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Pension Reform in India

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Abstract

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This paper reviews the current state of the pension system in India, as well as plans to reform it. Problems with the current system are identified, and, within this context, the appropriate role of the government in retirement saving is discussed. Finally, the OASIS reform proposal is evaluated and additional reform options are presented.

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I. THE NEED FOR REFORM

Pension reform is a subject in active debate in India today, for several reasons. First and foremost, the coverage of the current complex of pension programs is extremely narrow. Roughly 11 percent of the current working-age population participates in mandatory, formal programs designed to provide income security during old age. Moreover, these participants—salaried employees in the formal private sector and government—are among the highest-income workers in India. Almost 85 percent of workers operate in the relatively informal sectors of the economy and have very little ability or opportunity to save for old age. The poorest elderly are covered under a separate social assistance program—the National Old Age Pension Scheme (NOAPS)—that provides a benefit of Rs 75 per month. However, relatively few elderly have applied for this benefit and, in any case, coverage is limited to 10 percent of the population over 65.²

Second, the retirement system for workers in the formal private sector is complex and has performed inadequately. Two funded programs—the defined-contribution Employees' Provident Fund (EPF) and the defined-benefit Employees' Pension Scheme (EPS)—invest contributions to fund retirement and insure against a variety of income-disruption risks. The investment options are highly regulated and have yielded low returns. Moreover, premature withdrawals are freely available. Consequently, despite a very high contribution rate, funds remaining to provide income support in old age are often inadequate. It is highly likely that the EPS has a fundamental imbalance between contributions and benefits, especially given its restrictive investment regulations.

Third, absent reform, the pension system for government employees is likely to place increasing pressure on the budget in the years ahead. Civil servants are covered under noncontributory, pay-as-you-go pension systems (CSPS) administered by both the central and state governments and a separate Government-wide Provident Fund (GPF). The CSPS has a high dependency rate—the ratio of beneficiaries to workers—partly because of special provisions for the military. Contributions to the GPF are deposited in the Government of India Public Account. These funds are not segregated and invested, so the fund operates essentially on a pay-as-you-go basis providing a source of financing for the government.

Reform is important not only to achieve social objectives, but also to reduce the government's contingent liabilities. Three aspects of the current system create fiscal risk: (1) the CSPS will become an increasing burden on the budget; (2) the EPS is likely underfunded, and the budget has ultimate responsibility for benefits; and (3) retirement saving receives preferential treatment under the tax system, allowing higher-income workers to

² In addition to NOAPS, the poorest elderly may also be eligible for social assistance at the state level. Unfortunately, little information is available on the design and financing of these programs, which appears to vary significantly across states.

reduce their tax liabilities. Reform will have limited effect in the short term, but is critical to protect government finances in the medium to long term.³

II. REFORM OBJECTIVES

Structure of contributions and benefits

The reform of a pension system requires choices across several structural dimensions. First, a system—or a component of a multi-tiered system—can be either mandatory or voluntary. Second, it can be either defined-contribution or defined-benefit. Third, it can be either funded or pay-as-you-go. The current system in India exhibits almost every combination of attributes along these three dimensions. The reform process should carefully evaluate what combination of elements will best address the needs of the people. To do this, it is necessary to set explicit objectives.

Mandatory vs. voluntary. The choice between a mandatory and a voluntary system is the clearest. There are three primary public-policy rationales for a government to design and implement a mandatory pension scheme.

- *Myopia.* A mandatory pension scheme may be warranted if workers are short-sighted and, without coercion, will not save enough—or as much as they will later wish they had saved—for retirement.
- *Moral hazard.* A mandatory scheme is also warranted if workers believe that the government will provide support if they do not have sufficient resources. Under this assumption, unless the government forces them, workers may not choose to save, assuming the government will come to their rescue.
- *Redistribution.* Finally, a mandatory scheme facilitates the *internal* redistribution of income from higher-income to lower-income workers/pensioners.

Of course, in each case the government could substitute subsidies for mandation. In the case of myopia, however, this would imply subsidizing workers to take actions that are in their own best interest. In the case of moral hazard, it would imply subsidizing workers not to

³ In contrast with many other countries, demographic pressures on the pension system are a less pressing concern in India. Currently (according to projections by the U.S. Census Bureau), roughly 7 percent of the population is over 60, with less than 5 percent over 65. These proportions are projected to increase to roughly 20 percent and 15 percent, respectively, by 2050. Two countervailing trends are likely to mitigate the effect of this increase. First, the share of the population below working age is projected to decline significantly. Consequently, the total dependency rate is likely to fall for the next 20–30 years. In addition, mortality rates are projected to decrease, leading to a substantially longer life expectancy and an increase in the normal retirement age. The total dependency rate with a working age of 20–65 is projected to be roughly the same in 2050 as the present dependency rate with a working age of 15–60.

subvert the public interest. Finally, since redistribution by definition implies winners and losers, it requires either a mandatory system or alternative financing for the desired redistribution.

Defined-contribution vs. defined-benefit. The choice between defined-contribution and defined-benefit schemes is less clear-cut and closely connected to the choice between a funded and an unfunded system. Under a defined-contribution plan, workers build up either explicit or implicit retirement accounts that fund retirement. The benefit is determined by (1) the level and timing of contributions, (2) the rate of return on the retirement accounts, and (3) the form in which benefits are realized, including annuitization, programmed withdrawals, and lump-sum distribution. The relationship between contributions and benefits is transparent, which may improve compliance incentives. In a defined-benefit system, benefits are usually determined by multiplying a replacement rate by a pension base. The replacement rate is typically an accrual factor times years of service, and the pension base is a function of a worker's earnings history. Since this type of system often ignores the time path of contributions in calculating the replacement rate and the pension base, the tie between benefits and contributions can be quite loose.⁴

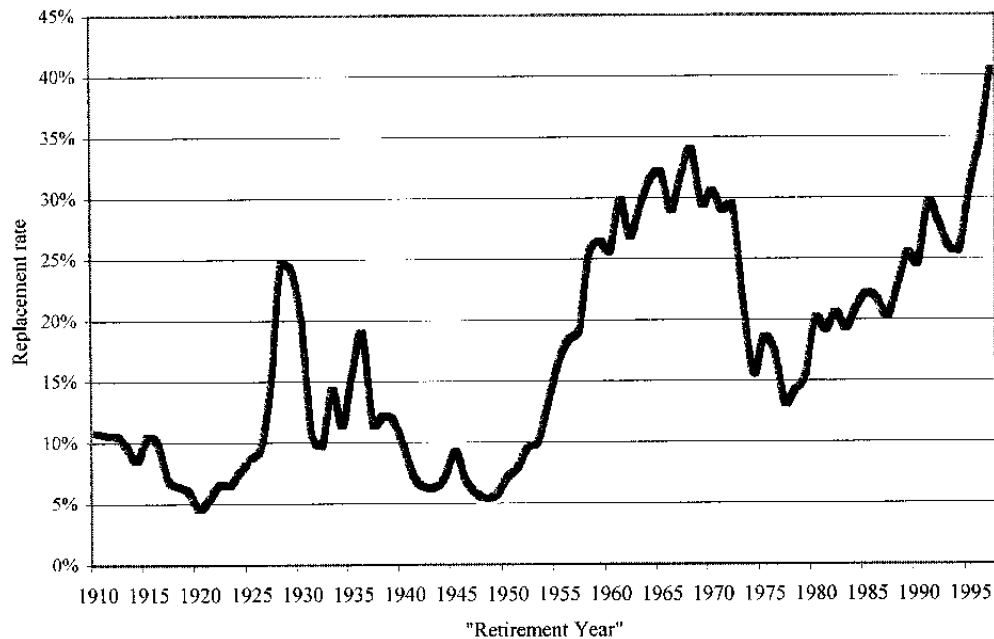
The looser the tie between contributions and benefits, the closer a pension system resembles a tax and transfer system. The choice between them then becomes a matter of whether the pension system provides an equitable and efficient vehicle for implementing the desired redistribution. An argument can be made for redistribution along two dimensions. Intragenerational redistribution can be viewed as redressing variations among individuals in initial endowments and opportunities to develop and apply their human capital. To be sure, the desire is to redress those variations over which individuals had no control, and not to reduce the incentives for development. Intergenerational redistribution can be viewed as redressing random variations in the returns that individuals can earn on their retirement saving.

