Peru: Reforming the Pension System

Cheikh T. Kane

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Abstract

This paper identifies the main areas of pension reform that Peru should address in order to complement its optional capitalization scheme introduced in 1992. The guiding principle of the remaining changes is the need to adopt a unified pension regime. Such unification is desirable for both equity and efficiency reasons. A central theme of the paper is therefore to provide a framework for selecting a unified pension system. This framework allows a critical assessment of the new draft law for private pensions. In addition, an estimate of pension liabilities is provided to highlight the importance of moving towards a defined-contribution regime, but also to quantify the fiscal effect of some of the policy reforms that are being discussed in Peru, such as adopting a minimum pension guarantee.
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POLICY NOTE: REFORMING THE PERUVIAN PENSION SYSTEM

I. Introduction

As an integral component of the structural reforms implemented since 1990, Peru introduced a fully-funded private pension system in 1992. This was undoubtedly a major step towards improving income security for the elderly and addressing the well known structural problems associated with dominant pay-as-you-go pension schemes. In many respects, however, this reform needs to be consolidated and extended to other important sectors. Today in Peru there are five main pension regimes, of which the newly created private pension fund is the only defined-contribution and fully funded regime. The functioning of these five regimes is summarized in Table 1. The marked differences between these regimes in terms of financing, eligibility criterion, and benefit level create obvious distortions in net marginal tax rates. The underlying premise of this paper is that for both equity and efficiency reasons a move towards a uniform pension regime should be considered. The purpose of this paper is therefore to provide a framework for selecting a unified pension regime and assessing the fiscal implications of the transition from the current combination of regimes. Among the existing five pension regimes, the focus will be on the national pension system, the civil servant pension system (i.e., cedula viva), and the capitalization regime (i.e., AFPs). The rest of the paper is organized as follows. Section II summarizes the main problems associated with the current combination of regimes. These limitations provide the background for Section III, which lays down three options of unified pension system. Section IV gives an assessment of the new draft law for private pensions that is being discussed in Peru today. This new law provides a window of opportunity for strengthening the earlier pension reform. Section V contains estimates of unfunded liabilities associated with existing pension schemes and explores ways of financing them. Finally, Section VI summarizes the main policy recommendations.

II. Weaknesses of the Current System

The current system has at least five major drawbacks. First, except for the private pension regime, which covers 13 percent of the labor force, most pension schemes are unfunded and fiscally non-sustainable. As shown in section IV, the magnitude of these unfunded liabilities is very significant. This is particularly true for the civil servant pension system, which is financed out of general revenue. Second, the different pension regimes give rise to different contributions and benefits to individuals with the same socioeconomic profile, hence violating horizontal equity (see Table 1). For instance, workers affiliated with the civil servant pension system can draw a pension after 30-25 years of service and irrespective of their age, whereas workers affiliated with the national public pension system receive a less generous pension and are subject to a minimum age for retirement of 60 (men) and 55 (women). Third, there are still strong disincentives for workers to join the private pension scheme because of its higher contribution rate (15 percent, including commissions and disability insurance) compared to that of the national pension scheme (9 percent). This bias is reinforced by the fact that in many companies, for administrative simplicity,

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1/ The law was adopted in 1992 and the system started operating in 1993.

2/ The coverage rate of 13 percent is based on total affiliates and therefore overestimates actual number of contributors because of multiple accounts and inactive affiliates.
the one-time salary increase of 13.5 percent that is supposed to be granted to workers shifting to
the private pension fund is often applied to all workers.³

An additional disincentive to opt for the private pension scheme is due to the fact
that workers who decide to do so would face a statutory retirement age that is 5 years older for
men and 10 years older for women. Clearly, these disincentives are not consistent with moving
away from a pension system with a dominant pay-as-you-go pillar. Indeed, today there are still
twice more contributors in the national pension system than in the private pension system. Fourth,
in addition to generating significant unfunded liabilities, the civil servant pension system is holding
captive any genuine reform of the state because of its indexation to public wages. These wages are
particularly low in the social sectors. But because of the indexing mechanism, any extra US$1
spent on wages translates into a 30-cents increase in pension payments. The civil servant pension
system is also hindering the privatization process because a funding mechanism for pension
liabilities has not been put in place. It is therefore important to quantify the cedula viva pension
liabilities, devise a funding mechanism, and phase out the regime. Fifth, payroll taxes financing
pensions contribute to the very high marginal effective tax on labor, which hinders competitiveness
and is conducive to informalization. The combined taxes on labor funding pension schemes,
health, and the housing fund (FONAVI) reach 18 percent for workers affiliated with the national
pension system and 27 percent for workers affiliated with the private pension regime. It is
important to emphasize that for a small open economy such as that of Peru, prices on tradable
goods are internationally set and higher taxes therefore lead to higher labor cost because taxes
cannot be "pushed forward".⁴

III. Three Options for a Unified Pension System

Pure Capitalization System:

As shown in the previous section retaining the combination of pension systems as
they operate today is not a viable option. An alternative arrangement would be to move totally to a
capitalization scheme without any Government involvement in the provision or the guarantee of
pensions. This option therefore entails phasing out both the civil servant and public pension
systems. The attractiveness of a capitalization regime is that it removes the fiscal instability
associated with pay-as-you-go systems. Furthermore, such regime makes contributions more a
delayed compensation than a tax, hence reducing distortions. There are, however, two limitations
to adopting a pure capitalization regime. First, to the extent that redistribution remains an
objective of the pension system, a pure capitalization will not be satisfactory since individual
pensions would be determined by contributions and the average return on investments. Second,
the principle of risk diversification across pillars is also absent since there is no mechanism to
offset the investment risk factor. One must remember that the way the savings pillar works today,
and despite the existence of a fluctuation reserve, negative returns are not precluded. It would be
preferable to have a pension system that, at least partially and for the most vulnerable groups,
insulates pensions from investment risk.

