

Development Discussion Papers

Central America Project Series

Pension Reform in Central America: A Proposal

Rodrigo Cifuentes and Felipe Larrain B.

Development Discussion Paper No. 676
February 1999

© Copyright 1999 Rodrigo Cifuentes, Felipe Larrain B.,
and President and Fellows of Harvard College

Harvard Institute for
International Development

HARVARD UNIVERSITY



DEVELOPMENT DISCUSSION PAPERS

CENTRAL AMERICA PROJECT SERIES

A PROJECT OF HARVARD UNIVERSITY, INCAE AND
THE CENTRAL AMERICAN BANK FOR ECONOMIC INTEGRATION



Pension Reform in Central America: A Proposal

Rodrigo Cifuentes & Felipe Larraín B.*

Abstract

This paper contains a proposal for pension reform in Central America. The proposal focuses on the mechanism for financing and provision of services, and is flexible to accommodate different levels of contribution rates, benefits and income redistribution that different countries may desire. The proposal considers the current situation of the systems and economies in the region and addresses the problems encountered by other reform experiences in the world. The main characteristics of the proposed system are: i) a funded system with individual accounts privately managed; ii) providers of fund management services selected through a bidding process; iii) regional integration of both administration and regulation. Specific recommendations are given for issues including collection of contributions, types of fees charged and the transition to the new system.

Rodrigo Cifuentes is at Department of Economics at Harvard University.

Felipe Larraín B. is Robert F. Kennedy Visiting Professor of Latin American Studies at Harvard University and the Director of the Central America Project at the Harvard Institute for International Development.

*We are grateful to the participants of the conference “Pensions Systems Reform in Central America,” in particular to Peter Diamond, Laurence Kotlikoff, Olivia Mitchell, Fernando Solis and Salvador Valdés-Prieto for their comments. We also thank the useful comments of Daniel Dulitzky, Gerardo Esquivel and Amina Tirana.

Pension Reform in Central America: A Proposal

Rodrigo Cifuentes & Felipe Larraín B.

TABLE OF CONTENTS

1.	Introduction	1
2.	The Need for Reform	2
3.	Alternatives for Reform.....	7
3.1	Substitutive Reforms.....	7
3.2	Mixed Systems.....	13
3.3	Parallel Systems	15
4.	A Reform Proposal for Central America.....	18
5.	The Proposal.....	19
6.	The Transition Process	27
7.	Final Remarks	29
	References.....	30

List of Tables

Table 1.	Summary of Advantages & Disadvantages of Pension Reform Models	17
Table 2	Summary of the Reform Proposal.....	28

Pension Reform in Central America: A Proposal

Rodrigo Cifuentes & Felipe Larraín B.

1. Introduction

Central America is moving forward to fundamental reform of its pension systems. Most countries in the region are studying, discussing or implementing such changes. The motivations differ among the countries considered in this study—Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua, and from pension reform experiences of countries elsewhere in the world.

The Central American nations have small economies and undeveloped financial markets. Overall, their pensions systems are young and cover relatively small portions of the population.¹ The problems these countries face, then, are to a lesser extent those generated by the maturity of systems, but due to perverse incentives inherent in the operation of unfunded pensions systems.

This nature of needed pension reform in Central America differs from reform experiences around the world. Elsewhere, systems in crisis are characterized by large coverage of the population, high contribution rates, and financial imbalances that require large contributions from the government. These characteristics do not, by and large, apply in Central America. The importance of this difference is that fundamental reform to most Central American pensions systems will incur much lower fiscal costs than similar changes made by a country with a mature system and large fraction of population covered.

Most countries in Central America, notably Guatemala and Honduras, but also Costa Rica, encounter problems in the proliferation of parallel pension systems that cover specific population groups. Another problem, particularly in Nicaragua, but also in Guatemala and Honduras, is government intervention in the use of pension fund reserves for non-pension purposes and the granting of retirement benefits to people that strictly do not deserve them. Costa Rica, in turn, faces the problems more typical of maturing, high-coverage systems. Its pension scheme is several decades old and covers more than 50% of the labor force.

¹ Costa Rica is the exception with a mature system and significantly larger fraction of population covered.

This paper provides a proposal for the reform of public pensions systems in Central America. The proposal takes into account the characteristics of the economies in the region and incorporates lessons learned from other reform experiences in the world.

The paper focuses on the organization of the pension system, that is, the mechanisms through which income for the payment of pensions is generated, the role of private providers in the system, the rights of workers, the role of the government, and so on. We stress these issues because in these areas recommendations may be suitable for all countries in the region and accommodate a wide range of income redistribution and desired replacement rates.

Other issues should be decided by each country, particularly the task of defining a specific target level for retirement income depends on the social and economic situation in each country, and we refer to them only broadly. Similarly, recommendations for the scope of income redistribution embedded in the pensions system have to be made in relation to each country's desire for it, considering other existing programs for income redistribution. This is a matter to be decided by each country. The recommendations provided in this paper can accommodate a wide range of income redistribution and desired replacement rates.

Section 2 of this paper briefly assesses the current situation of pension systems in the region. The next section, 3, reviews the advantages and disadvantages of major pension reforms in Latin America. Section 4 presents the proposal for pension reform in Central America and Section 5 provides final remarks.

2. The Need for Reform

Even though most Central American pension systems are relatively young, they already show some problems typical of more mature systems. Not all countries experience the same or all problems. The problems most commonly experienced by systems in the region are:

- proliferation of parallel programs;
- inadequate provision of benefits;
- poor investment performance;
- low population coverage;
- low fraction of wages covered;
- poor administration (inability to keep proper individual records, long delays in payment of benefits, etc.).

A detailed discussion of the current situation of pensions systems in each country is provided in Cifuentes and Larraín (1997). A brief overview of their main problems follows.

Proliferation of parallel programs

Proliferation of parallel programs has been a problem especially in Costa Rica, Guatemala and Honduras. Costa Rica partially solved this situation in 1992 through the unification closure to new entrants of 17 different programs and their closure to new entrants. Despite efforts by the government, however, two groups (teachers and employees of the judicial system) managed to keep their own schemes. Guatemala has about 17 programs that provide coverage to various groups of workers, while Honduras has at least seven separate programs. In these three countries, the government provides some form of financial assistance to most of these parallel programs.