As in the World Bank's three-tiered pension model (World Bank, 1994), intragenerational redistribution can be addressed by combining a defined-contribution system with a defined-benefit system. The combination can balance the goals of redistribution and a close tie between benefits and contributions. Intergenerational redistribution presents a greater challenge, at least if the defined-contribution system is also funded. In this case, average rates of return on contributions can vary drastically across cohorts. Consequently, the tie between contributions and benefits—though explicit and transparent—will embody an important random element that will be more difficult to offset with a defined-benefit tier (see Diamond, 1998). Of course, if the defined-contribution plan is not funded, the rate of

⁴ The tie need not be loose, however. For instance, in the U.S. social security system, (almost) the entire earnings history (and thus contributions history) is used in calculating the pension base. The replacement rate varies to meet redistributive goals, so the variation in the rate of return on contributions across participants is systematic and intentional.

return applied to contributions will be notional and can be easily smoothed across cohorts. Notional accounts can be applied in a funded system to smooth rates of return, but—for better or worse—the intergenerational redistribution will be more transparent and require mandatory participation.

Figure 1. Replacement Rates from Simulated 2 Percent Individual Accounts



The variation in rates of return across cohorts is not a purely academic point. Figure 1 presents the rate of replacement of final income that could be obtained if a worker in the United States invested 2 percent of her or his wages in equities for 40 years, and the rate of return stream was identical to the actual stream ending in “retirement year.” Note that the return stream and the fortunes of the worker experiencing that epoch are the only variants in the simulation. In an individual accounts system, bad random draws from securities markets are likely to engender political pressure to augment pensions (cf. Heller, 1998, for a discussion of how this might come about). On the other hand, it is likely to be difficult to tax back the greater than expected pensions yielded by a lucky draw.

Funded vs. pay-as-you-go. One of the hottest debates in the pension-policy literature is over the relative merits of funded and pay-as-you-go systems. In a funded system, the contributions of each cohort are invested to ultimately support the benefits that cohort will receive—that is, each cohort finances its own benefits. In contrast, under a pay-as-you-go system, the contributions of each cohort are used to finance the benefits of earlier cohorts—that is, each cohort must rely on the contributions of subsequent cohorts for its benefits. A variety of reasons have been offered for the introduction of at least partial funding. Some relate to its direct effect on the pension system:

- Funding provides an opportunity to benefit from investment in financial markets, where the rate of return is likely to be higher than the implicit rate of return to contributions that can be sustained in a pay-as-you-go pension system. The benefits of funding can be enhanced by investment diversification.
- A funded system can reduce—though arguably not eliminate—the vulnerability of a pension system to adverse demographic trends and political pressures.

The benefits of funding are usually argued in the context of individual accounts (see e.g., Feldstein, Rangelova, and Samwick, 1999). Geanakoplos, Mitchell, and Zeldes (1998) caution that a simultaneous implementation of funded, diversified, individual accounts is not a “free lunch” once you properly account for existing unfunded obligations and risk. Aaron and Reischauer (2001) and Diamond (1998) have argued for increased funding and portfolio diversification even in a defined-benefit plan.

It has also been suggested that a shift to at least partial funding will provide additional capital to spur economic growth and contribute to the deepening of capital markets. However, these macroeconomic justifications are more problematic. The increase in private retirement saving may be offset—in full or in part—by a reduction in other private and government saving, although the offset can be limited by a prudent fiscal stance that limits the reduction in public saving.⁵ Moreover, a reform of the pension system is not the only way to pursue the goal of increased national saving, so the effect of pension reform on national saving should be evaluated within a broader context.

Financing of the pension system

A critical element of pension reform is to rationalize the financial structure of the system. Contributions and benefits should be in balance over the long run, or, at least, any imbalance should be a conscious, well-justified policy decision.⁶ This simple objective is especially critical for a government-sponsored system, in which the public treasury is often the ultimate guarantor of benefits. In the Indian context, the financing issues arise primarily in four programs: the EPS, the CSPA, the GPF because of its integration into the government accounts, and the NOAPS. Each presents a potentially open-ended financial responsibility. A goal of reform should be to place explicit limits on these liabilities.

⁵ See G. Mackenzie, Philip Gerson, and Alfredo Cuevas, 1997, *Pension Regimes and Saving*, IMF Occasional Paper No. 153 (Washington: International Monetary Fund).

⁶ For example, the pension system might be used as a vehicle to provide income support for the poor elderly from the budget. The implied imbalance in benefits and contributions—the subsidy to the poor—may be warranted in this case, but it should be transparent, and the efficiency of the pension system as a vehicle for this subsidy should be carefully evaluated.

Analysis of the CSPA and GPF is complicated by the fact that in these programs, the government plays two roles: employer and guarantor of benefits. In this context, the social and political objectives of the government can often conflict with its financial objectives, creating risk for the sustainability of a pension scheme. These roles should be explicitly separated in the reform process.

Administration

An important goal in pension reform is to streamline administration. There are four basic administrative functions:

- collection of contributions;
- record keeping;
- asset management (within a funded system); and
- benefit distribution.

Either the public or the private sector can perform each of these functions. The assignment should depend on which sector can perform the function most efficiently. In any case, a public sector entity will have to take responsibility for the oversight and regulation of the pension system (see Heller and Gillingham, 1999).

III. THE CURRENT SYSTEM OF PENSIONS AND PROVIDENT FUNDS

Currently, India has a complex of different provident fund and pension schemes, targeted at different segments of the labor force.

The organized segment of the private sector

Participation in two social insurance programs is mandatory for workers in establishments with more than 20 employees who earn less than Rs 5,000 a month. These workers constitute 49 percent of the salaried work force and slightly more than 7 percent of the estimated total work force. They participate in two funded pension schemes: (1) the Employment Provident Fund (EPF), a defined-contribution program, and (2) the Employment Pension Scheme (EPS), a defined-benefit program, both overseen by the Employees Provident Fund Organization (EPFO).⁷

⁷ These workers also participate in the Employees' Deposit Linked Insurance Scheme (EDLIS), a third program overseen by the EPFO, which pays a lump-sum death benefit to the survivors of workers who die before retirement. The benefit is equal to the accumulated balance in the worker's EPF account up to a maximum of Rs 35,000. Employers contribute 0.5 percent of workers' salaries, and until 1996, the government also contributed 0.25 percent. Funds contributed up to March 1997 are invested in the Public Account, while subsequent contributions are invested according to the guidelines for EPF investments. At end-march 1997, accumulated funds were Rs 19 billion. The average rate of return for the EDLIS portfolio is 8.7 percent per

(continued)

Employees Provident Fund Scheme. The EPF was established in 1952 and participation is mandatory for private and public enterprises in 177 specified sectors (excluding Jammu and Kashmir) that employ more than 20 persons. As of March 1999, the EPF covered about 23.1 million workers in 318,430 establishments. Establishments outside these 177 sectors may voluntarily join the EPF. There were 22,502 such establishments as of March 1999. The system covers those employees whose initial basic wages and “dearness” allowances were below Rs 5,000. Workers whose wages later exceed this threshold are required to contribute on only the first Rs 5,000 but may voluntarily contribute on amounts in excess of this standard.

