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5 The Shift to a Funded Social Security System: The Case of Argentina

Joaquín Cottani and Gustavo Demarco

The Argentine social security system has been modified a number of times since its creation in 1904. The pay-as-you-go system was adopted in 1954. The reform of 1969 established the system's definitive structure, which remained substantially unchanged for more than twenty years. However, the system's underlying financial problems led the government to undertake an integral reform of its social security program in 1993. The government adopted a mixed system by introducing private pensions into the program. In this report, *former system* or *old system* will refer to the retirement program that existed between 1969 and 1993.

The former pay-as-you-go system included a single regime for public- and private-sector employees and a separate regime for the self-employed (whose affiliation to the social security program is mandatory in Argentina). In theory, more than 90 percent of the labor force was insured under these two systems, with exclusions made only for state and local government employees, armed and security forces, and certain professionals with independent retirement systems. However, owing to pervasive evasion, especially among the self-employed, many workers were not eligible for benefits on reaching retirement age.

The former system was funded with payroll taxes and, when necessary, with other forms of taxation. The government was exclusively responsible for its administration. Future benefits were predefined, but the actual link between

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the amounts of contributions and benefits was very weak. This was especially true when the system's financial problems became particularly serious and beneficiaries had to accept lower than anticipated pensions.

To receive an old age pension, public and private employees had to attain a specified retirement age (sixty for men and fifty-five for women) and make contributions for a minimum period. In practice, however, excessive permissiveness in the system allowed some workers to obtain pensions without accumulating the required contributions. Conditions of eligibility for disability and survivorship pensions were also lax.

In theory, the pension formulas for dependent workers were extremely generous by international standards and were linked to wages received during the last years of service. However, the methodology used to index pension benefits allowed distortion of the relation, and this happened for decades of high inflation.[1]

Typically, there was little connection between workers' past wages and their pension entitlements under the old system. There was also very little connection between their years of covered employment and their pension entitlements. These factors contributed to the creation of undesirable labor market incentives and significant redistribution effects that were generally capricious.

The cost of the pay-as-you-go system increased dramatically over time as a result of demographic and other factors. To cope with this problem, the government raised payroll taxes and earmarked other tax revenues for the system. In 1993, the year of the reform that introduced private pension funds, the payroll tax rate was 26 percent. In addition, the system received 10 percent of total VAT collection, 20 percent of income tax collection, 100 percent of the personal tax on wealth, 30 percent of all capital revenues obtained by the federal government from the sale of public enterprises, and the entire surplus of the family allowances program funded by an additional payroll tax. Currently, social security expenditures represent 6 percent of GDP, almost as much as the consolidated expenditure of the central government and its decentralized agencies, including transfers to public enterprises and to the private sector.

The financial position of the social security system began to deteriorate in the 1980s. The crisis became so severe that the government declared a state of emergency and rescheduled the debt of the system to avoid a total collapse of the system. In 1993, the Argentine Congress sanctioned new legislation to create a mixed system based on the coexistence of private pensions and individual retirement accounts and the pay-as-you-go institutional arrangement (Schulthess and Demarco 1994).

The purpose of this report is to analyze the factors that led to the 1993 reform (sec. 5.1) and describe the principal characteristics of the new system (sec. 5.2). In section 5.3, we examine some results of the new social security

1. The Social Security Department developed its own wage index for the purpose of adjusting base pensions.

system by observing the evolution of a group of global indicators. Finally, in section 5.4, we make inferences about the macroeconomic effects of the pension funds on variables such as the public budget and the savings rate.

5.1 Factors Leading Up to the Reform of the Social Security System

The social security system's reform was the response of the government to the financial crisis that had been building for many years. One clear manifestation of the deteriorating financial position of the system was the extremely low level of benefits paid (as compared to the legal targets) and the growing indebtedness with beneficiaries. The financial problems were not merely the result of inefficient administration but reflected, to a large extent, fundamental institutional weaknesses that ultimately threatened the solvency of the system. The growing number of lawsuits brought against the system throughout the 1980s revealed its vulnerability to legal challenges regarding benefit levels and undermined the ability of the government to administer the system with available resources.

The situation was complicated by increasing evidence of the inequities of the system, which were as much the result of general pension legislation as of special laws introduced to benefit some segments of the labor force. In short, when the government submitted legislation to initiate a profound reform of the social security retirement program, it was clear that the financial problems of the system were just one of many factors contributing to the crisis. We will address each of these factors in turn.

5.1.1 Chronic Financial Disequilibria

The financial problems of the system resulted from trends in labor market demographics, payroll tax evasion, and structural problems inherent in the pay-as-you-go system. To better understand the financial implications of the pay-as-you-go system, it is useful to analyze the following condition for financial equilibrium:

$$Aaw(1 - e) + T = Bbw', \tag{1}$$

where A = number of contributors, a = payroll tax rate, w = average wage, e = rate of evasion, T = resources from the national Treasury (including earmarked taxes), B = number of beneficiaries, b = replacement rate, and w' = pensionable wage (i.e., reference wage to determine pensions).

The left-hand side of equation (1) corresponds to the revenues of the system, and the right-hand side represents its outlays. If we express T as a proportion of payroll taxes,

$$T = \tau aAw(1 - e), \tag{2}$$

equation (1) may be rewritten as follows:

$$ad(1 - e)(1 + \tau)(w/w') = b. \tag{3}$$

Equation (3) indicates that the replacement rate (b) increases with the payroll tax rate (a), the dependency ratio ($d = A/B$), defined as the potential number of contributors to pensioners, the amount of earmarked taxes, and the ratio between the current average wage and the pensionable wage and decreases with the rate of evasion. Variable e measures evasion as a proportion of potential payroll tax collection.[2]

Parameters involved in (3) are consistent if the equation is verified. For the values for d, a, (w/w'), and e approximate to those in Argentina before the reform, consistency would require an enormous increase in resources from the national Treasury, which should be 2.2 times the payroll taxes to guarantee the level of b promised by the law ($b = .70$). Alternatively, with the amount of resources from the Treasury actually available ($\tau = .33$), b should shrink to .29, a level rejected by Argentine society.

Changes in other parameters could certainly have helped, but, as we shall see, tendencies appeared to worsen these results.

Dependency Rate (d)

There has been a steady decline in the dependency ratio in Argentina before the social security reform as labor market demographics changed, conditions governing the extension of benefits became lax, and evasion increased.

Population aging is a well-known phenomenon that occurs as a consequence of economic development. During the first phases, it derives from a decline in birth rates parallel to an increase in life expectancy. Figure 5.1 illustrates that this phenomenon has occurred in Argentina. It is important to state that population aging is not a mere "transition problem": developed economies increasingly improve health and life conditions, thus increasing the proportion of old persons in total population. This is a leading reason why pay-as-you-go social security systems' financial problems are so generalized all over the world.

The primary effect of population aging on these systems is realized through a decline in the dependency ratio. Table 5.1 illustrates the projected dependency rate by extrapolating from actual demographic trends observed in the period preceding the 1993 reform. As illustrated, this rate was insufficient to meet the requirement for financial equilibrium even in the initial period. Moreover, the parameter declines throughout time, exacerbating the financial problems of the system even further.

In addition to demographic tendencies, excess permissiveness in the administration of benefits contributed to lowering the dependency rate. This was particularly clear in the case of disability and survivorship pensions (table 5.2),

2. Parameter e reflects just part of total evasion. In fact, evasion can affect revenues by lowering the number of contributors (A) or the amount contributed (aw). This has been a common form of payroll tax evasion in Argentina, where workers and firms have typically underdeclared wage incomes.

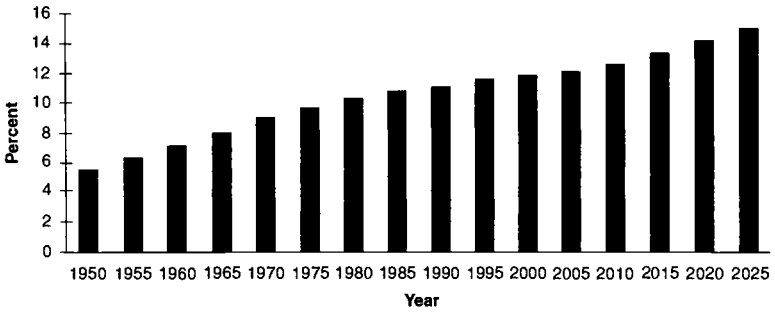

Fig. 5.1 Percentage of elderly population
Source: Superintendencia de AFJP, Unidad de Estudios Económicos y Estadísticas.

Table 5.1 Projected Dependency Ratio (thousands of persons)

Years	Contributors	Total Equivalent Pensions[a]	Dependency Ratio
1990	1,890	2,944	1.66
1995	5,260	3,447	1.53
2000	5,663	3,765	1.50
2010	6,654	4,339	1.53
2020	7,723	4,964	1.56

Source: Lo Vuolo (1994).
[a]Each survivorship pension is equivalent to 0.70 of a retirement pension.

Table 5.2 Survivorship and Disability Pensions (thousands of persons)

Year	Survivorship (1)	Disability (2)	Total (3)	$\{[(1) + (2)]/(3)\} \times 100$
1980	780	187	2,342	41.3
1985	951	302	2,743	45.7
1990	1,124	523	3,110	53.0
1991	1,141	525	3,204	52.0

Source: Schulthess and Demarco (1993).

noncontributory pensions (*pensiones graciables*), and special regimes for privileged sectors (characterized by higher benefits and less strict conditions for eligibility), which rose from 51 percent of total cases in 1975 to 56 percent in 1992 and from 39 percent of total expenditures to 49 percent.