With the proliferation of parallel pension schemes, each program places competing demands on the government as each tries to obtain higher benefits. Because conditions obtained by groups with different political influence and strength vary greatly, the pension system is inequitable. A greater inequity exists, however, with all those members of the working population that are not covered by any system.

Inadequate provision of benefits

A second critical problem is the inadequate provision of benefits by the pension systems in some countries. Young pension schemes based on PAYG financing typically experience revenue surpluses, as contributors greatly outnumber beneficiaries —e.g. retired pensioners. As elsewhere around the world, when experiencing a surplus, some governments have fallen to the temptation of extending pension benefits to populations not entitled to receive them. Thus, they have lowered eligibility requirements, or have given benefits more generously than can be sustained in the long run. This was the case in Nicaragua during the 1980s, and also seems to be the case with recent disability pensions in Costa Rica.

Poor investment performance

A third common problem is the poor performance of investments made by pension funds. These investments have generally had low or negative real returns. The low development of

regional financial markets, for example, has precluded insulating reserves from inflation, and helps explain low returns. Investing abroad in more developed financial markets would have given access to better returns and coverage of risks, but has not been allowed by any Central American countries. Furthermore, the investment objective has not been to maximize returns but to use investments as a source of additional benefits for affiliates and beneficiaries. Commonly, pension fund reserves have been used to provide loans to affiliates at very low or negative real interest rates. Investment in government securities has also provided very low returns.

Low coverage of population and wages

A fourth common problem is the low population coverage of Central American pension systems and, in some cases, the low fraction of wages that they covered. With the exception of Costa Rica, pensions programs in the region have failed to protect a reasonable fraction of the labor force. Additionally, in some cases, maximum taxable wages have been set at such a low level that effective coverage provided by the system is even lower than what would be expected by the fraction of the population covered. This is the case of Honduras, as discussed by Cifuentes and Larraín (1997). In many instances, the pension benefit is set nominally, through a link to salary history, and is not adjusted for inflation, thereby rendering coverage nearly ineffectual.

Poor Administration

Systems in some countries have failed to keep adequate record of workers' history of transactions. This makes calculation and granting of benefits a highly discretionary process. On top of this, administrative procedures can be very slow. Time between a worker files an application for a pension and this is approved can be eighteen months in the public pensions system in Honduras (IHSS).

Problems with record keeping and administrative procedures have been found in Honduras and Nicaragua. On the other hand, Costa Rica and the recently reformed public system for the private sector in El Salvador (ISSS), get high marks on administration.

The Problems of Pay-As-You-Go systems

Most pension systems in Central America are of the pay-as-you-go (PAYG) type, in which current benefits are financed mainly by current worker and employer contributions (social security taxes). Most of these problems are a direct result of the incentives embedded in the design of PAYG systems. Two design issues are crucial. The first arises naturally from the fact that the system is meant to be unfunded.² With benefits financed mostly by the contributions of active workers. At the start of the system, active workers contribute while there are no people entitled to receive benefits. It seems possible, then, to use these “extra” funds without threatening the long run financial sustainability of the system. This is true if the uses of the fund are temporal; i.e. they do not imply a promise of a permanent stream of payments in the future.

The existence of this temporal fund is an incentive for different groups of workers to create their own parallel program so as to gain access to this funds for their own immediate benefit. This helps to explain the proliferation of parallel systems.³ There is, however, no free lunch here. The losers in this scheme are the future generations that will receive a poor return on their contributions to the pensions system, given, on average, by the rate of growth of covered wages rather than by the market return to capital.⁴

A second crucial issue is that PAYG systems do not provide a clear definition of ownership rights over the contributions and the system’s fund.⁵ Lack of definition generates political pressure to obtain additional benefits such as increased pensions, cheap loans from the fund, or investments in projects that benefit particular interests groups, among others. The diversion of resources, in turn, results in poor investment performance, and may also result in benefits that are unsustainable in the long run.

Some think that tighter control over the operation of PAYG systems could solve some or all of these problems. We think not. Experiences in the region and around the world have shown that the design of PAYG systems cannot insulate against political pressures. Adjustments can somewhat normalize the operations of PAYG systems, but the incentive problems remain

² The analysis also holds for the case in which the system holds a small reserve fund for short-term fluctuations.

³ Two other reasons can be added. One is that a group can commit the government to give a more generous contribution to their own system than what they get from the government in the system from which they are splitting from. A second reason is that they can escape from a redistributive mechanism that was harming them in the original system.

⁴ Assuming –safely– that there is no excess of capital in the economy.

⁵ This holds true for systems defined in benefits, as in Central America.

inherent in the structure. In the political reality of Central America, PAYG systems have proven extremely vulnerable to political pressures.

Thus, only a fundamental change in the incentives and structure of the systems will bring a lasting solution. One way to achieve this is to define the property rights over contributions through individual accounts. This would allow workers to have better information of the investments of the fund and would make it more difficult to divert resources for purposes other than saving for retirement. Privatization of management, with a clear rule of using the funds for no purposes other than providing good pensions will reinforce this.

PAYG systems also offer lower returns than funded systems in which contributions are capitalized at market interest rates and benefits are paid with the capitalized funds, especially in aging populations.⁶ Cifuentes and Larraín (1997) review the forecasts for the population's age-structure in Central America. The situation resembles that in other parts of the world: populations are aging and therefore PAYG schemes will experience tighter financial conditions in the future as the number of beneficiaries grows faster than the number of contributors. Because of this demographic trend, a funded system will provide a better return on contributions, that is, higher pensions for a given contribution rate. Additionally, the longer PAYG systems operate, the greater the benefits promised to the population. This increases the cost of reform, and implies that the sooner PAYG systems are reformed, the lower the transition costs.

An additional problem of most PAYG systems arises from the fact that they are defined in benefits. This means that the system offers to pay a benefit that is defined as a replacement rate of an average of wages in the last years of working life. This implies that normally there is a weak link between the amount of money effectively contributed and the benefit received.⁷ This induces different forms of evasion. In a recent study, Gruber and Wise (1998) find that the absence of link between contributions and benefits has been a strong incentive for workers to leave the work force early, bringing adverse effects for the financing of the system and the

⁶ This is not true for the initial generations in the system. Initial generations obtain an implicit return from a PAYG system that is above the market return. The opposite is true for later generations. The speed at which a system reaches the point where implicit return is below market return varies across countries and depends on the rate of growth of population and on increases in coverage. Once it is reached, there is no way to revert the relation.

