should be interpreted cautiously since they refer to the numbers of affiliates as a share of the economically active population reached by the old and the new pension systems. Many of the affiliates of the new funded systems, however, do not contribute regularly to their individual accounts; therefore, the effective coverage, i.e. the share of workers who can be expected to actually receive adequate pension benefits upon retirement, is much lower. This issue will be explored in greater detail in Chapter 5 of this study.

The speed of workers’ affiliation in the new pension systems depends on the transition strategy chosen. Affiliation rates are obviously very high in those countries that made the new systems mandatory for all existing workers (Bolivia, Mexico) and much lower in countries which gave workers the option to remain in the old system (Peru, Colombia). The age structure of members in the public pension systems also reflects the reform strategy. In Chile, for example, there are almost four times as many pensioners as

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10 See the detailed description of the Bolivian reforms in Chapter 2.
contributors in the public system since the old system was closed to new labour force entrants. In Peru and particularly in Colombia, on the other hand, where the public systems are still open to everyone, there is a relatively large number of contributors to support a still low number of pensioners.

Table 4.1. **Coverage of Pension Systems in Latin America in 1997**

<table>
<thead>
<tr>
<th>Private systems</th>
<th>Public systems</th>
<th>Total coverage (% of EAP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affiliates</td>
<td>Contributors</td>
<td>Affiliates</td>
</tr>
<tr>
<td>Argentina</td>
<td>6.26</td>
<td>3.07</td>
</tr>
<tr>
<td>Chile</td>
<td>5.74</td>
<td>3.22</td>
</tr>
<tr>
<td>Colombia</td>
<td>2.35</td>
<td>1.57</td>
</tr>
<tr>
<td>Bolivia</td>
<td>0.24</td>
<td>n.a.</td>
</tr>
<tr>
<td>Mexico</td>
<td>11.19</td>
<td>7.26</td>
</tr>
<tr>
<td>Peru</td>
<td>1.73</td>
<td>0.76</td>
</tr>
<tr>
<td>Uruguay</td>
<td>0.46</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

**Sources:** Affiliates: SAFJP, Primamerica, Superintendencia Bancaria Colombia, Consar, SAFP Peru; Bolivia: estimate for 1996; data for Chile 10/97, Colombia 3/97; in Argentina and Uruguay, affiliates of the private systems are also members of the public systems; public system affiliates refer to those workers who are exclusively affiliated in the public systems.

The initial pace of affiliation to the new private systems was slower than expected in most of the second-generation reform countries; an exception is the case of Uruguay where voluntary affiliation in the new system by far exceeded expectations (Davrieux, 1997). In Argentina, policy makers had estimated that about 70 per cent of workers would opt for the private system; but despite massive advertising campaigns only about 20 per cent of eligible workers were affiliated when the system was launched (Vittas, 1997b).

While the Chilean pension reformers offered significant income incentives which triggered a massive transfer of workers to the private system, the Peruvian pension reform provides an interesting example of the opposite. In Peru, affiliation was initially high at about 100 000 workers per month due to extensive publicity campaigns; over the next two years, however, it declined dramatically to less than 5 000 workers per month. This decline was due to several factors: Lower contribution rates and lower retirement ages for affiliates of the public system greatly reduced the attractiveness of the new system. In addition, the government failed to issue the promised recognition bonds and did not pay the due contributions for public sector employees who had switched to the new system. These problems reduced workers’ confidence in the system. And finally, workers were misinformed about the pension reform; many thought, for example that they would lose health insurance coverage if they switched to the private pension system. After these design flaws were corrected in June 1995, the pace of affiliation to the new system immediately began to pick up again (Queisser, 1997).

The new private systems have been attracting primarily the younger workers. Workers under the age of 35 years account for about 70 per cent of all affiliates in Peru, almost 80 per cent in Colombia and about half of all affiliates in Argentina. The income distribution of the affiliates in the new systems reflects the general levels of earnings in the respective countries. In Colombia almost 80 per cent of affiliates earn less than two minimum wages and the average salary of Colombian workers contributing to the private system is US$358, compared to US$608 in Chile and US$905 in Argentina. (SAFJP, 1997a; Primamérica, 1997).
Most countries have chosen to exempt the mandatory and, up to a ceiling also voluntary pension contributions as well as investment income from taxes. Pension benefits are usually taxable but in some countries such as Colombia, there is a ceiling up to which pensions are also tax-free. Only in Peru, there is effectively double-taxation since pension contributions are paid out of after-tax income and pension benefits are also taxed.

Management Companies and Market Concentration

All second-generation reform countries have followed the Chilean approach of allowing only specialised fund management companies to manage the mandatory individual retirement accounts. In some countries, banks, insurance companies and other financial institutions are allowed to own pension fund management companies directly, in others direct ownership is not allowed but participation in the pension business is still possible through the establishment of a holding company. Colombia is the only country that was able to build the private pension system onto an existing structure of fund managers. Since the enrolment in severance funds is compulsory in Colombia and a private fund management industry had already been operating for a number of years, the government allowed severance fund managers to engage in pension fund management provided that the two lines of business are financially separated.

In several countries state institutions have set up pension fund management companies which are subject to the same rules and regulations as the private companies. In Argentina, the law required the state-owned Banco de la Nacion to set up an AFJP. This AFJP initially provided an absolute rate of return guarantee, was supposed to provide its services free of charges and direct its investment into certain projects; most of these regulations have been abolished in the meantime, however, and the public AFJP is now competing with the private companies under equal conditions. Both in Uruguay and in Mexico, the public social security institutions have established fund management companies together with other partners. In some of the other countries the public pension institutions are explicitly forbidden by law to engage in the pension fund management business.

Table 4.2. Minimum Capital Requirements

<table>
<thead>
<tr>
<th>Country</th>
<th>Minimum capital (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>3 million</td>
</tr>
<tr>
<td>Chile</td>
<td>10 000 UF</td>
</tr>
<tr>
<td>Colombia</td>
<td>4 million</td>
</tr>
<tr>
<td>Mexico</td>
<td>3 million</td>
</tr>
<tr>
<td>Peru</td>
<td>200,000</td>
</tr>
<tr>
<td>Uruguay</td>
<td>1 million</td>
</tr>
<tr>
<td>El Salvador</td>
<td>570 000</td>
</tr>
</tbody>
</table>

Note: In Chile and El Salvador the minimum capital increases with the number of affiliates; current value of Chilean UF is approx. US$31.

The minimum capital requirements for pension fund management companies vary from country to country. The highest requirements are found in Argentina, Colombia and Mexico. Some countries, for example Chile and El Salvador, have mandated increases of the minimum capital as the number of affiliates grows. Higher minimum capital requirements might discourage companies from entering into the
pension market. But for some countries this is a desirable effect since it helps to prevent an excessive fragmentation of the market. Minimum capital requirements can always be lowered later if the authorities wish to increase the contestability of the market and strengthen the threat of potential competition from new entrants. (Vittas, 1997a)

Foreign ownership and joint ventures with foreign financial institutions are prevalent in all countries. In Bolivia there is no domestic fund manager as two Spanish-led consortia were licensed to start up the new system. In Argentina, foreign participation in pension fund management has increased strongly. This was largely due to the fact that after the banking crisis in 1997, all except for one bank were taken over by foreigners; in mid-1997, foreign banks alone owned 54 per cent of total AFJP equity, not taking into account non-bank financial institutions from other countries. In Peru, approximately half of total equity of the five original AFPs was owned by foreigners and all AFP were joint ventures with foreign partners.

Table 4.3. Market Concentration in Private Pension Fund Management

<table>
<thead>
<tr>
<th>Fund managers</th>
<th>Number at start-up</th>
<th>Herfindahl Index (affiliates)</th>
<th>Herfindahl Index (assets)</th>
<th>Affiliates in 3 largest companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>18</td>
<td>24</td>
<td>1232</td>
<td>1207</td>
</tr>
<tr>
<td>Bolivia</td>
<td>2</td>
<td>2</td>
<td>5072</td>
<td>n.a.</td>
</tr>
<tr>
<td>Chile</td>
<td>13</td>
<td>12</td>
<td>1870</td>
<td>1380</td>
</tr>
<tr>
<td>Colombia</td>
<td>8</td>
<td>9</td>
<td>1736</td>
<td>1705</td>
</tr>
<tr>
<td>Mexico</td>
<td>17</td>
<td>17</td>
<td>1102</td>
<td>1406</td>
</tr>
<tr>
<td>Peru</td>
<td>5</td>
<td>5</td>
<td>2264</td>
<td>2228</td>
</tr>
<tr>
<td>Uruguay</td>
<td>6</td>
<td>6</td>
<td>2225</td>
<td>3717</td>
</tr>
</tbody>
</table>

Sources: SAFJP, CONSAR, Primamerica, own calculations.

Since the start of the systems, there have been several mergers and acquisitions in the pension fund industry. Market concentration has decreased markedly only in Chile while it has stayed at the same levels or increased in the second-generation reform countries. Table 4.3 shows the Herfindahl index for the private pension business in the reform countries both with respect to affiliation of workers and assets under management. The highest concentration of affiliates is found in Bolivia; this result is not surprising given that the government decided to launch the new pension system by granting licenses initially to only two companies and to distribute members evenly between the two providers.

The lowest concentration of affiliates, on the other hand, is found in the Mexican pension market. Again, this result comes as no surprise since the Mexican authorities are setting limits for the maximum market share of affiliates per fund management company. Among the countries with competitive pension markets, the highest concentration of affiliates is found in Peru where the three largest AFPs account for 75 per cent of all affiliates. Still, market concentration in Peru is not that much higher than in Chile in 1981 when, at the beginning of system, the Herfindahl Index stood at 2028 (Vittas and Iglesias, 1992).

The concentration of the assets under management is lower than the concentration of affiliates in all countries except for Mexico and Uruguay. The high concentration of funds in Uruguay is due to the

11 The Herfindahl Index measures the market concentration. It is calculated as the sum of the squared market shares; the highest possible value would be the square of 100 per cent, i.e. 10 000.
dominance of the state-owned fund management company in the market; in December 1997, the public
AFAP Republica had US$1 billion under management while the second largest fund managed only
US$24 million. The three largest AFAPs managed 80 per cent of all assets in the private system.

In all countries, the fund management companies have been suffering from poor financial results. The
unsatisfactory performance in the newer pension systems is basically due to the AFPs’ very high start-up,
expansion and advertising costs. In Chile, the AFPs’ financial situation is affected by the frequent transfers
of members between the different fund management companies which are inflating the administrative and
marketing costs of the pension business. The problem of the transfer wars between the fund management
companies will be discussed in more detail in Chapter 5.

In Argentina, Chile, Colombia and Peru, the pension fund management industry as a whole is now
recording surpluses but a substantial number of companies are still running large operating losses. In
Chile, after 17 years of operations, only four companies were recording profits in October 1997, although
the accumulated results show that eight AFPs recorded positive net results. In Argentina, where companies
were allowed to amortize their start-up costs over a period of 10 years, the industry as a whole became
profitable at the end of 1997, i.e. in the third year of operations (Bertín, 1997).

The performance of the AFPs in Peru was heavily affected by the decline of affiliation in the private
system. By the end of 1997, however, three companies had managed to break even. Peruvian AFPs have
not been allowed to defer the start-up which has resulted in substantial capital losses. Between 1993 and
1997, the industry as a whole lost more than two thirds of its initial capital. In Colombia, start-up costs
were also very high in spite of using the existing fund management infrastructure of severance funds for
the pension business. Losses in Colombia during the first three years were higher than in Peru, amounting
to about 70 per cent of the initial capital (Queisser, 1997). By mid-1997, only one company had broken
even.

Fees and Commissions

The financial condition of the private fund management companies has been disappointing despite the fact
that workers have been paying high fees and commissions for the pension fund management services. Out
of the total contribution rates, workers pay on average between 3 and 3.5 per cent of wages for insurance
coverage against the risks of disability and survivorship and for the services of the fund management
companies. Depending on the level of contribution rates, this amounts to between 20 and 30 per cent of
workers’ contributions.

The countries have chosen different approaches to fee regulation. In Mexico, fund managers are free to
choose both the type of commission, i.e. fixed, asset-based or contribution-based, and the level of
commissions. In Colombia, there are no restrictions to the type of commissions but the combined charge
of commissions and insurance premiums may not exceed 3.5 per cent of wages. In Peru, only variable
commissions calculated as either percentage of collections or assets are allowed; AFPs are allowed,
however, to charge both fixed and variable commissions on benefit payments. To discourage excessive
transfers of accounts between management companies, exit fees are also permitted. In Argentina, flat and
variable fees per collection as well as entry fees are allowed, but fund managers are prohibited from
charging exit or asset management fees.

Table 4.4. AFP Commissions and Premiums for Disability/Survivors’ Insurance (in % of Wages)
<table>
<thead>
<tr>
<th>Country</th>
<th>AFP Commissions</th>
<th>Insurance Premium</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>2.54</td>
<td>0.91</td>
<td>3.45</td>
</tr>
<tr>
<td>Bolivia</td>
<td>1.00</td>
<td>2.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Chile</td>
<td>2.30</td>
<td>0.64</td>
<td>2.94</td>
</tr>
<tr>
<td>Colombia</td>
<td>1.62</td>
<td>1.87</td>
<td>3.49</td>
</tr>
<tr>
<td>Mexico</td>
<td>1.94</td>
<td>2.50</td>
<td>4.44</td>
</tr>
<tr>
<td>Peru</td>
<td>2.34</td>
<td>1.38</td>
<td>3.72</td>
</tr>
<tr>
<td>Uruguay</td>
<td>2.05</td>
<td>0.57</td>
<td>2.62</td>
</tr>
</tbody>
</table>

Notes: Commissions assume conversion of all fees into front-load charges as reported as such by Pension Superintendencies, all figures for 12/97 except Colombia for 3/97 and Mexico for 4/97. In Mexico, the insurance premium is contributed to IMSS.

The wide variety of permitted fees makes it difficult to compare the cost of the different fund management companies within a country, let alone between countries. Table 4.4 gives an overview but it should be taken into account that not all fees are considered; in Peru, for example, exit fees are charged when a worker switches the fund management company. Given that several countries charge fixed fees, the commission structure and the resulting cost to workers should also be examined for different income levels. The Argentine supervisors now publish the cost to affiliates of the individual AFJPs for different income levels so that workers can see which company is the least expensive for their individual earnings situation. The cost differentials are substantial: workers earning the minimum wage (US$240) pay on average 4.1 per cent of their wages in commissions while workers earning an income equal to the ceiling for contribution calculation (US$4 800) pay only 3.2 per cent.

In Colombia and, since 1997, in Peru, the superintendency has been trying to increase cost transparency by requiring the fund management companies to publish returns to workers net of commissions. This method requires converting all charges into asset-based fees and the net returns obviously depend on the period that a worker has been contributing to the system. Thus, this method will only increase transparency if returns are published for a sufficiently large number of entry dates into the system.

In Bolivia, the commissions for fund management are the lowest of all Latin American private pension systems. In light of the costs of the experience of the other countries in the region, the Bolivian authorities decided to base the selection of fund managers predominantly on the submitted cost proposals. The two selected managers charge the workers only 0.5 per cent of wages. Further, the AFPs receive fees from investment management which are paid out of the fund’s profits. These fees amount to 0.2285 per cent of assets for the portion of funds below US$1 billion decreasing gradually to 0 per cent for funds over US$1.5 billion. The average monthly management fee according to the calculations of the successful bidders thus corresponds to about 1 per cent of the affiliates’ average wages. As the system has started only very recently, it will remain to be seen whether the operators will be able to maintain this fee level. If so, the Bolivian approach of using tenders to authorise fund managers could be applied in other countries as well.

While high costs can be expected in the start-up phase of the fund management industry which none of the second-generation countries have really fully completed yet, costs should come down substantially in the medium to longer term. In Chile, however, such decline of fees cannot be observed. The persistance of high administrative costs in Chile is due to the large number of account transfers between AFPs; almost 50 per cent of account holders switch their accounts from one company to another every year. The reasons for and possible solutions to this problem which is already beginning to emerge in the second-generation reform countries as well will be discussed in more detail in Chapter 5.
In all countries, the premiums for disability and survivors’ insurance have declined substantially from the start of the systems as the insurance companies acquired more market experience and became able to calculate risks more accurately. In Argentina, for example, the insurance premium has declined from 2.2 per cent of wages to 0.75 per cent after the first three years; the total commission charged by the AFJPs, however, has remained at a constant 3.5 per cent of wages. Instead of passing on the cost reduction to their affiliates, the fund management companies diverted the savings to cover their operational costs. The same can be observed in Peru and Colombia.

**Fund Accumulation and Portfolios**

The Chilean pension system has accumulated more than US$33 billion corresponding to approximately 44 per cent of GDP. In the second-generation reform countries, the largest fund has been accumulated by the Argentine pension system which has now reached almost 3 per cent of GDP. Compared to the evolution of the Chilean system which after three years already amounted to 8.6 per cent of GDP, growth has been much slower in Argentina. This is mostly due to the fact that in Argentina only about 7.7 per cent of wages are being saved in the individual account while in Chile, 10 per cent of wages are being saved. Also, all Argentine workers, including new entrants to the labour force, are still given the option of contributing to the public second pillar where capital is accumulated. In Colombia and Peru, contribution rates were also lower during the first years, but the coverage of the system is also much lower which explains why the pension funds’ assets make up only a small percentage of GDP.

Table 4.5. **Pension Fund Assets (12/97)**

<table>
<thead>
<tr>
<th></th>
<th>Total assets (bill. US$)</th>
<th>%GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>8.8</td>
<td>2.8</td>
</tr>
<tr>
<td>Chile</td>
<td>32.9</td>
<td>44.1</td>
</tr>
<tr>
<td>Colombia</td>
<td>1.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Mexico</td>
<td>0.7</td>
<td>0.2</td>
</tr>
<tr>
<td>Peru</td>
<td>1.5</td>
<td>2.1</td>
</tr>
<tr>
<td>Uruguay</td>
<td>0.2</td>
<td>1.0</td>
</tr>
</tbody>
</table>

*Sources: SAFJP, BCU, CONSAR, Primamerica.*

All of the reform countries have imposed strict regulations on the investment of the pension funds’ assets. In most countries, these regulations place limits on the maximum proportions of a fund that may be invested in certain classes of instruments. Most instruments are also subject to limits determined in relation to the consolidated capital of the issuer, the size of the AFP and its market share, as well as the risk rating of the issue. The investment regimes of the second-generation pension reforms follow the Chilean example quite closely but are more liberal with respect to the limits for equity investment and investment in foreign securities. Most countries do not mandate pension fund investment in particular instruments; exceptions are Bolivia, Uruguay and Mexico where a certain amount of pension assets must be invested in government bonds, at least initially. But due to the gradual development of capital markets in the region and the quantitative restrictions on other instruments pension funds may invest in, a certain level of demand for government debt is practically guaranteed in all Latin American countries.
Currently, most countries allow only one account per worker and only one fund per management company. In Colombia, however, fund managers are allowed to offer three different funds: one each for mandatory retirement savings, voluntary savings and severance benefits. In Colombia and Mexico, it is envisaged to allow fund managers to offer more than one fund for compulsory retirement savings. This way, workers could choose their individual portfolios according to their personal risk preferences. In Colombia, riskier investment choices will only be available for the share of individual retirement savings that exceeds a given minimum level. In Mexico, every fund management company will have to offer at least one fund that is invested predominantly in inflation-indexed securities.

