Social Security Reform in Uruguay:
An Economic Assessment

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Abstract

This paper offers an assessment of the Uruguayan social security reform plan enacted in 1995. We analyze several positive developments, identify remaining questions about the emerging outlines of the Uruguayan plan, and compare this reform to others underway in Latin America. Recommendations center on methods of bringing the Uruguayan system closer to long-run solvency, means of increasing the efficacy of the public and private pension systems, and techniques of strengthening private sector opportunities to take over more money management and insurance functions.

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Driven by cost concerns and rapidly-aging populations, social security reform has emerged as a center-stage issue throughout Latin America in the last decade. Some countries, such as Argentina and Peru, have followed Chile's example and added an individual-account pillar to their public retirement system. Other nations, such as Brazil and Costa Rica, have sought to correct insolvency problems by streamlining benefits and doing a better job collecting taxes, while keeping a public pillar at the core of their national social insurance system.

Despite these efforts, a recent World Bank study (1994b) reports that old-age systems in Latin America (and elsewhere) are confronting alarming and rapidly growing deficits. Such deficits result from relatively generous benefits promised to a rapidly aging population, usually coupled with high payroll tax rates and widespread tax evasion. As we will demonstrate below, the Uruguayan system is characterized by some of the problems common to other Latin nations, and in devising its own approach to reform, the nation has had to confront several of them. Whether the Uruguayan reform law passed in 1995 will be judged as successful in curtailing the social security system's large and growing deficit is still in question.

In this study we examine Uruguay's social security system, exploring how it developed and what challenges it faces as the nation moves toward implementing its new social security reform law passed in August of 1995. In the first section of this paper, we briefly highlight past problems and successes of the Uruguayan social security system, and outline socioeconomic challenges facing reformers in the 1990s. The next section characterizes salient features of the new law and examines how it might be expected to work in practice. We then explore how the reformed system will influence the nation's social security financing, market efficiency, and income distribution, drawing on lessons of social security reform in other nations. We conclude with observations regarding positive developments and areas of concern, along with recommendations about topics deserving special attention in the near and longer term in Uruguay.

I. Setting the Stage

The social security system in Uruguay is one of the oldest in Latin America, and as such has experienced many rounds of reform over the last century and a half.

A. The First 100 Years of Social Security Reform in Uruguay

The roots of today's system are traced to a retirement program initially established for the military in 1830, followed by expansion of coverage to the rest of the workforce by 1942-3 (World Bank 1988, 1993). As the system evolved, it became more inclusive in terms of the risks covered, moving beyond retirement and survivors' benefits to include health insurance, work-related injuries, maternity protection, and then unemployment. Also as the system evolved, it grew more complex and more generous, with almost 50 separate individual funds (cajas) providing benefits to teachers, police, military, employees in risky occupations (e.g. miners), and public employees.

By the 1970s, over 80% of the Uruguayan labor force was covered by one or another of the several work-related retirement schemes. This coverage rate compares with a similar level in Argentina and Chile, and was substantially higher than many other Latin American countries: Mexico and Peru had about 40% coverage, and Paraguay around 20% (McGreevey 1990). Social security benefits in Uruguay were also easy to qualify for: private sector workers were entitled to earnings-related benefits after only 10 years of covered employment, and the national retirement age was among the lowest in the Western Hemisphere -- age 45 for women, 50 for men. In addition, low wage-earners were eligible for a public assistance pension, so that virtually the entire workforce could be considered covered by some form of social security without terribly stringent work or contribution requirements. On the whole, the first century of social security in Uruguay produced a system more generous and that covered more people than in most of the rest of Latin America.

High retirement benefits and widespread coverage began to push system outlays up to, and over, system revenues, inducing Uruguayan politicians to seek reforms more than once. A far-reaching restructuring of the system occurred in 1979, bringing along with it centralized administration of many (though not all) cajas under one roof. A General Directorate of Social Security (DGSS) was created with oversight for the health and family allowances programs, maternity benefits, the unemployment program, and the retirement fund covering civil servants, teachers, and industry/commerce workers. At the same time, the normal retirement age was raised to 60 for men and 55 for women at 30 years of service; this

was more stringent than Argentina's and Venezuela's 60/55+15 formula in effect at the time, but less stringent than in Chile which had a 65/60+15 requirement (McGreevey, 1993:61). Benefits were set at 70% of average final pay after 35 years of service, where final pay was initially averaged over 6 years, subsequently reduced to 3 years. But once again, early retirement benefits worth 60% of pay were made available to men with fewer than 35 years of work history (and women with fewer than 30 years). Survivors received between 66 and 75% of the deceased retiree's benefit amounts, and special benefits were also payable to divorcees and parents of deceased pensioners. All retirees attaining age 70 with a minimum of 10 years of service were entitled to extreme old age benefits, worth 85% of the minimum wage; the extreme old-age cutoff was subsequently dropped to 65. Finally, special groups such as teachers were entitled to additional credit for service years, and other groups were exempted from the higher service and retirement age rules.

Periodic efforts to make benefits more uniform were accompanied by reductions in social security payroll taxes. For example the (total) payroll tax rate for industry/commerce workers totaled 36-7% in 1969, subsequently lowered to 25% by 1985 (World Bank 1988).   Additionally the government eliminated earmarked taxes to cover family allowances and unemployment insurance. Nevertheless evasion of the payroll tax continued, with one estimate in the mid-1980's reaching 27% (World Bank 1988). Additionally, the social security reform of 1979 permitted many older workers to opt for early retirement during a lengthy transition period, thus avoiding the higher retirement hurdles required under the new rules.

B. Social Security in Uruguay over the Last Decade

The combination of reduced payroll tax revenues, earlier retirement, and lengthening life expectancies in Uruguay took a toll on the system's finances, which grew more desperate throughout the 1980s. Because the payroll tax was insufficient to cover benefit outlays, additional revenue from the value-added tax (IVA) was required for the system to stay solvent. As a consequence, the IVA was boosted several times, with the minimum IVA rate growing from 7% in 1979 to 12% in 1984, and the basic rate rising from 18 to 20% over the same period. By the mid-1980s, expenditures for social security in Uruguay had ballooned to around 10% of GDP -- comparable to that in Argentina and Chile, but more than double that in Brazil (5%) and Mexico (3%) [See Table 1]. In addition, outlays exceeded

system revenues in Uruguay by a substantial margin -- 60% (or about 3 percentage points of GDP) -- making it the most deficit-ridden system in Latin America (Mesa Lago 1990; World Bank 1988).

Uruguayan social security system shortfalls contributed to the overall government deficit, and were also accused of depressing national economic growth and causing macroeconomic problems including inflation. In addition the system was charged with inequities, inasmuch the plans for certain privileged groups (i.e. public employees and teachers) often operated in the red, whereas the industry/commerce fund produced a surplus in most years. Benefits were also seen as unevenly allocated for given age/service combinations, particularly among teachers, public sector workers, and the military.

A follow-on wave of reforms in 1987-8 met only partial success. A ceiling was set on maximum pensions, but efforts to raise the retirement age from 55/60 (women/men) to 60/65 were defeated (IADB 1991). Coverage of the system near the end of the 1980s declined to about 75% of the labor force, partly because workers and their employers colluded to evade the rising payroll tax which, by 1988, had grown to 37.5% (16% for employees, 21.5% for employers). Since lower contributions did not reduce eventual benefits paid, social security tax evasion was substantial, at 3% of GDP (IVA evasion stood at about 1.8% of GDP). By the end of the 1980s, Uruguay was believed to have the highest labor costs of the MERCOSUR nations, and had the lowest ratio of contributors to pensioners -- one-to-one -- in all of Latin America (World Bank 1993).

Further retarding the system's progress toward solvency, a referendum of the Uruguayan people in 1989 overwhelmingly repealed the ceiling on social security pensions set just two years prior, and required that all pensions be linked to the cost of living index (World Bank 1993:52). In 1992 the government again tried to institute reform but was voted down by Congress, despite the fact that it left untouched retirement ages and payroll tax rates. The major changes embedded in that proposal were to require 10 years of service as a requirement for regular retirement benefits, and benefit formulas were shaved somewhat, from 70% down to 60% of contributions plus 0.5% per year of service up to a total of 65% (World Bank 1993). Under this proposal, the government would offer a minimum pension, equal to the minimum wage, and would pay survivor and disability benefits. In addition very old age benefits

would be continued for the destitute with no other pension. Finally, the government proposed a mandatory second pillar individual pension that would earn a guaranteed real rate of 3.5%.