⁷ It should be noted that a system defined in benefits can improve the links between contributions and benefits by extending the number of years considered in the computation of the base salary. Recently many countries in the world have changed the formula of calculation of benefits in this direction. In Central America, the number of years included in the calculation is low.

economy in general. Kotlikoff (1996) argues that strengthening the link between contributions and benefits can bring substantial efficiency gains.⁸

Finally, the establishment of a funded system can have important externalities in an economy. This is particularly true for Central America, where one such potential externality is to help develop financial markets. Pension funds require long-term investments, thereby making capital available on a long-term basis. Given the early stage of development of financial markets in the region, the gains could be considerable.

3. Alternatives for Reform

This section looks at the characteristics of pension reforms undertaken by some countries in Latin America. We only consider structural reforms that have made important changes in the financing method of pensions. After a brief overview of the main characteristics of these reforms, this section analyzes their advantages and disadvantages. Table 1 on page 17 provides a summary of the advantages and disadvantages of each of the pension reform models.

Pension reforms are grouped into three categories, according to the final (post-reform) status of the old system. The first is a substitutive reform in which a new financing method completely replaces the old. The second creates a mixed system, where the old PAYG system is reformed (in general, reducing its size and homogenizing benefits across the population covered) and coexists with a new system based on capitalization. Workers participate in both systems. The third type of reform also creates a mixed system, where PAYG coexists with individual capitalization, but here workers choose between the two systems, and can move back and forth between them. We call this “parallel systems.”

3.1 Substitutive Reforms

Chile and Bolivia provide examples of substitutive pension reform. Chile reformed its pension system between 1979 and 1981. This reform was the first experience of its type in the world, and deeply influenced reforms in other countries. Before 1979, a highly fragmented

⁸ Kotlikoff (1996) simulates the general equilibrium of an economy with endogenous labor supply that moves from a system where workers perceive no link between contributions and benefits to one where an additional dollar of contributions implies additional benefits at a fair price. Under some parametrizations, GDP in the long run can be as

system existed with several institutions covering different groups of workers under different conditions of contributions, benefits and retirement eligibility. Additionally, contribution rates were high, the system did not keep significant reserves and most of the institutions were running deficits. Reform was prompted by the desires of reducing labor-market distortions caused by high contribution rates and bringing financial security to pensions.

The Chilean government took the first step of reform in 1979 by homogenizing retirement conditions across the different programs. A system based on individual capitalization was created in 1981. Workers already contributing for pensions could choose between staying in the old system or switching to the new one. New entrants to the labor force could only participate in the new system. The old system was meant to dwindle and then disappear along with its beneficiaries. In the new system, contributions from workers go to an individual account that is administered by a private company exclusively dedicated to this activity. Workers freely choose among several pension-fund administrators (AFPs).

Bolivia reformed its public pensions system in 1997. The main difference with Chile's scheme is in the organization of competition among providers. This innovation was introduced as a response to the relatively high administrative costs in the reformed Chilean system. The population was divided geographically in two groups—only two because the initially covered population was small, about 320,000 in 1997. An international bidding assigned each group to a different pension fund administrator, based on which company bid the lowest administrative costs. During the first three years workers cannot switch from one administrator to the other; after this, choice—competition—will be allowed in the four largest Bolivian cities. In these cities, workers will be able to change to the other administrator once a year, or when changes in the administration fees occur (Jemio, 1997).

We analyze below the main arguments in favor and against substitutive reforms.

Advantages

- *Defined Ownership of Retirement Funds and Insulation from Political Risks* (Diamond, 1997). One problem of systems based on collective capitalization (scaled premium systems or, in the limit, PAYG) is the lack of clear definition of property rights over contributions, and the ensuing lack of strict control over the use of the funds. In turn, this enables people in

much as 11% higher in the new system.

the political power to use the funds at their convenience. In this misuse situation, the funds are generally used to give generous benefits to groups with political influence and are not invested to maximize returns. In contrast, a fully funded system with individual accounts assigns property rights to each worker for the contributions he/she has made to the system. It is still possible for the government to confiscate part (or all) of the pension funds, but such a move would be highly visible. This makes misuse or redefinition of fund use politically more difficult than when fund ownership is ill-defined and/or diffuse.

- *Reduced Labor Market Distortions.* A substitutive reform changes the pension systems not only from PAYG to a fully funded scheme, but also from a system defined in benefits to one defined in contributions.⁹ A system defined in contributions strengthens the link between contributions and benefits by decreasing the extent to which contributions are seen as a tax and increasing their perception as savings. Also, the higher rate of return obtained by fully funded systems compared to PAYG systems, allows the contribution rate to be reduced over time, for a similar level of benefits. This occurred in Chile. Contribution rates came down from an average of over 20% of taxable wages to about 13%. Both the reduction in the tax component of contributions and the decrease in contribution rates reduce distortions in the labor market.
- *Positive Macroeconomic Impact* (Cifuentes, 1995). A PAYG system implies the existence of “implicit” public debt, which crowds out private investment. Substitutive reform creates the opportunity to reduce the total outstanding public debt, when the system transition is not entirely financed by new (explicit) public debt. In Chile, the reduction of public debt was achieved because the reform was financed through the cut of other public expenditures, thereby avoiding the need to issue new public debt. If the transition had been financed by issuing debt, the total amount of public debt (explicit plus implicit in the PAYG) would have remained roughly unchanged. Of course, this reduction is paid by living generations in the

⁹ We consider the most standard types of pension systems: funded systems defined in contributions and unfunded systems (PAYG) defined in benefits. It should be noted that it is possible to have unfunded systems defined in contributions (notional accounts) and funded systems defined in benefits (collective capitalization). We do not discuss these cases here.

form of reduced public expenditures. The relevance of this issue depends on the size of the initial system. If it is small, then potential gains from the change are also small.

