The Colombian pension system after the reform of 1994: An evaluation

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The Colombian pension reform of 1994 introduced a privately administered defined-contribution programme, which coexists with a reformed public defined-benefit programme. This paper gives an overview of the Colombian pension system and evaluates its performance using four criteria: (1) effectiveness, (2) efficiency, (3) equity, and (4) sustainability, finding evidence of severe shortcomings. Both effective coverage and benefit levels are low, costs in the private programme are high, and there is evidence that insured persons are not fully informed about the actual system. The system is inequitable and the uninsured population bears part of the financial burden. The public programme is financially not sustainable. A current reform proposal from the Colombian government addresses only part of the problem.

An ideal social security system should be universal and protect against poverty and income loss in old age, while operating at the lowest cost possible. It should be equitable and financially sustainable in the long term. Many Latin American countries have reformed their pension systems in order to solve their serious financial, administrative, and equity problems. Since 1981, ten Latin American countries conducted structural pension reforms. They include Peru and Colombia, which introduced a parallel sys-

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tem where a public and a private programme coexist (Mesa-Lago, 2001).[1]

This paper evaluates Colombia's pension system using four criteria: (1) effectiveness (coverage and benefit levels), (2) efficiency, (3) equity, and (4) sustainability. The fulfilment of these criteria, with the exception of adequate benefit levels, was explicitly named as constituting the goals of the reform. The economic and social conditions in Colombia, a middle-income developing country suffering from chronic corruption and a weak State, constrain its possibilities of approaching an ideal social security system. In addition, some of the goals face trade-offs with other goals, such as universal coverage and financial sustainability. Even with limited resources, however, an intelligent design can overcome some of the obstacles. The four criteria are, therefore, sensible under the current political and economic conditions.

We find that effectiveness as measured by effective coverage and benefit levels is low. Effective coverage is estimated below 23 per cent of the economically active population, and future benefit levels in the private programme are uncertain and, for low-income workers in both programmes, precarious. Efficiency in the private programme is low owing to high fees and uninformed choices of the affiliates. The system is inequitable because of the different treatment of the insured persons in different pension programmes and also within the private pension programme. The uninsured population bears part of the financial burden of the costly pension system. The public programme is financially unsustainable because of the high benefit levels and transition costs.

This paper is organized as follows: the next section describes the pension reform of 1994, including the reasons for reform. The third section evaluates the reform using the four above-mentioned criteria. The fourth section summarizes a recent proposal for a new reform and gives additional suggestions for the improvement of the pension system. The fifth section concludes.

The reform of the Colombian pension system in 1994

Prior to the reform in 1994, Colombia had a mandatory public pension programme for employees that consisted of a social security institute (Instituto de Seguros Sociales — ISS) for private-sector employees[2] and more than

1. In this paper, the term "public pension programme" is used for a defined-benefit system where the old-age pensions are paid through a publicly administered pay-as-you-go or partially funded system. The term "private pension programme" is used for a fully funded defined-contribution system in which the contributions as well as the returns of the accumulated funds go into privately administered individual accounts of the insured persons.

2. The pensions in the ISS were financed by a scaled-premium system.

1,000 other institutions for public-sector employees. The combination of this extreme fragmentation, corruption, and the lack of adequate information systems was inefficient and costly and led to long delays in the granting and payment of pensions (De Geyndt and Mesa-Lago, 1987: p. 89).[3] The pension system had a rapidly increasing actuarial imbalance (Government of Colombia, 1993),[4] caused by the demographic transition in conjunction with low contribution rates and generous entitlement conditions.[5] Additional factors were the evasion of contributions and delayed payments, underreporting of wages, the high administrative costs, state debt, and inefficient investment of the reserves. The coverage was low, with less than 30 per cent of the labour force in 1993, and varied widely by economic sector and region. Rural and informal workers were generally not covered. Entitlement conditions and benefits varied greatly among the different pension programmes.

The new Constitution enacted in 1991 established social insurance as the inalienable right of all citizens. This, together with the problems of the system, led to a government proposal to replace the existing system with a private one. This plan was strongly supported by the financial sector, but other parts of society, such as the trade unions, set up far-reaching opposition. A compromise in the form of a modified reform proposal was approved by Congress in December 1993 and came into force in April 1994.

The reform introduced a private pension programme that coexists with the previous public programme, which itself was thoroughly revamped. Insured persons (including new entrants to the labour force) can choose with which of the two programmes to affiliate and switch between them every three years. (For a comparison of the pension system before and after the reform, see Table 1.)

After a transition period, only the ISS and the private programme are expected to remain, with the exception of several occupational groups exempted from the reform: military, police, teachers, university employees, judges, ISS employees, congresspersons as well as employees of the state-owned oil company ECOPETROL and the national phone company TELECOM. The pension programmes for other than the above-mentioned public-sector employees were closed to new affiliations and, once they ex-

3. The administrative expenditures of social insurance were estimated at 11.6 per cent of total expenditures between 1983 and 1987.

4. Note that actuarial imbalances are not the same as implicit pension debt. The former refers to higher current pension payments than current contributions, and the latter to future liabilities without taking into account future contributions.

5. Public choice theoretic models predict this outcome as a result of majority voting (see, e.g., Browning (1975) and Tabellini (2000)).

