The new, partially privatized social security system adopted by Chile in 1981 has since been implemented, with some variations, in a number of Latin American and old-world transition economies with either a single- or multi-tier system. That alternative to a pay-as-you-go system is sometimes advocated as a desirable model for solving problems in developed systems, such as that of the United States. This article describes the new programs in Latin America, their background, and similarities and differences among them.

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Social Security Privatization in Latin America

*by Barbara E. Kritzer**

Summary

The new, partially privatized social security system adopted by Chile in 1981 has attracted attention in many parts of the world. Since then, a number of Latin American countries have implemented the Chilean model, with some variations: either with a single- or multi-tier system, or with a period of transition to take care of those in the labor force at the time of the change. The single-tier version consists of a privatized program with individual accounts in pension fund management companies. Multi-tier systems have a privatized component and retain some form of public program.

This article describes each of the new programs in Latin America, their background, and similarities and differences among them. Much more information is available for Chile than for the other countries (in part because Chile has the oldest system), enough to be able to evaluate what, in most cases, is the most accurate information. That is often not the case for the other countries, especially when dealing with subjects such as transition costs and net rates of return (rates of return minus administrative fees).

No country has copied the Chilean system exactly. Bolivia, El Salvador, and Mexico have closed their public systems and set up mandatory individual accounts. Argentina has a mixed public/private system with three tiers. In Colombia and Peru, workers have a choice between the public and private programs. Uruguay created a two-tier mixed system. Costa Rica has a voluntary program for individual accounts as a supplement to the pay-as-you-go program and has just passed a law setting up mandatory accounts containing employer contributions for severance pay.

All of the countries continue to face unresolved issues, including:

- High rates of noncompliance—the percentage of enrollees who do not actively and regularly contribute to their accounts—which could lead to low benefits and greater costs to the governments that offer a guaranteed minimum benefit;
- Proportionately lower benefits for women and lower earners than for men and higher earners;
- A minimum required rate of return among the pension fund management companies (in most of these countries) that has resulted in similarity among the companies and the consequent lack of meaningful choice; and
- High administrative fees in most of these countries, which reduce the individual's effective rate of return.

To what extent these issues can be mitigated or resolved in the future is not yet clear. In general, a definitive assessment of the Chilean model and its Latin American variations will not be possible until a cohort of retirees has spent most of its career under the new system.

Introduction

In 1981, Chile became the first Latin American country to privatize its social security system. Chile switched from a defined-benefit, pay-as-you-go (PAYGO) system to a defined contribution system of individual accounts managed by private companies.

Although the Chilean model has attracted worldwide attention, the model was developed for a country that shares many characteristics with other Latin American countries. Most of the countries in the region have younger populations, which sets them apart from aging nations such as the United States (Table 1). The Latin American pension systems have also had similar problems, including inequitable benefits based on occupation and political clout, mismanagement of programs, high rates of evasion, low coverage, promises of higher benefits that could not be sustained, and high rates of inflation. Pension reform in the region has been part of major economic reforms that have included privatization of state enterprises and government programs.

The lessons of Chile's experience for other countries have been varied, and no country has followed the Chilean model exactly. The Latin American countries that have adapted that model are switching to a single- or multi-tier system, with a period of transition to take care of workers in the labor force at the time of change. Some countries have replaced their public social security system with a privatized one, while others have added a new tier to their existing public program.

The common denominator is that each of these countries has set up a highly regulated system of individual accounts in private companies that manage pension funds. Those companies invest the funds in very specific financial instruments; the resulting benefit is based on the contributions plus accrued earnings minus administrative fees.

To date, seven Latin American countries—Argentina, Bolivia, Colombia, El Salvador, Mexico, Peru, and Uruguay—have followed Chile's lead and implemented a new social security program. (A number of Eastern European countries have also adapted the Chilean model.) Bolivia, El Salvador, and Mexico have closed their public systems and set up mandatory individual accounts (though during the transition Mexico offers a choice of systems for many workers at retirement). Argentina has a mixed public/private system with three tiers. In Colombia and Peru, the insured has a choice between the public and private programs. Uruguay created a two-tier mixed system.

As other Latin American countries face financial problems with social security, many have adopted or are studying the possibility of introducing some form of privatization. Although Costa Rica has not replaced its existing system, it introduced similar but voluntary individual accounts in 1995 as a supplement to the PAYGO system. More recently (in late 1999), it passed a law setting up mandatory individual accounts to be funded with a portion of the employer's severance pay contribution. Venezuela passed laws to set up a privatized system and was about to implement it when a new government came in and abrogated the laws.

The programs share many common characteristics (Table 2). They usually include the majority of the formal-sector working population, but special programs for groups such as the military and public employees are separate. Affiliation is generally voluntary for the self-employed. Some countries have eliminated the employer contribution (Table 3). Many programs have a guaranteed minimum pension. Retirement is usually the choice of an annuity, programmed withdrawals, or a combination of the two. Early retirement is possible if the account balance is sufficient to fund a set pension level.

It is too early to determine how well these new systems have improved upon the old ones. They continue to have unresolved issues. Most of the countries have a high reported rate of noncompliance—the percentage of enrollees, or affiliates, who do not actively and regularly contribute to their accounts. If high rates continued, the retirement benefit for affiliates who are not contributing regularly could be inadequate. In most countries, such workers could be eligible for only the minimum pension, at a much larger cost to the government than originally anticipated. In countries that do not provide a minimum pension, the benefit could be even lower. Furthermore, women and lower earners receive proportionately lower benefits than men and higher earners.

Another issue in many of the countries is the required minimum rate of return for each pension fund. A fund's performance must fall within a predetermined range, compared with that of all the others. That requirement has an impact reaching beyond the rates of return, however, resulting in similarity among the companies that manage the pension funds. Because those companies cannot compete by using strategies that result in different yields, they resort to disproportionately high

Table 1.
Population statistics for selected Latin American countries and the United States, 1997

	Percentage of population age 60 or older		Percentage of population age 75 or older		Life expectancy at birth (years)	
Country	1997	2025	1997	2025	Male	Female
United States	16.5	24.6	5.8	7.9	73	79
Argentina	13.8	17.2	4.0	5.7	71	78
Bolivia	6.4	10.0	1.7	2.6	57	63
Chile	9.9	20.4	2.4	5.8	72	78
Colombia	6.7	13.9	1.3	3.1	70	76
Costa Rica	7.1	14.5	1.8	3.4	73	78
El Salvador	7.3	11.1	1.9	3.1	66	73
Mexico	6.1	12.4	1.3	3.1	70	78
Peru	6.7	12.2	1.4	3.1	67	72
Uruguay	17.3	20.6	5.0	7.4	72	79

Source: Bureau of the Census (1997).

marketing costs when attempting to lure individuals from one fund to another. Moreover, the consequent high rates of transfer from one management company to another raise administrative costs. Many countries are trying to implement measures to encourage contributors to remain in one company by offering lower fees for longer-term holdings.

The rule of having only one fund per management company in many of the countries further limits investment possibilities. There is concern about the ability to sustain, over a long period of time, a rate of return that will result in a satisfactory retirement benefit. The high administrative fees reduce the earnings even more. Programs in which the PAYGO and privatized systems coexist continue to experience financial problems and are seeking new solutions.

This article describes these programs, their backgrounds, and the similarities and differences among them. Chile, which is by far the oldest privatized system, has been closely studied. Significantly more information is available about its program than about the others, and Chile is therefore described first.

Chile

Before 1981, Chile had more than 30 separate pay-as-you-go systems based on occupation—each with different contribution rates, requirements for retirement, and benefit levels. High unemployment, pervasive informal employment, and widespread evasion of contributions depressed the number of contributors. About 93 percent of pensioners were receiving only the minimum benefit because the system was about to go bankrupt and could not pay adequate benefits to those who were eligible. By 1980, the deficit of the PAYGO system was about 2.7 percent of gross domestic product (GDP) (CBO 1999).

When Chile introduced a privatized scheme in 1981, it closed the old one to new entrants. All new workers had to join the new system, and those in the old system who were not within 5 years of retirement could opt to switch to the new one. (The police and armed forces retained their separate programs.) Employees who moved from the old system to the privatized one received a government-mandated gross wage increase of 18 percent (about 11 percent net). They were also given a recognition bond representing the value of accrued rights under the old system; the bond was indexed for inflation and funded by general revenues. To help fund the transition, Chile set aside funds equaling 5.5 percent of GDP over a period of years, in part through the sale of state-owned enterprises to the private sector.

New System of Private Individual Accounts

Under Chile's new system, workers pay 10 percent of earnings (mandatory for employees, voluntary for the self-employed) to an individual account run by a pension fund

Table 2.
Characteristics of Latin American privatized systems

Country	Year started	Coverage: Self-employed	Coverage: Special groups[a]	Retirement age: Men	Retirement age: Women	Guaranteed minimum pension	Type of retirement available: Annuity	Programmed withdrawals	Programmed withdrawals with deferred annuity
Argentina	1994	Mandatory	Separate program	65	60	Yes	Yes	Yes	Yes
Bolivia	1997	Voluntary	Included	65	65	Yes	Yes	No	No
Chile	1981	Voluntary	Separate program	65	60	Yes	Yes	Yes	Yes
Colombia	1993	Voluntary	Separate program	62	60	Yes	Yes	Yes	Yes
Costa Rica	1995	Voluntary	Included	Freely negotiated between insured and company		No	Yes	Yes	No
El Salvador	1998	Voluntary	Separate program	60	55	Yes	Yes	Yes	Yes
Mexico	1997	Voluntary	Separate program	65	60	Yes	Yes	Yes	Yes
Peru	1993	Voluntary	Separate program	65	65	No	Yes	Yes	Yes
Uruguay	1996	Voluntary	Separate program	60	60	No	Yes	No	No

a. Groups such as the military, national police, and public employees.

management company (*administradora de fondos de pension,* or AFP). They also pay about 1.98 percent for administrative fees and 0.64 percent for survivors and disability insurance—a total of about 2.62 percent (AIOS 1999). AFPs can charge a flat fee in addition to a percentage of earnings, and as of February 2000, only one did not do so; the monthly average of the other AFPs was about 600 pesos (about US$1.15). A fee is charged only when a contribution is made; inactive accounts are not assessed any fees. AFPs are not allowed to offer lower fees to groups or for longevity. Additional, voluntary contributions are permitted. Both mandatory and voluntary contributions are tax-exempt.