- *Deepening of Financial Markets.* In a funded system, a considerable amount of capital needs to be intermediated in financial markets. This has a profound impact in the development of financial markets. It makes the market more attractive to issuers of existing instruments and provides incentives for the creation of new instruments. Private pension systems also help to develop insurance markets such as annuities. Chile's transition from a PAYG scheme to a funded pension scheme created exactly this demand for long-run investment instruments. It increased the volume traded as well as the diversity of instruments. Between 1985 and 1997, the pension fund grew from slightly over 10% of GDP to more than 45% of GDP. In 1997, 40% of the fund was invested in government securities, with the rest held in instruments offered by the private sector. Of this 60%, almost half was invested in stocks. The stock market illustrates the overall development of Chile's financial market in the period following the pension reform. Between 1985 and 1996, the value of market capitalization in the Santiago Stock Exchange grew by a factor of 34 in U.S. dollars. Over the same period, market capitalization in emerging economies grew on average by a factor of 13, while in developed economies it grew at a factor of 4 (IFC, 1997). The turnover ratio (the value traded in a year as a percentage of the market capitalization) rose from 2.9 % in 1985 to 15.3 % in 1995. Thus, the stock market not only became larger but also more active. Combined, these effects placed a permanent pressure on the Chilean authorities to provide improved financial regulation and legislation. Commitment of the authority was crucial. Development of financial markets was possible not only because of the larger availability of funds, but also because authority improved the quality of regulation.
- *Sustainability to Demographic Change.* Systems based on the full capitalization of contributions are less dependent on the demographic structure of the population than PAYG systems. A PAYG financing method is based on intergenerational transfers of income, therefore the age structure of population is a key determinant on its viability. In a funded system, changes in the age structure affect its financing only as long as it affects the real return of capital. This is a much more indirect and its empirical evidence has not been shown.

Disadvantages

- *Transition Costs.* The complete phase-out of a PAYG system and its substitution for a capitalization scheme may carry high costs. In phase-out, the old system must continue to pay benefits with significantly reduced or no revenues from current contributions, that are directed into the individual accounts of contributing workers.
- *Administrative Costs.* There is no clear theoretical answer to the question of how best to organize the private provision of a good whose purchase is mandatory for the working population. Experience in Chile has shown that competition alone does not reduce the fees charged by providers as could be expected. This point is particularly relevant for the Central American countries. Their small economies will preclude a high number of providers, and make a low level of competition among providers likely.

The high level of administrative costs is a major issue in Chile's reformed pension system. The Chilean system relies on competition to enhance efficiency, that is, to optimize the quality of the product and to reduce its cost. Its designers expected that the free movement of workers between fund providers in pursuit of the best cost/quality combination would guarantee high efficiency and low administrative costs. Thus, they allowed the providers to set and change the administrative fees for fund management. After several years of operation, however, it became apparent that workers were not very active in moving towards the optimal quality/cost combination. This is likely attributed to two elements: contributions are mandatory, and therefore partly viewed as a tax; and the "product" contains enough complex elements that it is difficult for workers to make an informed assessment.

In general, people appear to be less willing to spend effort searching for best options on the investment of something perceived as a tax. Fund providers, very much aware of this, focus on spending large amounts on publicity and direct sales rather than in competing through prices and investment returns. This drives up the administrative costs of the system compared to similar services in other countries or industries.

The most visible manifestations of these high administrative costs are the large number of sales people in pension systems and the high numbers of affiliates that switch providers each year. Affiliates face no restrictions in switching providers. Providers assign large

resources and sales staff to attract contributors to their fund. This, in turn, keeps administrative costs high. Observing this, some people attribute the high administrative costs to the lack of restrictions for affiliates to switch between providers. We think that the source of this problem is the lack of response of the affiliates to changes in prices. This leads to the fact that it is not a good strategy for providers to compete by lowering prices, but keeping fees high in order to finance other forms of competition (sales efforts, for example).

In an attempt to reduce the number of transfers (and, allegedly, the administrative costs of the system), Chile's Superintendence of Pension Funds recently increased the formality of the switching process, requiring the affiliate to attach a photocopy of her last account statement and of her ID to her application for transferal to a new pension fund administrator.¹⁰ This has reduced the number of transfers from one AFP to another by over 80%, while sales force has halved. In the midst of evident political pressure, pension funds reduced their variable fees, from an average¹¹ of 2.92% of taxable wages in 1994 (a figure representative of the period 1990-96) to an average of 2.61% in June 1998, a reduction of 31 basis points. Fixed fees, however, were raised from a system average of Ch\$ 169 to Ch\$ 358 (both in Ch\$ of June 1998). As a fraction of the average taxable wage, this represents a net raise of 7 basis points. Therefore average fees fell by 24 basis points. This modest reduction is not enough to close significantly the gap between the administrative costs of the Chilean pensions system and comparable alternatives (Valdés-Prieto, 1998).

Bolivia reformed its pension system fifteen years after Chile. Its designers, thus, were well aware of the administrative cost issue, especially as the smaller size of the Bolivian market exacerbated the problem: fewer providers and thus less competition. As explained above, the bidding process guaranteed that competition would occur in the fees charged by administrators. (Providers cannot change the fee stated in the bid.) The bid determined substantially lower administrative charges per worker (see Valdés-Prieto, 1998 for a thorough comparison). One problem with the Bolivian scheme, however, is that it contains no incentives to improve the risk/return combination of investments, as workers are not allowed to switch pension administrators for three years. Quality of the service provided to affiliates so far, seems to be poor (Aponte, 1998). The only current incentive for improving

¹⁰ Circular 998, Superintendence of Pension Funds Administrators, October 31, 1997.

¹¹ Average weighted by affiliates to each pension fund. Taking affiliates or contributors as weights does not make a significant difference.

the quality of service is to strengthen the reputation in preparation for when workers will be able to choose the provider.

- *Financial Market Risks.* As political and demographic risks decline with capitalization schemes, financial market risks increase. The long-term nature of the investment, however, gives considerable possibilities to alleviate this risk.
- *Government Intervention in Investment Policies.* Investment portfolios of pension funds are often subject to government controls to minimize the investment risk. A problem arises, however, when investments are controlled for purposes other than limiting risk or guarding rates of return. In Mexico, for example, a fraction of pension contributions have to be invested in a housing program whose returns are below market. Again, governments may exert political pressure to alter the destination of pension funds.

3.2 Mixed Systems

In October 1993, Argentina approved a law to reform its PAYG system, which had serious financial imbalances. The law created two systems to which workers should contribute. One was based on PAYG financing, and gave workers two kinds of benefits: a flat pension (the basic uniform benefit) calculated twice a year according to the average contribution to this system by all workers; and a compensatory benefit calculated in relation to the years of contributions made to the old, unreformed system. This second benefit was meant to be transitory, disappearing as workers who participated in the old PAYG system diminished, thus leaving only the flat benefit in the long run. The other system would be based on privately managed individual capitalization accounts, such as in Chile. Contribution rates were to be set at 16% of wages for the PAYG system and 11% to the system based on individual capitalization, for a total contribution of 27% of the wage.