Average Salary/Best Salary Proportion (w/w′)

In many countries, this variable is higher than one due to increases in labor productivity. In Argentina, however, annual productivity growth was negative

between 1974 and 1990. Moreover, pay-as-you-go benefits were based on the individual's highest remuneration, not on average wages during the active years.[3] As a result, w/w' was typically lower than one, thus affecting the equilibrium equation. In addition, benefits defined as a proportion of best last salaries (and not to average) favored a form of evasion consisting in underdeclaring salaries during an important part of active life.

Evasion (e)

Since contributions made in years other than the last ten had no effect on benefit levels, young workers were particularly averse to complying with legal contribution levels. These factors, combined with the extremely high payroll tax that finances social security programs, explain the observed tendency toward evasion that is realized in the form of total or partial omission of contributions.[4] According to available data presented in table 5.3, evasion exceeded 40 percent of potential collections, on average, during the period 1980–92.

Evasion is partially a consequence of underdeclaration of wages and also one of illegal employment. One can infer the magnitude of the last by examining the evolution of informal employment. There is clear evidence that informal employment became more important in Argentina in the period preceding the 1993 reform since the share of employment in the personal and social services sector increased from 20 to 33 percent between 1960 and 1990. The increase in the share of the labor force employed in low-productivity activities had a negative effect on the financial position of the system since evasion is more pervasive among self-employed workers.

In summary, the factors analyzed in this section explain why Argentina's social security system developed financial problems in the years leading up to the reform. The tendencies observed during the period demonstrate clearly that the necessary conditions for financial equilibrium were already absent in the 1980s.

The data contained in table 5.4 reflect the financial structure of the social security system. As illustrated, the system relied increasingly on external sources of financing and transferred its financial difficulties to the national budget. Table 5.5 illustrates the evolution of social security revenues and expenditures prior to the reform. As observed, even the addition of Treasury resources was insufficient to reverse the basic trend toward financial disequilibria.

3. For salaried workers, the former legislation defined *highest remuneration* as the highest three-year average remuneration received during the last ten-year period in the worker's active work life.

4. In addition to pensions, payroll taxes fund four other social insurance programs: health insurance for active workers, health insurance for pensioners, family allowances, and unemployment insurance. Total contributions under the former regime were 33 percent for employers and 16 percent for workers, raising the overall payroll tax to 49 percent of wages.

Table 5.3 **Evasion of the Argentine Social Security System (% of potential collections)**

Year	Employees			Self-Employed	Total
	Public Sector	Private Sector	Total		
1980	58.3	49.5	50.5	44.3	50.1
1985	44.7	37.8	38.5	63.0	39.7
1991	30.5	53.9	53.0	65.5	53.8
1992	35.0	46.9	46.6	74.2	49.1

Source: Durán (1993).

Table 5.4 **Financing the Social Security System (%)**

Years	Own Resources	Earmarked Taxes	National Treasury and Central Bank	Total
1975	79.6	.3	20.1	100
1980	85.1	10.6	4.3	100
1985	74.3	15.9	9.8	100
1990	65.8	21.8	12.4	100
1991	74.2	15.9	9.9	100

Source: Schulthess and Demarco (1993).

Table 5.5 **Revenues and Expenditures of the Social Security System (million pesos)**

	1975	1980	1985	1990	1991
Revenues	8,016	11,694	10,737	9,241	10,384
Own revenues	7,984	9,955	6,715	7,366	8,302
Other	32	1,739	4,022	1,875	2,082
Expenditures	10,130	11,674	9,940	9,963	9,668
Net (revenues minus expenditures)	−2,114	20	797	−722	716

Source: Schulthess and Demarco (1993).

5.1.2 Debt with Pensioners

Growing financial difficulties and natural limitations on the extent to which the deficits of the system could be financed with tax revenues prompted the government to lower the pensions paid to beneficiaries through an "adequate" manipulation of benefit adjustment indexes. The result was that the replacement rate promised by law (70–82 percent of the best wage) was systematically

violated. The subsequent legal challenges to the constitutionality of the practice ended in the system's "indebtedness crisis."

Between 1991 and 1992, the government consolidated all the system's debts with pensioners. The government canceled its debts with pensioners partially with cash and partially with bonds (BOCON). The total amount of debt recognized by the system through the consolidation process reached U.S.$12.5 billion. The government also used resources it received from the privatization of the national oil company, YPF, to cancel part of the bonds it had issued to cancel the system's debts.

Notwithstanding the special factors that contributed to restoring equilibrium to the system during the period 1991–93, the continuing inconsistency among the pay-as-you-go arrangements' basic parameters threatened to destabilize the system again. The traumatic consequences of managing such an enormous debt burden strengthened other arguments in favor of an integral reform of the social security system.

5.1.3 Inequities

Apart from its financial weaknesses, the pay-as-you-go system exhibited extreme inequities in the allocation of benefits. As mentioned earlier, special regimes proliferated and introduced marked differences in the criteria used to extend benefits to particular workers. For example, public-sector employees generally received more generous pensions than private-sector employees. The practice of applying different adjustment procedures to different pensions produced inequities and also led to settlements in favor of workers that brought lawsuits against the system. The settlements typically included provisions to apply adjustment procedures that were even more generous than those provided for in the general legislation. In some cases, maximum legal pensions were exceeded.

The general pension legislation itself was a source of inequity since an individual's benefit rate was completely divorced from the effort he or she made to contribute to the system. As a result, two similarly paid workers who contributed to the system during a different number of years could receive similar benefits in retirement.

The inequity effects of the pay-as-you-go system can be quantified by comparing the internal rate of return of the social security system of the general and special regimes. We estimated the corresponding IRR.[5] In spite of the additional contributions of 2 percent of the salary, special regimes yielded benefits that exceeded those of the general regime by 66 percent in the case of men (5.8

5. The IRR were calculated on the basis of estimated contributions during the active working life and projected benefits during retirement. Greater detail on the methodology used can be found in Schulthess (1991) and in Demarco and Posadas (1992).

percent per year vs. 3.5 percent in the general case) and by 30 percent in the case of women (8.0 vs. 6.1 percent).

5.1.4 Effect on Saving

The effects of private pensions on saving constitute an additional argument for the reform of social security. Owing to its low internal saving rate, Argentina's growth is crucially dependent on foreign savings, its economy being thus exposed to great instability as a consequence of fluctuations in variables affecting financial markets. Long-run reduction in social security's public deficit and the development of an institutional capital market would certainly contribute to self-sustainable economic growth.

The poor growth performance of Argentina in the 1980s was closely associated with a decline in gross domestic investment relative to GDP, from 25.3 percent in 1980 to 14 percent in 1990. During the same period, the national saving rate decreased from 23.3 to 18.6 percent. Although the investment rate picked up in 1991 and 1992, reaching 16.7 percent in 1992, this was entirely due to an increase in foreign saving since the saving rate decreased to 14.3 percent in 1992. Thus, net capital inflows financed not only an increase in investment but also an increase in consumption, raising doubts about the capacity of the economy to generate foreign exchange to maintain external solvency in the long run.

The debate over the current account deficit, which reached 2.4 percent of GDP in 1992, helped the government push the reform of the social security system by arguing that such a reform would have a positive effect on the national saving rate, thereby reducing dependency on foreign saving. To substantiate this argument, the government committed itself to maintaining in 1993, 1994, and 1995 the same consolidated primary budget surplus that had been attained in 1992 (i.e., 1.5 percent of GDP), in spite of the shift of funds that would materialize once the social security reform was implemented. The government was confident that this result was possible because of the reduction in payroll tax evasion that would follow the reform.

The three-year (1993–95) fiscal program was supported by the IMF under the Special Drawing Rights (SDRs) $4.0 billion Extended Fund Facility. However, owing to the complexity of the reform and the extensive discussions that followed, Congress did not approve the law until October 1993. Moreover, the reform was not implemented until July 1994.

5.2 The Rules of the New System

The system, called the integrated system of retirement and pensions (SIJP), is a mixed program consisting of a public pay-as-you-go institutional arrangement and an individual retirement account program known as the capitalization regime (CR). All workers eighteen years of age or older are required to partici-

pate in the system. Employees of the armed and security forces, state and local governments, and certain professionals with independent retirement systems are not obligated to participate.[6]

Individuals are free to choose whether they affiliate with the CR or the pay-as-you-go regime. The so-called private pension regime is not purely private since the government intervenes in some aspects of its administration.

The SIJP is financed through statutory contributions paid by employees and their employers. The employee contribution is 11 percent and the employer contribution 16 percent.[7] In the case of self-employed workers, a 27 percent contribution rate is applied to a schedule of reference incomes to calculate the individual's statutory contribution. The reference for these workers is not their actual income but rather an estimated income level.

The pay-as-you-go regime is financed with (*a*) the payroll tax paid by employers, (*b*) the contributions of employees who are affiliated with the system, and (*c*) earmarked taxes and funds provided by the public budget. The capitalization regime is funded by the individual's statutory contributions, any voluntary contributions made by the affiliates or by persons or firms to the affiliate's account based on a prior agreement with the affiliate, and indemnifications paid by life insurance companies in the event of disability or death.[8]

The public pay-as-you-go regime extends benefits to pensioners under the old system and also to affiliates of the two regimes under the new system. The benefits for the new system are (*a*) the basic universal pension (PBU), (*b*) the compensatory pension (PC), (*c*) additional pension for permanence (PAP), and (*d*) survivorship and disability pensions. The basic universal pension (PBU) is a redistributive (minimum) elderly pension; affiliates of any regime who have contributed to the system for thirty years or more are eligible at sixty-five years of age.[9] The compensatory pension (PC) is also a pension for those elderly individuals who meet the criteria for the PBU and who have also contributed to the old previsional system. The additional pension for permanence (PAP) is a pension for individuals who are eligible to receive a PBU and who chose to remain in the pay-as-you-go system after the new system was established.