The retirement benefit is a choice of an annuity, programmed withdrawals, or programmed withdrawals with a deferred annuity. The normal retirement age is 65 for men and 60 for women. Programmed withdrawals from the individual account are scheduled to guarantee income over the insured's expected life span. The amount of the pension is based on the individual's contribution plus interest minus administrative fees. Pensions are protected against inflation since they are denominated in UFs—*Unidad de Fomento*—a monetary unit that is adjusted monthly to reflect changes in the consumer price index. Annuities are purchased from an insurance company for an additional fee, which has been reported as high as 5.4 percent of the value of the annuity (in 1999). As of February 2000, two of the eight AFPs charged an additional monthly flat fee for programmed withdrawals: one charged 450 pesos; the other, 1,495 pesos, or about US$3.00 (SAFP/Chile 2000).

Workers may retire before the normal retirement age if their account yields a pension that is at least 50 percent of the average wage over the last 10 years before retirement and is at least 110 percent of the minimum old-age pension. If an individual account has funds beyond those needed to provide a pension equal to 120 percent of the minimum pension or 70 percent of the worker's average wage over the previous 10 years, the worker may withdraw the excess funds in a lump sum that may be used for any purpose (Rodríguez 1999; SSA 1999).

The government guarantees a minimum pension to two groups of workers: those who have contributed for at least 20 years but whose accumulated funds do not yield the minimum level set by law; and those who have chosen programmed withdrawals and have exhausted their funds by living beyond their actuarial life expectancy. The value of the minimum pension varies since it is adjusted when the consumer price index is at least 15 percent higher than in the previous year. The minimum pension was 61 percent of the minimum wage in 1982, 91 percent in 1987 (CBO 1999), and 72 percent in 1999 (SAFP/Chile 1999).

The program also offers pensions for disabled workers and survivors. Pension options for both groups are similar to those

Table 3.
Characteristics of Latin American pension fund management companies

Country (Fund)	Contribution rates [a]: Employee	Contribution rates [a]: Employer	Fees (percent)[a]: Survivors and disability insurance	Fees (percent)[a]: Average administrative fees [b]	Allowable funds per company	Allowable transfers per year	Minimum rate of return
Argentina (AFJP)	11	16	1.01 [c]	2.4 [c]	One	Twice	Yes
Bolivia (AFP)	10	None	2	0.5	One	Once	Yes
Chile (AFP)	10	None	0.64	1.98	Two [d]	Twice	Yes
Colombia (SAFP)	3.375	10	e	e	Multiple	Twice	Yes
Costa Rica (OPP)	Up to 10	Voluntary	NA	f	Multiple	NA	No
El Salvador (AFP)	3.25	6.25	1.1	2.08	One	Once in 1-2 years	Yes
Mexico (AFORE)	1.125	5.15	2.5 [g]	1.79	One [h]	Once	No
Peru (AFP)	13	None	1.38	2.36	One	Twice	Yes
Uruguay (AFAP)	15 [i]	None	0.61 [j]	2.03 [j]	One	Twice	Yes

Note: NA = not available.

a. As a percentage of worker's income.
b. Does not include flat fees.
c. Included in the 11 percent employee contribution.
d. The second fund is invested in fixed-income instruments and is available only to workers who are close to retirement.
e. Together the two fees total 3.5 percent, which is deducted from the employee and employer contribution.
f. The law permits fees of up to 10 percent.
g. Employee and employer contribution.
h. Multiple funds in law, no regulations yet.
i. For incomes above $5,000 NP.
j. Included in the 15 percent employee contribution.

for retired workers. Disability pensions are paid to workers who do not meet the requirements for an old-age pension but have lost at least 50 percent of their working capacity and have contributed in 2 of the 5 years before becoming disabled. A partial disability pension, equal to 50 percent of the worker's average inflation-adjusted annual earnings during the 10 years preceding the disability, is paid to those who have lost between one-half and two-thirds of their working capacity. Workers with more than a two-thirds loss receive a total disability pension equal to 70 percent of prior earnings. During periods of unemployment when the worker cannot contribute, disability coverage is extended for 12 months.

Survivors pensions are payable if the deceased contributed in at least 2 of the 5 years before death. Widows or disabled widowers (benefits are not otherwise provided to widowers) receive 60 percent of the insured's pension; orphans under age 18 (age 25 if a student; any age if disabled) receive 15 percent (30 percent if full orphan—that is, if both parents are deceased); and dependent parents receive 50 percent (SSA 1999).

Pension Fund Management Companies

The companies that manage pension funds, or AFPs, are private-sector, joint-stock companies with minimum capital requirements of about US$160,000 depending on the number of affiliates (individuals who have an account). The allocation of their investments is heavily regulated. As of November 1999, AFPs could invest no more than:

- 50 percent in government bonds,
- 50 percent in the financial sector,
- 45 percent in corporate bonds,
- 37 percent in domestic stocks, and
- 16 percent in foreign securities (SSB 1999).

In January 2000, actual investments amounted to 34 percent in government bonds, 19 percent in domestic stocks, 34 percent in the financial sector, and 13 percent in foreign securities *(Diario Estrategia,* 11 February 2000*).*

Performance

According to official government figures, the average gross real rate of return for all AFPs from July 1981 to December 1999 was 11.21 percent; that rate does not reflect administrative fees. As previously mentioned, AFPs can charge a flat fee in addition to a percentage of earnings. Lower earners are particularly affected by the flat fee. The average net return for the same period for workers with different income levels is shown below (SAFP 2000).

Worker's monthly income (pesos)	Net return (percent)	Gross real rate of return (percent)
90,500	7.44	11.21
150,670	7.60	11.21
226,004	7.67	11.21
452,009	7.75	11.21
904,018	7.79	11.21

A private Chilean investment company, CB Capitales (1999), has calculated the difference between the net rate of return from an individual account in an AFP and 90-day bank certificates held over a similar period. The representative individual contributes every month, receives the average taxable income of all workers in the system, and pays the average fees. Every month the fund yields the average rate of return. According to CB Capitales's findings, an individual who began contributing to an AFP in 1982 and continued through the end of 1998 would have an average net rate of return of 5.1 percent, compared with 6 percent if the contributions had been held in a bank account—19.2 percent more. Obviously, there are differences between the government's figures for net rate of return and the ones produced by CB Capitales, but it is difficult to determine which are more accurate.

Chilean economist Salvador Valdés-Prieto (1999a) has compared administrative fees for AFPs with those charged by other financial institutions in Chile. Using a life-cycle model, he finds that average AFP charges are slightly lower than the average cost for mutual funds but about 50 percent higher than other savings alternatives such as savings accounts in banks, bank certificates of deposit, and custodial accounts with stockbrokers.

AFPs must maintain a minimum rate of return, calculated annually to reflect the performance of all the AFPs over the past year. If an AFP exceeds the average rate by 2 percentage points or 50 percent (whichever is higher), it must place the excess monies in a profitability reserve. An AFP must also keep 1 percent of the value of its pension fund—taken from the company's own earnings, not from individual account holders—as a separate cash reserve. Conversely, funds whose returns are between 2 percentage points and 50 percent lower than the average must make up the difference within 6 months by transferring monies from either their profitability or cash reserves. Otherwise, the government must make up the difference, then liquidate the company and the fund and distribute the individual accounts to other AFPs. Affiliates do not incur any loss; at that time, they may select a new AFP for their individual accounts (SAFP/Chile 1998).

Competition among the AFPs has been an integral part of the system. The number of AFPs has fluctuated since the inception of the program in 1981, when there were 12; in 1994, there were 21, and in 2000 there are 8. Three AFPs failed and were dissolved—Bannuestra in 1991, Laboral in 1994, and Geneva in 1995 (Rodríguez 1999); others merged with another AFP to form one larger company, for reasons that may or may not have reflected problems with returns.

The minimum profitability rule creates a "herd effect" that forces AFPs to invest in the same instruments most of the time in order to maintain the minimum short-term profitability. It also effectively rules out longer-term investment strategies. Since AFPs have similar rates of return and an individual can switch from one AFP to another twice a year, the need to compete leads AFPs to create large sales forces, undertake costly advertising campaigns, and make outlays for incentives to lure new contributors. The high cost of competing translates into high administrative fees.

In 1996, about 28 percent of the labor force transferred their accounts, and the sales force was almost 18,000. Transferring was easy because an individual only had to sign a piece of paper indicating the intention to switch. An October 1997 regulation required an affiliate to present an identity card and the latest AFP statement in order to change AFPs. As a result of that modestly restrictive regulation, the number of transfers plummeted from about 26 percent in 1997 to 3.5 percent in June 1999; the sales force also declined, from 22,643 in November 1997 to 4,026 in September 1999 (SSB 1998 and 1999; *Santiago Times,* 28 July 1999).

A regulation effective October 1999 lengthened the period for calculating minimum profitability from 1 year to 3, which may reduce the “herd effect.” That period of time is being phased in, increasing by 1 month, every month, for up to 36 months (SSB 1999).

The only change to the fee structure to date is that some companies have lowered their variable fees (a percentage of income) while raising the flat fees. That effectively discourages lower earners from joining that AFP because they prefer a combination of a lower or no fixed fee and a higher variable one. Another attempt at gaining a certain share of the market is to use the sales force to target specific groups such as high-income affiliates (SSB 1999).

Until 2000, AFPs were allowed to manage only one fund. A law passed in August 1999 and effective in March 2000 created a second type of fund invested in fixed-rate instruments (protecting the value of principal) for workers who are within 10 years of retirement. The new funds will charge lower fees—about 8 percent to10 percent lower than the other fund—and invest in instruments with terms of 2 to 4 years. In the first year, only those affiliates who are within 3 years of retirement age are permitted to join the new fund. In the second and third years, those within 7 and 10 years of retirement, respectively, will be allowed to participate. Workers who choose the second fund will be able to switch back to the other fund only once, after they have remained in the second fund for at least 24 months (SSB 1998; *Diario Estrategia,* 19 August 1999, 22 September 1999, and 21 January 2000).

Discussions are taking place both within and outside the government concerning proposals to allow AFPs to offer a choice of investment funds with different levels of age-appropriate risk. About 70 percent of affiliates are less than 40 years old, while only about 5 percent are older than 55 (*Diario Estrategia,* 31 August 1999).

Government Role

The government plays a large financial and administrative role in the privatized pension system. The Superintendent of Pension Fund Management Companies (SAFP) is an autonomous state-financed agency that regulates, supervises, and licenses the AFPs. The government also funds the amount needed to reach the guaranteed minimum pension for qualified individuals, which is an ongoing cost.