A modification was made to secure legislative approval of the proposal, and it became possible for a worker to remain solely on PAYG financing. Workers who chose the new system needed to follow the rates above. Workers who stayed in the PAYG scheme were entitled to receive the basic uniform benefit, the compensatory benefit (the same as in the new system) and

an additional benefit recognizing the fact that they stayed in the PAYG and did not accrue funds in an individual account. This additional benefit was defined at 0.85 % of the average wage (over the last 10 years of contributions) per year of contributions to the new PAYG system (after the reform), with a maximum of 35 years. The maximum benefit was, then, equivalent to a 29.8 % replacement rate.¹²

In 1996, Uruguay reformed its pension system on lines similarly to the original Argentine proposal. Instead of a flat benefit plus a complementary one, however, only one pension is paid by the PAYG system, calculated from the years of effective contributions. An additional pension is paid by the new system based on capitalization and individual accounts.

Advantages

- *Low Transition Costs.* In the transition to a mixed system, benefits accrued from the old system become a basic uniform pension and a compensatory benefit that depends on the number of years contributed. Financing is of the PAYG type, meaning that contributions from active workers finance this benefit. Therefore, the government does not have to divert revenue from other sources to pay pensions.
- *Basic Uniform Benefit.* The design of a basic, uniform benefit is sustainable in that each period it adjusts its level to available revenues. This incorporates an automatic adjustment for demographic shifts or changes in population coverage. In this mixed system, the demographic risks are borne explicitly by the benefit recipients. The extent to which this should be considered an advantage or a disadvantage is not clear. In general, one of the ways in which PAYG systems adjust to demographic shifts is by changing the benefits. This formulation simply makes it explicit.

Disadvantages

- *Risks of Financial Imbalance.* The continuity of a defined benefit program with PAYG financing maintains the risk of future financial imbalances. Moreover, these types of non-

¹² Pension Benefit over Average wage of last 10 years of contributions.

funded pensions systems have adverse macroeconomic impacts because, like public debt, they tend to crowd out private investment.

- *Duplication of Costs.* Because workers are affiliated to two systems, many functions such as account maintenance must be done twice. Thus, total administrative costs increase.

3.3 Parallel Systems

Peru and Colombia established new systems based on individual capitalization in the mid-1990s, while keeping the old PAYG scheme open to new entrants. In Colombia, workers are allowed to switch back and forth between the two systems as many times as they want in their working lives, provided that they have stayed at least three years in one system. In Peru, workers in the PAYG can switch to the new system, but changes in the other direction are not allowed. This parallel structure was, in both instances, a necessary concession to obtain parliamentary approval for the introduction of a capitalization system. As a design, this parallel structure does not give any particular benefit. Rather, it imposes more uncertainty in the sustainability of the PAYG system¹³ and therefore uncertainty in the evolution of public finances.

Advantages

- If the capitalization part of the system prevails, the advantages of a funded system apply. It is likely, however, that these will be realized only partially, and much later than in the case of substitutive reform.

Disadvantages

- *Differences in Contribution Rates.* The parallel system provides several opportunities for policymakers to introduce distortions and to affect the incentives of workers to join one system or the other. The experience in Peru has proven that policymakers do take advantage of these opportunities. Recently, the Peruvian government introduced changes intended to make the individual capitalization more attractive. Future governments, however, may decide to encourage choice in the other direction if, for example, financial problems worsen in the

¹³ For example, an unexpected migration out of the PAYG system increases its financial needs in the short-term.

PAYG system. This feature introduces a significant and unnecessary degree of uncertainty to the system.

- *Differences in Benefits.* There is an open possibility for the state to improve the benefits offered by the PAYG system in order to attract a larger number of affiliates. Such an offer may not be financially sustainable in the medium or long run.
- *High Operation Costs.* The administrative costs of operating two parallel systems are higher than operating a single one. In the case of Peru, the design of the individual capitalization scheme is similar to Chile's, which leads to high costs of operations.

TABLE 1:
Summary of Advantages and Disadvantages of Pension Reform Models

TYPE OF REFORM	ADVANTAGES	DISADVANTAGES	Examples
Substitutive	<ul style="list-style-type: none"> • Defined Ownership of Retirement Funds and Insulation from Political Risks. • Reduced Labor Market Distortions. • Positive Macroeconomic Externalities. • Deepening of Financial Markets. • Sustainability to Demographic change. 	<ul style="list-style-type: none"> • Transition Costs. • Administrative Costs. • Financial Market Risks. • Government Intervention in Investment Policies. 	Chile 1979-1981 Bolivia, 1997
Mixed Systems	<ul style="list-style-type: none"> • Low Transition Cost. • Sustainable design of Basic Uniform Benefit. 	<ul style="list-style-type: none"> • Risks of Financial Imbalance. • Duplication of Costs. • Pensioners bear systemic risks in the Basic Uniform Benefit. 	Argentina, October 1993 Uruguay, 1996
Parallel Systems	<ul style="list-style-type: none"> • If capitalization part prevails, benefits of a substitutive reform are partially achieved. 	<ul style="list-style-type: none"> • Differences in Contribution Rates. • Differences in Benefits. • Increased uncertainty in evolution of public finances. • High Costs of Operations. 	Peru, 1993 Colombia, 1994

4. A Reform Proposal for Central America

In this section we present a proposal for pension reform in Central America that takes into account both the lessons learned from other reforms and the characteristics of the countries in the region. Our proposal is based in the following principles and facts:

1. PAYG or scaled-premium systems have built-in incentives that put their sustainability at risk. The following is a brief list of the most common aspects of this problem:
 - fragmentation of the system, leading to inequality in the conditions faced by different groups of workers. It also constitutes a source of conflicts and demands for the government;
 - government intervention in the system, normally diverting funds to purposes other than social insurance;
 - adverse macroeconomic externalities, with crowding out of private investment;
 - evasion of contributions due to the weak links between contributions and benefits; distortions in the labor market due to this fact;
 - vulnerability to the demographic transition.

2. Effective coverage of the labor force by existing schemes is low in most Central American countries. Possibilities of expansion are limited in the medium run, given the important proportion of informal and temporary workers. Thus, the potential market for mandatory pensions is not big. At the same time, this implies that transitional costs would be relatively low.