Under the capitalization regime, affiliates may be eligible for a PBU and also for a PC, but the PAP is replaced by an ordinary retirement pension (JO) based on the accumulation of personal contributions made to individual accounts managed by private pension fund managers called AFJPs. After com-

6. State and local governments may participate in the SIJP if they choose to. To date, six of twenty-three state governments and the municipal government of Buenos Aires have subscribed to the system. Subscription by these governments to the SIJP involves the transference of the local pension regimes to the national regime and the obligatory participation by all personnel employed in these governments in the SIJP.

7. The employers' contribution was recently reduced in variable proportions according to different geographic regions.

8. Although not the only way, employers' voluntary contributions represent one way to channel bonuses or profit sharing to the employees.

9. Women can retire five years earlier than men.

missions have been deducted, the contributions to individuals' accounts are invested in assets and capitalized together with the profits that are obtained by investing the funds. The individual retirement account can be increased through voluntary contributions.

Affiliates with the capitalization regime may begin to draw on their assets at the age of sixty-five (men) or sixty (women). Individuals may choose to purchase annuities with their accounts or to receive programmed periodic payments ("programmed withdrawals") until the account is exhausted. In the event of disability or death, the AFJP must draw on a collective life and disability insurance policy to add to the capital accumulated in the individual's retirement account until there are sufficient funds to generate a defined-benefit pension.

5.2.1 Pension Fund Managers (AFJP)

The AFJPs are private or public companies created for the exclusive purpose of investing affiliates' contributions to their individual retirement accounts and administering payments to affiliates who choose to draw down their accounts through scheduled withdrawals in retirement. Current legislation sets minimum requirements for the volume of capital and minimum reserve requirements that must be held.

The AFJP is the primary institution with which current workers affiliate. The AFJP remains the primary institution during the worker's retirement years if the individual retirement account is drawn down through programmed withdrawals. The AFJP is responsible for investing its affiliates' retirement funds, for guaranteeing the statutory minimum return on these investments, and for providing supplementary capital when necessary for affiliates who are disabled or die before retirement. Individuals cannot be affiliated with more than one AFJP, but they may change AFJPs up to two times per year after making four consecutive monthly contributions to a single AFJP.

5.2.2 Pension Funds

The pension fund is composed of the affiliates' statutory and voluntary contributions plus preconvened deposits, less commissions, plus profits earned by investing the funds. The fund is the property of the affiliates and is legally separated from the capital constituted by the AFJP. The legal separation is necessary to isolate the AFJP's financial position from the pension fund and to protect the fund if the AFJP goes into bankruptcy. Each AFJP manages just one pension fund, which consists of investing the funds accumulated through individual contributions and capital contributed by life insurance companies.

The fund may be invested in a number of alternative financial instruments, such as government bonds, corporate bonds, time deposits, corporate stocks, shares in mutual funds, and mortgage-backed securities. There are legal limits on the percentage of the fund's total resources that may be invested in any one kind of instrument or in any single issuer. The supervisory body may also issue regulations to lower percentages below those set in the law. Table 5.6 illustrates

Table 5.6 Pension Fund Investment Rules

Assets	Asset Ceiling (% of Portfolio)
Securities issued by the national government	50
Securities issued by provincial and local governments	15
Long-term securities issued by domestic private corporations	28
Short-term securities issued by domestic private corporations	14
Certificates of deposit in local banks	28
Domestic corporate shares	35
Shares of recently privatized domestic public enterprises	35
Domestic mutual investment funds	14
Foreign corporate securities	10
Foreign government securities	7

the structure of investments permitted together with the accompanying regulations.

The profitability of a particular fund is measured as the percentage change in the value of one share between two consecutive periods. Returns are not guaranteed in absolute terms, but each fund manager is required to produce a minimum investment return equivalent to 70 percent of the system's average return or 2 percentage points lower than the system's average, whichever is lower. Each AFJP must guarantee that affiliates earn at least the minimum return by using funds, when necessary, from (*a*) the special fluctuation fund, (*b*) minimum reserves required by law to be held by the AFJPs, and (*c*) the AFJP's own capital.

The special fluctuation fund is constituted by setting aside all profits that exceed by 30 percent the system-wide average return or 2 percentage points higher than the system average whenever the system average is positive, whichever is greater. The minimum reserve requirement represents 2 percent of the fund's assets and cannot be less than 3 million pesos (equivalent to U.S.$3 million).

5.2.3 Benefits

The SIJP covers contingencies for retirement, disability, and death. Retirement benefits vary depending on whether the worker has participated in the pay-as-you-go regime or in the capitalization regime. In either case, the total retirement pension has three components, two of which are common to both regimes and administered by the government.

As mentioned previously, affiliates of the pay-as-you-go regime are eligible to receive the PBU, the PC, and the PAP. The PBU is a uniform and universal retirement benefit, approximately equivalent to 20 percent of the average salary economy-wide. It is not linked to individual wages.

For a transition period, the government will pay the PC to workers affiliated

with either regime when they demonstrate that they made contributions to the former pension system. In order to qualify for the PC, the worker must first qualify for the PBU. The PC is calculated as a percentage of the average income received by the worker during the last ten years of active employment. The percentage is equivalent to 1.5 percent for each year that the worker contributed to the former pension system.

The PAP is a benefit that the government extends to all workers who choose to be affiliated with the pay-as-you-go regime after the social security reform. The requirements to receive the PAP are the same as those needed to receive the PBU. The PAP is calculated as a percentage of the average income the worker received during the last ten years of active employment. The percentage is equal to 0.85 percent for each year that the worker contributes to the pay-as-you-go regime under the new system.

Affiliates of the private pension regime are eligible to receive the PBU, the PC, and the ordinary retirement pension (JO). Affiliates who have reached sixty-five years of age in the case of men or sixty years of age in the case of women may receive a JO, which is related to the amount they have available in their individual retirement accounts. The total amount available may be used to purchase an annuity, or the total may be depleted gradually through a program of scheduled withdrawals. Figure 5.2 illustrates the relation between the various components of retirement benefits.

The PC was extended to smooth the transition between the former and the current retirement system while recognizing the contributions made under the former system. Once it disappears, retirement benefits will be consolidated into the PBU, which is the redistributive component of the system, and the JO. The PAP should also disappear over time since its implicit rate of return is relatively low.

The dependents of a worker who dies during his or her productive years are entitled to receive a survivorship pension, which is equivalent to a percentage of the worker's average income received in the five years prior to death. Depen-

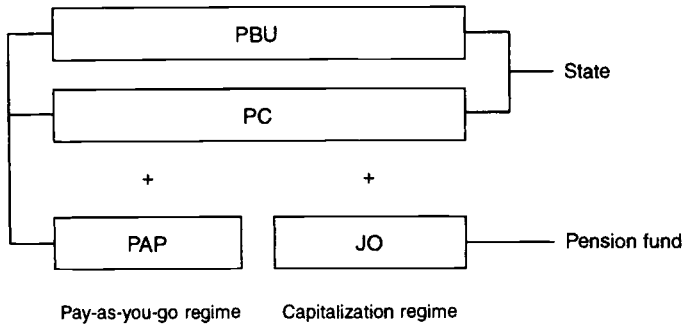

Fig. 5.2 Retirement pensions

dents include the worker's wife, husband, or partner, incapacitated children, or children who are minors.

SIJP benefits are also extended to workers who become completely disabled at some time during their active working lives. The technical definition of *complete incapacitation* is 66 percent or greater. The disability benefit is equivalent to 70 percent of the average income earned during the five years prior to being declared incapacitated.

During the two years' transition period until the definitive disability is declared, the AFJP must pay the monthly disability benefit with funds provided by a life insurance company. Once the disability becomes definitive, the life insurance company must supply complementary funds to the individual retirement account until it is possible to purchase an annuity that generates the defined-benefit pension.

5.2.4 Institutional Organization of the SIJP

One significant difference between the new and the former social security system is the number of institutions involved in their administration. Under the former system, the government had a complete monopoly on the collection of funds, on the allocation and administration of benefits, and on the regulation of a single social security system. Currently, different institutions are responsible for different functions.

The Dirección General Impositiva (DGI), tax collection agency, is responsible for collecting contributions to the pay-as-you-go as well as to the capitalization regime. Once the funds are collected, the DGI transfers them to the appropriate AFJP and to the government's social security administration agency, the Administración Nacional de la Seguridad Social (ANSES). Employers' contributions are also collected by the DGI, and the funds go to ANSES, independent of the worker's affiliation. ANSES is a decentralized agency operating under the authority of the Social Security Department. It is responsible for administering the benefits of individuals affiliated with the pay-as-you-go system. ANSES also administers other benefits extended by the social security system, such as unemployment payments, welfare pensions, and family allowances.

As mentioned previously, the new system is a mixed one, so, even in the case of workers who have chosen to affiliate with the capitalization regime, ANSES is responsible for the administration of their PBU and PC. Finally, ANSES shares with the private pension funds the cost of disability or death insurance for workers who are affiliated with the capitalization regime and who were at least thirty years of age when the new system was adopted.