Table 1. *The Colombian pension system before and after the reform of 1994*

	Before 1994	After 1994	
	Public programme (ISS)	Public programme (ISS)	Private programme
EAP coverage[a]	Total 29.6%, ISS 24.16% (1993)	47% based on affiliates, less than 23% based on active affiliates (July 2001)	
Rate of contribution[b]	6.5% (in 1993), 8% (in 1994) employer 2/3, employee 1/3	13.5% of payroll (includes 3.5% for administration and disability and survivor pension) + 1% for Solidarity Fund if wage is at least 4 times minimum wage; maximum payroll contribution out of 20 minimum wages;[e] employer 3/4, employee 1/4	
Retirement age	55 (women), 60 (men)	55 (women), 60 (men) until 2014; 57 (women), 62 (men) from 2014 if actuarial calculations support the need	At 60 (women), 62 (men) employer can stop contributing; retirement is possible when accumulated capital allows a lifetime annuity of 110% of minimum pension
Pension amount	45% of inflation-adjusted average wage of last 2 years, plus 3% for every 50 weeks of contributions above 500 weeks, maximum 90%	65% of inflation-adjusted average wage of last 10 years + 2% for each of the 4 next 50 weeks after 1,000 weeks contributed, + 3% for each of the 4 next 50 weeks; maximum 85%; 14 monthly payments a year	Depends on total amount of contributions and investment yields
Minimum pension (monthly)	Yes, same as legal minimum wage	Yes, same as legal minimum wage; paid 14 times a year	Yes, same as legal minimum wage; paid 12 times a year
Eligibility for minimum pension	500 weeks contributed in the last 10 years or 1,000 weeks in the whole working life	1,000 weeks of contributions and retirement age reached	1,150 weeks of contributions and age 57 (women) and 62 (men) reached
Financing scheme	Partially funded, defined benefit	Partially funded, defined benefit	Individually fully funded, defined contribution
Percentage of insured population[d]	About 81.6%[c]	50.68% (January 2002)	49.32% (January 2002)
Affiliates/retired pensioners	30:1 (1980) 12.1:1 (1993)	10.6:1 (January 2002)	Not applicable

Notes: [a] EAP = economically active population. Coverage is mandatory for salaried workers, voluntary for self-employed. [b] Minimum contribution amount is the rate indicated as a percentage of the minimum wage; only exception: *madres comunitarias* (childcare) and domestic workers, for whom it is the same percentage of half the minimum wage. [c] The rest was insured in the more than 1,000 other pension institutions for the public sector. [d] In the new system only those insured in the ISS and in the private programme were taken into account. [e] The Solidarity Fund subsidizes contributions to the public programme.

Sources: Clavijo (1998: p. 17), Forero de Saade (1996: p. 228), ISS (1994: p. 13), López Montaño et al. (1993: pp. 47, 175), Schmidt-Hebbel (1995: p. 46), Superintendencia Bancaria (2001-2002), DANE (2002).

haust their reserves and become insolvent, the pension payments will be made by the newly created *Fondo de Pensiones Públicas del Nivel Nacional* (national public pension fund) and the *Fondo Nacional de Pensiones Territoriales* (regional public pension fund). These funds are intended to run out over time as their affiliates retire and die. Hereafter, I will refer to the ISS as the public programme and exclude the remaining public pension funds.

The mandatory contribution rate is fixed at 10 per cent of the payroll in both programmes, plus an additional maximum of 3.5 per cent for administration costs and mandatory coverage of disability and survivor insurance (managed by commercial insurance). The employer pays 75 per cent of the total contributions, and insured persons the remaining 25 per cent. Affiliates that earn more than four times the minimum wage contribute an additional 1 per cent of their payroll — matched by the State — to the Solidarity Fund, which subsidizes part of the contributions for some of the low-income insured. Only workers in the informal sector, workers with disabilities, and *madres comunitarias* (a special kind of childcare workers that receive only half of the minimum wage) above certain minimum ages are eligible for this subsidy. It is used to top off the existing past contribution period to make the insured person eligible for a pension. Voluntary additional contributions are allowed in the private programme.

The public programme has been thoroughly reformed. The ISS introduced a computerized system to store and administer the records of insured people, eliminating many of the inefficiencies and fraud possibilities of the previous system of paper records kept in the capital city. Entitlement conditions have been tightened. The retirement age remains unchanged at 55 years for women and 60 years for men until the year 2014, when it will be increased by two years in both cases if actuarial calculations provide evidence that this is necessary. Because the retirement age for public-sector employees was considerably lower in some pension programmes,[6] the overall average pension age has increased (Cárdenas Rivera, 1997: p. 210). The calculation of the replacement rate was changed and the minimum contribution period and that used for the base wage for pension calculation were increased. The pension replacement rate ranges from 65 to 85 per cent, and the pension is paid in every month with an additional payment in each June and December, making a total of 14 times a year. After reaching retirement age, affiliates are eligible to receive a minimum pension equivalent to the legal minimum wage if they have contributed during at least 1,000 weeks. The State guarantees both the pension payments and the minimum pension in the case that the public programme lacks sufficient funds.

6. For instance, in CAJANAL, the largest pension institution for public employees, the retirement age was five years lower than in the ISS.