Table 4.6. **Portfolio Composition of Private Pension Systems in Latin America (end 97)**

<table>
<thead>
<tr>
<th></th>
<th>Government securities</th>
<th>Deposits</th>
<th>Mortgages</th>
<th>Bonds</th>
<th>Equities</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>46.6</td>
<td>17.5</td>
<td>--</td>
<td>3.7</td>
<td>28.3</td>
<td>3.8</td>
</tr>
<tr>
<td>Bolivia</td>
<td>--</td>
<td>--</td>
<td>12.0</td>
<td>16.9</td>
<td>--</td>
<td>94.6</td>
</tr>
<tr>
<td>Chile</td>
<td>39.2</td>
<td>15.5</td>
<td>2.8</td>
<td>43.6</td>
<td>27.4</td>
<td>1.2</td>
</tr>
<tr>
<td>Colombia</td>
<td>20.1</td>
<td>15.5</td>
<td>2.8</td>
<td>43.6</td>
<td>2.3</td>
<td>15.7</td>
</tr>
<tr>
<td>Mexico</td>
<td>99.0</td>
<td>26.6</td>
<td>6.8</td>
<td>32.1</td>
<td>34.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Peru</td>
<td>0.7</td>
<td>26.6</td>
<td>6.8</td>
<td>32.1</td>
<td>34.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Uruguay</td>
<td>80.3</td>
<td>18.2</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1.6</td>
</tr>
</tbody>
</table>


Table 4.6 shows the portfolio composition of the private pension funds at the end of 1997.

Compared to the evolution of the Chilean system, the high share of pension fund assets invested in equity in Argentina and Peru is remarkable. In Chile, pension fund investment in equity was not permitted until 1985 and at the end of the 1980s shares still accounted for only 10 per cent of assets. With respect to the Chilean AFPs’ portfolio it should be taken into account, however, that the Chilean financial sector is still almost fully indexed to prices which enables pension funds to get inflation-protected returns on non-equity investments.

The portfolio composition in Mexico and Uruguay is not comparable with the other countries since the systems have started recently and the investment regulations are gradually being issued; moreover, in Uruguay, placement in government paper is mandatory during the first year. In Bolivia, the system has been launched very recently and funds are accumulating slowly in the individual accounts of the workers; as explained in Chapter 2, the portfolio managed currently by the Bolivian AFPs consists predominantly of shares in previously state-owned enterprises which make up the collective capitalisation fund.

In Argentina, the investment strategies of the AFJPs are more conservative than in the other reform countries; 64 per cent of assets are still held in government securities and term deposits. The portfolio of the Peruvian pension system has changed rapidly since introduction of the system. While in Peru too most of the funds were placed in bank deposits and government bonds in the beginning, already more than one third of total assets were invested in shares at the end of 1997. Currently there is still a strong bias of the Peruvian AFPs’ portfolios towards the banking sector but investment in the industrial sector is gradually increasing (Queisser, 1997).
In Colombia, the AFPs’ portfolios are being diversified only very slowly. In their investment strategy, the companies have consistently shown a strong preference for fixed-income securities, particularly bonds issued by financial institutions and quasi-public entities. Equity investment has not increased like in the other countries of the region; this is primarily due to the fact that Colombia’s stock market is not deep and trading is low. In 1996, the equity trading volume amounted to only 1.6 per cent of GDP compared to 6 per cent in Peru and 11 per cent in Chile (IFC, 1997).

Investment in foreign securities has been either negligible or disallowed during the start-up of the systems. But even in Chile where up to 12 per cent of assets may now be invested abroad, the share of foreign securities in the portfolio has always remained below 2 per cent. There are several reasons for this “home bias”, i.e. the preference of pension managers to invest in domestic assets which can also be observed in more developed capital markets (Reisen, 1997). Investment overseas involves higher transaction costs and foreign exchange risk. For pension managers, the shortfall risk is often more important than the upside potential. Managers may also be limited by internal restrictions on foreign investment imposed by the shareholders of the pension fund management companies. Particularly in developing economies, fund managers may not be sufficiently familiar with foreign markets and tax laws in other countries and would have to conduct extensive research to collect the necessary information. Fund management companies would need to hire a specialised team of experts to manage their overseas investment activities.

In the Latin American reform countries where the majority of fund management companies have still not broken even, managers are hesitating to incur these additional expenses, particularly since high returns can be obtained in the emerging domestic markets. Under these circumstances, pension fund managers find it unprofitable to invest pension fund assets overseas. This view is short-sighted, however, since international diversification would lower risk substantially (Reisen, 1997). Especially in small countries with underdeveloped capital markets, private pension systems will not function without international diversification. Otherwise, capital would not only be concentrated in very few instruments with highly correlated risks but also concentrated in too few companies or conglomerates.

<table>
<thead>
<tr>
<th>Country</th>
<th>Last 12 Months</th>
<th>Since Start</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>14.8</td>
<td>16.7</td>
</tr>
<tr>
<td>Chile</td>
<td>4.7</td>
<td>11.7</td>
</tr>
<tr>
<td>Colombia</td>
<td>-</td>
<td>13.3</td>
</tr>
<tr>
<td>Mexico</td>
<td>-</td>
<td>8.6</td>
</tr>
<tr>
<td>Peru</td>
<td>11.1</td>
<td>8.2</td>
</tr>
<tr>
<td>Uruguay</td>
<td>6.4</td>
<td>-</td>
</tr>
</tbody>
</table>

Sources: Superintendencies, Primamérica; annualised returns are not reported in Colombia, Mexico: rate for first 6 months of operations.

In all countries pension funds are valued daily and marked to market. Table 4.7 gives an overview of the real rates of return that have been reached to date. Despite a record low of -2.5 per cent real in 1995, the Chilean system boasts an impressive average return of more than 12 per cent over the last 17 years. In the second-generation reform countries, returns should be assessed taking into account the relatively short period of operations. Also, the returns in all Latin American countries reflect the high risk premiums in emerging markets. To date, the highest returns have been achieved in Argentina with on average almost 17 per cent real; again, this result reflects the high level of interest rates in Argentina more than specific...
investment strategies of the Argentine pension fund managers. Nevertheless, the conservative approach of the AFJPs paid off when the country was hit by the financial crisis after the devaluation of the Mexican peso in December 1994. Despite turbulences, the AFJPs managed to achieve a 10 per cent real rate of return during the first year (Vittas, 1997a).

In all of the reform countries, the differences between the portfolios of the individual AFPs are small. The reasons for the fund managers’ similar investment choices may be due to several factors, including the direct and indirect regulatory restrictions on investment and the still limited availability of investment instruments in incipient capital markets. Some critics (e.g. Shah, 1997) have argued that the main reason for the herding behaviour of the pension fund managers is the minimum rate of return rule with which the managers have to comply. This issue will be discussed in more detail in Chapter 5.

Effects on Savings and Growth

As discussed earlier, the savings and growth effect of a shift from an unfunded to a fully or partially funded pension system depends on the way the transition is financed. The larger the share of tax financing and cutting of other public expenditures is, the stronger the positive effect on savings will be.  

For most of the second-generation reform countries some model calculations have been conducted to estimate the impact of the proposed pension reforms on savings and economic growth. The results of these simulations vary depending on the underlying assumptions and most predict moderate positive effects on savings and growth.  

Again, Chile is the only country where the effects can be measured over a longer time, i.e. 16 years, whereas the other countries have only had a few years of experience.

A recent study by Schmidt-Hebbel (1997) examines the savings and growth impact of the Chilean pension reforms. At first glance, it seems that pension reform must have had a strong positive effect on the level of savings in Chile: National savings as a share of GDP increased from about 11 per cent in the early eighties to almost 25 per cent today. But the pension reform deficit caused by the transition ranged between 6.5 per cent of GDP annually in the 1980s to around 4.4 per cent in the 1990s. At the same time, the surplus of the non-financial public sector has grown from less than 3 per cent of GDP in the period of 1975-1981 to 6.3 per cent in the 1990s. Schmidt-Hebbel estimates that national saving has increased in response to pension reform by a range of 1.2 per cent to 5.5 per cent of GDP; taking the mid-point of this range, i.e. 3.8 per cent, this would corresponds to roughly one third of the total increase of savings in Chile while the remaining two thirds would then be due other policy measures.

Through the accumulation of pension assets – which in the Chilean case is equivalent to about 40 per cent of GDP today – the development of financial sector infrastructure is boosted. The management of substantial pension reserves requires financial services such as accounting, rating, custody, investment management. But since Chile, and all second-generation reform countries undertook simultaneous reforms in the financial sector, it is difficult to determine which and how much of these effects can be attributed to pension reform. Nevertheless, a strong impact of pension reform on economic growth was found by Holzmann (1997) to take place through financial sector development; according to his estimates, between 

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12 For a comprehensive discussion of the impact of pension reform on savings see e.g. OECD, 1997; MacKenzie et al., 1997; Chand and Jaeger, 1996; Schmidt-Hebbel, 1997. A first cross-country analysis of the empirical impact of funded pensions on aggregate savings finds that to stimulate savings it is important that funded pension schemes are mandatory, that tax exemptions on pension returns are limited to low savers and that it is discouraged to borrow against the accumulated mandatory pension assets (Bailliu and Reisen, 1997).

13 These calculations were conducted by World Bank staff and are mostly unpublished.
1 and 2.9 per cent of Chile’s economic growth was due to this effect. Schmidt-Hebbel (1997) also finds a positive impact albeit with a much lower magnitude; his estimates show that between 0.4 and 1.4 per cent; at the mid-point of this range, his findings would imply that Chile’s pension reform would have accounted for one quarter of the economy’s total growth.

**Benefit Options and Minimum Pensions**

Most of the second-generation reform countries have adopted the benefit structure of the Chilean pension system. At retirement, workers can choose to either draw down their accumulated balance according to their individual life expectancy or purchase an annuity from a private insurance company. If a beneficiary who has chosen the programmed withdrawal option dies before the balance is drawn down, the survivors will inherit the remaining balance. In some countries, the laws envisage that the fund management companies could offer more benefit choices which are currently only available from the private insurance sector. The government guarantees the benefit payments contracted with private insurance companies in the case that an insurance company should go bankrupt.

In the second-generation reform countries, the number of old age pensioners receiving benefits from the new private systems is still very low. Most current pensioners have retired under the conditions of the old public pension systems. Therefore, no conclusions as to the adequacy of the old age pensions paid by the new systems can be drawn as yet. The new systems do, however, already pay out disability and survivors’ benefits. These pensions are defined benefits since their levels are set by law as certain percentages of previous earnings; in most cases, beneficiaries are entitled to up to 70 per cent of salaries for total disability and lower percentages for partial disability and survivorship. The benefits are financed out of the account of the disabled or deceased worker with the fund management company being required to make up for any difference between the account and the necessary funds to finance this benefit. Fund management companies take out group insurance for all their members with private insurance companies to insure against this risk.

In most countries, the government guarantees members a minimum pension benefit which is again modeled on the Chilean example. In the private systems, members who have contributed for a determined period but do not reach the minimum pension level are entitled to a supplement payable by the government. Further, pensioners who have completed the minimum contribution period, choose the programmed withdrawal option and outlive their benefit payments also receive a government-financed minimum pension.

The Chilean system provides a minimum pension of approximately 25 per cent of the average wage indexed to prices; all workers are entitled who have contributed for at least 20 years but whose balance is insufficient to reach the minimum pension level. The Colombian pension systems, both the private and the public, guarantee pensioners one minimum wage which corresponds to about 60 per cent of the average wage; entitlement requires a minimum contribution period of 22 years. In Mexico, too, there is a minimum pension benefit to which all workers retiring under the conditions of the private or the public system are entitled provided they have contributed for 25 years; the minimum benefit is equal to the minimum wage in Mexico City and corresponds currently to about 40 per cent of the average wage.

The most restrictive minimum pension guarantees are offered by the Argentine and the Uruguayan systems. In Argentina, workers need to have completed 30 years of contributions in order to receive the minimum pension, in Uruguay, 35 years of contributions are required. In Argentina, the minimum pension used to be linked to the average contributions to the system but it is now discretionary and depends on the government budget capacity; in 1997, it corresponded to approximately 40 per cent of the average wage.
But both countries have an additional social assistance benefit for advanced age retirees who do not comply with the minimum contribution periods.

In Bolivia, the government does not guarantee any minimum benefit from the private pension system. After pensioners have exhausted their savings, they will receive only the universal old age assistance benefit from the Bonosol programme. In Peru, the pension law theoretically envisages the establishment of a minimum pension benefit; but since no regulations have been issued, there is in effect no minimum pension.
Chapter 5

Challenges for Pensions Policy in Latin America

While the overall performance of the new Latin American pension systems has been satisfactory during the first years of their existence, there remain several serious challenges to the long-run sustainability and effectiveness of the new pension models. Four of these challenges will be examined in this chapter: the discrepancy between affiliation and effective coverage, the level of the administrative costs of the systems, the uniformity of the pension funds’ portfolios and the problem of establishing efficient annuity markets to provide workers with adequate life-long retirement incomes.

Affiliation and Effective Coverage

A major criticism of the new private pension models centers on their capacity to provide adequate old age income given that many workers do not contribute regularly to their accounts and may find themselves with very low balances at the moment of retirement. In all of the private pension systems in Latin America, a large discrepancy between the number of affiliates, i.e. account holders and the number of active contributors can be observed. In Argentina and Chile, the ratio of contributors and affiliates has been fluctuating around 50 per cent; in Peru, about 44 per cent of all affiliates contribute regularly to their accounts; this is the lowest ratio in Latin America. In Colombia and Mexico, the ratios are higher, ranging around 65 per cent.

Table 5.1. Individual Account Affiliates and Contributors

<table>
<thead>
<tr>
<th>Country</th>
<th>Affiliates</th>
<th>Contributors</th>
<th>C/A ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>6 256 443</td>
<td>3 073 537</td>
<td>49.1</td>
</tr>
<tr>
<td>Bolivia</td>
<td>243 050</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Chile</td>
<td>5 738 994</td>
<td>3 218 090</td>
<td>56.1</td>
</tr>
<tr>
<td>Colombia</td>
<td>2 347 049</td>
<td>1 567 738</td>
<td>66.8</td>
</tr>
<tr>
<td>Mexico</td>
<td>11 188 114</td>
<td>7 256 534</td>
<td>64.9</td>
</tr>
<tr>
<td>Peru</td>
<td>1 735 891</td>
<td>760 600</td>
<td>43.8</td>
</tr>
<tr>
<td>Uruguay</td>
<td>427 097</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Sources: SAFJIP, CONSAR, Primamerica; all data for 31/12/97 except Chile for 11/97.

There are various reasons for this discrepancy. In the case of dependent workers, employers may default on their payment obligations; often, mistakes are made in the contribution data submitted to the fund management companies or in the payment of contributions. Some of the evasion is simply due to the fact that workers leave the labour market to pursue further studies, stay at home or start up their own business in which case they are no longer obliged to contribute, except in Argentina where the self-employed must also contribute. Independent workers often stop contributing due to the instability of their incomes, other priorities in the allocation of their savings, or misunderstanding of the benefits and mechanics of the system.
In Chile, the AFPs’ association claims that in 1996-97 per cent of all workers required to contribute to the overall pension system (including the old public umbrella organisation and the military and police schemes) were actually complying with this obligation. A calculation shows that out of the total Chilean labour force of 5.3 million, 3.3 million workers were in dependent employment and below the age of 65 years. The number of active contributors below the age of 65 in the private system, the public system contributors, and the contributing members of the special retirement schemes added up to 3.2 million, i.e. 97 per cent of the dependent employees under 65 years (Asociación de AFP, 1996). Thus, the problem of effective pension coverage in Chile appears to be more a problem of affiliating self-employed workers than ensuring contribution compliance of dependent workers. Currently, only about 20 per cent of all self-employed are affiliated to the pension system.

In Argentina, affiliation to the overall pension system, i.e. in the first pillar and the two second pillar options, increased substantially after the pension reform. By the end of 1997, the number of affiliates had grown to about 8.5 million from 5.7 million in late 1994; but the ratio of contributors to affiliates decreased from 76 per cent to 54 per cent over the same period. This deterioration, however, is due mostly to increasing numbers of pensioners in the public system where the ratio fell from 80 to 58 per cent. Nevertheless, non-contributing affiliates still are a problem in the private system where the ratio has dropped from initially 62 per cent to 49 per cent at the end of 1997. It should be taken into account though that Argentine economy underwent a severe recession in 1995 during which unemployment rates increased strongly; this may explain a large part of the ratio’s decline.

In Peru, the pension superintendency conducted a study of the contribution pattern which showed the following results: (i) irregular contributions were much more frequent among independent, voluntarily affiliated workers than among dependent workers; (ii) there was no difference in the contribution patterns of male and female affiliates; (iii) the older the affiliates were, the higher the density of their contributions; (iv) there were regional differences in contribution patterns with rural areas showing a lower density of contributions; (v) there was a positive correlation between income and contributions; and (vi) affiliates who were entitled to recognition bonds contributed more regularly. These results, however, were based only on a small representative sample of affiliates which had been in the system from the start and therefore should be interpreted cautiously (SPP, 1996).

The increasing share of non-contributing affiliates jeopardises the effectiveness of the new pension systems in providing old age income security. It is mostly among lower-income groups that the share of non-contributing members is highest; in most countries, AFPs with higher average base salaries have much higher shares of contributing members. In those countries which provide a minimum pension guarantee, the high shares of non-contributing members will translate into an increased need for fiscal subsidies to attain the minimum benefit level. In addition, many affiliates might not even complete the necessary contribution period in order to receive the minimum pension, particularly in countries like Argentina and Uruguay where the required contribution periods are very long. In that case, the non-contributory old age assistance programmes would require additional budgetary resources.

However, as highlighted by Vittas (1997b), what matters from the point of view of adequate income in retirement is the extent to which household heads or breadwinners have a full contribution period. Unfortunately, there is no data available on the composition of the group of non-contributing affiliates. Since the second-generation reform countries have only been running their defined-contribution systems for a short while, Chile is the only case which could shed more light on the reasons for declining contribution ratios and the affected groups of workers.
Operating Costs of the Private Systems

One of the strongest criticisms voiced against the new private pension systems in Latin America is directed at their high operating costs. In systems which rely on individual retirement savings high administrative costs endanger effective old age protection by cutting into the retirement capital. As described in Chapter 4, workers in the Latin American reform countries are charged up to 3.5 per cent of their base salaries to cover disability and survivors’ insurance as well as the administrative costs of the systems. Despite falling insurance costs, the total charge to workers has remained fairly constant. As insurance premiums have declined, the share dedicated to covering the AFPs’ operating costs has increased from about 1 per cent to almost 3 per cent of wages in some countries. Depending on the contribution rates in the individual countries, administrative costs thus correspond to between 20 and 30 per cent of contributions.

The reasons for the high costs vary in the different countries and depend on the stage of development of the private pension systems. In the second-generation reform countries, the pension fund management companies are still struggling to amortize the very high start-up expenditures of the new systems. To launch the system, all companies employed large numbers of sales agents, engaged in expensive advertising campaigns and invested heavily in computer equipment and other office infrastructure. Thus, the current cost structure and financial performance of all the newer systems still reflects the start-up expenditures. Of all the second-generation reform countries, Argentina seems to have been the fastest to reach the break-even point in the pension business; as mentioned earlier, however, it should be taken into account that Argentine AFJs are allowed to amortize their start-up costs over a 10 year period while the other countries allow only shorter amortization periods or no deferral of start-up costs at all.

In the medium to longer term, the operating costs of the pension fund management companies should decline substantially. As the companies enlist more affiliates and accumulate larger volumes of assets under management, they should be able to benefit from economies of scale which should translate into lower costs to workers. But the Chilean system, which has been in operation for 17 years now, does not present any evidence of decreasing costs to workers while still less than half of the companies are profitable.