That bill was defeated, leaving the country in 1994 facing prospects of social security meltdown. System expenditures totaled 13% of GDP and were projected to continue growing, social security participation had continued to fall to 69%, evasion was estimated at one-third of potential revenues, payroll and IVA taxes were unsustainably high, real benefit levels had risen 50% in the previous four years, and almost one-fifth of the population qualified for a pension (IMF 1995:1). No wonder, then, that a substantially revised and elaborated version of this defeated bill was revived and finally passed in August of 1995.

II. The 1995 Reform Law: Key Elements and Questions

In August of 1995, the Uruguayan Legislature approved a bill to overhaul the nation's Social Security system.[1] In this section we first review the reform, and then turn to a discussion of the new system's financing and benefit formulas. In addition we examine the system's administration, and note several outstanding questions about the structure of the new agencies designed to administer the law. In the subsequent section we discuss potential impacts of the new system.

A. Overview of the Reform

The 1995 reform as legislated institutes a mandatory national system for paying regular retirement benefits, survivors' benefits, extreme old age benefits, and disability benefits in Uruguay. In this way it continues the general types of commitments made by the prior system. All Uruguayan nationals (and foreigners resident in the country for at least 15 years) are eligible to participate in social security. System financing derives from payroll taxes paid by employers and employees, additional revenues as needed from the IVA, and in some cases, voluntary additional contributions. Payroll taxes are to be collected in collaboration with the Direccion General Impositivo (DGI) and turned over to the Banco de Prevision Social (BPS), which is the national social security administrator. Funds are then transferred from the BPS to new Associaciones de Fondos de Ahorro Previsional (AFAPs), which will invest the money, purchase retirement and supplemental benefits, and conduct reporting and disclosure

tasks. The institution of the AFAPs is newly constituted with this bill, and many aspects of this new institution remain to be fully spelled out as yet.

Benefits are payable under two pillars in the new Uruguayan system, a welfare or "solidarity" pillar, and a mandated individual pension pillar. The first pillar resembles the basic benefit payable under the previous social security system, though conditions for retiring have been made somewhat more stringent and the replacement rate has been decreased somewhat. The first pillar provides a retirement annuity that depends on the retiree's age, years of covered employment, and covered earnings; the rules specify both a minimum and a maximum benefit. The second pillar is a new development, relying on a mandatory individual pension contributions invested by an AFAP on the worker's behalf. At retirement, insurance companies are to provide both first- and second-pillar annuities based on tax revenues (for the first pillar) and capital accumulation (for the second pillar). In addition, the insurance companies are to provide supplementary benefits for the totally disabled, the very old, and for survivors; the government will maintain direct responsibility for partial disability benefits.

Pursuant to the August 1995 law, the Uruguayan government has worked to develop the regulations under which the new AFAPs will work, including the role of a public AFAP operated by the social security bank (BPS) and the structure of a government-guaranteed minimum real rate of return on AFAP investments. In addition, regulations regarding the insurance industry will probably have to be clarified as well. Finally, it appears [Art 12] that all nominal amounts in the law are indexed, thus keeping contribution and benefit thresholds constant in real terms.[2]

B. Financing Issues Under the Reform

By financing we refer to the mechanisms used to pay for the program benefits and administration. Several different sources of revenue are contemplated.

Employer and Employee Contributions:

Under the new law, employer contributions will decline by 2 percentage points of payroll from 14.5% to 12.5% of base income, and employee contributions will rise from 13% to 15% for the bulk of

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[1] The Uruguayan social security system continues to offer programs covering medical care, family benefits, and unemployment insurance, as before; however only the old-age system is the main focus of the 1995 reform, and hence of this paper.

the population (in the industry and commerce sector; in manufacturing the employer rate will be set at 6% for a time) [Art 181-183]. Base income is deemed to be earnings up to UR$5,000 per month (or US$728 in 1995; all figures are indexed).[3] The overall combined payroll tax rate is therefore on the order or 27.5%, unchanged from the combined tax in effect prior to the reform. (Payroll tax rates do continue to vary by sector and higher rates, up to double, will continue to apply to teachers and those in risky occupations). In exchange for the employer-side payroll tax cut, employers are required to raise employee pay so their take-home earnings after social security taxes will remain the same as before. Employees so desiring may make additional voluntary contributions to the national social security system as well [Art 7].

Revenue generated by these payroll taxes is to be used in two different ways. One portion will pay for the first pillar or "solidarity" benefits, and the remainder is to be deposited to the funded individual mandatory savings pillar. How these allocations are made depends on the covered employee's salary, and to some extent the employee's choice [Art 7, 8, 14]:

• Covered workers with earnings below UR$5,000 per month may elect to deposit up to half of their own share of the payroll tax into the AFAP system (i.e. 7.5% up to UR$5,000), with the remainder of their taxable amount plus the entire employer portion being deposited into the first pillar.

• Covered workers with monthly earnings between UR$5,000-15,000 must put half of their own contribution (7.5% up to $5,000) and the full employer-side tax on all earnings into the first-pillar plan [Art 14]. The remaining employee contributions must flow into the AFAP system (i.e., 7.5% on earnings to $5,000, and 15% on earnings between UR$5,000 and $15,000).[4]

• Covered workers earning over UR$15,000 per month must contribute as do lower earners for pay up to $15,000; on earnings over UR$15,000, they may voluntarily opt to pay additional contributions to the AFAP system.

Additional Revenues:

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[2] All references identified as [Art. x] refer to the article number of the 1995 Uruguayan social security reform law; see Republica Oriental del Uruguay (1995).
[3] Some 80% of the working population earned less than that amount in 1995 (Ayala 1995).
[4] UR$15,000 was about US$2,500 in mid-1995.

Employer and employee payroll taxes are to be allocated by the BPS to Administradores de Fondos de Ahorro Previsional (AFAPs), along with additional IVA revenues as required, sufficient to cover the first pillar as well as supplementary benefits. In addition to taxes, the system is to be financed by investment returns within the AFAPs. Benefits paid under the second pillar will depend on investment performance, though the state has guaranteed a minimum real 2% rate of return on all AFAP portfolios [Art 139]. How this guarantee will be funded has not yet been outlined in detail in the 1995 law.

C. Benefit Computations Under the Reform

Retirement benefits payable under the new system are to be of two types. The first pillar benefit depends on pay and service, subject to both a minimum and maximum level. (Those in risky jobs, and teachers, are covered under a more generous benefit formula than the average). Some retirees will also receive a second-pillar benefit, namely those lower-paid workers who opted to devote half their payroll tax to the AFAP system, higher paid workers who were required to put half of their payroll tax (to $5K) into the AFAP system, and anyone who earned over UR$15,000 who made additional voluntary contributions to that system.

Eligibility for both first and second pillar regular retirement benefits depends on the worker's retirement age and number of years of covered employment in the system. The minimum retirement age for women will be raised to equal that currently applying to men (60) and women will also be required to complete 35 years of service (as do men), after a transition period occurring over the next decade. Delayed retirement beyond age 60 is recognized by benefit increases in the basic benefit formula; AFAP benefits can received at age 65 irrespective of the participant's employment status.

First Pillar Benefits:

The regular retirement benefit under the first pillar is determined by computing the retiring worker's base salary, and then applying a percentage benefit formula to this number. Base salary (sueldo basico jubilatorio - Art 27) includes the worker's pay in covered employment -- employment for which social security contributions were made (and demonstrated to the BPS' satisfaction). Base salary is computed as the maximum of:

(i) the average of the last 10 years' pay, capped at $5,000; or

(ii) the average of the best 20 years' pay capped at $5,000, where each year's indexed pay

cannot exceed the prior year's by more than 5% [Art 27].

In other words, the first-pillar benefit formula provides no return for pay in any year above

$5,000, despite the fact that employer and employee payroll taxes are levied on salaries above that

level. This provides little incentive to report earnings over that level from the perspective of the first

pillar, though the second pillar plan (described below) somewhat reduces incentives for evasion.

Certain nonwage benefits provided by employers are to be excluded from base salary

computations (e.g. life, dental, and medical insurance premiums up to 20% of the worker's pay - Art

167), and special rules are developed for the self-employed as well as workers in construction and

transport [Art 169, 172].

At age 60, a retiring worker with at least 35 years of covered employment will be eligible for a

first pillar regular retirement benefit of 50% of base salary, down from 60% under the old law. In addition

a worker delaying retirement receives an additional 0.5% credit for years over 35, and 3% for each year

over age 60 to a maximum of 80%. The specific formula is given as follows [Art 29]:

Regular retirement first pillar benefit   (Eq.1)

= 50% Base salary

AND if have over 35 years service

+ Min[2.5%, 0.5%*(Years - 35)]

AND if over age 60

+ Min[30%, 3%*(Age - 60)].

