The Third APEC Regional Forum on Pension Fund Reform

March 30-31, 2000
Bangkok, Thailand

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Introduction

At the Sixth APEC Finance Ministers' Meeting in May 1999, Langkawi, Malaysia, the Finance Ministers have welcomed Thailand's proposal to host the Third APEC Regional Forum on Pension Fund Reform in March 2000. The Forum is a part of the APEC Finance Ministers' collaborative initiatives to strengthen financial and capital markets and to support freer and stable capital flows in the Asia-Pacific Region. This Forum continues the work of previous regional fora on pension fund reform, which were held in Mexico and Chile in 1998 and 1999 respectively. The Third APEC Regional Forum on Pension Fund Reform was successful organized with kind supports from the APEC Secretariat and the Asian Development Bank (ADB) in providing funds and technical assistance.

This volume contains results of discussions and materials prepared and presented by honorable speakers from both public and private sectors of the APEC economies and international organizations.

The papers presented in this volume are broadly divided into four parts. The first part is the executive summary which covers discussions among experts in all sessions. The following part deals with views and experiences of distinguished speakers from international organizations, including the International Labor Organization (ILO), the International Social Security Association (ISSA), and the World Bank, who have been involving with the pension fund reforms and developments in various APEC economies.

The third part compiles views of academic experts on various topics regarding pension fund management embodying factors determining the success of pension fund development, investment policy and corporate governance of pension funds, and administrative issues.

The final part is the views and experiences of representatives from APEC economies including Japan, Indonesia, Mexico, Peru, Singapore, Thailand, and USA on the reformation of their pension fund systems.

The list of distinguished guest speakers is also included for reference.

Part I

Executive Summary

Executive Summary

The Third APEC Regional Forum on Pension Fund Reform took place on March 30-31, 2000 in Bangkok. The forum provided a stage for 30 distinguished and accomplished participants which were senior policy makers, academic experts from all APEC member economies and representatives from national and international organizations as the World Bank, Asian Development Bank, International Monetary Fund, International Social Security Association (ISSA), and International Labor Organization (ILO). There were more than 180 persons attended the forum.

The forum consisted of seven general sessions and the concluding session, each session is classified as follows:

Session I involved with the past experiences, obstacles, and ways to reform of the pension fund, provident fund and social security systems in Thailand in the view of senior policy-makers of the Government Pension Fund, and the Social Security Office, Ministry of Social and Welfare, Thailand.

Ms. Nawaaporn Ryanskul began with the current structure of pension fund system and problems in Thailand in the area of private and the government pension fund. It can be seen that Thai system contains gaps if it is measured against the World Bank's recommended Multi-Pillar system.

At present, there is nothing for the second pillar which is mandatory defined contribution except the Government Pension Fund and the third pillar is the private sector's Provident Fund which is voluntary defined contribution. In her opinion, the provident fund should be changed from voluntary basis to mandatory basis. That would improve a lot in term of long-term saving for the country. She emphasized the need of mandatory defined contribution. The PPF voluntary defined contribution should be changed to individual saving in order to encourage more saving. She also felt the need to improve payment system from lump sum into annuity payment to ensure that in the long run, everyone who receives benefits will have adequate income to live on the rest of their life.

Ms. Ryanskul raised the limited supply of quality securities is a major obstacle for efficient asset allocation to achieve the requirement of the fund which is the long term fund. The quality of securities need to be improved to achieve efficient diversification. The development of capital markets infrastructure should keep pace with the anticipated huge demand by large fund which is growing rapidly. There is also some limitation that need to be improved in term of regulation such as arbitrary definitions of low risk instruments and the ability to make cross-border investments. In her paper, she also mentioned other areas of problems in the administration and investment management.

She proposed four ways to reform the pension system. The first way is the system reform. There is a need to extend coverage of existing scheme and ensure sustainability of the defined benefit scheme. The coverage between sectors need proper balance. The similar benefits should be given to every sectors. The second way is the legislative changes. It is necessary to improve investment rules to encourage individual saving. The portability in some parts of the fund should be allowed. Additional saving tax benefits for long-term saving, additional tax incentive for defined contributions scheme, and the annuity, instead of lump sum, payment are

issues for further reform. The third way is the development of market. The quality and diversity of supply should keep pace with the growth in fund size and good governance should be enforced. The last way is the cooperation from all parties involved. Every party concerned: government, companies and individuals have to work together to make the scheme successful.

Another speaker was Ms. Jiraporn Kesornsutjarit. She divided her presentation into five parts: Thailand demographic structure, the existing social security system, social insurance history, Old Age Pension Scheme (OAP) and pension reform.

In 2000, the population in Thailand is about 62 million and is projected to be 71 million in 2020. Currently, 33 million are in labor force. The successful implementation of family planning program shows a decline in birth rate and total fertility rate. Life expectancy is increasing rapidly, therefore, the percentage of the elderly in the overall population is further increased. The estimation shows that the decency ratio for the old-age group (age 60 years and over) to age 15-59 is to increase to 27.1 per cent by 2020. It is estimated that the various social security systems in Thailand provide protection to around 61 per cent of the total population.

She mentioned about the social insurance history in Thailand that occurred since 1954. However, the Social Security Act come into force in 1990 the Social Security Office (SSO) was established according to the act. At the initial stage, with technical assistance form the International Labor Organization (ILO), the SSO provided four types of benefits consisting of cash benefit and medical care. The scheme collected 1.5 per cent from employers, employees and the government and in 1998 the old age pension scheme was introduced. At present, the old age pension under the social insurance program is not the only scheme that provides income to the elderly.

The Old Age Pension System (OAP) is defined benefit with partially funded. It is mandatory and administrated by the Social Security Office, Ministry of Labor and Social Welfare. The OAP system covers the employees in those enterprises with 10 or more workers. They are the same group who are entitled to receive the other five benefits prescribed in the Social Security Act. However, an initial obstacle of operating the OAP scheme was caused by the economic crisis in 1998. The crisis hit just as contribution collection was being initiated. The contribution rate should be 6 per cent for the OAP but during economic downturn, SSO had to collect only 2 per cent from employers and employees. Appropriate technology and banking system are required to facilitate administration capacity of SSO.

Ms. Kesornsutjarit addressed the impact of pension reform on SSO that if the pension reform is done by establishing the second tier, the contribution rate will be very high and can create a burden to employers and employees as they have to make significant contributions to both tiers. It will be difficult for SSO to extend its coverage to more population since they have to pay also to the second tier. It also prevents SSO from introducing new benefits, for example, the unemployment insurance which is currently a strong demand of employees.

She mentioned that a comprehensive assessment needs to be done concerning the following areas:

- Political and economic feasibility
- Coherent with social protection, economic and labor market policies
- Institutional capacity, management and operation of pension scheme in reality
- Compliance Problem
- Capital market development
- The impact of pension reform on economic and social development

In conclusion, she stressed that it is necessary to have discussions and bring consensus among economists, financial experts, politicians, employers, employees and pension fund administrators. The systematic reform needs much more research, analysis and discussions before making decision about which way is appropriate to reform.

Session II involved with the "Establishing a Multi-Pillar Pension System in Thailand for Reforming and Options for Implementation" prepared by the Asian Development Bank (ADB)'s consultant. The presentation noted that the most important factor affecting Thailand to be concerned with the pension and provident fund systems is the demographic factor. Since the age of Thai population is increase aging very rapidly, compared with other countries, especially the western countries. The number of Thai elderly will double, while the number of the very old people will triple within the next 20 years. In addition, Thailand is facing with an increase in Thai people's income needs and expectations. While household savings fell remarkably during the past decade.

Due to the current Thai Naitonal Pension Program, the ADB's consultant suggested that the most suitable one is to establish a Multi-Pillar Pension System. This may involve a need to establish a new mandatory retirement savings program, based on individual accounts and to be invested by private fund managers, or Pillar II. The existing agencies should be utilized as much as possible to keep the initial costs low. The Social Security Office (SSO) is expected to administer, while the Securities and Exchange Commission (SEC) is expected to regulate the program.

The proposed combined Pillar I and II contributions of 12 per cent (3 per cent employers and 3 per cent employees for both pillars) is intuitively affordable, as the international experiences indicate. The employers, on average, will incur only 0.5 per cent increase in the total operating costs.

The newly established Pillar II will pose positive effects fulfilling the income gap, coverage gap, sustainability gap, as well as, growth gap of the current national pension plan. The likely negative effect due to the coverage expansion into informal sector workers, however, is also needed to be kept minimized.

Establishing a Multi-Pillar pension system in Thailand will require substantial efforts and coordination. The reform process should take a top-down approach and continue as without interruption. Objectives, deliverables, key tasks, required resources and potential timing should be predetermined. The Pillar I is unavoidably needed to be strengthen, both regarding to the coverage expansion and the financial sustainability of the program. The regulations of the Employer-sponsored Provident Funds and the Retirement Mutual Funds have to be upgraded. Furthermore, the Government is, most importantly, required to design, build support for, plan and launch a mandatory, privately-managed retirement savings program based on individual accounts, or Pillar II.

The discussion started with Mr. Prasarn Trairatvorakul who agreed in general with the need to establish a Multi-Pillar Pension System in Thailand, which, hopefully, will help develop the domestic capital market. However, there are still many important issues to be taken into careful consideration, such as the likely negative effects to the OAP coverage expansion if the Pillar II is established, or an increase in employers' burden which means a higher cost of production that may reduce the company's competitiveness in the world market. An economic analysis of the technical study still does not adequately take the Thai employment structure and the employers and employees' incentives into consideration.

Considering the recommendation to have Pillar II be overseen by a new independent agency, administered by the Social Security Office and regulated by the Securities Exchange Commission, the most important thing for reform success is coherence of the system. In addition, a clearer picture of how the related agencies will be involved or a master plan is needed.

Mr. Trairatvorakul suggested the four key success factors for the pension system reform as follows:

1) Government commitment: The Government has to assign the organizations to be responsible for various tasks and to have the standing agency to coordinate among the relevant agencies.
2) Contributions: This is a very sensitive issue, therefore, any decision making on the level of contributions has to be made prudentially, by comparing the short-term costs with the long-term benefits.
3) Collection: Careful consideration has to be made whether the centralized or the decentralized collection system is more suitable for Thailand. Both systems do have merits and demerits in different aspects.
4) Education: This is a very important factor in order to build support for the pension system reform. We need to acknowledge and convince people to be well aware of the need of the pension fund.

Mr. Raymond Tam also agreed on the importance of the decision making whether to use the centralized or decentralized system. The centralized scheme investment seems to be too conservative, in order to minimize risks; however, this also leads to a very low rate of return on investment. Thus, new investment innovation is needed to be created. Contrariwise, the decentralized scheme seems to be subject to the substantially high marketing and administrative costs, as has been prevailed in the Chilean model. Furthermore, there has to be appropriate measures to prevent the misuse of fund to invest in a very high risk asset.

Integration between the Defined Benefit Pillar I and the Defined Contribution Pillar II is likely to increase the retirement benefits that the retirees will receive in the future. However, it is needed to provide them the choice of receiving the benefits in the form of annuities or periodic withdrawal, and the annuities market should be developed as well. It is also critical to take into account the interface of the Pillar II and Pillar III, as well as, the likely effects that the Pillar II may place on the Pillar III. The newly established Pillar II should not intimidate the development of Pillar III. The other important issues to be considered are contribution rate; portability between funds; fund leakage, and vesting rules – the certain, not too long, vesting period is needed, such as two years in Canada.

It is very important to educate people to make the reform efforts successful. Even in the case of informal sector employees, education will critically bring about their clear understanding, which is the key factor to successfully build support for the reform among them. However, the collection system should be tailored to suit their needs. For instance, they may be allowed to make contributions only once a year as in Hong Kong, or to utilize the tax database for the contribution collection and to impose the tax penalty on the tax evasion as in Australia.

Session III covered the case studies in pension fund development in Asian and Pacific economies particularly the experience with pension and provident funds in providing social security. The paper which is prepared by Mr. Warren Mcgillivray noted that evasion of social security contributions is generally illegal and social security administrators are reluctant to admit that they faced the compliance problems. Hence, while the coverage of a social security scheme may be well-defined, the extent to which covered persons are actually participating in the scheme is not, and few statistics are available. But compliance is important. No social security scheme-

reformed or not, defined benefit or defined contribution, publicly or privately managed, funded or pay-as-you-go, and no matter how well it may be designed – will achieve its objectives if participants do not comply with the contribution conditions. Non-compliance creates the risk that covered persons who evade their pension scheme contribution obligations will have inadequate pensions and that the state will be called upon to remedy the shortfall. The principal causes of evasion and possible remedies and alternative contribution collection systems have been indicated; but the extent of contribution evasion results from national circumstances, and appropriate measures which promote compliance depend on national initiatives and the allocation of resources necessary to implement them.

In the discussion part, Mr. Wu Wai Mun, from the Central Provident Fund (CPF) Board , Singapore, shared his experience in the success of CPF in collecting contributions from employers that it can be attributed to: a supportive legal environment, timely detection of evasion, strict and efficient enforcement, simple administrative procedures which facilitate payment, public education programs to encourage employers' compliance and employees' ease of access to information pertaining to their own CPF accounts.

Session IV Mr. Nipon Poapongsakorn presented his paper regarding "Factors Determining the Success of Pension Fund Development Including Tax Policy and Extended Coverage" in five parts.

The first part showed the comparison and contrast of the strengths and weaknesses of two major pension systems, namely, the pay-as-you-go system (PAYG or the defined benefit) and the defined contribution system. Emphasis will be given to, among other factors, the redistribute effects, the administration cost and investment risks. Then, he identified the factors affecting the success of pension fund development, drawing from the experience of other countries. The second part discussed the rationale for government intervention in social security. Key characteristics of pension fund systems in some OECD and Latin American countries were explained in parts 3 and 4. Part 5 was the analysis of factors affecting the success of pension fund development, followed by a conclusion.

In the presentation, he stated that tax system is perhaps the most important issue in the design of the pension system. He floated the idea that the tax money on the scale spent on the rescue of the financial system be considered for pension system. He believed that the two departments within Ministry of Finance should perhaps first get its house in order. The Customs and Revenue departments are issuing differing tax IDs. Also, in his view, the eligible age of 55 is too low.

In the discussion, Mr. Jaime Villasenor commented that the multi-pillar concept, in principle, is not innovative. The reform is rather a process of adaptation. Pillar I, more of a social assistance, takes care of everyone although the wage replacement rate is very low. Pillar II means that everyone puts reasonable efforts towards providing for his/her own retirement and Pillar III entails record keeping of individualized accounts and government incentives. He went on to say that the centralized collection is less expensive particularly in the case where health and housing benefits are incorporated into the scheme because they could all be processed at one go. He cautioned that the government needs to introduce legal safeguards against frauds with regard to claims. Transition costs could also be high because liabilities (incurred under PAYG did not have actuarial elements factored in) are higher than plan assets at the time the reform process starts. He said that Mexico does not centralize fund management although the government centralized collection. Fund management is privatized to prevent political interference.

He also touched upon the issue with regard to choice. In Mexico, each fund selects one manager. Chile tries to implement multiple funds with implications in fiduciary responsibilities. With multiple funds, members would be given allocation decisions thus take on more fiduciary responsibilities. He said individuals are more risk averse when given choice than previously thought and cited the case of World Bank officers. Those who opted for defined contribution initiated some two years ago, opted for very conservative fund.

In connection with Mr. Poapongsakorn's paper describing the Chilean and Argentine Pension Reform, a representative of the NGO asked how Chile, the first country in the world to completely privatize the old public pension system, dealt with the informal sector. In this regard, Mr. Villasenor responded that most systems can not deal with the informal sector. He reasoned that as those in the informal sector do not pay tax, they do not deserve the government's matching contribution. He also raised the issue of corporate governance saying that pension funds in Chile which publicly disclose how they vote and in so doing pressure firms to act responsibly, to which Ambassador Linda Tsao Yang added that CalPERS publishes names of the 10 worst corporate offenders in terms of corporate governance. CalPERS also serves warning to firms, publishes how it votes proxies and plays very active role in the protection of the benefit of members. She said the fund managers must have independence to carry out fiduciary. It is a delicate matter because if the contribution is mandatory then control/regulation must be very good which if taken to the extreme means the governments would be the party doing the asset allocation which would in turn defeat the purpose of having private fund manager acting independently. There has to be a balance.

Another discussant, Mr. Jaseem Ahmed divided his comments into three aspects; 1) Broad strategy concerns; 2) Practical aspects with regard to coverage, contribution and health insurance; and 3) Chilean reform.

He began by saying that social security reflects (a country's) social aspirations (which include insurance and assistance). There could be many objectives (which must be balanced). Social security should be cost effective while producing the least economic distortions. The expanded coverage has implications on the capital market. This includes the speed and the comprehensiveness of the reform.

He went on to say that the level of income places limits on the amount members can contribute. This raised the issue of what is the lowest percentage of sustainable contribution. Other issues to content with are as follows:

- Argument for (or against) redistribution.
- How to deal with large informal sector
- What is the government's capability to regulate contributions?
- Administration constraints
- Should health be included, if so, contribution would be raised substantially. The simultaneous implementation of OAP and health would overwhelm the system.

He said that Chilean model could not be repeated elsewhere. To reform, (a country) needs to have a visionary leader. Chile also used pension reform to effect financial reform. Without reforming the financial sector, the pension reform would be undermined. The process also cleaned up corruption within the system.

Session V is related to investment policy and corporate governance of pension funds. The session started with Mr. Raymond Tam who mentioned about the restrictions and recommended investment policy and corporate governance issue.

The restrictions and recommended investment policy can be collected as follows:

1) Asset allocation rules (e.g. maximum limits in equities & minimum limits in bonds) create some disadvantage and hinder the flexibility to cope with market conditions. Artificial limits also lead to sub-optimal rates of return and reduce ability to diversify investment risk across asset classes because equities are better hedge of price and salary inflation. Moreover, long term investment horizon can withstand short term volatility.
2) Minimum investment guarantees have implicit costs. Guarantees, based on industry benchmark, lead to conservative and similar investments, thus reducing returns and leading to mediocre performance. Guarantees constrain investment choices and cannot meet needs of individual workers. Money market fund may be offered as proxy for investing quarantees. Government quarantees also create moral hazards problem.
3) Restrictions in foreign investments limit ability to diversify country-specific risks. Restrictions could be strict limits or tax on foreign investment income and limits on transactions with connected parties. Reasons for the restrictions are funds belong to the home country, foreign investments are riskier, and restrictions reduce contributors' exposure to currency risk.
4) Recommended investment standards are to prescribe permissible investments based on diversification rule of 10 per cent except for supra-nationals, investment quality, quantitative limits on riskier investments, valuation and liquidity considerations, no leveraging, no unlimited liabilities, and no short selling.
5) Examples of permissible investments are shares listed on well established exchanges, bonds meeting investment grade ratings, deposits with licensed banks, stock lending and repo with collateral, IPO and subscription of bonds from underwriters, derivatives traded on established exchanges for hedging, and qualified unit trusts, mutual funds or insurance funds.

Regarding corporate governance issue, he raised that many aspects should be concerned as follows:

1) Proper framework of separation included separation of funds from all other financial undertakings, limits on self-investments, segregation of custodians independent from investment managers, and limits on transactions with connected parties.
2) Prudent man's rules are designed for plan operator's fiduciary duties and personally held liabilities. The duties are to exercise with care, skill, diligence and prudence, to use professional knowledge, to diversify investments, to act in interest of members, to comply with plan rules, and to supervise and exercise control over delegates.
3) Proper delegation of duties includes contract of delegation (investment management contract, custodial and sub-custodial agreements, approval of contracts by regulatory authority) and reporting and monitoring of performance (regular reporting between plan operator and its delegates, plan operator accountable for acts of delegates).
4) Licensing of plan operators and managers is needed for capital requirements and other resources, fitness and properness of directors, independent directors, relevant skills and experience, professional indemnity insurance, adequate internal controls, and documentation of selection process of investment managers.
5) Transparency of investment operations is required on statement of investment policy (investment objectives of fund, policy on allocation between asset classes, risk inherent in the investment policy, expected return and benchmark), disclosure of all fees and charges to plan members, and pre-approval of all disclosure materials by regulatory authority.
6) Regulations of investment products are set up on plans and insurance products. Plans may invest in unit trusts, mutual funds and insurance funds subject to same standard

and approval by regulatory authority. Insurance products should have separation of protection element and savings element, establishment of separate statutory insurance funds, qualified investment managers and custodians, stringent reserving requirements on investment guarantees, market valuation of underlying investments, and unitisation of insurance funds.

7) Ongoing monitoring of compliance is needed for regular reporting and submission of accounts to regulatory authority, accounts subject to audit by independent auditors, routine and special statutory audit by regulatory authority, duty of whistle blowing and statutory immunity, code of conduct on investment practices, and regular disclosure of investment results to plan members.

In the discussion part, Ms. Mary Podesta, who represented the US's pension system, said that the US case provides an example of the success of individual retirement plans which complement the state's provision of the basic social security. The experiences of the 401k market illustrate the importance of the role of mutual funds in managing pension funds. It is interesting to note that policymakers in the US never actually designed it. The 401k individual retirement account schemes grew out of the investment freedom and better returns experienced by individual savers, through prudence and diversification, than detailed restrictions on asset allocations.

Do restrictions on asset allocation restrict or hamper growth of pension funds? To understand this, one needs to look back at the rationale for restrictions of fund management which generally stems from three concerns: employees, if given a choice, would not make good investment decisions; the market might not work properly; and if the system does not work, the government would come in and make up for shortfalls, and therefore it is better to prevent it than to rectify it.

In short, employees can be trusted as they make appropriate allocations with respect to equity, fixed income, and stable value investments and that within each age group. Secondly, market forces are allowed to operate with respect to products, fees and levels of services. Finally, pension plans in countries that allow broad investment freedom, subject only to the duties of prudence and diversification, have experienced the highest long-term returns on pension assets. Citizens are encouraged to take responsibility for their retirement savings.

Another discussant from the private firm in Thailand, BOA Asset Management Company, Mr. Nikhil Srinivasan commented on investment restrictions that long term equity funds are better hedge of price and salary inflation. Younger participants should invest more heavily in equities and older participants in fixed income securities. Short selling is probably a kind of speculation, but it is also a useful way of hedging. Foreign investment is also needed to diversify portfolio.

Session VI represented the administration, data, and accounting issues. This part began with Mr. Stanford G. Ross who stated that Thailand can make a very good start by evaluating the existing pension system and analyzing strength and weakness of present pension and social security system. He praised the social security office for the progress they made over the past years.

Mr. Ross presented his paper on "Doctrine and Practice in Social Security Pension Reforms" which was printed in the International Social Security Association Review in February 2000. The articles describe the debate taking place about the most appropriate way for States to provide for retirement income for their citizens. The essence of the debate centers on the relative merits of privately managed, fully funded, define contribution plans, in which risk resides with the individuals beneficiary, as opposed to publicly managed, pay-as-you-go, defined benefit

plans, in which risk resides with the State. Mr. Ross showed four figures supporting his paper as follows:

Figure 1 set forth a multiplier model in stylized form. Advanced economics usually rely on all pillars in the model. There are major differences in the relative size, the importance of the different pillars, and details of the way in which different approaches are implemented and adapted. But the important point is that the States have actually taken steps at one time or another to pursue politics related to retirement income that reflect a large range of approaches.

Figure 2 set forth the preferences on key issues in a polar format that shows the inclination of governments to blend and combine the two contending positions as they act to implement economic and social policy.

Figure 3 set forth common operations of tax/social security administration.

Figure 4 showed sample program for increasing compliance in small-medium sectors.