3. Current contribution rates are low in most countries, ranging from 3% to 7.5%, as reported by Cifuentes and Larraín (1997). These rates are too low to finance reasonable benefits on a sustainable basis under any financing mechanism. Pension systems in the region have been able –so far– to keep these low rates either because they are young or because they pay very low benefits. For systems to pay reasonable benefits on a sustainable basis, contribution rates will have to be increased.

4. Proposals based on privatization require strong public regulatory capabilities. The government must regulate administrators and provide the legal framework for development of the financial market. Setting up the structure to provide strong and efficient regulation is a major task ahead for the governments of Central America.
5. Sustainability. The design proposed should be able to confront political, economic, and demographic threats. Pension systems can be destabilized if there is room for groups to lobby for additional benefits. Also, a reform can be reverted if the system is too costly relative to its benefits. Lastly, demographics shifts can be a source of destabilization for PAYG systems.

5. The Proposal

Financing through capitalization

The new pension system should be based on capitalization rather than PAYG financing. Capitalization schemes reduce distortions in labor markets and increase benefits due to higher rates of return and externalities such as enhanced financial markets. PAYG schemes, on the contrary, generate a series of undesired situations, as outlined previously. Also, capitalization together with good legislation from the authority can be crucial in developing financial markets.

Individual accounts and private management

Individual accounts are a way to define property rights over the contributions. This helps to reduce pressures from organized groups to receive additional benefits from the system. Private administration of the funds is highly desirable. Public administration of pension funds makes it easier for the government to divert funds for other purposes, even with individual accounts. Certain governments may seem reliable and committed not to divert the funds, but there is always the uncertainty about what future governments can do.

We advocate private administration since the start of the system. An alternative could be to have the government administer the system until investment opportunities have developed. This is likely, however, to run into the problem of time inconsistency, as the government may be tempted to keep managing the system even after financial markets become sufficiently developed.

Centralized collection of contributions

This can be done by a centralized agency (such as the tax collection agency) that would collect contributions from employers or independent workers and distribute these funds to the fund managers. This simplifies the process of payment of contributions by employers because they will pay all contributions to one agency. It also avoids duplication of costs, because it avoids different fund managers setting up systems for collection of contributions.

Organization of the pension fund market through a bidding process

We propose a system where the right to participate as a provider (fund manager) is assigned through a bidding process to those who offer to charge the lowest administrative fees. Only highly qualified institutions, with a solid track record in pension fund management would pre-qualify to participate in the bid. Providers will be required to manage the fund, provide periodical information to affiliates and pay benefits (pensions).

The small size of Central American economies exacerbates the tendency of privatized systems with free-entry and competition among providers to carry high administrative costs. Given that market size would not allow more than a few providers, competition cannot be relied upon to keep costs low. Additionally, given their current low level in most countries of the region, contribution rates will need to be increased. Controlling administrative costs will help to moderate this increase, alleviating the impact that this can have on the labor market.

The traditional argument in favor of open competition (and against other arrangements as a bidding mechanism) is that consumers should be free to choose the provider that they prefer. This argument, however, should be considered alongside the fact that the mandatory imposition of purchase of this service—savings for retirement—has already limited consumers' freedom of choice. Consumers cannot choose not to buy the service. In addition, it should be considered that the product is new for most consumers, and it may be difficult to understand all of its dimensions. Moreover, there is little or no knowledge about the providers when the system starts. This weakens the argument that free choice by consumers will ensure that the product delivered will be one of good quality and reasonable low cost. It seems sensible, therefore, to think of mechanisms alternative to open competition for organizing the provision of the service, particularly for the initial years of the system. It should also be stressed that the government that

imposes the mandate to contribute bears a responsibility in ensuring that customers will receive a product in fair terms.

Fees

The fees to be charged can be defined in different ways: a flat fee, a fraction of the taxable wage, a fraction of the return of the fund or a fraction of the fund itself. Each of them has advantages and disadvantages:

Flat fee vs. fraction of income. Fees charged as a fraction of taxable income have a redistributive component if costs are mainly fixed per worker and do not vary with income. With variable fees, however, providers become more interested in having high-income affiliates. This may imply that services provided by fund managers will be better for this group than for low-income workers. A flat fee, in contrast, keeps charges closer to costs but represents a higher proportional cost to poorer affiliates.

Fraction of the return obtained by the fund. This provides a direct incentive for fund managers to improve the returns on investment because they will have participation on those gains. Fund managers should also have participation on the losses, in order for this mechanism not to induce them to take excessive risk.

Fraction of the fund. This type of fee is the natural one to cover costs that vary directly with the size of the fund managed. It is less transparent for workers, though, as it may be harder for them to perceive this cost compared to a fee that is deducted from their income. This potential problem can be taken care through the bidding process, which will ensure that fees charged will be low. Compared to a fee on the returns of the fund, this provides less incentive to improve performance. Different returns will change only marginally the payments to fund managers.

Part of costs are fixed per worker, i.e. they are independent of the income or fund of the worker, and are determined by the administrative costs of services like opening an account, record keeping and updating, and payment of benefits. Another portion varies with the size of the

fund and is known as fund management costs. These include transaction fees charged as a fraction of volume traded.

The structure of fees should reflect this cost structure. The recurrent costs that are fixed per worker should be taken care by a flat fee per worker. A fee charged as a fraction of income can also be considered if some degree of redistribution is desired. A second fee should be charged on the fund to take care of fund management costs. A fee on the return of the fund can be considered when investment opportunities are diverse enough so as to make investment skills of the fund managers a relevant determinant of the return obtained by the fund.

Affiliation

The affiliation of workers to the providers selected through the bidding process can follow different schemes. One option is the free affiliation of workers to one of the selected fund managers at the start of the system. The problem with this is that there is high uncertainty for both workers and providers at the start of the system. Entrance will be easier for providers linked to established businesses (e.g. banks), and difficult for those lacking this reputation.

An alternative is to follow the method used in Bolivia. There, the population was divided in two groups (because that was the number of providers selected) according to their geographic area. Each group was assigned to one of the selected providers. After an initial period of three years, affiliates would be allowed to switch. Their solution, however, provides no good incentives for fund managers to improve their performance.