The private programme is managed by pension administrators, the so-called SAFPs *(Sociedades Administradoras de Fondos de Pensiones)*. Insured persons can switch among SAFPs twice a year. Neither a minimum contribution period nor a specific age is required for retirement. The latter is possible as soon as the accumulated capital (including earned interest) in the insured person's account is sufficient to finance a pension equal to 110 per cent of the minimum wage over the expected lifetime.

Three alternatives exist regarding the payment of pensions: scheduled withdrawal directly from the account administered by the SAFP,[7] a transfer of the fund to an insurance company that, in turn, pays a real life annuity, and a mixture of both. The accumulated funds in the individual account are owned by the insured person and are separated from the capital of the SAFP. There is a minimum pension of the same amount as in the public programme, but only if the affiliate has contributed during 1,150 weeks and has reached age 57 (women) and 62 (men). The State pays the minimum pension in the private programme once the insured person's accumulated funds are exhausted. This is contrary to the public programme, in which the State acts only as a last-resort guarantor.

The State provides a last-resort guarantee for a relative minimum return and for the pension payment in the case of SAFP bankruptcy. The former is based on the average return of the funds, a representative market portfolio, and average stock returns. If the minimum return is not achieved, the SAFPs must use a mandatory stabilization reserve.[8] The State guarantee only comes into effect if this reserve is depleted. For the accumulated capital in the individual accounts, a finance sector guarantee fund was created (FOGAFIN) which guarantees 100 per cent of the obligatory contributions in the case of loss of the fund (Paredes, 1997: p. 95). The state guarantee holds only if this guarantee fund does not hold sufficient resources.[9]

Insured persons selecting the private programme are granted a recognition bond financed by the State for the pre-reform contributions made to the public programme and time employed in the civil service. The bond earns a real annual interest rate of 4 per cent if the switch occurred before 1999, and 3 per cent thereafter. If an insured person switches back to the public programme, the individually accumulated funds are transferred to it and contributed weeks credited.

At the start of the new system in April 1994, women aged 50 or more and men 55 or more were not allowed to enter the private programme, unless

7. In this pension alternative the remaining capital must, at every point in time, be sufficient to guarantee a lifetime annuity in the amount of the minimum pension.

8. As of June 2002, this had not been necessary.

9. See Turner and Rajnes (2001) for more information on rate of return guarantees.

they contributed for an additional 500 weeks. Women over 34 and men over 39, as well as insured persons who contributed for 15 years or more, are, if they choose the public programme, allowed to retire under the pre-reform conditions (regarding retirement age, contribution period, and pension amount) of the programme in which they were affiliated before.

Performance of the Colombian pension reform

Pension systems are designed to protect against poverty and income loss in old age. The performance of a pension system can be measured by how well it reaches this goal, taking into account economic and political constraints. The performance of the Colombian pension system after the reform is evaluated below in accordance with four criteria: (1) effectiveness, (2) efficiency, (3) equity, and (4) sustainability.

Effectiveness

The effectiveness of a pension system in protecting the population against poverty and income loss in old age is measured by its effective coverage as well as the pension benefit level.

Coverage and compliance. Universal coverage was an explicit goal of the 1994 pension reform. Although coverage has since then increased, it remains low. Policymakers expected coverage to increase for two reasons. First, the private programme was expected to increase both the number of insured persons, by attracting new participants; and compliance and the contribution amounts of those already insured, because of the strong link between contributions and expected benefits. Second, the newly created Solidarity Fund in the public programme was designed to increase the coverage of workers on very low wages.

This first effect seems not to have materialized since, in January 2002, less than 49 per cent of all affiliates in the private programme were active. An affiliate is considered active if he or she contributed at least once during the past six months. In the public programme, 46.5 per cent of the affiliates had contributed during the past one month.[10] A significant portion of the

10. Superintendencia Bancaria, *Comunicado de Prensa*, 5 April and 13 August 2002. In the following, unless otherwise noted, these are the sources for all current statistics about the pension system.

The existence of multiple registrations might understate the compliance rate. Affiliates that switch programmes do not have to notify the former programme. In addition, the public programme may still have multiple accounts for each affiliate owing to past inefficient and complicated registration procedures and resulting processing problems and errors.

affiliates in the public programme may not be eligible for a pension, because their contribution period is too short. Likewise, in the private programme, affiliates with low wages may not be eligible for the minimum pension. The degree of coverage, measured as the insured population's percentage share of the economically active population (EAP), was 44.5 per cent in January 2002, significantly higher than before 1994. Effective coverage, based on active and contributing insured persons, however, was about 21.2 per cent (DANE, 2002, and author's own calculations).[11]

The main reason for the low coverage and the low compliance is unchanged: a pension system designed for salaried employees. The formal sector in Colombia, however, is relatively small. The share of the informal economy (either not covered or voluntarily covered under the mandatory system) amounts to 50 per cent of the EAP in urban areas. Furthermore, 27 per cent of the population live in rural areas (mostly not in stable and formal employment) and are virtually excluded from social insurance (in 1999; López Castaño, 1993: pp. 35f., and World Bank, 2000: p. 276). In April 2000, only 3 per cent of the affiliates in the private and 5 per cent in the public programme were self-employed, and their compliance was even lower.[12] In addition, unemployment is growing: the urban unemployment rate increased from 8 per cent in December 1994 to 18.6 per cent in June 2002.[13]

Some insured persons may also choose not to contribute. Someone that expects to receive the minimum pension does not have an incentive to contribute for more than the required period. For the same reason, some may underreport wages, since the marginal benefit is zero for any contribution above the minimum. There is evidence that this happens. Since 1994, around 80 per cent of the insured population have contributed from a wage equal to or below twice the minimum wage, while in the national household survey from 1997 fewer than 60 per cent of insured people reported earning this amount.[14] Pressure from the employer, which saves its part of the contribution, is also possible. Furthermore, in 1994, 47 per cent of the Colombian population lived in poverty (ECLAC, 1998: p. 66). Individuals

11. Coverage measured as the percentage of pensioners in the population over 59 is even lower, with 11.8 per cent receiving old-age pensions and an additional 5.2 per cent survivor pensions (for 1996; ILO, 2000: Table 12).