The main reason for the high operating costs in the systems which have surpassed the initial start-up phase is related to the transfers of members’ accounts between the different fund management companies. All second-generation reform countries have adopted the principle of free choice between AFPs which is one of the central features of the Chilean pension model. Competition between the fund management companies was meant to provide the highest quality of services at the lowest prices for workers. Instead, the mechanism has produced cut-throat competition among companies for the individual accounts and high prices for all workers.

The largest component of the operational costs are the expenses for marketing and advertisement. Fund management companies in all countries that have introduced private pension systems employ large numbers of selling agents and spend substantial sums on advertising. This had led to “transfer wars” between the different companies as agents aim to switch as many affiliates as often as possible from one AFP to another. The problem is compounded by the fact that the fund management companies display very similar investment behaviour both with respect to the classes of instruments and the individual issues. Switching large numbers of workers around between fund management companies with practically identical portfolios is obviously highly inefficient. In Chile, 50 per cent of all contributors switch AFPs

14 See Chapter 4 for a detailed discussion of the pension funds’ investment portfolios.
per year, in Argentina about 30 per cent of all contributors changed fund managers in 1996. In Peru, where switching was initially not allowed, the number of transfers is now rising rapidly (Queisser, 1997).

Several proposals have been made how to lower marketing costs. Some countries have chosen to limit the number of transfers allowed annually. In Mexico, for example, account switching is not allowed yet. Starting in mid-1998, workers will only be allowed to switch once per year. Another proposal is to allow more than one account per worker which would reduce the competition for accounts (Vittas, 1997c). Some critics of the current institutional arrangements in Latin America propose to allow multiple providers of pension fund management services (banks, insurance companies, other financial institutions) instead of segmenting the market by permitting only single purpose companies to conduct the business. This, it is argued, would lead to lower fees because there would be much greater competition among providers (Shah, 1997). It is questionable, however, whether this approach could work in countries with incipient capital markets and a limited number of well-developed sound financial institutions to compete with the pension funds. Furthermore, asset segregation which is a crucial element in the Chilean-style pension systems would be much more difficult to achieve and even more difficult to supervise.

Other reform suggestions address the type and level of the administrative fees directly. In Chile, the types of commissions are regulated but not their level. Fund management companies may charge flat fees and variable fees; in the beginning, account management fees were also allowed. This fee was abolished later because it was also applied to dormant accounts and affiliates were finding their balances diminishing without having made any contributions. Exit fees for affiliates who wish to leave an AFP are not allowed in Chile; in Peru, however, a flat uniform exit fee is charged in an attempt to discourage excessive transfers of affiliates between different AFPs. Some countries allow both collection-based and asset-based management fees. Clearly, in the start-up phase of pension funds when workers’ balances are slowly beginning to build up, collection-based fees are more advantageous for the pension fund management companies than asset-based management fees which would be much cheaper for workers in the beginning, but more expensive in the long run. According to calculations by Shah (1997), it would take about 30 years of fund accumulation until an asset-based commission of 1 per cent would exceed a collection-based fee of 2 per cent. At the end of a workers career, however, collection-based fees will be very low when expressed as percentage of assets.

One possibility to reduce the level of commissions would be to let employers negotiate group affiliation with AFPs at a lower fee. Another option would be to allow AFPs to differentiate the fees among affiliates instead of mandating the same price for all; that way, AFPs could offer loyalty discounts to workers who stay with the same AFP for a longer period of time. Such fee differentiation is being applied in Argentina, for example, but it has not been very effective in reducing the number of account transfers so far.

To ensure that workers are informed about the costs of pension provision, some countries (Colombia, more recently Peru) require reporting of returns net of administrative costs. But this approach will not necessarily increase transparency. Since commissions are charged as percentage of the workers’ salaries, the rate of return on the affiliates’ balance depends on the time that the affiliate has been contributing. In Colombia, for example, the pension supervisors publish the net rates of return only for members who joined at the beginning of the system. To increase the value of this information to workers, the rates should be given for affiliates who joined at different times.

The more fundamental problem in the fee discussion, however, is that workers do not seem to choose their fund managers on the basis of fee levels or rate of return differences. Instead, they choose their managers because of advertising campaigns, promotional gifts and cash payments, because of advice they receive from their peer groups or even just to do agents a favour. As the agents are paid their commissions per affiliate, they have a strong incentive to switch as many affiliates as often as possible. Since the transfer
wars are affecting the fund management companies’ performance negatively, one could expect the companies themselves reaching agreements within the industry to limit the amount of switching. Any types of agreements, however, should be monitored by the supervisors to ensure that they will not result in even higher costs for affiliates.

Finally, although there is no doubt that the costs of the new pension systems are high, there still remains the problem of finding the adequate comparator. Should the costs and efficiency of the private pension funds be compared to those of the old public pay-as-you-go systems, to publicly managed funded systems such as the complementary ATP system in Sweden and the Provident Funds in Singapore and Malaysia, or to similar non-bank financial institutions such as mutual funds? Given that the public pay-as-you-go systems in Latin America functioned badly and paid low benefits to the majority of workers, any comparison between the old and the new systems would, for the time being at least, result in favour of the private systems. In Colombia and Mexico, this comparison will actually be made by the workers who can opt for the old instead of the new benefit if they find it to their advantage.

Often, cost comparisons are made between pension and mutual funds. Here, however, the relevant comparator are not U.S. mutual funds which offer a wide variety of choices at low costs. Instead, comparisons should be made with Latin American mutual funds. The fees charged by Latin American mutual funds are currently still very high; Chilean mutual funds, for example, charge retail investors more than 5 per cent of assets as fees for equity funds and around 2.5 per cent for fixed income funds. 15

Comparing systems across countries, Valdés (1998) argues that for workers the cost of the private pension systems in Latin America is still lower than that of the above mentioned publicly managed funded pension systems such as the Southeast Asian Provident Funds. These publicly managed schemes are more expensive because the governments grant workers much lower rates of return than they would receive on bank deposits and investments in diversified portfolios; in Singapore, for example, workers are credited the average interest rate on bank deposits regardless of what returns the government gets on the investment of the provident fund’s assets. Taking this implicit tax into account, Valdés finds that Chilean commissions amount to only about half of what the Southeast Asian workers must pay.

What matters to workers are the net returns on their balances. As long as the pension systems are able to reach real rates of return as high as those observed in Chile, workers can indeed “afford” to spend considerable amounts of money on the administration of the schemes. But as soon as the real rates pf return start to fall, the net returns will be reduced substantially which will jeopardise the accumulation of retirement capital in the workers’ individual accounts. Therefore, the problem of high operating costs will need to be addressed in a more comprehensive way even if the net returns of the systems are currently high.

In this respect, the experience of the recently launched Bolivian system will be interesting to observe. The two successful bidders were selected on the basis of the fees they will charge to workers. The fees proposed by the two companies are the lowest in Latin America and correspond to about 1 per cent of the base salary, i.e. between half and a third of what pension fund managers charge in the other Latin American countries. If the companies will succeed in operating profitably at such fee levels, a similar bidding approach could be taken in other countries as well.

Minimum Rate of Return Guarantees and Portfolio Uniformity

15 Information provided by Salvador Valdés-Prieto.
Moving to a private defined-contribution system entails the individualisation of investment risk. Workers may obtain substantially higher replacement rates from their accounts than in the previous public defined-benefit schemes. At the same time, there is also a risk of low or even negative real rates of return and thus of much lower replacement rates than those offered by the old system. Minimum rate of return guarantees seek to limit the replacement risk to workers. In systems with individual accounts where workers must choose their individual fund management company but often lack the necessary knowledge of financial management issues, a minimum profitability guarantee is also a means of fostering workers’ confidence and trust in the pension system.

Minimum rate of return requirements were introduced in most of the reform countries. Following the Chilean example, Argentina, Colombia and, until the end of 1996, Peru required pension funds to guarantee a minimum profitability in order to protect affiliates from strong fluctuations in the return of the funds. The same approach will also be applied in the new pension system in El Salvador. In Chile and Peru, the minimum rate of return was defined as the lesser of 50 per cent of the average 12-month real rate of return of the whole system or 2 percentage points under the average real rate of return. In Argentina, the minimum rate of return guarantee is defined in nominal terms and the fluctuation band is set at 30 per cent above and below the average return.

In Colombia, a more complicated approach was chosen. The minimum rate of return is determined on a three-year rolling basis and is calculated as a composite of the AFP industry’s average performance and the performance of a synthetic reference portfolio designed by the pension supervisors. In Colombia, AFPs are also subject to different reserve requirements which are not directly related to the performance of the funds but apply to financial institutions more generally. Colombian workers who have saved a minimum balance in their accounts may also renounce the minimum rate of return guarantee to join other savings and investment plans in order to stimulate competition and widen the range of products available.

Uruguay is the only country that has introduced an absolute rate of return guarantee defined as 2 per cent nominal. The Mexican reformers, on the other hand, decided not to give any rate of return guarantees, the main reason being the supposed impact of this guarantee on the investment behaviour of the fund managers.

To support the minimum profitability guarantee, the fund management companies are required to maintain a fluctuation reserve. If an AFP performs above the benchmark, the excess return must be transferred to the fluctuation reserve instead of being credited to members’ accounts. If an AFP underperforms the benchmark, the shortfall has to be made up first from the fluctuation reserve and, if this is not sufficient, from the mandatory capital reserve. This minimum rate of return guarantee is backed by the government in case the fund management company turns out to be insolvent. If the fluctuation reserve is not used, most countries require the managers to credit the reserve to members’ accounts after a certain period.

The relative minimum rate of return guarantees have not been evoked very often. In all cases where fund managers had to make up for return shortfalls, the deficit was covered out of the companies’ fluctuation reserves. In the second-generation reform countries there have been no AFP bankruptcies yet where the government had to intervene. Badly performing fund management companies were merged with or taken over by other companies. But in Chile, during the financial sector crisis in the early eighties, four AFPs went bankrupt, were temporarily taken over by the government and subsequently sold to private shareholders. The pension fund assets which are segregated from the company were then kept in custody of the Central Bank were not affected by the failures of the fund management companies.

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16 For a detailed description of the calculation method, see Queisser, 1997.
In all Latin American reform countries, it can be observed that the pension funds are invested in very similar, if not identical portfolios. Not only do the pension fund management companies invest in the same classes of instruments but very often even into the same issues such as shares of recently privatised companies or particular bond issues. Partly, the uniformity of portfolios can be explained by the fact that the capital markets in most of the second-generation reform countries are still incipient and there are not many instruments that pension funds can invest in. Also, investment regulations are not always issued as speedily as the pension fund managers would wish in order to take advantage of new investment opportunities. But herding behaviour of pension funds can also be found in Chile where, after 17 years of operations, the companies have gathered a lot of investment experience and the capital markets have developed and deepened considerably.

Critics of the current regulatory practices in Latin America (e.g. Shah, 1997) argue that the investment of pension fund assets is overregulated and that the observed uniformity of portfolios is due to the combination of the asset restrictions investment regime adopted by all Latin American countries and obliging pension fund managers to guarantee a minimum profitability. Instead of leaving the investment decisions at the discretion of the managers and simply monitoring the outcomes, all Latin American pension regulators have defined detailed lists of permitted investment instruments along with limits up to which a pension fund’s assets may be placed into a certain instrument or issue. This practice has been criticised as distorting investment decisions and the regulators have been accused of not reacting flexibly enough to permit fund managers to pursue optimal investment strategies.

In addition, the guarantee of a minimum rate of return has come under strong criticism because it tends to promote herding behaviour of funds managers. In the Latin American countries which have introduced mandatory pension funds with minimum profitability guarantees, funds indeed have very similar portfolios and there is evidence that managers seek to obtain information from the regulators on the behaviour of their competitors and the “reference portfolio”. However, similar portfolio composition among pension funds can be observed also in countries where there are no minimum profitability guarantees. The reason for herding behaviour seems to be the reluctance of pension fund managers to underperform the market due to the potential loss of business (Vittas, 1997a). For the case of Chile, this is confirmed by a recent study by Ramirez Tomic (1997) which examines the impact of regulatory changes on the portfolio composition of the Chilean AFPs. The study finds that the herding behaviour of the Chilean pension fund managers actually decreased after the fluctuation band for minimum returns was tightened, although the effect was small.

Even if the investment and rate of return regulations in Latin America should promote herding behaviour, the risk of having uniform portfolios has to be weighed against the risk of consistently below average returns. Individual workers could suffer from a wide dispersion of returns that could be the result of the greater choice given to pension funds to have less uniform portfolios and of irresponsible behaviour by some fund managers. A compromise solution to this problem would be to allow workers to opt out of the minimum profitability guarantee (and also of all other minimum pension guarantees) and invest their retirement savings in other plans depending on their personal risk preferences. The questions remains, however, how the state will later deal with pensioners who suffered high losses and have to live on insufficient retirement income. If the state offers a social assistance pension or any other type of public subsidy for all aged in need, the opting-out solution would increase moral hazard. The moral hazard risk could be limited by letting workers opt out only with the part of their savings which exceed the balance necessary to provide a minimum pension. This option is envisaged, for example, in the Colombian pension law.

Annuities
The new pension systems of the second-generation reform countries are currently all in the accumulation phase. The workers affiliated with the defined-contribution systems are predominantly young and the number of old age pensioners is still very small. Therefore, the problem of how to draw down the balance accumulated in the individual account has not become an issue yet in the countries with recently reformed pension systems. In Chile, the number of pensioners in the private pension system is rapidly increasing; in March 1997, there were approximately 220,000 old age pensioners. Most of these pensioners, however, had not reached the official retirement age yet but had accumulated sufficient balances in their individual accounts in order to retire early. About 70 per cent of the annuities paid in 1996 were due to early retirement.

As described earlier, retiring workers have different benefit options. The first option is a gradual withdrawal of the accumulated balance. The AFP determines a monthly pension which is recalculated annually. The annual benefit is calculated as the difference between the capital available in the account and the cohort-specific “necessary capital” to provide an income stream until death; the “necessary capital” is determined on the basis of actuarial tables and regulated by the superintendency. The remaining balance of the pensioner’s account stays with the AFP and is invested in the same way as the active accounts. A characteristic – and problem – of this option is that the monthly pension decreases continuously over time for most pensioners; if the actual return on the remaining balance equals the expected return, the pension benefit declines over time because the balance decreases faster than the “necessary capital” (Díaz, 1993). This places pensioners in a difficult situation since they will have to complement the pension with money from other sources in order to maintain their living standards. Further, a pensioner who outlives the life expectancy of his cohort may eventually receive only the minimum pension or even nothing at all if he contributed for less than 20 years.

The programmed withdrawal option, however, does offer three advantages: First, in case of a pensioner’s death, the remaining balance can be passed on to the survivors. Second, pensioners are allowed to withdraw a lump-sum equivalent to the excess capital over the amount which is necessary to finance a pension corresponding to 70 per cent of previous earnings. And third, pensioners can change AFPs if they are not satisfied with the services. Currently, there are no fees charged for the programmed withdrawal which means in effect that pensioners are being subsidised by the active contributors. But since the programmed withdrawal does not provide any protection against the risk of insufficient retirement income for pensioners who live for a long period after retirement, more and more pensioners are choosing the second option, the purchase of an annuity from a private insurance company.

The purchase of an annuity is only open to pensioners who have enough funds in their balances to finance a benefit greater than the minimum pension. The annuity can be immediate, i.e. commence with retirement, or deferred in which case pensioners initially use the programmed withdrawal option and move to an annuity later. According to life insurance industry estimates, about 60 per cent of all Chilean pensioners choose the annuity option. The volume of annuity premiums in Chile has soared from US$51 million in 1987 to an estimated US$1.1 billion at the end of 1996. The number of life insurance companies in Chile has increased from 9 in 1988, the year in which early retirement was authorised, to more than 20 at present.

The annuity option, however, brings with it the problems of annuity markets arising not only in Latin America but in all countries around the world. The main problem of annuities is adverse selection: only

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17 Simulations by Díaz (1993) show that a pensioner who chooses the programmed withdrawal at age 65 would see his pension reduced by 50 per cent at age 80 if the actual interest rate equals the expected return.

18 Estimate provided by Consorcio Nacional de Seguros in May 1997.
people who expect to live for a long time, i.e. bad risks from the point of view of an insurance company, will be interested in purchasing an annuity contract. Due to this adverse selection and the fact that insurance companies cannot be sure that mortality tables correctly reflect life expectancy, risk premiums are high and annuity contracts will not be sold at an actuarially fair price to good risks, i.e. pensioners who are expected to die soon (Friedman and Warshawsky, 1990).

Depending on the type of annuity contract, a pensioner is exposed to several risks. In a fixed annuity contract, the insurance company commits to paying a fixed, usually nominal pension until the pensioner dies. Thus, while the insurance company assumes the demographic and the investment risk, the pensioner is exposed to the risk of inflation, unless the annuity is contracted in real terms, i.e. indexed to inflation. Annuities with inflation protection need adequate investment instruments to back the indexation, i.e. usually CPI-indexed government security. Very few countries have wide ranging financial sector indexation, like it is found in Chile, so that there are not many private sector issues which are indexed to inflation. Even CPI-indexed government bonds are currently only available in a small number of countries: the UK, Canada, Finland, Israel, Brazil, Chile, and, since recently, in the U.S.

Under a variable annuity contract, the pensioner uses the accumulated balance to purchase units in a mutual fund; the monthly pension is defined as a number of units and varies depending on the unit value. Premiums are usually invested in a portfolio of stocks but could also be invested in bond or money market funds. The investment risk is assumed by the pensioner while the insurance company assumes the demographic risk. If the units are adjusted to inflation, the pensioner is protected against price increases; if not, the pensioner also has to bear the inflation risk.

In Chile annuities, like practically all financial contracts, are expressed in Unidades de Fomento (UF) which are accounting units adjusted monthly to inflation. Currently, all annuities are fixed and indexed to the CPI. The annuity is purchased with the payment of a single premium at the beginning of the contract. The contract is irrevocable, the annuitant is not permitted to switch insurance companies and it is not possible to adjust the annuities later. Since the annuity is contracted with a single premium payment, the annuity is highly dependent on the value of the balance at the moment of purchase, particularly if the portfolio contains a high proportion of equity. In order to avoid strong fluctuations and expose workers close to retirement to the risk of low balance value and thus below average annuities, the Chilean regulators are thinking of making gradual pre-retirement conversion to fixed-income securities mandatory.

Annuities intermediation costs in Chile have increased from 1.5 per cent of the gross premium in 1988 to more than 5 per cent today. These costs include the marketing and administrative fees of the insurance companies as well as the commissions to brokers. An important factor for the high costs is the fact that all annuities are contracted on an individual basis and group contracts are not allowed. Instead, every pensioner has to negotiate independently with the insurance companies. The annuitant is required to provide the pension authorities with three different quotations for annuity provision. Partly, the high costs of annuities are also due to information problems: Life insurance companies that are part of a group with a related AFP are in a position to charge commissions which are lower by about 100 basis points than the companies which are not related to any fund management company. There appears to be evidence that AFP employees are selling information on potential annuitants to life insurance companies; therefore, a law has been proposed to publicise this information and thus make it available to all insurance companies.