Table 1. Employee Provident Fund (EPF) and Employee Pension Scheme (EPS)
1996/97–98/99

	1996–97	1997–98	1998–99
Number of establishments	277,555	299,204	318,430
Exempt	2,970	2,948	3,123
Nonexempt	274,585	296,256	315,307
Members of EPF (in thousands)	20,289	21,219	23,119
Exempt	4,536	4,403	4,109
Nonexempt	15,753	16,816	19,010
Members of EPS (in thousands)	18,324	18,549	20,481
Exempt	3,425	2,384	1,889
Nonexempt	14,899	16,165	18,592
EPF contributions (billions of rupees)	59.7	68.2	78.0
Exempt	30.6	31.7	28.4
Nonexempt	29.2	36.4	49.5
EPS contributions (billions of rupees)	27.9	32.2	36.3
Employer/employee contributions	24.5	28.5	32.0
Government contributions	3.5	3.7	4.4
Memorandum items:			
Average monthly wage base for EPF member (rupees)	1,565	1,709	1,793
Exempt	3,583	3,834	3,677
Nonexempt	984	1,152	1,386

Sources: EPFO 1998–99 Annual Report and Fund staff estimates.

year. Establishments that wish to be exempted from this program must demonstrate that their employees already enjoy comparable or superior benefits, without additional contributions. As of end-March 1998, 7,261 establishments had been exempted. Since this is a life insurance rather than a pension plan, it is not analyzed here, although to the extent that premiums do not cover benefits, it represents a potential drain on public finances.

Contributions to the EPF can go into a fund managed by the EPFO, but employers can also seek an exemption to manage their own funds, as long as they meet regulatory requirements enforced by the EPFO. As of March 1999, there were 315,307 non-exempt establishments, accounting for 82 percent of contributors and 64 percent of contributions, in the EPF (Table 1). Not only were exempt establishments larger, but the average wage on which contributions were calculated was almost three times as large. In recent years, however, the share of workers in exempt establishments has been decreasing, along with their relative wages. With few exceptions, employees are required to contribute 12 percent of wages, with employers making contributions of 3.77 percent.⁸ Benefits are normally paid out as a lumpsum upon retirement.

To cover administrative expenses, nonexempt employers contribute 0.65 percent of wages, while those from exempt funds contribute 0.09 percent of wages to cover expenses related to their supervision by the EPFO. The difference in administrative costs provides a strong incentive to seek exempt status. Prior to retirement, employees may make partial withdrawals for specified purposes like house construction, illness, natural disasters, and higher education of children. Employees may also withdraw 90 percent of the balance in their accounts in the year before retirement.

Returns paid on funds managed by the EPFO are set annually by the government and are announced around budget time—the rate has been fixed at 12 percent since 1989/90 but was reduced to 11 percent in July 2000. The government's 2001/02 budget announced a further 150 basis point cut in returns.⁹ Exempted funds may not credit members with a return lower than that announced by the EPFO, and shortfalls from investment income on fund assets must be made up from employers' other income. When they declare a return higher than that declared by the EPFO, the excess return is taxable income for the employer. The real compounded rate of return enjoyed by contributors has averaged 1.9 percent per year since 1977, as a result of which balances in EPF accounts at retirement have been very low. For example, in 1998/99 EPF retirement claims averaged less than Rs 19,000.

Perhaps the most serious problems in the EPF are the regulations for the investment of contributions. Funds are required to be invested in government and government-guaranteed securities, or securities issued by public enterprises or state-owned banks. Partly reflecting the fact that most of these securities pay less than the required return on deposits, 85 percent–90 percent of funds had in the past been invested in a special deposit scheme (SDS) of the government. The SDS provided a 12 percent yield from 1986 to July 2000, and will provide an 11 percent yield in 2000/01. The 2001/02 budget proposes a further reduction in the rate of return to SDS to 9.5 percent. Since April 1997 new subscriptions cannot be invested in the SDS, though interest earned from the SDS can be reinvested. The average rate

⁸ For five industries—essentially industries suffering from economic stress—the contribution rates are 10 percent for employees and 1.67 percent for employers.

⁹ The EPFO resisted this cut, and initially only approved a 75 basis point reduction in returns.

of return on the EPF portfolio has been estimated at 12.1 percent per year. Given the required rate of return on deposits, it is clear that there is no room for the accumulation of reserves to meet contingencies. As of end-March 1999, accumulated funds under management by the EPFO were Rs 413 billion. Total assets including exempt establishments were Rs 700 billion.

Employees Pension Scheme. The EPS was established in 1995 as a replacement for the Family Pension Scheme (FPS), which had provided survivor benefits. Its membership is lower than that of the EPF; as of March 1999 it covered about 20.5 million workers, with 1.9 million of them belonging to exempt establishments. Establishments may be exempted from the EPS if they provide benefits that are at least as good. However, the rules for exemption from the EPS are not entirely transparent, and there is currently a case before the Supreme Court regarding the conditions under which schemes may be exempted from the EPS.

The EPS is currently funded by employer and government contributions of 8.33 percent and 1.16 percent, respectively, of employees' basic wages plus dearness allowance. However, exempt funds do not receive the government contribution. The EPS provides pension benefits that are calculated on the basis of a worker's average salary in the 12 months preceding retirement, and a multiplicative factor calculated as years of service divided by seventy. The maximum replacement rate is 50 percent, and workers who have more than 20 years of service or have reached the retirement age of 58 years of age get credit for two additional years of service. Consequently, a 58-year-old worker with 33 years of service can retire with the maximum replacement rate. Finally, early retirement is possible at age 50 with a reduction in benefits for each year between the age of retirement and 58. A portion of EPS benefits is payable as a lump sum at retirement. The tax treatment of EPS benefits is similar to that of EPF benefits. Survivor and disability benefits also are provided by the EPS.

Up to 1997, assets inherited from the FPS and the government contribution to the EPS were invested in the Public Account of the Government of India—which earned 8.5 percent interest—and interest paid was reinvested in the Public Account. Other contributions were invested in accordance with the guidelines for EPF investments. However, new investment in the Public Account was suspended in April 1997, so that all new contributions since then have been invested in accordance with EPF guidelines. Because of the investments in the Public Account, the average nominal rate of return on the EPS portfolio has been estimated at roughly 10 percent per year, about 2 percent less than that for the EPF. As of end-March 1999, accumulated funds in the EPS were Rs 220 billion.

Special provident funds. There are also some mandatory provident funds linked to specific occupations or states, such as the Coal Miners Provident Fund (1948), the Assam Tea Plantation Provident Fund (1955), the Jammu and Kashmir Provident Fund (1961), and the Seamens' Fund (1966). Although managed by different trusts and fund managers, they all generally follow the same investment and return rules as those funds regulated by EPFO. Total membership in these schemes is roughly 2 million.