12. According to statistics from the ISS and Asofondos. The only information available about compliance concerns self-employed workers in the public programme; there, in April 2000, less than 30 per cent had contributed during that month.

13. According to DANE (2002); the rate for 1994 is for seven metropolitan areas, the one for 2002 for 13.

14. Encuesta Nacional Sobre la Calidad de Vida, 1997, conducted by DANE; author's own calculation.

on low incomes may have a high discount rate for the future and binding credit constraints, and therefore a lower degree of compliance (Holzmann, Packard, and Cuesta, 2001: pp. 463ff.).[15]

The second factor in the expansion of coverage was the introduction of the Solidarity Fund. Between the beginning of 1996 and the beginning of 2000, 514,000 affiliates had been granted such subsidies (comprising over 11 per cent of all affiliates in the public programme in June 2002). The State had not contributed to the fund at all. Since only a small percentage of the insured population contribute to the Solidarity Fund (in April 2000, 8.6 per cent), its expansion is restricted, especially if the State continues to fail to meet its obligations.[16]

Pension benefit level. Pension levels should be high enough to prevent old-age poverty and allow retirees to maintain a decent living standard. It is not clear, however, if the majority of affiliates in the private programme will receive a sufficiently high pension. In addition, the future level of the minimum pension is uncertain.

The pension in the private programme depends on the amount of mandatory and voluntary contributions, the contribution period, and the rates of return on the accumulated funds. The amount of contributions going into the insured person's fund is relatively low, owing to the low compliance, underreporting, and low wages. Fewer than 3 per cent of the affiliates in the private programme had made voluntary additional contributions (in June 2002).

The rates of return are crucial to the future pension. The average real annual rate of return achieved by the SAFPs between May 1994 and June 2002 was 7.27 per cent. Eight years, however, is a short time in the context of pension insurance. The long-term rates of return are expected to lie between 3 and 5 per cent (Velasco Osorio, 2000: p. 15), which is in line with the average real annual interest rate in Colombia of 4.5 per cent in the last quarter of the twentieth century (Jaramillo Pérez, 1999: p. 98). Investment instruments in the private programme are strongly regulated and restricted by law. This, in conjunction with the minimum rate of return that the SAFPs must guarantee, leads to a homogenization of portfolios and limits diversification opportunities. The real rates of return achieved by the different

15. For a detailed treatment of the problems of extending pension coverage, see also Gillion et al. (2000: pp. 193-216).

16. According to Consorcio Prosperar, the administrator of the Solidarity Fund, subsidies ranged between 70 and 90 per cent of the contribution, for a maximum time of between 480 and 800 weeks, depending on the insured group concerned; 31.5 per cent of the subsidies were given to rural workers.

Table 2. *The private pension programme in Colombia: Market concentration and fees (June 2002)*

Pension Fund Administrator (SAFP)	Number of affiliates	Participation (%)	Proportion of active affiliates in SAFP (%)[a]	Funds (millions of pesos)	Proportion of total funds (%)	Commission[b]	Insurance premium[b]	Total fees[b]	Real annual average rate of return 5/94-30/6/02[c]
Porvenir	1,161,497	25.6	50.63	3,722,606	27.71	1.75	1.75	3.50	7.53
Horizonte	961,982	21.2	42.15	2,495,005	18.5	1.50	1.98	3.48	6.79
Protección	840,860	18.5	57.92	3,021,407	22.41	1.50	2.00	3.50	7.57
Santander	782,220	17.2	43.44	1,777,133	13.2	1.56	1.94	3.50	7.55
Colfondos	754,261	16.6	48.74	2,064,456	15.3	1.50	2.00	3.50	6.73
Skandia	36,173	0.8	54.63	378,109	2.8	1.50	1.99	3.49	7.15
Total	4,536,993	100	48.66	13,458,716[d]	100	1.63	1.87	3.498	7.27

Notes: [a] *Active* means that the affiliate contributed at least once during the previous six months (author's own calculations). [b] Information as of April 2002. [c] Based on average daily balance of funds (Skandia from March 1995, when it entered the market). [d] This is equivalent to US$ 5.61 billion, and 7.1 per cent of Colombian GDP in 2001 (calculated using information from DANE and the Colombian central bank, Banco de la República).