In addition, if an AFP fails, the government guarantees a minimum rate of return financed through general revenues. In that event, an individual has no loss, but the government may have to make up the difference if AFP reserves prove insufficient. If an annuity insurer is unable to pay the insured, the government must provide 75 percent of the benefit that exceeds the minimum pension. Other government costs include the recognition bond, which represents the value of accrued rights under the old system and is indexed for inflation, and the cost of operating the old pay-as-you-go system.

In a recent study, Chilean economist Alberto Arenas de Mesa (1999) calculated the social security deficit since 1981 as a percentage of GDP and projected costs until 2037. He broke down the figures into the following categories:

- Operational deficit—the cost of financing and operating the old public system,
- Recognition bonds,
- Social assistance pensions for indigents over age 65, and
- Guaranteed minimum pensions.

Both the operational deficit and recognition bonds are transitional costs. The operational deficit has already reached its peak (Table 4). As the number of beneficiaries under the old privatized system falls, so will the operational deficit. The cost of the recognition bonds will reach a high point between 1999 and 2008 and then steadily decline to zero by about 2030, when there will be no more beneficiaries in the new system who contributed to the old.

By contrast, the social assistance pensions for indigents over age 65 and the guaranteed minimum pensions are permanent financial responsibilities. The social assistance pensions will remain about the same since the number of pensions paid is limited to 350,000. (Not all those in need are covered since there

Table 4.
Social security deficit in Chile, 1981-2037 (as a percentage of GDP)

Years	Operational deficit	Recognition bonds	Social assistance pensions	Minimum pensions	Total deficit
1981-1989	3.7	0.4	0.2	0	4.3
1990-1998	3.0	0.3	0.7	0.02	4.0
1999-2008	2.8	1.2	0.4	0.13	4.6
2009-2018	1.6	0.8	0.4	0.41	3.3
2019-2028	0.8	0.1	0.5	0.77	2.1
2029-2037	0.3	0	0.5	1.19	1.9

Source: Arenas de Mesa (1999).

is a ceiling on the maximum number of participants.) The minimum pensions are an ongoing cost to the government and are expected to rise after 2029.

Unresolved Issues

Chile's new pension system faces a number of unresolved issues, including inequality in the pensions of men and women, a high percentage of affiliates who do not contribute, and whether pensions will be higher than under the old system.

Women generally receive smaller pensions than men, for several reasons. The Chilean system provides no form of credit for child-rearing years. Women also receive benefits based only on their own earnings, which are generally lower than those of men. Moreover, the use of gender-specific mortality rates to calculate life expectancy produces a lower annuity since women in Chile, as in most countries, generally live longer than men.

According to a 1995 study, a woman whose salary was 75 percent of a given man's salary would receive a pension that was between 35 percent and 45 percent of his pension. If a woman and a man had the same salary and had contributed for the same number of years, the woman's pension would be between 76 percent and 52 percent of the man's pension (though she could expect to collect it longer). Consequently, in order for a woman to receive the same pension as a man with the same salary, she would have to retire later than the man would (Arenas and Montecinos 1999).

Noncompliance continues to be a problem. Since administrative fees are charged only on contributions, workers who make contributions are also paying to maintain the inactive accounts of those who do not. The ratio of contributing to noncontributing affiliates in a given year remains at about 55 percent, so the fees charged to contributors are almost doubled (Table 5). If that ratio continues, an increasing number of beneficiaries will receive the government-funded minimum, which may not be sufficient to maintain an adequate standard of living. According to Arenas (1999), women will account for more than 70 percent of the workers receiving guaranteed minimum pensions.

Whether the value of pensions under the new privatized system will be higher than under the old system is still not clear. Since the system is 19 years old, workers who are at retirement age (65 for men and 60 for women) today were in their 40s in 1981 when the new system was implemented. That means that those who have retired to date rely on recognition bonds as a significant portion of their pension. The only exceptions—those who were able to retire early—are the higher earners. As of March 1999, about 50 percent of all pensioners under the privatized system had retired early; 14 percent of them were women and 86 percent were men (SAFP/Chile 1999).

Argentina

Before the 1990s' reform, Argentina's PAYGO system comprised separate programs for workers in industry and commerce, civil servants, the military, and the self-employed. By the 1980s, more than 80 percent of the economically active population was covered, but 46 percent evaded their contributions, and there were only 2.5 contributors for every beneficiary. Unemployment was high, retirement ages were low (60 for men and 55 for women), underreporting of income was widespread, and benefits required few years of work.

During that time, Argentina's PAYGO system lost its ability to pay promised benefits. That led to a series of financial crises, and the government was forced to take some drastic measures. In 1980, the employer's contribution was eliminated and replaced by proceeds of a value-added tax (VAT). Since the latter was not sufficient to help fund the system, the contribution was reinstated in 1984 (Mesa-Lago 1994; Queisser 1998). The government also reduced replacement rates by only partially indexing benefits. From 1981 to 1988, the real value of pensions declined by 28 percent and then by another 30 percent from 1988 to1991.

As the value of their benefits eroded, many pensioners challenged the government in court. The courts decided in favor of the pensioners, but the government did not have the funds it needed to pay the promised benefits. After a financial state of emergency was declared in November 1986, the government agreed to readjust the benefit formula. Pensioners who accepted the new formula stopped all legal claims against the government and received their past pension benefits, but other pensioners continued to sue. As a settlement in 1991, those pensioners were given four choices: cash up to 1,580 pesos, a combination of cash and bonds, peso bonds, or dollar bonds (Mesa-Lago 1994).

In July 1994, Argentina replaced the PAYGO system with a mixed public/private one. Participation is mandatory for most

Table 5.
Annual administrative fees per contributor and per affiliate, 1999 (in U.S. dollars)

Country	Ratio of contributors to affiliates	Dollars per contributor	Dollars per affiliate[a]
Argentina (AFJP)	0.45	239	108
Bolivia (AFP)	NA	21	NA
Chile (AFP)	0.53	127	67
Colombia (SAFP)	0.67	140	94
El Salvador (AFP)	0.49	93	46
Mexico (AFORE)	0.85	78	67
Peru (AFP)	0.42	193	82
Uruguay (AFAP)	NA	192	NA

Source: Valdés-Prieto (1999).

Notes: An affiliate is any member; a contributor is a member who actively contributes to an account.

NA = not available.

a. Since fees in most Latin America countries are charged only for contributions, affiliates who do not contribute do not pay a fee. That means contributors are paying to maintain the inactive accounts of the noncontributors.

employed and self-employed workers. The military, police, and provincial government workers are covered by separate systems, although the provincial workers are gradually being incorporated into the national system.

The new system has three tiers. The first two are pay-as-you-go: a non-earnings-related universal benefit (*prestación básica universal,* or PBU) based on years of service, and an earnings-related compensation benefit (*prestación compensatoria,* or PC) for service rendered before July 1994.

The third tier offers a choice between a public defined contribution plan and a private individual retirement account. The public alternative (*prestación adicional por permanencia,* or PAP) benefit is based on earnings after July 1994; the private one is based on individual contributions to a pension fund management company, *administradora de fondo de jublicaciones y pensiones* (AFJP) plus accrued interest minus administrative fees. Workers who do not choose between the public and private tiers are automatically placed in the private one.

Unlike in Chile, both workers and employers contribute to the Argentine retirement system. Employees pay 11 percent of earnings. Those who choose the private alternative have 3.42 percent of their earnings deducted from their contribution to pay combined administrative fees and survivors and disability insurance (2.4 percent for fees and 1.01 percent for insurance); the remainder goes to their individual account. The employer's contribution—16 percent of payroll—goes to the public system regardless of which program the employee chooses. All contributions to the AFJP are tax-deductible.

The self-employed contribute 27 percent, but only 11 percent of earnings goes into their individual accounts. The other 16 percent presumably covers administrative costs, survivors and disability insurance, and funding for other programs. That large difference is a powerful incentive for self-employed workers to either evade the contribution or underreport earnings (Arenas and Bertranou 1997).

The government contributes to the public programs through general revenues, investments, and certain earmarked taxes—including 10 percent of the VAT, 90 percent of personal property taxes, and 30 percent of the proceeds from privatizations of companies (*Clarín,* 25 April 1999).

The current retirement ages—64 for men and 59 for women—will rise gradually to 65 and 60, respectively, by 2001. The first-tier benefit (the universal benefit, or PBU), requires 30 years of contributions and equals 2.5 times the specified unit described below. The benefit is increased by 1 percent for each additional year of contributions, up to a maximum of 45 years. An advanced-age pension is payable to workers over age 70 with 10 years of contributions; 5 of the last 8 years of employment must be immediately before retirement.

Argentina has changed the method of revaluing benefits. When the privatized system was first set up, benefits were based on the AMPO (the average mandatory provisional contribution), which was determined twice a year by dividing total employee contributions to the system by the total number of contributors. That measure was replaced by the MOPRE, which eliminates automatic indexation and instead allows adjustments to be made according to the annual budget (Arenas and Bertranou 1997). The MOPRE equaled about $80 in 1999.

Rather than provide a recognition bond that is redeemed at retirement to represent the value of accrued rights under the old system, Argentina chose the compensation benefit (PC). That second-tier benefit will effectively extend the period of time that the government owes money but will lessen its cash-flow problems. The PC is equal to 1.5 percent of a worker's average monthly salary during the last 10 years and applies to each year of service rendered before July 1994, up to a maximum of 35 years (Queisser 1998).

Under the third tier, workers can participate in a public or private plan. Those who choose the public pension (the PAP) receive about 0.85 percent of their final 10-year average salary for each year of contributions paid after July 1994, up to a maximum of one MOPRE for each year of service. Those with the alternative private account select a pension fund management company (an AFJP) and may switch companies twice a year. Their retirement benefit is an annuity, programmed withdrawals, or a combination of the two. Workers who choose the public plan are allowed to switch to the private component but have not been allowed to switch back since June 1996 (Vittas 1997).

Early retirement is permitted in the private plan if the pension will equal 50 percent of the insured's average salary in the 5 years before retirement. A lump-sum withdrawal is also permitted before retirement as long as the account retains funds that will yield a pension equal to 70 percent of monthly earnings in the 5 years before retirement. After retirement, a pensioner may continue working with full benefits, although the retirement benefit will not be recalculated to reflect postretirement earnings.

Disability benefits are the same for the public and private programs. A worker must be younger than age 65, have lost 66 percent of working capacity, and have been employed at the onset of disability. The benefit is 70 percent of average salary for the regular contributor and 50 percent for the sporadic contributor during the 5 years before the onset of disability. A partial disability benefit is paid according to the degree of disability. In addition, a means-tested allowance is provided at any age to needy disabled individuals who are not eligible for a pension.