Voluntary programs. There are also a number of voluntary **group pension plans** that exist primarily because of rules barring high earning employees from participating in the EPF system. These pension schemes are either privately run by managers appointed by employers, or are run by the Life Insurance Company (LIC). The provisions of the Insurance Act 1938 and the LIC Act 1956 make the LIC the only enterprise allowed to provide annuity schemes to the Indian public, since the annuity business is considered a part of the life insurance business. As a result, privately run pension schemes can accumulate and invest funds, but are required to purchase annuities on behalf of retiring employees from the LIC. Although they are neither mandatory nor sponsored by the government, they are mentioned here because they receive tax preferences and because they are subject to restrictive investment and annuity regulations.¹⁰ As of March 1998, the total accumulated funds for these group pension plans was about Rs 65 billion (Gupta, 1998), of which the LIC managed Rs 49.7 billion on behalf of 4719 schemes. Annuity payments arising out of these schemes, covering about 210,000 persons, totaled Rs 3.1 billion in 1998. Voluntary **individual annuity schemes** can also receive preferential tax treatment.¹¹ In 1998 there were about 670,000 such annuities, which paid out about Rs 14.5 billion.

The informal sector

There are no mandatory retirement-saving programs for the self-employed or for workers in the informal and unorganized sectors of the economy. Although these workers are ineligible to join the EPF even on a voluntary basis, they can join the **Public Provident Fund (PPF)**. Members of the PPF can contribute between Rs 100 and Rs 60,000 per fiscal year, and PPF accounts mature in 15 years. Early withdrawals are permitted after five years. Three-fourths of net PPF contributions are distributed as loans to state governments at 14 percent interest, while the remainder is invested in the public account of the central government. The PPF and EPF earned identical returns until January 15, 2000, at which time PPF returns were reduced to 11 percent while EPF returns continued to be 12 percent. With the reduction in EPF rates to 11 percent in July 2000, PPF and EPF rates once again became identical. The rates have since diverged, as the 2001/02 budget ordered a 150 basis point reduction in the rates for provident funds that the EPFO has not fully implemented. The PPF has not been marketed aggressively, and net collections have grown slowly. As of March 1998, there were 2.76 million accounts in the PPF, representing less than one percent of the working population,

¹⁰ Contributions to these schemes by employers are tax deductible up to a limit of 27 percent of workers salaries. Employee contributions attract tax credits of 20 percent of the contribution, up to a maximum contribution of Rs 60,000. Income from investments is tax exempt. At retirement, one third to one half of benefits may be withdrawn as a lump-sum payment, which is tax exempt. However, annuity payments are taxable as income. Returns on investment have exceeded those for the EPF. In 1996-98, gross returns exceeded 14 percent, while the net return received by members was 12.5 percent. As with other pension plans, withdrawals before retirement are not permitted.

¹¹ Contributions to these schemes are tax exempt up to a maximum of Rs 10,000. However, as with other pension schemes, annuity payments are taxed as income.

with total outstanding balances of approximately Rs 50 billion. Finally, NOAPS provides a benefit for a small percentage of the poorest workers in the informal sector.

Civil service retirement programs

Civil servants participate in a noncontributory pension plan, a contributory provident fund, an insurance plan, and mandated gratuity pay. The government has recently set up a commission in the Ministry of Finance to estimate the contingent liabilities arising from these schemes.

Civil service pension system. The CSPS covers federal and state civil servants, a workforce of over 12 million (Table 2). Workers make no contributions, and benefits are financed directly from the respective federal or state government budgets. The CSPS pays a retirement benefit at age 60 that is based on years of service and average salary in the last year of service. The accrual rate is slightly over 1.5 percent replacement per year of service, so that a worker with 33 years of service will get a 50 percent replacement of final salary, as in the EPS. Survivor benefits are also provided. Within the central government, pension schemes are organized by occupation, with separate schemes—which have somewhat different rules of eligibility—for railways, telecommunications, defense, and line ministry personnel. Civil service salaries and benefits are adjusted in line with civil-service compensation every 10 years by the decennial Pay Commissions.

Table 2. Civil Service Pension System, 1998

	Wage Bill				Pension Outlays			
	Number (thousands)	In Billions of Rupees	In Percent of GDP	Average Wage	Number (thousands)	In Billions of Rupees	In Percent of GDP	Average Benefit
Central government	4,648	340.9	2.25	6,113	3,603	111.4	0.73	2,576
Railways	1,564	107.4	0.71	5,723	1,060	35.1	0.23	2,758
Telecommunication	852	57.4	0.38	5,609	235	7.5	0.05	2,657
Defense	1,036	87.8	0.58	7,059	1,844	49.5	0.33	2,236
Other	1,195	88.3	0.58	6,161	464	19.3	0.13	3,473
State governments	7,600	396.1	2.61	4,343	3,673	86.1	0.57	1,954
Total	12,248	737.0	4.86	5,014	7,276	197.5	1.30	2,262

Sources: Shah (2000) and Fund staff estimates.

Both pay and pensions can be adjusted during the intervening years by a dearness allowance. The Fifth Pay Commission prescribed minimum and maximum pensions of Rs 1,257 and Rs 15,000 per month, respectively, in 1999. Workers may borrow funds from their accumulated pensions for certain purposes, such as purchasing a house, and on retirement may also withdraw a part of the pension as a lump-sum payment. As of March 1998, total outlays due to pensions at the state and central government level amounted to about

1.3 percent of GDP. The largest component of the central government pension bill as of March 1998 was for defense personnel (0.33 percent of GDP).

Government Provident Fund. The GPF is a defined-contribution plan in which employees contribute 8.33 percent of their salaries, and receive a lump sum upon retirement. GPF funds are deposited in the Government of India Public Account, and no explicit interest accrues. Consequently, the system has essentially operated on a pay-as-you-go basis. Participants, however, have received an average rate of return of about 12 percent since 1986. In line with other major provident funds, the 2001/02 budget ordered a 150 basis point reduction in GPF rates of return. As of 1996, accrued balances were about 1.2 percent of GDP (Patel, 1997).

Other civil-service plans. There is also an **insurance scheme** into which employees pay a small monthly premium determined according to civil-service rank. It provides a survivor benefit equal to a multiple of the monthly premium in the event a worker dies prior to retirement. Otherwise, it provides a lump-sum payment equal to the accumulated premiums. Upon retirement civil servants also receive a **lump-sum gratuity** based on final salary and years of service (one-half month for every year of service). Workers can also make early withdrawals from their accumulated premiums for specified purposes such as housing costs.

IV. PROBLEMS WITH THE CURRENT SYSTEM

Coverage and equity

The most serious problem with the current pension system is that it fails to reach the vast majority of the population, and no safety net exists for those who are not covered. Moreover, members of this group have far lower incomes while they are working, and far fewer resources on which to live in retirement. The average income of the workers covered by the EPF/EPS and the CSPS/GPF is roughly Rs 2,900 per month. This is a large multiple of the average income of workers in the informal sector. The average EPS (CSPS) benefit is on the order of Rs 1,000 (Rs 2,000). On the other hand, NOAPS, has a benefit of Rs 75 per month and reaches only a small proportion of the poor elderly. Strain on the budget is clearly an impediment to providing more formal assistance and larger benefits to the poor elderly. However, any reform program must address this problem, either directly, with a plan for providing targeted assistance, or indirectly, with a plan to “formalize” the informal sector so that the poorest workers can be given an opportunity to save for retirement.

In addition, benefits net of contributions and the implicit rate of return on contributions vary substantially across program, occupation, sector, etc. This is inequitable, when the differences are imposed by government regulation rather than the result of freely made decisions about the structure of compensation. It is also one of the reasons why pension rights are not portable across these dimensions, thus creating impediments to labor mobility.