By contrast, the capitalization regime is managed by a number of public and private institutions. To start, the AFJPs are responsible for investing individuals' contributions to the system. The Superintendency of the AFJP is the regulatory body authorized to supervise the activities of the AFJP. The superintendency is a decentralized agency that operates under the authority of the

Ministry of Labor and Social Security. It is responsible for the authorization of AFJPs, the supervision of their activities, the imposition of legal sanctions, and the liquidation of an AFJP when necessary. The superintendency is also authorized to issue resolutions in areas that affect the functioning of the system, and it monitors the performance of the individual AFJP and the system by controlling for the quality and accuracy of indicators of contributions, investments, profitability, required reserves, and fluctuation funds, to name a few.

There are other institutions that are not specifically part of the private pension regime but are necessary for the development of the capital market, which is itself a necessary element of the regime. A couple of examples are the risk-rating agencies and such regulatory bodies as the National Securities Commission. Insurance companies that offer life and retirement insurance are becoming very active as a consequence of the new regime, and they will grow in the future. Figure 5.3 summarizes the various institutions involved in the public pay-as-you-go regime as well as their specific functions. Figure 5.4 summarizes the institutional structure of the private pension regime.

5.3 Evolution of the New Pension System

The new pension system was established in July 1994 and has been functioning for three years. It would be difficult to undertake a complete evaluation of the system after such a short period. In the following sections, we focus on the recent evolution of some of its components.

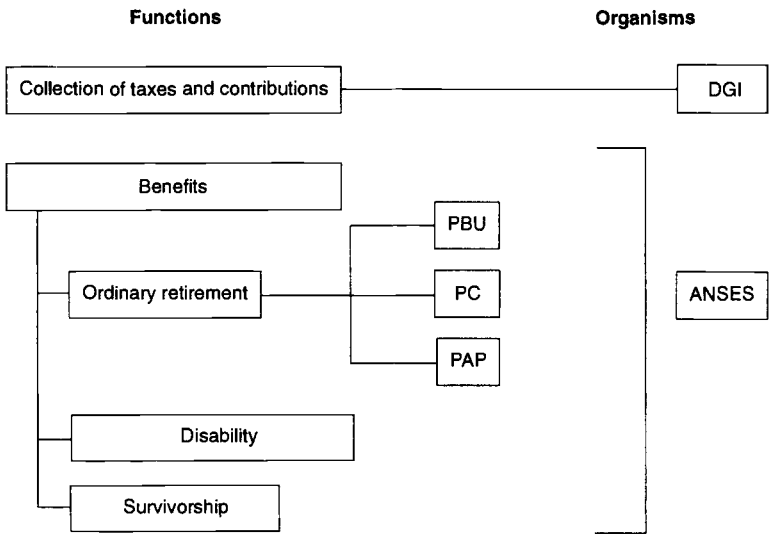

Fig. 5.3 Institutional structure of the pay-as-you-go regime

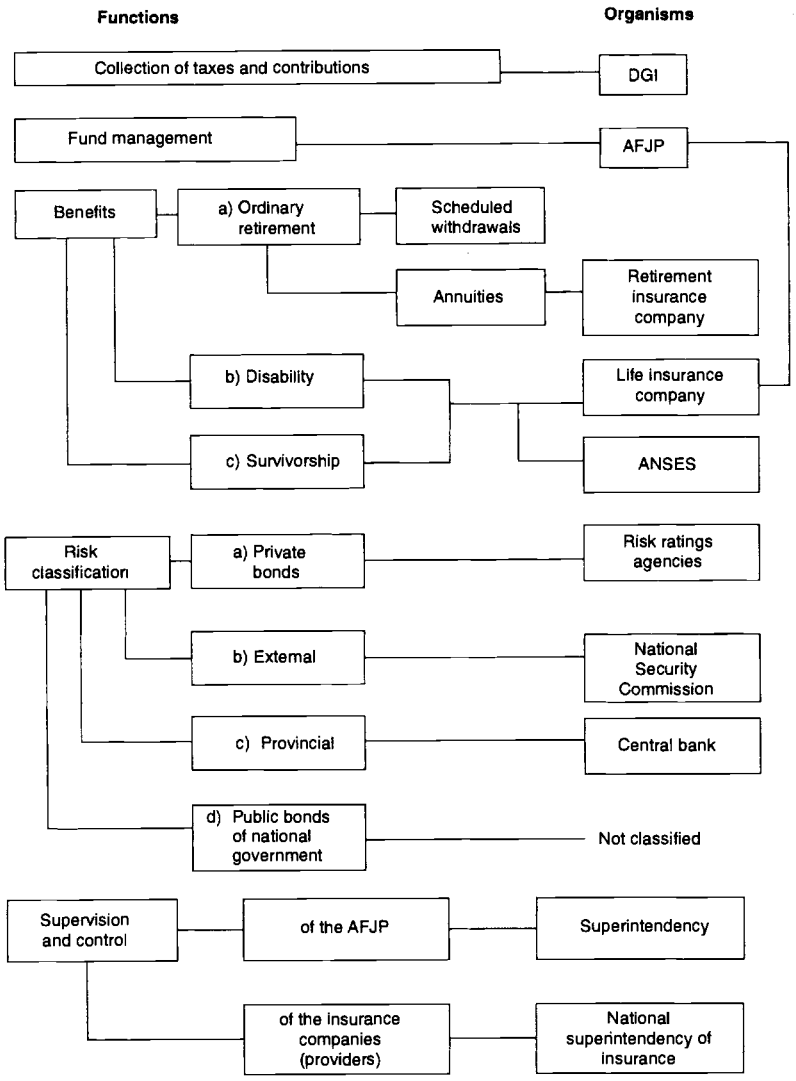

Fig. 5.4 Institutional structure of the capitalization regime

5.3.1 Affiliation

Table 5.7 provides information on the number of workers who chose to affiliate with the capitalization regime and with the pay-as-you-go regime. As illustrated, between August 1994 and June 1997, there has been continuous growth in the number of affiliations and in the share of the private pension affiliations in total affiliations.

Table 5.7 **Affiliates of the Capitalization and Pay-as-You-Go Regimes**

	Affiliates (thousands)			Affiliates (%)		
Date as of	Pay as You Go	Capitalization	Total SIJP	Pay as You Go	Capitalization	Total
September 1994	2,674	3,034	5,708	46.9	53.1	100.0
December 1994	2,901	3,679	6,580	44.1	55.9	100.0
June 1995	2,840	4,137	6,977	40.7	59.3	100.0
December 1995	2,709	4,921	7,630	35.5	64.5	100.0
June 1996	2,598	5,476	8,074	32.2	67.8	100.0
December 1996	2,544	5,633	8,177	31.1	68.9	100.0
June 1997	2,396	5,997	8,393	28.6	71.4	100.0

Source: Superintendencia de AFJP, *Memoria trimestral* (1994–97).
Note: "Capitalization" includes the National Fund of Employment and the undecided.

The growth trend is weakened if the rate of effective contributors to affiliates is analyzed during the same period. This variable tends to decline for both regimes during the period, and the decline is particularly pronounced in the case of the private pension regime. This phenomenon may be explained by the increase in unemployment observed during the period, the effect of the 1995 recession on delaying contributions to the system, and the problem of irregular affiliations. Both unemployment and irregular forms of affiliation tend to affect the capitalization regime more markedly than the pay-as-you-go regime since affiliates in the capitalization regime are on average younger.

Participation in the capitalization regime has been more important among formally employed workers than among the self employed, and this trend has increased through time. Even though the new legislation requires the self-employed to participate, the AFJPs have been less aggressive in affiliating them since their contributions to the system are generally low and there is a greater tendency among the self-employed to evade contributions.

Another interesting characteristic to consider is the composition of affiliates on the basis of their age and sex. There is a clear preference for the capitalization regime among young men, which is illustrated in figure 5.5.

The concentration of young male affiliates to the capitalization regime is explained by the greater benefits it offers this segment of the labor force. For younger workers, more time available to contribute to the system means that there will be greater expected benefit levels in retirement. Moreover, men, with lower life expectancy, have greater expected benefits for a given amount of capital than do women.

5.3.2 Pension Fund Managers (AFJPs)

Although eighteen AFJPs are actually operating, just four of them represent more than 60 percent of total affiliates in the capitalization regime, with collections amounting to 63 percent of the total in June 1997 (fig. 5.6).

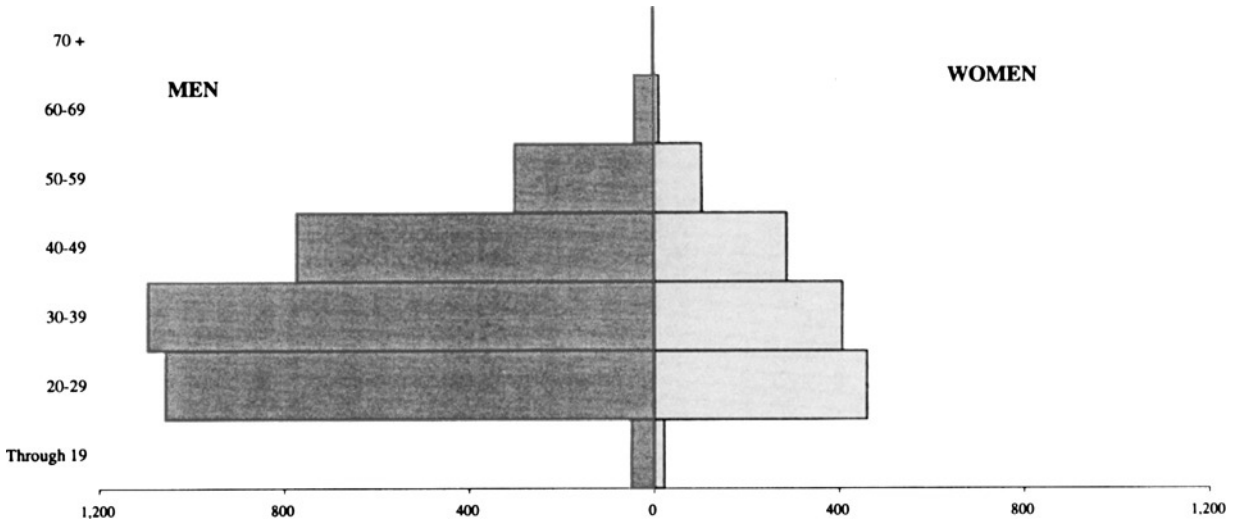

Fig. 5.5 Pyramid of affiliate population
Source: Superintendencia de AFJP, *Memoria trimestral* (1997).