It should be noted that the 0.5% per year additional per year of service also applied under the old

plan, and so what is new is the lower initial benefit (50% of base salary instead of 60%), plus the 3%

increment for delayed retirement per year after age 60. Because this 3% increment is still not actuarially

fair (a neutral increment would probably be around 7% per year of age), it remains the case that working

an additional year beyond age 60 reduces the net present value of one's social security benefits. As a

consequence the new formula provides no net positive incentives to delay retirement after age 60 given

35 years of service, though the disincentive effect is smaller than under the old law.

The new law also contains a minimum benefit formula which offers somewhat more of a positive incentive to delay retirement. Anyone leaving work with a history of low earnings will receive a flat $550 per month, with benefits increased by 12% per year after age 60 (for a maximum of 10 years). The specific formula is as follows:

Minimum regular first pillar benefit   (Eq. 2)

$$= \$550/mo$$

AND if over age 60

$$* Min [120\%, 12\%(age - 60)]$$

The existence of the minimum benefit may induce system noncompliance for low-paid workers and their employers, who could jointly collude to contribute the minimum needed while still generating a first-pillar minimum benefit payment.

Finally the new law specifies a maximum benefit payable under the system which is indexed along with all other nominal values, as follows:

Maximum regular first pillar benefit   (Eq. 3)

$$=\$4125/mo$$

One issue of considerable interest is how base salary will be computed for those who chose to contribute to the AFAP instead of the "solidarity" pillar. As explained earlier, a low-wage employee is permitted to deposit up to half of his share of the payroll tax into the AFAP, and higher-paid employees must deposit a portion of the tax into the AFAP.   The law specifies that in the former case, the base salary to be used for the retiree's first pillar benefit purpose is equal to 1.5 times the pay on which first-pillar contributions were made.

As an illustrative example, consider a worker whose average indexed final salary was UR$4,000 and he had opted to split his payroll tax between the AFAP and the first pillar program. Assuming 35 years of service at age 60, at retirement the first pillar benefit would be equal to $1,500, computed by taking half his pay (UR$2000) multiplied by 1.5 and taking half the result (i.e. 1.5 * .5 * $4,000=$1,500). On top of this amount, the AFAP benefit would be equal to the annuity value of his contributions (i.e. 7.5% of $2,000 per year) incremented by investment earnings. With a 35-year work career, a real interest rate of 2% (the government guaranteed rate), and a life expectancy of 18 years from age 60, the

monthly AFAP annuity would be around $400 per month.[5] In total, the hypothetical retiree's benefit under the two-pillar approach would sum to around UR$2,000, approximately the same benefit payable to an identical worker who had left his entire contribution in the first-pillar program and opted out of the AFAP. A different way to put this is that unless real rates of return proved to be substantially in excess of 2% real, the second-pillar plan will be unlikely to attract optional contributions of many Uruguayans earning less than $5,000 per year. As a result, relatively low opting-in rates to the AFAP system would be expected in Uruguay under current rules.

An individual working beyond age 60 is entitled to a delayed retirement increment in the basic pension [Art 29] which once again offers less than an actuarially neutral pay increase (2% per year after age 70). The basic formula, given below, may be affected by special minima and maxima [Art 40, 41, 75, 76]:

Delayed retirement benefit

(Eq. 4)   = Regular benefit

+ Min [20%, 2%*(Age - 70)]

In sum, the new two-pillar system is not particularly simple, given the multiple contribution options, as well as the many different regular and delayed benefit formulas (including complex minimums and maximums that change with age and service). Furthermore, it is far from clear how workers with "typical" earnings streams will fare in retirement -- even without considering the AFAP performance.

To understand this point, note that the summary of the first-pillar plan changes in Table 2 shows that both men and women employees retiring at 60 years of age with 35-40 years of service would be anticipated to experience a decline in their replacement rate under the new system as compared to the old program. Somewhat unexpectedly, however, the reform affects people delaying retirement to 70 years of age differently by sex. That is, men will experience an increase in their replacement rate at the later retirement age, while women will face about a 10% cut in theirs. Such anomalies would be even more likely if one took into account the minimum and maximum pensions plus supplementary benefits, about which more is said below.

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[5] Communication from Hector Salazar (IADB), November 1995.

Second Pillar Benefits:

Persons with accumulations in an AFAP are subject to the same requirements for retirement as under the first pillar -- namely, workers of both sexes must be at least age 60 and have at least 35 years of covered employment. Accumulations at retirement will depend on the individual's contributions over the worklife plus investment earnings, minus annual commissions which are to be set by the AFAPs individually [Art. 99-102]. By law, real returns on investments in the AFAPs may not fall below 2% per year, and an individual AFAP may not earn less than 2% below the average of all AFAPs (or it will be liquidated by the government; Art 97-99). Participants may change their AFAP up to twice a year, and must hold all individual account accumulations in only one AFAP at a time -- also the case in Chile [Art. 106-109]. No AFAP may refuse to service any participant, a feature that may cut down on adverse selection problems experienced in other insurance contexts.

At retirement, a participant must use AFAP accumulations to purchase an annuity from an insurance company. The annuity benefit which will depend on the accumulation amount as well as on the retiree's age, life tables, and assumed rates of return [Art 127]. The law contains no discussion of what annuity tables are to be used, and whether an insurance company can turn down prospective annuitants or charge differential prices (e.g. by sex, income level). It would be useful to clarify several insurance issues in subsequent regulations, similar to those raised in Argentina when that nation instituted a similar capitalization regime (World Bank 1994a).

Supplementary Benefits:

In addition to the regular retirement benefits just described, the reformed public social security system continues to offer supplementary benefit payments to those who meet certain categories of need or eligibility. These "categorically needy" groups include the disabled, survivors, those attaining extreme old age with no other benefits, and those needing funeral expense coverage. Eligibility for each of these varies by benefit type, but fewer years of service and younger ages (if any) are required than for the regular benefit.

In general, these supplementary benefit payments depend on the employees' pay in covered employment, either directly or via the pension formula which in turn depends on covered salary [Art 25, 29, 30, 32, 59]. In this way, the payments in Uruguay have been delinked from the nationally set

"minimum wage", which some see as an important cost-saving mechanism inasmuch as the national minimum wage is subject to political pressure to change. Also benefit levels have been reduced under the new law: extreme old-age benefits are payable at age 70 with 15 years of service instead of 65/10 previously required under the old system. Under the old law, the extreme old age benefit was 85% of the minimum wage, whereas under the new law the formula has been cut to 50% of base salary plus supplements as follows:

Very old age benefit = 50% of Base salary (defined above)

AND if have years over 15

+ Min[14%, 1%*(Years service - 15)].

Partial disability benefits are payable for a work-related injury or accident with no length of service requirement, or for other disabilities after only 2 years of covered employment (as long as the past six months were in covered employment). Partial and total disability benefit levels are scheduled as follows (IMF 1994):

Total disability   = 45% of Base salary

Partial disability = 65% of Base salary

The minimum disability pension under the new law is higher (UR$950) than the minimum old-age pension ($550), which suggests greater potential for low-wage workers in moderate to fair health to seek the disability pension in the future. Finally, survivors' benefits will apparently be a function of the covered person's pension eligibility and will also be means tested, as a function of the survivor's age and income:

Widows/ers/divorced benefit for those > age 40

= 66-75% of covered worker's pension benefit

(depending on whether she has minor children).

The very old age pension is payable for life as is the total disability pension, whereas the partial disability benefit is payable for a maximum of 3 years [Art 22] and the survivor benefit for those younger than age 40 is subject to means testing under the new law [Art 25]. Exactly how the means test is to be applied is not described in any detail in the present law, but substantial administrative costs would be anticipated in setting up and maintaining the effort associated with such monitoring.

It appears to be the plan to have the AFAPs accumulate sufficient monies so that they can purchase insurance annuities from insurance companies, sufficient to pay regular (first pillar) retirement benefits, very old age benefits, total disability benefits, and survivor benefits [Art 127-8]. Since payroll taxes are not expected to produce all the needed funds, presumably VAT taxes will have to make up the difference but the mechanism is not clear. Unless this is clarified, there is a risk that the AFAPs will soon run out of funds to pay the first and supplemental pillars, perhaps jeopardizing the retirement funds in the second pillar of the AFAPs.