Fiscal sustainability

Potential fiscal problems reflect the large unfunded liability of the system, and are concentrated in three areas:

Civil Service Pension System. As Table 2 demonstrates, there is a fundamental imbalance between wages and pension benefits in the civil service. First, given the average dependency rate of 59.4 percent, the pension age is almost certainly too low (Table 3).¹² Second, even with a low pension age, the average replacement rate is still over 45 percent. Consequently, the pension bill is over 25 percent of the wage bill. This represents a huge “hidden” cost. The situation is much more serious in the central government, led, as is well known, by defense, with railways also very high. The ratio in telecommunications is lower, but this may reflect that this is a growing area within the government.

Table 3. Parameters of the Civil Service Pension System

	Pensioners/ Wage Earners	Average Person/ Average Wage	Pension Outlays/ Wage Bill
Central government	77.5	42.1	32.7
Railways	67.8	48.2	32.7
Telecommunication	27.6	47.4	13.1
Defense	177.9	31.7	56.3
Other	38.8	56.4	21.9
State governments	48.3	45.0	21.7
Total	59.4	45.1	26.8

Sources: Shah (2000) and Fund staff estimates.

Employees Pension Scheme. It is very unlikely that the EPS is financially sustainable in the long run. The World Bank estimates that the cash-flow deficit in the EPS will grow to almost 1 percent of GDP over the next several decades. With a retirement age of 58, 33 years of service, a life expectancy at age 58 of 17.2 years, a contribution rate of 8.33 percent and inflation of 3 percent, the implicit “real” rate of return on contributions necessary to fund pensions “abstracting from survivor and disability benefits and any indexation for inflation” is 4.5 percent.¹³ This rate of return is well beyond the feasible return under the current restrictive investment regulations and approaches the rate that can be expected from a well-diversified, conservative (50 percent bonds) portfolio in financial markets in the

¹² The only other explanation would be that there has been a drastic reduction in the size of the civil service, and the high number of current beneficiaries is a result.

¹³ This calculation is for a hypothetical worker whose real income increases at a 5 percent rate between ages 25 and 50 and is stationary thereafter.

United States (see below). The survivor and disability benefits and any ad hoc indexation of benefits simply increase the imbalance.

Tax preferences. The tax preferences in the current pension system add to the strain on government finances and are not well focused. Contributions by employees and employers into retirement saving schemes are tax exempt up to Rs 60,000, so that the maximum tax-free contribution per worker is Rs 120,000, well beyond the limits of participation in the mandatory schemes. Interest income and lump-sum withdrawals from provident funds are also tax exempt, but benefits and annuities are not, creating a counterproductive incentive to realize benefits as lump-sum distributions rather than annuities or programmed withdrawals. Absent an incidence analysis, it is impossible to tell exactly who benefits, but it is almost certainly the highest-income workers.

Investment policy and administrative rates of return

Investment rules have constrained investment in corporate bonds and proscribed investment in equities, thus drastically reducing the return on investments to provident and pension funds.¹⁴ It has been estimated that a more mixed portfolio, with one-third of funds invested in a broad equity index since 1979, would have resulted in EPF balances more than twice the actual balances in 1999. The low returns of the EPF have imposed an implicit "tax" on EPF contributions. The situation had reversed in recent years, with the nominal returns on funds managed by the EPFO dropping only 1 percentage point at the same time that inflation was substantially curtailed. More recently, nominal returns have been cut and inflation has accelerated.

A prudent-investor paradigm, as in other common-law countries, would allow pension and provident funds to take prudent risks in order to increase returns. The basic idea is that there are some risks that can increase the expected return by enough to offset the relatively slight chance that the actual return will be reduced. Such an approach would not necessarily require more active fund management than has been the case in India, where, for the most part, fund managers are only authorized to purchase and hold specific securities to term. Rather higher returns can be achieved by investing in funds designed to mimic the average return of selected markets.

Investment rules in India appear to have been designed with the objective of creating a pool of funds for use by the public sector, as most funds must be invested in public-sector instruments. Thus, as of March 1999, 84 percent of EPF funds were invested in the special deposit scheme. In the 1990s, provident funds accounted for 30 percent and 46 percent of the net-aggregate domestic liabilities of the central government, and state governments,

¹⁴ In 1998, investments were allowed in corporate bonds with a minimum AAA rating up to 2 percent of fund flows. However, the majority of funds have not yet invested in corporate bonds.

respectively, thus indicating that they are an important source of captive financing for fiscal deficits that can reduce the pressure on the government to limit spending.

A related problem is that the government instruments in which provident funds invest are not freely marketable. Rather they are special issues with administered, rather than market-based, rates of return that are held to maturity as a matter of course. Unfortunately, the rate-setting mechanisms are political, explaining why the decline in administered rates has lagged the drop in inflation. The result has been a shift from a situation with unnecessarily low real rates of return for provident funds to one with an unnecessarily high cost of funds for the government securities. At current rates, these government securities compete unfairly against term deposits and marketable securities. Both the historically low and the current high real rates of return are inefficient and represent a strong argument for a more liberal investment policy and a shift to marketable securities, even if the funds have no intention of churning investments.

Regulation and administration

Neither trustee-managed pension funds nor funded gratuity plans are supervised by any statutory body, and the data on their operations are available only with a substantial lag. Also, although the EPFO supervises exempt EPF funds, there is a relative paucity of data regarding the operations of the exempt funds. In addition, there is an implicit conflict of interest for the EPFO to approve and supervise exempt provident funds, since the existence and growth of these funds reduces the resources under EPFO management.

The weak regulatory environment is reflected in the quality of service in the mandatory schemes. Delays in processing claims, crediting interest to members, and issuing annual account statements are common. For example, during 1994/95–1997/98, between 20 percent and 50 percent of interest earned was not received in the year earned. Improvement of service is a major reason for setting up exempt funds in the EPF. The EPFO does not publish its audit and actuarial reports, nor are these reports prepared in a timely manner.

Multiple uses of retirement saving

Retirement saving can be used for too many purposes—including not only income in retirement, but higher education of children, housing, funerals, and weddings of family members. These other uses may be important, but the same saving instrument is not appropriate for all uses. The result of the current ease with which funds can be withdrawn early is that they are no longer available for retirement, as evidenced by the share of contributions that are distributed at and after retirement. This runs counter to two of the justifications discussed above for a mandated retirement program: myopia and moral hazard.

V. ONGOING REFORM EFFORTS

In response to growing concern about the current system of provident and pension funds and its likely adverse impact on poverty amongst the elderly, a number of groups have been evaluating how the current system should be changed. Recently, the World Bank has

completed its analysis of old-age income security and suggested a set of reform options for consideration. In addition, the Asian Development Bank Institute, the Asian Development Bank, and the Colombo Plan Secretariat organized a conference in November 2000 in New Delhi with a major emphasis on pension reform in India. On a parallel track, the Ministry of Finance has convened a committee to evaluate reform options for the civil service retirement plans. Each of these efforts builds on the seminal work of the Old Age Social and Income Security (OASIS) project.¹⁵

Project OASIS

In 1998, the Ministry of Social Justice and Empowerment asked an eight-member expert committee that constitutes Project OASIS to examine the current vehicles for retirement saving and recommend changes to encourage saving by a broader cross section of workers. The committee report (Ministry of Social Justice and Empowerment, 2000) details many of the problems with the current system described above, including the need to insulate retirement saving policy from politics, better target tax incentives, and reach out to the informal sector. To achieve these goals, the committee recommended that the existing scheme be augmented by a system of Individual Retirement Accounts (IRAs) with the following features:

- IRAs would not be linked to employers, but rather to workers, and each worker would be given a unique account number that would not change with employment.
- To ensure accessibility to a broad cross section of the labor force, the minimum contribution would be initially set at Rs 500 per year, with flexible conditions for payment in order to encourage participation by workers who do not earn a steady income. Contributions would be tax exempt up to Rs 60,000 per year.
- To minimize transactions costs: (1) a system of “points of presence” (post offices, banks, etc.) would be established to collect contributions and distribute benefits, and (2) a depository would be created to pool individual contributions into large blocks of funds, which would then be passed on to fund managers. The depository would also be the main record keeper.
- To give workers a choice regarding the investment of their funds, and to substantially increase returns from their historical levels, a system of six competing private pension fund managers (PFMs) would be established. Each PFM would offer three investment portfolios, distinguished by level of risk and return, from which workers could freely choose.