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19 Diamond and Valdés (1994) estimate that only about 3 per cent of the AFP’s portfolio was exposed to inflation risk in 1992.
20 For a detailed discussion of the history and performance of variable annuities see Vaughan and Vaughan (1996).
Several suggestions have been put forward how to lower the cost of annuities. One way would be to allow group annuities rather than limiting the option to individual annuities. If annuities could be contracted for a whole group of affiliates similar to the purchase of disability and survivors’ insurance which is contracted for all affiliates of an AFP the costs could be expected to decline considerably.\footnote{Valdés (1994) compares the life-time charges of individual and group D.C. plans with annuities in the U.S. He finds that the individual annual charge is US$367.6 per covered worker while the group plan is only $177.6.} To reduce the adverse selection and thereby lower the premium, the government could also decide to make annuities mandatory, since insurance companies will then charge a price based on the average of all annuitants and not only the ones who expect to live long. In this respect, the Uruguayan pension reform has introduced an interesting innovation: pensioners affiliated with the private system will not be able to choose a programmed withdrawal; instead the purchase of an annuity contract will be mandatory.\footnote{See also Blake, Burrows and Orszag (1998).}

Valdés and Edwards (1997) argue that costs are also high because the annuity contracts are irreversible and there is moral hazard on the side of the insurance companies. The authors’ proposal is therefore to let annuitants switch insurance companies like they can switch AFPs during the accumulation phase. Based on the example of a method applied by the TIAA-CREF pension plan in the U.S.\footnote{TIAA-CREF is the occupational pension scheme for teachers’ and college professors.}, they propose a new mechanism for the retirement phase which combines the programmed withdrawal option with insurance against longevity. There would be a central pooling of risk for all annuitants and the monthly withdrawals from the balances would not be based on the individual life expectancy but on the whole group.
Chapter 6

Lessons for OECD Countries

The study of the Latin American pension reforms has shown that no two of the “second generation” reforms are alike but their basic common feature is a greater role for funded, privately managed pensions. In the design of their new systems, the individual countries have made different choices depending on their initial conditions such as the pension systems’ financial viability, the fiscal situation as well as the political environment in which pensions were reformed. The varied nature of Latin America’s recent pension reforms and their mixed results hold lessons for OECD and non-OECD countries alike.

In OECD countries, the problems of social security are primarily due to the demographic transition; in recent years, high structural unemployment has aggravated the situation in Western European countries. The pension systems in Latin America confronted crisis much earlier than would be expected judging by their demographic dependency ratios. Some of the reasons for the financial imbalance of the Latin American social security systems are different from those in OECD countries. Evasion, for example, has as yet been much less of a problem in most OECD countries; the management of the pension institutions is usually quite efficient and administrative costs of pension systems are much lower. But the effects of the financial crisis are the same: rising contribution rates resulting in unsustainable levels of payroll taxes, increasing government subsidies to stabilize the systems, and gradual reductions of benefit levels.

The second-generation pension reforms in Latin America show that a partial transition to funding is feasible in a democratic context

The second generation reforms in Latin America have demonstrated that structural pension reform is possible under very different economic, political and social conditions. Up to the late 1980s, the Chilean pension model was still regarded as too closely connected to the authoritarian Pinochet government and thus impossible to implement in a democratic context. The Chilean example has attracted a lot of attention and its perceived success has reduced the resistance to reform among political interest groups in other Latin American countries. Partially funded solutions similar to the new pension model established in Argentina are now being adopted in modified forms even in Eastern Europe (Hungary, Poland).

The reform experience of Argentina and Uruguay is particularly relevant for the pension reform discussion in OECD countries. First, the old-age dependency ratios and system dependency ratios in Argentina and Uruguay are very similar to those found in Western Europe and Japan; in Argentina, for example, in 1996 there were only 1.5 contributors per pensioner and 3.1 persons of working age per person above 60 years. Second, both countries had pension systems modeled on Western European social insurance schemes with high benefit levels, high contribution rates and state transfers to finance growing deficits. Thus, policy makers were faced with a scenario which resembles the crisis of the welfare state in high-income OECD countries. Third, neither country adopted a pure capitalisation scheme such as the Chilean model. Instead, they introduced mixed models maintaining a reformed version of their public pay-as-you-go systems combined with a privately managed funded pillar.
The transition to a fully or partially funded pension system can be financed in different ways

Particularly in OECD countries it is often argued that a transition to a partially or fully funded pension scheme is impossible because current generations would have to pay twice – for the pensions of today’s retirees and for their own future retirement. The second-generation reforms show that this is not the case. The reforms demonstrate that governments have a considerable degree of freedom in the design of the financial transition path and that there are choices in distributing the fiscal burden of reform. The instruments used to cover the financing gap are crucial as well as the parameters set in the reforms such as the cut-off age for eligible workers, the integration or exclusion of certain occupational groups who have special, more generous pension regimes, and the calculation and recognition of rights acquired under the old system. Further, pre-reform measures streamlining the existing pension programmes by increasing the retirement age, scaling down benefit entitlements and tightening eligibility conditions for old age and disability pensions were an important factor for cost reduction in all of the reform countries.

The second-generation reforms also show the distributional effects of postponing reform over a long period. In Latin America, a large part of the transition burden was carried by the pensioners in the years prior to reform. Piecemeal reforms and arbitrary benefit reductions, particularly through insufficient indexation, led to very low pension levels. The reforms are carried out on the basis of these low pension levels. While transition and future generations are likely to benefit from much higher pension levels, the current pensioners will not see little, if any improvement in their payments.

OECD countries should carefully consider the appropriate structure of the funded pillar given the high administrative costs of the Latin American models

The individual account management by specialised fund management firms has proven to be very costly and the competition among firms has led to an excessive switching of accounts. Some modifications of the rules and regulations for the fund management industry are currently being discussed in Latin America. Such changes may or may not be successful in lowering the costs to workers. For OECD countries considering the introduction of a mandatory second pillar, these experiences are useful when deciding on which providers to allow. Given that many OECD countries already have established employer-based second pillars, the Latin American model may not be the most suitable approach.

An alternative for the management of a compulsory second pillar could be the employer-based second pillar in Switzerland where plan sponsors have a choice of in-house management, banks or insurance companies for the management of the pension plan. Another option would be a public centralised institution or the establishment of a fund under the umbrella of the existing social security institution with private asset management through competing investment managers. Under such a model, the public institution would be able to negotiate asset management fees for all affiliates; at the same time, workers could still be given a choice between different investment portfolios depending on individual risk preferences. The second-pillar solutions in OECD countries are likely to be much more diverse and shaped to individual country conditions than in Latin America where the funded pillars were built from scratch without any pre-existing structures to build on.

Successful pension reform requires consistency and consensus

The experience of Chile and the second-generation reform countries shows that the consistency of the pension reform concept was crucial to bring reform about and implement the adopted strategy. Consistency refers both to the internal consistency of chosen model and to consistency with the overall
economic and social policy framework in the individual country. This can be seen in such diverse cases as in Chile, where pension reform was an integral component of the economic and political restructuring concept elaborated by a group of neoliberal economists, in Colombia where pension reform was part of a larger reform concept and was preceded by external liberalisation and reform of the labour code, and in Bolivia where pension reform was integrated into the privatisation cum capitalisation policy of the government. The absence of consistency was the reason for the near failure of the Peruvian reform which made it necessary to relaunch the private system after the design flaws had been corrected.

The importance of building consensus can be seen in the quality of the political discourse in Latin America in the early nineties. The overriding objective of pension reforms, regardless of the model proposed, must be the improvement of retirement income security; this should be kept in focus in the political debate. All other effects of pension reforms on capital markets, financial sector infrastructure, or privatisation, however beneficial they may be, are subordinated objectives of pension reform. A policy measure that has a positive impact on any of these other areas but fails to improve the provision of pensions, should not be given the label of pension reform. Much confusion and unnecessary confrontation has arisen in the political arena because the primary aim of reform – to provide better and sustainable old age benefits – has not been spelled out clearly.

**For OECD countries it will be important to arrest the financial deterioration of their pension systems now instead of waiting for the systems to collapse**

Although reform may be easier when the financial problems are more obvious to the electorate and to the interest groups, measures have to be taken now. The longer reform is postponed, the more expensive the transition to a new system becomes. The history of failed reform attempts in Argentina and Uruguay shows that the political resistance to pension reform can stop all measures to restore financial equilibrium of the system until the situation has deteriorated so much that no interest group can gain any longer from postponing reform. At the time of reform, the Argentine pension system was financially bankrupt and pensioners were being paid only a fraction of their entitlements. There were pensioners’ strikes, numerous judicial claims brought against the social security administration and several temporary agreements to retire the debt owed to pensioners which were broken every time. The losers in this process are clearly current pensioners whose real benefit levels deteriorated dramatically before the reform and who have little chances of expecting any improvements during the transition process as additional financing requirements are imposed on the government.
Annex 1: Pension Reform in Peru

The Peruvian pension reform was launched in June 1993 on the basis of Law 25897 of 1992. A new defined-contribution pension scheme (SPP), decentralised and managed by private pension fund management companies, was introduced as an alternative to the existing defined-benefit “pay-as-you-go” system (SNP). Contrary to the Chilean pension reform, which has closed and is gradually phasing out the old public system, the Peruvian reform involves the continuing coexistence of two pension systems. As in Chile, workers switching to the private pillar are entitled to recognition bonds for their past contributions to the public pillar.

Coverage in either the public pension system (IPSS) or in the private pension system (SPP) is mandatory for all dependent workers. Independent workers may voluntarily join either system. At introduction of the SPP in June 1993, all workers already affiliated with the IPSS were given the choice of switching to the SPP or remaining in the public system. This option does not expire and transfers from the IPSS to the SPP are possible at any time. Workers who choose the private system are not allowed to go back to the public system.

At the end of 1997, about 1.73 million workers were affiliated in the SPP representing about 21 per cent of the estimated economically active population and 47 per cent of all dependent workers. But only about 760 000 workers or 44.3 per cent of all affiliates contribute regularly to their accounts. Around 10 per cent of the economically active population are still affiliated with the public system.

The Public System

The public pension system (SNP) continues to co-exist with the new private system. It still covers approximately 1 million active workers and about 300 000 retirees. In 1996, contributions and income from the investment of reserves were still sufficient to cover an expenditure of approximately US$400 million, i.e. about 0.6 per cent of GDP. The operational deficit of the public system is expected to increase substantially over the next decade because the departure of predominantly younger workers to the new system has caused a sharp decline in revenues.

In addition, there is a small, very generous defined-benefit system (Cedula Viva) for several groups of civil servants and employees of former state-owned enterprises. It covers about 50 000 active workers and 250 000 pensioners. The total expenditure of this system which is financed by the state government, public enterprises, local governments and other public agencies is not known; according to the World Bank (1996), the central government’s share alone amounted to US$400 million in 1996. Initially, workers who were affiliated with the cedula viva system were not allowed to switch to the new private system; since July 1996, however, they too are allowed to transfer to the SPP.

Transition Cost

The Peruvian government decided to finance the (partial) transition from the old pay-as-you-go system to the new funded system through a combination of different instruments. As in the case of the Chilean reform, government debt was issued to finance the recognition of workers’ past contributions to the old system. In addition, public savings which are part of a public sector adjustment programme are used to pay off the implicit debt of the old pension system. The government has also established a fund financed with
proceeds from the privatisation of public enterprises; this fund (Fondo Consolidado de Reservas Previsionales) is earmarked for the payment of pension obligations.

Past contributions to the old system are honoured by the government through the issue of a recognition bond for workers who have contributed during the six months before the reform and for at least four years during the last ten years prior to 1992. The face value of the bond depends on the months of contributions made and the average salary during the 12 months prior to December 1992. Due to the lack of reliable contribution records, however, the entitlement has to be estimated for most workers. Since actual salary records are also unavailable, workers who switch to the new system are asked to provide sworn statements of their previous earnings. Contributions to the old system are recognised only up to a ceiling originally set at S. 60 000; due to adjustments for inflation, it now corresponds to about US$46 000. The recognition bonds are indexed to prices but carry no real interest. In the amendment to the pension law passed in November 1996, the requirements to obtain a recognition bond were loosened to offer a greater incentive for affiliates to switch to the new system. Now affiliates only have to have contributed for four years during the last ten years in order to qualify for a recognition bond.

In September 1996, the present value of the recognition bonds already issued to workers was about US$137 million corresponding to about 0.2 per cent of GDP. Obviously, the total amount of recognition bonds depends on the number of workers switching from the old to the new system. According to World Bank estimates, the present value of the obligations of the public pension system net of contributions in September 1996 amounted to US$10-14 billion, i.e. around 15-20 per cent of GDP (1996). If no further reforms are undertaken to curb benefit expenditure or change the calculation method of the recognition bonds, this amount will need to be financed by the government.

Performance of the New System

The pace of affiliation to the new private system was high in the beginning due to extensive publicity campaigns by the pension fund management companies. But monthly affiliation declined continuously from more than 100 000 workers during the first three months after the system was launched in July 1993 to less than 5 000 workers in June 1995.

The decline of affiliation was due to several factors. First, the uneven competition between the SPP and the IPSS resulted in disincentives for workers to join the SPP. The contribution rate payable by the worker to IPSS was only 3 per cent compared to 14 per cent in the SPP. Workers who switched were given a salary increase of about 13.5 per cent to compensate for the higher rates in the SPP. However, some private and public sector employers had difficulties paying this increase which effectively resulted in a rise of labour costs because employers had only paid a 6 per cent contribution before.

Second, the retirement age in the SPP was 65 years for men and women while retirement ages in the IPSS were only 60 and 55 years for men and women, respectively. Third, implementation problems, particularly the failure of the government to issue the promised recognition bonds, reduced the confidence of workers in the new system. Fourth, the government did not pay the contributions for public sector employees who had joined the SPP. Fifth, affiliates were not properly informed about the implications of the pension reform; many workers thought, for example, that they would lose health insurance coverage if they switched from the public to the private pension system.

After contribution rates between the SPP and IPSS were equalised at 11 per cent and a uniform retirement age of 65 years was set for both systems in July 1995, monthly affiliation increased by a factor of 5. In the last quarter of 1996, about 40,000 workers on average joined the SPP every month.

The rules and regulations to which the pension fund management companies are subject in Peru are very similar to those applied in Chile. Like in Chile, the Peruvian companies are called Administradoras de Fondos de Pensiones (AFPs). The AFPs are licensed, regulated and supervised by a specialised agency, the Superintendencia de AFPs (SAFP). The AFPs are not allowed to do any other business than pension fund management. They have to be set up as joint-stock companies. Banks, insurance companies, and other financial institutions that already operate in Peru as well as IPSS are prohibited from owning AFPs. The holding companies of such banks and other financial institutions, however, may invest in AFPs.

Each AFP is allowed to manage only one fund for all affiliates. The retirement capital managed by an AFP is an independent entity, which is legally and financially separated from the companies’ capital in order to ensure that members’ assets are protected in case of an AFP’s bankruptcy. The assets of the pension fund belong exclusively to the affiliates, they are not attachable, and are not affected by any financial losses suffered by the AFP. The transaction requirements and custodial arrangements are similar but a little less stringent than in Chile. In Peru, all transactions other than CD primary issues must be made through the securities exchange. In Chile in the beginning only the Central Bank was allowed to act as custodian for AFP transactions but now private companies are authorised as well. In Peru, any independent financial institution may perform the role of custodian.

AFPs must have a minimum capital of S. 500,000 or approximately US$200,000. Further, they must keep a mandatory investment reserve so that possible shortfalls arising from the minimum profitability guarantee can be compensated for. This reserve (encaje) is equal to 0.7 per cent of the total fund under management plus an add-on depending on the risk-rating of the fund’s investments. This usually results in a total reserve of about 1 per cent of assets under management, which is equivalent to the encaje requirements in Chile.

The new pension system started up in June 1993 with five AFPs. By the end of 1993, eight AFPs had been established. All AFPs are joint ventures with foreign partners. Market concentration has increased as a result of mergers. The three largest AFPs account for 74 per cent of all affiliates. The Herfindahl index of concentration is 2264 in the case of affiliates and 2228 in the case of funds under management. The eight AFPs started out in 1993 with a capital of about US$30 million; approximately half of the total equity was owned by foreigners. Due to the high start-up and expansion costs, the total AFP capital was increased to US$150 million by the end of 1996.

The commissions charged by the Peruvian AFPs are currently the highest in Latin America. In December 1997, the average variable commission was 2.34 per cent and the average premium payable for disability and survivors’ insurance amounted to 1.38 per cent of wages. The insurance premium is higher than in most other reform countries and has not been declining markedly as observed in the other systems. Since fixed commission are no longer allowed, workers paid on average a total commission of 3.72 per cent. A law amendment of 1997 also allows for discrimination of commission between affiliates in order to discourage them from switching AFPs. For benefit payments, both fixed and variable commissions are still allowed.

Despite the high commissions, the AFP industry has been running high operating losses. In the first three years of operations, the accumulated losses of the system amounted to more than S. 200 million (approx. US$82 million) corresponding to two thirds of the AFPs’ total capital. By the end of 1997, three out of the five AFPs were profitable and the industry as a whole was recording positive net results.
The total funds under management by the AFP system amounted to S. 4.1 billion or about US$1.5 billion at the end of 1997, corresponding to about 2 per cent of GDP. Out of the total contribution rate of currently 11 per cent, 8 per cent is used for long-term capital accumulation. The monthly inflow is about US$25 million. It was originally planned to increase the contribution rate for capital accumulation to 10 per cent starting January 1997, but in the recent amendment to the law, this increase has now been delayed until after December 1998. There is no income ceiling for the calculation of pension contributions and mandatory contributions are not deductible from income tax. Pensions are also subject to income tax, which means that effectively workers are taxed twice.

The investment of the funds is subject to strict rules and regulations which are issued by the SAFP. Like in Chile and Argentina, the rules prescribe only maximum but no minimum investment limits. The maximum investment limits are established by the Central Bank in consultation with the SAFP. Central bank authorisation is required for investment in foreign securities. Up until now foreign investment has not been allowed. However, it is expected that investment of pension funds in Brady Bonds will soon be authorised by the SAFP.

Corporate and financial sector issues are also subject to limits determined in relation to the consolidated capital of the issuer, the size of the AFP and its market share as well as the risk rating of the issue. All instruments except for securities issued by the government and the Central Bank are subject to risk classification. Companies classifying the risk of AFP investments are required to register with the SAFP. Since this industry has yet to develop, however, a Risk Classification Commission consisting of government officials and financial sector representatives will be in charge of risk classification until mid-1998.

Pension funds are valued daily and marked to market. Like in Chile and Argentina, the Peruvian system originally had a minimum profitability guarantee in order to protect affiliates from strong fluctuations in the return of the funds. The minimum return was defined, like in Chile, as the lesser of 50 per cent of the average 12-month real rate of return of the system or 2 percentage points under the real rate of return. Peruvian AFPs, just like Chilean AFPs, were required to maintain a fluctuation reserve. If an AFP performed above the benchmark, it was required to transfer the excess return to a fluctuation reserve instead of crediting it to the affiliates’ balances. If an AFP underperformed, the shortfall had to be made up first from the fluctuation reserve and, if this was not sufficient, then from the mandatory reserve (encaje).

In the November 1996 amendment, the upper band of the profitability guarantee was removed and thus the fluctuation reserve was abolished. At the moment, there is no minimum profitability guarantee at all; the law provides for a minimum profitability requirement to be regulated by the SAPF but, as already noted above, no such regulation has been issued to date. The only reserve that the AFPs still have to keep to protect affiliates in the case of fraud or mismanagement is the encaje. This mandatory reserve not only depends on the size of the fund under management (as in Chile) but also on the risk of the fund’s investments.