D. System Administration Under the Reform

Under the new reform bill, social security in Uruguay is to be provided by a mixed public-private system. Payroll taxes will continue to be collected by the government, but capital accumulation and most benefit payments will be handled by newly created private pension funds and existing insurance companies. Only one of the supplementary benefits, partial disability insurance, remains completely under the control of the BPS.

The Role of the BPS:

At the government level, the new social security system is to be administered by both new and existing state institutions. The tax collection agency, the Direccion General Impositivo (DGI), will collect payroll taxes and turn them over to the Banco de Prevision Social (BPS), which was the national social security administrator under prior law.

New responsibilities are also envisaged for the BPS. This agency will now be charged with developing and maintaining employment histories for system participants, which will require that employees having contributed into the social security system in the past produce proof of contributions satisfactory to the BPS. This must be done within a relatively short period of time and with more concrete documentation than has apparently been true in the past. In addition the BPS must oversee employer compliance with the payroll tax, and may levy fines in the event of nonpayment. There is also a plan to increase administrative efficiency of the BPS, inasmuch as administration costs currently amount to 6% of benefit payments annually (Gomez-Fabling 1995).

While streamlining the BPS would undoubtedly be useful and increase the system's efficiency, the data in Table 3 indicate that Uruguayan social security administrative costs are not especially high, at least compared to many other Latin American nations; Brazil and Chile both report cost ratios of 7-8%, and the LAC average is close to 28%. Since social security administrative cost rates in the OECD nations average an order of magnitude less (3%), some see this as a target worth emulating. On the other hand, it must be recognized that administrative costs might rise if services offered by the system were enhanced substantially.

The Role of the AFAPs:

Under the new social security system, the BPS will forward payroll tax revenue (and probably additional VAT revenue as needed) to the AFAPs. It will be the AFAPs responsibility to invest the funds, purchase retirement and supplemental benefit annuities, and conduct reporting and disclosure tasks. The BPS must also establish the first AFAP, described as a private independent financial institution to administer individual contributions under the second pillar of the system [Art 81]. Additional AFAPs may subsequently be established, including by banks, and must initially hold a minimum capital reserve of $60K, with 2% of fund value thereafter (or they face dissolution by the Central Bank). In addition a Fluctuation Fund must be held to cover variations in returns. AFAPs may charge commissions with rates freely set subject to the proviso that all affiliates are charged the same, and rates must be the same for both mandatory and voluntary contributions. In this way, the commission structure proposed resembled that adopted by Chilean AFPs, though recent reforms have loosened the Chilean restrictions on investment substantially (Kandell 1995).

Probably to try to reduce the opportunities for fraud, Uruguay has directed that the AFAPs will face strict investment requirements over pension fund assets [Art 133]:

A) Initially 100% in government bonds, falling by 5-10% per year to a minimum of 60%;

B) Maximum of 30% in bank bills from the Banco Hipotecario;

C) Maximum of 30% in cash or currency;

D) Maximum of 25% in Uruguayan corporate or public stock;

E) Maximum of 25% in direct Uruguayan investments with financial guarantees;

F) Maximum of 15% in loans of up to 2 years duration with a minimum ROR.

Further rules limit the sum of holdings under items B through F to less than 20% in year 1, rising by 5-10% per year to a maximum of 70% thereafter; also items C+E cannot exceed 15%, and items D+E+F cannot exceed 30%. Finally, several types of investments are prohibited [Art 124] including foreign investments (except for financial institutions operating in Uruguay), insurance company paper, paper issued by AFAPs, and paper issued by investment companies. Such limits on AFAP investments will severely restrict the institutions' ability to compete on performance, and should soon be relaxed in favor of more diversified holdings over Latin America and elsewhere.

The Role of the Central Bank:

The Central Bank is to control the overall structure of the AFAPs including the Fluctuation Fund mentioned above. Should an AFAP's system's reserves fall below the above-mentioned thresholds, the Central Bank may liquidate the noncomplying AFAP. The Central Bank will also oversee contracts between the AFAPs and insurers, and publish information periodically about the system.

Other Roles of the State:

Under the new social security law, the Uruguayan government has also taken on several new risk-sharing obligations which thus far have not been fully discussed nor financed in full. For example, the law specifies that the state will guarantee a minimum real rate of return on AFAP portfolios, and further guarantees first pillar and supplementary benefits in the event of an insurance company bankruptcy [Art 139]. In addition, benefit payments are guaranteed for government-run AFAPs (though not for the private AFAPs, which may make it difficult for the latter to compete). How these risk-sharing arrangements are to be structured has not been detailed as yet. The state is also authorized to issue indexed bonds with a minimum real rate of return, which only the AFAPs will be permitted to hold. How this process is to work has not been fully spelled out. Finally, the state has responsibility for financial and insurance market regulation, though exactly how this will evolve is not explicitly discussed in this bill.

III. An Assessment of the Uruguayan Social Security System Reform

In this section we explore in more detail particular results expected from the Uruguayan social security reform, focusing on potential fiscal, distributive, and efficiency outcomes. Where possible we

draw lessons from other Latin American nations undergoing social security restructuring over the recent past.

A. Fiscal Implications of the Reform

There is little question but that the old Uruguayan social security system faced mounting deficits into the foreseeable future, mainly due to the aging of the population, increasing benefits over time, and rising evasion (BID 1995; Kane 1995; IADB 1996; World Bank 1988, 1993;). As is evident in Table 4, Uruguay's population was older, and was aging more rapidly, than other nations in Latin America and the Caribbean, with 23% of the population expected to be age 60 or older by 2030 (versus 19% in Argentina, 21% in Chile, and 16% in the LAC region as a whole).

How deep these problems were, and whether the new system will succeed in alleviating the system's insolvency problems, remains to be seen. For example an IMF analysis projected "old law" BPS outlays at 14.8% of GDP in 1995, rising to 15% in 2005, and to 16.8% by 2035 if no reforms were undertaken (IMF 1995). Payroll taxes were expected to fall ever behind rising benefit payments, necessitating an infusion of general revenues equivalent to 8.6% of GDP by 2035.[6] A different forecast (Ayala 1995) found that without the reform, payroll tax rates would have had to grow to 44% of pay in 1999, 38% in 2009, and 50% by 2039 to achieve solvency without additional IVA contributions.

Early efforts to predict the fiscal implications of the reform concluded that the new system will not be able to be supported from payroll taxes alone in the short and medium runs, but rather value-added taxes must continue to be used to sustain the system. According t the IMF, social security expenditures under the new rules were projected to decline over the next decade by three full points of GDP, and by 2035 by almost seven points (to 10% of GDP instead of almost 17%; see Table 5). In this simulation tax evasion was projected to decline by about one-third, raising revenue. Pulling in the opposite direction, first-pillar revenues would be predicted to fall by an estimated 0.75% of GDP since a portion of the payroll tax would now go to the individual pension pillar. Overall, net payroll tax revenue to the public pillar was expected to fall 0.2% beginning around 2010. As a result, most of the cost-savings under the new system would accrue to the Treasury, whose burden would drop from 6.5% of

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[6] A somewhat smaller deficit is projected by Gustavo Michelin (1995) based on smaller projected increases in future benefits.

GDP down to 4% a decade later, then 3%, and finally 1% in 2035. Of course these projections depend on several assumptions holding true (such as real wage growth rising and evasion declining), which may or may not actually occur. A different report cites BPS estimates indicating that the new rules would pare demands on revenues somewhat, but payroll taxes would have to be 27% through 2030 to balance the system without IVA support, and would need to be higher thereafter that point (Ayala 1995).

Either way, the aging of the Uruguayan population and the high level of benefits promised under the new regime still entails a public pension system projected at around 7.4%% of GDP by 2035.   Some would judge this level of government expenditure to be too high to be sustainable, though it is certainly than comparable countries such as Argentina (spending 6% of GDP on social security) and less than Chile's expenditures of 13% of GDP on social security (see Table 1).

It should be noted that other countries have suffered from evasion problems when their social security payroll taxes were high. For example, in Argentina, payroll tax evasion was estimated at 40% given total payroll taxes of 27%, and even in Chile there appears to be substantial nonparticipation by low-paid workers because they can do better under the minimum guaranteed public benefit than by paying into the Chilean private pillar (Mesa Lago 1993; World Bank 1994a; Salvador Valdes Prieto 1992, 1993, 1994). Clearly one factor producing evasion is high payroll tax rates, and the Uruguayan reform has not curtailed the overall rate of payroll taxes. The data in Table 3 show Uruguay's total tax rate is about 3 times the LAC average of 10.5% per worker per year. A second factor likely to induce evasion is the delinking of benefits and taxes paid, and unfortunately it appears that the necessary links have not been forged with the reform plan in Uruguay. That is, very low-paid workers will tend to receive the minimum benefit irrespective of contributions, and more highly-paid workers will receive a capped maximum though payroll taxes continue to be levied on salary up to high levels. It is therefore unlikely that evasion will decline substantially under the new Uruguayan system.