Survivors benefits for both programs are payable to widows, widowers, or companions with no children. They are equal to 70 percent of the deceased's benefit but are reduced to 50 percent if there are children. Each eligible child under age 18 (no age limit if disabled) receives 20 percent (SSA 1999).

Pension Fund Management Companies

Companies known as AFJPs manage the individual accounts of workers who select the third-tier private plan. AFJPs may be formed by any group of stockholders—whether public, private, or nonprofit—including banks and other financial institutions, trade associations, labor unions, and large corporations. Argentina requires its National Bank, *Banco de la Nación,* to set up an AFJP that must provide a guaranteed minimum rate of return equal to the interest rates earned in savings accounts and must invest in the regional economies. The other AFJPs do not offer that kind of minimum guarantee; rather, they are expected to compete with the public one and provide returns that are equal or higher. Each AFJP may operate only one pension fund (Arenas and Bertranou 1997).

AFJPs must have minimum capital of at least $3 million (Argentina, in effect, uses the U.S. dollar) and maintain an investment reserve of either 2 percent of assets or $3 million, whichever is higher (Vittas 1997). The minimum rate of return is either 70 percent of the average performance of all funds in the past 12 months or 2 percentage points, whichever is lower. If the rate of return is 30 percent or 2 percentage points higher than the average, AFJPs must place the excess in a separate profitability reserve fund. If the nominal rate of return falls below the average, the company must use both reserve funds to make up the difference. If it cannot make up the difference, it will be liquidated and its individual accounts transferred to other AFJPs (Vittas 1997). As of December 1999, there were 13 AFJPs, compared with 26 when the system began in 1994 (SSB 1999). Little information is available as to how many of those AFJPs were liquidated and how many merged with other companies.

The Superintendent of Pension Fund Management Companies (SAFJP) oversees the operation of the private system, including the proper crediting of contributions and the payment of benefits. Funded by the AFJPs, it authorizes their establishment or liquidation and makes sure the laws are followed (CBO 1999).

The SAFJP also limits and tightly regulates the types of investments the AFJPs can make. Investments may not exceed:

- 50 percent in national government securities,
- 15 percent in provincial and local government securities,
- 42 percent in securities issued by domestic private corporations,
- 35 percent in domestic corporate shares,
- 35 percent in shares of recently privatized public enterprises,
- 42 percent in banks and mutual funds, and
- 17 percent in foreign securities.

As of October 1999, the average for all AFJP investments included 48 percent in government securities, 19 percent in stocks, 19 percent in certificates of deposit, and 0.3 percent in foreign securities (CBO 1999; SAFJP 1999; and SSB 1999).

Performance

The AFJPs' average real rate of return from July 1994 to November 1999 before deducting administrative fees was 12.42 percent (SAFJP 1999). (Net rates of return for that time period are not available.) Administrative fees averaged about 2.4 percent of a worker's earnings in December 1999.

As in Chile, AFJPs may charge both a fixed and a variable fee. All of them charge a variable fee. In December 1999, 8 of the 13 AFJPs had flat fees—an average of $3.85 a month (*Ambito Financiero,* 23 December 1999). As a result of the flat fee, lower earners pay proportionately more of their income than do higher earners. The following table shows the average fee for administrative costs and survivors and disability insurance as a percentage of a worker's monthly income in September 1999 (SAFJP 1999).

Worker's monthly income (U.S. dollars)	Average fee (percentage of income)
240	4.01
480	3.64
800	3.49
1,200	3.41
1,600	3.34
2,400	3.25
3,200	3.17
4,800	3.06

Affiliates may switch from one AFJP to another twice a year. The number of transfers has been increasing each year, adding to administrative costs. In 1996, about 20 percent of all account holders changed companies (Vittas 1997). To halt that trend and encourage individuals to remain with one AFJP, the companies were allowed to charge lower fees to affiliates who stayed with their plan. For example, at an income level of 1,600 pesos per month (one peso equals one U.S. dollar), the average fee of 3.34 percent would be reduced to 3.29 percent after remaining for 12 months, to 3.27 percent after 24 months, and to 3.25 percent after 36 months. Perhaps in response, the number of transfers declined 45 percent between October 1998 and October 1999, to about 5 percent of affiliates (SAFJP 1999).

Unresolved Issues

A key issue is the inequality between plans for men and women and for high and low earners. Arenas de Mesa and Bertranou (1997) conclude that one incentive for workers to choose the private system is that the only pension requirement is age 65 for men and 60 for women, with no specific years of service. The 30 years required to receive a public pension may not be easily reached by low-income workers and women, since both groups have lower labor force participation rates and higher unemployment rates. As in Chile, women in the private system receive lower benefits than men, but over a longer time.

Another major issue is the relatively low number of regular contributors to the system. About 50 percent of enrollees have been delinquent in making their contributions. In January 2000, that share rose to 54 percent (*La Nación,* 11 February 2000). Active contributors represent less than 30 percent of eligible workers and only about 20 percent of the labor force (Vittas 1997).

Another continuing concern is the high administrative fees. As of early February 2000, the AFJPs had reached an agreement to voluntarily lower fees up to 8 percent for affiliates who regularly contribute to their account. That agreement created four levels of discounts: those who have paid 10 of the last 12 contributions; 20 of the last 24; 30 of the last 36; and 40 of the last 48 (*La Nación,* 11 February 2000).

Bolivia

Bolivia had a failing PAYGO system and a system of complementary pensions for particular categories of workers, both of which were plagued by many problems. In 1996, only 12 percent of the economically active population contributed to the system. The ratio of workers to retirees was 2.5 to 1. Both systems required subsidies from general revenues, about 1 percent of GDP between 1993 and 1996. Administrative costs were high, and the funds were poorly invested. The majority of pensioners received very low benefits. Since pensions were based on average monthly earnings during the last 5 years before retirement, many workers were underreporting their earnings until that time, when they began to base their contributions on their actual earnings in order to maximize their benefit (Von Gersdorff 1997).

New System

The new system was implemented in May 1997, and the old one was completely shut down, although the government continued to pay old-system benefits for workers who had retired by April 30. All contributors to the old system were switched to the new one, and their accumulated contributions were credited to the new account.

An initial problem was the transfer of records. Most of the data were not automated or available from one central source, and their accuracy was questionable. Information was collected through the employer (Guerard and Kelly 1997). To encourage participation in the new system, an amnesty program forgave all debt under the old system if an employer registered employees within the first 2 years (Mesa-Lago 1997).

The government provides a recognition bond, paid as part of the new pension, to those who have contributed under the old system. The amount of the bond is calculated as 2.8 percent of earnings as of October 1996 times the number of years of contributions, up to a maximum of 20 times the minimum wage. At the end of 1996, it was estimated that the government would have to pay $1.9 billion for recognition bonds and for old-system pensions during the 1997-2060 period (Cole and Requena Blanco 1997).

Bolivia's new system is mandatory for all new entrants to the labor force and for all employees regardless of whether they participated in the old system. Affiliation for the self-employed is voluntary. The worker contributes 10 percent of earnings to an individual account managed by an AFP, plus 2 percent for survivors and disability insurance and 0.5 percent for administrative fees (Von Gersdorff 1997). Both the employer and the government contributions have been eliminated. Since that action amounted to an average tax increase of 4 percent for the employee, employers were required to raise their workers' salaries by that percentage. The insured can make additional voluntary contributions to his or her account up to 10 percent of 60 times the minimum wage.

A retirement benefit is payable at age 65 (for men and women) as either a fixed or variable annuity. If the benefit does not equal the minimum pension determined by law, the government will make up the difference. Workers may retire early if the assets in their individual account will yield 70 percent of their average earnings in the last 5 years of employment (Mesa-Lago 1997; SSB 1998, 1999).

Disability and survivors pensions are also available. A disability benefit equals 70 percent of the individual's base salary plus a contribution of 10 percent of earnings to the individual account if:

- The insured is under age 65 and made 60 monthly contributions, including 18 in the 36 months before the onset of disability, and
- The disability occurred no more than 12 months after the last contribution.

The benefit is payable until the disability disappears or at age 65, when the benefit becomes a retirement pension. Survivors pensions are between 70 percent and 100 percent of the worker's base salary, retirement, or disability benefit and are payable to the worker's beneficiaries.

Unlike the other systems in Latin America, Bolivia's new one also covers work injury. If the resulting disability is 25 percent or greater, the worker is paid a monthly benefit equal to his or her base salary times the degree of disability. For a disability between 10 percent and 25 percent, the worker receives a lump sum (SSB 1998).

Bolivia also offers the *bono solidario,* or *bonosol,* a lifelong annual benefit after retirement. The *bonosol* is payable at age 65 to the 3.5 million people who were 21 or older in 1995. It is funded by 50 percent of the proceeds of the sale of government-owned companies (telecommunications, oil and gas, electricity, railways, aviation, and mining) to the private sector—about 22 percent of GDP in late 1997. The assets are held in the FCC (*fondo de capitalizacion*) and invested and managed by the AFPs. The *bonosol* is payable once a year. For the first 5 years, the amount is $248; after that, it will be recalculated every 3 years according to the size of the FCC, the expected yield from investments, and the life expectancy of the beneficiaries, but it will vary no more than 25 percent from the previous amount. The fund also pays funeral expenses. Whether the *bonosol* will be extended to those who were under age 21 in 1995 is not clear (Von Gersdorff 1997; Queisser 1996; Cole and Requena Blanco 1997).

Pension Fund Management Companies

Only two AFPs are allowed to operate for the first 5 years (until 2002). Their initial requirements for operation were 20 years' experience in portfolio management, including 10 years managing global assets of at least US$10 billion and 10 or more years administering funds with at least 100,000 participants. The two AFPs divide the country in half geographically except in the main cities, where affiliates are assigned according to their date of birth—even-numbered dates to one AFP and odd-numbered to the other. Since January 2000, enrollees have been permitted to switch AFPs if they have made 12 contributions, changed jobs, or moved, or if fees or insurance premiums are increased (SSB 1998).

In 1999, the two Spanish companies (Banco Bilbao Vizcaya and Argentaria) that owned the two AFPs allowed to operate in Bolivia merged into an entity called Banco Bilbao Vizcaya Argentaria—BBVA. The merger has created a problem for the Bolivian government since now only one institution runs both AFPs. To date there is no information as to how that problem will be resolved (SSB 1999).

An AFP must have $1.4 million in capital and maintain a minimum investment yield after the third year of the system's operation. AFPs must invest in Treasury bonds that fund the transition from the old to the new system, with the government paying about 9 percent interest. In addition, they are allowed to invest up to:

- 30 percent to 50 percent in mortgage bonds or banks,
- 20 percent to 50 percent in bank deposits,
- 20 percent to 40 percent in stocks,
- 20 percent to 40 percent in bonds, and
- 20 percent to 40 percent in foreign institutions (Mesa-Lago 1997).