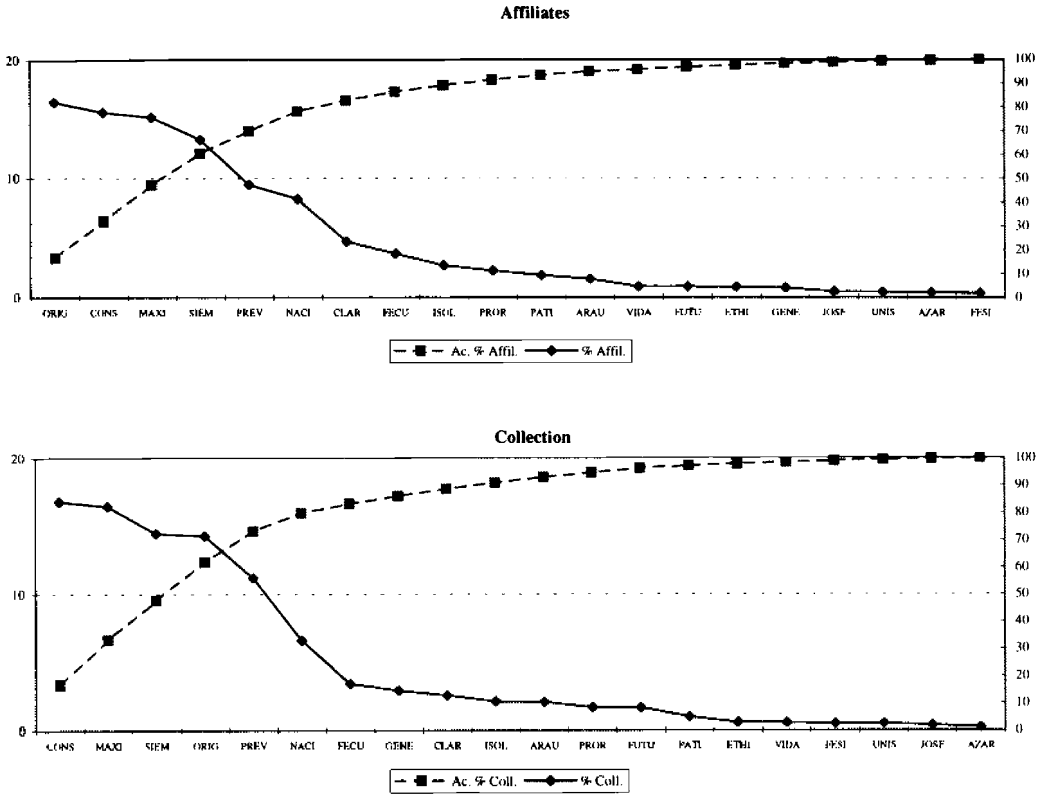

Fig. 5.6 Affiliates and contributions collection (June 1997)
Source: Superintendencia de AFJP, *Memoria trimestral* (1997).

Another important characteristic of the market for AFJPs is the composition of shareholder capital. Table 5.8 and figure 5.7 illustrate the composition of AFJP shareholder capital, dividing shareholders into banks, insurance companies, unions, nonfinancial companies, and others. As illustrated, banks and insurance companies represent almost 90 percent of total capital invested in the AFJPs. The union associations, which are eligible to form their own AFJP directly, have invested only 5.2 percent of the total amount invested in the AFJPs. Nonfinancial institutions have invested just 3.2 percent of the total.

5.3.3 Pension Funds' Investments and Profitability

Since their creation, the private pension funds have been growing by more than 200 million pesos per month on average. By the end of June 1997, the total value of the retirement and pension funds represented more than 7.3 billion pesos.

The notable growth in the monthly fund totals is the result of the growth in the number of affiliates, which was discussed previously, and of the high rate of return realized on investments during the period analyzed. As illustrated in table 5.9 and figure 5.8, the funds accrued very favorable real returns on their investments throughout 1995. In fact, the extremely high annual returns recorded at the end of 1995 and 1996 are explained by the comparison with low asset prices quoted after the 1994 Mexican crisis. Nonetheless, even the lowest rates earned in the months preceding the crisis were very high.

Such high rates of return on fund assets are a consequence of the structure of fund portfolios. This information is illustrated in table 5.10. A striking feature that emerges from the data is that changes in the structure of the portfolios had a very limited effect on returns. During the first two years of the period analyzed, investments were concentrated in fixed-income instruments such as government bonds and time deposits, while investments in variable-income instruments such as stocks were well below the legal limits permitted. Since

Table 5.8 **Capital Structure of the AFJP (June 1997)**

	Millions of Pesos	%
Banks	5,857.4	79.8
Insurance companies	715.9	9.7
Labor associations	380.6	5.2
Nonfinancial companies	229.5	3.1
Foreign pension funds	.0	. . .
Other	161.1	2.2
Total	7,344.6	100.0

Source: Superintendencia de AFJP, *Memoria trimestral* (1997).

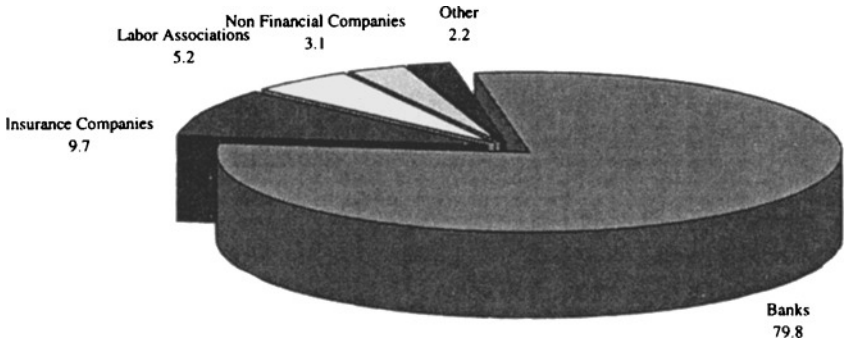

Fig. 5.7 Capital structure of the AFJP (%)
Source: Superintendencia de AFJP, *Memoria trimestral* (1997).

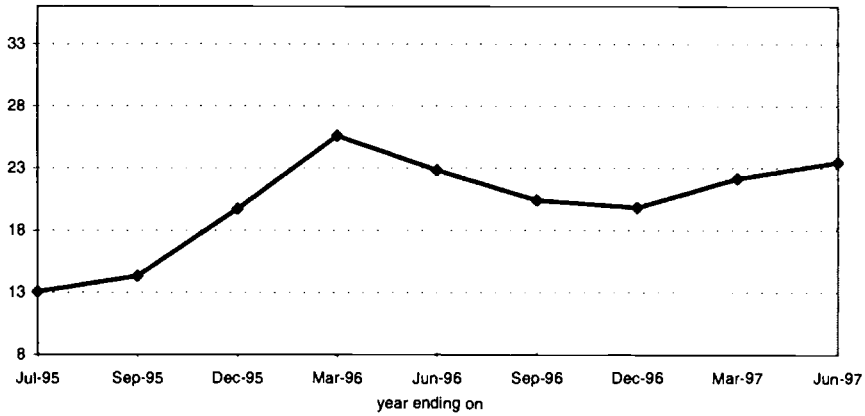

Fig. 5.8 Average system return
Source: Superintendencia de AFJP, *Memoria trimestral* (1994–97).

Table 5.9 Average System Return (%)

12-Month Period Ending	Average Annual Return
July 1995	13.1
September 1995	14.3
December 1995	19.7
March 1996	25.6
June 1996	22.8
September 1996	20.4
December 1996	19.8
March 1997	22.1
June 1997	23.5

Source: Superintendencia de AFJP, *Memoria trimestral* (1994–97).

Table 5.10 **Percentage Distribution of Investment Portfolio by Type of Instrument**

Instrument	Dec. 1994	June 1995	Dec. 1995	June 1996	Dec. 1996	June 1997
Cash reserves	6.3	2.3	1.7	2.2	1.8	1.4
Bonds	49.8	51.5	52.7	51.8	52.7	49.3
Time deposits	27.6	27.1	24.8	17.6	14.2	16.4
Stocks	1.5	2.0	5.9	13.5	18.7	21.8
Corporate bonds	5.8	6.8	8.7	10.7	7.8	4.8
Mutual funds	5.0	4.2	1.7	1.5	2.3	4.1
Foreign bonds	.1	2.8	.7	.5	.2	.4
Other	3.8	3.4	3.9	2.4	2.3	1.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Superintendencia de AFJP, *Memoria trimestral* (1994–97).

June 1996, however, an important substitution took place from time deposits to stocks (fig. 5.9).

5.3.4 Commissions

The commissions that the fund managers charge their affiliates are determined freely. They include a charge for the collective life and disability insurance policy that each fund manager must maintain to confront the eventual contingencies discussed in previous sections.