³Apparently this was done by the Central Bank.

⁴This holds unless labor supply is perfectly inelastic and labor unions are absent. There is empirical evidence for OECD
countries supporting the view that increased transfers financed by distortionary taxation lead to a loss of competitiveness and a
decrease in employment in all sectors of the domestic economy (see Alesina and Perotti NBER 4810, July 1994).
Capitalization with Minimum Pension Guarantee:

In order to add redistribution to a defined-contribution scheme, the Government could provide a minimum pension guarantee that is financed out of general revenue. It should be emphasized that this option would also imply phasing out the public pension scheme as well as the civil servant pension system. In the case of Chile, the minimum pension guarantee is set at US$70 per month and requires 20 years of contribution. More recent Latin American reformers such as Colombia and Argentina also have a minimum pension that requires 20 and 30 years of contribution, respectively. It is therefore not surprising that Peru is considering following suit by inserting a minimum pension guarantee in the new draft pension law.

Cost estimates of the minimum pension guarantee are provided in Tables 2.1 and 2.2 for an average real return of 5 percent and 3 percent, respectively. The costs shown are for each eligible retiree and expressed as a multiple of the monthly average wage prevailing at retirement. It should be noted that the cost is the difference between the funds accumulated by a worker at retirement and the level that would be required to receive an annuity equal to the minimum pension. By design, the unit cost of the minimum pension guarantee is higher for low income workers. However, even with an equal starting salary, women receive a higher subsidy because it is assumed that, on average, they have a lower contribution density (i.e., propensity to contribute during working age). The fiscal burden of the minimum pension insurance also rises as the average return of the pension fund decreases. Section IV provides an estimate of the annual cost of a minimum pension guarantee and its associated implicit debt. By adopting a minimum pension guarantee that requires 20 years of contribution payments would start only 18 years from now, as the first contributions to the capitalization system took place two years ago. If the Government decided to have the guarantee applied earlier, the required years of contribution could be increased gradually to its target.

Multipillar with Public Provision:

In many countries the option of phasing out the public pension pillar either runs against considerable resistance or is simply politically unfeasible. In the case of Argentina, for instance, the original draft made the savings pillar mandatory to new entrants into the labor market. By the time of final approval, the capitalization scheme was made optional. Thus, it would be wise to devise a strategy in response to a constraint of keeping the public pension system. Such strategy should ensure that the public pension system neither becomes a source of fiscal instability nor hinders the performance of the savings pillar. For instance, the need to correct the difference in contribution rates between the savings and public pension systems becomes even more pressing if new entrants into the labor market are allowed to opt between these two regimes.

With a minimum pension guarantee of 20 percent of the average wage and an average real return of 3 percent, per-capita cost of the minimum pension guarantee would be roughly 22 times the monthly average wage for a typical worker with an average starting salary of 15 percent of the average salary. The corresponding cost for a worker with a starting salary of 42 percent of the average wage falls to 11-12 average wages.

As shown in Tables 2.1 and 2.2, when the average return goes down from 5 to 3 percent, the subsidy to workers with a starting salary of 15 percent of the average wage is increased by 22 percent for men and 19 percent for women. The methodology that we use to estimate the fiscal burden of a minimum pension guarantee does not take into account the variability of the return. This variability would have been taken into account by using an option-pricing method. For an illustration of this approach applied to Chile see Zurita (1994).
A more fundamental question, however, is whether it would be desirable to retain some form of public provision even after adding a minimum pension guarantee to a mandatory capitalization scheme for new entrants. Militating in favor of such provision is the need to protect uninsured workers that remain outside the formal sector. One way of meeting this need would be to transform the national pension scheme into a social assistance scheme. Indeed, in a country such as Peru where a large fraction of the population is outside the formal sector, the minimum pension guarantee alone becomes a less effective tool for redistribution. Today, both the national pay-as-you-go scheme and the capitalization regime cover less than 40 percent of the labor force. By contrast, in Chile affiliates to the capitalization regime represent 94 percent of the labor force. It is unlikely that such a broad coverage would take place in Peru in the near future. For this reason, Peru could consider providing a social assistance pension to the elderly in a context of a broader poverty alleviation strategy. In addition to an obvious vertical equity argument, the minimum pension guarantee might be politically easier to adopt in tandem with a social assistance pension. Of course, just like the minimum pension guarantee, the flat social assistance pension would be financed out of general revenue. It should be noted that the social assistance pension would have to be set at the level that is more or less equal to the subsidy that is implicit in the minimum pension guarantee.\footnote{8}

IV. A Critical Assessment of the Draft Pension Law for Private Pension Funds

The Government of Peru has recognized the need to correct some of the weaknesses of the current private pension system. As a result, a draft law modifying the original one was put together in April 1995. The new law contemplates changes in virtually all aspects of the functioning of pension funds. The importance of this law lies in the fact that in choosing a suitable uniform pension system, Peru seems ready to make the private pension scheme the most important pillar. This is confirmed by the proposed change in affiliation policy.

**Affiliation:** The draft law suggests making it mandatory for new entrants into the labor market to join the private pension system. This would certainly contribute to moving towards a unified pension system, but should be complemented by other measures discussed above, such as closing the civil servant pension system.