As of September 1999, 67 percent of investments were in Treasury bonds and other government financial instruments and 33 percent in the financial sector (Superintendente de Pensiones/Bolivia 1999). The rate of return was 12.39 percent for 1997, 13.69 percent for 1998, and 14.18 percent for the first half of 1999. Whether those rates are gross or net, and real or nominal, is not clear (*Ambito Financiero,* 21 July 1999).

The System for Financial Regulation (SIRFEI), supervised by the Ministry of Finance, was created to monitor the system. It comprises the superintendents of pensions, banks and financial institutions, insurance and reinsurance, and the local securities, all of which are independently operated. The Superintendent of Pensions is financed by a special contribution from the AFPs and appointed by the President with the approval of Congress (SSB 1998).

Unresolved Issues

Since the inception of the program, a substantial 90 percent of affiliates have been actively contributing to their accounts, but Salomon Smith Barney (1998) estimates that over time that level will decline closer to the regional average of about 55 percent. After 5 years, when additional AFPs are allowed to enter the market, they may have a very hard time competing since the two existing AFPs have a clear advantage with low administrative fees and the limit on switching. The fact that employers have to report only annually to the insured means it could take 1 year to find out if the employer is delinquent in collecting and sending contributions, a pervasive problem within many Latin American countries (Mesa-Lago 1997).

In late 1997, it was reported that the FCC had not accumulated sufficient funds to cover payments and administrative fees (*Lagniappe Letter*, October 1997). The two AFPs had to seek a $47 million loan to cover their costs for 1997. The reasons include:

- The number of b*onosol* beneficiaries was 21 percent higher than the government estimates.
- Earnings from the FCC were lower than expected.
- Administrative costs had not been included in the original figures.

Colombia

Colombia had 1,040 separate social security institutions in 1990, covering only about 21 percent of the total population. Seventy percent of the covered workers belonged to the Social Security Institute for private-sector employees (ISS), while another 5 percent were covered by CAJANAL, the program for civil servants.

Both programs were on shaky financial ground. ISS contributions could not finance the system. In the late 1980s, the government contribution to the ISS was eliminated. CAJANAL had no employee contribution for pensions and was financed by the government. By 1988, ISS's deficit was US$2 billion and CAJANAL's was US$1billion. Evasion was widespread, and payment delays were frequent. Benefits were overly generous relative to the amount of contributions, and returns on investments were low. Overall, the system was corrupt and mismanaged (Mesa-Lago 1994; Superintendencia Bancaria de Colombia 1997).

New System

Terrorism and political violence in the beginning of the 1990s created one of Colombia's most difficult political and social periods. The 1993 reform was a political compromise between two diametrically opposed points of view. The government had originally proposed a transition to a system of fully privatized accounts (Ayala 1997).

The reform has consolidated the old system, changed its contribution rates and benefit structure, and introduced private pensions. The military, national police, teachers, and employees of the state-owned oil company (Ecopetrol) continue to maintain their separate programs. Participation is voluntary for the self-employed, for Colombians who live abroad, and for foreigners who live and work in Colombia and are not covered by any other program (Bertín and Perrotto 1997).

The Colombian program differs from those in the other Latin American countries in that it offers employees a choice between the public and private system; an individual can switch back and forth every 3 years. In effect, the public and private systems compete with one another.

The structure of existing privately managed severance funds formed the basis of the new private pension scheme. Since 1990 (after the funds were no longer publicly run), employers have been paying 1 month's wages once a year to an individual account that pays 12 percent (nominal) interest; employees may withdraw their funds if they leave work or for education and housing. The fact that Colombians already had experience with private fund management companies has made the transition a little easier. Companies that managed severance funds are allowed to set up pension fund management companies (SAFPs) as long as the two funds remain financially separate (Clavijo 1998).

A recognition bond given to those leaving the old system represents what the projected pension would have been if the worker had remained under the old system. The projection is not based on contributions to the old system because recordkeeping was poor and the amount of contributions to the public system had been so low (Ayala 1998). If an employee switches back to the public system, the bond reverts to the state (SSB 1998).

Contribution rates are the same for both systems. An employee pays 3.375 percent of earnings, and the employer, 10 percent of payroll. Employees earning over four times the minimum wage also pay 1 percent of those earnings to the solidarity fund for the low earners' minimum benefit. The government also subsidizes that fund. For affiliates in the new system, 10 percent of the combined employee/employer contribution goes to an individual account and 3.5 percent pays for disability and survivors insurance and administrative fees. The self-employed pay 25 percent of earnings. Voluntary contri-butions by employee and employer may be made to a separate savings account up to a maximum of 20 times the minimum wage.

The public system's (ISS) retirement benefit is payable after 1,000 weeks of contributions at age 60 (men) and 55 (women)—rising gradually to 62 and 57, respectively, by 2014. It equals 65 percent to 85 percent of average earnings in the 10 years before retirement, depending on the number of weeks of contributions (up to 1,400 weeks).

Workers who join the private system can retire at any age, provided their account balances are sufficient to purchase an annuity equal to 110 percent of the minimum wage. They may make withdrawals from the account (regulated to guarantee income for their expected life span), buy an annuity from a private insurance company, or have a combination of the two. If the employee switches back to the public system, the proceeds of his or her account and any recognition bond are transferred to the state (SSA 1999; SSB 1998).

Affiliates whose accounts have sufficient funds to finance a pension greater than 110 percent of the minimum old-age pension may use the amount over that minimum as a guarantee for purchasing a house or for education. If the amount is equal to or greater than 70 percent of the insured's basic monthly wage, he or she may have access to those funds for any reason (Bertín and Perrotto 1997).

A minimum pension, equal to the minimum wage and guaranteed by the government, is payable at age 62 (men) and 57 (women) with 1,150 weeks of contributions, if the individual account will not yield that amount. If the insured does not meet the qualifying conditions for the minimum pension, the balance of the account (savings, returns, and recognition bond) is returned to him or her as a lump-sum payment in lieu of a pension (SSB 1998).

Disability benefits are the same under both programs. They require at least a 50 percent loss of earning capacity and 26 weeks of contributions in the year before the onset of disability. Eligibility is reviewed every 3 years. The benefit is between 45 percent and 75 percent of the basic monthly wage, depending on the degree of disability and number of weeks the worker has contributed.

Survivors benefits for both programs also range from 45 percent to 75 percent of the basic monthly wage, depending on the number of contributions, and are payable to the spouse, children younger than 18 (students up to age 25 and no age limit if disabled), and all who were economically dependent on the deceased (SSA 1999).

Pension Fund Management Companies

Ownership requirements for Colombian SAFPs are not as strict as in other countries, and they may include the public sector, cooperatives, labor unions, mutual funds, and cooperative banks. Insurance companies and other financial institutions are permitted to be shareholders.

SAFPs are required to guarantee a minimum rate of return: half is calculated according to the 6-month weighted average of all the SAFPs; the other half, according to a stock index. As in the other Latin American countries, an SAFP must invest 1 percent of its assets in a mandatory reserve fund. In addition, the financial-sector guarantee fee protects individual account balances in case the SAFP must liquidate.

SAFPs may offer more than one pension plan. Affiliates whose funds would finance at least 50 percent of the minimum pension are permitted to invest the excess in other plans. In fact, the law contains a provision (no implementing regulations yet) for affiliates to renounce the minimum guarantee and invest in higher-risk plans. However, as of the end of 1997, 80 percent of affiliates under age 35 would not have qualified because their incomes were too low (Queisser 1997).

The Superintendent of Banks supervises both the public and private pension systems, serving as an umbrella regulatory body with departments dealing with banks, insurance companies, and pension funds. The Pension Department of the Superintendent regulates and supervises the SAFPs as well as other financial institutions rather than being a separate, independent organization as in other countries. The Ministry of Finance issues the rules and regulations for the pension system (Queisser 1997, 1998).

Performance

The program began operating in 1994 with 17 SAFPs; as of October 1999, there were 8. In 1999, the average portfolio included 94.8 percent in fixed-income instruments and 5.2 percent in equities; in 1997 and 1998, the share in equities was 2.3 percent and 4.1 percent, respectively (SSB 1999).

The real rate of return from July 1995 to June 1998 was 8 percent, minus administrative costs. Since the nominal historical rate of return through October 1999 averaged about 28.5 percent, the gross real historical rate of return for that period was probably also about 8 percent, since the average inflation rate was about 20 percent (Coinvertir 2000).

Only 52 percent of affiliates regularly contributed to their accounts, and only 38 percent of social security (ISS) affiliates had paid their contributions as of December 1999 (SSB 1999; FIAP 1998; *South American Business Information*, 28 January 2000).

Unresolved Issues

The 1993 reform did not solve one of the main problems of the old social security system; the debt of the ISS remains very high. The architects of the reform hoped that the SAFPs could attract enough workers to lessen the ISS's financial burden. However, the SAFP industry is not sufficiently developed, partly because the public and private systems coexist and directly compete with each other. When the privatized program was implemented, the government did little to promote it. In fact, it ran advertisements promoting the public program in an effort to convince the insured to remain with the ISS. In 1997, the head of the ISS sued the head of the SAFPs, questioning the accuracy of their report that referred to a possible collapse of the ISS. Another complication is the high number of low-income affiliates, which translates into a lower level of contributions and lower earnings for the system as a whole (SSB 1999). Many experts agree that additional changes are needed.

Costa Rica

Costa Rica, unlike the other Latin American countries discussed here, kept its public PAYGO system intact and added voluntary individual accounts in 1995. (A law that was passed in late 1999 but has not yet been implemented would set up mandatory individual accounts.) The Costa Rican Social Insurance Fund administers the mandatory public system, which provides old-age, survivors, and disability benefits for all workers in the public and private sectors and, optionally, for the self-employed.

The public system offers a retirement benefit, payable at age 62 (men) and 60 (women) with at least 20 years of contributions. The basic benefit is equal to 60 percent of the average of the worker's 48 highest monthly earnings during the last 5 years of coverage before retirement and increases by 0.0835 percent of the average for each month of contribution above 240. The pension increases by 1.5 percent, 2.0 percent, and 2.5 percent for the first, second, and third years, respectively, that retirement is deferred.

A disability pension is provided to workers who have lost two-thirds of their earning capacity. The number of required contributions varies by age, from a minimum of 12 contributions up to age 24 to a maximum of 120 contributions after age 51. The disability pension is calculated in the same way as the old-age pension.