The portfolio of the AFPs has been diversified considerably since the start of the system. While most of the funds were placed in bank deposits in the beginning, already about 34 per cent of total assets were invested in shares by the end of 1997. This represented about 4 per cent of the market capitalisation of the Lima Stock Exchange (Salomon Brothers, 1996). In Chile, pension fund investment in equities was still zero five years after the start of the AFP system, but they have now reached 26 per cent of assets and about 13 per cent of the Santiago market capitalisation.
Investment of pension funds in foreign securities is theoretically subject to a limit of 10 per cent of assets. However, the real restriction appears to lie in the fact that a list of foreign investments needs to be permitted and risk-rated before AFPs can invest and that not many permitted foreign instruments have been identified yet. The AFPs portfolio shows a very high exposure to the banking sector which at the end of 1996 accounted for 39 per cent of all investments (bonds, deposits and shares). The AFP regulations do not limit the overall exposure of AFPs to the banking sector. If investments in other financial institutions, such as leasing companies and consumer credit institutions, are also taken into account, the share of financial sector investments accounts for more than half of all assets. Particularly the large share of subordinated bank bonds in the AFP portfolio could cause problems. These bonds are treated as capital in the Peruvian banking regulations and are admitted for the AFPs reserving purposes as encaje (Downs, 1996). Since in terms of risk, the subordinated bonds are closer to equity than bonds, this could mean that the reserves might turn out to be insufficient, particularly as AFPs are no longer required to maintain fluctuation reserves.

The differences between the portfolios of the five AFPs are small. The reason for the similar investment choices may be due to several factors, including the direct and indirect regulatory restrictions and the limited availability of investment instruments. The Peruvian government has not issued long term debt since the late 1980s and there is a limited supply of long-term government bonds on the market. Trading on the Lima Stock Exchange is very limited; it averages less than US$20 million a day and only about half of the stocks are actively traded. In 1996, the equity trading volume corresponded to about 6 per cent of GDP (IFC, 1997).

The real rate of return of the Peruvian AFPs has been 8.2 per cent since the start of the system in 1993. Until January 1997, AFPs were only required to report and publish their returns without taking account of their commissions. Now, however, returns net of commissions will have to be reported. According to World Bank calculations, the returns net of commissions for a worker who joined the new pension system in July 1993 were -0.32 per cent in 1994, -0.92 per cent in 1995, and 4.46 per cent in 1996 (Shah, 1997).

The retirement age in the Peruvian pension system is 65 years for men and women. At retirement, the accumulated balance and, if the pensioner had contributed to the old public pension, the recognition bond are converted to monthly pension payments. Early retirement is possible only if the balance accumulated in the individual account is sufficient to finance a pension equivalent to 50 per cent of the average salary during the last ten years. The law contemplates four different types of old age benefits: programmed withdrawal, personal annuity, family annuity, and a combination of programmed withdrawal and annuity. A pensioner choosing the programmed withdrawal option will receive monthly payments based on the individual life expectancy. If the beneficiary dies before the balance is drawn down, the survivors will inherit the remaining balance. Under the option of personal annuity, the beneficiary would use the balance in the individual account to purchase an annuity. Currently, all annuities are available only from insurance companies; the law, however, contemplates the option of AFPs also offering annuities at a later stage.

The AFPs are required to provide their affiliates with coverage against the risks of disability and survivorship. Currently, all AFPs insure their members with approved insurance companies. The law contemplates, however, that after five years of operations, AFPs may also self-insure these risks in which case they would be required to establish a special fund and purchase additional reinsurance. Further, it is envisaged that in the future workers will be able to individually choose their insurance company instead of the AFPs negotiating a group insurance plan for all its affiliates.

The Peruvian AFP pension system does not have a minimum pension guarantee. In Chile, members who have contributed for at least 20 years but do not reach the minimum pension level are entitled to a supplement payable by the government. Further, pensioners with at least 20 years of contributions who
choose the phased withdrawal option and outlive their benefit payments also receive a government-
financed minimum pension. Neither of these guarantees currently exists in Peru. In 1995, an amendment
established the possibility of introducing a minimum pension by decree, but no guarantee has been given
yet, however. Since the minimum profitability requirement has also not been specified yet, there does not
seem to be a safety net at all for pensioners of the private pension system. Peru also does not have a social
assistance scheme, which would take care of old age poverty.

The absence of a minimum pension guarantee and of a specified minimum profitability requirement,
coupled with the continuing requirement to place all funds with one AFP account exposes individual
workers to the risk of substantial losses in cases where fund managers were to suffer substantial, and much
above average, losses. Individual workers could suffer from a wide dispersion of returns that could be the
result of the greater choice given to AFPs to have less uniform portfolios and of aberrant behaviour by
some fund managers. This is an issue that confronts all privately managed mandatory pension pillars based
on individual capitalisation accounts.

The number of pensioners in the Peruvian private pension system is still small. By August 1996, only
134 old age pensioners, 85 disability pensioners and 3 559 survivors were receiving benefits. Of the old
age pensioners, about a third had chosen phased withdrawal, a third an annuity, and a third the
combination of the two.
Annex 2: Pension Reform in Colombia

In April 1994, Colombia introduced a new privately managed pension scheme as an alternative to its existing public pension system. Like in the case of Peru, all workers are given a choice between the public and the private pension system. The private pension system has many of the features of the Chilean system. It was modified, however, in several areas to take account of the characteristics of the Colombian financial sector and the existing institutional structure of social protection.

Affiliation in either the public or the private pension system is mandatory in Colombia for all dependent workers of the public and the private sector; independent workers may join either system voluntarily, provided their contributions reach a minimum level. Workers already affiliated in the old system are allowed to switch to the new system at any moment and affiliation of new labour force entrants in the new system is not mandatory. The Colombian law is even less restrictive than the Peruvian in that workers may switch back and forth between the public and the private system every three years while in Peru this was allowed only during an initial period and only for a restricted group of affiliates. Moreover, various groups of workers, such as workers in the oil sector, teachers and the armed forces, have their own schemes, which continue in existence after the passage of the reform programme.

The coverage of the public and private pension systems together amounts to about 30 per cent of the economically active population (EAP). The low coverage is partly due to the large size of the informal sector in Colombia but also to a high degree of evasion on the part of employers. Taking only the urban EAP, the combined coverage of the public and private systems is 75 per cent.

To extend coverage, particularly to low income groups, Colombia has introduced an element of redistribution in its private pillar: All workers earning more than four times the minimum wage are required to contribute an additional 1 per cent of their income to the Solidarity Pension Fund (Fondo de Solidaridad Pensional). These contributions are matched by government transfers to the fund. The fund is managed by the government and its resources are used to supplement the contributions of workers, both wage earners and independent workers, to enable them to join the pension system. The workers supported with this subsidy have the choice of joining either the public or the private system. There is no universal entitlement to this subsidy for all low-income workers, however. The programme is targeted in certain areas and subsidies are given on a discretionary basis.

The Public System

The uniformed public pension system was a defined-benefit pay-as-you-go which evolved according to pattern typical for the region. It was fragmented along occupational lines and offered varying but mostly fairly generous benefit entitlements and eligibility conditions. The system, however, started relatively late as it was introduced only in 1965. Therefore, the system dependency ratios were still quite favourable and overall financial situation of the pension system was stable compared to the countries with more mature pension systems. As part of the pension reform, the benefit and eligibility conditions were tightened. The new regulations are phased in only very gradually, however, and for the next decades most workers who chose to remain in the public system will still be able to retire under the old conditions. Another feature of the overall pension reform was the introduction of Colombia’s first non-contributory pension which is financed out of general revenue and paid to retirees who do not fulfill the conditions for receipt of social insurance benefit (Valdés, 1996).
The public pension system is still highly fragmented and is only slowly becoming more unified. Before 
the pension reform of 1994, pensions were provided by a pension system for private sector employees 
(ISS) and more than 1 000 public sector pension institutions. In addition, various other pension plans were 
offered directly by public and private enterprises for their employees; these plans in some cases allowed 
the employers to opt out of the mandatory public system. The fragmentation of the system caused 
considerable administrative problems and presented an obstacle to labour mobility as benefits were usually 
not portable between the various schemes. This fragmentation continues to be a problem as unification or 
even a harmonization of terms and conditions has yet to take place.

In order to equalise contribution rates between the public and the private system, the contribution rate for 
public system was raised from originally 6.5 per cent to 13.5 per cent of wages. This implied a strong 
increase of revenues for the public system. In 1996, the consolidated public pension system was in surplus. 
The total assets under management amounted to about US$2.4 billion in July 1997 which is about twice 
the amount of funds managed in the mandatory private pension system. Theoretically, the reserves of the 
public system should be managed by competitive trust companies and have to meet minimum rate of 
return requirements; but since no regulations have been issued for minimum rate of return guarantees, this 
provision is not applied and consequently, the reserves are not invested in a diversified portfolio (Orozco, 
1997). In July 1997, 95 per cent of the reserves are invested in government bonds and 5 per cent in shares 
of the mortgage bank Banco Central Hipotecario which the government sold to the pension institute. Since 
1993, the real rate of return of the public system has been around 8 per cent.

**Transition Cost and Recognition Bonds**

Estimating the transition cost of the Colombian pension reform is subject to far more uncertainties than in 
the Chilean case. Since in Colombia, the public pension system is kept open both to new entrants to the 
labour force and to workers who wish to switch back from the private system, contribution revenues and 
benefit expenditures of the public system are difficult to project. Further, the overall pension coverage of 
the labour force is very low in Colombia and coverage extension will depend on economic growth and the 
evolution of formal labour markets.

Compared to other countries, the Colombian transition cost is relatively low due to the pension system’s 
low coverage before the reform and the relatively low age of its affiliates. Simulations by Schmidt-Hebbel 
(1995) and Ayala (1996) calculate the transition costs for various scenario. In the non-reform constant-
coverage scenario, public pension expenditures would rise from 1.1 per cent of GDP in 1994 to 2.5 per 
cent in 2025. In the simulation of the actual Colombian reform scenario the following results are obtained: 
The present value of the total debt of the public pension system made explicit through the pension reform 
amounts to 84 per cent of GDP; of this debt, only 14 per cent is due to the issue of recognition bonds while 
the cumulative operational deficit of the public system reaches almost 70 per cent of GDP. The transition 
period is projected to be completed by the year 2060; after 2060, there will only be a steady-state “core” of 
affiliates left in the public system which would result in a remaining implicit debt of 4.5 per cent of GDP. 
On an annual basis, the reform would require transition financing of about 0.9 per cent of GDP initially, 
increase to a peak of 2.61 per cent in 2013 and decline gradually towards 2060.

Like Chile and Peru, Colombia has chosen the concept of recognition bonds to compensate workers 
switching over to the new system for previous contributions to the old system. The Colombian recognition 
bond, however, is not calculated to reflect the actual amount of contributions that workers made to the old 
system; instead, it seeks to compensate workers according to the net present value of the future pension

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25 Data provided by the Instituto de Seguros Sociales of Colombia.
they would have received from the old system. This approach was chosen because contributions to the public system were mostly very low and it was very difficult to reconstruct the individual workers’ contribution histories (Ayala, 1996).

The bond is calculated as the amount that should have been saved in the individual account in order to accumulate the necessary capital to finance an annuity equal to the corresponding pension entitlement in the old system. First, the future pension entitlement of a worker remaining in the public system is estimated. This projection takes into account the current salary of the worker and the ratio of pre-retirement salaries and the national average salary. There is a maximum ceiling set on the projected benefit: 90 per cent of the last salary or 15 minimum salaries whichever is lower. Then, the net present value of the projected pension is calculated. The value of the bond is determined as the amount that the worker would have had to save corresponding to his or her period of contributions to the public system in order to finance the reference pension assuming a constant pace of accumulation. For the calculation, a constant real rate of return of 3 per cent per year is assumed.

As in the case of the Peruvian pension reform, Colombia too has been experiencing implementation problems with the recognition bonds. In contrast to the other Latin American countries, which reformed their pension systems, Colombia is faced with a special difficulty due to its extremely fragmented system for public sector employees and the fiscal decentralisation of the country (Queisser, 1995). Unlike Chile, which unified the different systems in an umbrella organisation, Colombia has kept all of its different public pension institutions with the result that there is not one single institution responsible for issuing the bonds.

While those bonds, for which the central government is responsible, are now being issued without major delays, the regional governments are still not fully complying with their obligation to issue bonds for affiliates switching from regional public sector funds to the new private system. Problems also arise with the regional recognition bonds, which are due to workers who are switched to the public system ISS as more and more regional public funds are closed down. The option of switching back and forth between the public and private systems will further complicate the management of recognition bonds. The bonds are cashed in and the proceeds go to the public system when affiliates who switched first from the public to the private system return to the public scheme again.

The Private Pension System

Affiliation in mandatory private pension funds stood at about 2.3 million in August 1997 which corresponded to 14 per cent of the economically active population. About 2.6 million workers are affiliated in the other pension schemes of the public system, which would correspond to an additional 16 per cent of the economically active population. This number is a rough estimate, however, since the files of the public system have not been revised and cleaned and the errors in the registers are considered to be substantial.

The private pension system in Colombia took off more smoothly than in Peru and monthly affiliations in the initial period were within the range of what the industry had expected. This was due mainly to two reasons. First, competition between the public and private system took place under more even conditions than in Peru. In Colombia, the public system was at least partly rationalised as part of the reform. Benefit eligibility conditions as well as contribution rates were brought in line with the parameters of the private system so that there was no cost differential between the two systems. But the impact of the rationalisation could have been greater if the transition period to the new, less generous conditions was shorter. The incentive to affiliate with the new system would also have been stronger if the new rules had been applied
to all workers and not just to younger ones (those below 35 for women and below 40 for men). Second, workers were already familiar with the concept of private fund management companies due to the Colombian severance programme. Severance funds, which are compulsory, are already administered by private fund managers. These funds have provided the basis for the establishment of the new private pension system.

Due to the short existence of the new system and given the requirement of three-year intervals between transfers, there has not been any switching back to the public system yet. It is not expected that workers who are in the accumulation phase will switch back to the public system in great numbers. More transfers may take place shortly before retirement if, depending on the investment performance of their individual accounts, workers might find it beneficial to switch back to the public system in order to collect higher pension payments.

At the end of 1996, 41 per cent of all affiliates in the private system were new entrants to the labour force, while 59 per cent had switched over from the public system. According to the Banking Superintendency, the majority of new labour force entrants choose to join the new private system, although there are no official numbers available. Affiliates are allowed to switch AFPs every six months.

There is no official data on the ratio of affiliates and contributors in Colombia. Given that in Chile, Argentina and Peru, about 45 to 50 per cent of all affiliates contribute regularly to their accounts, a similar ratio can also be expected for the case of Colombia. Further, there has been a serious problem of duplicate affiliation in the private system. More than 177 000 workers were found to be simultaneously affiliated with more than one AFP. The revision of the files has led to substantial adjustment of affiliation numbers in some AFPs. In the case of one AFP, the cleaning of files resulted in a decrease of affiliation by more than 46 000 workers.

Management Companies

The Colombian rules and regulations for the management of pension funds follow the Chilean example closely but are less strict in several areas. The management companies, called Administradoras de Fondos de Pensiones Obligatorias (AFPs) have to be set up as joint-stock companies or as co-operatives with the sole purpose of managing pension funds. Companies, which were already managing severance funds, have been allowed to also manage pension funds as long as the two businesses are separated financially. Further, AFPs may also manage voluntary pension funds, which are subject to less strict rules and regulations. The voluntary pension business has to be separated from the management of the compulsory pension funds.

The ownership regulations for pension fund management companies are less restrictive than in Chile. In Colombia, AFP shares can be held by public sector institutions, by co-operatives, labour unions, mutual funds, co-operative banks, and family benefit funds (Cajas de Compensación Familiar). Insurance companies and other financial institutions are also allowed to be shareholders of AFPs.

Colombia did not choose to establish a separate independent supervisory agency for the new pension system. Instead, the AFPs are licensed, regulated and supervised by the Pension Department of Superintendencia Bancaria, the agency supervising the banking system as well as insurance companies and other financial institutions. The rules and regulations for the pension system are issued by the Ministry of Finance. The decision to integrate pension fund supervision with banking supervision was motivated by the fear that an additional superintendency might be subject to regulatory capture.
All pension fund management companies have to establish compulsory reserves to ensure safety and liquidity. First, AFPs are subject to the reserve requirements for financial institutions, which mandate a reserve of 50 per cent of the subscribed capital. In addition, 10 per cent of annual profits have to be transferred to this reserve. Second, AFPs must establish a reserve for stabilization of returns. Like in most other Latin American countries, AFPs are required to reach a minimum profitability benchmark. In Colombia, the benchmark is calculated as a combination of the average performance of the industry and a composite index of financial sector performance. The stabilization reserve requirement is identical to the encaje rule in Chile mandating a reserve of 1 per cent of assets under management.

Third, AFPs in Colombia must also contribute to the financial sector guarantee fund (FOGAFIN), which protects members’ contributions in the case of liquidation of an AFP. This fund guarantees 100 per cent of the mandatory contributions plus interest and voluntary contributions up to a ceiling of 150 minimum salaries (Ayala, 1996). If any of the mandatory pension reserves are not kept at the required levels, AFPs must pay penalties. These go to the Solidarity Pension Fund, which is used for extension of coverage as described earlier.

Like in Chile, the pension assets have to be legally and financially separated from the assets of the pension fund management companies. In Colombia, however, AFPs are allowed to manage more than one pension plan for the affiliates. Affiliates who have reached a minimum balance in their individual account are allowed to invest the excess in different pension plans. The law also envisages the possibility for affiliates to reject the minimum profitability guarantee if they want to invest in riskier portfolios. At the moment, no such alternative pension plans are offered. Given that almost 80 per cent of the affiliates are younger than 35 years and incomes are low, not many workers qualify yet for this option. However, several AFPs are in the process of developing new products.

**Market Concentration**

When the new pension system started in April 1994, eight of the ten existing severance fund management companies were licensed to manage pension funds. In December of the same year, an additional company was licensed to manage only pension funds. At the end of 1996, there were eight companies managing both pension and severance funds, one company managing only pension funds and one company managing only severance funds. There are four AFPs with foreign shareholders.

The Colombian private pension system is far less concentrated in terms of affiliation than the Peruvian, Chilean and Uruguayan systems. The top three companies control 60 per cent of the market in terms of affiliates compared to 74 per cent in Peru. The Herfindahl index of concentration is 1736 in the case of affiliates and 1705 for the assets under management. In Peru, the figures are 2264 and 2228, respectively.

The total capital of the AFP industry amounted to about 250 billion pesos (about US$236 million) at the end of 1996. Due to high operational losses of more than 170 billion pesos (about US$160 million), which corresponded to almost 70 per cent of total capital, the net worth of the AFP system amounted to only 73 billion (about US$68 million). The operational losses were basically due to high advertising costs and salaries for the salesforce. According to AFP industry studies, the Colombian companies expect to break even after four years of operations, i.e. in 1998.

The AFPs are free to choose the base for the calculation of commissions, i.e. they can charge fees as a percentage of the affiliates’ base salary, of the contributions, or of the balance in the individual account. The only restriction imposed by the law is that total commissions, including the premiums charged for disability and survivors’ insurance, may not exceed 3.5 per cent of the contributor’s base salary. Also, the
Colombian law allows for fee differentiation for affiliates within the same AFP, for example to offer discounts to affiliates who stay for a certain minimum period in one AFP. All of the commissions currently charged are variable commissions calculated as a percentage of the contributor’s base salary; none of the AFPs is charging a fixed commission or any asset-based fees.

The total funds under management of the mandatory pension system amounted to about US$1.2 billion at the end of 1997, corresponding to approximately 1.3 per cent of GDP. Voluntary pension funds had assets of an additional 74 billion pesos or about US$69 million. The contribution rate to the individual pension account was initially set at 8 per cent in 1994 and, as originally planned, was increased to 9 per cent in 1995 and to 10 per cent in 1996. In addition, up to 3.5 per cent of salary are payable to cover disability and survivors’ insurance as well as the fund management commissions. 75 per cent of the contribution is payable by the employer and 25 per cent by the worker. Contributions are mandatory up to a pensionable salary of 20 minimum wages. The mandatory and voluntary contributions to the AFPs are deductible from income tax.