¹⁵ Project OASIS, in turn, built on earlier analyses by Patel (1997) and Dave (1999).

- At retirement at age 60, workers would be required to use at least a portion of their balances to purchase annuities from insurance companies. The report suggests that with the recent liberalization of the insurance sector, a competitive market for annuities could emerge in the near to medium term.
- To narrow the focus of the plan on retirement, the proposed system bans early withdrawals, except where account balances exceed Rs 200,000. Even in these cases, the withdrawals would be subject to a 10 percent tax to discourage such behavior. The plan would allow workers to take out loans of up to Rs 5,000 against outstanding balances that exceed Rs 10,000. However, in such cases, subsequent contributions would first be applied toward loan repayment, so that in subsequent years, minimum contributions would equal the sum of loan repayment and Rs 500.
- To ensure the smooth functioning of the system, prevent abuse and fraud, and safeguard workers' investments, an independent regulator would be set up to license PFMs, oversee the entire system, disseminate information about the performance of the PFMs, and make improvements to the system where necessary.
- To encourage individuals to purchase annuities upon retirement, all lump-sum withdrawals would be taxable, while income from annuities should be tax exempt.
- A National Senior Citizen's Fund (NSCF) would be established to encourage, catalyze, and complement NOAPS and private-sector efforts to improve the quality of life of the elderly. The present government contribution to the GPS would be redirected to this fund for three years to provide initial capital, and then discontinued. In addition, 25 percent of all premature and lump-sum withdrawal taxes will be deposited in the fund.

With respect to existing provident and pension funds, the OASIS report makes the following recommendations:

- The EPF should be restructured along the lines of the IRA program, with premature withdrawals curtailed, workers given the option to switch to the IRA plan and exempt funds switching over to same investment strategy used for the IRAs.
- Government contributions to the EPS should be discontinued, and the EPS should (1) implement a uniform 10 percent (employer) contribution, (2) adopt the IRA investment guidelines, (3) perform an annual actuarial review and adjust parameters to assure the system is self-financing, and (4) move away from lump-sum distributions toward annuities.
- Because the Ministry of Finance has already appointed a committee to review the CSPS, the OASIS committee recommended only that the system be made contributory and put on a self-financing basis.

- The PPF should phase out its current system and channel all new contributions into a new fund (PPF-2) that does not rely on small saving instruments (see Appendix), segregates its funds from the Public Account, and manages them professionally in an open and transparent fashion.
- NOAPS should be continued because, despite its limitations, it still plays an important role.

The government is seriously considering reforms along the lines recommended by Project OASIS, and formal reform proposals are expected in the Fall of 2001.

Assessing the OASIS proposal

There is little to question in what the OASIS committee recommends. It recognizes the problems and makes suggestions to redress them. However, there are several issues that bear further consideration:

An almost complete reliance on voluntary thrift. The report recognizes the current budgetary strain and concludes that the central values of the pension system must be self-help and thrift. These are clearly the appropriate values for workers with sufficient resources. However, the reliance on voluntary thrift begs the question of how the proposal can address the problems of the lifelong poor. Workers who currently participate in EPF and EPS will be able to continue their participation, albeit with some changes to improve these programs. Moreover, they will continue to save, either in the EPF or IRAs. However, the proposal is silent on how poor workers in the informal sector can set aside sufficient resources to provide even minimal support in old age. At some point, it would be appropriate to explore options for a redistributive element, combined with mandatory participation. The redistribution would increase the benefits of participation, reducing the need for costly enforcement. The proposal for the NSCF moves in this direction, but options for additional funding could be explored, including a redirection of a larger share of the fines for premature withdrawal and any current tax expenditures on both voluntary and mandatory thrift.¹⁶

Overoptimism regarding returns. The report notes that a rupee saved at 25 years of age will grow to 7.68 rupees in 35 years with a real rate of return of 6 percent. This is an interesting and powerful observation. However, it may paint too bright a picture. The long-run rate of return on the U.S. stock market has been 6.6 percent (Simon, 1990). Unless a fund put almost all of its assets in equities—with the attendant risks—a 6 percent rate of return is very optimistic. For instance, over the period 1960 to 1996, the real rate of return on the U.S. stock market was 6.4 percent, but the return on an equally weighted portfolio of stocks and

¹⁶ Two possible options for covering more of the poor would be to (1) provide matching contributions to IRAs to entice more workers into the system or (2) expand the coverage and benefits of NOAPS to directly subsidize living expenses for the elderly poor.

U.S. government bonds would have been 4.6 percent. This may seem like a small difference, but at 4.6 percent, a rupee grows to 4.83 rupees, less than two-thirds of its value with a return of 6 percent.

In selecting the investment strategy of a pension fund, and especially of IRAs, it is imperative to recognize that equities are risky. Consequently, as Figure 1 demonstrates, returns can vary drastically across cohorts. This is a graphic representation of the point made by Geanakoplos, Mitchell, and Zeldes (1998) that prefunding is only part of the equation. The other is diversification into risky assets. In a simulation based on historical experience in U. S. financial markets, a mixed portfolio of equities and government bonds has a 45 percent higher expected value than a 100 percent bond portfolio.¹⁷ Unfortunately, however, it also has a nontrivial probability of a worse outcome. In other words, despite the fact that the reforms in investment recommended by the OASIS report are eminently reasonable, it is important not to overestimate the gains or underestimate the risks they entail.¹⁸

The administrative infrastructure for regulating pension policy, managing investments and maintaining records. The combination of “points of presence,” a depository, and private fund management is an innovative approach, aspects of which have been implemented or are under consideration in other countries. The cost estimate of 0.25 percent of fund balances may be optimistic, however, given the complexity of the scheme. The idea that PFMs compete on fees rather than performance promises is also very good. The question is what discretion they would retain in structuring the three investment portfolios they would each offer. Will they be the same for each? If not, how will differences in fees be distinguished from differences in risks? The experience of the Thrift Saving Plan—essentially a provident fund for U.S. government federal employees—might be informative. In this case, the plan trustees specify the indexed funds to be offered, firms compete on fees to provide them, and the plan participants can mix their investments.¹⁹

Rate of return guarantee. The OASIS proposal includes two rate-of-return guarantees. The first requires fund managers to guarantee their participants a rate of return on the safe investment option no lower than two percentage points below the average return on the safe portfolios each offers. It is unclear what this guarantee adds. On the one hand, if the

¹⁷ The standard deviation of the real rate of return on stocks over the 1960 to 1996 time period was over 15 percent, as compared with under 11 percent for the real rate of return to U.S. government bonds. The correlation between the two rates of return was 0.4. The simulation assumes a random walk in rates of return. One might argue that the stock market is not a random walk. However, it would then be necessary to justify the existence of the return premium that stocks receive relative to bonds.