Also of concern is the system's long-run ability to respond to business cycle and other shocks, and whether the new institutions envisioned by the Uruguayan social security reform will be successful. Current system revenues are too low to meet current expenditures, so some explicit mechanism to deal with this must be devised immediately. Otherwise there will be little incentive for workers to contribute to the AFAPs, and little reason for private AFAPs to be established. More generally, the 1995 law does not

satisfy the fundamental necessity of laying out precisely how various risks are to be borne by the stakeholders in the Uruguayan system including covered and uncovered employees, the reconfigured public social security system, the regulated individual account system, the private insurance and annuity companies, and the state and future taxpayers more generally.

Similar questions have arisen in other nations undertaking capitalization efforts, notably in Argentina, where the public Banco de la Nacion guarantees a minimum real rate of return on investments in what are there called AFJPs (Associaciones de Fondos de Jubilacion y Pensiones) along with a state minimum public pension of 40% of average pay for anyone whose other pensions are inadequate (World Bank 1994a; Rofman 1993). Without more clarity about financing of these return and benefit guarantees, it is almost impossible to ascertain the social security system's financially vulnerable under poor economic circumstances.

A different area of concern has to do with some of the supplemental benefit plans offered under the new (as well as the old) system. The BPS maintains total responsibility for, and monopoly control over, access to partial disability benefits, while AFAPs and private insurers are charged with handling total disability benefits. From an insurance perspective, since both sponsors of disability plans are required to provide defined benefit payments, it would behoove them to predict and charge for the expected value of future payouts. However there is a great deal of uncertainty regarding future takeup rates, implying that both parties' future costs are difficult to forecast. In addition, under the law there are no earmarked payroll taxes for disability benefits, breaking the link between tax revenues and benefits owed. Another concern is that when AFAP returns are low, workers would be expected to be more likely to seek disability plan eligibility. For example this could occur during economic downturns as has been seen in the United States over the last decade (Stapleton and Livermore 1995). Such undesirable correlations would severely undermine both the public and the private AFAPs' financial positions.

B. Benefit Amounts and Distributive Consequences of the Reform

On the benefits front, certain transitional matters must be handled right away, and others must be handled over the next decade. To begin with, the Uruguayan social security reform law distinguishes three cohorts of beneficiaries: current retirees, employees over the age of 40, and workers currently 40

or younger. It appears that no current retirees will be affected by any changes in the law [Art 61].

Workers over the age of 40 appear to have an option to stay in the old system, or within 180 days [Art 65] may switch to the new system. Those who do not opt into the new system may have their benefits computed according to the old rules, or the old rules with the new basic salary/minima/maxima instead, and benefits will be paid according to the higher formulas [Art 63].

Workers over the age of 40 opting into the reformed system face new age and service requirements for the basic retirement benefit which gradually become sex-neutral over time [Art 67-8]. As now, men must be at least age 60, but women's normal retirement age (which had been 55) rises to 60 by the year 2003 (for both 35 years of service is required). The requirements for very old age supplementary benefits also move into sex-neutrality. As under the prior rules, under the new law men must attain age 70; women must attain that age by 2003 (rising from 66 now); both face an increase in years of service for that benefit of 11 years in 1977 rising to 15 years in 2003 and thereafter. Regular retirement benefits appear to be computed according to the identical first pillar formula described above, though during the transition phase the gain for delayed retirement after age 60 in the minimum formula is only 4% rising to 12% per year over the decade to 2003 (compare eq. 2). In general the lower returns to delayed retirement for the transition generation will probably not encourage continued work by much, particularly if many are at the minimum. The minimum and maximum disability benefits are likewise scheduled to rise over time.

One datum as yet unknown is what fraction of the over-40 workforce will actually opt into the AFAP pillar. Only 13% of the Uruguayan workforce currently earns more than the $5,000 threshold, and the low-wage group will probably opt out of the AFAP private pillar (see above; also Gomez-Fabling 1995:5). In addition, early evidence from Argentina indicates that many people are choosing to stay with the publicly run plan there, expecting to receive higher benefits than those generated by the private capitalization pillar in a wide range of economic circumstances (Rofman 1993). This is because the Argentine plan offers a combined first-pillar pension (the PBU) of about 30% of pay plus an additional 30% via a government second-pillar, which for many people will be higher than what the individual capitalization account generates from investing 11% of pay at a 2% real rate of return until retirement.

Whether this pattern holds true in Uruguay will depend on the difference between the rate of real earnings growth (which affects the base salary used in the public pillar benefits) and the real rate of return of private capitalization pension investments (which determines the growth of the AFAP accounts). A simulation analysis, while beyond the scope of the present paper, would be useful so as to better judge which series of circumstances would make a private AFAP contribution plus investment earnings worth more than the public defined benefit promise which rises with pay. In any event it is not a sure thing that those Uruguayans given the option to contribute to the capitalization account will do so. One recent analysis concluded that the entire Uruguayan AFAP system might receive no more than US$30-50 million annually (Ayala 1995:8). A different estimate predicted an AFAP accrual of 2.9% of GDP, rising to US $5.0 billion by the rear 2020.

For workers currently under the age of 40, the minimum and maximum benefits relevant to the first pillar and supplementary pensions are stepped up over time such that there is an increasing incentive to work beyond age 60. For example, there is currently a delayed retirement credit for work over the age of 60 of 4%, which rises to 12% by the year 2003 (for a maximum of 10 years: Art 75). Similarly, minimum disability benefits rise by a specified amount over time to the year 2003. Widow/er benefits for survivors under age 40 are means tested and payable only for a specified period in the future (if age 30-5, 5 years; if under age 30, 2 years: Art 25). It appears that all of these nominal minima/maxima will be indexed over time [Art 12] so that the government's benefit obligations are increasing over time. Whether this was intended, and whether it is desirable, is in question, given the old social security system's insolvency.

When looking at benefits, it is worth noting that the redistributiveness of the Uruguayan social security system may change in several ways. If payroll tax evasion is, in fact, curtailed, more people will pay into the quite redistributive public pillar that guarantees low-wage workers a minimum pension and limits high-earners' benefits due to the cap. On the other hand, it is generally the case that low-wage workers have higher mortality rates than higher income employees, so that reducing evasion could increase rather than reduce net regressivity (World Bank 1994). Extending the length of the period used to compute benefits also has a double-edged effect: on the one hand evasion should fall as a consequence, but on the other, lower-wage workers will have to work longer and pay more in taxes into

the system to receive the minimum benefit. It may result that, on net, the new system will be less rather than more redistributive.

The redistributional effects of the new Uruguayan system will also depend on what effect the new rules have on retirement behavior and whether low-wage workers respond differentially than do high-wage employees. Almost all persons (except 70-year old men) face lower pension replacement rates and below for retirement at age 60 (Table 2). This would be expected to induce somewhat later retirement, but the effect might be expected to be larger among the low-paid who lack other sources of retirement income. To the extent that the low-paid also die younger, smaller replacement rates reduce benefit payouts to lower earners more than proportionally. Somewhat different patterns are evident by sex, as well. Overall, women's benefits are cut more than the men's, as compared to the current system (of course, on average). To fully judge the likely effect of these changes in benefit patterns it would be necessary to know the current pattern of retirement ages by sex, age and years of service, and to simulate how they would change under the new law. Unfortunately these data are not currently available.

Another area deserving of additional attention as the reform process proceeds is in the area of the supplementary benefits. As has been demonstrated in many other countries, a disability pension has become a favorite "path to early retirement", particularly if the medical and other criteria used to determine eligibility are relatively lax (Burkhauser 1993). Under the new Uruguayan law, disability benefits remain quite generous and in some cases greater than retirement benefits (65% of base salary for temporary disability, 45% for total disability). It is possible that applications for these benefits will rise, as eligibility rules for regular retirement benefits are tightened.

A different distributional issue must be raised with regard to the differential benefit rules that continue to apply to teachers and certain other occupations (e.g. construction workers, those in risky occupations). On the whole these groups continue to receive more generous benefits than average under this revised system, which suggests that a certain regressivity still applies (World Bank 1988). In addition, several large pension cajas such (those of professors, notaries, and bankers) still remain outside the BPS system.[7] Certainly a common set of rules and benefit amounts would be more

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[7] The military pension system is also slated to remain separate from the overhauled program.