The investment regulations are much more relaxed in Colombia than in Chile or Peru. Investment in public debt is limited to 50 per cent of assets under management. Investment in equities and foreign securities was allowed from the beginning of the system. Contrary to the practice in most other Latin American countries, the Colombian supervisors require no risk evaluation prior to investment.

The portfolio of the Colombian AFPs has been diversified only slowly over the past years. As observed in other Latin American countries, the portfolios of the different AFPs are very similar in their composition. In their investment strategy, the AFPs have consistently shown a strong preference for fixed income securities. In 1995, almost 60 per cent of assets were invested in bonds and term deposits. By mid-1997, the share of term deposits was reduced significantly to 15 per cent but there is still a strong emphasis on bonds, particularly those issued by financial institutions as well as by quasi-public entities such as the coffee stabilization fund and the rural development fund. The high percentage of assets invested in the financial sector gives less cause for concern than in the case of Peru since the Colombian financial sector is considered more solid than the Peruvian financial institutions. The AFPs’ equity investment grew from 3 per cent of assets at the end of 1994 to about 8 per cent at the end of 1997. The low share of equity investment is primarily due to the fact that Colombia’s stock market is not deep and trading is low. In 1996, the equity trading volume amounted to only 1.6 per cent of GDP compared to 6 per cent in Peru and about 11 per cent in Chile (IFC, 1997). The Colombian AFPs have not yet invested in foreign securities although the law allows for investment abroad of up to 5 per cent of assets. One reason for the absence of foreign investment is the appreciation of the Colombian peso vis-a-vis the US dollar. But more importantly, there is still no uniform mechanism for the daily valuation of foreign securities, which effectively prevents AFPs from investing abroad.

In Colombia, AFPs are required to publish their returns both gross and net of commissions (but not net of insurance premiums). This rule applies to mandatory and voluntary pension funds as well as to severance funds. Nominal gross and net returns are reported by the APFs and published by the superintendency in quarterly intervals. Returns net of commissions are reported only for affiliates who joined the system at the beginning, i.e. in May 1994. Real net returns were highly negative for the affiliates during the first six months of the new pension system and slowly increased to more than 10 per cent during the third quarter of 1996. For affiliates who joined the private system later, the returns would be lower since their balances are lower. Nominal returns have been relatively stable given that fixed income securities make up the

These figures are not fully consistent with the gross rates of return published by the Superintendencia Bancaria.
largest part of the AFPs’ portfolios. On average, the annual real rate of return has been 13 per cent from the start of the AFP system to March 1997.

The benefit entitlement in the Colombian pension system differs between the public and the private system. Workers still have the choice of switching systems before retirement if they find that the public system offers a more attractive benefit than the private system.

In the public system, the retirement age is currently still set at 55 years for women and 60 years for men. By the year 2014, it will be increased to 57 years for women and 62 years for men. Originally, it had been planned to raise the retirement age to 60 and 65 years for women and men, respectively, over a period of ten years, i.e. by the year 2004, but this proposal was diluted during the negotiations in Congress. Also, all new regulations apply only to new entrants to the labour force as well as female and male affiliates, who were 35 and 40 years, respectively, at the moment of reform. For older affiliates, the previous (more generous) eligibility conditions and benefit formulae are still in force.

The pension of the public system now replaces between 65 and 85 per cent of the average income during the last 10 years before retirement depending on the amount of contributions made. The minimum contribution period to receive a 65 per cent replacement rate is 1 000 weeks. Although the replacement rates are still high, they represent a substantial reduction from rates of up to 90 and even more than 100 per cent for certain occupational groups before the reform. Further, pension benefits were previously calculated on the basis of only the last two years before retirement, which presented a strong incentive for strategic manipulation; this provision has been removed for all affiliates.

In the private system, the official retirement age is 57 years for women and 62 years for men. But early retirement is possible as soon as the balance in the individual account is sufficient to finance a pension of at least 110 per cent of the minimum wage. Any excess capital may be withdrawn and used for purposes other than retirement. As mentioned earlier, affiliates whose balance is sufficient to finance a minimum pension may also choose other investment plans for the excess capital. An affiliate retiring in the private system has essentially the same type of options as in the Chilean pension system: Upon retirement, the worker can choose to convert the accumulated balance in the individual account plus the recognition bond to pension payments under a programmed withdrawal programme, use the amount to purchase an annuity from an insurance company, or opt for a combination of the two.

The disability and survivors’ benefit offered in the public and the private system are the same. A disability pensioner receives benefits amounting to 45 to 75 per cent of the average salary, depending on the individual degree of disability and on the length of the contribution period.

Like in the other Latin American countries with private pension systems, the disability and survivors’ risk in the private system is insured with private insurance companies. The benefit is financed using the balance in the worker’s individual account plus the recognition bond, if any, topped up by a lump-sum to be provided by the insurance company. Disability pensioners have the option of increasing their benefits through voluntary top-up contributions.

Pension benefits are tax-exempt up to the limit of 20 minimum wages. However, if funds accumulated in the individual account are used for any other, non-retirement purposes, taxes are due. In both the public and the private systems, pensions are adjusted according to the consumer price index.

Like in the other Latin American countries, which have implemented similar reforms, the government guarantees the payment of a minimum pension provided the worker has reached the official retirement age and has contributed at least 1 150 weeks (22.12 years). The minimum pension amounts to one minimum
wage and currently amounts to approximately US$170. This amount is roughly equivalent to 60 per cent of the average wage. The guarantee entitles workers to draw a monthly amount equal to the minimum pension from their balance; once the balance is exhausted, the government takes over the benefit payments.

In March 1997, there was only one old age pensioner, 79 disability pensioners and 841 beneficiaries of survivors’ benefits receiving benefits from the new system.
Annex 3: Pension Reform in Argentina

The Argentine social security system covering private sector workers and the self-employed was founded in 1944. This system was preceded by occupational schemes which were established at the beginning of this century and covered initially only employees of the public sector and the military. Coverage expanded rapidly and the pension system reached more than 80 per cent of the economically active population in the 1980s. The system operated on a pay-as-you-go basis and provided generous benefits after only 15 years of contributions; the minimum retirement age was 55 and 60 years for women and men, respectively.

The demographic indicators in Argentina are very similar to those observed in European countries. Compared to other Latin American countries, the Argentine population is fairly old; in 1990, the demographic dependency ratio, measured as the population over 60 years in relation to the population aged 20-59 years, was 37 per cent compared to about 13 per cent in Peru and Colombia. As pension eligibility conditions are generous and the system is mature, a relatively high system dependency ratio can be expected. The system dependency ratio deteriorated dramatically during the eighties; it fell from 40 per cent (i.e. 2.5 contributors per beneficiary) in 1980 to an estimated 64 per cent in 1990. The large discrepancy between the demographic and the system dependency ratio resulted from a combination of high unemployment rates, low retirement ages and high evasion. Approximately 46 per cent of the economically active population evaded pension contributions; evasion was particularly high among the self-employed with 70 per cent non-compliance. (Vittas, 1997b)

The financial situation of the pension system was also negatively affected by the underdeclaration of incomes and delay of contributions encouraged by numerous legal moratoria for the repayment of pension debt. Especially during periods of high inflation, employers defaulted on their contributions rightly expecting no legal consequences. On the expenditure side, the calculation method for old age benefits placed a heavy burden on the system. Retirees were entitled to pension levels between 70 and 82 per cent of previous earnings. But since the three highest salaries of the last the years were used to calculate the pensionable salary and workers close to retirement were often given hefty increases, many pensioners effectively received around 90 per cent of the average contributor’s income.

With high benefit levels and increasing system dependency ratios, the contribution rate for the pension system reached 26 per cent in 1980. To alleviate the burden on employers during the deep economic crisis, the employers’ share of 15 per cent was suppressed in the same year and replaced by state transfers financed out of general tax revenue. Four years later, the employers’ contribution was reinstated and the total contribution rate was set at 21 per cent. Despite generous legal benefit entitlements, average replacement rates declined dramatically. This was due to partial indexation of pensions during periods of high inflation and to government default on payments as the system became insolvent. By the end of the 1980s, the relation between the average salary of the contributors and the average benefits paid had fallen to about 40 per cent. The annual operational deficit of the pension system fluctuated between 1 and 1.5 per cent of GDP in the eighties (Vittas, 1997b).

As more and more pensioners brought judicial claims against the social security system, the government declared a state of social security emergency in 1986. The calculation base for the defaulted pension payments was renegotiated which substantially reduced the debt owed to pensioners. In addition, the government tried to improve the finances of the pension system by levying new taxes on fuel, telephone services and gas. Despite the emergency measures, pensions continued to lag behind the legally established increases. After the state of emergency was lifted and the system returned to the previous pension rules, the situation deteriorated again. Claims and law suits increased once more and a new debt rescheduling agreement was reached between the government and the pensioners according to which
60 per cent of the system’s accumulated debt was to be paid to the affected beneficiaries. Pensioners had different options of payment in cash or specially issued bonds. The government recognised a total pension debt of 7.5 billion pesos corresponding to 3.5 per cent of GDP (Queisser et al., 1993).

The financial collapse of the Argentine pension system paved the way for systemic reform. For several years, reform proposals had been floated by different groups for a total or partial transition to a funded, privately managed defined-contribution system. In the early nineties a more detailed concept was elaborated by a government-appointed team of experts and presented to Parliament. Benefit cuts, increases in the retirement age and tightening of eligibility conditions which had been impossible in earlier years were now accepted. Partly, political acceptance was facilitated by the introduction of a completely new system which departed radically from the old structure and seemed more credible in its promise of new and better benefits. Further, it had become clear to the electorate and policy-makers that piecemeal reforms would not be sufficient to put the pension system back on track.

Argentina launched its new pension system in July 1994, based on a law that was enacted in October 1993. The reform entailed a substantial increase in the pension deficit since part of the contributions were transferred to a newly created funded pillar. Several studies were conducted to estimate the transition cost of reform. In the Argentine case the determination of transition cost is particularly difficult, since the pension reform coincided with the integration of the provincial pension systems into the national system; the provincial schemes are more generous than the national scheme and the integration thus increased financing requirements further. In addition, the employers’ contribution payable to the public pay-as-you-go pillar was temporarily reduced because of the economic crisis and high unemployment rates. Therefore, the Argentine system has been running increasing deficits which were not exclusively caused by the shift from an unfunded to a partially funded pension system.

The New Pension System

The new system consists of a public pay-as-you-go pillar complemented by a mandatory second pillar. For the second pillar, workers can choose between a system of privately managed individual accounts or a publicly managed defined-benefit scheme. Affiliates are allowed to switch from the public second pillar to the private system but not from the private to the public. If workers do not express a preference for either pillar, they are automatically enrolled in the private system.

Participation in the new scheme is mandatory for all dependent workers as well as for the self-employed. The military and the police, however, are excluded and continue to benefit from their more generous pension regimes. Employees of provincial governments were initially also excluded but they are now gradually being integrated into the national system.

The public pay-as-you-go system provides several different types of pensions: The basic pension (PBU) is currently equal to about 27.5 per cent of the average wage of all contributors to the system; initially, it was planned to keep the basis pension fixed in relation to the average covered wage but a law amendment in August 1997 put the basic pension level at discretion of the government. In order to receive the basic pension, workers must have contributed for at least 30 years. The retirement age is 65 and 60 years for men and women, respectively. The basic pension is increased by 1 per cent for every year of contributions between 30 and 45 years. The compensatory pension (PCU) is payable to retirees who acquired rights under the old system; for every year of contributions pensioners receive 1.5 per cent of their average salary of the last ten years prior to retirement. The PCU has a ceiling of 52.5 per cent, i.e. a maximum recognition of 35 years. Existing pensions in payment from the old system are also paid by the public system.
The public pay-as-you-go system also pays the supplementary pension (PAP) to workers who choose the public option for the second pillar. This pension is calculated as 0.85 per cent of the average salary during the last ten years of employment per year of contributions. The public systems also pays disability and survivors’ pensions for workers who remain in the public system. Disability and survivors’ benefits for workers who are affiliated with the private system, but have acquired rights under the old system are pro-rated and paid jointly with the second pillar. Finally, the public pension system also pays an old age pension (PEA) to persons who are older than 70 years and have not contributed long enough to qualify for the basic pension. The PEA is equal to 70 per cent of the PBU, i.e. about 19 per cent of the average wage, but it is not a universal pension since it is also subject to minimum contribution period.

The pay-as-you-go system is managed by the public social security agency ANSeS. It is financed through an 16 per cent contribution payable by employers for all covered workers. The self-employed are required to pay 16 per cent out their total 27 per cent contribution to the public system. In addition, affiliates who have chosen the public option contribute 11 per cent of their salaries to the pay-as-you-go system. The contribution revenue is supplemented by earmarked taxes, such as designated shares of the value-added tax and taxes on personal wealth and profits, as well as transfers from the budget. The contributions are not collected by ANSeS but by the tax authorities which then transfer funds to the public and private system according to workers choices.

The private second pillar consists of a system of fund management companies very similar to the Chilean system. Workers who choose this option must contribute 11 per cent of their salaries to the fund manager of their choice. About 7.5 per cent are used for the accumulation of retirement capital in their individual account while approximately 3.5 per cent go to the financing of the premium for disability and survivors’ insurance and to cover administration costs and profits of the fund manager. Upon retirement, members of the private pillar have the choice between different benefit options: they can gradually withdraw the accumulated capital according to a schedule based on individual life expectancy or they can purchase a life annuity from a private insurance company.

Only a few months after the new pension system was launched, all of Latin America was shaken by the Tequila crisis which erupted in Mexico in December 1994. As the Argentine economy faced the adverse impact of this crisis, Congress approved the so-called “Solidarity law” aiming at cost containment in the public pension system. The law overrides all respective provisions made in the previous pension law and basically stipulates that the state will only pay transfers to the pension system at the level it can afford. To that end, the indexation mechanism which linked pensions to wage increases was abolished and replaced by an ad-hoc indexation to prices according to the situation of the fiscal budget. This indexation method is applied both to existing pensions in payment and the PBU of the new system. Further, a maximum ceiling on public pensions was introduced and provisions were made to allow differential adjustment rates which would grant higher increases to lower pensions.

As mentioned above, the pension law was further amended in August 1997. The link between the level of the PBU and the average covered wage (AMPO) was abolished. Instead, the government introduced the term of “pension module” (modulo previsional – MOPRE) ; this accounting unit will be used for the calculation of the basic pension and will be determined annually by the government according to the budgetary capacity. With this modification, the first pillar benefit practically becomes a minimum pension comparable with the one offered by the Chilean system with the sole difference that the Argentine minimum benefit is financed by payroll instead of general taxes. It pays out a flat-rate pension benefit, the level of which is at discretion of the government, to everyone who has contributed for at least 30 years with small increases for additional years of contributions.
As happened during previous changes to the pension laws in Argentina, the solidarity law too has been challenged as unconstitutional. It thus remains to be seen whether it will actually be possible to restrict public pension expenditure by law. As inflation rates have been very low since the Argentine peso has been pegged to the US-Dollar, the effects of changes in the indexation mechanism have not brought any major changes, either for the budget or for the beneficiaries.

The transition cost was estimated in four different studies (Schulthess and Demarco, 1996; FIEL, 1995; Durán, 1996; Rofman et al., 1997). According to the most recent study which was conducted by the SAFJP, the annual deficit of the pension system will decline from about 2.5 per cent of GDP to 0.86 per cent in the year 2005 and disappear around 2012. The other projections are less optimistic; The studies by FIEL and Schulthess and Demarco estimate a deficit beyond the year 2020. The SAFJP’s estimate assumes a strong increase the rate of contribution compliance which would improve the finances of the system in the medium term. Also, the increases of the retirement age and the 30 year contribution requirement to receive the basic pension will reduce the number of beneficiaries; according to the calculations, the share of men and women eligible for pensions above the ages of 65 and 60 years, respectively, will drop from 45 per cent in 1995 to 28 per cent in 2017 and later increase again to about 50 per cent as a result of the increase in effective coverage. These projections show that a large number of pensioners could be left without rights to the basic pension and would depend exclusively on the old age assistance pension.

Performance of Private System

Affiliation to the overall pension system, i.e. in the first pillar and the two second pillar options, increased substantially after the pension reform. By the end of 1997, the number of affiliates had grown to about 8.5 million from 5.7 million in late 1994; but the ratio of contributors to affiliates decreased from 76 per cent to 54 per cent over the same period. This deterioration is due mostly to increasing numbers of pensioners in the public system where the ratio fell from 80 to 58 per cent. Nevertheless, non-contributing affiliates still are a problem in the private system where the ratio has dropped from initially 62 per cent to 49 per cent at the end of 1997. It should be taken into account though that the Argentine economy underwent a severe recession in 1995 during which unemployment rates increased strongly; this may explain a large part of the ratio’s decline.

The affiliation to the new pension system was initially slow and remained below the expectations of the government. Gradually, however, it began to pick up speed and is expected to accelerate further as the provincial schemes are integrated into the national system. At the end of 1997, affiliation in the private second pillar stood at 6.2 million members corresponding to 73 per cent of all affiliates to the pension system. The majority of affiliates are dependent workers; only 12 per cent are self-employed. As can be expected, the private system attracts predominantly the younger workers; the average age is 35.3 years.

Argentina, like most other second generation reformers, chose to model its private pension pillar very closely on the Chilean example. The rules and regulations applied to the Argentine pension fund management companies, called Administradoras de Fondos de Jubilaciones y Pensiones (AFJPs), are very similar to those applied in Chile. The AFJPs are licensed, regulated and supervised by a specialised agency, the Superintendencia de AFJPs or SAFJP. The AFJPs are not allowed to do any other business than pension fund management. They have to be set up as joint-stock companies. Shareholding of AFJPs is much less restricted than in many other Latin American countries. Banks, insurance companies, and other financial institutions, trade unions and other groups may own pension fund management companies. At the start of the new system, it was decided that the state-owned Banco de la Nacion should establish a public AFJP which should not charge commissions, should direct investment into specific assets and, most
importantly, provide an absolute rate-of-return guarantee specified in pesos and US-dollars; some of these provisions have been relaxed since.

Each AFP is allowed to manage only one fund for all affiliates. The retirement capital managed by an AFP is an independent entity, which is legally and financially separated from the companies’ capital in order to ensure that members’ assets are protected in case of an AFJP’s bankruptcy. The assets of the pension fund belong exclusively to the affiliates, they are not attachable, and are not affected by any financial losses suffered by the fund manager. The transaction requirements and custodial arrangements are similar to those in Chile. Transactions may only be carried out on official markets and custodial agreements can only be made with authorised custodial institutions.

AFJPs must have a minimum capital of 3 million pesos, i.e. the equivalent of US$3 million. Further, they must keep a mandatory investment reserve so that possible shortfalls arising from the minimum profitability guarantee can be compensated for. This reserve (encaje) must be at least 3 million pesos or 2 per cent of assets, whichever is larger. The minimum capital requirements in Argentina are much higher than in Chile and other Latin American countries due to the concern of the Argentine authorities to prevent excessive fragmentation of the pension sector. The largest AFJPs are joint ventures between foreign banks or insurance companies and locals. Foreign participation in pension fund management has increased strongly. This was largely due to the fact that after the banking crisis in 1997, all except for one bank were taken over by foreigners; in mid-1997, foreign banks alone owned 54 per cent of total AFJP equity, not taking into account non-bank financial institutions from other countries. Foreign shareholders are for example AIG, Banco de Santander, Citicorp, Deutsche Bank, Dresdner Bank, New York Life and the World Bank Group’s IFC.