The level of commissions charged by various AFJPs is one indicator of their efficiency. If we observe the evolution of the system-wide average commission, separating out the portion of the fee charged for the life insurance premium and the administration cost, the most significant observation is the sharp reduction in the average cost of collective life and disability insurance. With the improvement in information on mortality rates, which were lower than expected, insurance companies and the AFJPs were able to adjust the cost.

The significant reduction in the insurance premium (from an average of 2.2 percent of wages in July 1994 to 1.0 percent in June 1997) was not passed on to affiliates in the form of lower overall commissions. To the contrary, average commissions remained at a constant level of 3.3 percent of salaries between July 1994 and June 1997.

This means that a significant increase in the part of the commission was used to finance the administration of the fund managers. It may be the case that the low mortality rates produced a source of financing to cover the high start-up costs of the AFJPs' activities, which in many cases resulted from an overestimation of the size of the market. The mergers between companies that are taking place and the more austere commercial policies being adopted by the fund managers will be key to determining whether commissions will decline (Rofman 1996).

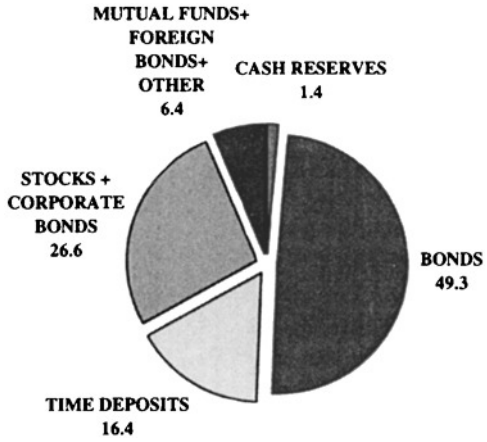

Fig. 5.9 Percentage distribution of investment portfolio by type of instrument (as of 30 June 1997)
Source: Superintendencia de AFJP, *Boletín mensual* (1997).

5.3.5 Benefits

It is difficult to evaluate the administration of benefits under the new system since its number is still quite low. Since most affiliates under the new private regime consist of young workers, most of the benefits that have been extended correspond to disability or survivorship pensions.

The only remarkable fact in this regard is the important decrease in the ratio of disability pensions to total pensions as compared with the levels before the reform. This is important in explaining the low level of life and disability insurance.

5.3.6 Summary

It is still difficult to evaluate the results of the new previsional system adopted by Argentina in 1993. The indicators analyzed in this section show, however, that Argentine society is increasingly accepting this alternative organization of social security. An important growth in the number of affiliations confirms this. AFJPs are proving that they can administer pension funds efficiently, and insurance costs are surprisingly low. However, commissions still remain high.

One can expect commissions to be reduced as the number of affiliates (or the size of the fund administered) grows, increasing the return on investment. Mergers will certainly help, as will the government's efforts to reduce evasion.

In spite of the insufficiency of evidence, one can conclude that many of the chronic problems with the old previsional system are apparently disappearing.

Time will confirm whether the new system provides better service to affiliates and beneficiaries.

In the next section, we focus on some macroeconomic effects of pension funds. The most important for the Argentine economy are the effects on the public budget and on the national saving rate.

5.4 The Effect of the New System on Saving

Macroeconomic effects of social security reforms have become part of the discussion as relevant aspects to consider when introducing capitalization regimes (Uthoff 1995). One of the most discussed questions in this respect is the effect of pension funds on national saving. This has been an important concern in Argentina, a country characterized by a structurally low national saving rate and a strong macroeconomic exposure to fluctuations in international financial markets. It is our purpose, not to test theoretical hypotheses, but to examine probable empirical results from projections for the economy as a whole.

The initial effect of social security reform is to increase the government's deficit since public social security expenditures will be reduced much more slowly than the payroll taxes collected by the state. The effect of the reform on saving will thus depend on the relative size of the government's deficit vis-à-vis the annual growth of the pension funds. We examine separately projections of the public deficit and of pension funds for the period 1995–2020 before concluding with a consideration of the expected net effect on private saving.

5.4.1 Public Social Security Deficit

When a pay-as-you-go system is replaced by a capitalization regime, there will exist a period of time in which the new system coexists with benefits defined under the former regime. As a result, the government will have to finance expenditures generated under the former regime with a smaller amount of resources, the result of the partial or total transfer of workers' contributions to the capitalization regime.

The *transition period* is defined as the period of time it takes until the former regime disappears. During the transition period, the financial pressures generated by the shift in resources away from the pay-as-you-go regime will become even more pronounced. Even though the transition is temporary, it is important to have an estimate of the size and probable evolution of the deficit and to adopt necessary corrective measures (Posadas 1994).

It is necessary to analyze the evolution of the transition period correctly in order to quantify the effect of the reform on national savings. As we have stated, the reduction in government savings that takes place during the transition could completely offset the increase in private-sector savings channeled through pension funds. Prior to continuing the analysis of the transition period,

it is helpful to review the expenditures and revenues of the state-run social security system before the reform and the projections for the transition period and for the long run (after the former system ceases to exist).

a) Prior to the reform, the government was exclusively responsible for all pension benefits extended to public- and private-sector employees as well as self-employed workers. The government financed these expenditures with payroll taxes: a 10 percent personal contribution and a 16 percent employer contribution. Since these revenues were insufficient to fund the system's obligations, the government began to use part of the tax revenues collected from income taxes, the value-added tax, the asset tax, etc.

b) Once the new regime becomes fully operational (i.e., in the long run), the government will be responsible only for the payment of the PBUs. To finance these expenditures, the government will draw on the employers' contribution, which has been reduced in variable percentages depending on the employer's geographic location.[10] Given that the government will pay only the minimum pensions, the public system will generate a surplus if the current level of taxes used to finance the system is applied identically in the future. This would allow the government to reduce payroll taxes even further in the future, thereby reducing the distortion that this tax has produced in labor markets.

c) During the transition, the government must continue to pay the benefits generated under the former system. In addition, the government must contribute to the financing of benefits that the capitalization regime extends to workers who would have received benefits before the reform. Finally, the government will be responsible for the pensions of those affiliates who choose to remain in the state-run system.[11] To finance the transition period, the government can draw on employer payroll taxes and personal contributions of workers who opt to remain in the pay-as-you-go system.

Table 5.11 summarizes the expenditures and revenues of the state-run system. Since, in Argentina, workers are free to choose between the pay-as-you-go and the capitalization regimes, the projections on financing the state social security system are based on alternative assumptions regarding individual preferences for the alternative systems.

Table 5.12 contains the financing projections for the state social security system realized by Schulthess and Demarco (1996).

10. The government reduced the employer contribution in October 1995 in response to the growth in unemployment observed since 1993. The minimum reduction of 30 percent (equivalent to a rate of 11.2 percent of wages) is applied in the most-developed regions of the country, where the unemployment problem is less severe. The maximum reduction of 80 percent (equivalent to a rate of 3.2 percent) is applied in the least-developed regions.

11. As we have already argued, even though workers will be free to choose between regimes in the future, it is expected that new workers will on the whole find the capitalization regime more attractive since it offers comparatively higher benefits than the pay-as-you-go regime for active affiliation throughout total years of employment.

Table 5.11 **Benefits and Revenues of the Public Pension Program**

	Benefits	Revenues
Before the reform	Retirement and pensions of public- and private-sector employees and self-employed workers	Personal contributions: 10% of wages Employer contributions: 16% of wages Other tax revenues (part of value-added and income taxes, wealth, etc.)
During the transition	Benefits already extended under the former system Part of the benefits under capitalization regime for workers who contributed to the former system Benefits to affiliates of the pay-as-you-go regime PBU	Personal contributions of workers who opt for the pay-as-you-go regime (11% of wages) Employers contribution (16% of wages reduced in most regions of the country) Other tax revenues
Under one unique regime	PBU	Employer contribution Other earmarked revenues

The employer's contribution reflects the reduction that was implemented during 1995 when the amount was 16 percent.[12] These projections allow us to draw the following conclusions. First, there is a significant disequilibrium in the years immediately following the reform that tends to correct itself over time. In the long term, the deficit becomes a surplus since, under the new system, the government is responsible only for the minimum pensions.

It is important to point out that a high proportion of the difference is the direct result of reduction in employer contributions from 16 to 12 percent, not the consequence of the pension reform per se. This reduction is part of a plan to lower labor costs by reducing the proportion of public social security financed through payroll taxes. It obviously requires an important reduction in public expenditure and a redistribution of public resources from other uses, a process that is now taking place but that is still incomplete.

In essence, the only truly significant issue that emerges from projections of a considerable deficit in the social security system is how it is going to be financed. Since, in the long term, the deficit becomes a surplus, there is the possibility of financing it through issuing debt. In other words, since the long-term solvency of the system does not deteriorate (to the contrary), it is possible to think of an intergenerational transfer that offsets a large part of the reform's effect on saving.

12. This assumes that, at some point during the transition, contribution rates will be increased to yield an average of 12 percent, which is higher than current levels.