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egalitarian, though current law promises to respect the institutional and financial autonomy of these cajas.

Finally, it appears that system solvency will require further adjustments on social security benefit payments in the relatively short term. As Table 4 shows, Uruguayan demographic projections indicate that the burden of the elderly will rise considerably over the next 3-4 decades. In fact, Uruguay currently has the highest ratio of people over age 60 in the LAC region, and by the year 2030 it will have one-third more elderly than the LAC average. In addition, the social security system's early retirement ages, coupled with low national mortality rates, imply that Uruguayan men can expect to spend 16.7 years retired (and women 25 years) and receiving benefits. These figures are substantially higher than in the US (14.9 and 18.6 years respectively), and in the OECD as a whole (15.2 and 18.6 years; World Bank 1994b).

One way to improve system solvency is to raise the normal retirement age further, perhaps to age 65 or 70, and then index it thereafter to life expectancy. The current retirement age would perhaps then be the earliest age at which a retiring worker could receive benefits, but benefits would be reduced actuarially from the (higher) regular retirement age. In other words, if the early retirement benefit were cut to about half of the regular retirement age benefit, this would help move the system toward a better financial position.

C. System Structure and Administration

One important factor influencing the potential appear of the new AFAP system is how cost-effective the private capitalization AFAP firms will be. Currently the BPS and other pension cajas expend 6% of annual outlays on administrative costs (Gomez-Fabling 1995), and efforts are underway to design a more cost-effective BPS agency. Table 4 provides data on other public pension system administrative costs for comparison purposes. In addition, the BPS is in the process of creating the new publicly-run AFAP.

A critical issue at this juncture is whether the newly-created AFAPs will be large enough to be sustained at any level of economy. Early estimates project that a maximum of 3% of employees' payroll contributions will flow to the AFAPs (Gomez-Fabling 1995) during the early years. Small AFAPs are likely to be extremely expensive to administer, based on studies of scale economies in pensions in

several different countries. For example, in Chile, administration and marketing costs totaled one-quarter of pension contributions in the early years of the program, though they have declined somewhat more recently (Diamond 1993; Diamond and Salvador Valdes Prieto 1994; Mitchell et al. 1994a, b; James and Palacios 1995).

{Tables 6, 7}

There is no question that an administrative overhaul of the BPS system, combined with computerization and better record keeping and reporting, will help streamline costs and make the system more efficient. Simultaneously the BPS must develop workers' covered employment histories, to establish benefit entitlements under the first pillar and the supplementary pension system. Additional regulations will also be required regarding the form and structure of the private AFAPs, links between the AFAPs and the insurance sector, and conditions under which various governmental guarantees are payable. For example, better record-keeping by a public pension agency can reduce benefit expenditures, inasmuch as without proper tracking of employment histories, retirees might receive benefits they might not be entitled to. In addition, public social security systems can be further spurred into cost-saving by competitive pressures. As an example of this, the Chilean public pension system undertook a massive modernization effort toward the end of the 1980s, an effort that resulted in substantial agency cost cutting along with important increases in service quality (Reid and Mitchell 1995; Mandakovic 1994a, b).

Specific examples of service quality improvements that can be targeted appear in Table 8, and include turnaround time for posting employee and employer contributions, faster responses to requests for benefits, and better investment management of funds. In particular, the possibility of international diversification of fund management should be contemplated, to protect retirees against political risk (e.g. inflation, a decline in national tax revenue).[8] Of course, as has been noted in many other studies of social security administrative efficiency, cost-savings on the administrative front will not be sufficient to resolve the social system's insolvency problems in the long run (Mitchell et al. 1994a and b; Reid and Mitchell 1995; James and Palacios 1995). Nevertheless, such administrative cost-savings along with higher quality consumer oriented services, would do a great deal to restore confidence in the system.

D. Market Efficiency Effects of the Uruguayan Social Security Reform

Based on this analysis of the Uruguayan law and its similarities and differences with systems in other countries, what can be said about the likely market efficiency effects of the Uruguayan social security reform? First, with regard to capital markets, it appears that the new Uruguayan plan will probably not generate massive new incentives to save through the capitalization system. Unfortunately, without substantial new capitalization it is unlikely that Uruguay will experience the degree of capital market deepening and broadening that Chile's AFPs have been credited with generating (World Bank 1994b). To improve capital market functioning via social security reform, it will be necessary to increase the fraction of the payroll tax channeled to the AFAPs. In addition, it would be helpful to curtail the restrictive investment limits on AFAP portfolios, and to free the AFAPs from having to offer defined benefit-type payments. This can be achieved only by imposing further benefit cuts on the first-pillar system.

Second, with regard to labor markets, the new Uruguayan plan may slightly encourage delayed retirement, but on net this effect will be modest. In addition, there remain real concerns about evasion, particularly among low-wage earnings likely to receive the minimum pension, and also among higher-paid who perceive no benefit from additional payroll taxes under the first pillar. The fact that overall payroll taxes have not been cut from their very high rates depresses the demand for labor relative to capital in Uruguay, and in addition would be expected to depress wages as has been demonstrated in Chile (Gruber 1995). A smaller first-pillar system, paying replacement rates on the order of 25-30%, would have fewer of these negative effects on the labor market. Of course, social security benefits at such a low level would necessitate continued work for more people of limited means.

E. What Remains To Be Done

Several additional questions remain to be answered before the evolving Uruguayan social security reform plan can be said to be complete.

1. Should Uruguay enhance first-pillar benefit uniformity?

For equity reasons, as noted above, it would be useful to further enhance retirement system uniformity across all occupational categories in the country. Bringing benefits and eligibility ages into

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[8] See Fields and Mitchell (1995) regarding the risks social security systems face.

conformity would also lower administrative costs. In addition, covering all employees with the same retirement system would make portability of benefit accruals easier, hence encourage worker mobility across jobs. This may be a useful development as the economy strives to become more competitive, though there will no doubt be political issues raised in such a transition.

2. Should Uruguay modify the first-pillar floor and ceiling benefits?

Some observers have suggested that it would be useful to modify or eliminate the benefit floors and ceilings specified in the new Uruguayan social security reform law. The floor is the minimum benefit payable to a retired worker with the requisite years of service but who had very low earnings levels recorded by the system. Eliminating the guaranteed social security minimum benefit is useful along two dimensions: it makes the program less expensive, and it increases incentives for people to contribute to the system (those who evade their contributions will receive lower benefits in retirement). On the other hand, eliminating the minimum social security pension generates very low benefits for some people even though they contributed to the system 35 years (at age 60) or 15 years (at age 70). So from a redistributive vantage point, eliminating the minimum is undesirable.

Another concern is that the current system still embodies incentives for evasion. To illustrate the point, let us posit a low-wage worker who has contributed the necessary years and in his 35th year of service earns a marginal $1. Since employer taxes are fully shifted to the employee (Gruber 1995), the marginal $1 of earnings is taxed at 27.5% if the worker reports it to the social security system. Very low-paid workers would always receive the minimum or floor benefit, so that no additional benefits would flow from the additional tax. Clearly, the higher the social security minimum benefit, the greater the regressivity of the payroll tax, and the stronger the incentive for low-paid workers to evade contributing to the system.

Having a maximum benefit payable under the social security system also produces some incentives for evasion, though again the decision of where to set the maximum must weigh costs versus benefits. Naturally, capping the benefit paid by the first pillar helps reduce system costs, and helps ensure that available benefits are targeted more effectively to the lifetime-low-wage earners. However the existence of the maximum implies that high wage-earners will perceive that their first pillar benefits stop rising after some point but contributions continue. Of course the second pillar program does reward

high earners to the extent they report their earnings, raising their capitalization amount without a maximum. Since the maximum benefit appears to be quite high -- payable to those whose 10-year average pay is $8,600/month--keeping the maximum is probably politically sensible and is not likely to drastically alter high-paid workers' incentives to contribute at the margin.

A related task for the Uruguayan social security system as it moves forward is to bring into line the minimums and maximums under both the regular retirement and the disability plans. Currently, the minimum disability benefit is much higher than the minimum regular retirement benefit. Lowering the minimum disability benefit to the minimum payable under the regular retirement benefit program has the beneficial effect of curtailing incentives to "game" the system. Similarly, reducing the maximum pension payable under regular retirement to the maximum level offered under the disability plan would save money and reduce incentives to switch across plans at different ages. In general, however, lowering the average benefit formula would do more to restore system solvency and increase work incentives, than would realigning the minimums and maximums.