**Minimum Pension Guarantee:** This would be an important addition to the private pension fund, in particular given that affiliation to these funds would be made mandatory for new entrants. The draft does not specify the level at which the minimum pension guarantee would be set. As far as eligibility is concerned, it is proposed that to qualify workers would need to have contributed a minimum of 5 years in the private pension system, and a total of 30 years in the combined private pension and public pension systems. This implies that payments arising from the minimum pension guarantee could start as early as 1998 for workers who joined the private pension system in 1993 and have contributed 25 years to the old system.

\footnote{7/Vittas and Iglesias (1992) estimate the ratio of affiliates to the labor force at 79 percent in 1991. A more recent estimate by Powers and Terrin (1995) is 94 percent.}

\footnote{8/The social pension would have to be below the minimum pension guarantee itself since the subsidy element is the difference between this minimum and the annuity arising from the worker's savings. In Chile, for instance, there is a social assistance pension that represents 50 percent of the minimum pension guarantee.}

\footnote{9/Propuesta de Reforma Reglamentaria del Sistema Privado de Pensiones Decreto Ley No.25897, April 1995.
There is a growing consensus that when setting a minimum pension guarantee a principle of proportionality should be adopted. According to this principle, for workers who fail to meet the minimum years of contribution, the level of the minimum pension guarantee would be pro-rated by the number of years of contribution. At this stage, such proportionality is not included in the Peruvian reform proposal. Its adoption would imply that a worker who has contributed for 29 years but failed to accumulated a fund at retirement that is sufficient to yield an annuity greater or equal to the minimum pension, would receive a 97 percent (29/30) of the full minimum pension. By adopting a pro-rated guarantee, Peru would also avoid penalizing women who tend to have less continuous periods of contribution.

**Taxation:** The draft law proposes changes regarding the personal income tax as well as the value added tax (VAT). Since June, contributions to private pension funds are no longer deductible from the personal income tax while pensions remain taxable, therefore creating an unjustified double taxation. The reason is that the original draft law allowed for a deduction of contributions during the first 30 months only. The draft law proposes moving to the other extreme by suggesting that both contributions and pensions be made deductible from the personal income tax. It is hard to justify on either equity or efficiency grounds the need to exempt both contributions and pensions. Given the importance of savings for economic growth, many countries opt for a tax treatment of pension accounts that eliminates the taxation of interest. This can be done by allowing deductibility of principal contributions and taxing all withdrawals, or, alternatively, by taxing principal contributions and leaving withdrawals untaxed. In accordance with this principle, Peru should consider applying deductibility to contributions but tax pensions. Under certain conditions, this arrangement could even lead to a net increase in government revenue and a lower stock of government debt.

The draft law also suggests exempting the premium for survivor and disability insurance as well as the commissions paid to private pension funds from the VAT. As a general principle, the tax base for the VAT should be kept as broad as possible and applied to all goods and services. Usually goods and services are exempted or zero rated either for equity reasons (e.g., food products), because they are difficult to tax (e.g., some financial services, renting and leasing of movable and immovable property), or because they do not fall within the tax base of the VAT (e.g., exports). In principle, pure insurance naturally falls under the VAT net. Life insurance has an additional complexity because of its implicit saving component. Technically, a VAT can still be applied to life insurance by fully taxing the premium net of the saving component and paying a VAT on the claims less the cash surrender value of the policy (see Barham, Poddar and Whalley 1987). In practice, many countries do exempt life and pure insurance from the VAT. In Chile, for instance, there is a VAT exemption on life insurance and other pure insurance

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10 / The Chilean minimum guarantee does not include proportionality either.

11 / These two forms of taxation are generally referred to as consumption tax treatment of savings accounts.

12 / Feldstein (1995) shows that, once the effect on corporate income tax is taken into account, the fiscal incentives of IRA accounts in the US lead to a more favorable impact on government revenue and debt stock than previously thought.

13 / The correct arrangement is that the “full value of the premium should be taxed at the VAT, and that insurance companies should increase claims paid by the VAT rate...At the insurance company level, VAT supplements paid when claims are made would be creditable as input taxes against VAT due on premium, and thus the net VAT remitted would reflect only its value added in providing financial intermediation services” (Barham, Poddar, and Whalley, 1987).
policies (e.g., earthquakes). Despite the fact that the EEC's Sixth Directive requires member countries to exempt insurance from VAT, many countries either have a stamp duties or a separate and lower rate for insurance premium. The first best solution for Peru seems to be to keep life insurance under the VAT net, but make sure that the base is properly defined i.e., excludes the saving component. If this turns out to be difficult to implement then the solution would be to follow Chile's route and exempt life insurance altogether.

With regard to commissions paid to private pension funds, there is no good argument for zero rating or exempting them from the VAT. Unlike life insurance, commissions to private pension funds do not have any saving component. The only question that remains is to ensure that the tax base is the cost of intermediation rather than total revenues from commissions alone, which would turn the VAT into a cascading sales tax.

**Contribution:** Under the proposed new rules, the total contribution to the private pension fund system, including commissions and insurance premium would fall from 15.02 to 11.29 percent. This reduction would come partly by lowering the contribution channeled to the individual account from 10 to 8 percent. There is a danger that in trying to reduce the difference in contribution rates between the private pension fund and the public pension system, Peru would end up with a contribution rate that is too low to guarantee a meaningful pension at retirement. The actual contribution rate of 10 percent seems adequate to provide for a pension equivalent to 75 percent of pre-retirement salary. Given the possibility of early withdrawal when the accumulated funds can guarantee a pension equivalent to 50 percent of the worker's salary, there does not seem to be a compelling reason for reducing the contribution rate. Another important point is that, ceteris paribus, a lower contribution to the individual account increases the fiscal cost of the minimum pension guarantee. Lowering the contribution by 2 percentage points would increase the liabilities of the minimum pension guarantee from 4.7 to 5.8 percent of 1994 GDP (using a 4 percent discount).