Comparing the two alternatives, problems of the second alternative seem to be less significant. At the start of the system in countries with small financial markets, investment opportunities will be very small, and thereby the possibilities of competition in ability to manage funds will be minimal. Therefore, the absence of incentives for fund managers should not harm investment performance by much.

Incentives to Improve Efficiency

If the bidding process focuses exclusively on minimizing administrative costs, the system could be left without incentives to do well in other dimensions, such as investment performance and quality of the service. This lesson is apparent in the Bolivian experience (Aponte, 1998).

This problem can be attacked in two ways. First, the initial contract can specify benchmarks for certain variables as investment performance, quality of record keeping, and timeliness of reports to affiliates and payment of benefits. Falling behind the benchmarks established in the contract could be made to trigger the payment of a fine. Second, participation in future bids can be made contingent on reports about the quality of service provided. These reports may come from surveys to the affiliates or may be produced by independent agencies.

The Medium Run

In the medium run, we envision two possibilities that the reformed system can follow. One is that the bidding process is repeated every five years. The second is that after an initial period of five years, the market opens for the entry of new fund managers. This alternative should only be considered if it includes, at the same time, measures to avoid the rise in costs observed in other privatized systems. Experiences do not provide conclusive answers to this issue, as we have discussed, in part because the transitions only occurred in the last few years.

Investment Policies

It is desirable to have restrictions to control the risk of the investment portfolio. These restrictions usually take the form of maximum fractions of the fund that can be invested in certain types of instruments. Legislation should allow funds to invest internationally, in order to take advantage of good investment opportunities abroad and to diversify risk.

*Type of Retirement Benefits*¹⁴

There are two natural schemes for the payment of benefits in a system with individual accounts: phased withdrawal and annuities.

In an initial phase, we recommend the use of phased withdrawal as the mechanism for pensions. A market for annuities can be formed in the future, once financial markets reach a more advanced stage of development.

Under the phased withdrawal modality, funds are withdrawn periodically (normally on a monthly basis). The monthly stipend is calculated in such a way that funds in the individual account are sufficient to finance that stipend if the worker were to live her remaining life

¹⁴ We are grateful to Peter Diamond and Olivia Mitchell for their comments on this issue.

expectancy at the time of the calculation. Given that life expectancy increases as people grow older, the stipend has to be recalculated periodically. This system requires actuarial capabilities by the regulator and/or the institution in charge to administer the payments.

Annuities are offered by insurance companies, and retirees can purchase them with the funds accumulated in their individual accounts. Insurance companies offer the payment of a fixed stipend (which should be expressed in real terms) while the worker is alive. Annuities require a certain degree of development of the financial market, particularly the existence of low-risk long-term real securities, which are normally offered by the government.

Redistribution

A pensions system with the characteristics described so far can accommodate a program of income redistribution, as a minimum pension guarantee financed with general revenue of the government. In order to have access to this benefit, workers should have contributions for a certain number of years. Given the situation of poverty and unequal income distribution in Central America, the issue of income redistribution should be addressed on its own by each nation which should define the groups of the population in most urgent need. Considering the low population covered in most countries, the pensions system does not seem to be the most effective instrument available for income redistribution.

A Regional System

Countries may benefit greatly if they adopt a regional system. Main gains come from two sources: The size of the market increases considerably, allowing the system to take advantage of economies of scale. Second a regional system with a single regulatory body will save each country resources and the expense of administration compared to five separate regulatory systems. The next paragraphs discuss these issues and other topics in the perspective of a regional system.

Regional Fund Management

In an ideal regional system, fund managers would be allowed to manage funds from any country in the region. This would allow the system to take full advantage of economies of scale. There are different ways by which the region can converge to this situation.

We propose that all countries, or a group of them,¹⁵ call for an international bid for the management of pension funds. Between three and five fund managers would be assigned. Following pre-qualification on the basis of solvency and experience requirements, fund managers would be selected strictly according to a ranking of the administrative fees they propose to charge. Fund managers should charge the same fees in all countries, and they need to have a minimum presence in each of them.

We propose that each country continue to design autonomously its the type of system, including contribution rates, retirement ages, minimum guaranteed pension etc.. In other words, regional fund managers would administer up to five different pensions programs.

Initial sorting of affiliates to the different administrators would work on the same lines as described above under “Affiliation”. In each country, potential affiliates would be divided into as many groups as positions for fund managers exist. Each fund manager would take care of one of these groups in each country. After an initial period of two to three years, workers would be allowed to switch.

For the medium run, same considerations as before apply. Bidding could be repeated every certain number of years, or free entry could be allowed once good mechanisms for controlling costs become available.

Regional Regulation

The second natural sphere for regional integration is regulation. Regulation of a privatized system requires, in general, the active role of the authority supervising operations by fund managers and an adaptation of the regulatory framework as the system grows and as the opportunities offered by financial markets change. This activity requires specific knowledge. Setting up regulatory institutions by the different countries will be a costly and unnecessary duplication of activities.

Nonetheless, the case for a regional regulatory body is not only one of economies of scale in the traditional sense. Regulatory capabilities in some countries are so low that establishing their own regulatory bodies will not only be expensive; but practically impossible. The type of independence and technical capabilities that such institution would require are hard to find in some Central American countries. An institution that has a regional scope is by far the best

¹⁵ See the next section for different transition schemes.

alternative to achieve quality, permanence, and low political interference in pension regulation, in a timely manner.

Thus, regulation should be carried out by a centralized body financed by all the countries involved. We suggest that the Central American Bank for Economic Integration (BCIE) takes a leading role jointly with a commission of the Central American governments in defining and implementing a regional regulatory body. This would be a natural extension of BCIE's role, leading in the design of regional financial markets.¹⁶

Collection of contributions

Each country can take advantages of existing structures for this task (e.g. the tax collection system) and there does not seem to be major gains from integrating this function regionally.

Investment Policies

It remains necessary to restrict the risk taken in the investment pensions portfolio. Realistically, other restrictions will arise from politics. For example, some fraction of funds coming from a certain country will have to be invested in that country. An important test of a true regional financial integration would be permitting fund managers significant possibilities of investing in other countries in the region. Investing outside Central America should also be allowed for reasons of risk diversification. Potentially, each country could decide on a different investment policy for the fund it owns, but we do not recommend it, unless differences result from considerations of risk diversification. Similar investment rules across countries will reduce administrative costs for fund managers. These rules should be made only with concerns for risk and return.