Ms. Estelle James presented her paper in the aspect of administrative system-member individual accounts (IA) by comparing costs of individual accounts systems. Decentralized individual accounts (IA's) may have high administrative costs. She mentioned that under the Pillar II, IA systems can be operated in retail or institutional market. She made a comparison between retail and institutional markets as follows:

Retail market :
- open entry, free choice, unrestricted fee
- direct relation between worker and fund
- retail fund incur high marketing costs
- administrative costs are 15-30 per cent of new contributions, equivalent to 0.75-1.5 per cent of assets per year for lifetime worker
- examples : Latin America, Poland, Hungary, UK, US Mutual Funds

Institutional Market :
- contribution aggregated into large blocs
- intermediary negotiates fees for large blocs
- constrained choice and limited entry
- costs are half as much as in retail market, less than 10 per cent of new contributions or 0.5 per cent of assets
- examples : US pension funds, Sweden, Bolivia.

She also gave example of Chile where administrative costs of system are very high, marketing cost represents half of total cost. She pointed out that evidence told us there was a change from retail to institutional because the minimum size which has effected cost. Cost per account falls as number of affiliates grow, cost per asset unit falls as assets grow; industry consolidates.

Session VII provided the participants of the forum to learn about the experience, obstacles, strengths and weaknesses of the reforming APEC economies' pension systems. There were five APEC economies joining this session which are People's Republic of China, Japan, Korea, Indonesia, and Malaysia.

The **concluding session** of the forum was set for the Roundtable on Best Practices in Pension Fund Reform. This session allowed the distinguished speakers from national and international organizations to share their views and experiences as well as new idea or practices in order to meet the overall theme of the Forum, "Pension Fund Reform: Challenges of Best Practices for the APEC economies". This can be concluded in three points; 1) how to educate people to realize the importance of the pension fund reform; 2) the role of the government in

providing the reform; and 3) the scope of the corporate governance related to the pension fund reform.

Part II

View of International Organization

The Development and Reform of Social Security Pensions: The Approach of the International Labor Office

Mr. Colin Gillion

Executive Summary

This paper provides a synopsis of a forthcoming book to be published by the ILO entitled Social Security Pensions: Development and Reform. It has been edited by Colin Gillion, John Turner, Clive Bailey and Denis Latulippe but in fact is the product of a large number of contributors both within the Social Security Department of the ILO and from outside. The editors wish to express their thanks to all who have contributed, although any errors and omissions remain their own. Although this summary, and the book on which it is based, have been produced by the Social Security Department, the views expressed do not necessarily reflect the opinions of the International Labour Organisation.

At the beginning of the last century few workers possessed the security of an old age pension. In the developed countries most either died early or worked until they were in their late sixties, spent a brief retirement living with their children, then died in their early seventies. To be old generally meant to be poor. Being disabled signified that poverty began earlier. To survive the wage earner implied that poverty lasted longer. No support from children meant being thrown back on charity or minimal public support. For developing and middle-income countries matters were a great deal worse: incomes were substantially closer to subsistence levels and the capacity of children to support their parents was less: death came earlier: life was nasty, brutish and short. But by the beginning of the 21st century the situation has dramatically changed. In developed countries the incidence of poverty in old age is now at comparable levels to that in the remainder of the population. Life expectancy is longer and most workers can expect a significant period of retirement with a reasonable income. Disability pensions and the possibility of early retirement have reduced the financial risks of incapacity to work. Almost all women are entitled to a survivor's pension, and a growing majority are entitled to a pension as workers in their own right. Alongside these changes, an increasing number of developing countries are beginning to emulate the experience of the developed countries, in terms of the extension of coverage and in the improvement of benefits.

A large part of this profound improvement in social conditions can be attributed to the creation of social security pensions which must be counted as one of the great social developments of the last hundred years. After growing hesitantly in the first part of the 20th century, they underwent an accelerated development in the second half. Pension outlays in the developed countries grew at twice the rate of GDP: and more and more developing and middle-income countries joined the number of countries attempting to provide pensions for their people.

But, as this book shows, the task is only half complete. Pension schemes throughout the world are in a state of upheaval. On one hand the developed countries are contemplating new

architectures for the financing of pension outlays. This will require careful thought and the development of a new consensus. But on the other hand the overwhelming majority of the world's population is still without some form of income security in old age or disability. To extend the security available to workers in the developed countries of the world to workers in all other countries remains a paramount task for the early years of the next century. It will require great effort, great imagination and an enlightened adaptation to the different circumstances of developing countries. It means extending the coverage of pension schemes (and all other forms of social security), improving their governance, and ensuring that the design of the schemes is both economically efficient and compatible with internationally accepted human and social values.

About this book

This book has three main purposes.

Its first and principle intention is to act as a reference work for policy analysts and decision-makers in countries which are seeking to reform their existing pension programmes, or which are seeking to establish pension programmes for the first time. For this group of readers what is happening in other parts of the world, and its implications, is of critical relevance to the decisions which they themselves must take and implement. This is especially the case because few such countries possess their own prior experience on which to draw in shaping their decisions. A balanced assessment only can come from a factual review of what other countries have done, modified by its applicability to the particular circumstances and history of the country contemplating reform.

The second main intention of the book is to act as a textbook, mainly for graduate students or for undergraduate students in their last year who wish to find out about the structure of pension programmes on a global basis, and who wish to understand not only the current situation as far as pension schemes are concerned but also some of the analytical social and economic consequences which arise from different pension structures.

These first two groups of readers are addressed mainly in Part I of the book which, as far as possible, is descriptive and which, again as far as possible, avoids taking sides in what has become a controversial and sometimes heated policy debate.

The third purpose of the book is frankly more prescriptive and because of this may be more controversial. It is concerned with making the right choice of policies. It should be of interest both to all members of the general public, who will be affected by the choice of policy, as well as to those members of the international community whose task it is to set normative as well as economic standards for the reform and development of pension schemes. Part II of the book sets out the normative basis for pension programmes -- in terms of the replacement incomes which they can generate, their desired universality, the extent to which they can assist in the avoidance of poverty, the extent to which they can guarantee an adequate retirement income, and the degree to which they should be managed on a tripartite basis. This normative underpinning is largely taken as a set of self-evident axioms, although it has been endorsed by the international community and consecrated in International Labour Standards. It also raises the question of whether these Standards may require revision and whether the same set of Standards can be universally applied to all countries. Part II goes on to discuss the views of the International Labour Office about the various policy options which are available to countries undertaking

reform and development, especially in the areas of extending the coverage of pension schemes, improving their institutional structure and governance, adjusting the age of retirement, in setting the structure of benefits and contributions, in the broad question of the funding or non-funding of pension schemes, and of casting the whole in a pluralistic and flexible framework.

The subject matter of the book is social security pensions. This is an extraordinarily vast topic. Broadly it is taken here to mean those pension schemes (including invalidity and survivors', as well as retirement, benefits) which require mandatory participation by workers. On the benefit side it also includes social assistance to the elderly, and on the revenue side pension schemes financed from general taxation as well as from earmarked social security contributions. Private pension schemes in which participation is voluntary are given a much slighter treatment, and are referred to only in so far as they supplement social security pension schemes. But these are not hard and fast definitions and, as the book itself shows, there are many areas where public social security schemes and private and/or personal pension or savings schemes interact, and cannot be considered one without the other.

Much of the book is concerned with detail - the practicalities of running a pension scheme which are the lifeblood of most pensions agencies - and it provides numerous examples, including institutional structure, of how things are managed across a wide range of countries. These illustrate both what works in some countries and what does not work in other countries. They cover the administrative regulations and operational procedures used to collect contributions, to pay pensions, to invest any reserves, and to set the various formulae which determine contribution and benefit rates. But pension issues are seldom open to black and white resolution. Except in a very few instances it is not possible to give a single categorical answer which fits all circumstances. This information is displayed throughout the book, but it can also be found in the regional and technical annexes which give summary accounts of the situation in the main regions of the world and deal with particular issues. It is backed up a statistical annex which presents quantitative information concerning demography, capital markets and other features of social security pension schemes.

The climate of change

As a starting point, it is necessary to recognise the widespread turbulence which is affecting almost all social security pension schemes throughout the world. In retrospect, the 1980s and 1990s may appear as one of the great watersheds in the development of social policy. A large number of countries are at present contemplating, planning or implementing major changes to their existing schemes of retirement protection. Others are undertaking large-scale expansions of their schemes, frequently from a very limited base. A majority of countries, across all regions, now fall into one of these two categories and there is almost no country throughout the world (including the advanced countries) where the reform, development, adjustment, improvement or modification of pension schemes does not appear on the political agenda. By the early years of the next century, the international landscape of income protection in old age may have changed beyond recognition.

The list of countries affected is a long one. In China, the government is planning to introduce major reforms to pension schemes, as well as to employment injury insurance, unemployment compensation and health care. After decades of discussion, Thailand is establishing a social security pension scheme for employees. A number of countries in Africa, are converting national provident funds into pension schemes, and partial conversion has been

implemented in India, and is also under consideration in Malaysia. Conversely, in Latin America many countries are contemplating a change to privately-managed pension schemes based on individual accounts. In Central and Eastern Europe, most countries face an almost complete overhaul of their pension schemes, together with the installation of new programmes of unemployment compensation and social safety nets. Many schemes in Africa, such as that in Madagascar, are undertaking a basic reconstruction, both of their design and coverage, and their organisation and management. Timing differs. Chile, introduced major reforms nearly 20 years ago. Other countries, such as Tanzania, are in the middle of their transformation. And yet other countries, such as Mexico and Vietnam, are just beginning the process of change. Waiting in the wings are countries such as Cuba, Nepal and South Africa.

Public and non-public pension programmes

In many developing countries, the social security retirement benefit programme provides benefits to only a small fraction of the population, primarily upper-income urban workers. For most workers, there is no public-private mix. There is only private provision for consumption in old age, which occurs through work, transfers from other family members, and support from charities and other non-governmental organizations. In some countries, low coverage is the result of widespread contribution evasion. In others, it is the result of legislated exclusions of certain groups from coverage. Legislated exclusions, however, are often a pragmatic policy based on the realization that if certain groups were covered in the legislation, these groups would have high contribution evasion.

By contrast, in many of the countries making the transition from planned economies to market economies, the provision of retirement income remains largely a public sector responsibility. This situation is also in transition in some of these countries, however, as they are preparing and enacting reforms to shift responsibility to the private sector.

In developed countries, for the bottom 40 per cent of the income distribution, retirement income is provided almost exclusively by the public sector through social security retirement, disability and social assistance benefits. In these countries, the top 60 per cent of the income distribution also finance retirement consumption through private savings, occupational pensions and work.

In most developed countries, the largest component of the provision of retirement benefits is the social security retirement benefits programme. This programme is generally a defined benefit pay-as-you-go programme providing monthly or biweekly benefits. In some middle-income and developing countries, the public sector retirement benefit programme is a provident fund - a funded defined contribution plan managed by the government. Provident funds generally provide benefits as a single lump-sum payment at retirement. In a small but growing number of countries, social security defined contribution pension schemes are managed by private sector management companies. Other governmental components include benefits for disabled workers and for survivors of deceased workers, for the unemployed and benefits for workers taking early retirement. Government provision or financing of health care in old age is an important benefit in some countries. In addition, most countries provide social assistance benefits

for some low-income elderly. Often, in countries with a personal income tax, the elderly receive a governmental subsidy through preferential income tax treatment.

Government may influence the public-private mix in a number of ways. The most important way is by setting the generosity of the benefits it provides. It may allow voluntary privatization through contracting out, as is done in Japan and the United Kingdom. It can mandate provision of employer-provided benefits, as in Switzerland, or that workers contract with private pension fund management companies, as in Peru. It may provide incentives for private sector provision by providing preferential tax treatment for occupational pensions, as in Canada, or, as in the United States, affect the level of private sector provision through regulations as to the characteristics of benefits provided.

Part I: Development

The structure of pension schemes and their problems

Part I begins by discussing benefits. The first three chapters discuss the major types of retirement pension benefits. A conclusion running across the three chapters is that the entitlement conditions - the requirements for qualifying to receive benefits - are an important aspect of the structure of benefits. Particularly for disability and social assistance benefits, the entitlement conditions may ease or tighten based on bureaucratic interpretation or application of the rules. Because of budgetary pressures, many countries are seeking to reduce the generosity of benefits. This can be done as an equal percentage reduction for all beneficiaries or a targeted reduction. A targeted reduction that reduces benefits relatively more for upper-income workers may be fairer because they generally have other sources of income and consequently depend less on social security benefits than do lower-income workers.

Retirement benefits

While countries structure social retirement benefits in different ways, in all cases they need to decide the entitlement conditions under which benefits will be paid and the factors that determine the level of benefits. Retirement (old-age) benefits provided by social security defined benefit and defined contribution schemes are the main focus of the book. In defined benefit schemes, the benefit formula determines the level of benefits the individual receives and the link between contributions and benefits. A number of countries have made changes in their defined benefit programmes to tie benefits more closely to contributions. Defined contribution schemes generally more closely link benefits to contributions than defined benefit schemes, but often have features that break the connection between contributions and capital market returns. These features include guaranteed minimum benefits, rate of return guarantees and benefits based on rates of return fixed by the pension fund, which are often lower but less variable than market rates of return. Thus, social insurance features in both defined benefit and defined contribution schemes weaken the link between benefits and contributions, but serve to reduce risk faced by retirees.

The annuitization of benefits in defined contribution schemes is the conversion of the account balance at retirement into a flow of periodic benefit payments. Typically, defined

contribution schemes do not automatically provide annuitized benefits, and when they do, those benefits generally are not price indexed. By contrast, defined benefit schemes typically provide annuitized benefits with indexation based on increases in prices or earnings.

Disability and survivors' benefits

All developed countries, and many others, have established disability benefit programmes. The level of protection against the hazards of job separation that disability benefits provide varies dramatically across countries. In some countries, disability benefits are an important source of benefits for older workers who leave the work force before reaching the minimum age for retirement benefits. This path to retirement is especially likely to be widely used if a high minimum age has been set for receipt of benefits through the retirement benefits programme.

In countries where welfare benefits are low or difficult to obtain compared to disability transfers, unemployment is high and unemployment benefits are of short duration and little is available in terms of rehabilitation and job protection, it is likely that the supply of applicants for disability benefits will be relatively large. This supply of applicants will increase as the unemployment rate increases, disability benefits increase, and as the period over which benefits can be received lengthens.

The generosity of survivors' benefits has an important influence on the well-being of older widows. Because women have a longer life expectancy than men, they are the principal recipients of survivors' benefits. While many countries still do not treat men and women equally with respect to the receipt of survivors' benefits, there is a trend towards equality of treatment.

Social assistance benefits

Social assistance benefits are provided by governments to low-income people. These benefits are not tied to previous work or contributions but are based solely on need. Thus, a means test must be satisfied in order to qualify to receive them. They are important for some retirees who would receive low or no benefits through the retirement benefits programme, due to low wages or not having substantial periods of work. Social assistance includes:

general assistance	- providing cash benefits for all or most people below a specified minimum income level;
categorical assistance	- providing cash benefits for specific groups (sometimes at a level above the minimum);
tied assistance	- providing free or subsidized access to specific goods or services, either in kind or in cash. Housing assistance is an example.

The financing of pension programmes

In most countries, social security retirement benefits are financed through contributions by both workers and employers. Generally, employers finance 50 per cent or more of

contributions in defined benefit schemes, but in many defined contribution schemes workers provide all the financing. In many countries the government provides partial financing out of general tax revenues, it being considered fair that the government, employers and workers share in financing social security retirement benefits. The government's share can be determined by a formula or can be a back-up source to cover deficits.

To encourage coverage through voluntary compliance by self-employed workers, and even in some cases to encourage self-employment, those workers have generally been charged a lower rate than the total rate charged to employees and employers. Numerous countries, however, charge self-employed workers a rate equal to the sum of the worker and employer rate on the theory that ultimately employees bear through reduced pay the rate paid by the employer, and thus self-employed workers should also bear the full rate.

The management of investment

The difficulties facing pay-as-you-go social security pension schemes in both developing and OECD countries are leading to growing interest in the advance funding of pensions as a complement or even a substitute for pay-as-you-go. Most countries do not provide funded benefits, but for those that do particular issues relating to the management of investments arise. The investments financing funded benefits may be managed by employers, workers, financial institutions or the government.

If employers or financial institutions are given responsibility for managing pension funds, considerable government oversight is required to protect the interests of the workers. Placing responsibility for managing the considerable sums of money in mandatory defined contribution pension accounts in the hands of private pension fund managers requires some mechanism to ensure that those funds are not stolen or otherwise misused. Experience with the management of private pension funds in OECD countries suggests that the regulation of pension managers requires considerable care. Pension fund management presents notable and perhaps obvious opportunities for self-dealing whereby the managers improperly benefit themselves. In addition, managers may mismanage their funds, either through laziness or excessively zealous pursuit of profit, to the detriment of beneficiaries who will often find it difficult to evaluate accurately the performance of the managers in whose funds they participate. There must be realistic and effective legal means of addressing these potential problems.

If pension policy gives individuals responsibility for managing the investments of their defined contribution retirement accounts, that policy should also assure that workers have sufficient financial knowledge to make wise decisions. Experience has shown that workers tend to be conservative in their investment decisions, which causes them to receive low expected returns and thus low benefits compared to what they would have received had they invested in higher risk assets. If government is given the responsibility, care needs to be taken to prevent the politicization of the investments. While there are numerous examples of poor management of investment by government, there are also examples, such as the Quebec Pension Plan, where government management of investment has been effective.

Whoever manages the investments, pension funding in capital markets requires that those markets are adequately regulated. This criteria is not met in many capital markets, where there is a lack of transparency as to the value of assets.

Coverage and its shortfalls

In 1944, the International Labour Conference recognized in the Declaration of Philadelphia that economic security should be a right for all people and that the nations of the world should develop programmes "which will achieve ... the extension of social security measures to provide a basic income to all in need of such protection and comprehensive medical care". More than 50 years later, however, that right is still denied to the vast majority of retired and disabled people, widows and orphans. For them the key issue concerning social protection is their lack of entitlement, and not the basis for determining benefit.

Lack of coverage tends to be a problem among workers with particular characteristics - informal sector, agriculture, rural, low wage, household workers and the self-employed. While workers with these characteristics are likely not to be covered or to evade contributions in both developed and developing countries, they are a much larger percentage of the workforce in developing countries, which explains in part why the problem of lack of coverage is more severe in developing countries.

The extent of population coverage for social security pensions, however, depends on many factors, of which the following are particularly significant:

The method of financing

Universal, or social assistance, schemes are typically financed from general taxes rather than social security contributions. Provided that the tax base is broad and yields sufficient resources, coverage may be extensive and not directly dependent on individualized financing.

The age of the scheme

Generally, the more established the scheme, the broader the coverage.

The level of economic development

There is a close link between the level of coverage and the level of social protection resources available to finance it, with more developed countries generally having a higher level of coverage

The size of the formal sector

It is easier to collect contributions and taxes from those in formal sector employment than from those in the informal sector.

The capacity of the social security administration

This affects both the credibility and viability of the scheme and has implications for existing coverage in that many schemes experience difficulty in ensuring compliance. It also limits, however, the extension of coverage to excluded groups and contingencies.

Government policy

The extent to which the government gives priority to extending coverage for social protection varies according to national priorities and may be sufficient to counteract other factors. Thus, for example, Costa Rica is less developed than Mexico but has considerably higher coverage due to government initiatives in the 1970s.

Governance and administration

The overall performance of social security pension schemes in many countries has been disappointing. This is attributable to a broad range of problems some of which are outside the control of the social security administration. Some, however, reflect mismanagement, or are due to weaknesses in the design of the scheme. Good governance is the key to an effective social security scheme, but it is essential to be clear as to what this term means. The definition used here is broad and embraces the processes of consultation and decision making, the institutional arrangements, and the managerial and administrative functions relating to the implementation and supervision of social security schemes. It is also concerned with the interrelationship between national policy, national management and scheme management.

Many countries have had problems with poor functioning of their social security schemes. Frequently, these problems are due to poor governance. Sometimes they arise because of politicization of the social security institution. Sometimes they result from the poor design of administrative procedures, or the benefit formula. Poor governance in some countries results in high administrative costs and poor service. These issues of coverage and governance are primarily relevant for developing countries because developed countries generally have high coverage and are fairly well governed.

The following are objectives for good governance, grouped according to whether they relate to strategic and macro policy issues, institutional arrangements or administrative obligations at the operational level.

Strategic and macro-policy objectives

- establish a process of policy formulation which takes account of the full range of social protection needs and which balances those needs against national resources;
- create a balance within national policy between public and social security schemes and individual and private provision which ensures widespread coverage and achieves the desired level of income redistribution;
- create a mechanism for the enactment of legislation to give effect to policy decisions.

Institutional arrangements

- establish institutional arrangements which are accountable for the implementation of social security programmes;
- ensure that contributors and beneficiaries have an opportunity to influence the decision-making process and to monitor the administration of social security schemes;
- establish financial control mechanisms to monitor the allocation and management of resources;

Administrative obligations

- ensure that contributions are collected and accounted for and that benefits are paid promptly and accurately and with appropriate explanation, minimise the cost of administration within the desired level of service;
- ensure that contributors and beneficiaries are aware of their rights and obligations;
- establish a mechanism for monitoring and reviewing administrative performance.

These objectives for good governance provide the basic framework for the conception, development and monitoring of a sound and viable social security scheme. The governance of social security has received increasing attention in recent years as part of a growing awareness that schemes are only as effective as they are administered. There has been a tendency in the debate on the reform of social security, however, to fail to distinguish governance issues from conceptual ones. This has led to criticism of social insurance principles when, often, the focus should have been on weaknesses as to how such schemes were administered.

Contribution evasion

Contribution evasion, or noncompliance, is a critical issue in the design and operation of contributory social security pension programmes. It influences the adequacy of benefit payments to participants as well as both the financial status and the political legitimacy of the entire programme. Contribution evasion occurs when employers, employees and the self-employed do not pay required social security contributions. It is a major problem in much of Central and Eastern Europe, Latin America, Africa and Asia. It has seriously undermined the social security scheme in some countries, with revenue falling far short of that needed to pay benefits. This shortfall has resulted in social security schemes failing to pay benefits, paying low benefits and in their receiving subsidies from general revenue. Even in OECD countries, many schemes lose considerable revenue due to this revenue gap.

Contribution evasion is one of the reasons why social security schemes are mandatory - some workers will not voluntarily save enough on their own to fund their retirement. The problem is compounded because employers generally act as a collection agent, and they may have even less interest in collecting contributions than some workers do in making them. However, the causes of contribution evasion are more complex. In some countries, contribution evasion is primarily a result of high inflation. In other countries, corruption and lack of trust in the government are important reasons. While a loose connection between contributions paid and

benefits received may be a factor in contribution evasion, it is certainly not the only factor and is probably not the most important one.

Contribution evasion can only occur if three conditions coincide:

- employers wish to evade, or place a low priority on making social security contributions relative to other expenses;
- employees prefer non - payment of contributions, are reluctant to report non-payment to authorities or are unaware of the non-payment;
- government enforcement tolerates evasion or is inadequate to prevent it.

Pension transfers and the redistribution of income

Redistribution is an important feature of many social security pension schemes. Governments design pension schemes to be redistributive to guarantee adequate retirement income for retirees who were in low-paid employment while working, or whose accrual of pension benefits was reduced because they were temporarily out of work for reasons such as sickness, unemployment or family responsibilities. Redistribution between generations may also be desired to share the benefits of economic growth or to provide decent pensions to people who had low lifetime income due to a depression or war.