Peru, unlike most other Latin American reformers, does not apply any wage ceiling to contributions. The new draft proposes a ceiling of 4104.8 Soles (April 1995) that would be indexed to the consumer price index. The main rationale for such a ceiling is that high-income workers hold other assets and there are efficiency costs in having an excessive mandatory saving. It should be added that the existence of a ceiling is an additional reason for not reducing the contribution rate since it limits the possibilities of excess mandatory savings.

**Investment regulations and Minimum Return:** Two important changes are proposed in this area. First, the fluctuation reserve that was instituted to guarantee a minimum

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14/ See Miguel Massone (1994).

15/ In the Federal Republic of Germany, the tax on premium is 5%, in Greece 3-8-18%, in Italy 1-5%, and in France 2-30% (see A Tait, 1987).

16/ Assuming an average real return of 4 percent, a 6 percent probability of being unemployed, an average duration of unemployment of 2 months, and an average real wage growth of 2 percent.

17/ The resulting elasticity of liabilities of the minimum pension guarantee to the contribution rate is -1.1.

18/ This ceiling is US$1500 in Chile, US$2500 in Colombia, and US$3780 in Argentina (Towers Perritt/Marcu y Asociados, 1995)
return would be eliminated.\textsuperscript{19} The justification is that this arrangement penalizes good performers, since returns in excess of a threshold have to be channeled to this reserve rather than translate into an increased value of the fund to affiliates. It is important to realize that creating a minimum pension guarantee while eliminating the minimum return mechanism places more of the investment risk on the shoulders of the State. This risk would be exacerbated by barriers to moving across different private pension funds due to the existence of captive markets, or if workers do not have full information about the relative performance of different pension funds. As pointed out earlier, it is against this combination of factors that one must assess the full implications of reducing the contribution rate. For all these reasons, improving the fluctuation reserve to reward good performers might be more indicated than eliminating it altogether.\textsuperscript{20} An innovative approach followed by Colombia has been to take into account actual returns of different assets to determine the minimum return, hence allowing for more product differentiation by private pension funds.

The second direction of change contemplated by the new draft law is related to investment regulations. For instance, the maximum portfolio share of central government and central bank papers would be reduced from 60 percent to 40 percent. There does not appear to be a convincing rationale for reducing the ceiling on government papers at such an early stage of the capitalization regime. Indeed, these are maximum rather than minimum limits.\textsuperscript{21} An important aspect of investment regulation which would remain unaltered under the new draft law is related to the ceiling on foreign assets. This ceiling would be kept at 5 percent, which is the lowest among Latin American reformers.\textsuperscript{22} There is some evidence pointing to the desirability for Latin American pension funds to achieve a greater international portfolio diversification.\textsuperscript{23} Such evidence suggests that Peru should at least reach parity with other Latin American reformers and increase the ceiling on foreign assets to 10 percent.

IV. Overall Unfunded Pension Liabilities and Cash Flow Issues

**Consolidated Implicit Debt:**

All three pension regimes analyzed in this note give rise to liabilities. The importance of quantifying these liabilities lies in the fact that they shed light on the Government's intertemporal budget, hence allowing a better assessment of the sustainability of other planned

\textsuperscript{19} In Peru and Chile, private pension return in excess of 150 percent of the industry average must be channeled to a fluctuation reserve, which guarantees a minimum return. This minimum return is set at 50 percent of the industry average return or 2 percentage points below the industry average, whichever is lower.

\textsuperscript{20} There seems to be similar dissatisfaction with the minimum return and fluctuation reserve in Chile (see Garcia, 1995).

\textsuperscript{21} Chile, for instance, had much higher ceilings on government papers at the beginning of the reform. Even today, 43 percent of investment by Chilean private pensions can be done in government papers.

\textsuperscript{22} The corresponding ceiling is 9 percent in Chile, 10 percent in Argentina, and 10 percent in Colombia.

\textsuperscript{23} Ricardo Garcia (1995) reports a very important finding regarding the optimal portfolio allocation in Chile. He shows that an efficient portfolio allocation based on observed performance and risk between May 1994 and May 1995 would have included only 5 percent of Chilean assets, 50 percent of European (G7 excluded), 24 percent of G7 assets, 2 percent of Other Latin American assets, and 19 percent of South East Asian assets. In practice, Chilean pension funds invested only 0.6 percent of their portfolios abroad (March 1995).
investments. This highlights the importance of designing a financing plan for these liabilities by taking into account all resources available, including the proceeds of privatization. Indeed, sound fiscal management favors using the proceeds of privatization to reduce Government's liabilities rather than to finance recurrent expenditures. It is also important to analyze the cash flow implications of these liabilities because of their very different maturity structures.

The consolidated pension debt is shown in Table 3 under three assumptions about the discount rate. Using a discount of 4 percent, the consolidated implicit debt of all three pension systems is estimated at 51.2 percent of 1994 GDP. Of this debt, the largest proportion is attributed to the public pension system (33.3 percent of GDP). Within the public pension system, contributors' acquired rights account for 26.8 percent of GDP. In general, the Peruvian public pension debt is relatively low compared to that of countries with a much older population and wider coverage such as Uruguay (216-295 percent). The maturity structure of the implicit debt is shown in Table 4. About 34 percent of the public pension debt need to be serviced between 1995 and the year 2000.

The implicit debt created by the civil servant pension system with a discount of 4 percent is estimated at 9.9 percent of GDP. In sharp contrast to the public pension system debt, the civil servant debt is mostly (77 percent of total debt) due to actual pensioners rather than contributors. This is explained by the fact that the ratio of pensioners to contributors is 0.17 for the public pension system and 3.5 for the civil servant one. The civil servant pension system has the shortest maturity, more than half of the debt needs to be serviced between 1995 and the year 2000. This makes the civil servant pension problem a more pressing fiscal issue because it is financed out of general revenue.