Redistribution

A regional system could accommodate some forms of income redistribution in the same way as explained above. The extent of redistribution could be decided freely by each country.

¹⁶ See Camacho (1998).

Externalities

A regional pensions system as described here could be a major force in the deepening of regional financial markets and in the integration of the region. Investment across borders would create a permanent pressure to homogenize the rules governing the financial systems and to facilitate the movement of funds and capital among countries.

6. The Transition Process

One of the first steps in transition to a new pension system will be to define a mechanism to recognize the contributions of participants in existing systems. This mechanism will differ across countries according to political will and to the availability of information regarding past contributions.

The possibility of countries in Central America adopting a regional system differs. In particular, El Salvador has just started to operate a system based on private administration and individual accounts. Changing the system at this point would not be desirable, given that current participants in the system have rights that have to be respected. Possibilities remain open, though, for this country to join a regional system over the span of some years. Current fund managers in El Salvador could be allowed to participate in a future regional bidding process.

In Costa Rica, the current system is mature and covers a significant fraction of the population. This makes the reform to a funded system more costly. Thus, the government is considering a proposal for a transition toward a mixed system. The current system will continue to provide a basic benefit, while a second pillar based on individual accounts will complement the pensions. This mandatory second pillar could participate in the regional scheme. Should Costa Rica decide to implement a bolder reform, it could also participate fully in the regional mechanism.

Guatemala, Honduras and Nicaragua can participate from the outset in the regional scheme. These countries are considering alternatives for reform, and can coordinate their efforts towards a regional system like the one discussed in this document. Table 2 summarizes the basic elements of the proposed reform system.

TABLE 2: Summary of Reform Proposal

Finance Mechanisms	Capitalization
	Individual Accounts
	Private Management
Collection	Centralized through government agency, such as tax collection
Organization Mechanisms	Bids on lowest administrative fees from pre-qualified providers to determine fund managers.
	Fund managers operate at regional level, serving clients in any country
	Increased contribution rates to cover administrative costs.
	Assigned affiliation of pensioner to provider, at least in early years, with possible later choice.
Fees	Flat fee per worker, with possible additional fee if: <ul style="list-style-type: none"> i) some degree of redistribution is desired, ii) to cover fund management costs; and iii) if diverse investment opportunities exist and incentive to fund managers is desired.
Retirement Benefit	Initial ‘phased withdrawal’ with eventual transition to annuities.
Regulation & Investment	Regional regulatory body for pension systems and management in all countries.
	Enforced benchmarks for investment performance, quality of record keeping, payment of benefits.
	Regional (and international) investment of funds.

7. Final Remarks

This paper has presented a proposal for the reform of pensions systems in Central America. The proposed system takes into account the particularities of the economies in the region, the current situation of their pensions systems, and the rich international experience on pension reform.

The proposal stresses the advantages that a regional system can bring to the countries involved. Besides the powerful argument of economies of scale, a regional system has the additional advantage of giving small countries a means to insulate part of the regulation and system design from local politics. Relinquishing part of their freedom to set their own rules and participating in the discussion of rules and regulations in a regional instance, may allow the countries to overcome the low credibility of their authorities and institutions. In this way, credibility would be enhanced in the eyes of both domestic workers and foreign investors. In the case of Central America, this would be a concrete step towards the long desired goal of regional integration.

The benefits of the proposed system are highly significant, but will not come automatically. The Central American governments must first face the challenge of providing a regulatory framework that enables the development of solid regional pension system and financial market.

As in other experiences of regional integration, countries need to go through a transition process. Besides the specific issues described above, a key element for a successful reform at the regional level is the existence of a solid consensus in each country about the advantages of adopting such a system. Consensus is needed in order for providers and workers to perceive the regional system as more stable and beneficial than each country's individual potential scheme. Getting to a regional pension system in Central America may take time, but it is our firm opinion that this is the direction the region should move.

References

- Aponte Reyes-Ortiz, Guillermo (1998), “Reforma del Sistema de Pensiones: El caso de Bolivia”, presented at the conference *Pensions Systems Reform in Central America*, HIID, July 17-18, 1998, Cambridge, Mass.
- Camacho, Arnoldo, Ligia Castro and Allan Rodríguez (1998) “Financial markets in Central America: Current Situation”, presented at the conference *Pensions Systems Reform in Central America*, HIID, July 17-18, 1998, Cambridge, Mass.
- Castillo R., Jacqueline and Fabio Durán V. (1996), *Cobertura y Evasión en el Seguro de Pensiones IVM: 1994*, Caja Costarricense de Seguridad Social, March.
- Cifuentes, Rodrigo (1995), “Reforma de los Sistemas Previsionales: Aspectos Macroeconómicos”, *Cuadernos de Economía* 96, 217-250, August.
- Cifuentes, Rodrigo and Felipe Larraín B. (1997), “Pension Systems in Central America: An Assessment of the Current Status”, *HIID Development Discussion Paper No. 2*, Central America Project Series, September.
- Diamond, Peter (1997), “Insulation of pensions from political risk.” In Salvador Valdés-Prieto, editor, *The Economics of Pensions*, Chapter 2. Cambridge University Press, Cambridge.
- Durán V., Fabio (1996), *Estudio Actuarial de Seguro de Invalidez, Vejez y Muerte*, Caja Costarricense de Seguro Social, April.
- Fundación Friedrich Ebert (1997), “La Seguridad Social en Guatemala: Diagnóstico y Propuesta de Reforma”, Carmelo Mesa-Lago, coordinador. *Materiales de Estudio y Trabajo* 18, Fundación Friedrich Ebert, Representación en Guatemala, April.
- Gruber, J. and D. Wise (1998), “Social Security Programs and Retirement around the World”, NBER Working Paper 6134.
- Kotlikoff, Laurence (1996), “Privatization of Social Security: How it works and why it matters”, in James Poterba, editor, *Tax Policy and the Economy* 10, NBER.
- IFC (International Financial Corporation) (1997), *Emerging Stock Markets Factbook, 1995*. Washington, D. C.
- Rizo, Simeón (1996), *Seguridad Social para el Siglo XXI*, Managua, Nicaragua.
- Valdés-Prieto, Salvador (1998) “Administrative Costs in a Privatized Pension System”, presented at the conference *Pensions Systems Reform in Central America*, HIID, July 17-18, 1998, Cambridge, Mass.