Table 5.12 **Projections of Revenues, Expenditures, and the Deficit of the Public Pension Regimen (millions of pesos)**

Year	Total Revenues	Total Expenditure	Deficit	Accumulated
1995	10,489	14,239	3,750	3,750
1996	10,677	14,436	3,760	7,510
1997	10,918	14,621	3,703	11,213
1998	11,176	14,725	3,550	14,762
1999	11,406	14,799	3,392	18,155
2000	11,586	14,865	3,279	21,434
2001	11,772	14,827	3,055	24,488
2002	11,962	14,825	2,863	27,351
2003	12,155	14,775	2,620	29,971
2004	12,350	14,751	2,401	32,371
2005	12,546	14,661	2,115	34,486
2006	12,740	14,625	1,885	36,371
2007	12,931	14,547	1,616	37,987
2008	13,118	14,489	1,372	39,359
2009	13,296	14,391	1,096	40,454
2010	13,463	14,334	872	41,326
2011	13,617	14,233	616	41,942
2012	13,761	14,175	414	42,356
2013	13,895	14,077	182	42,539
2014	14,017	13,981	−36	42,503
2015	14,126	13,879	−247	42,256
2016	14,221	13,777	−444	41,812
2017	14,304	13,691	−613	41,199
2018	14,377	13,574	−804	40,395
2019	14,439	13,468	−971	39,424
2020	14.490	13,373	−1,117	38,308

Source: Schulthess and Demarco (1996).

Alternatively, the government could reduce public expenditure, or increase tax collections (contributions, transfers, and others), by fighting tax evasion or increasing tax rates. The possibility of achieving an increase in total national savings (public and private) with this approach is considerably greater. In view of the difficulties observed in reducing evasion, an important redistribution of public resources to public social security from other uses results in the crucial issue of financing transition without (or with a low level of) public indebtedness.

These alternative instruments could be complemented by some redefinition (reduction) in the level of certain public pensions. In fact, some critics oppose the high level of basic redistributive pensions (such as the PBU). Since public pensions do not adjust automatically, the system does contemplate reductions in real terms without the need of a legal amendment if Congress authorizes adjustments at a rate lower than the inflation rate.

5.4.2 Pension Funds' Projection and the Net Effect on Saving

Table 5.13 contains projections of retirement savings under assumptions consistent with those used for the projections presented in table 5.12 above and assuming that the rate of return on the capitalization fund is 4 percent. By comparing the two tables, it is possible to conclude that, during the years immediately following the reform (from 1995 to 1998), private savings channeled through the pension funds are less than the dissaving by the public sector that is necessary to finance the pay-as-you-go system during the transition.

We can conclude from the information presented in table 5.13 that, once the negative effect of the public deficit has passed (from 1998 on), the social security system will increasingly add to national saving. Projections for 2020 reflect an increase of the savings rate induced by social security reform of about 2.5 percent of GDP (almost 15 percent of the saving rate previous to social

Table 5.13 **Estimate of Total Effect of Pension Funds on Saving**

	Millions of Pesos			% of GDP		
Year	Public	Private	Total	Public	Private	Total
1995	−3,750	1,973	−1,777	−1.33	.70	−.63
1996	−3,760	2,290	−1,470	−1.33	.81	−.52
1997	−3,703	2,887	−816	−1.26	.98	−.28
1998	−3,550	3,376	−174	−1.16	1.10	−.06
1999	−3,392	3,918	526	−1.07	1.23	.17
2000	−3,279	4,392	1,113	−.99	1.33	.34
2001	−3,055	5,017	1,962	−.89	1.46	.57
2002	−2,863	5,398	2,535	−.80	1.51	.71
2003	−2,620	6,037	3,417	−.70	1.62	.92
2004	−2,402	6,299	3,897	−.62	1.63	1.01
2005	−2,115	6,908	4,793	−.53	1.72	1.19
2006	−1,885	7,548	5,663	−.45	1.80	1.35
2007	−1,616	8,213	6,597	−.37	1.89	1.51
2008	−1,372	8,895	7,523	−.30	1.96	1.66
2009	−1,096	9,605	8,509	−.23	2.04	1.81
2010	−872	10,307	9,435	−.18	2.10	1.93
2011	−616	10,980	10,364	−.12	2.15	2.03
2012	−414	11,677	11,263	−.08	2.20	2.12
2013	−182	12,396	12,214	−.03	2.25	2.22
2014	36	13,062	13,098	.01	2.28	2.28
2015	247	13,740	13,987	.04	2.30	2.35
2016	444	14,432	14,876	.07	2.33	2.40
2017	613	15,137	15,750	.10	2.35	2.44
2018	804	15,853	16,657	.12	2.36	2.48
2019	971	16,565	17,536	.14	2.37	2.51
2020	1,117	17,266	18,383	.15	2.38	2.53

Sources: Schulthess and Demarco (1996) and Rofman and Stirparo (1996).

security reform). This proportion would be greater if we introduce more optimistic assumptions about the evolution of earmarked taxes.[13]

Apart from the magnitude of the effect on saving, a qualitative effect on capital market development is expected as a result of the reform. Whereas the effect of private pension plans on the saving rate is a subject of discussion, there is practically no doubt regarding its importance in strengthening capital markets through the development of long-run investments and the introduction of institutional investors.

In summary, expected long-run effects on saving and the development of capital markets appear optimistic if the government can solve the financial problems of the transition. It is difficult to anticipate how the government will deal with the transitional period on the basis of its behavior in 1995 when the new pension system had been in effect for one full year. The year was exceptional to the extent that the increase in the global fiscal deficit substantially exceeded the loss in personal contributions to the pay-as-you-go system. It is important to keep in mind that the Argentine economy suffered a tremendous confidence shock at the beginning of the year as a result of the Mexican peso devaluation, which precipitated a 20 percent reduction in deposits. The external shock produced a sharp recession (GDP fell by 4.4 percent), which led to a sharp reduction in fiscal revenues. In the social security system, in spite of the increased affiliations that resulted from the reform, the lack of credit and the decline in the level of economic activity reduced the system's revenues significantly. At the same time, there was an alarming increase in the expenditures of the social security system during 1994, which demonstrated clearly that the problems inherent in the former system persisted even after the reform.

To offset these effects, the Argentine government implemented very important measures to demonstrate its commitment to increasing national saving through the social security reform. First, it proposed the Ley de Solidaridad Previsional, which was approved at the beginning of 1995. The law established maximum benefits and limits on the growth in the system's expenditures, eliminated definitively the practice of indexation, and established that any increase in benefits extended under the pay-as-you-go system would be decided by the national Congress, through the approval of the Annual Budget Law, on the basis of the system's available resources. This signified the guarantee of a true pay-as-you-go system. The government also implemented a far-reaching tax and pension moratorium, which resulted in nearly $5 billion in debts declared by contributors. The moratorium allowed affiliates of the SIJP and other contributors to regularize their pension situation after they had postponed contributions following the tequila effect (Schulthess 1994).

13. With an annual 4 percent growth rate in GDP, tax collection should increase by more than the proportion assumed in our projections in table 5.12. In addition, a redistribution of public resources is taking place at present between social security and non–social security public expenditure, and one could expect this tendency to continue.

The Argentine government anticipates that its operational deficit (without including privatization revenues) will be $2.5 billion. This figure is similar to the projected flows of contributions to the capitalization regime. Nonetheless, in view of the prevailing standby agreement with the IMF, the deficit must disappear in 1997. In order to comply with this target and maintain it in successive years, the pension reform will have a very positive effect on savings resulting from the government's commitment to refrain from using debt to finance the pension reform.

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Comment

Anita M. Schwarz

Had I been asked to comment on this paper a year ago, I would have concentrated on some of the technical flaws in the Argentine reform. None of these flaws are fatal, but they nonetheless exist and will need to be addressed at some time by the government. Over the last year, watching the reform unfold, I have become an admirer of the political strategy used in reforming the social security system in Argentina and am convinced that the political economy dimensions of the reform may be applicable to other countries as well. I devote the first part of my comments to the technical flaws and the last part to explaining my still favorable view of the reform.

Technical Flaws

There are three main technical problems with the newly reformed Argentine system. These include issues of long-run sustainability, the parallel operation of multiple systems, and, last but not least, evasion.

Long-Run Sustainability

In the long run, the employer contribution to the social security system, which is currently averaging around 12 percent of wage today, is meant to finance the basic universal pension to all individuals of retirement age who have contributed for thirty or more years. This basic pension is flat, currently set at 27.5 percent of the economy-wide average covered wage. In many respects, this system is quite similar to the British system, but recall that the British flat pension is currently only 15 percent and is expected to fall to 9 percent in the future, as a result of the decision to fix benefits in real terms.

The question is whether this level of basic pension can be sustained in the future. A simple back-of-the-envelope calculation, assuming two contributors per retiree in the future, suggests that 12 percent of wage can support a pension worth only 24 percent of wage, not 27.5 percent of wage, even if there are no administrative costs or disability payments to finance. If the fiscal projections shown in table 5.2 were extended for another fifteen to twenty years, they themselves would show the system once again running deficits. In fact, longer-run projections done by a group at the University of Buenos Aires do show deficits in the system beyond 2020, with the surpluses being generated in the medium term, peaking around 2013. This is quite different from the cases of Mexico or Chile.

In both Mexico and Chile, the government faces liabilities during the transition to a new pension system. Current pensioners and those with accrued rights to pensions under the old system have to be paid, while the contributions from

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current workers are invested in their own individual accounts. However, the life spans of those with accrued rights to the old system are finite. Subsequently, the only liabilities faced by the governments are contingent liabilities, arising from minimum pension guarantees, limited to those who are extremely poor or to those with extremely erratic work histories.

Argentina faces transition liabilities like these other countries, but it also has to finance this public flat pension. There is no question that this flat pension allows the system to provide more redistribution and more poverty alleviation than the Chilean and Mexican systems, although one could argue that the expenditures in Argentina are less targeted toward the poor. The critical question is whether this level of redistribution is optimal and affordable in the long run. In pension systems, there is always a trade-off between redistribution and providing individuals a reasonable return on their mandated savings. The more you redistribute, the lower the rate of return some individuals will receive relative to what the market would have provided. This low rate of return increases the incentive to evade.