Concentration of the Argentine pension market has been increasing through mergers. When the new Argentine pension system was launched, 26 AFJPs were authorised; in December 1997, there were 18 AFJPs operating. In July 1997, the three largest AFJPs accounted for just under half of all affiliates and for 48 per cent of all assets under management. The Herfindahl index which measures concentration has increased from well below 1000 before the mergers to 1232 in the case of affiliates and 1207 with respect to assets under management. These figures are still much lower than concentration in Peru and Colombia where the Herfindahl indices for concentration of affiliates were 2264 and 1736, respectively, at the end of 1997.

The AFJPs are allowed to charge fixed commissions and variable commissions calculated as a percentage of the contributor’s salary. For voluntary contributions or deposits they are also permitted to charge a commission on assets. There are no restrictions on the level of commissions charged. AFJPs set their commissions within the overall limit of a total contribution of 11 per cent of salaries; on average, about 7.5 per cent go to the individual account and the remainder is destined to the payment of insurance premiums and commissions. Argentina already allows AFJPs to give commission discounts to affiliates who remain with one AFJP for a determined period, provided that such discounts are applicable to all affiliates that fall into the same category. In Chile this is still under discussion but likely to be approved in the near future. Discounts for group affiliation or any other type of preferential fees are not allowed.

In December 1997, the AFJPs charged an average commission of 3.44 per cent of wages. Disability and survivors’ insurance premiums which amounted to about 2.2 per cent of salaries at the beginning of the system have come down considerably due to better loss experience: currently they range between 0.49 and 1.32 per cent of salaries. It is not surprising that the insurance costs are still higher than in other Latin American countries. As the contribution rate going to the individual account is only about 7.7 per cent (as opposed to 10 per cent in most other systems), the insurance companies have to put in more funds to reach the defined benefit level if a worker becomes disabled. The decline of the insurance premium has not
resulted in a cost reduction for affiliates. According to an SAFJP study conducted in March 1996, the individual account balances would have been about 10 per cent higher if the insurance cost reductions had been passed on to the affiliates (Rofman, 1996).

Instead, the AFJPs have used the savings on insurance expenditure to improve their operating results. During the start-up phase and the first two years of operations alone, the AFJPs spent a total of 1.8 billion pesos on marketing and advertising and most AFJPs incurred high operating losses (Vittas, 1997a). By mid-1997, half of the fund management companies were profitable, six were about to reach the break-even point and four AFJPs were still running large losses. The industry as a whole became profitable at the end of 1997, i.e., in the third year of operations (Bertín, 1997). It should be noted, however, that contrary to other countries, the Argentine AFJPs were allowed to amortize their start-up costs over a period of ten years.

Like in all of the Latin American reform countries, the right of affiliates to choose their own pension fund management company and switch their accounts from one AFJP to another is a fundamental feature of the Argentine pension system. But like in the other countries too, account switching is increasing rapidly as a result of large numbers of selling agents – the system currently employs more than 20,000 agents – and aggressive marketing techniques. The large number of transfers is very costly for the AFJPs and mostly motivated not by differences in rates of return or quality of services but due to the persuasion of agents and use of gifts and other incentives. The fee discounts offered to long-term affiliates does not seem to be effective in lowering the number of transfers. In 1996, account transfers corresponded to almost 20 per cent of the active contributors and 12 per cent of affiliates.

The total funds under management of the AFJPs reached about 8.8 billion pesos in December 1997, corresponding to 2.8 per cent of GDP. Collection per contributor in the same month ranged between 21 and 328 pesos; the average of the system was 98 pesos, i.e. average pensionable salary of the contributors considering an 11 per cent contribution rate was 890 pesos. Compulsory and voluntary contributions to the AFJP system as well as capital gains are tax-exempt; pension payments are subject to income tax.

The investment of the pension funds is subject to rules and regulations which are issued by the SAFJP. Like in Chile, the rules prescribe only maximum but no minimum investment limits. Compared to Chile, however, the investment regime in Argentina is more liberal allowing for example higher investment in equities and permitting AFJPs immediately to invest in foreign securities which was initially prohibited in Chile. The maximum investment limits are established by the Central Bank in consultation with the SAFJP and the securities commission. Corporate and financial sector issues are also subject to limits determined in relation to the consolidated capital of the issuer, the size of the AFP and its market share as well as the risk rating of the issue. Investment in foreign securities is subject to a 10 per cent limit for bonds issued by states and international organisations and 7 per cent for foreign corporate issues. All instruments except for securities issued by the government and the Central Bank are subject to risk classification.

Pension funds are valued daily and marked to market. Like in Chile, the Argentine system has a minimum profitability guarantee in order to protect affiliates from strong fluctuations in the return of the funds. In Argentina, however, the guarantee is defined in nominal rather than real terms which effectively reduces the level of protection for affiliates in periods of high inflation. The minimum return is defined as the lesser of 70 per cent of the average 12-month real rate of return of the system or 2 percentage points under the real rate of return. The AFJPs, just like Chilean AFPs, are required to maintain a fluctuation reserve. If an AFJP performed above the benchmark, it is required to transfer the excess return to a fluctuation reserve instead of crediting it to the affiliates’ balances. If an AFJP underperforms, the shortfall has to be
made up first from the fluctuation reserve and, if this is not sufficient, then from the mandatory reserve (encaje). If the fluctuation reserve remains at a level of more than 5 per cent of the total funds for more than two years, AFJPs must transfer the excess to the individual accounts.

The pension funds were initially invested very conservatively; a year after the start of the new system, almost half of the funds were invested in governments bonds and 27 per cent in bank deposits. Over the last two years, portfolios have been diversified considerably. At the end of 1997, government bonds still made up 46 per cent of investments but equities accounted for 28 per cent of funds. Investment in foreign securities was very low reaching not even 1 per cent of total assets. As in the other Latin American countries, the portfolios of the AFJPs are very similar.

In December 1997, the annual real rate of return was 14.8 per cent; since the beginning of the system the average rate of return has been 16.7 per cent. The conservative investment approach of the AFJPs at the start of the system protected the AFJPs from the repercussions of the Mexican peso crisis in December 1994; during the first year of operations the AFJPs managed to reach a real rate of return of about 10 per cent. Obviously, the excellent performance of the AFJPs is due to the high level of interest rates in Argentina which in turn is a reflection of the difficult economic situation the country is faced with (Vittas, 1997a).

At the end of 1997, there were about 17 000 beneficiaries receiving pensions from the private system. 75 per cent were collecting survivors’ benefits, 13 per cent were disability pensioners and only 12 per cent were old age pensioners.
Annex 4: Pension Reform in Uruguay

Uruguay has the oldest mandatory pension system in the Latin America. The first pension system for public sector employees was founded as early as 1896. Like the public pay-as-you-go systems in most other countries in the region, the Uruguayan system was very fragmented and consisted of a large number of different regimes organised along occupational lines. Since Uruguay is a small country with a mostly urban population, the coverage of the economically active population is high amounting to about 70 per cent.

Compared to the other countries in the region, Uruguay is in a special situation since its economy is highly dependent on its neighbouring countries Argentina and Brazil. The close economic ties with these countries have resulted in high migration of younger age groups. The ageing of the population and the maturing of the pension system have thus been more rapid than in other Latin American countries. By the end of the 1980s, the population growth rate had dropped to 0.75. Increases in life expectancy coupled with low retirement ages led to long duration of retirement; on average, the retirement period lasts 16.7 years for men and 25 years for women. In 1996, the system dependency ratio was around 70 per cent.

Benefit levels of the old system were generous with replacement rates of 65 per cent and more for early retirement and up to 80 per cent for normal retirement. The government made several attempts to tighten eligibility conditions and lower benefit levels but a plebiscite in 1989 reversed all previously reached agreements and further accelerated expenditure growth. Between 1984 and 1994 real benefit levels increased by more than 50 per cent. Pension expenditure reached 15 per cent of GDP in 1996. Consequently, contribution rates reached unsustainable levels. Before the reform in 1994, contribution rates for pensions alone amounted to 29.5 per cent of salaries. The evasion of contributions was also high but there no reliable data on its extent; the estimates run from 14 to 30 per cent of the economically active population.

As the financial situation of the pension system deteriorated rapidly, it became clear that more fundamental reforms could not be avoided any longer. Some partial reform measures were introduced to contain pension expenditures. But in 1994, there was another plebiscite after which all budgetary decisions with respect to the social security system were declared unconstitutional and the social security authorities were forced to review the pensions in payment and make upward adjustments. Finally, in September 1995, a law establishing a new pension system in April 1996 was passed. With the establishment of the new pension system, a number of new rules were also introduced for the public system. The retirement age for women is gradually increased from 55 years to 60 years. The replacement rate offered by the public system will be reduced from 60 to 50 per cent and minimum service condition will be extended from 30 to 35 years.

Given the political importance of the pensioners’ party, it is not surprising that the Uruguayan reform is the least radical and most gradual of all the reforms adopted in Latin America. Several important occupational groups, such as teachers, notaries and bank employees, were excluded from the reform and their own more generous pension systems were preserved. These exclusions reflect the power of political pressure groups on the one hand but are also a result of the inability of the Uruguayan government to finance a pension reform encompassing all workers, simply because the transition costs would have been prohibitively high. The implicit debt of the old pay-as-you-go system was estimated to be more than 200 per cent of GDP and thus much higher than in most Western European countries (Kane and Palacios, 1996). In the medium to longer term, however, it is envisaged to amend the law to include the groups previously left out.
The cut-off age for the pension reform was set at 40 years. All workers above 40 years (about 28 per cent of contributors) were given the choice to remain in the old system or join the new one while workers below the age of 40 were automatically made subject to the new rules. Pensioners generally receive their benefits under the old system but if they continue to work beyond retirement age, they may also choose to participate in the new system.

The new pension system consists of three different pillars defined according to the contributors’ income levels. The first pillar is a publicly managed pay-as-you-go pension scheme to which all workers must contribute. The second pillar is a privately managed funded scheme with individual accounts which is mandatory only for workers earning between 5 000 and 15 000 pesos; these limits are adjusted to inflation and corresponded to about US$800 and US$2 400, respectively, in May 1995 when the new system was launched. Workers who earn less than 5 000 pesos may join the second pillar if they wish. In that case, they can pay up to half of their contribution to the second pillar and the remainder to the first pillar.

The third pillar is strictly voluntary; workers earning above the contribution ceiling of 15 000 pesos may make additional contributions to their individual accounts. In 1996, only 4 000 contributors or 0.4 per cent of all contributors were above the 15 000 pesos income ceiling.

The contribution rate payable by employees is 15 per cent of salaries up to the ceiling of 15 000 pesos. Employers’ contribution rates vary depending on the sector of activity: private sector employers pay 12.5 per cent, state-owned enterprises 24.5 per cent, the public administration and the municipality of Montevideo 19.5 per cent and administrative units in the interior of the country pay 16.5 per cent. Thus, the total contribution rate for pensions ranges between 27.5 and 39.5 per cent. Employers’ contributions are paid fully into the first pillar and it is only the employees’ part of contributions that is split between the first and second pillar.

The Uruguayan pension system offers several types of benefits. There is a basic pension payable by first pillar which amounts to 50 per cent of the pensionable salary. To receive the basic pension, workers have to contribute at least 35 years; every additional contribution year is credited with 0.5 percentage points up to a maximum of 2.5 per cent, i.e. maximum benefit is 52.5 per cent of pensionable salary. The pensionable salary was previously calculated on the basis of the three last years; this period has now been extended to the last 10 years. For the first pillar benefit there is a cap on the pensionable salary of 5 000 pesos, i.e. the annual basic pension for normal retirement cannot be higher than 2 600 pesos.

The retirement age for men is 60 years; for women it is currently still 55 years but it will be increased gradually to 60 years by the year 2003. To provide an incentive for workers to remain in employment longer, workers above the age of 60 who fulfill the minimum service requirement are offered an increase of 3 per cent of pensionable salary per year, up to a maximum of 10 years. Those above 60 who have not reached the minimum service yet are given an increase of 2 per cent per year. The replacement rate for someone working until age 70 with 40 years of service would thus reach 82.5 per cent. In addition, there is an advanced age pension for retirees who do not fulfill the requirements for the basic pension; in order to access this benefit, they have to be at least 70 years old and have contributed for at least 15 years. Further,
the reform also introduced maximum ceilings on pensions in payment and for affiliates older than 40 years who chose to stay in the old system.

The new system has a built-in incentive for those affiliates that are older than 40 years or earning less than 5 000 to opt for paying part of their contributions to the new private system: While the contribution to the private system can be made on up to half of the salary, the benefit from the first pillar is calculated on the basis of 75 per cent of their individual salary instead of only 50 per cent. This means that effectively, the public system is paying a subsidy for low-income workers to divert part of their contributions away from the public to the private system.

In Uruguay, the implicit pension debt was not made explicit and transition workers are not compensated for a switch to the new mixed system. Workers of 40 years or older are not required to join the new system but can do so if they regard it as beneficial. But the replacement rates will be reduced so that, despite an official retirement age of 60 years, workers will have to work until age 65 to reach the benefit levels of the previous system; at the same time, the minimum and maximum pension levels are increased. Workers younger than 40 years who come under the rules of the new system receive no recognition of past contributions since the basic benefit of the first pillar already corresponds to the maximum benefit they would have been entitled to under the old system. (Camacho, 1997)

The new pension system had 457 403 affiliates in December 1997. At the end of the first year, the affiliates to second pillar corresponded to about 30 per cent of all affiliates. Given that only about 5 per cent of the contributors were required to join the second pillar, this means that about one quarter of the affiliated workers chose the second pillar option. The initial government forecast estimated that after the first year the system would have about 200 000 affiliates; by March 1997, there were already more than 380 000 affiliates. The collection of pension contributions remains centralised like in Argentina. The public social security agency BPS collects all contributions and transfers them to the private pension fund management companies, called Administradoras de Fondos de Ahorro Previsional (AFAPs).

Unlike in Chile, the supervision of the Uruguayan pension system is not organised in a separate supervisory agency but exercised by the Central Bank. Furthermore, pension supervision is integrated with other financial institutions and no separate department was created for pension supervision. The provisions for the management of the second pillar are very similar to those governing the private pension systems in other Latin American countries. AFAPs must have a minimum capital of 60 000 accounting units which corresponded to approximately US$1 million in mid-1995. The pension fund must be separated from the capital of the managing company and the custodian of the fund must be either the Central Bank or an institution authorised by the Central Bank. Pension funds are non-attachable and all transactions and investments are governed by strict regulations. Contributions are deductible from income taxes up to a ceiling of 20 per cent of earnings.

Affiliates of AFAPs are allowed to switch fund managers up to twice a year. Fund managers are allowed to charge commissions which can be fixed or calculated as a percentage of collections. Contrary to the other new pension systems in Latin America, the Uruguayan system allows AFAPs to deduct the commissions from the individual account. There is no fixed and legally required amount that must be accumulated for retirement purposes. AFAPs are allowed to grant their affiliates commission discounts for permanence but no other types of fee discrimination are permitted. All fees and commissions are exempt from value-added taxes.

The system started out in July 1996 with three AFAPs one of which is state-owned (República). Currently there are six companies in the Uruguayan pension market. Several AFAPs are joint ventures with foreign partners such as Banco Santander, Citibank and Bank of Boston. The total assets of the system
accumulated by December 31, 1997 amounted to US$190 million. The real rate of return in 1997 was 6.4 per cent. The Uruguayan pension market is among the highest concentrated in Latin America. The Herfindahl index with respect to workers’ affiliation is 2225 and the three largest AFAPs have 68 per cent of all affiliates. For funds under management the Herfindahl index is 3717. The high concentration of funds is due to the dominance of the state-owned fund management company in the market; in December 1997, the public AFAP Republica had US$1 billion under management while the second largest fund managed only US$24 million. The three largest AFAPs managed 80 per cent of all assets in the private system.

The commissions and insurance premiums in Uruguay on average add up to 2.62 per cent of salaries. The premiums for disability and survivors’ insurance were initially set at about 1.5 per cent of salaries but have come down considerably and now amount to about 0.57 per cent of salaries. Only one AFAP charges a fixed fee in addition to the variable commissions. Like in Argentina, coverage for disability and survivors’ pensions is pro-rated and provided partly by the second pillar and partly by the first pillar. The second pillar coverage is organised through group disability and joint life survivors’ policies with private insurance companies.

The investment regulations for the Uruguayan pension system are more restrictive than in any other Latin American country. During the first year of operations, AFAPs were required to invest at least 80 per cent of the pension funds in government bonds; this requirement was relaxed and the maximum limit for investment in government bonds is now 60 per cent. Investment in foreign securities is not allowed to date. Of all the countries in the region, Uruguay has the least developed capital market. There is a lack of financial instruments available for investment. Market capitalisation is only 1 per cent of GDP and daily trading on the stock exchange only about US$1 million.

The Uruguayan system also has a minimum rate of return which is defined as the lower of 2 per cent real and the average performance of the AFAP industry minus 200 basis points. In setting an absolute rate of return in real terms, the Uruguayan system differs greatly from the other countries in the region. The rate of return is measured monthly on an annual rolling basis. If a pension fund underperforms the benchmark, the difference must be covered first from the fluctuation reserve, then from the additional mandatory reserve “encaje” and then from the AFAP’s own capital. The fluctuation reserve is filled through a funds’ performance above the band; when the fluctuation reserve reaches 5 per cent of the mandatory retirement savings or 3 per cent of the voluntary savings, however, the excess must be credited to members’ accounts.

In Uruguay, the purchase of an annuity is mandatory for the second pillar benefit. Unlike other countries, the system does not offer the option of programmed withdrawals of the accumulated balance in the individual account. The annuities are mandatorily indexed to average wages; insurance companies can only provide this indexation because there are wage-indexed bonds available in Uruguay.
Annex 5: Pension Reform in Mexico

The Mexican pension system was founded in 1944. It consists of several institutions for private sector, public sector and parastatal employees. The largest institution is the Mexican Social Security Institute (IMSS) which provides old age, disability, survivors’, and health insurance as well as workmen’s compensation and child care services; in 1996, it had about 11 million affiliates corresponding to about 30 per cent of the economically active population. The defined-benefit scheme was originally financed according to the scaled premium system, i.e. accumulating reserves to cover pension liabilities over a determined number of years.

Although the Mexican population is young and the old age dependency ratio is still low, the reserves of the public pension system diminished rapidly resulting effectively in pay-as-you-go financing of the system. The reasons for the erosion of the Mexican pension reserves were the same as in most other Latin American countries: Pension reserves were not only used to cross-subsidise the health insurance programme of IMSS but they were also placed in low-yielding investments. Rising pension expenditures, due particularly to a high number of disability pensioners, were not matched with increases of the contribution rate. The benefit formula was originally designed to redistribute in favour of low-income earners but in practice affiliates often resorted to strategic manipulation of their contribution history in order to receive the most favourable treatment. The financial disequilibrium led to inadequate pension benefits and, in turn, to high evasion of contributions. The total social security contribution rate before the pension reform amounted to 31.5 per cent of wages, shared by employers (25.2 per cent), workers (5.25 per cent) and the government (1.05 per cent) which in turn increased evasion and subdeclaration of wages even more. This includes a compulsory 5 per cent contribution payable by employers for the housing finance scheme (INFONAVIT). This scheme provides loans to members for the purchase of real estate.