The liabilities associated with the private pension fund have two components. The first one comes from the recognition bonds promised to workers who have switched from the public pension regime to the capitalization regime. The present value of these bonds with a 4 percent discount is estimated at 3.2 percent of 1994 GDP. Because the recognition bonds do not bear any real interest and mature at retirement only 22 percent of the present value of this debt will be serviced between now and the year 2010. The second component of the liabilities associated with the private pension fund are the ones that would arise if Peru decided to implement a minimum pension guarantee. In other words, unlike the other sources of debt, the one arising from the minimum pension insurance has not been committed yet. With a minimum pension of 20 percent of the average wage and a requirement to have contributed 20 years, the debt is estimated at 4.7 percent of GDP. It is important to note that this debt would have to be serviced at a time when both the public and the civil servant pension systems would be virtually phased out, provided (as recommended) all new entrants to the labor market are required to join the capitalization scheme. About 80 percent of the minimum pension liabilities towards current affiliates would need to be honored between 2011 and 2030 (see Table 4).

24 /It should be noted that when estimating the size of the implicit debt, a "termination hypothesis" is adopted. Thus, it is assumed that all contributors are reimbursed starting today using a pension that is prorated by the worker's age to the normal retirement age. It is important to keep this hypothesis in mind when analyzing the maturity of the debt attributed to contributors because payments start prior to retirement.

25 /It should be noted that an earlier World Bank estimate for the present value of these bonds was 4.2 percent of GDP (see Peru: Public Expenditure Review, Report No. 13190-PER, October 31, 1994). The previous estimate, however, assumed that 1.25 million workers would be entitled to a recognition bond. In this case, because we are looking at the consolidated debt, we confine the calculation to the actual number of workers who have already switched. Workers who are expected to switch later are still taken into account in the public pension debt.

26 /The debt calculation is confined to current affiliates rather than incorporating projections about future affiliates.
Consolidated Cash-flow Accounts:

The implicit pension debt gives a good indication of the intertemporal fiscal stance. It is important, however, to take into account cash-flow considerations as the Government faces obvious borrowing constraints. The cash flow needs are captured by Table 5, which shows the consolidated accounts of all three pension regimes. Throughout the projections real GDP growth and annual inflation are set at 3 percent and 10 percent, respectively. For the public pension system, it is assumed that the system is phased out, since all new entrants into the labor market would join the private pension system. The consolidated deficit of all three pension systems would average 0.7 percent of GDP in 1995-2000 and fall below 0.2 percent of GDP after the year 2040. Based on the existing pension systems, very few countries, if any, can expect a similar fiscal improvement.

Expenditures under the public pension system are separated into three components. The first component is attributed to the current stock of retirees. For these retirees, expenditures would gradually fall from 0.6 percent of GDP in 1995 to 0.3 in 1999. Given the current life expectancies, these expenditures would disappear by the year 2023. The second component is attributed to future retirees from the current pool of workers affiliated with the public pension system. For this group, expenditures would average 0.05 percent of GDP a year in 1995-2000. The third expenditure item represents the administrative cost that is kept at its current level relative to pension expenses (15 percent). Since pension expenditures are gradually reduced to zero so is the administrative cost. This is an additional benefit of having minimum pension guarantee under the capitalization regime while phasing out the public pension system. Overall, the deficit in the public pension system would average 0.10 percent of GDP in 1995-1998. Provided that the administrative cost falls with pension expenditures, the public pension system will enjoy a period of small surplus in 1999-2020. Subsequently a deficit will take place as the pool of contributors disappears. In short, phasing out the public pension system does not represent a major source of fiscal imbalance as long as the administrative cost is reduced proportionately to benefit expenses.

The civil servant pension system is by far the biggest source of cash flow imbalance, since it is financed directly out of general revenue. Again, the fiscal accounts presented are based on the assumption that the civil servant pension system, just like the public pension system, would be phased out. This is relatively easy to do because there are very few active workers in this system compared to pensioners. The phasing out period could be accelerated through incentives given to active workers to opt out of the system. This could take the form of a recognition bond mechanism similar to the one that has been designed for workers shifting from the public pension system to the capitalization regime. Pension expenditures of the civil servant system would average 0.5 percent of GDP in 1995-2000. Most of this cost would be attributed to the existing stock of pensioners. For state-owned-enterprises that have been or are in the process of being privatized the management and payment of future pensions could be shifted to private pension funds by transferring to them some of the privatization proceeds necessary to continue paying pensions through the already existing mechanism of phased withdrawals. This would help boost the industry in a relatively small market while removing the temptation for the Government to either use these funds for other purposes or force investment into low or even negative returns.

Annual Government expenditures arising from the private pension system appear in the lower panel of Table 4. The first component is made of recognition bonds, which would
average 0.03 percent of GDP in 1995-2000. The payment of these recognition bonds would reach a peak of 0.17 percent of GDP in the year 2014 and fall gradually to zero by the year 2042, which is the expected date of retirement of the last recognition bond beneficiary.\textsuperscript{27} It is important to include these payments into the budget planning process to avoid unnecessary delays. If the Government decided to adopt a minimum pension guarantee, then a additional source of expenditures would be created. But as shown in the table if eligibility to a minimum pension requires 20 years of contribution, then the first outlays would appear only in the year 2013.