A survivors pension is payable to widows, orphans, and other dependents up to a maximum of 100 percent of the insured's pension if the deceased was eligible for an old-age or disability pension or had made 12 contributions in the last 24 months or 180 contributions any time (SSA 1999).

Pension Fund Management Companies

Pension plan operators (OPPs) collect contributions and manage the individual accounts. Employees have the option of contributing up to 10 percent of earnings (tax-deductible) to their own accounts. Employers may make additional payments and may also set up an additional "termination indemnity" account in the event the employee becomes unemployed. Survivors and disability insurance are available at an additional cost. OPPs may charge administrative fees (up to 10 percent of the fund's returns) plus fees for other services.

Qualifying conditions and benefits vary according to the contract between the OPP and the individual. As a benefit, the individual can choose either programmed withdrawals or a partial or full annuity. Partially retiring and continuing to make contributions is also possible. Workers can withdraw funds early if they have contributed for at least 5 years. The OPPs assess a 6 percent fee on the amount of the accumulated funds.

The OPP's investment limits are:

- 90 percent in instruments issued or guaranteed by the government,
- 40 percent in instruments issued by financial institutions,
- 20 percent in fixed-income instruments from institutions other than financial entities, and
- 20 percent in equities.

For the first 5 years (until 2000), foreign investments are limited to only those companies with a presence in Costa Rica. In 2001, the type of allowable foreign investments will be broadened but may not exceed 20 percent of the fund.

As in other countries, the OPPs' only function is to manage individual accounts. They must have a minimum capitalization of one-quarter of the amount required for private banks. In addition, they may administer more than one fund and provide complementary pension plans.

OPPs must have two reserve funds: one made up of 0.5 percent of the pension fund's returns until that amount reaches

2 percent of the value of the fund, and another with 5 percent of the pension fund's net income. Those monies are used to raise rates of return to a required minimum when the Superintendent deems the OPP responsible for poor returns. That mechanism differs from the other countries' guaranteed minimum return.

The Superintendent of Private Pension Funds oversees the operation of the OPPs. Although it operates independently, the Superintendent is subordinate to the central bank. In June 1999, there were eight OPPs (Bertín and Perrotto 1997; SSB 1998, 1999; AISS 1998).

Recent Developments

A law passed in December 1999 modifies the termination indemnity (*cesantía*), or severance rules, that requires employers to pay 1 month's earnings per year of service up to a maximum of 8 months' pay if an employee is dismissed for any reason. That payment equals about 8.33 percent of annual earnings for each year of service, plus interest. The new law reduces the 8.33 percent to 5.33 percent, and the other 3 percent will go to a funded labor account that will be set up for each employee. Half of the account will fund the severance payment; the other half will be sent to a complementary pension fund chosen by the worker. An employee may make additional contributions to a separate savings account managed by the same entity that manages the pension fund.

The 1999 law will set up a four-tier system for social security:

1. Social security as described above, supervised by the Superintendent of pensions.
2. Mandatory complementary pensions funded by part of the termination indemnity contribution and supervised by the Superintendent of pensions.
3. Voluntary individual savings accounts funded by employee contributions.
4. Noncontributory pensions for low earners (IBIS, November 1999, January 2000).

El Salvador

Before its most recent reform, El Salvador had separate PAYGO schemes for public- and private-sector employees with different benefits and contribution rates. Although little information is available about the reasons for the reforms, El Salvador most likely had problems similar to those of its Latin American neighbors. A law passed in 1996 and implemented in April 1998 established a privatized system similar to the Chilean model. The delayed start-up was caused by a crisis in the financial sector in mid-1997 that involved fraud (Queisser 1998).

New System

The "new" old system combines the two PAYGO programs, but the Armed Forces system remains separate. Although the old system was closed to new entrants, all insured workers over age 55 (men) and 50 (women) had to remain under the old system, and all those younger than age 36 had to switch to the new system. Workers older than 36 but less than 55 (men) and 50 (women) within the first 6 months of implementation could select either system (Mesa-Lago 1997).

Individuals who switched to the new system received a recognition bond, representing the value of rights accrued under the old system. The bond is price-indexed but pays no interest. The government is financing the bonds from a transition fund paid by government monies and invested by the pension fund management companies (AFPs). The cost of that obligation in 1998 was about 0.5 percent of the total government budget. To encourage switching, contribution rates for the new system are set lower than those for the old (Queisser 1998).

Workers choose the AFP for their individual accounts, which are financed by both the employee and the employer. Contribution rates are being phased in gradually so that by the seventh year of operation (2005), employees will pay 3.25 percent of earnings plus 3 percent for survivors and disability insurance and administrative fees; employers will pay a total of 6.25 percent of payroll. As of July 1999, employees paid 2.08 percent of earnings for administrative fees and 1.1 percent of earnings for survivors and disability insurance.

At that time, only about 63 percent of affiliates regularly contributed to their account. Although there is no penalty for affiliates' noncompliance, employers who do not transfer affiliates' monies are assessed 20 percent of the amount of the contribution plus 2 percent for every month the contribution is not paid. Employers who do not pay the correct amount are charged 10 percent and 5 percent, respectively.

Affiliates may switch to another AFP after contributing for 18 months or if their AFP has either 2 consecutive or 3 nonconsecutive months of returns that are below the minimum. In July 1999, about 1 percent of affiliates transferred to another AFP (SSB 1998, 1999; Superintendente de Pensiones/El Salvador 1999).

Workers are eligible for retirement at age 60 (men) and 55 (women) with 25 years of contributions, or at any age with 30 years of contributions. They may also retire if their pension equals at least 70 percent of their basic earnings or 160 percent of the current minimum pension. An individual may choose programmed withdrawals, an annuity, or a combination of the two.

The government guarantees a minimum pension for workers with 25 years of contributions whose account will not yield the minimum level on the basis of average taxable earnings; however, the guarantee goes into effect only if the government has the resources. No other type of pension is available for poor, uninsured individuals (Mesa-Lago 1997).

Pension Fund Management Companies

As of July 1999, El Salvador had five AFPs. To become an AFP, a company must have worked in the pension fund industry for at least 3 years, be 50 percent owned by Central Americans, and maintain at least one office in El Salvador (SSB 1998, 1999). Of the five AFPs, one is totally owned by El Salvadoreans, and others are partially owned by European and

U.S. banks and Chilean AFPs. National and foreign banks, financial institutions, or a foreign financial institution that has shares in a domestic financial institution are not allowed to own or operate an AFP, except for subsidiaries of foreign financial institutions (Queisser 1998). With the 1999 merger of BBV and Argentaria (the two Spanish companies that owned two AFPs) and BBV's acquisition of Provida (another AFP), the market could change significantly (SSB 1999).

The Superintendent of Pensions oversees both the old and new systems and is financed by the AFPs. The government does not guarantee a minimum rate of return or pension in the event that an AFP goes bankrupt. However, AFPs must guarantee a relative rate of return according to the average rate of all AFPs (Mesa-Lago 1997). An AFP that cannot pay the relative rate of return from its earnings must use its reserves. If those funds are insufficient, the Superintendent has the right to revoke the AFP's license and appoint a liquidator. The liquidator will pay the AFP's debts from the assets that remain, including the minimum rate of return. Affiliates may switch to another AFP once liquidation begins (Superintendente de Pensiones/El Salvador 1999).

AFPs are permitted to invest in securities that are traded on the El Salvadorean exchange. In addition, they are required to invest in the public housing fund for a period of 10 years, beginning with 30 percent of their assets and gradually declining (SSB 1998). As of July 1999, 68 percent of investments were in government instruments, 32 percent in financial institutions' debt, and less than 1 percent in stocks. The nominal rate of return from July 1998 to July 1999 was 12.84 percent (Superintendente de Pensiones/El Salvador 1999).

Mexico

Mexico's old social security system (Instituto Mexicano de Seguridad Social, or IMSS) was failing for a number of reasons. Reserves from the pension program were invested in low-yielding instruments and were diverted to cover rising health care costs. Contributions did not keep up with increasingly generous benefits. Between 1943 and 1995, benefits were raised 40 times while contribution rates were changed only three times. The minimum pension increased from 35 percent of the minimum wage before 1989 to 100 percent in 1995. However, the value of pensions declined because they were not indexed to inflation.

Evasion was also high. Since the benefit formula was based on 10 years of contributions, employees would either underreport their income or work in the formal sector for only 10 years in order to receive a benefit. Although in theory lower-income workers received a higher proportion of their earnings than did higher-income workers, higher earners could manipulate their work history in order to receive a higher benefit.

Only about 30 percent of the economically active population was covered by the IMSS, in part because the informal sector in 1995 was about 40 percent of the workforce. Although the Mexican population is young—almost half are under 25, and only about 6.4 percent are over age 65—the ratio of contributors to pensioners (the dependency ratio) fell from 25 to 1 in 1960 to only 1.25 to 1 by 1994, and life expectancy is still increasing. To keep the old system going, the government would have to either triple contribution rates or increase government spending to about 3.75 of GDP by 2030 (Grandolini and Cerda 1998; Queisser 1998).

In 1992, Mexico added a system of mandatory supplemental private pensions (SAR) to help the failing PAYGO system, but the SAR also failed. Employers contributed 2 percent of earnings, and employees made voluntary payments to an individual account in a commercial bank, insurance company, or stockbrokerage house. The guaranteed minimum interest rate was 2 percent.

The SAR failed for a number of reasons, including poor supervision, high operating costs, and a flawed design. Banks had few incentives to set up accounts for low-income workers, and their profits were limited since allowable fees were very low. No regulations for investments had been set up. The administrative organization that oversaw the program—the CONSAR (National Commission of the SAR)—was not established until 2 years after the program began.

In addition, INFONAVIT, the National Worker's Housing Fund Institute, which provides low-interest loans to employees for buying a home, set up a separate interest-bearing housing account for each employee to which the employer contributed 5 percent of payroll. INFONAVIT also had financial problems that were not resolved (Grandolini and Cerda 1998).

New System

In September 1997, Mexico introduced a mandatory system of individual accounts held in pension fund management companies known as AFOREs. (Public-sector workers have a separate system.) Pensioners continue to receive benefits under PAYGO, but all workers must join the new privatized system. The SAR is closed for any additional contributions, and its account balances have been folded into the individual accounts (Grandolini and Cerda 1998).