3. Should Uruguay introduce Recognition Bonds?

Current active workers have accrued social security benefit obligations in the old Uruguayan system, based on past service and earnings. When Chile and Peru terminated their old unfunded social security systems, they made explicit the past service obligations by offering so-called Recognition Bonds. Active workers are required to hold these until retirement, at which time they present them to the government in order to claim an annuity based on the bono amount (plus some rate of return set by the government). In Peru the bonos were frozen in nominal terms, and in Chile the promised amount was decreased when the bonos were computed (World Bank 1994b). As a result, in both these cases, the recognition bond mechanism effectively reduced the government's implicit debt while converting it to an explicit debt.

Whether Recognition Bonds would be advisable for Uruguay, as it seeks to reform its social security system, depends on how the bonds would be structured, and who would hold them. Moving to this sort of bond would not resolve the system's solvency problem if the bonos promised indexed benefits under the old social security benefit formula. In fact, having such bonds might make it more rather than less difficult for the government to reduce promise benefits offered under the old regime, since the old-

system obligations would be made explicit and formalized. Also, the current social security reform law does not explicitly incorporate these bonds as part of the Uruguayan reform law, so that moving in this direction would probably require new legislation. Clearly the political and economic costs of issuing Recognition Bonds must be deemed less than the benefits, in order to consider moving ahead on this front.

4. Should Uruguay increase AFAP competitiveness?

One of the realities of moving to a defined contribution pension system is that pension participants now must bear capital market risk in a way they did not under the old defined benefit social security system. On the other hand, participants also stand to reap higher investment rewards if they make good investment decisions.

As currently structured, the Uruguayan social security reform law seems to offer only limited possibilities for substantial rewards under the AFAP system. Among the restrictions imposed by the government are a prohibition against investing in more than one AFAP at a time: the requirement that real returns on AFAP investments may not fall below 2% per year; and a rule that individual AFAPs may not earn less than 2% below the average of all AFAPs. More critical still is the mandate that all AFAPs must invest 100% in government bonds initially, and 60% in the long run; the regulation that investment company as well as insurance company investments are disallowed; and the prohibition against foreign investments. Increasing investor diversification and better protection against macroeconomic risks would be achieved by diversifying pension holdings as soon as possible (Fields and Mitchell 1995), though this may require a change in the pension law to permit international diversification. Such gains would be enhanced by additional systematic reporting and disclosure efforts describing to plan participants how benefits are linked to accruals, how the investments are performing, and what administrative costs are.

5. How should Uruguay manage AFAP retirement payouts?

As yet Uruguayan legislation has not devoted a great deal of attention to issues surrounding payouts under the AFAP system when workers reach retirement age. It will be recalled that at retirement, the AFAP participant must purchase an annuity from an insurance company, but there is no law prohibiting selective annuity pricing based on anticipated longevity. Thus for instance women and healthy retirees of both sexes would be expected to be charged more, or would receive lower annuities,

reflecting their lower anticipated mortality rates. Differential annuity pricing in this way may be expected to have incentive effects in terms of these groups' willingness to contribute to the system, and will certainly affect retiree well-being.

Another as-yet-unsettled policy issue regarding the form of benefit payouts is whether the government will permit AFAP accumulations to be cashed out in lump sum form at retirement. As currently written the law does not appear to permit such an option, but there will certainly be pressure to permit it as accumulations begin to mount. In Chile, the government allows retirees to obtain partial lump-sum cashouts as long as the remaining accumulation is sufficient to fund the purchase of a minimum government pension. Permitting lump sum cash outs in Uruguay would have the clear advantage of reducing incentives for evasion, while also increasing investor support for the AFAP system. On the other hand, lump sum cash outs could seriously erode the insurance pool over which the annuities were written, and might threaten the role of insurance companies in the plan altogether.

IV. Conclusions

Without summarizing all the issues developed in this discussion to this point, several points are worth reiterating. The most positive aspect of the Uruguayan reform from the point of view of the survival of social security in that nation is that benefit promises will grow less quickly under the new rules, than they would have under the old system. At the same time, a minimum pension is to be maintained in real terms, providing a floor under retiree income. In addition, the proposed institutional reforms of the BPS will facilitate monitoring of taxes collected, better cost-accounting and record-keeping, and more accurate tracking of funds for individual programs within the agency's purview. All of these developments are positive steps on the way to a reformed, and more solvent system.

Remaining concerns must also be acknowledged. The new Uruguayan plan is complex, more so than the system recently passed in Argentina. This lack of transparency will inevitably undermine support for both the public and the private pillars. In addition there remain many opportunities and incentives for evasion, which persists strongly under the new system.

Perhaps most importantly, the plan as presently structured does not appear to be solvent over the medium and long run. This is troubling inasmuch as Uruguayan payroll tax rates are still extremely high, making labor costs among the most expensive in Latin America. Social security payroll tax rates

could be reduced by raising the retirement age further and under some circumstances by paring benefits

further. Additional reforms to confront the solvency problem directly must receive highest priority to

ensure economic stability and political support for the system. Finally, it is not clear that strong private

Uruguayan AFAPs will develop quickly after the initial government-run plan organized by the BPS is

established. More work needs to be done to ensure that private alternatives to the government-run plan

are viable and that workers opt to move into them for the relevant portion of their contributions. Better

reporting and tracking of funds and administrative costs within the AFAPS is required, between the

AFAPS and the BPS, and between the AFAPs and the insurance companies. In general, a regulatory

structure should be put in place that encourages private sector groups to take over part of the old public

system's money management and insurance roles, and to deliver more secure benefits than the old

system could reasonably promise.

Table 1. Social Security Expenditures As a % of GDP

Latin America and the Caribbean		OECD	
Mean	**3.30**	**Mean**	**19.26**
Standard dev.	3.25	Standard dev.	7.79
Antigua-Barbuda	n/a	Australia	9.18
Argentina	6.10	Austria	25.38
Bahamas	1.43	Belgium	26.39
Barbados	4.89	Canada	16.23
Belize	0.56	Denmark	26.27
Bolivia	1.91	Finland	22.80
Brazil	4.98	France	26.80
Chile	13.10	Germany	23.40
Colombia	2.00	Greece	19.48
Costa Rica	7.30	Iceland	7.23
Cuba	n/a	Ireland	23.20
Dominica	1.42	Italy	11.18
Dominican Republic	0.47	Japan	12.16
Ecuador	3.01	Luxembourg	23.42
El Salvador	1.07	Netherlands	28.56
Grenada	1.72	New Zealand	17.86
Guatemala	0.85	Norway	29.78
Guyana	2.80	Portugal	10.39
Haiti	n/a	Spain	18.14
Honduras	1.02	Sweden	31.33
Jamaica	1.29	Switzerland	14.67
Mexico	2.67	Turkey	3.62
Nicaragua	n/a	United Kingdom	20.35
Panama	8.28	United States	12.55
Paraguay	n/a		
Peru	1.61		
St Lucia	0.79		
St Vincent	n/a		
Surinam	n/a		
Trinidad and Tobago	2.22		
Uruguay	**9.61**		
Venezuela	1.29		

Source: Mitchell et al. (1994b)

Table 2. Wage Replacement Rates of Old-Age Social Security in Uruguay:
Pre and Post 1995 Reforms

	Benefits as % of pensionable base earnings	
	Years of Earnings	
	35	40
I. At 60 years of age		
Men: Old system	65%	70%
Women: Old system	70	75
Both: New system	50	52.5
II. At 65 years of age		
Men: Old system	65%	70%
Women: Old system	80	80
Both: New system	60	65
III. At 70 years of age		
Men: Old system	67.5%	75%
Women: Old system	77.5	80
Both: New system	70	75

Source: IADB (1996).