¹⁸ For instance, in the discussion of annuitization, the report foresees a range of real rates of return from 3 percent with a safe portfolio—higher than the expected rate of return on U.S. government bonds—to (implicitly) almost 9 percent—much higher than the return that can be reasonably expected on an all-equity portfolio.

¹⁹ A wide range of additional ideas is presented in Shoven (2000) and Mitchell (1998).

regulations for safe portfolios effectively reduce risk, a difference is unlikely. On the other hand, if they are badly designed, a fund could be penalized because it did *not* take a relatively risky approach and fell behind those that did. The rate-of-return guarantee is equivalent to an imbedded insurance option, and fund managers will pass on the cost of this option to investors in one way or another. The fact that it will be inexpensive is largely irrelevant if the investment regulations for safe portfolios are effective, but could be expensive in the absence of well-structured regulations. It is a good idea to make managers compete primarily on transaction costs rather than differences in promised returns. To achieve this goal, however, it may be preferable to require funds to track broad-based and transparent equity or bond indexes. Under this approach, investors can more easily assess the risks they are taking and make informed decisions about these risks.

The report also recommends that the nominal value of contributions be guaranteed for long-term (10 years or more) participants. In other words, the value of the fund would never fall below the sum of contributions for these investors. This appears to be an innocuous guarantee, since it provides for zero *nominal* growth. By the same token, however, this guarantee is of little value under even modest inflation but could be expensive in the unlikely event of a deflation or a prolonged equity market correction.

Annuitization. A critical aspect of pension policy is determining how old-age benefits can be disbursed. As noted above, the current policy in India is counterproductive, with annuities penalized relative to lump-sum withdrawals. The report expresses the opinion that liberalization of the insurance industry will allow it to offer “fair-priced” annuities to retirees. No doubt liberalization will reduce unnecessary overhead in the industry. However, the information requirements necessary to sell individual annuities at a low markup over expected benefits are very demanding. Even in the most developed financial markets, the transactions costs in the purchase of an individual annuity are very high. It would be useful to consider options similar to the depository that could pool risks efficiently and purchase group annuities, so that retirees would not have to forego such a high percentage of their savings.

Reforms to the defined-benefit programs

The OASIS report is largely silent on needed reforms to the defined-benefit programs in the private (EPS) and public (CSPS) sectors. One aim of pension reform should be to unify and rationalize the rules under which these systems operate. At the very least, all new employees in each plan could be enrolled under new rules that are as similar as possible. A more ambitious goal would be to design a transition rule under which existing employees would be phased into the new system. The design of the new system should reflect carefully considered decisions on the following dimensions:

Pay-as-you-go CSPS v. funded EPS. The EPS is (at least partially) funded, while the CSPS operates on a pay-as-you-go basis. Consequently, the EPS can afford higher benefits relative to contributions than the CSPS. To recognize this fact, either the contributions (benefits) will have to be higher (lower) in the CSPS, or a transition to a funded system will have to be

financed separately. If the latter approach is selected, civil servants could be gradually shifted to a reformed EPS.

Sustainable self-financing. The EPS and CSPS should internalize the costs and benefits of the new system to both employers and employees. At least prospectively, contributions should be sufficient to finance benefits, without the need to resort to additional budget transfers. This would require implementing adequate contributions in the CSPS as recommended in the OASIS report, and adjusting contributions and benefits in the EPS to bring them into balance. Standardizing contribution and benefit rules across the two systems would reduce the appearance of inequity and promote mobility between the public and private sectors.

Level of benefits. A primary purpose of these defined-benefit plans is to allow for the sharing of risks across cohorts; they focus on the redistribution objective discussed above.²⁰ The system can be structured so that all workers of different ages receive the same rate of return on their contributions, regardless of the particular draw from the distribution of rates of return experienced during their lifetimes. The question to be answered is what overall replacement rate should be expected from the pension system, what share should be obtained from a defined-benefit system, and what share from a defined-contribution system?

Retirement age/replacement rate. There is a clear trade-off between retirement age and replacement rate in a defined-benefit plan. As noted in the OASIS report, life expectancy at the current retirement age of 60 is over 15 years, and will grow in the future. By increasing the age for “normal” retirement, a larger replacement rate can be achieved with a given contribution rate. For a given replacement rate, the contribution rate could be cut by between a quarter and a third.

Wage base for setting pensions. Basing pensions on average wages over the last year of employment weakens the link between contributions and benefits. For given average lifetime wages and contributions, a worker with a flat wage profile will receive a smaller pension. Increasing the averaging period will eliminate this inequity, but raise the question of how to index prior wages in calculating the average. To be consistent with the defined-benefit design, the wages should be indexed with long-run average rate of growth in the index chosen. Otherwise, the ratio of benefits to contributions will vary substantially across cohorts, and the intergenerational risk-sharing of a defined-benefit scheme will be foregone.²¹

Indexation of benefits. Even a modest inflation rate can rapidly erode benefits. At 5 percent inflation, real benefits fall by 40 percent in the first 10 years. Ignoring inflation puts the

²⁰ The benefit formula could also be designed to redistribute within generations as well as across generations.

²¹ A number of options exist, but the choice should be consistent with structure of benefits and the degree of funding in the system. The replacement rate will have to be consistent with the chosen index, as well as the average rate of return earned by the pension fund's assets.

beneficiaries at substantial risk; requiring the budget to maintain real benefits shifts that would present a risk to taxpayers. Neither is equitable. Rather, allowance for expected inflation should be built into the benefit and contribution structures, and indexation should be automatic and transparent. In this way, workers can finance their own inflation protection. Indexation is expensive, however. For instance, for a 4 percent real rate of return on investment and 5 percent inflation, the contribution rate necessary to fund a given replacement rate is on the order of 30 percent to 40 percent higher with indexation than without.

Special consideration for certain occupations. The expected work life is shorter in some occupations than in others—two examples are military service and mining. The pension system may need to reflect these differences, but it should do so explicitly, avoiding arbitrary and unintended cross-subsidies. If one occupation requires an earlier retirement age, it should show up as a compensating difference in total compensation. Then, either compensation net of contributions will be higher, or a larger share of compensation will be saved for retirement. Prospectively, for example, the higher costs of military retirement should be reflected in higher contributions for active military.

Transition. If all new employees are hired into a new, restructured system, the question then becomes what to do with existing employees. One option is to pick an age—say 35—and require all younger workers to join the new system. Their ultimate benefit could then be a blend of the benefits under the old and new rules, weighted by years of service under each. Finally, if it is in the best interest of the employer—either private or public sector—for older workers to switch, they could be offered an incentive to do so.

VI. SUMMARY AND CONCLUSIONS

In summary, the efforts to reform the retirement saving system in India should follow four separate tracks:

- (1) Institute OASIS-like reforms to improve the administration and management of provident funds and expand their coverage.²²
- (2) Restructure the EPS and CSPA to obtain a financially sound first-tier pension that is both self-financing and appropriately sized. The reforms should stop the accumulation of actual and contingent government liabilities in both systems and eliminate the explicit government subsidies to the EPS.

²² This is not to argue that the exact OASIS proposal be implemented, but rather that its principles be adopted and its innovative proposals for structure be given careful consideration in the reform process.