Source: Superintendencia Bancaria, 2001-2002, and *Carta circular de 2002.*

SAFPs are very similar, between 6.73 and 7.57 per cent annually (May 1994 to June 2002; see Table 2). Consequently, affiliates cannot choose according to their preferences between different risks and expected return combinations.[17]

With relatively low long-term rates of return, the replacement rates in the private programme will be low. For example, an affiliate who contributes for 40 years with a compliance rate of 55.1 per cent (75 per cent), earns a 5 per cent rate of return, and chooses the pension option that pays a lifetime annuity, will receive a replacement rate of 39 per cent (53 per cent).[18] In this scenario, the state-guaranteed minimum pension would be paid to the around 80 per cent of affiliates that reported earnings of less than twice the minimum wage. It is important to remember, though, that the minimum pension guarantee holds only if the insured person contributes for at least

17. For more information on regulation and its effects on private pension programmes, see Srinivas and Yermo (1999).

18. This calculation assumes zero wage growth and uses a programme written by Asofondos, the Colombian Association of Pension Fund Administrators. If the rate of return or compliance is higher, replacement rates increase significantly. In the above example, a rate of return of 7 per cent yields a replacement rate of 78 per cent with a contribution density of 55.1 per cent. It is important to notice, though, that the replacement rates will be lower, since the insurance company selling the annuity charges a fee for its services.

1,150 weeks, which for a compliance rate of 55.1 per cent in the example given is exactly reached.

In the public programme, where the replacement rate depends only on the number of contributed weeks, 1,150 weeks of contribution would give a replacement rate of 71 per cent or the minimum pension, whichever is higher, each paid 14 times a year (so that the effective monthly replacement rate would be 82.8 per cent).

The required contribution period for the minimum pension guarantee is difficult to achieve for some insured persons.[19] The density of contribution over the lifetime is very low, given that the proportion of active and contributing affiliates in both programmes is under 50 per cent. Women and persons on lower wages are especially affected because of lower compliance rates due to a higher degree of informality or periods without contributions because of childbearing or unemployment, as well as lower average wages. Women also have a shorter contribution period because of the lower retirement age.[20] An additional factor of uncertainty about the minimum pension is that the State cannot credibly commit to its current level. Given the high number of potential beneficiaries, it is probable that, with increasing pressure on state finances, the legal minimum will be reduced or simply not paid.

Efficiency

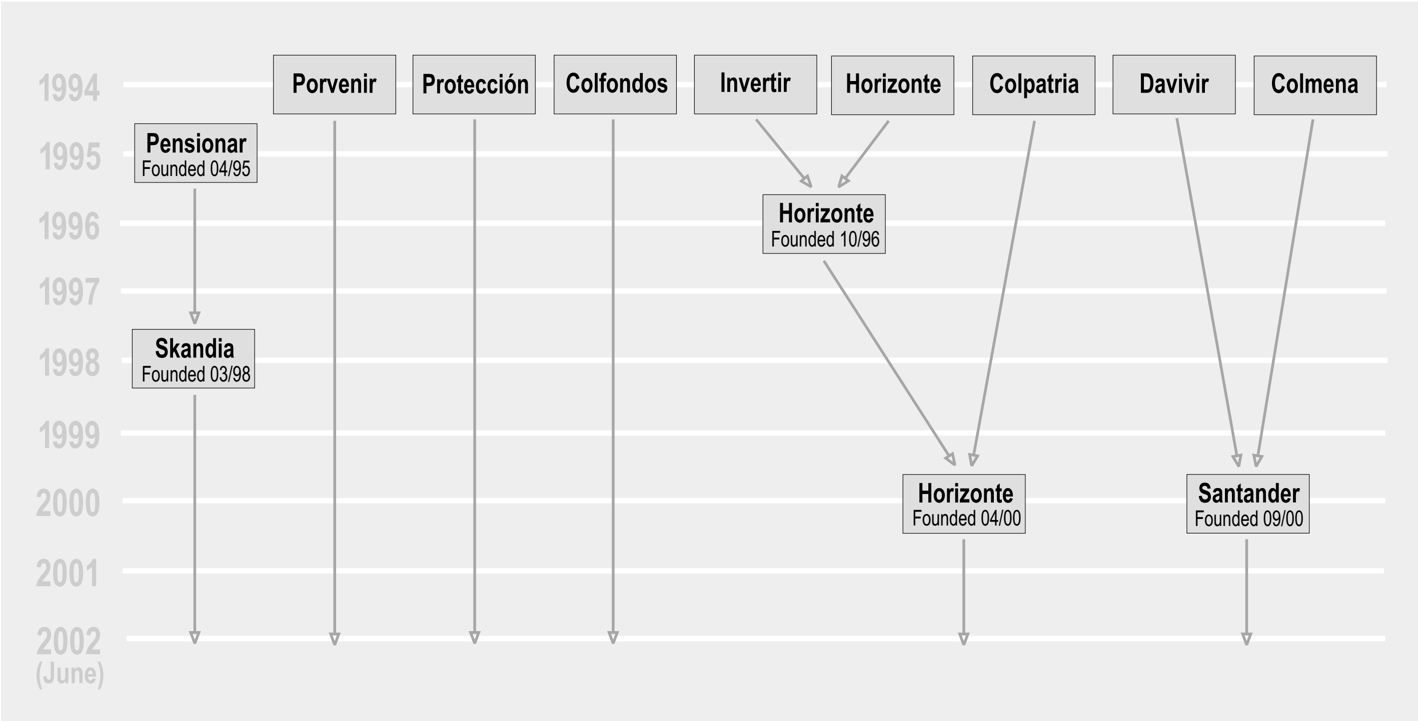
An efficient pension system should have low administrative costs and insurance fees and the choice made by the insured person should be informed. In the public programme, efficiency increased owing to the unification of the programme and administrative reform, but in the pension system in general, and particularly in the private programme, there is evidence of imperfect competition, cost inefficiencies, and insured people not being well informed about how the pension system works.