Redistribution from upper-income to lower-income workers is generally seen as an essential feature of a pension scheme. The desire of governments to redistribute income raises questions about how this can be done equitably, both for those who contribute and those entitled to benefits.

Pension schemes can be designed so as to be progressive, meaning that they provide low-income workers a higher rate of return on their contributions than upper-income workers. While progressive features are commonly built into the structure of defined benefit schemes, that is rarely the case for defined contribution schemes. Defined benefit schemes often have features designed to reduce the inequality of income, although features that increase income inequality by benefiting privileged groups may also be present in some countries. In many countries, including countries with defined contribution schemes, the military and government employees are treated as privileged groups. Political pressure by powerful groups may result in redistribution favouring the military and the judiciary, or upper- and middle-class workers, rather than the poor. For both defined benefit and defined contribution schemes, the fact that higher-income workers tend to have higher life expectancy causes annuitization of benefits on a uniform basis to favour those workers in terms of lifetime benefits received.

The risks to individuals

The challenge in delivering stable and predictable retirement income is that the world is changing and is inherently unpredictable. Pension schemes are subject to a variety of risks. The economy may not behave as expected, demographic trends may alter, political systems may change, and private and public sector institutions important to the pension scheme may fail to execute the responsibilities they have been assigned. Moreover, at the beginning of a working

career, the worker's own fortunes are not entirely predictable. He or she may experience prolonged unemployment, or have a promising career disrupted or prematurely ended by industrial restructuring. Each of these possibilities introduces risk that expected pension benefits may not be received.

No pension scheme in an unpredictable world can completely succeed in providing a predictable source of retirement income. Some threats to a predictable retirement income, however, have more serious consequences under one approach to pension provision than another.

The following categories of risk affect pension benefits:

- demographic risk arising from unexpected changes in birth rates or mortality rates;
- economic risk arising from unexpected changes in the rate of growth of wages or prices or from unexpected changes in the rate of return earned in financial markets over the course of the worker's career;
- political risk arising from a breakdown in governmental decision processes which allow politicians to make benefit promises in excess of what society can afford to pay, cause benefits to be reduced on short notice due to political changes, lead to other flaws in system design, or which prevent the political system from making timely adjustments to changing economic and demographic trends;
- institutional risk arising from the possible failure of private financial institutions, or their government regulators, or from the inability to obtain retirement benefits due to inadequate record-keeping or other kinds of incompetence on the part of pension administrators; and
- individual risk arising out of uncertainties about the individual's future work career.

The risks of social security pension schemes differ between pay-as-you-go defined benefit, funded defined contribution and unfunded notional account systems. Risks as to replacement rates provided by defined contribution schemes are affected both by unexpected changes in capital markets and unexpected changes in the rate of growth of wages. For example, an unexpected rapid growth in real wages will lead to a low replacement rate in a defined contribution plan just as will an unexpected decline in asset values in capital markets. Relying on defined contribution schemes may lead to considerably over-saving or under-saving in comparison to that needed to reach a target replacement rate, depending on the performance of capital markets and wage growth rates near the point of retirement. Fluctuations in interest rates also affect the value of annuitized benefits provided by defined contribution. For defined contribution schemes, a decrease in interest rates will cause a given account balance at retirement to provide lower annuitized benefits. However, it will also affect the value of assets held by the pension fund, and the two effects may be partially offsetting. Neither of these effects of interest rates, however, directly affect the benefits provided by defined benefit schemes.

Economic effects

Social security retirement pensions are determined by the political process in democratic countries. Thus, their effects are to some extent desired outcomes of conscious decisions concerning design. Some effects of social security, however, may be undesired, due either to

inherent trade-offs in the design of systems or consequences unanticipated when systems were designed.

Economists have extensively analysed the effects of defined benefit social security schemes. These schemes may affect hours employees' work, their choice of work in the formal or informal sector, and the age they retire. They may also affect savings decisions of workers, national aggregate savings and the development of capital markets. In most cases, theory yields ambiguous predictions concerning these effects, empirical studies have failed to resolve the issues and controversy remains. However, there is little support for large effects of retirement benefits programmes in either labour or capital markets. In many countries, disability benefits programmes, and to a lesser extent special early retirement programmes and unemployment benefits, are the primary paths to early retirement. Empirical evidence suggests that even a relatively large change in the generosity of benefits would affect the average retirement age by only a few months. Evidence concerning effects of unfunded social security programmes on savings or effects of switching to funded programmes are mixed, but do not consistently indicate a negative effect of unfunding, nor a positive effect of switching to funding. Other government policies targeted specifically at encouraging savings, such as tax policies, are more appropriate tools for influencing national savings because they do not involve a sacrifice of social insurance goals in order to increase savings.

Because of the apparent simplicity of defined contribution schemes, economists have hardly analysed them. These schemes collect contributions, make investments and disburse payments. Policy analysts generally treat them as savings plans that do not affect how workers behave. A closer look at the provisions of mandatory defined contribution pension schemes indicates that they may affect retirement age and other worker labour supply decisions. These effects occur because the schemes are mandatory. Any mandatory programme that induces people to change their behaviour, such as causing them to increase their savings, will cause distortions, as individuals act to minimize the consequences of the programme that is undesired by them. Defined contribution schemes also have behavioural effects because of their relationship to minimum benefit and poverty programmes, their sometimes high administrative expenses, and the effects of capital market risks on account balances and interest rate risks on monthly benefits when they are annuitized.

The consequences for public finances

Social security pension revenues and benefit payments affect public finances but common accounting practices have weaknesses in recording these effects. Single period accounting methods commonly used to measure the effects of social security pensions on public finances do not indicate whether the long-term financing for social security is adequate. The commonly used definition of implicit pension debt, measured using private sector insurance concepts, is misleading for social insurance. Pension debt is created when benefits have been promised but not funded. Social security financing is adequate if projections indicate that in each period revenue plus reserves are sufficient to meet benefit payments. Standard accounting methods have difficulty incorporating the value of implicit and explicit contingent liabilities, such

as for guaranteed minimum benefits, and thus understate the costs of social security defined contribution schemes where contingent liabilities may be relatively important.

The primary conclusion of Part I is that for the majority of workers in the world, the most important social security pension issue is not how benefits are financed or determined, but the fact that they are not covered by a social security pension programme. This problem occurs primarily in developing countries.

The second main conclusion of Part I is that governance is an important issue in many countries. A well-designed social security pension programme can fail to meet its goals if it is poorly governed. Many of the problems of social security schemes in developing countries result from poor governance and can be resolved by improvements in governance rather than requiring major reforms.

Part II: Reform

The search for a new balance

Recognizing that social security schemes need to adjust to their changing economic, demographic and social environments, Part II provides policy analysis and major policy prescriptions geared towards finding a new balance for social security schemes.

The normative basis for policy

Guidance on social security pension policy is always underpinned by the normative views or values of the policy adviser. The normative basis for policy concerns value judgements as to how social security retirement benefits ought to be structured. The general objectives for the benefit structure of pension schemes can be thought of in terms of five components:

- the extension of coverage to all members of the population;
- protection against poverty in old age, during disability, or on death of the wage earner for all members of the population;
- provision of an income, in replacement for earnings lost as the result of voluntary or involuntary retirement, for all those who have contributed;
- adjustment of this income to take account of inflation and, at least to some extent, of the general rise in living standards;
- creation of an environment for the development of additional voluntary provisions for retirement income.

In addition to these aspects, which affect the amount of benefits to be delivered and their universality, there are other considerations. These include:

- the principle of compulsory affiliation;
- equality of treatment, for men and women and as between nationals and non-nationals;
- the need to provide guaranteed and predictable benefits, at least up to a certain level;
- democratic management of the pension scheme, through the inclusion of workers' and employers' representatives on the controlling body;

- the responsibility of the state to ensure that the conditions for the delivery of benefits is fulfilled (although this does not mean that the state is obliged to carry out this task itself, only to ensure that it is done);
- the establishment of benefit (and contribution) ceilings which limit the states' responsibilities to high-income earners.

Most of these principles are contained in the various International Labour Standards established by the ILO, which also set out the minimum level of benefits: broadly speaking, these amount to a replacement rate of 40 per cent of previous earnings after 30 years of contributions, with safeguards and minima for those whose lifetime earnings were low, or who experienced significant periods of non-contribution.

Extending coverage to the informal sector

A number of common considerations lie behind the policy options for extending coverage:

- there is unlikely to be, in any country, only one solution to the goal of universal coverage;
- in developing countries it may be unrealistic to rely on an extension of a social insurance scheme designed for the formal sector as a means of covering the self employed and those in the informal sector;
- high levels of coverage depend on a high degree of consensus and the latter depends on the scheme being related to the needs and circumstances of those that it seeks to cover;
- achieving an extension of coverage is interdependent with good governance and scheme design.

Policy options include:

- extending, without a significant modification of the contribution and benefit structure, existing schemes to cover excluded groups;
- restructuring or adapting existing schemes to facilitate coverage of excluded groups;
- designing special schemes for excluded groups;
- introducing tax-based universal or targeted schemes;
- encouraging the development of special schemes based on self-help or mutual insurance principles.

The first three approaches seek, each to a different extent, to bring the excluded within the scope of the existing system and imply the general application of at least some social security principles, particularly contributory-based entitlement and compulsory insurability and related obligations that ensure compliance. The fourth breaks the contributory link and presumes, with financing from general taxation, the payment of benefit based on evidence of a contingency such as old age or low income. The fifth presumes that, at least for some of those excluded, coverage under a public social security scheme is unrealistic and implies that private and group arrangements based on mutual support might be the only solution.

Extending coverage to the informal sector may require special programmes be constructed or special treatment be provided to those workers to make the programme better fit their needs and their limited capacity for contributing. This may involve providing them only disability and survivors' benefits, or providing retirement benefits at a relatively high age, such as age 70. In some cases, special programmes need to be designed specifically to meet the needs of informal sector workers. Legislative restrictions on coverage in the retirement benefits programme may need to be eased. For example, in some countries, workers employed in small enterprises are excluded.

Improving management, governance and compliance

Some of the problems social security schemes have encountered can be addressed by policies to improve management, governance and compliance.

Governance can be improved by involving workers and employers in the process. The way they would be involved depends on the circumstance of the country, but in some cases it would involve tripartite (worker, employer, government) participation in a management board. Management needs to be structured so that employers and workers have input into the structure of social security programmes. While in some cases, it may be useful to have the formal input of these groups through their participation in management committees, in other cases, participation could occur through lobbying, voting, and their otherwise being involved in the political process.

Maintaining compliance requires an enforcement policy and mechanism. Compliance problems have occurred in both defined benefit and defined contribution schemes. Compliance needs to be a responsibility of the government. In some defined contribution schemes, compliance has been assigned as a responsibility of private sector pension providers. Because the small pension accounts of low-income workers tend to be as expensive to manage as the larger accounts of upper-income workers, and thus result in little profit, frequently private sector providers do not have an incentive to maintain compliance among low-income workers, where compliance problems tend to be found.

Influencing the age of retirement

The lower the minimum age at which retirement social security pension benefits can be received, the more expensive it is to finance a given replacement rate. Wealthier countries can afford to finance longer retirement periods, and as wealth increases workers tend to want to spend more years in retirement. With increases in life expectancy the retirement period tends to increase. Population ageing, however, raises the number of retirees relative to workers, which raises the cost of providing benefits through pay-as-you-go schemes. These are some of the factors that need to be considered in setting the minimum age at which benefits can be received.

Raising the minimum retirement age may cause people to retire later or it may have little effect on the actual age at which people retire but instead be a cut in retirement benefits. When countries raise the minimum retirement age, there tends to be an increase in demand by older

workers for other types of benefits, such as disability and unemployment benefits, and that should be factored in when figuring any cost savings.

Developing pluralistic designs and flexible structures

There is no one universal perfect retirement income scheme. The level of economic development, the population age structure and political factors affect the retirement income scheme appropriate for different countries. As the economic, demographic and political situation in a country alters, changes in retirement income schemes may also be required. Because of the interaction between social security retirement benefit schemes and economic development, retirement income schemes evolve over time and different systems may operate more successfully in different countries and at different periods.

All countries need to develop pluralistic designs and flexible structures for their social security schemes. To meet the goals of alleviating poverty in old age and providing low risk retirement benefits, generally multiple sources of benefits are needed.

This book stresses the roles of the retirement income scheme in reducing poverty and providing low risk retirement income. To do that, retirement income must have an element that is redistributive and it must be provided from diversified sources. The relative importance of the different sources will depend on the rate of return and risk of the different sources. Whether the sources are managed in the public or private sector will depend on political philosophies towards individual and private sector responsibilities versus the role of the government and views as to the relative governance capabilities of the private and public sectors.

To reduce risk through risk diversification, the best approach for developed countries can be characterized as a multi-tiered system, with the tiers being determined by their risk and redistributive characteristics. They would include a bottom, anti-poverty and means-tested tier, financed from general revenues, a second pay-as-you-go tier, a third tier which would be a mandatory defined contribution component, and an upper tier of voluntary retirement savings and non-pension sources of income. The essential aspect of this approach is not a particular number of tiers, however, but that retirement income be provided from different sources having different risk characteristics in order to diversify risk. This approach stresses the desirability of increasing complexity in retirement income schemes as they develop to allow for greater diversification of retirement income risks.

For developing countries with low coverage, priority needs to be given to expanding coverage. This could be done by having special programmes designed for workers in the informal sector, or by having a national programme that includes most workers while only higher-income workers are required to participate in a more expensive programme. In order to keep costs low for poor workers, the basic programme could provide only disability and survivors' benefits, or could provide retirement benefits starting at a relatively high age, such as 65 or 70.

The reform process and its political management

Managing the political aspects of the reform process is an essential aspect of successful social security reform. Strategies are needed for developing and reaching consensus on reforms. Because of difficulties in reaching consensus, many countries have found that it takes years to enact reforms once the need for reform has been agreed upon.

Instituting reforms gradually, and allowing for options for workers, are strategies to reduce opposition to reform. However, for a country to be able to use these strategies, it needs to have long-term planning concerning the financing of its social security pension benefits, otherwise, it may not be able to afford postponement of reform.

In planning reform, government consultation with workers and employers is needed at all stages. The government may need to educate the public about the problems and issues, and investments may be needed in strengthening the knowledge of staff and parliamentarians involved in the process. Once reform has been achieved, periodic review is needed of the social security scheme to evaluate what adjustments are required.

The main conclusion to Part II is that different types of retirement income schemes are appropriate for different countries. Typically pluralistic programmes are desirable that diversify retirement income sources to reduce risk, and that have a redistributive function targeted at alleviating poverty.

For most developed countries, meeting the goal of providing low-risk retirement income requires a programme that has a pay-as-you-go element that is subject primarily to macroeconomic labour market risks and a funded element that is subject primarily to capital market risks. (Both types of programme are subject to risks as to the individual becoming unemployed, with the consequences typically being more serious in a defined contribution scheme than in a traditional defined benefit scheme.) These two elements could be in one or several programmes. Because of the fixed costs of individual accounts, it may be better for low-income workers to have a less complex system.

Introduction to regional briefs

The regional briefs discuss social security schemes and related policy issues around the world. They divide the world into six regions: Africa, Asia, the Arab states of the Middle East, Latin America and the Caribbean, Central and Eastern Europe and Central Asia, and the countries of the OECD. This division of the world is by geographic region, except for the OECD countries, which have as their unifying element that they are the most highly developed economies but are found in different regions. Thus, for example, Japan is included in the OECD regional brief rather than the one for Asia.

Social security schemes vary greatly around the world. Even within regions, large variation reflects diversity in level of development, views towards policies of income redistribution, and historical experience. Thus, while it is possible to generalize to some extent

within regions, the division of the world into regions was not done on the basis of retirement income schemes being similar within a region. For many aspects of social security the briefs stress the variations within regions. Low coverage is a problem, however, in all the regions except the OECD region.

Asia and the Pacific

One striking feature of this region is the large number of countries with no mandatory pension scheme. Most of these countries are former British colonies and the main reason they do not have a pension scheme is that they have provident funds. Indonesia, Malaysia and Singapore provide benefits through provident funds. A provident fund does not fulfil the same function as a pension scheme, as it does not provide a replacement income for the length of retirement. A few countries, such as Thailand until 1998, have not had any statutory retirement benefits. Countries in the region less exposed to British influence have, for the most part, set up social insurance pension schemes to cover employees and sometimes also the self-employed. These include countries as diverse as the Republic of Korea, the Philippines and Viet Nam. Pakistan, despite its strong British connections, opted for a social insurance pension scheme in the 1970s. This may reflect the influence of the Arab countries, which almost all have such schemes. India has also recently established a social insurance pension scheme, though this did not happen until half a century after the end of British rule. The funded schemes in the region have been hard hit by financial turmoil, arising in part from problems with the government regulation of the national financial systems in the region.

Africa

Some countries provide benefits through provident funds, but there is a trend towards ending those funds and converting them to defined benefit pay-as-you-go funds, as was recently done by Tanzania. In general, and with certain exceptions, the coverage and effectiveness of existing social protection schemes relating to the contingencies of retirement, invalidity and death in Africa is weak. This is attributable to a number of factors, some political and economic, and others which reflect failures in governance at all levels from the design of schemes to their operation. The schemes introduced by the colonial countries often took insufficient account of the socio-cultural context and thus proved limited and inappropriate. Since independence, this has been compounded by adverse economic and political circumstances as well as by mismanagement. Many African schemes have failed to provide effective social protection, even for the small minority of the population that they cover.

Latin America and the Caribbean

Most of the countries of this region provide benefits through defined benefit pay-as-you-go schemes. However, because of the poor functioning of their defined benefit social security schemes, an increasing number of countries - eight as of 1998 - have converted at least partially to defined contribution schemes. These schemes involve fully-funded individual accounts that are managed by private sector pension fund managers with sometimes the government also operating a pension fund management company that competes with the private companies to attract workers

as clients. While it was thought that converting to a defined contribution scheme would reduce contribution evasion because benefits would be tied more closely to contributions, contribution evasion remains a problem in these countries, suggesting that, as discussed earlier, the causes of contribution evasion are more complex.

A trend towards defined benefit schemes has occurred in the Caribbean, where countries have converted their provident fund defined contribution schemes into defined benefit pay-as-you-go schemes.

The Arab states of the Middle East

The Arab states of the Middle East include both some of the world's wealthiest and poorest countries. Birth rates tend to be high in this region and population ageing is not viewed as a problem. In most countries, the schemes are relatively young. All have been established since 1950. All the programmes are traditional defined benefit social insurance programmes. In most cases, the schemes are financed by contributions from both employers and employees with the state covering any deficit. Some of the wealthy countries provide very generous social security benefits.

Some of the countries in the region have work forces with a high percentage of foreign workers. The treatment of foreign workers is a social security issue in the region because some of the countries exclude them from coverage under the social security retirement benefits programme.

Central and Eastern Europe and Central Asia

The countries of Central and Eastern Europe and Central Asia are in the process of converting their economies from command based to market economies. The social protection schemes in most of these countries have features inherited from the systems of the former planned economies, which consisted of a visible (explicit) and an invisible (implicit) component. The visible institutionalized system of social security provided pensions, short-term cash benefits and health care. The implicit component added security through specific socialist income redistribution mechanisms, such as guaranteed employment, the provision of low-cost housing and heavily subsidized basic goods and services (for example food and services for large families, educational supplies, books and cultural goods and services). There was also a system of cash and in-kind benefits provided by state enterprises to employees, their families and retirees - such as cash allowances, subsidized recreational facilities and vacations, and subsidized short- and long-term loans.

Many of these countries are rethinking their social security schemes, with some adopting defined contribution schemes. The defined contribution schemes in the region are just being instituted and it is too early to evaluate their performance.

The OECD countries

The OECD countries have the oldest populations, which is a motivating factor in their reforms. OECD countries spend on average 10 per cent of their Gross Domestic Product (GDP) on old-age retirement benefits, exceeding their health care spending. OECD countries rely primarily on pay-as-you-go defined benefit schemes for providing social security retirement benefits. The pay-as-you-go social security schemes are frequently supplemented by voluntary funded schemes, mostly operated by the private sector.

Most OECD countries are considering changes in their retirement income schemes to ensure the financial viability of their systems in the face of population ageing. Many of them have legislated increases in the age for early or normal retirement in an attempt to reduce benefits and encourage workers to postpone retirement. A number of countries have reduced benefits by increasing the years used in the earnings averaging period, reducing the generosity of cost-of-living increases for retirees, or requiring more years of work to qualify for certain benefits.

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Policy conclusions

Throughout this book, and in addition to its attempt to provide a comprehensive and global view of pension schemes, a number of major themes will be apparent which in turn give rise to a number of important general issues. The approach to these issues is based on the International Labour Standards which have been established in the International Labour Office over many years, and which have been confirmed by the world community. These Standards heavily influence the ILO's view of what ought to be the guiding principles for the design of pension schemes. But that is not to say that they are universally observed by all countries. Many countries find it impossible to implement all the main principles, largely because their economic circumstances do not permit it. In other cases countries have opted for different approaches mainly because their perception - in many cases a mistaken perception - is that it is not to their economic advantage. And in other cases conflict between different groups and classes of society leads them to adopt other regimes. The reader who comes to the end of the book will be fully aware of these divergencies and the ILO's attitude to them. But it is both useful and important to provide some brief statement at the start.

Two main problems are at the heart of the issues facing pension schemes in almost all countries of the world (the exceptions relate entirely to developed countries). These are questions of coverage and governance.

Universal coverage of pension schemes is the first and most important of the normative principles. But many countries find it impossible to apply because of the large informal sectors of their labour force: the rural self-employed, the urban self-employed and the many who are employed, in one way or another, by informal sector enterprises. For these social groups earnings cannot easily be monitored or contributions collected and frequently the state does not possess the fiscal means to pay even basic pensions from general revenues. Participation in the pension

scheme on a voluntary basis breaks another of the central principles - that of compulsory participation - and if an attempt is made to make participation mandatory it opens the way to large scale evasion of contributions from groups of people who are too poor to contribute much anyway. Even where workers are employed by small enterprises, say less than five or ten employees, the social security pension scheme may find it too difficult, or the administrative costs too high to enforce compliance.

There does not appear to be any easy answer to this problem, although two approaches are worth trying. The most obvious approach is for the pension agency to enforce compliance by all firms of any size, even if doing so makes the cost of collecting contributions from small firms greater than the benefits which will ultimately need to be paid. The social benefits from greater coverage far outweigh the additional administrative cost and reduce the social assistance which the state may ultimately need to pay to the poor. An alternative approach is to rely on institutions built up within the informal sector itself - savings clubs, cooperatives and other informal organisations - and to offer such organisations assistance in forming their own retirement anti-poverty protection schemes. This has implications for the design of such schemes. They would need to be self controlling. They would be voluntary. They are likely to cover a range of social contingencies - health care, unemployment, family needs, food shortages and crop failures, education and business needs - as well as strictly retirement income. They would also need to operate on the basis of individual retirement savings accounts and could not benefit from the collective force of large-scale pension schemes. Nevertheless, they would bring a degree of protection to large numbers of people who would otherwise be excluded. The problem is recognized in the International Labour Standards, which originally (Convention No. 102) accepted less than universal coverage but have subsequently increased the stipulated level of coverage. But many countries, especially those in Africa, have great difficulty in complying with these requirements and the problem is far from being solved.