Contributions totaling 6.5 percent of earnings are made by the employee (1.125 percent), the employer (5.15 percent), and the government (0.225 percent). The employee may make additional voluntary contributions. The government provides a flat subsidy equal to 5.5 percent of the minimum wage per day to all workers regardless of income level. Unlike many of the other Latin American countries whose disability and survivors insurance is a separate private contract funded only by the employee, Mexico has the IMSS administer those programs, financed by contributions totaling 2.5 percent of earnings (the employee, 0.625 percent; the employer, 1.75 percent of payroll; and the government, 0.13 percent of employer's contribution) (International Group Program 1999). INFONAVIT, however, is still financed entirely by the employer's additional 5 percent of payroll and is a separate subaccount.

IMSS collects the contributions and places them in a special general account called *Cuenta Concentradora.* After the contributions are verified according to payroll records and identification numbers, the funds are transferred to the designated AFORE. Funds for employees who do not choose an AFORE remain in the general account for up to 4 years, after which they are sent to an AFORE chosen for them (CBO 1999).

The retirement benefit, available at age 65 (both men and women) with 25 years of contributions, is based on contributions plus interest minus fees and can be taken as an annuity or programmed withdrawals. The account balance is paid out as a lump sum if the worker is of retirement age but has not contributed for the required number of years. Early retirement is available when the balance can provide a benefit equaling at least 30 percent of the current minimum pension, which is equal to either the minimum wage or 40 percent of the average wage. If the insured has 1,250 weeks of contributions but the account will not yield the minimum pension, the government guarantees a minimum pension.

A disability pension is payable to those with at least a 50 percent disability and 250 weeks of contributions before onset (only 150 weeks if the disability is more than 75 percent). An affiliate who does not have the required number of contributions may withdraw his or her account balance as a lump sum. The insurance policy that the worker purchases provides a benefit of 35 percent of the average salary during the 500 weeks before the onset of disability, plus a family allowance benefit equal to 15 percent of the pension. Survivors benefits equal 90 percent of the disability pension for the widow plus 25 percent (30 percent if full orphan) for children up to age 16 (25 if student) (SSA 1999; Bertín and Perrotto 1997).

The INFONAVIT account can become part of the retirement benefit. The returns from that account, which are based on the housing fund's operating surplus, are likely to be lower than those from the AFORE account since INFONAVIT invests in low-interest loans to low-income workers. Those workers may use the savings before retirement as a down payment on a house. At retirement, the balance of the subaccount is combined with the AFORE to provide the pension (Sales and Solis 1996).

The government does not provide recognition bonds, but workers who had previously made contributions under the PAYGO system may, at retirement, choose between a benefit under the old or new scheme. If the individual chooses the PAYGO benefit, the balance of his or her individual account is transferred to the government. Having a choice of benefit is an advantage for the worker, who can receive the higher of the two benefits. The ability to choose, however, poses a problem for the government because of its inability to project and plan for the long-term costs of paying for the transition from the public to a privatized system.

In certain cases, workers may make withdrawals before retirement. An unemployed worker who has 5 years of contributions and has made no other withdrawals may take out 10 percent of the account balance on the 46th day of unemployment. Also, workers may withdraw 1 month's wage when they marry (CBO 1999).

Pension Fund Management Companies

AFOREs can be set up by private-sector companies (including banks and other financial institutions), trade unions, and the IMSS. Foreign companies may do so if they are financial institutions. Countries participating in the North American Free Trade Agreement (NAFTA) are permitted majority ownership; other countries are limited to 49 percent ownership (Grandolini and Cerda 1998). An AFORE must have a minimum capital of US$350,000 and a special reserve fund of 1 percent of total assets or US$350,000, whichever is higher. Each AFORE is limited to 17 percent of the market share, to be increased to 20 percent after the system has operated for 4 years. There is no guaranteed minimum rate of return. The number of AFOREs has fallen from 17 in 1997 to 13 in late 1999 (SSB 1998, 1999; CBO 1999; Queisser 1998).

Investments are initially restricted to debt instruments. As time goes on, those rules will most likely be relaxed. At the end of 1998, investments were mainly in three types of Mexican government issues: development bonds, treasury certificates, and bonds indexed to inflation (*Corporate Mexico,* 8 January 1999). For 1998, the gross real rate of return was 6.14 percent, and the net rate (minus administrative fees) was 5.62 percent (*Excelsior,* 19 January 1999).

Like management companies in other Latin American countries, AFOREs currently manage only one fund (called a SIEFORE). However, in the future, the law will permit each AFORE to offer SIEFOREs with different types of investment and risk levels. Each AFORE will have to offer one fund that has at least 51 percent of its investments in inflation-indexed securities, one with mainly fixed-income investments, and another that is primarily invested in equities (Queisser 1998). To date, no implementing regulations have been passed to allow AFOREs to manage multiple SIEFOREs.

The CONSAR, originally set up to oversee the SAR, supervises all aspects of the private pension system. It has full authority over the AFOREs and SIEFOREs, banks, and insurance companies and issues regulations concerning investments, operations, and so forth (Grandolini and Cerda 1998).

AFOREs may charge fees for a variety of services, assessed in one or more of the following ways: as a percentage of wages, as a percentage of assets under management (including inactive accounts), or as a percentage of real return. Most AFOREs charge fees as a percentage of wages (between 1.6 percent and 1.7 percent of contributions); six of them charge as a percentage of assets, and only two as a percentage of real return.

Individuals can transfer from one AFORE to another once a year or whenever the AFORE has a change in investment policy or fee structure. The number of transfers has been notably small compared with those in other countries in the region—less than 1 percent of all affiliates for January to September 1999 (CBO 1999; SSB 1999).

Unresolved Issues

Compared with other Latin American countries, Mexico has a high rate of affiliates who are contributing to the system—

about 87 percent as of June 1999. However, that figure is not entirely comparable with the rate of other countries since Mexico counts only those who have contributed at least once a year while most other countries include only the last quarter of the year (SSB 1998, 1999). Furthermore, the private pension system covers only about one-third of Mexico's workforce—the system excludes many government workers, and participation by the self-employed and the informal sector is voluntary (CBO 1999).

Another unresolved issue is the fact that INFONAVIT represents a large percentage of an individual's account, but its low returns produce a less adequate pension. In recent years, returns have actually been negative. The government is discussing revamping the program.

In addition, the option to choose benefits under the public or private system could cause workers to take higher risks with their individual accounts. Such risk-taking will lead to an increased financial burden if the resulting average account balances are low and the government must fund a large number of benefits under the old public system (Grandolini and Cerda 1998; SSB 1998).

Peru

Peru, like most other Latin American countries, had severe problems with its PAYGO system. In the 1980s, it covered only 22 percent of the population. The evasion rate was 33 percent, employers frequently delayed their payments, and administrative costs were very high—about 52 percent of total expenditures in 1986. In addition, the real value of pensions had declined significantly as inflation reached 3,000 percent a year. Social security reform was introduced as part of an overall economic program to privatize the state-owned companies (Mesa-Lago 1996; SSB 1998).

New System

In 1993, Peru introduced a system of private individual accounts (SPP) as an alternative to the existing PAYGO system (SNP). Initially, the private program was not attractive because it had higher contribution rates and higher retirement ages. Employees who switched to the SPP were given a 13.5 percent salary increase, which posed a problem for some employers who had been paying a 6 percent social security contribution (Queisser 1997). Further, the government failed to issue recognition bonds—for the value of contributions already made under the public system—until the end of 1994. Also, workers were allowed to switch back and forth between the two systems from 1993 to1995. Since then, changing has not been permitted, and contribution rates and retirement ages are now the same for both systems. Participation of the self-employed is voluntary.

The government is financing its transition costs by issuing government debt and by setting up a special fund containing the proceeds of the privatization of public enterprises, earmarked for the payment of SNP pension obligations. As of 1996, contributions and income from the investment of reserves were sufficient to cover the transition costs, about 0.6 percent of GDP. However, since younger workers have been joining the private system, resulting in lower revenues, the deficit is expected to increase significantly over the next 10 years (Queisser 1998).

Recognition bonds, which are indexed to prices but earn no interest, are provided to those who contributed to the public system during the 6 months before the reform and for at least 4 years during the 1983-1992 period. Contributions are recognized up to a ceiling. Because of the lack of reliable records, employees had to provide sworn statements of their previous contributions (Queisser 1998). According to government estimates, about 58 percent of all SPP affiliates will receive a recognition bond (SSB 1998).

Under the old system, the employee contributes 13 percent of earnings for old-age, survivors, and disability coverage; under the new system, the employee contributes 10 percent of earnings to an individual account for old-age benefits, plus an average 1.38 percent for survivors and disability insurance and 2.36 percent for administrative fees (SSA 1999; FIAP 1998). Workers may make additional voluntary contributions to their accounts to save for nonretirement purposes. If any voluntary funds are withdrawn for purposes other than retirement, an additional fee can be charged. Employers may make voluntary contributions on behalf of the employee to an individual account but are not required to do so. Pension contributions have no ceiling. Unlike in other countries, contributions (except for the employer's voluntary contribution) are not tax-deductible, and pensions are taxed; in effect, there is double taxation (Queisser 1997).

Both systems permit retirement at age 65 (men and women) with 20 years of contributions. Benefits under the old system range from 50 percent to 55 percent of average earnings during the last 1 to 5 years of employment, depending on the number of years of contributions beyond 20. Under the new system, the benefit is derived from the insured's contribution plus accrued interest minus an administrative fee. Workers may choose to take their benefit as a programmed withdrawal, a personal or family annuity, or a combination of both. Early retirement is permitted if the balance of the individual account is sufficient to finance a pension equal to at least 50 percent of the worker's average salary in the last 10 years of employment.

Both systems also offer disability and survivors benefits. The public SNP pays workers who have lost two-thirds of their earning capacity, a benefit that varies from 50 percent of average earnings to 80 percent of total earnings, up to a ceiling. The private SPP's partial disability benefit (between 50 percent and 66 percent disabled) is payable at 50 percent of monthly earnings during the 36 months before the onset of disability. Workers who are more than 66 percent disabled receive 70 percent. The public SNP survivors benefit equals 50 percent of the insured's old-age pension, payable to a widow or disabled widower; children under age 18 (21 if student, any age if disabled), receive 20 percent (40 percent if full orphan). The private SPP survivors benefit equals

90 percent of a disability pension (SSA 1999; Bertín and Perrotto 1997).

Pension Fund Management Companies

AFPs in Peru are similar to those in Chile in that their sole purpose is to manage one pension fund. Institutions that are prohibited from setting up an AFP include banking, financial, insurance, and credit-rating companies; savings and loans; and the public system. However, shareholders of those institutions may participate in or establish an AFP provided the competition remains fair. The minimum capital required for an AFP is US$200,000 and is adjusted yearly according to the Metropolitan Lima Price Index (SSB 1998).