VI. Summary of Recommendations and Transition Issues

Adopt a Unified Pension System:

This entails making the capitalization scheme mandatory for new entrants, adding a minimum pension guarantee to the capitalization regime, transforming the national pension regime into a flat social assistance scheme, and phasing out the civil servant pension scheme. If Peru decided instead to keep an earnings-related public pension scheme, then the need to equalize contribution rates and statutory retirement ages would become even more pressing.

Accelerate the phasing-out of the civil servant regime:

This can be done at least in two ways. First, for enterprises that have been or are in the process of being privatized, pension payments to current retirees could be shifted to private pension funds. In principle, the Oficina de Normalizacion Provisional (ONP) is responsible for managing pension payments of privatized companies by creating appropriate reserves. International experience indicates that partial funding managed by the public sector is very likely to fail. A better approach would be to shift the reserves backing the cedula viva to private pension funds, which could use them to design individual accounts of phased withdrawals (retiro programado). This has the added advantage of not requiring any heavy administrative structure and new investment regulations. The allocation of reserves to private pension funds should be done through a bidding process in which group policies would be designed, but a single private pension fund should not be allowed to have more than a certain proportion of total reserves and affiliates. Because of the magnitude of the funds involved, allocating them to a single private pension fund would undermine the competitive nature of the industry. The estimated reserves for pension payments are estimated at US$108 million for only three privatized enterprises that would be good candidates for a pilot program.\textsuperscript{28} The relative size of these reserves becomes obvious by noting that total accumulated funds by private pensions are estimated at US$253 million (1994).

Another way of accelerating the phasing-out of the civil servant pension would be to design a recognition bond mechanism similar to the one adopted for workers shifting from the national pension system to the capitalization regime. The dilemma is that making the bonds

\textsuperscript{27} It is important to note that annual expenditures implied by the minimum pension guarantee take into account the fact that new entrants into the labor market would be required to join the private pension system.

\textsuperscript{28} According to the Government’s actuarial studies, the reserves required for pensioners associated with Electrolima and EMSAL are US$45.2 and US$7.9 million, respectively. The new owners of the privatized telephone company (Telefonica) have also estimated the reserves necessary to meet future pension payments that fall under the Government’s responsibility at US$55.3 million. The total for these three companies alone is therefore US$108 million.
actuarially fair would induce more workers to opt for it, but at the risk of being too costly. One could argue, however, that there is risk premium attached to any implicit government promise that would induce workers to accept an explicit recognition bond maturing at retirement rather than a promise of a full pension over an entire retirement period.

**Fiscal Incentives:**

Starting in June, contributions to the private pension fund are no longer deductible from the personal income tax while pensions would remain taxable, therefore creating an unjustified double taxation. Notwithstanding the need for Peru to improve its tax ratio, the personal income tax should be applied to either contributions or pensions but not both. A better approach would be applying deductibility to contributions and taxing pensions. This deduction, however, should apply only to the mandatory contribution component (10 percent). Any contribution in excess of the mandatory level would be taxed.

The VAT base should be kept as broad as possible. For this reason, commissions to private pension funds should be included in that base. Life insurance should also enter the VAT base provided the necessary adjustments are made not to tax its saving component.

**Contribution Level and Structure:**

The new draft law suggests reducing the contribution rate to individual accounts from 10 to 8 percent. This appears to be an attempt to close the gap in contribution rates between the public pension system and private pensions. There are, however, many reasons for keeping the contribution rate at 10 percent. First, after taking into account unemployment and other sources of non-contribution, the 10 percent rate does not appear to lead to excess savings. Second, the new draft law suggests implementing a ceiling on contributions that would limit further the possibilities of excess savings. Third, the pension law allows for the possibility of early withdrawal when the accumulated fund reaches a certain level. It is therefore preferable to keep the current contribution rate of 10 percent until there is clear evidence that the rate is not satisfactory. The difference in contribution rate between the two regimes should not dictate such a change.

The differences in the structure and level of contributions between the two main pension regimes require an adjustment. Currently, the entire contribution to the private pension fund is deducted from the worker's salary whereas contributions to the national pension scheme are nominally shared by the employer (6 percent) and employee (3 percent). Removing this asymmetry, by shifting the entire contribution to the national pension system to the worker, would contribute to eliminating the perception that the private pension system is too costly. This would need to be accompanied by an increase in the salary such that take-home income remains unchanged. In the same spirit, if Peru decided to keep the 1 percent solidarity contribution, then it should be applied to all workers.

**Investment Regulations and Minimum Return**

Peru has a more restrictive policy regarding investment in foreign assets than other Latin American reformers. To achieve greater international portfolio diversification the ceiling on foreign assets could be increased to at least 10 percent. Although, the minimum investment return penalizes good performers, improving its mechanism along the lines of the Colombian scheme seems preferable to eliminating it altogether.
Appropriate Budgetary Allocations:

Moving towards a unified and improved pension system entails recognizing current and future liabilities and funding them. This is very obvious, for instance, in the creation of a minimum pension guarantee, which should be explicitly inserted in the budget as soon as it is adopted rather than waiting for the first payments to be due. The same holds about the recognition bonds. It is important for Peru to make provisions for these liabilities by using, among other sources of revenues, the privatization proceeds. Only then, would the budget contain the intertemporal flavor that contingent liabilities call for.  

\[\text{\textsuperscript{29}}\text{see Blejer and Cheasty (1991).}\]
Statistical Annex

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Table 1: Peru’s Main Pension Regimes