Table 3. Social Security Administrative Costs as a % of Benefit Expenditures

Latin America and the Caribbean		OECD	
Mean	**27.78**	**Mean**	**3.12**
Standard deviation	31.16	Standard deviation	1.28
Antigua-Barbuda	n/a	Australia	1.22
Argentina	2.30	Austria	2.48
Bahamas	30.75	Belgium	4.55
Barbados	5.56	Canada	2.80
Belize	89.49	Denmark	2.98
Bolivia	21.39	Finland	3.36
Brazil	7.00	France	4.18
Chile	8.00	Germany	2.86
Colombia	81.80	Greece	6.72
Costa Rica	4.75	Iceland	1.71
Cuba	n/a	Ireland	4.88
Dominica	46.97	Italy	2.20
Dominican Rep.	31.72	Japan	1.79
Ecuador	13.55	Luxembourg	2.74
El Salvador	33.40	Netherlands	3.10
Grenada	9.85	New Zealand	2.42
Guatemala	12.72	Norway	1.00
Guyana	22.66	Portugal	4.86
Haiti	n/a	Spain	2.81
Honduras	18.25	Sweden	4.24
Jamaica	6.40	Switzerland	3.04
Mexico	23.55	Turkey	2.62
Nicaragua	n/a	United Kingdom	3.10
Panama	5.88	United States	3.28
Paraguay	n/a		
Peru	130.98		
St. Lucia	48.31		
St. Vincent	n/a		
Surinam	n/a		
Trinidad & Tobago	15.29		
Uruguay	**6.51**		
Venezuela	17.46		

Source: Mitchell et al. (1994b)

Table 4. Comparative Statistics on Latin American Demography and Retirement Systems

	Uruguay	Argentina	Chile	LAC	OECD
			Country or Region		
Demographic Data					
Population > 60 [1]	16.4%	13.1	8.7	8.2	18.6
Population > 65 [1]	11.4	9.0	5.9	4.6	13.6
Population > 75 [1]	4.4	3.2	2.1	1.5	5.9
Pop.>60/Pop.20-59 [1]	33.3	26.9	17.0	18.0	34.0
Pop.>65/Pop.15-64 [1]	18.2	14.8	9.3	9.5	19.6
Proj.%>60 by 2000 [2]	22.5	19.3	20.8	16.0	27.7
National Retirement System Coverage and Financing					
SS Contrib./LF [3]	68.8%	53.2	62.2	38.3	93.9
Pensions/Pop>60 [3]	81.7	72.4	na	30.8	84.1
Pensioners/Contribs [3]	47.6	66.7	na	21.0	39.2
Ret.Spend./GDP [4]	8.8	4.6	na	2.0	9.2
Ret.Taxes/GDP [5]	6.4	5.1	na	2.4	9.1
Tot. Payroll tax rate [6]	~29%	21	13.3	10.5	16.3
Components of Retirement System Revenues [6]					
Payroll tax	92.0%	74.0	na	63.8	57.4
Invest. earns	1.1	0.0	na	23.0	11.0
Gen. revenues	6.9	26.0	na	13.0	35.1
National Retirement System Benefit Rules					
Covered Yrs Serv. [6]	35 yrs	15	20	13.9	18.3
Ret. Age (M/F) [6]	60/60	60/55	65/60	61/59	64/63
Ben.Repl@30yrs [7]	50%*	70	na	na	na
Exp. Duration of Ret, (M/F) [8]	16.7/25.0**	15.6/24.1	na	na	15.2/18.6

Notes:
*At 35 years of service
**Under old system rules (men retire @ 60 and women @ 55).
Sources:
1. World Bank 1994: T. A1.
2. World Bank 1994: T. A2.
3. World Bank 1994: T. A4.
4. World Bank 1994: T. A5.
5. World Bank 1994: T. A6.
6. World Bank 1994: T. A7.
7. World Bank 1994: T. A8.
8. World Bank 1994: T. A10.

Table 5. Medium-Term Forecasts of Social Security System in Uruguay

	Percent of GDP				
	1995	2005	2015	2025	2035
I. Old system					
BPS Expenditures	*14.8%*	*15.3*	*15.7*	*16.2*	*16.8*
Pensions	11.3	11.5	11.8	12.0	12.3
Other benefits	2.6	2.8	2.9	3.1	3.3
Other expenditures	0.9	1.0	1.0	1.1	1.2
BPS Revenues	*8.3%*	*8.3*	*8.3*	*8.3*	*8.3*
Private sector	7.7	7.7	7.7	7.7	7.7
Other excl. Treas.	0.6	0.6	0.6	0.6	0.6
Transfers from Treasury	**6.5**	**7.0**	**7.4**	**7.9**	**8.6**
II. New system					
BPS Expenditures	*14.8%*	*12.4*	*11.5*	*10.8*	*10.0*
Pensions	11.3	9.6	8.9	8.2	7.4
Other benefits	2.6	2.2	2.0	2.0	2.0
Other expenditures	0.9	0.8	0.6	0.6	0.6
BPS Revenues	*8.3%*	*8.3*	*8.1*	*8.1*	*8.1*
Private sector	7.7	7.7	7.5	7.5	7.5
Other excl. Treas.	0.6	0.6	0.6	0.6	0.6
Transfers from Treasury	**6.5**	**4.3**	**3.4**	**2.7**	**1.0**

Source: IMF (1995).

Table 6. Social Security Administrative Costs in Selected Countries

	CHILE		COSTA RICA	ARGENTINA		U.S.	
	AFP	INP	CCSS	ANSES Costs/Benefits (4)		SSA (5)	
	Admin.	Admin. Costs /	Admin. Costs /	w/o	including		
	Charges/	Benefits (2)	Benefits (3)	Collection costs		Cost/Benefit:	
Year	Contribs. (1)					OASI	Disability
1980						1.1%	2.0%
1981							
1982							
1983							
1984							
1985				1.7%		0.9%	2.8%
1986				1.8%			
1987	25%			2.7%	5.3%		
1988	24%			2.2%	4.1%		
1989	20%			2.3%	5.5%		
1990	18%	1.1%		3.3%	5.6%	0.7%	2.4%
1991		1.3%		2.7%	5.1%	0.7%	2.4%
1992	17%	1.6%	5.1%	4.7%	7.4%		
1993		1.9%					

Source: Reid and Mitchell (1995)
Note: Data in this table reflect only pension-related social security functions.

Table 7. Social Security Administrative Costs Per Participant, Selected Countries (constant 1992 US$)

Year	AFP / Active Contributor (1)	AFP /Contributor(2)	CHILE INP / Plan Member(3)	COSTA RICA CCSS / Plan Member(4)	ARGENTINA ANSES Cost/Member (5) w/out	ARGENTINA ANSES Cost/Member (5) including Collection costs
1980						
1981						
1982		$71.0	$44.7			
1983		$55.0	$35.8			
1984		$50.0	$29.5			
1985		$43.0	$24.9			$ 6.7
1986		$42.0	$24.2			$ 8.9
1987		$39.0	$22.6			$11.0	$21.5
1988		$44.0	$24.5			$ 8.5	$15.7
1989		$42.0	$23.2			$ 5.4	$12.9
1990		$45.0	$31.8			$16.8	$28.4
1991		$46.0	$27.8	$44.2		$20.7	$39.1
1992	$51.6	$49.0	$29.8	$47.7	$7.6	$46.0	$72.6
1993				$40.8		$39.2	$65.2

Source: Reid and Mitchell (1995)

Table 8. Social Security System Performance Indicators, Selected Countries

Performance Indicator, Country, System and Measure	Performance
Contributions Administration Performance	
CHILE	
AFP	
% of accounts correctly credited in 1 mo of payment	6.20%
Correctly credited contributions (incidence of rezagos)	
1991	1.05%
1992	0.78%
1993	0.83%
% of active accounts receiving statement every 4 months	low
% of accounts receiving statement every 12 months	low
INP	NA
COSTA RICA	
CCSS (1994)	NA
ARGENTINA	
ANSES (1993)	NA
USA	
SSA: (1991)	
Posting accuracy to Summary Earnings Record	0.8%
Records posted within 6 months of close of tax year	30.0%
Benefits Administration Performance	
CHILE	
AFP (1993)	
Benefit determination correct	27.0%
INP	NA
COSTA RICA	
CCSS (1994)	
% of old age pensioners disputing initial benefit determination	20-50%
% of invalidity cases disputing initial eligibility determination	33%-50%
% of invalidity determinations overturned on court appeal	25%-40%
ARGENTINA	
ANSES (1993) (3)	
% of benefit determinations appealed to courts	29.7%
USA (4)	
SSA: OASI (1991)	
Correct initial payments	5.2%
Correct lifetime claims payments	0.2%
SSA: Disability (1991)	

Table 8 (continued)

Client Inquiry Services Delivery Performance

CHILE
AFP   NA
INP   NA

COSTA RICA
CCSS (1994)   NA

ARGENTINA
ANSES (1993)   NA

USA (4)
SSA: (1991)
Waiting time for client inquiries <15 mins. w/appt.   12.4%
Waiting time for client inquiries <30 min. w/out appt.   17.7%
Waiting time for client inquiries <60 min.   4.7%
Telephone inquiries answered w/in 24 hrs.   8.0%
Information provided leads to correct payment   2.7%

Source: Reid and Mitchell (1995)
Note: Rezagos are contributions that do not match the contributors' data base for
a given AFP.

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