In the private programme, efficiency was expected to be high because of the competition among the SAFPs and with the public programme. Such competition, however, is called into question by the high concentration of insured persons in the SAFPs. In June 2002, six SAFPs were in operation, down from nine at the end of 1994 (see figure). The largest SAFP (Porvenir) covered 25.6 per cent of all insured persons in the private programme, and the two largest covered 46.8 per cent (see Table 1). Although social insur-

19. In both programmes, affiliates are compensated for their contributions if they are not eligible for a minimum pension.

20. Insured persons are allowed, however, to contribute to the public programme until age 60 (women) and 62 (men).

Evolution of the SAFPs



Source: Superintendencia Bancaria, 1994-2002.

ance law allows a variety of institutions to administer a pension fund (public, private, cooperative, etc.) this has not taken place in practice. The only SAFP in the cooperative sector, Invertir, was taken over by Horizonte in 1996. Porvenir and Protección belong to the most powerful financial groups in Colombia, and four SAFPs have a majority of foreign shareholders (Skandia, Horizonte, Colfondos, and Santander), which also hold a 20 per cent share of Porvenir.[21]

The degree of efficiency is not obvious, either.[22] The largest two SAFPs neither charge the lowest commissions and insurance premiums nor pay the highest investment returns (see Table 1). Four out of the six SAFPs charge the legal maximum total fee of 3.5 per cent (for administrative cost and the premium for mandatory disability and survivor insurance); only Skandia and recently Horizonte charge slightly less (Superintendencia Bancaria, 2002; see also Table 1). In addition, the costs of advertising and of the activities of salespersons are very high. At the end of 1996, the SAFPs employed 4,800 salespersons, one for every 430 affiliates. The cost amounted to 37 per cent of total SAFP expenses in 1994 (Mesa-Lago, 1998: p. 120; Queisser, 1997: p. 30).[23] This may explain why, despite the few differences, the proportion of affiliates in the private programme that switched from another SAFP is relatively high at 12.4 per cent in June 2002.

It seems that insured persons do not necessarily choose the SAFP that is in their best interest. For many years, Skandia — by far the smallest SAFP — was the best choice because of its lower total fees (which used to be even lower than now) and higher annual rate of return. Colfondos and Horizonte had consistently lower rates of return than the other SAFPs, but had a market share of 16.6 and 21.2 per cent of the affiliates in June 2002, respectively. People who expect to receive a minimum pension, however, would be better off in the public programme because of its lower contribution requirement and the lower retirement age (at least until 2014). Since switching is possible every three years, the insured person could affiliate first with the private programme and then switch to the public one if its benefits were better. For this strategy one would need to be confident, though, that the switching possibility will not be eliminated in the future, which has been discussed in the past.[24]

21. Rodrigo Galarza, Vice-President of Asofondos, in a personal interview on 3 August 2000.

22. This is not surprising, since competition might lead to low or zero profits, but not necessarily to low costs (Orszag and Stiglitz, 2001: p. 35).

23. Fragmentary evidence shows that higher wage earners in particular are targeted by salespeople through phone calls and personal visits to the workplace.

24. Other factors influencing the choice could include the perceived financial stability of an individual pension fund administrator, which would, however, be difficult to assess for the typical insured person.

One reason for the observed choices might be a lack of information, a hypothesis supported by a survey[25] in which 33 per cent of the participants responded that they did not know about the possibility of choosing between pension programmes, and 44 per cent believed that the retirement conditions in the public and private programme were the same.[26] Furthermore, 21 per cent of those who were affiliated with the private programme and 19 per cent of those with the public programme responded that their employer decided such affiliation. Employers may have a preference not only for a programme (for example, the employer can stop contributing to the public programme earlier) but also for a particular pension fund, for instance, because of financial ties with the financial group that owns it.

The administrative reform improved efficiency in the public programme significantly, particularly with the introduction of an integral computer system. The first results became visible in March 1994 when, for the first time since its founding, 40 per cent of the ISS's members received reports listing their contributions. The average waiting period for processing a pension claim was reduced considerably, and according to the ISS its administrative costs were very low at less than 1.1 per cent of contributions in the year 2000, compared with 12 per cent for the private programme in June 2002. Extreme stratification, one of the main reasons for inefficiency, was expected to be eliminated with the unification of the public programme, but it has been achieved only partially. According to information from the Labour Ministry, in August 2000 only 135 out of the 985 regional institutions had been closed or integrated.

Equity

The pension system remains inequitable with respect to all three types of possible inequalities: (1) among the affiliates of different pension programmes; (2) among those insured within the same pension programme; and (3) between insured and uninsured persons.

The unification of the pension system and the gradual incorporation of public pension institutions into the ISS have reduced the inequality among the insured population regarding entitlement conditions. Some groups, however, were excluded from unification and allowed to keep their privi-

25. This phone survey was conducted by the Colombian presidency in 2000 among a representative sample of 1,000 people over age 18 ("Percepción del Regimen de Pensiones", 5 February 2000). I would like to thank Mauricio Perfetti, the Presidential Social Policy Adviser, for giving me access to a survey summary.