<table>
<thead>
<tr>
<th>Year Created</th>
<th>Law</th>
<th>Scope</th>
<th>Benefits Offered</th>
<th>Eligibility</th>
<th>Financing and Funding</th>
</tr>
</thead>
</table>
| 1965         | DS 04-65-TR | workers of the fishing industry | health, widow’s pension, orphan allowance, and others | • 55 years of age  
• minimum 15 weekly contributions per year  
• registered in the CBSSP  
• have fisher ID | The maximum amount of the retirement pension is equal to 80% of the five year average salary received during the last five years. |
| 1973         | DL19990 (under ONP’s jurisdiction) | all workers and self-employed | retirement, survival, disability. | • 60 years of age for men  
• 20 years of contribution | 50% of the salary of the first twenty years of service, and an additional 4% for every year of service. By law, the maximum pension is stipulated in S./600. The worker contributes 3%, and the employer another 6%. |
| 1974         | DL21021 | military and police personnel | retirement, widow’s pension, orphan allowance, (ascendientes) | • after 15 years of service for men and 12.5 for women | For 15-20 years of service, the pension would equal 1/30 of the salary corresponding for every of service. After 30 year of service the amount of the pension will equal to that of the salary. For 35 years of service or more, the pension would increase depending on the number of years of service, and the pension remuneration is in relation to the remuneration of the total salary of the immediate higher grade. The worker contributes 6% and the employer another 6%. |
| 1974         | DL20530 (under ONP’s jurisdiction) | public sector workers not included in DL 19990 | retirement, pension of the suspended official, widow’s pension, orphan’s allowance, survivor, disability | • 30 years of service for men and 25 for women | Financed by general revenues, The amount of the pension equals to that of the salary of an active worker. The worker contributes 6% and the employer another 6%. |
| 1992         | DL25897 | workers of the public and private sector, and the self employed | retirement, survivor, disability, other benefits | • 65 years of age for men and women | The contribution scheme is the following: 10% for the capitalization account, 1.9% for the variable commission, S./ 1.45 of fixed commission, and 1% for the IPSS. |
Table 2.1: The Cost of a Minimum Pension Guarantee with an Average Return of 5% 
(as a multiple of the average wage at retirement)

<table>
<thead>
<tr>
<th>Starting Wage (% of Average Wage)</th>
<th>Frequency</th>
<th>Cost of Minimum Pension Guarantee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>MP = 20%</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Men</td>
</tr>
<tr>
<td>14.8</td>
<td>0.132</td>
<td>18.1</td>
</tr>
<tr>
<td>25.2</td>
<td>0.177</td>
<td>10.9</td>
</tr>
<tr>
<td>42.0</td>
<td>0.165</td>
<td>0</td>
</tr>
<tr>
<td>58.8</td>
<td>0.096</td>
<td>0</td>
</tr>
<tr>
<td>75.6</td>
<td>0.075</td>
<td>0</td>
</tr>
<tr>
<td>92.4</td>
<td>0.055</td>
<td>0</td>
</tr>
<tr>
<td>117.6</td>
<td>0.08</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: MP = Minimum pension as a percentage of average wage

Table 2.2: The Cost of a Minimum Pension Guarantee with an Average Return of 3% 
(as a multiple of the average wage at retirement)

<table>
<thead>
<tr>
<th>Starting Wage (% of Average Wage)</th>
<th>Frequency</th>
<th>Cost of Minimum Pension Guarantee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>MP = 20%</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Men</td>
</tr>
<tr>
<td>14.8</td>
<td>0.132</td>
<td>22.1</td>
</tr>
<tr>
<td>25.2</td>
<td>0.177</td>
<td>17.7</td>
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<tr>
<td>42.0</td>
<td>0.165</td>
<td>10.7</td>
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<tr>
<td>58.8</td>
<td>0.096</td>
<td>3.7</td>
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<tr>
<td>75.6</td>
<td>0.075</td>
<td>0</td>
</tr>
<tr>
<td>92.4</td>
<td>0.055</td>
<td>0</td>
</tr>
<tr>
<td>117.6</td>
<td>0.08</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: MP = Minimum pension as a percentage of average wage

Key Common Assumptions

Real wage growth = 2%
Male contribution density 61%
Female contribution density 56%
Age of entry to labor market = 20
Table 3: Implicit Pension Debt (as a percentage of 1994 GDP)

<table>
<thead>
<tr>
<th>Discount Factor</th>
<th>D=2%</th>
<th>D=4%</th>
<th>D=8%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consolidated Liabilities</td>
<td>68.91</td>
<td>51.20</td>
<td>32.46</td>
</tr>
</tbody>
</table>

I Public Pension System
1.1 Stock of Pensioners | 42.431 | 33.351 | 22.429 |
1.2 Acquired Rights Contributors | 7.875 | 6.581 | 4.869 |

II Civil Servant Pension System
1.1 Stock of Pensioners | 6.271 | 5.287 | 4.004 |
1.2 Contributors | 1.791 | 1.510 | 1.144 |

III Private Pension Funds (AFPs)
1.1 Recognition Bonds | 5.183 | 3.226 | 1.426 |
1.2 Minimum Pension Guarantee | 9.30 | 4.743 | 1.358 |