A first attempt at reform was undertaken in 1992 when the government introduced a system of individual savings accounts. This compulsory scheme was meant to top up the pay-as-you-go pension. It consisted of two subaccounts, one for retirement and one for housing. The retirement account was financed by a 2 per cent employer contribution. The funds were deposited with the commercial banking system and then channeled to the Central Bank for investment in government securities; the retirement accounts were guaranteed a rate of return of 2 per cent. The INFONAVIT housing subaccount was continued separately. Contributions were collected together with the retirement contribution. The Central Bank then transferred the funds to the housing agency; the interest on the accounts was paid according to the operational surplus of INFONAVIT.

This reform failed because of conceptual flaws and operational problems. The regulatory and supervisory framework was not sufficiently developed and the implementation of the new system was not properly monitored. Also, workers had multiple identification numbers and multiple accounts which led to substantial confusion and aggravated the supervisory problems. The banks’ incentives for contribution collection were not strong given that the amount to be saved was low and commissions were therefore small. The management of the housing account was poor due to lack of compliance, insufficient collection of due payments, overstaffing and high administrative costs of INFONAVIT.

In 1995 and 1996, legislation for a more comprehensive pension reform was passed. After the Tequila crisis in Mexico which erupted in December 1994, however, the reform programme was subject to political as well as fiscal constraints. The fragile political situation led to the exemption of several powerful groups from the pension reform. The armed forces, public sector employees and parastatal workers kept their own pension institutions. Only the IMSS pension programme for private sector workers
was reformed but in the new system IMSS retains a much broader and more significant role than in all other pension reforms in Latin America.

The new system was launched in July 1997 with the mandatory affiliation of all dependent private sector workers; prior to this date, workers were allowed to affiliate voluntarily with the new pension fund management companies which started operations in February 1997. The new fully funded defined-contribution scheme consists of privately managed individual accounts. Like in Chile, the pay-as-you-go system is closed to new entrants but workers with acquired rights do not receive recognition bonds or compensatory pensions for their past contributions. Instead, upon retirement, all “transition” affiliates can choose between a pension calculated according to the rules of the old system and a pension corresponding to the balance in their individual accounts. If they choose the public pension, the balance in the individual account must be surrendered to the government. Compared to the transition rules in other reform countries, the Mexican solution is the least generous, since transition workers in other countries are entitled to the newly accumulated balance plus a compensation for previous contributions. All workers retiring under the new and the old rules are eligible to a minimum pension guaranteed by the government.

The contribution structure in the new system is complex: 6.5 per cent of wages are payable to the individual retirement account. This contribution is supplemented by a flat government subsidy amounting to 5.5 per cent of the minimum wage per day which all workers receive regardless of their income level. On average, the subsidy will correspond to about 2 per cent of wages, for low-income workers it obviously represents a higher share of wages. In addition, 5 per cent of wages must be contributed to the INFONAVIT account which will be accumulated and integrated with the AFORE account upon retirement. A further 4 per cent of wages are payable to IMSS to finance disability and survivors’ coverage (2.5 per cent) as well as pensioners’ health insurance (1.5 per cent). This leads to total contribution rate of 16.5 per cent of wages plus the government subsidy; in the old pension system, the pension plus housing contribution rate was 15.5 per cent.

The pension funds (SIEFORES) are administered by fund management companies (AFORES) which can be established by the private sector, trade unions and the public pension institution IMSS. IMSS will also continue to collect the contributions which are then distributed to the various AFORES. It will pay out benefits to existing pensioners and to pensioners who choose the old benefit option, and make payments arising out of the minimum pension guarantee. All other Latin American reform countries chose to transfer disability and life insurance to the private sector but in Mexico the public pension institution will continue to manage this line of insurance but private insurance companies will provide benefits through annuities.

The eligibility conditions for pensions are a retirement age of 65 years and a minimum of 25 years of contributions (instead of previously ten years). The benefits of the old system depend on the number of weeks of contributions exceeding the required 500 weeks of contributions; the formula is based on the average pensionable income during the last five years before retirement. In 1995, the replacement rate for a worker earning the average wage and a 20 year contribution period amounted to 50 per cent; for 45 years of contributions, the benefit corresponded to a replacement rate of 100 per cent. (Sales et al., 1996) Under the rules of the new system, pensioners can opt either for a scheduled withdrawal of their account balance – into which the INFONAVIT account is integrated at retirement – or purchase an annuity from a private life insurance company. The minimum benefit is equal to one minimum wage in Mexico City with fixed at the level of December 1996 and price-indexed thereafter. For transition workers, the guarantee is still calculated under the old, more generous rules where the benefits is not price-indexed but dependent on the evolution of the minimum wage.

The new system is regulated and supervised by a specialised pension supervisory agency, CONSAR. The agency licences the fund management companies, authorises their directors and managers, and monitors
the operations of the companies. AFORES are single-purpose companies which must have a minimum capital of at least 25 million pesos or about US$3 million. In addition, they must keep a special reserve equal to the greater of 25 million pesos or 1 per cent of assets under management.

AFORES can be owned by banks and other financial institutions but only if these fulfill all solvency requirements and other financial standards. Foreign majority ownership is allowed and foreign-owned companies are subject to the same conditions as Mexican owned AFORES. The management companies are free to charge commissions and fees on contributions, on assets or on any combination of the two. In order to prevent the excessive account switching experienced in other countries, the Mexican pension law limits account transfers to one per year.

The investment of pension funds is restricted by type of instrument and by issuer of securities. There are also explicit restrictions to limit transactions within financial groups and conglomerates. In order to prevent a strong concentration of affiliation in only a few leading management companies, the pension supervision agency limits the maximum market share per AFORE. At the start of the system, AFORES were allowed a maximum market share of 17 per cent.

At the moment, only one fund per company is allowed. But it is envisaged to allow more than one fund, i.e. SIEFORE, per management company starting in mid-1998. Workers will then be able to direct their savings into different portfolios depending on their individual risk preference. The life-time switch option combined with a wide choice of portfolio compositions might pose a problem of moral hazard as older workers could be encouraged to make riskier investments knowing that old benefit is probably better option. Unlike Colombia where riskier portfolios are excluded from the minimum pension guarantee Mexico gives the minimum pension guarantee for all portfolios. Each AFORE will, however, be required to offer one fund invested fundamentally (at least 51 per cent) in inflation-indexed securities. The Mexican system does not require AFORES to provide any minimum rate of return nor does it give return-related government guarantees.

The implicit debt of the old pension system was estimated by the Mexican Ministry of Finance to be about 141 per cent of GDP in 1994; the implicit debt is estimated to be retired by the year 2069 (Grandolini and Cerda, 1998). The fiscal cost of the pension reform has five components: the cost of paying benefits to existing pensioners, the minimum pension guarantee in the old and new system, the payment of old benefits to “transition” retirees who choose this option; the cost of the government subsidy to the individual accounts, and lastly, the government’s share of contributions which amounts to 0.425 per cent of wages.

The total fiscal cost is estimated to be about 1 per cent of GDP annually throughout the next 20 years. The large difference between the implicit debt of the old system and the fiscal cost of the pension reform is due to the fact that the government will not take over the pension obligations of the old system but under the new system. The life time switch option could cause large costs if many workers opted for the old pension benefit. But at the same time, these retirees would have to surrender their account balances to the government. Obviously, the estimates of the fiscal costs are subject to more uncertainty in the Mexican case than in other countries. Further uncertainty arises from possible coverage extension of the system in the future which will increase the fiscal costs due to the government subsidy, the government’s share of contributions as well as due to the minimum pension guarantee.

By the end of 1997, affiliation to the new pension system stood at 11.2 million affiliates representing about 95 per cent of the eligible dependent private sector workers. The system started with 17 AFORES; market concentration in terms of affiliates measured by the Herfindahl Index was 1102, in terms of assets under management 1406. Mexico has the lowest concentration of affiliates of all Latin American reform
countries. This result comes as no surprise since, as explained above, the Mexican authorities are setting limits for the maximum market share of affiliates per fund management company. The total funds accumulated amounted to US$700 million at the end of 1997. The funds’ portfolios currently consist almost exclusively of government securities but this will change rapidly as investment regulations are liberalised and more financial instruments become available. The real rate of return since the start of the system was 8.6 per cent.
Annex 6: Pension Reform in Bolivia

The old Bolivian pension system was founded in 1959. It was characterised by strong legal and institutional fragmentation. The coverage of the overall system was low and further reduced by the economic crisis and subsequent adjustment during the 1980s. Before the reform in 1996, only about 12 per cent of the total economically active population (EAP) and 22 per cent of the urban EAP were affiliated with the pension system. Despite a young population, the pension system was financially unsustainable. The relation between contributions and benefits was unrealistic, many employers evaded the payment of contributions, administrative costs were high, and there were many cross-subsidies among the different pension institutions and between pension and health insurance. The hyperinflationary periods in 1982 and 1985 eroded benefit levels and pension reserves. The current deficits of the system were covered by increasing government transfers.

After several unsuccessful reform attempts, a new pension law was passed in November 1996 by the Sanchez de Lozada government. The new system consists of fully-funded individual defined-contribution accounts. It incorporates many elements of the Chilean pension system but constitutes a completely new approach in its combination of “capitalisation” and pension reform. The old defined-benefit system is closed down and all affiliates are transferred to the new system. The reform simultaneously establishes a social programme called “Bonosol” which provides an annual old-age assistance benefit to all Bolivians above 65 years of age.

Under the “capitalisation” scheme, 50 per cent of the capital of the six largest state-owned enterprises (telecommunications, oil and gas, electricity, railways, aviation, mining) was transferred to private partners in an international bidding. The proceeds from these sales stay with the companies to finance future investment. The strategic investor(s) and the government both hold 50 per cent of the shares; the government’s shares were transferred to the new privately managed pension system. The shares are managed as “Collective Capitalisation Fund” together with by the same companies as the newly established individual retirement accounts. The dividends of the collective capitalisation fund are earmarked to finance the Bonosol programme.

The Collective Capitalisation Fund started out with shares of US$1.67 billion in securities and US$40 million in cash. Initially, each AFP manages assets of about US$800 million. All dividends or proceeds from share sales must be invested in units of the joint AFP fund consisting of the individual accounts. Therefore, in the medium term, the Collective Capitalisation Fund will have the same portfolio composition as the AFP pension funds.

The Bonosol programme provides an untargeted annual pension benefit to people over the age of 65 years. All Bolivians who were at least 21 years old at the end of 1995 (about 3.5 million persons) will be entitled to this benefit when they reach retirement. At the moment, it is not clear whether this programme would be extended to cover following generations. In 1997, the first year of the programme, the benefit amounted to about US$250 and was received by approximately 300 000 persons. The benefit level will be kept at this level for the first five years and will then be adjusted every three years according to changes in the life expectancy of the beneficiaries and the returns of the collective capitalisation fund.

The Bonosol corresponds to about a third of the Bolivian per capita income. While the benefit amounts to only 11 per cent of the average wage, it constitutes a significant income subsidy for the poor. According to World Bank income data (von Gersdorff, 1997), the Bonosol replaces 85 per cent of income for the extreme poor and 50 per cent for the poor.
The contributions to the new pension system amount to 12.5 per cent of wages of which 10 per cent are saved in the individual accounts, 2 per cent are destined to disability and survivors’ insurance and 0.5 per cent are paid as commission to the fund management companies. The official retirement age is 65 years but workers are allowed to retire earlier if their balance is sufficient to finance a pension of at least 70 per cent of earnings. The pensions paid by the old and the new system are indexed to the US-Dollar. The government does not guarantee any minimum pension from the system. After pensioners have exhausted their savings, they will receive only the Bonosol benefit. Disability and survivors’ insurance are provided by private insurance companies.

The new system was launched in May 1997 when approximately 300 000 existing affiliates were transferred to the new system. All dependent workers are required to participate; self-employed workers earning at least the minimum wage can join voluntarily. With respect to affiliation the Bolivian reform is the most comprehensive of all Latin American pension reform, since no exclusions or exceptions were made for special occupational or interest groups; even the military is required to participate in the new pension system. By mid-June, all public sector workers and 77 per cent of the private sector workers were affiliated.

Due to the low number of formal sector workers, the Bolivian authorities decided to limit the market for fund management to initially only two companies. These two companies were selected in an international bidding process. The conditions for tender were that the companies had to have managed assets of at least US$10 billion, have at least 20 years of experience as investment portfolio manager and at least 10 years as international manager, manage more than 100 000 individual pension accounts, process at least 5 million transactions annually in the pension account management, have experience in educating workers on retirement plans, and have affiliated workers of a retirement plan of at least 100 000 members.

Out of nine last-round applications, two Spanish-led consortia were selected: the first AFP was awarded to Consorcio Invesco PLC-Argentaria and the second to Banco Bilbao Vizcaya (BBV). The two companies share the market in the four largest Bolivian cities and operate exclusively in the Northern and Southern regions of the country, respectively. Competition between AFPs is supposed to start in January 2000 when all workers will be allowed to choose between the companies. In 2002, the market will be further opened to new AFPs.

The commissions for fund management, on which the selection of fund managers was based, are the lowest of all Latin American private pension systems. The employee is charged 0.5 per cent of wages for the management of the individual account; this level was preset by government in the documents for bidding. Further, the AFPs receive fees from investment management which are paid out of the fund’s profits. These fees amount to 0.2285 per cent of assets for the portion of funds below US$1 billion decreasing gradually to 0 per cent for funds over US$1.5 billion. The average monthly management fee according to the calculations of the successful bidders thus corresponds to about 1 per cent of the affiliates’ average wages.

The new pension system is supervised by the pensions department of the Financial Sector Superintendency. The AFPs have to invest their funds following the investment guidelines issued by the Central Bank. During the transition from the old to the new system, the AFPs are required to invest a certain amount in the government bonds issued specifically to finance the transition. The law requires that at least 10 per cent of assets have to be invested abroad. The custodian for the pension assets was also selected by international competitive bidding and awarded a contract of five years. The custodian’s fee is 0.2 per cent of assets which will not be paid by the AFPs but deducted directly from the return on assets.
The benefit options under the new system are a programmed withdrawal of funds according to the individual life expectancy or the purchase of an annuity from a private life insurance company. In addition, the transition workers will receive a compensatory pension when they reach retirement. A worker who has contributed for 25 years, for example, will receive a compensatory pension equivalent to 70 per cent of his or her earnings before the reform. Both the compensation benefit and the reference salary are subject to a ceiling and they are indexed to the US dollar. The pensions of the old system will continue to be paid according to the previous rules; they will be financed by transfers from the general budget.

The transition cost in Bolivia is higher than in other reform countries given the low coverage and benefit levels of the previous system. Since the old system was closed down completely, current benefits must be fully paid out of government transfers. According to World Bank calculations, the pension reform will cost the government the equivalent of 2.7 per cent of GDP in 1998 (after 2.2 per cent in 1997) which will slowly decline to 0.18 per cent in 2037. The transition cost comprises the implicit debt of the basic public pension system and the obligations of the complementary pension funds which were heavily subsidised by the government; the total implicit debt was estimated to be around 40 per cent of GDP (von Gersdorff, 1997).
Annex 7: Pension Reform in El Salvador

The new Salvadoran pension law was passed in December 1996. In mid-1997, the financial sector in El Salvador experienced a severe crisis after some major incidents of fraud. As the climate was not judged favourable for the introduction of the new pension system and the interest of foreign investors to participate in the new system was small, the introduction of the new pension system was delayed. By March 1998, however, five fund management companies had been authorised by the Superintendency and affiliation is expected to begin in April 1998. Of all the second-generation pension reforms, the Salvadoran reform is the one most similar to the Chilean pension reform. The new system will eventually replace the existing defined-benefit pay-as-you-go system which will be phased out. It consists of fully funded individual accounts managed by competing private pension funds, the Instituciones Administradoras de Fondos de Pensiones (IAFP).

Participation in the new system will be mandatory for all new labour market entrants as well as for all affiliates of the existing system up to the age of 35. Male workers over 55 and female workers over 50 must remain in the old system institutions ISSS (for private sector employees) and INPEP (for public sector employees); workers between these age limits will be able to choose whether to transfer to the new system or to remain in the old system. According to government estimates, the new system will start with about 400 000 affiliates. Workers who switch over to the new system will receive a “transfer bond” to honour their past contributions to the old system. In order to provide for transition financing, the government has set up a “transition fund” to which funds will be transferred annually; in 1998, the transfer amounted to 0.5 per cent of the government budget; this fund will be invested by the fund management companies in the same way as the pension funds.

These recognition bonds will carry a real interest rate of 0 per cent, i.e. they will be indexed to prices. They will be calculated applying a formula very similar to that used in Chile. The retirement age in the new system will be 60 years for male workers and 55 years for female workers. Originally, an increase of the retirement age to 65 and 60 years for men and women, respectively, had been proposed for the new and the old system. This proposal, however, was rejected by Congress. In addition, Congress introduced a new provision allowing workers to retire after 30 years of contributions regardless of age in both systems.

The contribution rate in the new system will start out at 4.5 per cent and gradually increase by 2002 to 10 per cent of the monthly salary; approximately two thirds of this are payable by the employers and one third by the workers. In addition, workers will have to pay an insurance premium to cover the risks of disability and survivorship as well as a fee charged by the IAFP for fund administration. Based on the experience of other Latin American countries, it is estimated that the premium and the administrative fee will amount to about 3.5 per cent of salaries which is the maximum allowed by the supervisors. Workers are allowed to make additional voluntary contributions. Workers will be allowed to switch between fund management companies every six months, including the processing delay of three months effectively every nine months.

In order to rationalise the existing system, contribution rates will be increased for ISSS affiliates from currently 3.5 per cent to ultimately 14 per cent of wages. In order to provide an incentive for affiliates to switch over to the new system, the contribution rate for ISSS will be 8 per cent in 1997 while the new system will require only 4.5 per cent during the first year. For INPEP affiliates and teachers who stay in the public system, contribution rates will increase from currently 9 per cent and 12 per cent, respectively, to 14 per cent. If they choose to go to the new system, however, their contribution rate will be 8 per cent in the first year.
The law contains investment provisions very similar to those in Chile. Ranges are prescribed within which the limits for investment in each instrument will be set through regulations; taking account of the low level of financial sector development in El Salvador, the proposed ranges are wider than in Chile. Investment in foreign securities and shares is not allowed. The draft law envisaged the possibility of foreign investment but this was modified in the political process. During the first ten years of operations, the new system will be required to invest a declining percentage of assets in the public housing fund, Fondo Social de Vivienda (FSV). This provision was seen as necessary in order to integrate the previously mandatory contributions to the FSV into the pension system. Originally, the share of FSV investment was proposed to start out at 25 per cent of the pension funds’ assets; Congress changed this to 30 per cent, however.

Like in Chile, there is a relative rate of return guarantee and a minimum pension set by the Ministry of Finance. It had been proposed to index the minimum pension to prices but this was rejected; instead, adjustments will be made at discretion of the Ministry of Finance. Upon retirement, workers will have the same benefit choices as in Chile: programmed withdrawal of funds, an annuity or a combination of the two. The pension fund management companies will be regulated and supervised by a specialised supervisory agency. The IAFPs must be established as joint stock companies with a minimum capital of C. 5 million corresponding to about US$570,000. All of the five authorised AFPs have been established with capital that exceeds this amount by five times.

Ownership of IAFP shares has to be authorised by the Pension Superintendency; foreign ownership is allowed but subject to several restrictions and allowed only together with national or Central American shareholders. All national and foreign banks, financial institutions and insurance companies established or operating in El Salvador or, in the case of foreign financial institutions, holding shares in national financial institutions are prohibited from owning shares or operating an IAFP. This restriction does not apply to subsidiaries of foreign financial institutions. Of the five pension fund administrators authorised by March 1998, only one company is purely domestic. Foreign investors include Chilean pension fund management companies and several European and American banks.
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