The other major problem of pension schemes in developing countries is that of governance. Many schemes, or their beneficiaries, are in financial difficulties simply because of an inability to collect all the revenues due to them, to invest any reserves wisely, or to pay benefits promptly and in full. Administrative costs may be excessively high. In some cases the origin of these difficulties may lie with the government, which may usurp the reserves of the pension fund for other purposes, or which may impose financial requirements-for example investment of the pension funds in government bonds at unrealistically low or negative real rates of interest - which effectively transfer resources back to the state. But the shortfall in contributions, or equally the non-payment of benefits, may also arise from general deficiencies in management and administration and from large-scale contribution evasion on the part of employers and their workers. Staff of the pension agencies may be too numerous, their salaries too high, and they may lack the necessary skills and training. And auditing and control techniques may be too weak. The remedy would seem to lie in improving the performance of pension agencies in all these areas. But the process is likely to be a long one and is likely to rely on general improvements in a country's governance, both public and private, and a greater degree of autonomy on the part of the pension agency itself. In some countries the difficulties may arise because of fundamental actuarial imbalances: the government has over-promised the benefits it can deliver on the basis of the contributions it expects to collect, but may be unwilling to increase

contribution rates, reduce benefits or to meet the deficit from general revenues. Or retirement ages may be set unrealistically low. In this case the problem of governance becomes a political one.

In these two cases - coverage and governance - the problems of pension schemes in a large part of the world do not permit easy or simple answers. Ultimately much depends on the economic growth of the country concerned, the transformation of its labour force into one largely incorporated into the formal sector of the economy, and a greater maturity in its political and corporate governance. This will all take time. For the moment, the situation of pension schemes, and social security generally, in many developing countries resembles the situation in the developed countries a hundred years earlier. However there are also major issues, affecting especially developed countries, which are more amenable to an analytical resolution. These are issues concerning the prospective ageing of population structures and whether or not to move from pay-as-you-go public social security schemes to schemes based on fully funded, defined contribution structures, based on individual accounts and possibly managed by private sector agencies.

As is well known, the population structure of the advanced OECD countries is likely to age dramatically over coming decades, both as a consequence of earlier declines in fertility and as a result of increases in life expectancy. As a result, the proportion of total national income which must be transferred to retired persons - provided their relative incomes are to be maintained and provided their actual age of retirement is to remain unchanged - will need to be increased almost pro rata. OECD countries currently allocate about 10 per cent of national income to the 18 per cent of their population over the age of 60. By the year 2030 the proportion of the population over the age of 60 will have increased to nearly 31 per cent and will require a comparable increase in benefit expenditures. Together with other social charges, especially on health care, social assistance and unemployment, the contribution rate required to support these public expenditures is thought to become too high and politically unacceptable. At the same time, the social basis of public social security schemes is being questioned, quite apart from the necessity to support ageing populations. The public transfers to retired persons are thought to be too generous and to result in distortions in labour and capital markets (lowering the participation rates of older workers and reducing the national savings rate) which in turn affect the level and growth of GDP. One answer to both these perceived problems - ageing and too expensive public sector involvement - which has been widely proposed is to convert public pay-as-you-go social security pension schemes into defined contribution ones, possibly managed by private sector pension funds. It is claimed that the pre-funding of pension schemes would avert the major increase in pay-as-you-go contribution rates to be expected as the population ages, would improve labour force participation by older workers, increase national savings, improve national competitiveness, reduce the financial obligations of the state, and generally create a much more specific link between contributions and benefits. Such a scheme would need to be mandatory and it would need to be supplemented by a basic anti-poverty pension financed from general revenues. The pension itself would need to be determined from an actuarially calculated annuity based on the lump sum accumulated at retirement.

Analysis of such proposals and their comparison with existing structures is complicated. The reader is directed to the relevant chapters for an account of the analytical details. For the purposes of this introduction however there are two main points to be made.

In the first place, some of the perceptions about the operation of such a scheme are factually and analytically wrong. It would not reduce the burden (on the national economy and the population at large) of supporting an ageing population unless pension benefits were reduced relative to income in work, or unless it resulted in a significant increase in the actual age of retirement. But both these changes could also be achieved under a public social security scheme of the pay-as-you-go type. The reason is fairly straightforward. The standard of living of retirees can only be provided from the real incomes of those in work, whether this transfer takes place through a public mechanism or through market-based savings. If it is the former, contribution rates must be increased. If it is the latter, then the accumulated financial assets of pensioners must be sold to contributors in order to provide the pensioners with money for consumption. In both cases the amounts of money involved (contributions or mandatory savings) are equivalent. Both must react in the same way to increases in the proportion of pensioners to the active population.

More importantly, the introduction of a mandatory retirement savings scheme (MRS) clashes with some of the normative principles established for social security schemes. There are a number of divergencies.

In the first place, one of the most important fundamentals of the International Labour Standards is that the retirement income of workers should be predictable and guaranteed. Defined contribution schemes cannot do this. The lump sum accumulated at retirement relies on the income from the (market) rate of interest accumulated on a lifetime of contributions to the scheme. This can be very uncertain: simulations presented suggest that it might vary by 30 per cent or more, depending on the course of interest and wage rates over the previous 40 years. In addition, the current interest rate at the actual point of retirement has a strong influence on the value of the annuity which can be derived from the lump sum. There can be major differences in the pension received according, to whether interest rates are high or low at the point of retirement and negotiation of an annuity.

Other principles are engaged, although perhaps less importantly than the question of the guaranteed income. One is the question of indexing benefits to prices, and at least to some extent to wages. To achieve this the institutions providing annuities must have access to some form of indexed bonds in order to fix their benefit rates, or must provide their own indexing calculating the annuity on the basis of expected real rates. Another is the question of the responsibility of the State. If defined contribution schemes are to be operated by private agencies, they must be carefully regulated and monitored by the State and subject to a range of prudential regulation. Finally there is the question of democratic management, by which is meant that contributors and beneficiaries must have a voice in their management. This is difficult under a system of privately-managed funded schemes. But it could be replaced by providing workers with a transparent choice of scheme, and the right to switch from one to the other without loss of assets.

Two alternative pension designs are currently being proposed, which would attempt to avoid this conflict between the normative principles and the wish to develop more direct links between contributions and benefits, and the desire to split risks more evenly between contributors and pensioners.

The first design consists of financing retirement incomes from a range of different sources, in particular a mixture of defined benefit and defined contribution schemes. One such design would comprise a number of tiers:

- a bottom anti-poverty tier, means tested, and financed from general revenues, which would provide income support for those without other means;
- a second pay-as-you-go defined benefit tier, mandatory and publicly managed, which would provide a moderate replacement rate (say around 40 or 50 per cent of lifetime average earnings) for all those who had contributed to it, and which would be fully indexed;
- a third tier which would be defined contribution based, mandatory up to a determined ceiling, possibly managed by private pension agencies, and which would provide a pension by means of annuities;
- a fourth tier which would be defined contribution, voluntary, without ceiling, and also managed by private pension agencies.

Such a structure would have the merit of splitting the risks inherent in pension schemes - both the risks associated with public management of defined benefit schemes and the market-based risks associated with defined contribution schemes - but would at the same time provide a basic guaranteed retirement income for the large majority of workers in the middle bands of income.

A second alternative is a notional defined contribution (NBC) scheme. The structure of such a scheme is very similar to a defined contribution (DC) scheme: a notional account is accumulated during the working life based on contributions and the (notional) interest obtained on them which, at retirement, can be converted into a pension by means of an annuity. The main difference is that the interest rate applied is not the market rate of interest but some other indicator, such as the rate of growth of GDP, or the rate of growth of wages. The scheme would be mandatory and it would need to be managed by the state. Both the interest, and the capital sums to which it contributes, are notional ones and although pension entitlements are built up in terms of individual contributions, these are accounting ones without any equivalence in terms of real money. It would provide a more direct link between contributions and entitlements. But at retirement the risk of increasing longevity would be borne by the individual contributors/beneficiaries since the value of the annuity would be calculated over the then expected lifetime of the pensioners. Other risks, such as those related to economic progress, or those demographic risks arising from previous increases in birth rates, would be borne by contributors and involve some adjustment of contribution rates as the scheme progressed. It would also be necessary to incorporate a bottom tier of income protection in old age for those whose lifetime earnings were insufficient to provide a basic, anti-poverty income in old age.

But the future of pension schemes is evolving very rapidly. Obviously there is no single design which fits all circumstances, and the question of what is the most appropriate design has to be weighed against the other factors, in particular the need to provide universal coverage and good governance, which will determine where the most desirable balance lies.

Contribution Evasion:
Implications for Social Security Pension Fund Schemes

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Abstract

A contributory pension scheme, whether it be defined benefit or defined contribution, publicly or privately managed, cannot achieve the objective of providing adequate retirement income for participants who fail to meet their contribution obligations. No matter how well-conceived a scheme may be or how economically sound the principles on which it is based, the scheme will fail to provide adequate retirement income if participants do not fulfil their obligations to the scheme. This paper examines the implications of contribution evasion for the participants and for the state.

Contribution Evasion: Implications for social security pension schemes

1. Introduction

Failure of participants to comply with their contribution obligations to social security schemes is a problem which threatens the legitimacy of the schemes, the adequacy of the social protection of persons who evade their contributions and the financial viability of defined benefit schemes. While evasion is a serious problem, it receives little attention in the social security literature. Generally, evasion of contribution obligations by employers and workers is illegal, hence statistics on evasion are rare and evidence is principally anecdotal or derived from other data. High levels of evasion can indicate low public credibility of a social security scheme and reflect on the quality of governance of the scheme and the efficiency of scheme administration. Consequently, it is not surprising that schemes with unsatisfactory levels of compliance do not report the extent of contribution evasion.

It is important to distinguish between coverage - those persons who by law or regulation are participants in a social security scheme and are generally obliged to contribute to it - and compliance which refers to the extent to which covered persons meet their contribution obligations. A social security scheme can only function with the support of its participants. (Rofman and Demarco, 1999, p. 2) Extending mandatory coverage to categories of workers who may not be disposed to participate in the scheme (i.e. to contribute) and whose participation cannot be effectively enforced may bring political rewards, but it can bring a scheme into disrepute if their participation is illusory. Typical examples of these categories include self-employed and domestic workers. If evasion of contributions becomes widespread and is tolerated, a mandatory social security scheme can effectively become a voluntary scheme.

For employed persons, social security contributions are normally withheld from their wages by their employers who are legally responsible to remit the contributions, along with any

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employer contributions, to a collection agency. Employers are subject to penalties if they fail to make the remittances within specified time limits. A worker's evasion of social security contributions normally involves collusion with the employer and sometimes with social security scheme inspectors.

In social security schemes where employers contribute, there is an incentive for an employer not to contribute in order to reduce the employer's labour costs. When the employer opting for this approach is the government or a state enterprise, the demonstration effect encourages other employers to follow the example set by the government. The principal incentive for workers to evade contributions is to increase their disposable income.

2. Principal types of evasion

Employers can evade contributions by under reporting employees who should be covered by the social security scheme, for example by designating employees as workers who are not required to contribute (e.g. casual, part-time or temporary workers or contractors). They can also evade their contribution liability by under reporting the earnings subject to contribution of workers whom they have registered with the scheme. Employers can delay remitting contributions to the social security scheme, contrary to the scheme regulations; or in the most insidious case, employers can fail to remit contributions which they have withheld from their employees.

Provisions of a scheme may facilitate evasion. For example, an employee may claim to be self-employed if coverage of self-employed workers is voluntary. Where employers must have a minimum number of employees (or turnover) for coverage under a scheme, they may contrive to keep the number of employees below this number. Social security cash benefits are designed to replace a portion of the regular income of a worker, and it is this regular income on which contributions are based. The portion of regular income in a worker's wages can be reduced by exaggerating overtime compensation and allowances (e.g. for travel).

3. Why employers evade

Aside from seeking to reduce their labour costs, employers may evade paying social security contributions due to the administrative complexity of compliance procedures. Separate contribution assessment and collection arrangements for different social security benefits (and for income tax) and multiple collection agencies to which contributions must be allocated and remitted make compliance more difficult and evasion more attractive and practicable. The records of some employers, especially in small establishments, are sometimes inadequate for them to determine the contributions payable. The proclivity of an employer to evade also depends on the employer's assessment of the risk of being caught, and should the employer be caught, the severity of the consequent financial penalty and damage to the employer's reputation.

4. Why employees evade

Current consumption needs can lead workers to seek to evade paying social security contributions, especially when the contribution rate is high. Poverty, temporary financial hardship and, particularly for young workers, expenses associated with family responsibilities are more immediate and pressing than paying contributions for a future retirement benefit.

Myopic behaviour - placing too low a value on future retirement consumption needs - led to state intervention to set up retirement benefit schemes, both to avoid the consequences

of inadequate provision for retirement by myopic individuals and the burden which they would create for prudent individuals who in a modern state would be called upon to support them. (Thompson, 1998, p. 28) Myopic behaviour is reinforced when individuals perceive that they are unlikely to survive to receive retirement benefits or when inflation discourages saving. Myopic behaviour and current consumption needs can provide strong motivations for workers to evade their contribution obligations. (World Bank, 1994, pp. 319-320)

Evasion of social security contributions is possible only if the social security organization tolerates evasion or if it does not have the authority or resources to enforce compliance with the statutory contributory provisions.

Some defined benefit schemes contain design features which encourage evasion. For example, in the 1970s one public scheme (which eventually became unsustainable) provided an old-age pension at age 65 after ten years of contributions equal to 50 per cent of the highest three years earnings (adjusted for cost of living inflation) after age 55, and the pension was increased by 1 per cent for each year of service after ten. Five of the years of service had to be in the eight years prior to retirement. Thus, after ten years of contributions the increment in the pension was marginal. The scheme was open to strategic manipulation by workers who could organize their employment to maximize their expected pensions and minimize their contributions, and this was reflected in high rates of contribution evasion.[1]

In defined benefit (DB) pension schemes the retirement pension is often calculated according to a formula which links a worker's earnings near retirement and the period during which the worker contributed to the scheme, hence the link between benefits and contributions is not transparent in many DB schemes. In defined contribution (DC) schemes the periodic payments throughout retirement depend on the accumulated amount in a worker's individual account at retirement. It is expected that the close link between benefits and contributions in DC schemes will reduce contribution evasion since evasion directly results in lower pensions. (James, 1998, p. 455) This rational response does not seem to be reflected by high levels of compliance in DC schemes which have replaced DB schemes. Myopic behaviour and current consumption needs still seem to predominate over prudent saving for retirement. (see Schulthess, 1998, p. 139; Mesa-Lago, 1998, p. 782)

Government minimum pension guarantees can create a moral hazard for contributors who may decide to forego contributions in order to take advantage of the guarantee. (See Section 7) Eliminating a guaranteed minimum pension would remove the potential moral hazard, but would not solve the problem of providing retirement income support for persons whose pensions, for whatever reason, are low.

Workers may try to evade their contribution obligations if they lack confidence in the social security scheme, for example if the legitimacy and equity of the scheme are being challenged. A few workers will reckon, and others may be persuaded, that they can obtain a better rate of return on their contributions elsewhere, thereby encouraging them to evade. If

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[1]One reason for basing benefits on final average earnings was simplicity of administration. Before modern information technology methods were introduced, maintenance of annual records of contributory earnings over a participant's entire working career was beyond the administrative capacity of many schemes. In some DB schemes which require extensive historical records in order to calculate a benefit (and in some provident funds) a retiring participant is expected to produce his/her own service (or contribution) records when applying for a benefit.

evasion is widespread and creates little opprobrium and enforcement is weak, evasion becomes an easy option. Even if a worker wishes to comply with the contribution conditions, the worker may be reluctant to report a defaulting employer since if the worker's anonymity is not maintained the worker will face retaliation (loss of employment), and if enforcement is weak reporting the employer may be futile.

5. Measuring evasion

Workers' evasion is generally considered to be greatest among self-employed workers and young, low-paid, domestic, casual and part-time workers. Evasion of contribution obligations is normally illegal; consequently consistent data on the extent of evasion by participants (or workers who should participate) in a scheme are not available. Evasion is prevalent among small employers, employers in the informal sector and employers who are experiencing financial difficulties - categories for which reliable statistics are difficult to collect. A social security scheme usually has statistics on the number of registered employers contributing regularly to the scheme. Among the types of evasion by employers registered with a scheme, (1) failure to register eligible workers, (2) under reporting earnings and (3) delay in remittances or failure to remit, the scheme will normally have financial data only on collections, the third item.

Employers' compliance with contribution regulations in countries where contributions are collected along with income taxes (e.g. Canada, USA), and in Japan where social security contributions and taxes are collected separately, is considered to be high. In 1996 the Singapore Central Provident Fund, which collects contributions directly, reported that the default rate for employers who failed to pay the monthly contributions on time was 1.4 per cent. (Central Provident Fund Board, 1996, p. 43). In 1996 and 1997 the Employees Provident Fund of Malaysia reported that the percentage of defaulting employers was 4 per cent. (Employees Provident Fund, 1997, p. 22)

When coverage of a scheme is broad, a rough estimate of the amount of contributions which have been evaded, the *contribution gap,* can be made by taking the difference between the contribution income received and the product of (1) the estimated annual average number of employed persons times (2) the estimated annual average covered wage times (3) the contribution rate. In Russia, where the financial crisis in mid-1998 exacerbated structural crises associated with economic reorientation, Cichon (1999) estimates that the contribution gap of the Pension Fund of the Russian Federation grew from 26 per cent of contributions due in 1997 to 53 per cent in 1998.

Table 1 shows statistics on the ratio of contributors to participants (affiliates) for several reformed schemes in Latin America. These statistics reflect a number of factors of which compliance is only one, and they must be interpreted cautiously. (Mesa-Lago, 1997, pp. 420-421) The following caveats should be borne in mind:

- Participants may have withdrawn from the covered labour force, yet may still be included in the potential active participants. Clearly, if participants who have withdrawn from active coverage are considered to be eligible contributors, the ratio of contributors to participants will decrease. Failure to remove participants who have become inactive can eventually lead to the number of participants exceeding the labour force. (See Arenas de Mesa (1999) with respect to Chile)
- In individual accounts DC schemes, participants may be registered with more than one pension fund manager, and administrative problems may complicate identification of participants (especially those who switch managers) and employers may delay remitting contributions.

- Self-employed participants who are obliged to contribute have notoriously low compliance rates. If self-employed workers are a significant portion of the covered labour force, this can result in a low overall compliance rate. Queisser (1998, p. 107) reports that in Argentina where self-employed workers are obliged to contribute, 70 per cent of them failed to comply.

Schmidt-Hebbel (1999, p. 10) observes A... coverage of affiliates - that comprise both active contributors and non-active members - is very different from coverage of contributors. The latter number ranges from one-half to two-thirds of affiliates. The causes of this discrepancy include varying degrees of evasion of contributions, large and time-varying degrees of labor informality, and large variations in the composition of the officially-measured labor force and people moving in and out of the labor force. A case in point is Chile where 100 per cent of the labor force is affiliated with the second pillar scheme but only 56.2 per cent are active contributors. In this country most of the difference is due to independent and informal sector workers, as the ratio of active second pillar contributors to dependent workers [*employees*] is close to 90 per cent (italics added).

Arenas de Mesa (1998, table 4) separates Chilean employed persons from the self-employed for whom coverage is voluntary. In 1998, the ratio of contributors to employees was 66 per cent and for the self-employed it was 4 per cent

In Australia around 81 per cent of workers (97 per cent of full time workers) are covered by superannuation. (APRA, 1999)

It is clear that the definition of coverage and measurement of compliance can lead to statistical complications and inconsistencies. The relationship between an individual's employment status and coverage and the individual's obligation to contribute can be summarized:

Employment status of individual	Contribution obligation
1. Covered:	
1a. active participant	contributor
1b. inactive participant	non-contributor(possibly can contribute under 2)
2. Voluntary coverage	optional contributor
3. Not covered	non-contributor
4. Pensioner	non-contributor

Inactive participants include persons who have temporarily or permanently withdrawn from covered employment (due, for example, to unemployment, retirement or in the case of females, maternity) generally with acquired benefit rights arising from prior periods of active participation. Measurement of compliance refers to the ratio of contributors to active participants in category 1a.

Table 1: Ratios of contributors to affiliates in DC individual accounts schemes in Latin America

Country	Queisser (1998) % EAP Covered	Queisser (1998) Contributors/ Affiliates (%)	Mesa-Lago Contributors/ Affiliates (%) (1997)	Mesa-Lago Contributors/ Affiliates (%) (1998)	Rodriguez (1999) Contributors/ Affiliates (%)
Argentina	80	49	52	49	
Bolivia	12	na	na	na	
Chile	98	56	54	56	44
Colombia	30	67	50-53		
Mexico	33	65	na	65	
Peru	32	44	45		
Uruguay	70	na	72	61	

EAP = Economically Active Population (Coverage refers to the public and private systems.)
Sources:
Queisser (1998) Table 4.1, p. 56 and Table 5.1, p. 71.
Mesa-Lago (1997) p. 420 - data for 1996; Mesa-Lago (1998) Table 3, p. 792 - new data.
Rodriguez (1999) Table 4, p. 7.

6. Evasion and financial projections

Defined benefit schemes

While the true rate of compliance may be difficult to measure, it is clear that it is below 100 per cent In actuarial projections of contributions to DB schemes this is taken into account by assumptions regarding the density of contributions where,

$$\text{Density of contributions} = \frac{\text{period during which contributions are paid}}{\text{total potential period of contributions}}$$

This definition takes into account legitimate periods during which a participant is not liable to contribute, evasion by the participant's employer due to failure to register eligible workers (category 1 in Section 5) and evasion by the participant. If significant benefit rights are acquired in a DB scheme after relatively short contributory periods, a density of benefits which is higher than the density of contributions can be applied. Different density assumptions can be made by sex and type of employment.

This definition of contribution density does not take into account under reporting of earnings subject to contribution (category 2 in Section 5). An alternative density definition is an estimate of the annual earnings on which contributions are paid compared to the annual earnings on which contributions are payable by a full-year contributor. This definition incorporates periods when contributions are not paid and under reporting of contributory earnings.

Defined contribution schemes

Estimates of DC scheme individual account balances are readily constructed and there are no generally accepted standards regarding the assumptions which must be made concerning interest rates and rates of wage growth during the active (contribution payment) period. Density is generally ignored (as is mortality) during the active period. Projections may be made over an active period of 40 years (e.g. age 20 to 60 or 25 to 65). Few participants will have a full 40 years

of contributions, and consequently the projected individual account balances at the end of 40 full years of contributions can be deceptive.

For example, in a DC scheme assuming an average annual 2 per cent real growth in wages and 4 per cent real interest earnings, after 40 full years of contributions at a contribution rate of 10 per cent the balance in the account will be about six times the wages in the last year. Assuming an (arbitrary) annuity factor of 12 (i.e. 12 units at retirement produce a life annuity of one unit per annum), then the balance in the account results in a life annuity equal to 50 per cent of the wages in the fortieth year. A greater difference between the assumed interest rate and wage growth will produce a larger annuity and conversely. This relationship between the assumptions and the fact that projections over forty years may be sufficiently robust for a group but are unlikely to apply to any specific member of the group are largely ignored. In this example, the effect of density of contributions is ignored.