Table 4: Maturity Structure of the Implicit Debt

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I Public Pension System</td>
<td>33.87</td>
<td>40.77</td>
<td>18.74</td>
<td>5.84</td>
<td>0.75</td>
<td>0.02</td>
<td>0.00</td>
<td>100</td>
</tr>
<tr>
<td>- Pensioners</td>
<td>46.40</td>
<td>39.90</td>
<td>11.70</td>
<td>1.83</td>
<td>0.14</td>
<td>0.02</td>
<td>0.00</td>
<td>100</td>
</tr>
<tr>
<td>- Contributors</td>
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<td>40.99</td>
<td>20.47</td>
<td>6.82</td>
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<td>0.02</td>
<td>0.00</td>
<td>100</td>
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<tr>
<td>II Civil Servant Pension</td>
<td>50.40</td>
<td>35.99</td>
<td>11.25</td>
<td>2.11</td>
<td>0.23</td>
<td>0.02</td>
<td>0.00</td>
<td>100</td>
</tr>
<tr>
<td>- Pensioners</td>
<td>50.40</td>
<td>35.99</td>
<td>11.25</td>
<td>2.11</td>
<td>0.23</td>
<td>0.02</td>
<td>0.00</td>
<td>100</td>
</tr>
<tr>
<td>- Contributors</td>
<td>33.05</td>
<td>36.07</td>
<td>19.73</td>
<td>8.58</td>
<td>2.32</td>
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<td>III Private Pension Fund</td>
<td>0.31</td>
<td>0.89</td>
<td>19.55</td>
<td>39.08</td>
<td>37.74</td>
<td>2.43</td>
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<td>100</td>
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<tr>
<td>- Recognition Bonds</td>
<td>5.73</td>
<td>16.56</td>
<td>40.59</td>
<td>26.37</td>
<td>10.68</td>
<td>0.06</td>
<td>0.00</td>
<td>100</td>
</tr>
<tr>
<td>- Minimum Pension</td>
<td>0.00</td>
<td>0.00</td>
<td>18.36</td>
<td>39.80</td>
<td>39.28</td>
<td>2.56</td>
<td>0.00</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 5: Consolidated Accounts of the Three Main Pension Systems
(as a percentage of GDP)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I Public System</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Expenditures &amp; Commitments</td>
<td>0.725</td>
<td>0.662</td>
<td>0.588</td>
<td>0.519</td>
<td>0.451</td>
<td>0.394</td>
<td>0.091</td>
<td>0.033</td>
<td>0.001</td>
<td>0.000</td>
</tr>
<tr>
<td>- Current Pensioners</td>
<td>0.573</td>
<td>0.509</td>
<td>0.451</td>
<td>0.400</td>
<td>0.347</td>
<td>0.307</td>
<td>0.009</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>- Future Pensioners</td>
<td>0.058</td>
<td>0.067</td>
<td>0.061</td>
<td>0.051</td>
<td>0.045</td>
<td>0.036</td>
<td>0.070</td>
<td>0.029</td>
<td>0.001</td>
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<tr>
<td>- Administrative costs</td>
<td>0.095</td>
<td>0.086</td>
<td>0.077</td>
<td>0.068</td>
<td>0.059</td>
<td>0.051</td>
<td>0.012</td>
<td>0.004</td>
<td>0.000</td>
<td>0.000</td>
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<tr>
<td>1.2 Revenues</td>
<td>0.504</td>
<td>0.488</td>
<td>0.476</td>
<td>0.465</td>
<td>0.453</td>
<td>0.434</td>
<td>0.143</td>
<td>0.000</td>
<td>0.000</td>
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<tr>
<td>1.3 Deficit</td>
<td>-0.221</td>
<td>-0.174</td>
<td>-0.113</td>
<td>-0.054</td>
<td>0.002</td>
<td>0.041</td>
<td>0.053</td>
<td>-0.033</td>
<td>-0.001</td>
<td>0.000</td>
</tr>
<tr>
<td><strong>II Civil Servant Pension System</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Expenditures &amp; Commitments</td>
<td>0.639</td>
<td>0.621</td>
<td>0.576</td>
<td>0.533</td>
<td>0.493</td>
<td>0.454</td>
<td>0.065</td>
<td>0.009</td>
<td>0.001</td>
<td>0.000</td>
</tr>
<tr>
<td>2.11 Current Stock of Pensioners</td>
<td>0.629</td>
<td>0.584</td>
<td>0.540</td>
<td>0.500</td>
<td>0.461</td>
<td>0.424</td>
<td>0.035</td>
<td>0.000</td>
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</tr>
<tr>
<td>General Government</td>
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<td>0.404</td>
<td>0.374</td>
<td>0.346</td>
<td>0.319</td>
<td>0.294</td>
<td>0.024</td>
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<tr>
<td>Non-Financial Institutions</td>
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<td>0.064</td>
<td>0.059</td>
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<td>0.051</td>
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<tr>
<td>General Government</td>
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<td>0.031</td>
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<tr>
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<td>-0.621</td>
<td>-0.576</td>
<td>-0.533</td>
<td>-0.493</td>
<td>-0.454</td>
<td>-0.065</td>
<td>-0.009</td>
<td>-0.001</td>
<td>0.000</td>
</tr>
<tr>
<td><strong>III Private Pension Funds (AFPs)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2 Recognition Bonds</td>
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<td>0.017</td>
<td>0.016</td>
<td>0.049</td>
<td>0.032</td>
<td>0.031</td>
<td>0.383</td>
<td>0.192</td>
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<td>0.038</td>
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<td>0.000</td>
<td>0.302</td>
<td>0.190</td>
<td>0.088</td>
<td>0.038</td>
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<td>1.4 Government Deficit</td>
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<td>-0.017</td>
<td>-0.016</td>
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<td>-0.032</td>
<td>-0.031</td>
<td>-0.383</td>
<td>-0.192</td>
<td>-0.088</td>
<td>-0.038</td>
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<td><strong>IV Consolidated Deficit</strong></td>
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<td>-0.812</td>
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<td>-0.522</td>
<td>-0.444</td>
<td>-0.395</td>
<td>-0.234</td>
<td>-0.090</td>
<td>-0.038</td>
</tr>
</tbody>
</table>

*Note:* Using SNP administrative cost = 15% of pension expenses
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Powers and Terrin. 1994. "Caracteristicas del nuevo sistema de pensiones en Argentina y su comparacion con las reformas de Chile, Peru y Colombia, December.