- (3) Estimate the “tax expenditures”—that is, foregone revenues—that result from the current tax preferences for retirement saving and make explicit decisions about the appropriate size and progressivity of these preferences.
- (4) Begin to plan if and how retirement income for the poor elderly can be enhanced.

Pension reform will not occur overnight. It is fortunate that India does not face the same immediate demographic pressures that many other countries do, but, given the ultimate cost of inaction, it is important to start the reform process as soon as possible. It should be possible to implement a reasonably complete set of reforms over the next several years.

Small Saving Schemes

There are a large number of small saving schemes, which provide small savers with significant tax advantages—in most cases interest earned is tax exempt and deposits are deductible from taxable income. However, these schemes are not, in general, intended to be retirement saving schemes, and their tax advantages mean that they attract a substantial amount of funds that would otherwise be invested in provident and pension funds. The 1999/00 budget estimates indicate that by the end of the 1999/00 fiscal year, total outstanding deposits would be Rs 1,802 billion (9 percent of GDP). Details of these schemes as of end-2000 are as follows:

- Post Office Savings Accounts (POSA) are limited to Rs 50,000 per individual. These are current rather than time deposits, and currently the rate of return for the POSA is 4.5 percent per year.
- Post Office Time Deposits (POTD) are unlimited in their size and may have one-, two-, three-, or five-year maturity, paying 9 percent, 10 percent, 11 percent, and 11.5 percent rates of return, compounded quarterly but payable annually, respectively. Interest income is tax exempt up to Rs 10,000.
- Deposits to the National Savings Scheme (NSS) are limited to Rs 40,000 per individual, and are deductible from taxable income. Deposits have a maturity of four years from the end of the year of opening the account, and carry an 11 percent rate of return.
- Deposits in the Post Office Monthly Income Scheme (POMIS) are limited to Rs 204,000 per individual, and are of a six-year maturity with a 12 percent rate of return. There is a 10 percent bonus upon maturity, and a 5 percent discount in case of premature withdrawal.
- There is no investment limit for the National Savings Certificate (NSC), and deposits are deductible from taxable income up to annual limits. Deposits have a six-year maturity, and pay an 11.5 percent rate of return.
- Deposits in the Indira Vikas Patra (IVP) and Kisan Vikas Patra (KVP) are doubled in a specified period (currently 6 years). There is no maximum on the size of deposits, but interest is not tax exempt.
- Post Office Recurring Deposit Amount (PORDA) requires a minimum investment of Rs 10 per month, has a five-year maturity, and an 11.5 percent rate of return.
- The Deposit Scheme for Retiring Government Employees (DSRGE) and the Deposit Scheme for Retiring Employees of Public Sector Companies (DSREP) have a minimum investment amount of Rs 1,000, and total deposits cannot exceed the

employee's total retirement benefits. There is no maturity period, and they have a 9 percent rate of return, payable bi-annually.

Deposits to small saving schemes flow to the central government, and three-fourths of net collections (gross collections less withdrawals) of small saving in each state are transferred to the state as long-term loans—typically 25 years. In order to encourage collections, for every 5 percent increase in the rate of small saving in a state above the national average an additional long-term loan of 2.5 percent of net collections is also given. Also, 50 percent of net collections under the DSRGE and DSREP in each state are advanced to the state as long-term loans. The rate of interest charged by the center on these loans is currently 14 percent, with a grace period of five years.

The treatment of small savings in the central government's budget changed in 1999/2000. Up to 1998/99, inflows of deposits were treated as capital receipts, and the amounts on lent to the states were treated as government spending (net lending). A National Small Savings Fund (NSSF), into which all small savings and provident fund collections would be paid, was established in April 1999. All withdrawals by depositors are also made out of the NSSF. For 1999/00 the total inflow into small saving schemes is projected to be about Rs 250 billion, compared with Rs 290 billion in 1998/99.

References

- Aaron, Henry, and Robert Reischauer, 2001, *Countdown to Reform: The Great Social Security Debate* (New York: Century Foundation Press).
- Dave, S.A., 1999, "Restructuring Pensions for the Twenty-first Century," in *India: A Financial Sector for the Twenty-First Century*, ed. by James A. Hanson and Sanjay Kathuria (New Delhi: Oxford University Press).
- Diamond, Peter, 1998, "The Economics of Social Security Reform," in *Framing the Social Security Debate: Values, Politics, and Economics*, ed. by R. Douglas Arnold, Michael J. Graetz, and Alicia H. Munnell (Washington: National Academy of Social Insurance).
- Feldstein, Martin, Elena Rangelova, and Andrew Samwick, 1999, "The Transition to Investment-Based Social Security When Portfolio Returns and Capital Profitability Are Uncertain," NBER Working Paper No. 7016 (Cambridge, Massachusetts: National Bureau of Economic Research).
- Geanakoplos, John, Olivia S. Mitchell, and Stephen P. Zeldes, 1998, "Would a Privatized Social Security System Really Pay a Higher Rate of Return?" in *Framing the Social Security Debate: Values, Politics, and Economics*, ed. by R. Douglas Arnold, Michael J. Graetz, and Alicia H. Munnell (Washington: National Academy of Social Insurance).
- Gupta, P.C., 1998, "LIC's Experience with Management of Pension and Superannuation Funds," paper presented at the Conference on Old Age Social and Income Security, Goa, India, November.
- Heller, Peter S., 1998, "Rethinking Public Pension Reform Initiatives," IMF Working Paper 98/61 (Washington: International Monetary Fund).
- , and Robert Gillingham, 1999, "Public Versus Private Roles in Funded Pension Systems," in *Policy Issues in Pensions Reform*, Proceedings of the Second APEC Regional Forum on Pension Fund Reform, Viña del Mar, Chile, April.
- Mackenzie, G. A., Philip Gerson, and Alfredo Cuevas, 1997, *Pension Regimes and Saving* IMF Occasional Paper No. 153 (Washington: International Monetary Fund).
- Ministry of Labour, 2000, *46th Annual Report 1998–99*, draft report (New Delhi: Employees' Provident Fund Organisation).
- Ministry of Social Justice and Empowerment, 2000, *The Project OASIS Report* (New Delhi).

- Mitchell, Olivia S., 1998, "Administrative Costs in Public and Private Systems," in *Privatizing Social Security*, ed. by Martin Feldstein (Chicago: University of Chicago Press).
- Patel, Urjit R., 1997, "Aspects of Pension Fund Reform: Lessons for India," *Economic and Political Weekly*, September, pp. 2395–2402.
- Pillai, S. Mohanan, 1996, "Social Security for Workers in Unorganised Sector: Experience of Kerala," *Economic and Political Weekly*, Vol. 31 (August), pp. 2098–2107.
- Shah, Ajay, 2000, "Issues in Pension System Reform in India," Indira Gandhi Institute for Development Research (mimeographed; Bombay, India).
- Shoven, John B., 2000, *Administrative Aspects of Investment-Based Social Security Reform* (Chicago: University of Chicago Press).
- Simon, Julian L., 1990, "Great and Almost-Great Magnitudes in Economics," *Journal of Economic Perspectives*, Vol. 4 (Winter), pp. 149–56.
- Weaver, Carolyn, 1997, "Government Guarantees of Private Pension Benefits: Current Problems and Market-Based Solutions," in *Public Policy Toward Pensions*, ed. by Sylvester J. Schieber and John B. Shoven (Cambridge, Massachusetts: MIT Press).
- World Bank, 1994, *Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth*, (Oxford: Oxford University Press).
- , 2000, *India: The Challenge of Old Age Income Security*, draft report (Washington).