A worker who experiences intermittent periods of unemployment may have a density of contributions of 80 per cent. If it is assumed that periods of unemployment are uniformly distributed over 40 potential years of contributions, then the annuity is reduced from 50 to 40 per cent of the wages in the fortieth year. But periods of unemployment are often concentrated and prolonged. Suppose a worker continues studying or cannot find employment and does not enter the scheme until the ninth year and thereafter contributes regularly for 32 years.[2] Again the density of contributions is 80 per cent, but in this case the annuity will be 37 per cent of the fortieth year wages. At the other end of a worker's career, if a worker contributes for 32 years and is unemployed for the last eight years before retirement, the density is again 80 per cent, but the annuity is 43 per cent of the fortieth year wages. While an 80 per cent density of contributions may be a reasonable assumption for workers who experience involuntary unemployment, the density of contributions for workers who evade contributions can be very much lower. It is noteworthy that while in a DB scheme which uses a final average earnings benefit formula, it is important to be in contributory employment during the period near retirement so the earnings applied are high, in a DC scheme the operation of compound interest makes it important to commence contributions early. (For a mathematical treatment of density of contributions see Iyer (1999))

7. Effects of evasion: why governments should care about compliance

Evasion creates inequities between employers who meet their contribution obligations and those who do not, and similarly between workers who contribute and those who do not. The effect of evasion on the solvency of DB and DC schemes differs. When evasion is due to an employer failing to remit contributions withheld from employees, in most DB schemes (but not DC schemes) participants who have been defrauded receive credit for the service and earnings represented by the contributions whether the scheme can recover the contributions from the defaulting employer or not. In a DB scheme, evasion can result in lower replacement rates and/or a higher contribution rate than would otherwise be required to pay pensions. A DB scheme (i.e. its current and future members) and ultimately the government bear the risk that evasion will result in insufficient income to pay benefits and that a transfer from general revenue will be necessary. This may motivate social security organizations and governments to enforce compliance with DB scheme contribution conditions. This motivation is not present in DC schemes.

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[2] It is assumed that the worker's wages at entry are the same as those of workers who have been in the scheme for eight years. This is unlikely to be true in practice.

In DC schemes individuals bear the risk that their benefits will be inadequate. Evasion results in lower periodic payments during retirement, but neither the scheme (or account managers) nor the state is legally responsible for this result of evasion by DC scheme participants. However, the consequent recourse to general revenue financed minimum pension guarantees and political pressure from retired persons make it inevitable that state will be called upon to provide retirement income support. Increased attention to enforcing compliance can reduce this potential burden.

Minimum pensions

In some countries members of DC individual accounts schemes are guaranteed minimum pensions by the government. Whenever necessary, pensions of participants who have contributed for a specified minimum period are supplemented up to the level of a guaranteed minimum pension. Table 2 indicates minimum pension provisions in selected countries.

Table 2: Minimum pension provisions in selected countries

Country	Minimum contribution period (years)	Amount
Argentina*	30	discretionary
Chile	20	≈ 25% of average wage
Colombia*	22	one minimum wage ≈ 60% of average wage
Mexico*	25	Mexico City minimum wage ≈ 40% of average wage
Uruguay*	35	discretionary

* applies to both public DB scheme and private DC individual accounts scheme
Source: Queisser (1998), pp. 67-68.

In Chile, where after 20 years of contributions the minimum pension is around 25 per cent of the average wage, it is not clear that the minimum pension guarantee provides significant inducement to evade contributions. However, participants may decide to rely on the minimum pension (presumably along with other savings) to finance their retirement, or they may conclude that continuing to contribute is not going to produce a pension significantly higher than the minimum pension. Arenas de Mesa (1999, pp.12-14) estimates that 52 per cent of pensioners in the private DC individual accounts system in Chile will qualify for minimum pension supplements, and that the cost of minimum pensions will rise from around 0.04 per cent of GDP in 1999 to 1.3 per cent of GDP in 2037.

Minimum pensions are paid from general revenue. There is no pooled fund from which they may be paid as in a DB pension scheme. Arenas de Mesa (1999, p. 23) proposes establishing a pay-as-you-go DB scheme to finance minimum pensions. If a significant proportion of retired persons are receiving minimum pensions, the increasing number of pensioners and their political influence can lead to irresistible pressure on governments to increase the levels of minimum pensions.

Another potential result of evasion is that workers may be obliged to delay their retirement (provided, of course, they can find employment), not because they wish to continue working, but because their DC scheme pensions are too small to support them and their dependants. Contribution evasion may thus lead to an increase in the age when workers withdraw

from the labour force - a desirable result (albeit for a perverse reason) in countries where dramatic reductions in the labour force relative to retired persons are projected. Contributions they may continue to make to the DC scheme will have little effect on the amount of their pensions, but they will have employment income while they continue working and the retirement period during which they must rely on their pensions will be reduced thereby resulting in larger pensions.

8. Combatting evasion

Evasion of social security contributions is not only a question of employers' seeking to reduce their labour costs or workers' preference for current consumption or the other factors noted in Sections 3 and 4. If social security organizations (and governments) rely principally on education and persuasion to encourage compliance rather than on effective enforcement, it is not surprising that contributors seek to evade their contribution obligations.

Social security organizations can combat evasion, but they must have the *statutory authority* required for effective enforcement of contribution conditions. If government does not grant a social security organization the necessary authority, the commitment of the government to the social security programme is in question, enforcement will be hampered and ineffective and benefit expectations will not be met. Social security schemes need:

- the *right to inspect* e mployer records and unfettered access to ancillary information such as an employer's bank statements, income tax returns, etc. from which estimates of the number of employees and the wage bill can be made and compared to social security registrations and contributions paid. Confidentiality should not be invoked in order to conceal or abet evasion of social security contribution obligations; and
- the *right to assess and collect contributions due and unpaid and assess enforceable penalties* with social security debts having priority over other creditors, the possibility of attachment of employers'assets, etc.

Armed with statutory authority, social security organizations can take a number of step to enforce compliance:

- They can *streamline administrative procedures* by simplifying contribution regulations, and reporting and remitting procedures. Modern information technology facilitates this. Clearly, a unique registration number for each employer and each participant is necessary (however, for worker contributors this fundamental requirement causes many schemes much difficulty). Contribution conditions for different social security benefits administered by different schemes can be harmonized and consolidated.

In some systems workers have been empowered to make their own choices (e.g. select fund managers), but they generally do not have the information necessary nor the capacity to evaluate and analyze it in order to make informed decisions. In their dilemma, there is no shortage of professional advisers and salespersons to assist them. The switching of fund managers which results complicates administration and can create or abet non-compliance with contribution provisions.

According to Daykin (1998, pp. 36-37) "Some would place a high premium on having consumer choice. It is difficult to be against choice, but the essential factor with pensions is to ensure that the consumer has adequate safeguards since the issues are rather too complicated for most people to grasp fully the nature of the choices with which they are faced. Although it may sound paternalistic, it is sometimes better to limit the number of choices, in order to ensure that everyone receives a reasonable level of pension".

- They can *strengthen enforcement* through focussed and timely inspections. Effective enforcement requires timely verification of employer returns and investigation of possible discrepancies. There must be sufficient well-trained inspectors who are adequately remunerated so as to ensure their probity. Enforcement activities are expensive, but they are a legitimate and necessary expense of a social security scheme. In Malaysia at the end of 1997 there were nearly 300,000 registered employers in the Employees Provident Fund, and during the year the Fund inspected just over 100,000 registered and non-registered employers. (Employees Provident Fund (1997) p. 11, 22)
- They can initiate and enforce punitive but realistic administrative *penalties for evasion*. Penalties should not be so severe that they are unlikely to be respected or applied successfully or sustained by the courts. In the Philippines, 1997 legislation provides that non-registration of a self-employed person, failure of an employer to deduct the correct contributions and remit them or submission of a false claim for benefits can result in six to twelve years imprisonment and a fine. (Social Security System, 1997, p. 29)
- They can *undertake public relations campaigns* to encourage compliance. Through the benefits they provide and the efficiency of their operations, DB schemes must convince workers that despite allegations that they are unsustainable, they are reliable providers of retirement income. A negative approach which in some countries has promoted compliance is publicizing (and prosecuting) employers for evasion (or maintaining the threat to do so).
- They can *report regularly* (annually at least) to workers on contributions paid by them and on their behalf so that workers can verify that their contributions have been properly remitted and recorded, and at the same time they are reminded of the benefit rights they are acquiring.
- They can *collect pension scheme contributions along with contributions for other social security benefits*, for example medical care, for which the needs of workers and their families are more immediate and hence workers are more likely to comply than for retirement benefits alone. This procedure would also increase administrative efficiency and reduce employers' reporting burdens. Social security contributions can also be collected along with income tax. (See Section 9)
- They can enforce compliance indirectly through realistic regulations which, while not inhibiting commerce, require that an employer be *certified* by the social security scheme to be in good standing before the employer can be issued or reissued a business licence, bid on government contracts, receive an export licence, etc.
- They can *remedy scheme design deficiencies* which demonstrably encourage evasion. For example, DB schemes can modify provisions which encourage strategic manipulation of contributory periods in order to maximize benefits and minimize contributions.
- They can *coordinate verification and enforcement activities with the tax collection agency* where there are separate social security and income tax collection agencies.
- They can declare *amnesties* to encourage evading employers to comply in the future. In the Philippines, the Social Security System offered an amnesty to delinquent employers from May to November 1997. (Social Security System, 1997, p. 29)

Social security schemes can avoid creating expectations which cannot be fulfilled and thereby bringing themselves into disrepute *by judiciously extending their coverage*. For example, extending compulsory coverage to self-employed persons seems to be a logical extension of social security to a sector of the labour force which needs protection and can have the capacity to finance it. But self-employment is not clearly defined, and everywhere persons deemed to be self-

employed have notoriously poor records of compliance with social security contribution obligations.[3] Consequently, extension of coverage to self-employed workers can be futile unless the administering body has the will and the capacity to enforce compliance. Unless an extension of coverage is implemented effectively, a social security scheme risks jeopardizing its legitimacy.

Private DC individual accounts managers

With respect to contributions which workers are obliged by law to remit (through their employers), fund managers to whom the contributions are payable tend to behave in much the same manner as insurance companies which receive premiums from persons they insure and mutual funds (or unit trusts) which receive deposits from investors. In the case of insurance companies, the acquisition expenses for new policyholders are amortized over a number of years (e.g. in the USA using a preliminary term reserve method). Should a new policyholder cease paying the premiums due early in the contract period, the agent who sold the policy is debited the commission which the agent received. An insurance company's enforcement effort is normally limited to encouraging the agent to persuade the insured person to continue paying the premiums; a usually unsatisfactory endeavour since agents are generally more successful at selling policies than maintaining them in force. There is no legal liability for an insured person to continue paying premiums on an insurance policy and the insurance company has little motivation to devote resources to persuading the insured person to pay the premiums; instead it limits its losses on the lapsed policy by writing it off.

This approach is not appropriate for a statutory social security scheme. Participants do not have the option of lapsing their contributions. Contributions have to be collected, and enforcement activities by the body which is responsible for collecting contributions must deter evasion. There is little incentive for a private fund manager to devote resources to compliance, since evaders are predominately individuals whose contributions would be small. A centralized collection agency may pursue a more diligent enforcement policy. No matter how enforcement is undertaken it is a legitimate and significant expense of a social security scheme.

9. Collection systems

In most countries, social insurance contributions for mandatory pension systems are collected by a public agency. Marginal costs are lowest when collection of contributions can piggy-back onto existing income-tax collection systems. There are good reasons for this. An income-tax collection agency has extensive infrastructure in place that can not only collect contributions, but also perform important verification, oversight, and enforcement functions. (Heller and Gillingham, 1999, p. 4) Despite the apparent merits of a joint collection system, it is clear from table 3 that separate collection systems for social security contributions and income tax are maintained in many countries. In countries which have introduced DC individual accounts schemes with private fund managers, contributions are paid directly to the fund managers (e.g. Chile, El Salvador, Peru) or to a central collection agency which transmits them to the fund managers selected by the contributors (e.g. Argentina, Mexico, Uruguay).

It was once held that social security contributions and income tax should be collected separately since workers were more disposed to pay social security contributions which conferred

[3]The distinction between employment and self-employed workers is discussed by Williams (1997) and other aspects of coverage of self-employed and informal sector workers are dealt with in the *International Social Security Review* (ISSA, 1999).

rights to identifiable benefits than to pay income tax; consequently, the two deductions from wages should not be confused. Even with separate collection systems, workers who might be prepared to pay their social security contributions, but were determined to evade income tax, would evade both if an effective arrangements for sharing information between the collection systems were in place.

Social security contributions may be payable from a lower income threshold than the threshold for income tax. Hence a joint collection agency might devote less attention to low-paid workers who were liable to pay social security contributions but not income tax, thereby abetting low-paid workers' evasion of their social security contributions. The continuation of separate collection systems is, no doubt, also attributable to historical precedent. Table 3 summarizes contribution collection arrangements in selected countries.

Table 3: Social security pension scheme contribution collection bodies for private sector workers in selected countries

Income tax collection authorities	
Argentina	• Federal Public Revenue Administration (AFIP) (contributions under the reformed scheme are transferred to fund managers (AFJPs) by the AFIP).
Canada	• Department of National Revenue (or Québec Department of Revenue)
Sweden	• National Tax Board
USA	• Internal Revenue Service, Treasury Department
UK	• Inland Revenue Contributions Agency
Social security organizations	
PRC	• provincial or city/county social insurance agencies
Indonesia	• Employees Social Security Scheme
Japan	• Social Insurance Offices of the Social Insurance Agency; prefectural insurance divisions collect and transmit National Pension contributions to Social Insurance Offices
ROK	• Korea National Pension Corporation
Malaysia	• Employees Provident Fund
Mexico	• Mexican Social Insurance Institute (IMSS) (contributions are transferred to fund managers (AFORES) by the IMSS)
PNG	• Papua New Guinea National Provident Fund
Philippines	• Social Security System
Russia	• Pension Fund of the Russian Federation
Singapore	• Central Provident Fund
Chinese Taipei	• Taiwan Labor Insurance Bureau
Thailand	• Social Security Office
Uruguay	• Social Insurance Bank (BPS) (contributions under the reformed scheme are transferred to fund managers (AFAPs) by the BPS)
Individual accounts/mandatory occupational schemes	
Australia	• managers of occupational schemes (mandatory occupational pensions)
Chile	• fund managers
El Salvador	• fund managers
Peru	• fund managers

The evident economies of scale and efficient enforcement which should be possible with a unified collection system cannot materialize unless two critical conditions are met:

- There must be a strong fiscal administration. (In some countries it is claimed that the social security organization collects contributions more efficiently than the tax collection agency collects income taxes.)
- The social security organization and the participants in the scheme must be confident that a joint collection body will act solely as an agent which receives and transmits social security contributions to the social security organization without delay or diversion. (Since the joint collection body is generally a government agency, in countries where governments face chronic budget deficits this confidence can be difficult to build.)

If these conditions are fully met a social security organization which changes to a joint collection system could expect an improvement in compliance. (McGillivray, 1997, p. 62)

With respect to collection systems, it is tempting, but inappropriate, to identify best practice As Ross (1997, p. 12) states AA basic proposition that may sometimes be lost sight of ... is that real circumstances in any country should determine the nature of the administrative arrangements that are utilized to collect social contributions and taxes. Real circumstances include the size and characteristics of the population of the country, the resources available to the government (financial, personnel, information technology), political time frames and other constraints and the national cultural and social situation. Ross concludes AAdministrative arrangements that do not take adequate account of real circumstances generally fail to operate properly.

While one may focus on compliance with social security contribution obligations, it is necessary to bear in mind that participants in a social security scheme are citizens or residents of a state and generally also taxpayers. For a modern state to function it is necessary for the polity to respect the statutes and regulations of the state. In the long run, an effective joint social security contributions and income tax collection agency can benefit society as a whole.

10. Conclusion

Compliance of participants with social security contribution conditions is a subject which has received little attention. The opposite of compliance, evasion of social security contributions, is generally illegal and social security administrators are reluctant to admit they face compliance problems. Hence while the coverage of a social security scheme may be well-defined, the extent to which covered persons are actually participating in the scheme is not, and few statistics are available. But compliance is important. No social security scheme, reformed or not, DB or DC, publicly or privately managed, funded or pay-as-you-go - and no matter how well it may be designed - will achieve its objectives if participants do not comply with the contribution conditions. Non-compliance creates the risk that covered persons who evade their pension scheme contribution obligations will have inadequate pensions and that the state will be called upon to remedy the shortfall. The principal causes of evasion and possible remedies and alternative contribution collection systems have been indicated; but the extent of contribution evasion results from national circumstances, and appropriate measures which promotecompliance depend on national initiatives and the allocation of resources necessary to implement them.

Administrative Costs and the Organization of Individual Account Systems

Mr.Estelle James

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Abstract: Administrative Costs and the Organization of Individual Account Systems: A Comparative Perspective

One of the biggest criticisms leveled at defined contribution individual account (IA) components of social security systems is that they are too expensive. This paper investigates the cost-effectiveness of two alternative methods for constructing mandatory IA's: 1) investing through the retail market with relatively open choice, which is the method first used by Chile and adopted by most Latin American countries and 2) investing through the institutional market with constrained choice among investment companies. Our question: what is the most cost-effective way to organize IA's that are part of a mandatory social security system?

For the retail market we use data from mandatory pension funds in Chile and other Latin American countries and from voluntary mutual funds in the US. For the institutional market we use data from IA systems in Bolivia and Sweden and from large pension plans and the federal Thrift Saving Plan in the U.S. These institutional approaches aggregate numerous small accounts into large blocks of money and negotiate fees on a centralized basis, often through competitive bidding. Choice by workers remains, among a limited number of funds. But fees and costs are kept low by reducing incentives for marketing, avoiding excess capacity at the start of the new system, and constraining choice to investment portfolios that are inexpensive to manage. In developed financial markets the biggest potential cost cuts stem from constrained portfolio choice, especially from a concentration on passive investment. The biggest cost saving for a given portfolio and for countries with weak financial markets comes from reduced marketing activities.

In the retail market annualized fees and costs range between .8 and 1.5% of assets. We find that use of the institutional market in IA systems has reduced annualized fees and costs to less than .6% and in some cases to less than .2% of assets. This reduction can increase pensions by 10-20% relative to the retail market. The trade-off is the increased probability of corruption, collusion and regulatory capture, decreased performance incentives, rebidding problems and inflexibility in the face of unforeseen contingencies. In countries where these problems can be surmounted the institutional approach is worth serious consideration, especially for systems with small asset bases and at the start-up phase of a new multi-pillar system.

Administrative Costs and the Organization of Individual Account Systems: A Comparative Perspective

Prefunding is now seen as a desirable characteristic of old age security systems because it can be used to increase national saving, makes the financial sustainability of

the system less sensitive to demographic shocks, and reduces the need to increase taxes as populations age. With prefunding comes the need to determine how the funds will be managed. Those who fear political manipulation of publicly managed funds see defined contribution individual accounts (IA's) as a way to decentralize control and thereby achieve a better allocation of the funds. But IA's have been criticized on other grounds, most important among them being high administrative costs. Many countries now in the process of establishing their IA systems are concerned about these costs and are seeking ways to keep them low.

This paper investigates the cost-effectiveness of two alternative methods for organizing mandatory IA's: 1) investing through the retail market, in which workers choose their own pension fund, entry is open subject to regulations and prices are set by the fund; and 2) investing through the institutional market with entry and price negotiated for a larger group or for the entire covered labor force and worker choice constrained by group choice. In a competitive bidding process, which is a recommended way of determining group choice, primary competition takes place at the point of entry to the market, and a more limited secondary competition for individual workers occurs among the winners of the primary competition. In both the retail and institutional cases government "organizes" the markets, but in the former regulations are used while in the latter competitive bidding or other group mechanisms are used. Also in both cases most countries will end up with a relatively concentrated market due to scale economies, but the paths differ, as well as the equilibrium costs and fees, due to the differing paths. Our question: what is the most cost-effective way to organize a mandatory IA system?

We start with a simple stylized illustration of retail and institutional markets that decomposes total costs into its investment, record-keeping, marketing and start-up components (Part I). To analyze actual costs in the retail market we use data from mandatory schemes in Chile and other Latin American countries (Part II), complemented by mutual fund data from the U.S., an example of a relatively well run voluntary retail financial industry that has much in common with decentralized IA systems (Part III). To analyze costs in the institutional market we use data from large centralized pension funds in the U.S. (Part IV) as well as from mandatory and voluntary IA systems in various countries—Bolivia, Sweden and the Thrift Saving Plan (TSP) in the U.S.--that operate in the institutional market (Part V). They do so by aggregating small contributions into large blocks of money, constraining choice regarding investment portfolios and managers, and negotiating fees on a group or centralized basis. In Bolivia and the TSP entry has been limited and fees set in a competitive bidding process; in Sweden price ceilings attempt to mimic the marginal cost function and the sliding fee scale in the institutional market.

Empirical evidence in this paper and elsewhere find substantial economies of scale and scope in asset management. Both the retail and institutional markets exploit these economies, but in different ways. The retail market pools funds from many individual investors, enabling them to benefit from scale economies, but at the cost of high marketing expenses—about half of total costs--that are needed to attract and aggregate small investments into large pools. In the Chilean AFP and U.S. mutual fund industries, most annual fees range between .8 and 1.5% of assets and marketing is the largest cost component. Slightly larger numbers obtain in retail personal pension plans in the U.K. and master trusts in Australia (Murthi, Orszag and Orszag 1999, Blake 2000, Bateman 1999, Bateman and Piggott 1999). A 1% annual fee reduces retirement accumulations by 20% for a lifetime contributor, so administrative costs in the retail market reduce pensions by 15-30%.

The institutional market, which caters to large investors, benefits from scale economies without large marketing costs, hence its total costs are much lower. We investigate whether and how mandatory IA systems that consist of many small investors could be set up to capture these same advantages. We find that use of the institutional market in IA systems in Bolivia, Sweden and the U.S. has reduced fees to less than .6% and in some cases to less than .2% of assets. These lower fees stemming from lower administrative costs in the institutional market reduce pensions only 10% or less, a potential saving of 10-20% relative to the retail market.

Costs must always be weighed against benefits. Potential pitfalls inherent in the institutional approach include the increased probability of corruption, collusion, regulatory capture, decreased performance incentives, rebidding problems and inflexibility in the face of unforeseen contingencies (Parts V and VI). If these problems can be surmounted, the institutional approach is worth serious consideration, especially for countries with small asset bases and at the start-up phase of a new IA system.

I. How Administrative Costs Vary Across Time and Systems and How to Compare Them

We start by setting forth a small model of the components of administrative costs that can be used to understand differences in costs across time and systems.

$TOTADMINCOST^i_t$ = STARTUPCOST + R&C + INV + MARKETING , where:

$TOTADMINCOST^i_t$ = total administrative cost for pension fund or system i in year t

STARTUPCOST = capital costs incurred in the early years of a new system or fund

R&C = record-keeping and communication costs;

INV = investment cost;

MARKETING = marketing cost.

Each of these cost components is determined quite differently. R&C costs tend to be technologically determined and standardized, depending on quality of service and number of accounts. Passive investment costs are also technologically determined, depending on volume and allocation of assets. Active investment costs are market-determined, stemming from the premium that a manager who is deemed to be superior can command in a market for differentiated investment skills. Marketing expenses usually go together with active management, since they are used to sell the skills of a particular asset manager, and they depend on profit-maximizing calculations about costs versus returns of incremental marketing activities.

In comparing costs across funds or systems and trying to ascertain how these are likely to change in the future, it is necessary to take into account the main arguments of the fund's production function—the volume of assets and the number of accounts that determine costs. Looking simply at current costs can be misleading as an indicator of efficiency or long run costs, in comparing systems of different sizes or stages of development.

Table 1 illustrates the total administrative cost and its breakdown between R&C and INV in two hypothetical systems, as they evolve through time. Two cost measures are used--*dollars per account* and *basis points per unit of assets* (1 basis point = .01%). The first measure is useful because it tells us how much it costs to operate an account for an average worker, while the second measure tells us how much gross returns are being whittled away by administrative costs. While economies of scale are probable (see James and Palacios 1995, Mitchell 1998), in this section, for expositional purposes, we assume that R&C cost per account and INV cost per unit of assets are constant and start-up costs are incurred in the first three years.