Reducing the size of this public flat pension and thus the contribution necessary to finance it relative to the defined-contribution pillar would improve incentives to contribute, provide individuals with a better return on their overall contribution, and be more affordable, but still allow positive redistribution.

Parallel Systems

A second problem is the parallel operation of a new public pay-as-you-go, defined-benefit scheme that operates as an option to the fully funded, defined-contribution scheme and is financed by the employee contribution. The parallel operation of two schemes is especially troubling because currently individuals can go back and forth between the schemes. Eventually, on entry to the labor force individuals will choose which scheme is preferred, and, subsequently, they can opt for the fully funded scheme, but no one who opts for the fully funded scheme can go the other way.

From a fiscal standpoint, not only does the Argentine system continue to accrue liabilities in its flat, redistributive pillar, but it is also generating new liabilities in this pay-as-you-go, defined-benefit system. Pay-as-you-go systems are fiscally sustainable as long as the benefits are defined with regard to future declines in the number of contributors. This system is particularly vulnerable since, of the overall number of contributors under the age of thirty, more than 90 percent have chosen the private system. Since individuals cannot change back in the future, the contributor base will dwindle quite rapidly, leaving the government to cover the remaining liabilities.

The operation of this parallel system has effectively increased the costs of transition and increased the duration of the transition period in Argentina. Argentina not only has the normal problem of financing the transition away from a pay-as-you-go system toward a funded system but also has the additional problem of financing the transition from its new public pay-as-you-go second

pillar to a funded system. And the acquired rights prior to the reform were rewarded generously, making the transition in both cases quite costly.

Evasion

Evasion is probably the most pressing problem in the Argentine pension system and one that not only plagued the previous system but continues virtually unchanged in today's system. The extent of this evasion can be seen by comparing the demographic support ratio, the number of working age individuals divided by the number of elderly, with the beneficiary-contributor ratio in the system. While the demography suggests a support ratio of 5.86, the system shows a support ratio of only 1.55 contributors per retiree. There are either enormous numbers of unreported workers, enormous numbers of excess retirees, or some combination of the two. By contrast, in countries like the United States, the demographic ratio is virtually identical to the system support ratio. In fact, on a graph showing the relation between the two for a group of forty-two countries for which data are available, Argentina is a clear outlier (World Bank 1994, 146).

Moving from a public pay-as-you-go system to a funded private system should reduce evasion. Individuals in the funded private system cannot receive substantial benefits without contributing. The penalty for not contributing is a sizably reduced pension.

Although Argentina has adopted a funded private pillar, there has not yet been a change in evasion. This judgment is not entirely fair in that, six months after the reform, a severe recession began and the unemployment rate began to skyrocket, which reduced both contributions and contributors, making it difficult to measure changes in evasion. But I would argue that some of this lack of progress in combating evasion can also be attributed to the system design.

For starters, the overall payroll tax rate in Argentina is 49 percent. Including income taxes and value-added taxes, the tax burden is enormous. Under the reform, only 11 percentage points of that 49 percent tax go toward the funded system for the people opting for the private system. The remainder is in varying degrees a tax, particularly for higher-income people because of the heavy redistributive element involved. As a result, despite the social security reform, there is still a powerful incentive to evade, particularly since payroll taxes are collected together with income taxes. The government is aware of this problem and is trying to reduce payroll taxes, but, in the short run, cutting tax rates reduces the contribution revenue, exacerbating fiscal problems. The increased fiscal problems make the policy less credible in the long run. As a result, employers and employees are not responding to the tax cut, which is perceived as transitory.

Second, the benefit structure is such that the flat, first-tier pension is received for only thirty years of contributions, with no benefits at all for anything less than thirty years. Take the example of a woman who works from age twenty to age twenty-five, drops out of the labor force for fifteen years to raise children,

reenters at age forty, and retires at the statutory age of sixty-two. She will not complete thirty years of contributions, so, even if she contributes, she receives nothing in return. In most cases, a spouse's income may provide the family with eligibility for health benefits and family allowances. The only benefit she may receive for her 49 percent payroll tax is unemployment insurance. She could self-insure much cheaper than that.

Similarly, the individual who was in the informal sector when the reform began and had already reached the age of forty without formal contributions would never have the opportunity to complete thirty years of contributions and would thus find that most of the payroll tax would be exactly that, a tax. It is no wonder, then, that evasion has not dropped significantly. One way of dealing with this problem is to prorate the flat benefit on the basis of the number of years of contributions.

Finally, in Argentina, unlike in Chile, both employers and employees contribute to most benefit plans. Both have an incentive to collude by underreporting the number of employees, the number of hours worked by each employee, and the wages paid because such collusion results in lower taxes for both employer and employee. In Chile, by contrast, only the employees pay. The wages of contributors to the new system were increased to compensate for the former split payment, but the payment responsibility lies strictly with the employee today. Now, employers have no incentive to collude. In fact, given that employee wages are tax-reducing costs, employers have every incentive to report accurately, which makes it much easier for tax authorities to catch evading employees.

Lessons from the Argentine Reform

Despite these technical problems, the political economy of the Argentine reform holds lessons for other reforming countries. Take as an example the case of the new parallel system. The architects of the reform did not want a parallel system. They wanted a new system with a flat pillar and a private funded pillar. But, politically, it was not possible to force individuals, even new employees, into a private pension system. Insisting on this provision would have derailed the entire reform effort. However, now, only two years after the reform was initiated, almost 90 percent of new employees are choosing the private system. Within a year, it will be possible to pass a law mandating that all new employees join the private system, without causing political uproar. The compromise was costly, but it was a price that had to be paid in order to develop public confidence in private pensions and to change a mind-set accustomed to public pension rights.

In too many countries, public social security programs have become the third rail. Touch them, and you die. Incremental reform, such as what happened in Argentina, may be more feasible than a big-bang one-shot reform, particularly where the political obstacles to reform outweigh the technical obstacles. Sub-

sequent minor adjustments can now take place in an environment where public opinion is no longer hostile to private participation in pension provision. These minor adjustments will always be necessary as technical problems arise and circumstances change.

However, the first reform, the introduction of the private funded accounts in a substantive way, paves the way for all future reform. In this context, we should regard the Argentine reform as a second-best solution that serves as a conduit to the first-best solution rather than evaluating it strictly as a final solution in its own right.

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Discussion Summary

Jeffrey Liebman and Andrew Samwick

The discussion began by considering differences between the Argentine and the Chilean plans. It was noted that the minimum guarantees are quite different in the two countries. In Argentina, all workers who have contributed to the system for thirty years or more receive the basic universal pension (PBU), which is equal to about 20 percent of the average wage level in the economy. This basic benefit amount is not linked to the individual worker's earnings history and is not reduced if the workers are entitled to additional pensions. Thus, there is no distortion from phasing out the pension. However, since all retirees receive it, it is not very well targeted. The Chilean plan, in contrast, contains a guaranteed minimum that results in a 100 percent tax rate on savings in the relevant range. The participant suggested that some combination of the two approaches to the minimum guarantees was likely to be better than either of the simple schemes and that it would be helpful to see some simulations on this issue.

Another participant noted that, in Chile, there was no intention of including redistribution in the privatized retirement system. He said that, while figuring out how to achieve a more equal income distribution was a very important problem in Latin America, he doubts that transferring income through retirement programs is an efficient way to help the poor.

It was also noted that, while the administrative fees charged by the plans in Chile come from additional contributions above the mandatory savings, in Argentina they are subtracted from the mandatory contributions. The authors explained that having the administrative costs deducted from the mandatory payments makes it easier to observe whether the funds are transferred to the management firm. This observability reduces tax evasion.

The discussion turned to more general evasion issues, and one participant reported that a former cabinet minister in Argentina had said that evading taxes was Argentina's national sport. The participant questioned whether it made sense to have the DGI (Argentina's IRS) collect the funds for the retirement system since it has been shown to be incapable of collecting other tax revenue. In response, the author noted that it is hard to tell whether tax evasion has diminished in recent years. Argentina has had a reasonably good measure of evasion only since the new retirement system was put into place. Before that, it was impossible to determine what was in each individual's accounts. Moreover, unemployment has been very high recently, making comparisons with earlier periods difficult.

A participant questioned the wisdom of forbidding workers from moving back and forth between the old and the new systems. He said that economists generally prefer to influence people by altering the incentives they face rather than by mandating particular behavior. He recommended that Argentina should arrange the incentives to discourage workers from gaming the system by moving back and forth between the old and the new systems (as the United Kingdom recently has done), rather than forbidding switches.

Members of the conference expressed surprise at some of the numbers presented in the paper. One participant remarked that the rates of returns achieved by the plans were very high and wondered whether the rates of return were real or nominal. The author explained that the returns are real but that it is very difficult to measure the returns achieved by the plans (they are calculated as yield to maturity). In addition, interest rates have been very high in Argentina, in large part owing to the tequila effect (the Mexican crisis), and that fact partially explains the high rates of return. A second participant inquired whether it was really true that 42 percent of workers had retirement accounts but were not contributing to them. He also expressed surprise that few workers took advantage of the opportunity to make additional voluntary contributions to their accounts. The author confirmed the numbers and said that there were policies under consideration to encourage additional contributions by adding an insurance component to the plan. A third participant noted that the 49 percent payroll tax rate in Argentina is very high, especially for low-wage workers and workers with intermittent attachment to the labor force who would receive no marginal retirement benefits from their payments. The author explained that the payroll tax funds health insurance and family allowances in addition to retirement benefits, so all workers get something for their contributions. In addition, the high marginal tax rates are falling since the employer contribution rate is declining. Health reform might make it possible to reduce this tax rate further.