Regulation of an AFP's minimum profitability was relaxed in 1998. Under the new requirement, AFPs must deliver the average real rate of return of all the AFPs minus 3 percent, or 25 percent of the system's average real rate of return—whichever is lower—over a 5-year period. The rates had previously been 2 percent and 50 percent, respectively, over a 1-year period. In addition, an AFP may not have returns below inflation. These changes should help lessen the "herd effect" on AFP fund managers and allow them more freedom to select alternative strategies and differentiate themselves (SSB 1998).

AFPs are also required to place 1.25 percent of assets in a reserve fund to help pay for losses. That amount was raised from 1 percent in November 1998 as economic conditions worsened (IBIS, October 1998).

Performance

The number of AFPs has fallen from eight in 1993 to five in December 1999. Foreign companies such as Citibank, Aetna International, and American International Group are partners in the AFPs. From 1994 through December 1999, the average real rate of return, before deducting administrative fees, was 7.28 percent (SAFP/Peru 1999, 2000).

Investments as of December 1999 were about 50 percent in instruments from nonfinancial companies, about 50 percent in instruments in financial companies, and less than 1 percent in government instruments (SAFP/Peru 2000). AFPs were initially allowed to charge both variable and fixed fees on the individual account and a variable fee on the contribution, but the fixed fees were eliminated in November 1996. AFPs may charge a fee set as a percentage of the contribution and may give a rebate of 3 percent to 15 percent of the charge in order to discourage transfers. As mentioned above, costs to the individual average about 3.74 percent—2.36 percent of earnings plus about 1.38 percent for survivors and disability insurance (*Análisis Laboral* 1999).

Employees are permitted to switch AFPs after they have contributed for at least 6 months to one AFP. Peru is the only country that charges an exit fee (SSB 1998; Queisser 1997; IBIS, March 1997). As of June 1998, about 1 percent of affiliates had transferred from one AFP to another. Although the number of transfers declined by 33 percent from June 1997 to June 1998, the size of the sales force increased by 3.6 percent (FIAP 1998).

The Superintendent of Pension Fund Management Companies (SAFP) is an autonomous agency that oversees the AFPs. The head of the SAFP is nominated by the President and approved by the Congress for a 5-year term (Queisser 1997). The agency is financed by 6.5 percent of gross earnings of all AFPs (AFP Horizonte 1997).

Unresolved Issues

The number of participants in the private system is small compared with the total potentially eligible population. The average contributor is about 25 years old; more than 50 percent are under 30, and fewer than 18 percent are over 40. Only 21 percent of the economically active population have joined the private system, and 10 percent are part of the public system. The formal sector accounts for only about 40 percent of the economically active population; the informal sector has some 5 million workers (AFP Horizonte1997; Queisser 1997).

Unpaid contributions are a key issue for the Peruvian system. Only 45 percent of SPP affiliates are regular contributors. Also, even though employers do not pay into the system, many fail to remit their employee's required payment to their account. In the past, the government has had two official amnesty programs for employers to repay their overdue pension contributions (Queisser 1997). Despite those efforts, the head of the SAFP reported to the Congress in October 1998 that unpaid contributions, including fines and interest (about 4.2 billion soles), almost equaled the amount of assets under management at the time (about 5 billion soles). Of the total due, 58 percent is from the private sector, 34 percent from state companies, and about 8 percent from local municipalities (IBIS, October 1998).

Uruguay

Uruguay has one of the oldest social security programs in Latin America, starting with a program set up for its public-sector workers in 1896. As with other countries in the region, the system became very fragmented as it developed and benefited those who had more political power.

Uruguay also has a low birth rate, and the young people frequently emigrate. People over age 60 represent 15.8 percent of the total population, a high percentage for the area.

The benefit formula under the PAYGO system, which was previously calculated on the last 3 years of work, encouraged workers to evade contributions. They either would not contribute or would report lower earnings until the last 3 years, when earnings would be inflated (Mesa-Lago 1997). Evasion, estimated at 32 percent in 1993 and coupled with the growth of the informal economy, lowered the ratio of contributors to pensioners from 3.8 in 1960 to 1.3 in 1983.

In 1986, 64 percent of the old-age pensions, 95 percent of the survivors pensions, and all of the disability pensions were less than the minimum salary. The real value of pensions declined while the system's debt rose from 9.6 percent of GDP in 1986 to 16.1 percent in 1992 (Papadópulos 1998). A social assistance pension, payable at age 65, was supposed to be means-tested.

However, it was also used as a supplement to the regular pension (Kane 1995).

New System

After several proposals to reform the system, a law passed in 1995 and implemented in 1996 set up a two-tier system that retained the PAYGO component and added a program of individual accounts. Experts widely agree that the political power of the trade unions and pensioners' associations was instrumental in retaining a continuing large role for the PAYGO component.

When Uruguay implemented the new system, workers over age 40 had 6 months to decide whether to stay with the old PAYGO system, which was closed to new entrants, or switch to the new, mixed system. The Armed Forces and four other independent funds were not included. Since the insured's contributions were increased by 2 percent and the employer's were reduced by 2 percent, employees were given a 2 percent increase in earnings at the inception of the program to make up the difference (Queisser 1997).

The 1995 law established a two-tier mixed system. The first tier—the new public portion, or BPS—covers all workers for the first $5,000 New Pesos (NP) of monthly earnings, about US$800. The employee contributes 15 percent of earnings, the employer contributes 12.5 percent of payroll, and the government provides the proceeds from various taxes including a portion of the value-added tax (VAT).

The old-age pension is payable at age 60 (men) and 56 (women—gradually increasing to 60 by 2003) to workers with 35 years of coverage. The benefit is equal to 50 percent of average earnings in the last 30 years of employment, plus half a percentage point for every year of work up to 2.5 percent of earnings. The minimum pension is equal to the minimum wage at the time of retirement. The maximum pension is between 7 and 15 times the minimum wage, depending on the type of work.

An advanced-age pension is payable at age 70 (men) and 66 (women) with 11 years of service, gradually rising to 15 years of service and age 70 for women by 2003. The benefit is equal to 50 percent of average earnings in the last 3 years of employment plus 1 percent of earnings for each year of service over 15 years, up to a maximum of 14 years. Pensions are adjusted yearly according to changes in wages. A noncontributory pension, which is payable to indigents over age 70 who are not capable of working, is paid for by a separate government fund.

The second tier is an individual savings program (*Ahorro Individual Obligatorio,* or AIO) financed by a 15 percent employee contribution to an individual account in a pension fund management company (AFAP) chosen by the employee. Participation in AIO is mandatory for workers under age 40 (voluntary for those who were over age 40 when the program was set up) whose monthly earnings are between $5,000 NP and $15,000 NP. Additional voluntary contributions are permitted for earnings greater than $15,000 NP. Contributions up to 20 percent of earnings are tax-deductible. Workers earning less than $5,000 NP (about 87 percent of the labor force) can choose to contribute 7.5 percent of half of their earnings to an individual account and 7.5 percent of half of their earnings to the public program.

Requirements for retirement are age 65 (men and women) with 35 years of contributions. The insured has only one benefit option—to buy an annuity, indexed to average wages, from an insurance company. The private program does not offer a guaranteed minimum pension. No recognition bonds are provided since a public tier remains. Unlike the other Latin American countries, Uruguay has no specific required amount that must be accumulated for retirement (SSA 1999).

Both the public and private tiers offer disability and survivors benefits. A disability benefit is payable to workers with 2 years of service, 6 months of which must have been immediately before the onset of disability. Workers younger than age 25 must have 6 months of service. The public disability pension is equal to 65 percent of the average earnings in the last 10 years. Under the AIO, an insurance company provides a monthly benefit equal to 45 percent of the average monthly amount the insured had contributed to his or her individual account over the last 10 years (Bertín and Perrotto 1997).

The survivors pension is up to 75 percent of the insured's pension, payable to a widow, widower, divorced spouse, unmarried children under age 21 (no limit if disabled), and disabled parents (SSA 1999).

Different organizations control the administrative functions of both systems. The Social Security Bank (BPS) supervises the public program and collects the contributions for both programs. It can also levy fines against the employer for nonpayment of contributions. The BPS also oversees partial disability benefits (Mitchell 1996). The Central Bank authorizes the establishment of the AFAPs and supervises and controls them, in part by levying fines.

Pension Fund Management Companies

AFAPs may be formed by private and state-owned banks and financial institutions, although the program could not begin operation until a public-sector AFAP was established. There are currently six AFAPs; República is the state-owned company. The minimum capital required is about US$900,000, to be maintained in real terms. An AFAP must maintain a reserve fund equal to 2 percent of its holdings and a fluctuation fund consisting of the returns that exceed the average return of all AFAPs.

The required minimum return is equal to the system's average return minus 2 percentage points. An AFAP whose earnings fall below that minimum first use the reserve, then the fluctuation funds, and finally its own capital to compensate the account holders (Bertín and Perrotto 1997; SSB 1998). If an AFAP cannot make the payments, the government steps in only for the state-owned AFAP (Mesa-Lago 1997). However, if the fluctuation reserve of any one AFAP reaches 5 percent above the average of all AFAPs, the amount of money that exceeds the average is credited directly to the affiliates (Queisser 1998). The real rate of return from October 1997 through September 1998 was 6.03 percent, minus administrative fees (Queisser 1998; Banco Central del Uruguay, September1998).

Affiliates may transfer from one AFAP to another if they have contributed for at least 6 months, even if the contributions were not continuous. The number of transfers has been relatively small compared with that in other countries.

The limits on investments are up to:

- 60 percent in government bonds,
- 30 percent in the Uruguayan Mortgage Bank, and
- 25 percent in domestic stocks.

Investments are not permitted in securities from other AFAPs, insurance companies, foreign companies, investment funds, or companies related to a specific AFAP. In May 1999, the Central Bank approved a regulation allowing AFAPs to invest in the Montevideo Stock Exchange (*Ambito Financiero,* 12 May 1999).

Fees may be charged for both mandatory and voluntary contributions as well as for assets under management. As of June 1999, administrative fees averaged about 2.64 percent—2.03 percent for disability and survivors insurance and 0.61 percent of earnings (AIOS 1999). As in Argentina, the fees are deducted from the employee's 15 percent contribution. Longevity discounts are permitted for affiliates remaining with an AFAP. All fees and commissions are exempt from value-added taxes.

What remains a problem is the number of active contributors as a percentage of affiliates, now about 67 percent. Also, as in Chile, women do not fare as well as men under the new system. Women have a longer life expectancy, fewer years of contributions because of child-rearing years, and even lower contributor-to-affiliate ratios (Mesa-Lago 1997).

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