Panel A illustrates a stylized cost profile for an IA system that uses the institutional approach, with passive investing that costs .1% of assets annually, R&C costs of $20 per account. Panel B does the same but increases the gross annual contribution from $520 to $2020. Panel C illustrates the retail approach, with marketing plus investment expenses totaling 1.1% of assets, R&C costs $30 per account. We see that cost per account and per unit of assets change over time, and in a given year differences appear between these systems, even if they are equally efficient:

1. *Start-up costs* greatly accentuate total cost in the early years.
2. *Cost per account* starts relatively low and rises through time as average account size grows, due to increased investment and/or marketing costs.
3. *Cost as a % of assets* starts high and falls as average account size grows, due to constant R&C costs per account; scale economies in asset management would accentuate this effect.
4. R&C costs dominate at the beginning but their impact on net returns become much smaller in the long run, when investment and marketing costs dominate.
5. A higher contribution rate leads to a faster build-up of assets, and a lower cost as % of assets, even if two systems are equally efficient (Panel A v. B).
6. An expensive investment and marketing strategy, as in the retail market, increases cost per unit of assets and leads to faster growth in cost per account and per unit of assets, while the institutional approach keeps these costs low, both in the short and long run (Panel B v. C).

If we apply this production function approach across countries, in attempting to evaluate the cost-effectiveness of different systems, additional problems arise because wages, infrastructure and productivity vary widely. If the relevant technologies tend to be capital-intensive, then capital-rich countries with relatively cheap capital will have lower costs per account and asset unit, while the opposite is true if the feasible technology set uses labor intensively, especially unskilled labor. Funds that operate in countries with a facilitating legal and physical infrastructure, such as enforceable contract rights and telephone lines that work, will be able to use their own labor and capital more productively. Regulations that vary across countries also influence the feasible production function. Data gaps do not allow us to control for differences in types and quality of service, which therefore become part of the "random" variation.

While we have been defining costs to the fund and the system, costs (fees) to consumers may vary from this. In the short run, at the start-up of a new system, funds may run temporary losses, in the expectation that they will increase their market share and recoup their capital expenses later on. In the medium term, they may earn profits, that offset the earlier losses. Thus fees over time might be smoother than costs over time.

We would expect that in the long run competition will eliminate pure profits, so fees will just cover fund costs. But the existence of marketing competition, as well as potential skill and wage differentials across asset managers, makes it difficult to predict the cost and fee level at which this zero-profit equilibrium will occur. New computerized technologies may reduce variable costs in the long run but raise fixed costs in the short run. New financial instruments may increase benefits but also transactions costs as well as cost differentials across managers and funds. And oligopolistic profits may remain if scale economies are large relative to size of market. Moreover, price discrimination, used to recover fixed costs when heterogeneous consumers have different price elasticities, means that cost may have different relationships to price for different groups of investors. In this paper we presume that in the long run fees will bear a close relationship to real costs, and costs depend on how the system is organized.

The retail market for IA's incurs R&C costs for many small accounts, expensive investment strategies may be chosen, and marketing costs are often high (as in Panel C). Proponents of centralized funds point to the cost advantages that stem from lower R&C, investment and marketing expenses. We argue, and provide supporting evidence, that by operating in the institutional market, an IA system may achieve most of the cost advantages of centralized funds but with greater political insulation and responsiveness to workers' preferences. The institutional approach aggregates many small accounts into large blocs of money and negotiates investment fees on a group basis, thereby keeping costs and fees low by:

Cutting STARTUPCOST by avoiding excess capacity
Minimizing MARKETING cost;
Constraining worker choice to portfolios and strategies with low INV costs
Using increased bargaining power to shift costs and reduce oligopoly profits.

R&C expenditures may also be organized to cut costs and facilitate compliance, although we have less evidence on this.

When these strategies are utilized, the cost to workers of an IA system are in the same neighborhood as a centralized system, but with greater competition and choice, which are the key elements of a privately managed funded pillar.

II. How High are Administrative Fees in Latin America and How are They Spent?

In this section we examine costs and fees charged by individual account systems in Chile and other Latin American countries. These fees have been subject to great criticism by opponents of IA systems. AFP fees do not necessarily represent real costs nor do they represent a long term commitment. AFPs in Chile (and other Latin American countries) made losses in the early years of the new system because of large fixed and start-up costs that exceeded their revenues; but the industry has been quite profitable in recent years. We might expect competition to eliminate these profits but price insensitivity among investors may prevent this from happening quickly. Deregulation and increasing oligopoly may alter costs and their relationship to fees in the future, in ways that are difficult to predict. For example, in an industry characterized by differentiated competition, marketing costs play a large role and we don't know whether they will increase or decrease as the industry grows more concentrated. As regulations are liberalized, portfolio diversification increases and managerial skill is deemed increasingly important, this may raise managerial wages, marketing costs and fees. Despite this uncertainty about the future, the current fee structure poses costs to investors that reduce their net returns, so we take them as given and examine their implications in this section.

Costs and Fees in Latin America Across Time, Countries and AFP's

Tables 2 and 3 presents information about aggregate fees, costs and their impact on member accounts for AFP systems in a variety of Latin American countries in 1998. Table 4 presents a longer time series for Chile, on which we have data since 1982.

Most Latin American countries have adopted the Chilean method of charging fees: the fee is imposed when the contribution first enters the system, and no management fees are charged on that contribution thereafter. In Chile the fee started at over 20% of contributions but has now fallen to an average level of 15.6% (and possibly less for the many workers who are said to get unofficial rebates). Table 2 shows that in other Latin American countries, such as Argentina and Mexico, fees are still 20% of contributions or even higher. In Bolivia, which is experimenting with an institutional approach to administrative costs, they are lower. Table 3 shows that in systems that are still I their early years, these fees do not even cover full cost.

Besides the problems inherent in cost comparisons across countries that were listed in Part I, additional problems appear in Latin American, where the allocation of fees and expenses between administration, insurance and other AFP activities is not always clearcut. In Argentina the division between insurance and administrative costs may be arbitrary, and in Colombia additional revenues are obtained from the management of unemployment insurance and voluntary insurance. Generally only contributors pay fees although non-contributing affiliates also generate costs and the ratio of contributors to affiliates varies across countries. Nevertheless, some effects are striking. While initially the differences among countries may appear to be random, upon closer examination clear patterns emerge.

1. New systems are characterized by high start-up costs--until a sharp drop occurs around year four. This helps account for the higher expenses outside of Chile in 1998.
2. Thereafter, cost per account climbs gradually due to the increased investment costs associated with larger assets, while cost per unit of assets falls as the constant R&C costs per account are spread over a larger asset base. Figures 1 and 2 demonstrate the negative relationship between cost per unit of assets and average account size implied by these tables--except for Bolivia which has a much lower expense ratio than would be expected. In contrast, Mexico--which is one of the newest systems with the smallest account size--has the highest expense ratio relative to assets in the region. We would expect Mexico's cost per account to rise but its cost per unit of assets to fall as its system matures.

Costs and Fees in Chile

Chile, which has by far the largest account size due to its age and contribution rate, has the smallest expense ratio per unit of assets. In Chile in 1998, using the official exchange rate for conversion, the average account size was $5000 per affiliate and $10,000 per contributor, cost per affiliate and contributor were $59 and $112, respectively, and fees somewhat higher. (All these numbers are two to three time higher if PPP conversion rates are used). While fees per account have been rising, as a percentage of assets they have fallen sharply--from over 9% in 1982 (much like Mexico today) to 1.36% in 1998 (much like the US mutual fund industry today).

Table 5A presents the results of a simple regression analysis that sums up this relationship between aggregate assets, costs and fees for the Chilean system over time. Start-up costs and assets alone explain 96-98% of the variance in costs and fees across time. Very high correlations among assets, affiliates and contributors together with small sample size preclude the inclusion of more than one variable in this analysis of aggregate costs.

However, when we disaggregate by AFP as well as by year, larger sample size and greater variation is introduced that allows us to decompose total costs and fees into their major determinants—assets and affiliates—and to explore potential scale economies. Table 5B presents the results of a panel data (fixed effects) analysis of Chilean AFP costs, 1982-98, using these independent variables, and showing how the system has evolved through time. We see there that:

1) Start-up fees and, even more, start-up costs in the first three years of operations were high.
2) As number of affiliates grows, (R&C) costs and fees grow en toto and relative to assets.
3) As assets grow, (investment) costs and fees grow, en toto and per account, but costs and fees as a % of assets, which ultimately determine net return, decrease—due to scale economies.

4) Scale economies are further demonstrated by the fact that affiliates and assets both have a coefficient of less than 1, singly and summed, in the logged regressions on total costs; but the negative term (although insignificant) in the quadratic implies that these scale economies may eventually come to an end. Calculations using these coefficient suggest that this occurs when the AFP has about 3 million affiliates and US$15 billion—half of the current Chilean market.

Mergers have indeed been occurring. We can expect that Chile, Mexico and other Latin American countries will benefit further from maturation and scale economies in the future, so their future costs will be lower than present costs for that reason.

Implications of Front-Loaded Fees: how to convert them into annualized fees

Charging fees based on new contributions is an extremely front-loaded method as compared with the customary practice in mutual funds of charging an annual fee based on assets. Such a fee basis has a different impact on returns depending on how long the worker will keep his or her money in the system, which in turn depends on the age and career pattern of the worker. For comparability, we have converted the 15.6% front-loaded fee in Chile into an equivalent annual fee based on assets that will yield the same final year accumulation (Table 6). This tells us how much, effectively, gross investment returns are being reduced each year and it enables us to compare it with fees charged by mutual funds and other financial institutions. This simulation assumes that the same fee schedule remains in effect over the worker's lifetime, although of course there is no guarantee that this will be the case. If a worker contributes only for her first 20 years of employment the equivalent average annual fee for all her contributions is .57%, while if contributions are made only in the last 20 years, the equivalent average annual fee is 1.65% (column 2). For a worker who contributes every year for 40 years, paying a fee on each new contribution, the annual equivalent of all these front-loaded fees is .76% (column 3). Suppose that one half of all workers contribute for 40 years, and one quarter each for their first and last twenty years. The system-wide annual expense ratio that is equivalent to the 15.6% fee on contributions would then be .94%, almost 1% of assets per year.

A front loaded fee means that workers with different employment histories will end up paying different annual equivalents as a subtraction from their gross returns, even if they impose the same real cost on the fund. Front-loading of fees may induce evasion among workers in their later years, since they can avoid all investment costs on accumulated assets if they simply stop making new contributions. It may induce AFP's to reject transfers from older workers with larger assets and investment costs. Thus, front loads may not be desirable in the start-up phase of a mandatory system because of their distributional impact and may not be sustainable in the long run if AFPs are permitted to change their fee structure, but they are frequently used, perhaps as a device to help AFP's cover their costs, which are also front-loaded.

Comparison Between Chilean AFP Fees and Mutual Fund Fees

Annualized Chilean fees are similar to fees of mutual funds that operate in the U.S. domestic market (Part III). American mutual funds, because they are voluntary, cater to a higher socio-economic group and provide much greater diversification and service than Chilean AFPs, which would make their costs higher. But they also benefit from much greater economies of scale and better infrastructure, which would make their costs lower. AFP costs are much lower than costs of U.S. mutual funds that operate in emerging markets. They are much lower than mutual fund fees for voluntary saving in Chile which, during the early 1990's, averaged around 6% per year for equity funds and 2% for bond funds, plus entrance and exit charges (Maturana and Walker 1999). AFP

fees are also lower than those of mutual funds in most other countries, where the combination of front loads and annual fees exceeds levels in the U.S. Chilean AFPs are therefore relatively inexpensive if the standard of comparison is fees in other diversified mutual funds that invest individuals' savings. However, they are more expensive than savings accounts in commercial banks, either in Chile or elsewhere (Valdes 1999b).

The breakdown of costs among AFPs shows that over 45% of total expenditures were used for marketing costs, especially sales commissions. This proportion is similar to marketing expenses in the retail financial markets in the U.S. and other countries. In both countries the number would probably exceed 50% if we included staff salaries involved in marketing. These similarities suggest that a study of US mutual fund data will yield insights into how costs might evolve in IA systems and how these costs might be reduced—e.g. by reducing marketing costs.

Finally, AFP fees are much higher than fees paid by institutional investors and they have a substantial impact on ultimate pension amounts. This leads one to wonder whether it is possible to organize a mandatory system so that it captures the lower costs and higher benefits of the institutional market, and if so, what are the trade-offs?

III. Costs in the Retail Market of American Mutual Funds

The mutual fund in the U.S. has been a hugely successful retail financial institution. Assets have grown from less than one billion dollars in 1949 to almost $140 billion in 1980 to over $4 trillion by the end of 1997 and now exceed the combined total of savings bank deposits and life insurance assets (Pozen 1998). Each mutual fund investor has an individual account, that can be transferred from fund to fund, so this might provide information on how an IA system would operate in a competitive retail market. An earlier paper analyzed the determinants of these fees and the cost structure that underlies them. We used regression analysis and frontier analysis based on a large data set of mutual funds (4254 funds in 1997 and 1300-2000 each year for 1992-96), as well as information culled from annual reports, surveys conducted by mutual fund associations, and discussions with fund officials. In this section we summarize these results and consider the policy implications for a reformed social security system that includes individual accounts (For a fuller account and numerous references see James and others 1999).

Costs and Fees in the Mutual Fund Industry

In the US mutual fund industry, the fund pays annual fees to its investment adviser and distributor (which is usually the same group or "sponsor" that set up the fund originally), and much smaller fees to lawyers, auditors, transfer agents and others. The charges are allocated among shareholders proportional to their assets and determine the fund's reported "expense ratio" that it subtracts from its gross return to obtain the net return passed on to shareholders. In addition, for many funds front-loaded and back-loaded commissions are paid directly by individual investors to brokers or other sales agents upon purchase or sale; these entry and exit fees are part of the price to relevant shareholders although not received by the fund. Brokerage fees paid by the fund for securities transactions are also excluded from the expense ratio but are costs to shareholders, netted out of the fund's reported gross returns.

We have constructed a "total investor cost ratio" which equals the reported expense ratio plus average brokerage (trading) costs and annualized front loaded sales commissions (Table 7). In 1997 the total investor cost was 1.85% of assets, compared to the reported expense ratio of 1.28%. Weighted by assets, the total and reported numbers fall to 1.43% and .91% (or $360 and $228 per account), respectively. Asset-weighted numbers are more relevant for our purposes.

Most funds are members of a mutual fund complex (e.g. Fidelity and Vanguard). Certain activities, such as advertising, research and new product development, are jointly supplied to all members of the complex by the common investment adviser. The allocation of these expenses among the funds may be influenced by estimates of where the expenses can be absorbed with least loss of clients. Thus, the relative fees paid by members of a fund complex do not necessarily reflect the real cost of producing them. For example, small and new funds that are expensive to run may be allocated only a small share of costs to attract new customers, and index funds that are marketed to cost-conscious consumers may similarly be allocated a small share. Business strategy concerning joint cost allocation may be different in a mandatory IA system. These caveats should be kept in mind as we analyze fund costs below.

We conducted a regression analysis designed to explain the "expense ratio"—reported expenses (excluding trading fees and loads) as a percentage of assets. (We did not use the "total investor cost ratio" as our dependent variable because reliable data were not available for holding periods by fund or on brokerage costs for many funds in the data set). We sought to determine the extent to which cost variation is random or systematic, to identify the factors that determined the systematic variation, and to assess the implications for IA systems. We ran the OLS regressions separately for each year, 1992-97 and also conducted a frontier (envelope) analysis for 1992-97. Tables 8 reports results from the OLS regression for 1997 and Table 9 reports the frontier analysis for 1992-97. The regressions in Table 8 explain 64% of the variance when all the above variables are included. Most of the variance in costs is therefore systematic rather than random. Costs faced by investors vary in large part because of business choices made by fund managers and these same costs could be substantially influenced by policy choices in a mandatory IA system. Our major empirical findings and their implications for IA systems:

Considerable evidence of economies of scale and scope

Expense ratios fall when total assets in fund, assets in the entire fund complex, and assets per shareholder increase. A simple cross-tabulation shows that funds with assets of less than $10 million have an average expense ratio of 1.6%, while for those with assets of $1 to 10 billion it is .96% and for more than $20 billion it is .6%. While all funds need industry analysts, portfolio managers, computers and access to electronic trading facilities, large funds can be managed with a relatively small increase in total resources. But these economies from asset aggregation do not continue indefinitely. The positive sign on the coefficient of $Asset^2$ in the regressions eventually halts the fall in expense ratio. *Thus, aggregation brings economies that lead to industry concentration, but the limit to these economies nevertheless leaves space for multiple mutual funds (and pension funds), the exact number depending on the total market size of each country.*

Significant fixed costs per account

Holding aggregate assets constant, the expense ratio increases with number of shareholders and decreases as average account size rises. The basic reason, as discussed in Part I, is that funds incur a fixed cost per account for record-keeping and shareholder communication (R&C), and the larger each account the smaller this cost will be, as a percentage of assets. According to these regressions and corroborating evidence from periodic surveys of transfer agents (the organizations which provide these services for mutual funds), average R&C costs per account are $20-25. Fixed costs of R&C pose a potential problem for IA systems if the accounts are small. *These fixed costs help explain the high expense ratios of new AFPs in developing countries. This raises the question of whether an investment option with lower R&C costs should be used or whether R&C*

costs should be amortized over a long time period, to avoid imposing a heavy burden on early cohorts, when new IA systems are started.

High marketing costs

Using brokers, other sales persons and mass advertising methods, the industry has successfully called to the attention of potential shareholders the advantages of equity investing, using mutual funds as the vehicle. The major marketing expense to shareholders consists of sales commissions. Two thirds of all funds are sold through third parties (brokers, insurance agents, financial planners) who receive some kind of commission (through front or deferred loads or annual 12b1 fees). And most of these sales commissions are passed on to consumers. If we define the "total annual marketing cost" paid by the shareholder as the 12b1 fee + annualized front load, it is .61%--around 43% of all fund expenses (Table 10). This is very similar to the marketing proportions in Chile's AFP system. From a social point of view, marketing probably provides a mixture of useful information, misleading information, an impetus to good performance, and zero-sum game raiding. Other studies have shown that the funds which have gained the most are those that combine vigorous marketing with good performance (Sirri and Tufano 1997). The possibility of spreading favorable information by marketing probably acts as a spur to good performance and product innovation. *But most methods to keep IA costs low involve a reduction in marketing expenses, under the assumption that much of it is zero-sum and not the most efficient way to provide useful information to new investors.*

Lower expense ratios for institutional funds

A small number of mutual funds are limited to institutional investors (i.e. bank trust departments, corporations, small foundations). These funds have a significantly lower expense ratio as compared with funds for individual investors. The same assets can be amassed with much lower distribution, communication and record-keeping expenses from one large institution than from numerous small individuals. Institutions are much less likely to pay sales commissions to brokers because they have more efficient ways of gathering information. On the rare occasions when they pay these fees, they obtain lower rates. As a result, the expense ratio of institutional funds is .6% lower than that of other funds in the regressions and the total investor cost for institutional funds is less than half those of retail funds (Table 11). *This led us to investigate the institutional market in greater detail, to determine whether IA's were doomed to have high expense ratios due to their small account size or could benefit from low expenses due to the large aggregate amounts in the mandatory system.*

Lower costs of passive management—for some assets

Also important is the large significant negative sign on passively managed funds, known as index funds, which do not have to pay the high fees that popular active managers command. Passively managed funds mimic or replicate a stated benchmark, such as the S&P 500 or the Russell 2000. The manager does not engage in discretionary stock selection or market timing and therefore cannot claim a fee for superior information or judgement. Index funds generally benefit from low turnover, which reduces the expense ratio as well as brokerage fees. Their high correlation with the market (low nonsystematic risk) means that they are less likely to engage in heavy marketing, more likely to rely on price (cost) competition. Controlling only for asset allocation, fees of passive funds are less than one-third those of actively managed funds in the retail market (Table 11).

The low cost of index funds should be interpreted with some caution, however. It could mean that fund complexes view these funds as the products that are designed to

capture price-sensitive consumers, and for this reason they may allocate much of their joint expenses (advertising, new product development) to the other members of their complex. R&C charges also tend to be less for passively than for actively managed funds; this may be a business strategy decision rather than a reflection of real cost differentials. The real cost savings to the economy from index funds may therefore be overstated by our regression results, although they remain real cost savings to individual investors. If index funds become a larger share of the total market, opportunities for cost-shifting may decline. Finally, the lower costs of index funds are not statistically significant for small cap and emerging market funds. *IA systems in large cap stock and bond markets in industrialized countries can keep their costs down and increase their net returns by using index funds, but this may be less true of developing and transitional countries where emerging markets and small cap stocks dominate.*

Asset allocation: international funds

Asset allocation has a major impact on costs. Bond funds have lower costs and small cap funds have higher costs. Expenses are highest in international funds, especially emerging market funds—as a result of their smaller size, the greater difficulty in obtaining information in these countries, their high bid-ask spreads, transactions and custodial costs, currency hedging costs, and the relative paucity of effective cost-saving passive investment opportunities. These factors would also apply to local funds operating in emerging markets, although institutions based in a country needn't hedge against currency risk and may have an informational advantage over those that are based in a foreign country. *It follows that IA systems in industrialized countries can economize on costs if they concentrate investments in large liquid domestic instruments; international diversification comes at a cost. In contrast, the higher costs in developing countries could be mitigated by international diversification, including the use of foreign index funds.*

Net and gross returns

Of course, the investor ultimately cares about net returns, not the expense incurred in earning them. If higher costs led to higher returns, they would be worth incurring. However, a large literature indicates that this is not the case (Elton and others 1993, Malkiel 1995, Malhotra and McLeod 1997). In fact, some of the same factors that increased costs actually reduced returns during this period. Most important, in our sample larger assets increase gross and net returns, but this effect stops after a point. Funds with front loaded sales commissions don't earn higher gross returns, so their load-adjusted net returns are lower than for no-loads. Index funds earn significantly more than actively managed funds over-all, particularly in the large cap stock and bond markets, but this effect is absent in small cap, international and emerging market funds (also see Muralidhar and Weary 1998, Shah and Fernandes 1999). Institutional funds have higher net returns. These results from separate equations are consistent with the negative sign on gross and net returns as control variables in our expense ratio equations. Cost and net returns appear to be negatively correlated. *Thus, strategies involving high administrative costs do not seem justified on grounds that they raise returns.*

Changes over time: Will price competition reduce investor costs?

The question of whether expenses have been going up or down over time has been hotly debated (see Lipper 1994). This is an important question because it tells us whether policy makers can rely on market forces to reduce costs. Between 1992 and 1997 a shift

of investors toward no-loads and a decrease in the size of front loads led to a small fall in the total investor cost ratio, despite the rise in the reported expense ratio (Table 10). Over a longer time period (1980-97), the average investor cost ratio has fallen more substantially (by about one-third), for the same reasons (Rea and Reid 1998). But the picture remains mixed because total expenses per account (expense ratio times average assets per account) have gone up dramatically over the same period, primarily as a result of asset growth and secondarily as a result of the rise in non-marketing expenses. More recently, investors have been shifting into cheaper passively managed funds, but in 1997 these still held only 6% of all assets.