26. Kleinjans (forthcoming in 2003) finds empirical support for the hypothesis that educated persons with pension insurance in Colombia make a better-informed decision.

leges, as mentioned earlier. These include members of the military and the Congress. Furthermore, the required minimum contribution period for the minimum pension is 150 weeks higher in the private programme than in the public programme, and insured persons receiving contribution subsidies from the Solidarity Fund have to affiliate with the public programme. In addition, the employer has a longer mandatory contribution period in the private programme — two and five years more for men and women, respectively.

Since pensions in the private programme depend significantly on the rate of return, the pension amounts received by affiliates can differ greatly depending on time of retirement, although contribution period and amounts are similar.[27]

The absence of solidarity within the private programme adversely affects the most vulnerable groups in the insured population, since the pension amount is solely the result of paid contributions and their returns. This particularly affects women, for the same reasons that they are less likely to be eligible for the minimum pension (see "Pension benefit level" above). Women in the public programme are also affected, because their pension amount is directly decreased and because of the lower retirement age and longer periods of income loss. The longer life expectancy, however, benefits women in the public programme and hurts them in the private one.[28] It is most likely that the majority of women and of low-income insured persons will switch to the public programme before retirement, because of its less restrictive entitlement conditions and better benefits, a move that will aggravate the financial situation of the public programme.

Inequality among regions and economic sectors also persists. Most self-employed workers in the informal economy have no or very low pension coverage. Since the labour market reform of 1990, both in the formal sector and in the informal economy the number of temporary workers is growing. These lose their social insurance coverage and are likely to show up in the official statistics as "inactive affiliates". Regional differences continue to be significant. According to Asofondos, in June 2000 almost 65 per cent of all affiliates in the private programme lived in only three states: Antioquia, Cundinamarca, and Valle, while DANE estimates that in 2002 only 27 per cent of the population lived in these three states. Fewer than 6 per cent of all affiliates in the private programme lived in any of the other states.

Last but not least, the system is inequitable because the whole population bears the high transitional cost as well as the cost of the minimum pen-

27. For a detailed analysis see Alier and Vittas (2001).

28. For more information on this see Bertranou (2001).

sion in the private programme and the other state guarantees, while only a minority receive a pension.

Sustainability

A functioning pension system has to be financially sustainable in the long run. In the case of Colombia, this is relevant with respect to the public programme, since the private programme is fully funded; this makes it, by definition, financially viable unless some unforeseen events, such as a financial market crash, induce a need to use the state guarantees. In addition, financial sustainability of the pension system as a whole might be endangered because of the high transition cost as well as newly created obligations borne by the State.[29] In spite of tightened entitlement conditions and reduced benefits, the public programme must still be considered financially unsustainable.

One of the main reasons for the reform in 1994 was the strained financial situation of the pension system. Through the tightening of the entitlement conditions and reduction of benefits in conjunction with administrative improvements, the financial viability of the public programme has been strengthened considerably. The internal rates of return,[30] however, are still too high to be sustainable in the long run without state subsidies. As has been shown by Samuelson (1958) and Aaron (1966), the steady-state return of a pay-as-you-go system without reserves is equal to the sum of wage and population growth. Population growth is estimated to be around 1.8 per cent; wage growth averaged 1.9 per cent in the 1970s and 1980s, and steadily declined to 0.9 per cent in 1990-93 (World Bank, 2000, and ECLAC, 1996: p. 93). Assuming this to be steady-state wage growth, the steady-state internal rate of return is 2.7 per cent. Kleinjans (2002) has estimated, however, that the internal rate of return ranges from at least 4.4 per cent to over 8 per cent. Only a continuous (difficult and costly) expansion of coverage could make up for the difference by increasing the wage base and, therefore, the wage growth. In addition, evasion continues to be a significant problem, mainly by small and medium companies. The ISS estimated the amount evaded in the pension and health system at more than US$ 350 million in 1998 (*El Espectador,* 1999a and 1999b).

29. Baker and Weisbrot (2002) look at this issue with respect to Argentina and find that the economic crisis of 2001 / 2002 was aggravated by the pension reform, which in turn contributed to a benefit cut in the public programme.

30. The internal rate of return is the interest rate that equates the present value of contributions with the present value of expected benefits in a defined-benefit programme, and can be interpreted as the real rate of return on contributions in a public pension programme.

Affiliates in the private programme might switch to the public programme (1) if the rates of return in the private programme were low enough that the pension was higher in the public programme; or (2) if they were eligible to receive the minimum pension, which has lower requirements in the public programme and is also paid 14 instead of 12 times a year. This negative effect on the finances of the public programme is in the short term somewhat alleviated by the fact that, in these cases, the accumulated capital of the insured person is transferred to the public programme, and that the insured person on lower income can be expected to have a relatively low life expectancy at retirement.

The main transition costs are generated by the recognition bond. Schmidt-Hebbel (1995: p. 28) estimated the capitalized value of pension deficits as 14.4 per cent of GDP for the entire 1994-2060 transition period.[31] By the end of May 1998, 590,000 recognition bonds had been issued at a total value of US$ 16.4 billion, the equivalent of 25.7 per cent of Colombian GDP in 1997 (Tobón and Gallo, 1998: p. 38; IMF, 1999: p. 60). The final cost will depend on how many insured persons change to the private programme and stay there. In June 2002, 38.4 per cent of the over 4 million affiliates in the private programme had switched from the public programme. If this trend continues, the costs of the recognition bonds are going to be significantly higher than estimated by Schmidt-Hebbel.

The minimum pension guarantee in the private programme is another cost for the State, although most eligible insured persons should switch to the public programme. Further costs might result from the last-resort state guarantees for the minimum returns and pension payments in the case of an SAFP bankruptcy. Additional fiscal costs would arise from the state contribution to the Solidarity Fund if the State began to fulfil its obligations.[32]

Discussion

As argued in the preceding sections, the pension system fares badly in the fulfilment of all four criteria. The goal of sustainable and equitable old-age

31. Note that making reasonable assumptions is difficult, since it is unclear how insured persons will behave and available data is incomplete and might be faulty. Schmidt-Hebbel assumed that 20 per cent of all insured people younger than 35 (women) or 40 (men) switched from the public to the private programme, plus 2 per cent of the public employees of the same age, as well as 5 per cent of all affiliates above those ages. For another estimation of the cost see Clavijo (1998).

32. An anonymous referee noted that there is also the danger that a future populist government will try to increase its votes by raising the pensions in the public programme. This would be sustainable for a number of years since the public programme receives the accumulated funds of the transferring affiliates.

security for all is extremely difficult to reach, not only because of the low income in Colombia but also because of the trade-offs between the different goals. For example, a financially sustainable system will be less able to subsidize the poor, likely to decrease coverage and maybe jeopardize the goal of adequate pensions. Pension systems can, though, maximize these criteria given the existing trade-offs. In the next section, reform proposals from the government and individual reform options are discussed.

The new reform proposal from August 2002

Owing to the above, a debate about a new reform has been going on in Colombia for several years. After a heavily debated reform proposal in 2000 that would have introduced a two-tier system with a mandatory basic public tier, the government issued another reform proposal in the fall of 2001. The new government of President Uribe, however, abandoned this proposal in August 2002, the first month of his presidency.

According to newspaper reports,[33] the new government brought a new pension reform proposal before Congress in August 2002. This proposal includes an increase in the retirement age to 58 years (women) and 62 years (men) starting in 2009, to be increased to 62 and 65 years by 2018; a decrease in the replacement rates to between 60 and 80 per cent; an increase in the contribution rate by two percentage points (one each in 2004 and 2005); and a increase in the minimum contribution period to 1,200 weeks in 2009 and 1,300 weeks in 2018. The increase in the contribution rate will finance the minimum pension guarantee in the private programme, which ceases to be a responsibility of the State. The special pension regimes will be eliminated for new entrants to an occupation.

This proposal contains elements that would make the system more sustainable in the long term: the increase in the contribution period, and the decreases in the replacement rates and retirement age. This would increase contributions to the private programme and therefore increase future pension amounts. It would also close the gap between the actual and the steady-state internal rate of return of the public programme. Compared with the public programme, the private programme would be relatively beneficial, inducing more insured persons to switch to it. This in turn would increase the cost for the State and decrease the income of the public programme, because of the cost of the recognition bonds and the lower number of contributors, respectively. It might also increase the number of insured persons that are eligible for a minimum pension because of the

33. In *El Espectador*, *El Tiempo*, and *Portafolio*, 21-22 August 2002.

lower replacement rates. There might be no effects (other than those of the higher contribution rate) of the elimination of the state minimum pension guarantee if the additional contributions were sufficient to pay for the guarantee. If the possibility of switching were not eliminated, this change would probably have little effect, since most insured persons that expect to receive the minimum pension would switch to the public programme anyway because of its lower requirements and higher pension amount. The elimination of the special pension programmes would greatly improve equity and decrease costs for the State. Equity between men and women would increase because of the proportionately higher increase in the retirement age for women, although women have to work much longer now to be eligible for a pension. Lower-wage insured workers that are not eligible for the minimum pension, however, would get significantly lower pensions. Not only would the replacement rate decrease, but there would also be a higher contribution period and a higher retirement age.

Some other important points, however, are not addressed in the reform proposal. First, there are no elements designed to increase the coverage. Given that this was one of the main goals of the reform of 1994, the government should study ways to increase coverage and fulfil its obligation to the Solidarity Fund. Second, there are no efficiency considerations. It is necessary to increase and improve the information available to the insured population as well as to study and, if necessary, undercut the alleged influence of employers on pension programme choice. A lowering of the total fee in the private programme could be achieved by the introduction of a general mandatory disability and survivor insurance through the public programme to take advantage of economies of scale and wider risk pooling.

Conclusions

This paper assesses the Colombian pension system after the reform of 1994 using four criteria: (1) effectiveness; (2) efficiency; (3) equity; and (4) sustainability. As has been argued, the majority of the population does not have pension coverage and future minimum pension levels are uncertain. The private programme is characterized by imperfect competition and high fees. The choice made by insured persons seems to be at least partially uninformed. The system treats those in the public and private programmes differently, and some occupational groups have special, more beneficial regimes. Most of the insured population live in urban areas and are formally employed; the remaining population is widely excluded from insurance. The financial sustainability of the public programme is questionable. The cost of switching to the private programme, whose effects are aggravated by the possibility of opting out of the public programme, and the minimum pension guarantee pose a serious threat to the future survival of the Colombian pension system, as do the higher than steady-state rates of return. A current reform proposal addresses only part of these problems.

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