The movement to lower cost and higher performing funds generally occurs through the flow of new money to the funds rather than the reallocation of old money. The process, therefore, has been very gradual and some poorly informed investors have not participated in it (Ippolito 1992, Patel, Zeckhauser and Hendricks 1994, Sirri and Tufano 1997, Gruber 1996). It appears that in the short run we cannot count on competition to bring price down for many investors. Why is this the case? We hypothesize that competition through marketing rather than through price cuts may be a consequence of high volatility and the resulting high noise-to-signal ratio that makes it difficult for investors to distinguish between random luck versus systematic skill and low costs until many years of observations have elapsed (for a mathematical example, see James and others 1999). Funds spend on marketing, pointing to their lucky returns, rather than cutting costs and price. *This poses a problem for IA systems, as an entire generation of workers may pass through the system before low cost, high performing funds are identified. The difficulty new investors have in processing financial information exacerbates this situation. An IA system that constrains investments to funds with low nonsystematic risk will encourage price competition relative to marketing competition, because such funds will be able to demonstrate their cost-based superiority more quickly than funds with greater fund-specific volatility.*

IV. Costs in the Institutional Market

Although small institutions invest through special low cost institutional mutual funds, large institutions (e.g. DB plans of major corporations) do not invest through mutual funds that must treat all shareholders equally. They can get better asset management rates elsewhere.

How Much do Institutional Investors Pay for Asset Management?

Table 12 presents illustrative cost data on costs of money management provided by a large manager of institutional funds operating outside the mutual fund framework. It also shows median costs for 167 large and 10 of the largest U.S. pension funds These rates show clear evidence of scale economies and the cost efficiency of passive management.

Fees as a percentage of assets decline over large ranges with volume of assets managed. Marginal fees are as low as 1 basis point for passive management of large cap stocks and 2.5 basis points for small and mid-caps, once assets in an account reach $200 million. Fees for active management are higher, but still far less than mutual fund rates. For large cap domestic equity exceeding $25 million, investors pay 35-50 basis points. Not surprisingly, fees for emerging market investments are much higher than for domestic investments, but advantages to large institutional investors remain. Despite the sliding fee scale, most funds use multiple money managers and allocate less than a billion dollars on average to each active manager, evidence that diversification benefits eventually outweigh scale economies. There appears to be no strong cost reason for aggregating assets per manager beyond a billion dollars.

If we add to these asset management costs another 3-10 basis points for brokerage fees and internal administrative costs that are incurred by large institutions, this brings the total cost to .04-.65%, depending on investment strategy. These numbers from large US pension funds are roughly consistent with numbers from occupational pension plans in the UK, Switzlerland and South Africa, and from "industry funds" in Australia, all of which cost between .4 and .6% of assets for large DB and DC plans in which workers have no choice of investment manager.

Why do Institutions Get Better Rates?

In an imperfectly competitive market, large investors have greater reasons and resources to seek out asset managers who will provide good performance at low cost. They are better able to separate noise from signal, to evaluate whether a particular fee is warranted by the expected returns, and therefore to respond sensibly to price differentials. They are more likely to use passive investment strategies. They also have the credible threat of managing their money in-house if they do not get good terms from an external manager. An "all or nothing" bargaining strategy for a large money bloc enables them to capture potential oligopoly profits or a fee that approaches marginal cost if this is less than average because of fixed costs.

Besides the greater information and bargaining power of institutional investors, they also require lower R&C and marketing costs by the asset manager. It is easier and less labor-consuming for the asset manager to deal with the financial staff at a few large institutions than with numerous small uninformed households. To reach the individual retail investor, advertising expenses must be incurred, numerous brochures and statements sent to households, and often commissioned salespersons are involved. In contrast, marketing in the institutional market-place is likely to consume less resources because of the concentration of investors, their greater financial expertise and price sensitivity. Commissions are rarely paid. And, once the contract is secured only one investor need be served in the institutional market. Even if the billion dollar investor gets better service than the thousand dollar investor (as is likely the case), total marketing and R&C demands relative to assets are much smaller for one institution than for a million small investors. These factors lead to costs for institutional investors as low as .04-.65% of assets, depending on asset category and investment strategy chosen. This is much lower than retail costs ranging from .3% to 1.5% for the average passively and actively managed mutual fund, respectively.

V. Capturing Institutional Rates for a Mandatory IA System: Constrained Choice

Mandatory IA systems can also be structured to obtain scale economies in asset management without high marketing costs, by operating through the institutional market. In other words, they can offer workers an opportunity to invest at much lower cost than would be possible on a voluntary basis. To accomplish this requires aggregating numerous small accounts of a mandatory system into large blocks of money and negotiating fees for the investment function on a group or centralized basis. Competition takes place in two stages. In the first stage, a competitive bidding process might be used to limit entry to asset managers charging the lowest fees subject to performance specifications. Limited entry avoids high start-up costs in the early years of a new system. Low fees create a disincentive for high marketing expenses. In the second stage workers choose from among funds that won the primary competition. The lowest fees are obtained when worker choice is constrained to low cost investment portfolios and strategies, such as passive investment. Still, enough choice could be retained to satisfy individual preferences and avoid political control. With R&C costs of .1% of assets (as in the

average mutual fund in Table 7 and as calculated for an IA system with small contributions in Table 1), and with investment costs as given above for institutions, an "institutional" IA system would cost .14-.75% of assets in the long run (James et al 1999).

Several countries are now experimenting with variants of this approach. The three institutional IA systems described below all operate within this fee range and imply some trade-off of political insulation and individual freedom for the cost reduction. We start with the most constrained system, in Bolivia, that is appropriate for a small developing country, and conclude with the Swedish system, that offers considerable choice among existing funds, mimics the institutional market through a sliding scale of price ceilings, and is more appropriate for countries with advanced financial markets. We describe the cost savings that seem achievable, as well as the pitfalls of these schemes.

Auction Off Entry Rights to a Single Portfolio: Bolivia

In 1997 Bolivia auctioned off the asset management rights in its new defined contribution pillar to two investment companies, in a widely publicized international bidding process. At the start of the new system it was expected to have 300,000 participants, each contributing 10% of wages into their retirement accounts, bringing total annual contributions to $300 per account or almost $90 million en toto. Initially almost all of the assets had to be invested in government bonds, to help finance the transition, but over time the funds were expected to diversify.

The bidding process for management rights consisted of two stages that began with notices in the *Wall Street Journal*, *Financial Times* and *Pensions and Investments* and proceeded via extensive internet communications, facilitating international competition. A web site was established to exchange documents such as draft law and regulations, proposed contracts and other data. Initial selection criteria included: experience in asset management (at least 10 years of global asset management, at least $10 billion in assets under management); experience in pension fund administration and record-keeping (at least 100,000 accounts); and experience in establishing new systems. Reacting to this publicity, 73 asset managers expressed interest, 12 consortia (including 25 separate companies) applied and 9 were selected to bid. At the bidding stage, the managers competed with respect to asset management fee and conditions regarding guarantees and regulations were added. Concerns about possible guarantees that might be required and the government's insistence that in the early years the AFP's must invest most incoming revenues in Treasury bonds led only three managers to submit bids at this stage.

The bidding process specified that a uniform fee of .5% of salary (5% of net contributions) would be imposed, and companies bid on the size of their additional asset-based fee. In the end, the lowest bidder offered to charge 22.85 basis points of the first billion dollars under management, 1.4 basis points on the next $.2 billion, .67 basis points on the next $.3 billion and no management fee on assets above US$1.5 billion—strong evidence of the scale economies in asset management noted above. The second bidder quickly adopted this schedule, thereby ending the bidding process. (Another 20 basis points is paid to Citibank, which serves as international custodian for all the funds; in Chile custodial fees are covered by the AFP's).

Both winners consortia consisted of international consortia that included foreign and domestic partners: Invesco-Argentaria and Banco Bilbao Vizcaya S.A.-Prevision**.** Their contract runs for 5 years. Initially workers were assigned to a company and no switching was permitted. Starting in the year 2000, urban workers will be allowed to switch and new workers will be permitted to choose. After the five-year contractual

period additional companies will be allowed to enter and the price caps will be lifted. (von Gersdorff 1997 and Guerard and Kelly 1997).

Why were international companies so interested in a small pension fund in a small country? The same companies that run the new defined contribution pillar will also manage the $1.65 billion proceeds of a privatization program (an amount which is equal to 22% of Bolivia's GNP). Pension reform and state enterprise reform were undertaken simultaneously in Bolivia and management rights to the two sets of assets were auctioned off jointly. In addition to the fees paid by workers, the companies will receive a fee of .2285% of privatization assets, which will roughly double their revenues in the early years. Given that 5% of pension contributions equals $15 per year, which could barely cover R&C costs, cross-subsidies from the management of privatization assets could well be involved. It is likely that bidders would have been less interested and initial costs paid by workers in the IA system would have been higher without the presence of large privatization assets. But they probably would have been lower if the same scenario were repeated in a country with better financial markets and infrastructure. In other countries, bidders might be attracted because of complementarity with desired insurance and banking markets.

The Bolivian system is designed to keep average costs and fees low in the early years by reducing fixed costs and excess capacity since only two companies are operating; decreasing marketing and record-keeping costs since each company is given an initial monopoly for a group of workers and transfers are not allowed; amortizing infrastructure costs over several years, during which each company has an assured market share; and increasing information and bargaining power since the government bargains on behalf of the entire system when fees are established in the contract. Was this accomplished? Initially fees in Bolivia are only .5% of wages (5% of incoming contributions) plus .23% of assets plus .2% of assets for the custodian. This produces a fee that is less than one-third that in Chile in the first year (3% of assets for Bolivia in 1998 compared with 9.4% in Chile in 1982, see Tables 3 and 4). For workers who will only be in the system for 20 years or less, Bolivia is clearly much cheaper than Chile.

However, the differential is expected to narrow over time as the asset-based component grows. Under the current fee structure, a full-career worker who enters the system today would pay the equivalent of .56% of assets per year over his lifetime, as compared with .76% in Chile. Thus, in the long run, given the present pricing structure, the difference between the two countries is about 20 basis points. (In the absence of cost-saving measures we would have expected Bolivia to be more expensive than Chile due to its smaller size accounts and less developed infrastructure and financial markets, so these numbers understate the true saving).

Restricted entry has other pros and cons besides the impact on costs. One advantage of a bidding process with only two or three winners, especially in small countries, is that for some period it provides a guaranteed market share that may entice international companies with financial expertise to enter the market. The established standards and practices of these firms may, to some extent, substitute for regulatory capacity in countries where this is weak. At the same time, the extreme concentration opens the door to corruption in the award of the initial contracts, collusion between the two firms, and possibly control of the contract monitors by the firms that it is supposed to regulate. The firms may agree to buy government debt at low rates rather than investing more broadly, in return for favorable regulatory treatment. The regulators may have weak power relative to the power of two large investment companies that control the market. The two companies may also constitute a controlling share of the securities market in Bolivia, once this begins to develop and they are permitted to diversify; this is a threat particularly if international investments are not allowed. Thus, this system is not as well

insulated from7 political objectives and monopolistic distortions as a less concentrated system would be.

Another problem stems from the lack of incentives for service and to slow adaptability to unforeseen contingencies, due to the incomplete nature of contracts. While certain service targets were set, the contract cannot specify every element of service that might be desired, and companies are likely to cut back on services that are not specified in order to maximize their profits while living within the contract. The fact that workers cannot switch companies initially removes competitive pressures to perform well for those circumstances and services that are not enumerated. Of course, the possibility of switches after three years, as well as the entry of new firms after 5 years, means that long run contestability may prevent abuses of monopoly power. But it is also possible that political pressures from the first two companies may lead to a continuation of the restrictions on entry and switching. Moreover, competition in Bolivia has been dampened by an unexpected development—the merger of the parent companies of the two winning bidders—which in effect have become one. Thus, the Bolivian approach keeps costs low at start-up, but the impact on costs and performance in the long run is uncertain.

One way to mitigate these problems is to maintain an auction process for the long run, but with rebidding every 3-5 years on the basis of performance as well as fees. However, the incumbent may have a big competitive advantage over potential newcomers, since it already has affiliates and R&C files. To facilitate contestability, it may be desirable to separate the fixed cost component of the operation (such as the R&C database) from the investment function, and to permit investment abroad, which will make the environment more inviting to asset managers from abroad.

With these caveats in mind, the limited entry-by-bidding approach is worth serious consideration, especially as a way to avoid excess capacity at the start-up of new systems and in the longer run for countries that have modest contribution and asset bases.

Competitive Bidding with Portfolio Choice: TSP

In Bolivia the same portfolio (government bonds and bank deposits) is offered by both funds. A less constrained variation on this theme uses a competitive bidding process to select a limited number of varied portfolios, and investment companies offering them, among which workers can choose. This approach is employed by the federal Thrift Saving Plan (TSP), a voluntary plan for civil service workers in the United States. It has been proposed as one possible model that might be followed if the U.S. social security system were reformed to include IA's. In the TSP, contributions by workers are matched by their employer, the federal government, up to a combined limit of 16%. Beginning with barely a million participants and $3 billion in assets in 1987, the TSP had grown to 2.3 million participants and $65 billion by 1998, with average annual contributions of $2600 and average account size of $27,400 that far exceed the size of other plans analyzed in this paper.

In the TSP model, several benchmarks are selected and the right to run a fund through passive management based on that benchmark is auctioned off periodically in a competitive bidding process. Initially only three portfolios were authorized--a money market fund that holds short term government securities, a fixed income fund that holds medium and long term government and corporate bonds, and a common stock fund indexed to the S&P 500. It is now in the process of adding a small cap fund and an international stock fund (the voluntary market provided these options many years ago). A bidding process is held every 2-4 years, with prospective managers evaluated on the basis of tracking ability, trading costs, fiduciary record and fees. Workers have a choice among these funds and limited switching is permitted. However, the same investment company has been selected to run the stock and bond funds so workers do not have a choice among

investment companies. Moreover, the contract holder has not changed over the lifetime of TSP, consistent with the "first mover" advantage mentioned above.

The TSP essentially operates as an institutional investor, passing the savings along to its investors. As a result of its information and bargaining power as well as its use of passive management, investment costs (including trading fees) are only a few basis points. The largest cost component, about $20 per account, is for R&C, which is carried out by a separate public agency. (An alternative model might auction off the R&C function as well). While R&C costs have been quite constant over time in dollar terms, investment costs have been rising with assets, so total administrative costs are now $30 per account. As a percentage of assets, administrative costs have fallen from .7% at the start-up of the system to .11% in 1998 (Table 13).

The fee is less than 10% of what workers would pay, on average, if they were given a broad choice of portfolios and chose the same mix as retail mutual fund investors (who pay 1.43% of assets, on average). It is about half of what they would have to pay in the retail industry in the U.S. for similar funds (S&P index mutual funds are available for 21 basis points, including trading costs). This cost is exceptionally low in part because contributions are passed on by a single employer, the government, which also covers some additional communications costs. But the biggest cost saving in TSP (a saving of 1.2% of assets per year compared with the average mutual fund investment) comes from constraining the choice of investment strategy to domestic passive management; countries that did not have such deep financial markets could not achieve such large savings. Small additional savings (of .1% per year) accrue to TSP from using a competitive bidding process to enhance bargaining power, secure better rates and eliminate marketing expenses.

The advantage of such a process: Workers have a clear-cut choice of investment portfolio —but choice is constrained in a way that is designed to keep fees low without sacrificing expected returns. This constraint may be a big advantage in an IA system where many small account holders are unaccustomed to evaluating multiple investment options, and where it is important to avoid a high implicit contingent government liability. The disadvantages: the selection of portfolios is very limited, adaptation to change is slow and there is no competition. Workers who want a risk-return trade-off that is different from that permitted by the system's governing board or those who want active management cannot satisfy their preferences. Investment in enhanced index funds, high-yielding but risky venture capital, private equity and new financial instruments are completely ruled out. Competitive pressures for good performance and innovation are limited once a portfolio is chosen since, for any given portfolio (and even across portfolios), there is no choice of manager. These disadvantages could be mitigated by increasing the number of benchmarks available and selecting two or three companies to run the funds for each benchmark. The larger the asset base, the more feasible this becomes.

In developing countries where the pension system is a major source of long term capital, financial markets are not efficient, and few attractive financial instruments and benchmarks are available, a heavy concentration on passive investment may not be feasible or desirable. Thus, as was the case with the Bolivian model, this approach is promising but must be used with caution.

Open Entry and Price Ceilings: Sweden.

Still greater product variety could be achieved, while retaining low fees, by allowing open entry subject to a price ceiling imposed by a central authority. Sweden recently established an IA system using this type of approach. Five million workers are expected to participate, contributing 2.5% of wages. (This funded system is supplementary to a large unfunded "notional" defined contribution pillar, to which

workers contribute 16%). For a full time worker, annual contributions will amount to $600 per year and about 16 billion kronor or $2 billion per year are expected to flow into the system. Money began to accumulate in an unallocated pool in 1995, so when allocations to individuals and funds begin in 2000, total assets will be about $10 billion.

All mutual funds that operate in the voluntary market (several hundred funds) are free to participate providing they agree to the net fee schedule set by the public agency that administers the system (the PPM). Subject to this proviso, workers can select the fund of their choice. After studying the industry's production function to determine the size of fixed and variable costs, the public agency has just promulgated the fee schedule that it plans to impose. It is a complex schedule that attempts to mimic the cost function and the fee schedule that would be charged in the institutional market. It depends on the expense ratio charged by the fund to the general public in the voluntary market (as a proxy for asset class and quality) and the magnitude of contributions that it attracts in the mandatory system (Table 14 and Figure 1). A sliding scale was used so that price would track declining marginal and average costs. It also cushions the risk of participation for funds that are not sure they will attract a large volume of assets, thereby encouraging diversity, while restricting excess profits from those that are more successful (MPIR 1998).

Mutual funds in the voluntary market in Sweden charge varying amounts ranging from .4% to over 2%. As of 1997 the average fee plus trading commissions was 1.5%, similar to the U.S. (Dahlquist et al 1999). Funds will charge the same fees in the mandatory system, but are required to pay a rebate to the PPM, which passes it back to workers. The rebate to the PPM is higher for high cost funds and more popular funds. Funds that attract large sums from the mandatory system are left with a net marginal fee of less than 20 basis points and a net average fee of 20-30 basis points. Intensive marketing is likely to be ruled out by these fees since cost would exceed incremental net revenues. These net numbers are roughly similar to fees paid for management of domestic assets by large institutional investors in the U.S.

This method could not be used, however, unless some other arrangements were made to cover R&C costs, for these costs will exceed the permissible fees in the early years of the new system. Many mutual funds would be unwilling to participate if they had to cover R&C expenses out of their allowable fee. The Swedish system avoids this problem by centralizing collections, record-keeping and most communications--charging all workers an additional asset-based fee to cover these costs (thereby cross-subsidizing low earners) and amortizing expenses over a 15-year period (thereby spreading fixed costs over many cohorts). R&C costs are expected to be .3% at the beginning, eventually dropping to .1%. To avoid the cost of setting up a new collection system, contributions are collected by the central tax authorities together with other taxes and eventually passed on to the PPM. The PPM records these contributions, aggregates the contributions of many individuals and moves them in omnibus accounts to the mutual funds chosen by workers. Indeed, the funds will not even know the names of their individual members—a procedure know as "blind allocations." All fund switches will be processed by the PPM. These features reinforce the bulk buying power of the public agency and further discourage sales commissions.

The rebate collected from the funds is distributed back to the workers, according to a formula set by the PPM. One might expect (and high fee funds preferred) that the rebate would go back to workers in the originating fund, on grounds that net price paid by workers would then equal net fee received by fund, and both would approximate marginal cost. However, the PPM proposed (and low fee funds, that tend to be associated with unions, preferred) to give each worker back the same amount (as a percentage of assets invested) regardless of which fund he or she has chosen. This would drive a wedge

between net price paid by workers and received by funds. Workers who chose low fee funds would get back far more than the rebate paid by their fund, while workers in high fee funds would continue to pay high fees that their funds would not keep. If the net fee received by each fund approximates its marginal cost (which is the intent), the net price paid by consumers would differ from marginal cost and, in making their allocation decisions, consumers would not be taking real marginal cost into account (Figure 1).

The PPM proposal, obviously, was opposed by the high fee funds and their potential consumers. The net outcome, therefore, was a political compromise: part of the rebate will be returned on a group basis and part on an individual basis. Thus, the system will redistribute across consumers in ways that are not obvious or obviously equitable. This controversy about how to distribute the rebate exemplifies the value judgements and/or political pressures to which price control systems are subject, sometimes at the expense of efficiency. It is not clear whether this redistributive fee-cum-rebate schedule will prove to be politically sustainable.

The Swedish system also illustrates some of the pitfalls of a price control system that stem from the difficulty in promulgating an efficient and equitable fee schedule for a differentiated industry. Experience in other industries warns that "incorrect" prices may be set and quality deterioration may occur under price controls. For example, it remains to be seen which funds will be willing to enter the system under these terms. If the price has been set too low, few if any funds would choose to participate. (In Kazakhstan a very low unstable fee ceiling of 1% of contributions + 10% of investment returns has been set and, partly for this reason, participation by private investment companies is limited). And those that do participate may provide inferior service. While many funds appear to be interested in Sweden, the nature of the participating companies will be skewed by the fee structure. Most likely bond, large cap and index funds investing in Sweden and other industrialized countries will participate, while actively managed small cap and emerging market funds that have more expensive production functions may be reluctant to join. Thus price controls are implicitly pushing the system toward certain assets and toward passive investing, although these were not explicit goals at the outset.

How much is actually saved by this complex system? Under the current formula, the average fee that will be paid by consumers and kept by funds depends on the distribution of assets in the mandatory system, which is not yet known, since the system will start operating in the year 2000. Suppose, hypothetically, that the demand and supply effects described above shape consumer choice so that 75% of all assets accrue to low fee funds while 25% of assets are divided equally among the others. Then, the net average fee paid by consumers (including trading commissions and R&C costs) will be about .8% of assets annually, compared with 1.5% in the voluntary market; total saving = .7% of assets. In the long run, as R&C costs fall, total savings rise to 1% (Table 15).

As in the case of TSP, much of this potential saving is due to incentives that change the mix of funds and shift consumers toward low cost funds. A smaller proportion is due to cost cuts for the given funds, stemming from fee ceilings that discourage marketing expenses. A final prtion of the lower fee is attributable to greater bargaining power of the PPM, which keeps price in the mandatory sector close to marginal cost. The saving is not nearly as much as the TSP achieves, mainly because the Swedish fees are high enough to accommodate greater choice, including active management. Thus, the Swedish model would be a possibility for other countries that want to provide considerable choice in their IA system, while also achieving modest cost reductions—but the dangers of price ceilings discussed above are also real.

VI. Constrained Choice: Is It a Good Choice?

An over-arching characteristic of these approaches is constrained choice for the worker. The government organizes the market and constrains choice in every mandatory system, albeit with different objectives. In Chile and most other Latin American countries with decentralized schemes, pension funds must abide by detailed regulations controlling their investment portfolios, designed to reduce financial market risk and regulatory difficulty, rather than to minimize costs. As a result, marketing costs are high and returns have not been maximized, but potential disasters have been averted (Srinivas and Yermo 1999). Moral hazard problems have potentially been reduced, thereby making government guarantees of benefits less costly.

The IA models used in Bolivia, Sweden and the TSP preserve private competitive fund management and worker choice, but choice is constrained with the object of reducing administrative costs and eventually increasing pensions. Preliminary evidence suggests that in the long run they will cut costs to less than .6% and in some cases to less than .2% of assets per year (Table 15). If gross returns are not affected negatively, such fee reductions could raise pensions by 10-20% relative to the retail market.

To evaluate whether these cost and fee reductions are desirable, it is important to analyze where they come from. We have identified three major sources: changes in investment portfolios and strategies, lower costs of managing a given portfolio, and redistributing by cost-shifting and cutting oligopoly profits. The first source has the largest impact on fees, especially in countries with efficient financial markets and passive investment opportunities. The second source, operating mainly by minimizing marketing and start-up expenditures, is available in developing countries as well. Cost-shifting involves distributional trade-offs between long run and short run fees and between fees in the voluntary and mandatory markets. The reduction in profits is probably the least important since, in many countries and in a global financial market, these will be small anyway in the long run. Potential gains may also achieved by centralizing the R&C function, although this is less clear.

Changes in portfolios

All three cases severely limit the range of portfolios available to workers, ruling out "expensive" portfolios in assets such as small cap stocks and emerging markets and directing workers toward index funds in liquid domestic instruments instead. Innovation and new product development is discourage or ruled out. TSP does this most strongly and directly; about 90% of its fee saving is attributable to this constraint on asset allocation. Sweden does it indirectly by setting price ceilings that will restrict the supply of "expensive" funds and cross-subsidies that will push demand toward cheaper funds. Developing countries such as Bolivia that lack well-functioning index funds and liquid securities markets have much less access to this source of cost saving. (Of course, they also lack access to a wide set of financial instruments necessary for diversified active investment; their portfolios are constrained mainly by availability). This may, however, become an additional rationale for the development of new instruments, more accurate indexes, disclosure rules that will enhance market efficiency, and international diversification using index funds (Shah and Fernandes 1999).

These constraints on asset classes are predicated on the assumption that the judgement of many workers about the relationship between fund performance and fees is imperfect, and that cost saving, which is certain, should take precedence over workers' expectations about returns, which are highly uncertain, in a mandatory scheme. The evidence cited above supports the idea that many small investors (and even large investors) are poorly informed. Constraining investment choice at the start of their new systems facilitates learning-by-doing, which is probably the most effective form of

education, by limiting the mistakes people can make. It makes government guarantees of benefits potentially less costly by diminishing moral hazard problems.

But these restrictions decrease the adaptability for individual risk-return preferences to informed workers as well as the fund's incentive to innovate and are therefore not an unmitigated gain. The agents who set these restrictions may not always act in the workers' best interests. Additionally, individuals may have a smaller sense of "ownership' and a larger sense of being taxed if their choice of investment strategies is constrained. The risk to the government of being responsible for a bail-out in case of investment failure may be greater when it has "endorsed" a small number of investment portfolios and managers. These dangers can be alleviated by allowing greater choice, but at a cost in terms of higher price (Sweden versus TSP).

Marketing cost-reductions

All three cases achieve further economies by investing assets through the institutional market to a limited group of companies and centrally negotiating fees for large money blocks. In Bolivia and the TSP a small number of slots for investment companies was set a priori and operating rights auctioned off to the lowest qualified bidder; price was determined through the competitive bidding process. In Sweden a low price structure was pre-set by the public agency and quantity of companies willing to accept these terms remains to be determined, but a small number is expected to dominate the market. The low fees and limited entry dampen marketing costs and excess capacity that might otherwise exist at start-up. Given the large fixed costs and declining average costs in the industry, it will always be tempting for funds to spend more on advertising and sales commissions to increase their market share so long as the attainable fee is higher than marginal cost. When the fee is exogenously decreased, the incentive to spend on marketing will similarly decline and this helps to sustain the low fee.

As discussed earlier, marketing provides both accurate and misleading information to consumers, incentives for good performance and a large element of zero-sum game competition. Reductions in marketing expenditures are efficient if the zero-sum game component is cut while the useful information is not cut. It seems likely that the socially optimal amount of marketing is less in a mandatory IA system than in the voluntary market. Since the total investable amount is predetermined by law; marketing is not needed to induce people to save or to attract these savings to financial markets. While information is imparted by marketing, investment companies and brokers have a clear incentive to impart misleading information that is in their interest rather than the consumer's interest. This could be a big problem in a new mandatory system with many small inexperienced investors. In such a system it is important to provide other less biased, less expensive sources of information such as government publications and the popular media. The incentives for good performance and innovation imparted by marketing could continue to be provided in the voluntary market place. Reducing marketing expenses in the mandatory systems may be more problematic in countries with low tax collection capacities and fewer alternative sources of information, particularly those that wish to use marketing as a tool to increase coverage and reduce evasion.

Cost-shifting

The third source of the fee savings is due to cost-shifting and is mainly a short run and distributional effect: maintaining the burden of fixed costs in the voluntary rather than the mandatory systems and shifting part of the initial capital costs in a new system to later cohorts. For example, in Sweden entry is open only to firms that operate in the voluntary market, the fee schedule aims at charging marginal cost and a 15-year amortization period is being used for R&C by the public agency, while a private company

would probably expect a positive return in five years. Since the benefits of an IA system accrue disproportionately to younger generations, who have more opportunity to accumulate savings, it seems reasonable that much of the fixed costs should be shifted to them as well—but obviously this involves a value judgement. Obtaining lower fees through an "all or nothing" offer for large blocs in oligopolistic markets likewise reduces price in the mandatory system without a corresponding impact on real resource cost—it shifts fixed costs to the voluntary sector or cuts oligopoly profits.

Centralizing collections and R&C: does this help?

The institutional approach is likely to imply centralized collections and record-keeping. Centralized collections enable money to be aggregated and moved in large blocs without the identity of the worker being disclosed and centralized record-keeping allows the investment function to be more contestable in the rebidding process. Both TSP and Sweden separate collection and R&C responsibilities from investment responsibilities and turn the former over to a central agency. In Bolivia, where only two asset managers operate, virtual centralization through private companies has been achieved, but this has not been separated from the investment function. Is this desirable?

Besides its role in making the rebidding process more contestable, centralized record-keeping has other cost implications. It facilitates economies of scale and standardization and avoids the compatibility problems that could arise when a member switches funds and information systems. It enables a basic level of service to be provided, without competitive pressures to upgrade to a more costly level. Workers can more easily have multiple accounts without multiple costly records and with the entire lifetime record in one place upon retirement. Centralization also has a redistributive potential—it permits a cross-subsidy to small accounts of low earners, which may be deemed socially desirable in a mandatory scheme. But the downside is the possibility that the central R&C office may have little incentive for accuracy and efficiency if it has a monopoly.

Centralized collections enable the IA system to piggyback on existing tax collection systems, hence avoid the cost of setting up a new collection system and reduce incremental paperwork costs to employers. But piggybacking involves a large time-cost, hence opportunity cost. An average of 9 months will pass in Sweden each year before the contributions will be attributed to individuals and allocated to funds, during which time participants simply earn the risk-free government rate. If the government rate is 3 percentage points lower than the rate that investors would otherwise have earned, this opportunity cost is equivalent to a charge of 2.25% of contributions or .11% annually of assets. We have not added this amount into our total cost calculations but they should be borne in mind—the advantages are not cost-free.

Centralized collections may also facilitate compliance since a single collection agency has responsibility for tracking contributors and therefore for identifying evaders. Individual pension funds have little incentive to report evaders, since they will simply lose a potential future customer. But the centralized agency may also have little incentive, since it doesn't keep the money. The outcome here obviously depends on governance capacity and social norms and we have little empirical evidence on real world outcomes.

Centralized collections and record-keeping may be handled through a public agency or may be contracted out to a private company or clearinghouse in a competitive bidding process. Croatia is attempting the latter approach. Using a public agency may not be a good option for countries that have weak tax collection mechanisms and distrust of government. For example, this approach probably was not feasible in Chile at the start of its reform. Centralization via a contracting process has the advantage of introducing price and quality competition into the choice. The bidding process could be run by the government, or by an association of pension funds in order to make the winner more

accountable to them. Even if centralization is not required from the start, the system is likely to move in that direction if sub-contracting is permitted, due to scale economies. (Such sub-contracts are not permitted in Chile). Most mutual funds in the U.S. (except the largest fund complexes) turn their R&C functions over to an external "transfer agent" and two transfer agents dominate the entire industry—evidence of natural market adaptation to scale economies. Many Australian funds contract out the account administration function to a few large R&C companies (Bateman 1999). We might expect such procedures to develop in other mandatory pension systems, if they are permitted. The pros and cons of alternative R&C arrangement obviously require further empirical study, as countries experiment with alternative systems.

Other caveats and pitfalls

The institutional approach to IA systems involves other caveats and pitfalls besides those already mentioned. First of all, in a centralized competitive bidding process the "wrong" number of firms may be chosen, resulting in over- or under-concentration relative to the least-cost point. Or in a system of price ceilings the wrong price may be chosen, resulting in under-or over-supply. Second is the need to build performance incentives into the initial contract. It is likely that whatever performance and service characteristics are not explicitly mentioned will be given scant attention by the winning bidders who want to maximize their profits subject to the contractual constraints. Market competition provides continual implicit incentives for good performance, in ways that matter to consumers. Innovation is encouraged. Competition bidding makes some of the incentives explicit ex ante and disregards the others—the essence of incomplete contracts. The greater the choice for workers and the contestability at the rebidding stage, the smaller is this problem. Also, the less confidence one has in the ability of workers to evaluate fund behavior, the smaller is this problem—and different analysts probably have different priors on this subject. Empirical evidence on the performance of asset managers who are chosen under different procedures might throw some light on this issue.

Further along these lines, a competitive bidding process is inflexible in the face of unforeseen contingencies that have not been spelled out in incomplete contracts. One such unforeseen contingency occurred in Bolivia when the parent companies of the two winning investment managers merged in a global merger process; in effect the two winners became one and the duopoly became, effectively, a monopoly.

Whether a monopoly or duopoly is involved, effective regulation is essential. But one or two large winners in a competitive bidding process may capture the regulators; the "regulated" may be in a stronger bargaining position than the regulators. Corruption in the bidding process and collusion afterwards is a related possibility (Valdes 1999a). A further problem is that a small number of large funds may exert a dominant control over small capital markets, rather than helping to develop these market further. These considerations may lead a country to choose a larger number of winners at the primary bidding stage than would be chosen on the basis of scale economies alone. Further concentration would then be achieved via the market at the secondary stage of competition for workers—but this would increase marketing costs as each "winner" tries to increase it market share.

A final problem occurs at the rebidding stage. Every competitive bidding process must specify a credible rebidding procedure. But the first winners may have a big competitive advantage over potential contestors in such markets. This is particularly the case if they have already invested in fixed costs and can therefore underbid new entrants who would have to cover such costs. A short run bidding competition can thereby become a long run monopoly, with little regulation or contestability. A large part of the fixed costs consists of the data base of affiliates to the system. The rebidding contest can

be enhanced by separating the R&C function from the asset management function, and vesting ownership of the membership database in the system itself, rather than in the firms that carry out the investment or R&C functions.

The greater the choice, the smaller are these dangers but the smaller also is the opportunity for depressing administrative costs. We thus face a trade-off between reducing administrative costs on the one hand versus increasing continuous incentives, adaptability and political insulation on the other hand. It seem plausible that the terms of this trade-off depend on the size of the system and the governance capacities of the country. The larger the contribution base, the greater the choice that can be allowed while still benefiting from low costs. Thus, Sweden is likely to have the same long run costs as Bolivia despite the fact that it offers greater choice, because of its larger average account size. The TSP has lower fees than Sweden, both because it has a larger asset base and because it constrains choice to a much greater extent.

These pitfalls can be minimized by a careful writing of the bidding contract—specifying performance targets and rewards, rebidding procedures and a mechanism for handling exceptional contingencies. The more responsible the governance of the country, the more likely that contracts will be carefully written and enforced and thus the lower the political risks of operating through the institutional market. While competition and choice always have a role to play, countries with well developed financial markets and good governance have a wider range of options, including lower cost options, available to them.

VII. Conclusion

We started this paper by asking: what is the most efficient way to set up an IA component of a social security system? And, how can the cost advantages of the institutional market that are obtained by the large investor be garnered by IA systems that consist of many small accounts? To answer these questions we compared costs in the retail market with those in the institutional market, including several IA experiments that aggregate these small accounts into large money blocs in setting price and market access.

Since these systems are new, the evidence is still fragmentary. But so far it is promising. It appears that substantial cost savings can be realized by investing IA's through the institutional market with constrained choice. This could raise final accumulations and pensions by 10-20%. Typically, these systems aggregate contributions, specify a small number of winning funds among whom worker can choose, and use a competitive bidding process to set fees (although Sweden reverses this process and sets fees, allowing competition to determine quantity).

These fee reductions have been achieved by (1) changing the range of investment strategies faced by workers, (2) cutting costs and (3) shifting costs or shaving profits. The largest fee reductions observed stem from a product mix change: constraining choice to investment portfolios and strategies that are inexpensive to implement, such passive management (as in TSP). This requires access to well developed financial markets and has an offsetting disadvantage for investors who would have preferred different portfolios. The largest cost reductions for a given portfolio are achieved by a price-setting process that cuts incentives for marketing (as in Bolivia and Sweden) and avoids excess capacity at the start of new systems (as in Bolivia). This is likely to work best if the collection and record-keeping functions are separated from the investment function, which facilitates blind allocations and competition at the rebidding stage. The third effect is distributional: increased bargaining power in an "all or nothing" deal is used to

maintain fixed costs in the old voluntary market, to partly transfer them to future cohorts through extended amortization, and to keep oligopoly profits low.

Any system of constrained choice imposes costs in terms of satisfying individual preferences, decreasing market incentives, increasing the risk of political manipulation, corruption, collusion and regulatory capture. Investment contracts are bound to be incomplete with respect to performance incentives and adaptability to unforeseen contingencies, and rebidding procedures pose a further problem. Trade-offs are therefore involved between administrative costs and other less certain and less tangible costs.

Probably the least-cost alternatives and trade-offs are available for industrialized rather than for developing countries. Industrialized countries have access to existing financial institutions, lower trading costs, passive investment opportunities, and more effective governance. For these reasons, they can save more than 1% per year by constraining choice and operating through the institutional market. In developing and transitional countries, particularly those with small contribution and assets bases, investment costs are likely to be higher and the opportunities for reducing fees lower. In particular, reducing fees through portfolio constraints may not be a realistic option in the short run for countries that have limited access to passive management or to large liquid asset classes. For these countries, the main cost-saving measure may be competitive bidding for a limited number of entry slots, that results in lower costs and fees for a given portfolio. Based on the experience of Bolivia, this offers the possibility of reducing costs substantially, especially at the start-up phase—providing government has the capacity and will to construct and enforce the contract carefully.

A total constraint on choice implied by a single centralized fund has led to poor net outcomes for workers and misallocated capital in many countries (Palacios and Iglesias 1999), while the retail market option has led to substantial administrative costs. The institutional approach is an intermediate option that retains market incentive while offering the opportunity for significant cost saving. Hence, it represents an option that policy-makers should seriously consider when establishing their mandatory IA systems--providing choice is not constrained “too much”.

TABLE 1

Administrative Costs Over Time as % of Assets and $'s per Account – Hypothetical System

Panel A: ***Low costs, small contribution base***

			Costs as % of Assets		Costs as $'s per Account		
Year	**Year-end accumulation of individual (in $000's) [a]**	**Average size account in system (in $000's) [b]**	**R & C**	**R&C + Inv**	**Inv. exp per account**	**R&C + Inv per account**	**R&C/Total exp.**
1	0.5	0.5	4.00	4.10	0.5	20.5	0.98
2	1.0	1.0	2.20	2.30	1.0	21.0	0.96
3	1.6	1.6	1.28	1.38	1.6	21.6	0.93
4	2.2	2.1	0.95	1.05	2.1	22.1	0.90
5	2.8	2.7	0.76	0.86	2.7	22.7	0.88
10	6.4	5.6	0.36	0.46	5.6	25.6	0.78
15	10.9	8.8	0.23	0.33	8.8	28.8	0.70
20	16.7	12.1	0.17	0.27	12.1	32.1	0.63
25	24.1	15.4	0.13	0.23	15.4	35.4	0.57
30	33.6	18.5	0.11	0.21	18.5	38.5	0.52
35	45.6	20.8	0.10	0.20	20.8	40.8	0.50
40	61.0	22.0	0.09	0.19	22.0	42.0	0.47

Panel B: ***Low costs, high contribution base***

			Costs as % of Assets		Costs as $'s per Account		
Year	**Year-end accumulation of individual (in $000's) [a]**	**Average size account in system (in $000's) [b]**	**R & C**	**R&C + Inv**	**Inv. exp per account**	**R&C + Inv per account**	**R&C/Total exp.**
1	2.0	2.0	1.00	1.10	2.0	22.0	0.91
2	4.0	4.0	0.50	0.60	4.0	24.0	0.83
3	6.4	6.4	0.31	0.41	6.4	26.4	0.76
4	8.8	8.4	0.24	0.34	8.4	28.4	0.70
5	11.2	10.8	0.19	0.29	10.8	30.8	0.65
10	25.6	22.4	0.09	0.19	22.4	42.4	0.47
15	43.6	35.2	0.06	0.16	35.2	55.2	0.36
20	66.8	48.4	0.04	0.14	48.4	68.4	0.29
25	96.4	61.6	0.03	0.13	61.6	81.6	0.25
30	134.4	74.0	0.03	0.13	74.0	94.0	0.21
35	182.4	83.2	0.02	0.12	83.2	103.2	0.19
40	244.0	88.0	0.02	0.12	88.0	108.0	0.19

Panel C: High costs, high contribution base

			Costs as % of Assets			Costs as $'s per Account		
Year	**Year-end acc. of individual (in $000's)** [a]	**Av. size account in system (in $000's)** [a]	**R&C**	**R&C + Investment**	**R&C + Investment + Marketing**	**Investment**	**R&C + Investment + Marketing**	**R&C/ Total**
1	2.0	2.0	1.50	2.10	2.60	12.0	52.0	0.58
2	4.1	4.1	0.74	1.34	1.84	24.3	74.5	0.40
3	6.2	6.0	0.50	1.10	1.60	36.3	96.5	0.31
4	8.5	8.2	0.37	0.97	1.57	49.0	119.9	0.25
5	10.8	10.2	0.29	0.89	1.39	61.4	142.6	0.21
10	23.9	21.0	0.14	0.74	1.24	126.1	261.2	0.11
15	39.8	32.1	0.09	0.69	1.19	192.7	383.3	0.08
20	59.3	43.3	0.07	0.67	1.17	259.8	506.2	0.06
25	82.9	53.9	0.06	0.66	1.16	323.2	622.5	0.05
30	111.6	63.1	0.05	0.65	1.15	378.8	724.5	0.04
35	146.6	70.1	0.04	0.64	1.14	420.4	800.8	0.04
40	189.1	73.2	0.04	0.64	1.14	439.0	834.9	0.04

Assumptions:

Panel A: a $520 is contributed each year, R & C costs = $20 per account, net contribution (NC) = $500, gross rate of return = 5.1%, investment costs = 0.1% of assets, net return (NR) = 5.0%.

Panel B: annual contribution = $2020, R&C costs = $20 per account, net contribution = $2,000, gross rate of return = 5.1%, investment costs = 0.1% of assets, net return = 5.0%.

Panel C: annual contribution = $2020, R&C costs = $30 per account, net contribution = $1990, gross rate of return = 5.1%, investment costs = 0.6%, marketing cost = 0.5% of assets, net return = 4%

a Individual's account accumulates at the following rate: $AA_t = AA_{t-1}(1 + NR) + NC$.

b Account size increases at above rate for individuals who stay in system. Withdrawals by high account individuals who retire and their replacement by incoming workers with small new accounts cause decrease in average account size in system relative to individual's account.

TABLE 2

Administrative Fees in Latin American IA Systems, 1999

Country[a]		Gross Fee as % of Wages[b]	Net Fee as % of Wages	Net Fee as % of Total Contribution	Net Fee as % of Current Assets, 1998	Net Fee as % of Lifetime Annual Assets[g]	% Reduction in Final Capital and Pension
Argentina[c]	(10.0)	3.25	2.30	23.0	7.66	1.13	23.0
Bolivia[d]	(10.6)	4.60	0.60	5.5	3.0	.54	11.1
Colombia[c]	(11.6)	3.50	1.64	14.1	4.0	0.69	14.1
Chile[e]	(11.8)	2.47	1.84	15.6	1.36	0.76	15.6
El Salvador	(12.1)	3.18	2.13	17.6	-	0.86	17.6
Peru	(12.4)	3.74	2.36	19.0	7.31	0.93	19.0
Mexico[f]	(8.7)	4.42	1.92	22.1	9.19	1.08	22.1
Uruguay	(14.4)	2.68	2.06	14.3	-	0.70	14.3

Source: Augusto Iglesias, Prim America Consultores

a Total contribution rate = contribution to IA System + net fee, as % of wages. This number is given in parentheses after each country. In Argentina, Mexico and Uruguay the fee is taken out of the worker's account, unlike other countries where the fee is added on.

b Gross fee includes premium for disability and survivors insurance. Net fee excludes this premium.

c Some AFPs in Argentina also charge a fixed fee. The split between administrative fee, insurance and other fees and costs is difficult to disentagle in Argentina and Colombia.

d This includes a fee of .5% of wages plus .235 of assets that is charged by the AFP's plus .2% of assets to the custodian. The asset-based part will increase over time as assets grow, so total fee as % of wages and contributions will also grow and will be higher than numbers given in columns 1,2 and 3 in the future. Gross fee includes 2% of wages for disability and survivors benefits.

e Most Chilean AFPs also charge a small flat fee per month, increasing the net fee. Anecdotal evidence indicates that part of the fee is rebated when workers switch AFPs, decreasing the net fee.

f. In Mexico the government contributes 5.5% of the minimum wage, which is estimated to be 2.2% of the average wage, to each account. This is included in the total contribution rate given above. Source for Mexico: CONSAR tabulations, 1997.

g. This is based on a simulation of a full career worker who works 40 years with an annual wage growth of 2% and an annual interest rate of 5%.

Table 3 – Assets, Accounts and Costs in Latin America, 1998 (in US$)

Panel A---- using 1998 exchange rate

Country	# of Contributors (millions)	# of Affiliates (millions)	Xchange Rate	Assets (mill US$)	Total Assets / Contributors (US$)	Total Assets / Affiliates (US$)
Mexico	11.38	13.83	0.100600	5484.43	482	397
Bolivia		0.46	0.177900	238.39		518
Colombia	1.39	2.91	0.000654	2127.57	1531	731
Peru	0.90	1.98	0.319600	1745.38	1939	882
Argentina	3.46	7.07	1.000200	11528.70	3332	1631
Chile	3.15	5.97	0.002111	31056.17	9859	5202
Country	Fee per Contributor (US$)	Expenses per Contributor (US$)	Fee per Affiliate (US$)	Expenses per Affiliate (US$)	Fee per Unit of Asset (%)	Expenses per Unit of Assets (%)
Mexico	43	44	35	36	8.82	9.19
Bolivia			16	21	3.00	4.04
Colombia	61	101	29	48	4.00	6.63
Peru	142	158	64	59	7.31	6.74
Argentina	261	200	128	98	7.66	6.80
Chile	134	111	71	59	1.36	1.13

Panel B---- using 1997 PPP

Country	# of Contributors (millions)	# of Affiliates (millions)	Exchange Rate	Assets (mill US$)	Total Assets / Contributors (US$)	Total Assets / Affiliates (US$)
Mexico	11.38	13.83	0.25	13629.30	1198	986
Bolivia		0.46	0.5263	705.26		1533
Colombia	1.39	2.91	0.0025	8132.92	5851	2795
Peru	0.90	1.98	0.6667	3640.93	4045	1839
Argentina	3.46	7.07	1.1111	12806.98	3701	1811
Chile	3.15	5.97	0.0058	85338.19	27091	14295
Country	Fee per Contributor (US$)	Expenses per Contributor (US$)	Fee per Affiliate (US$)	Expenses per Affiliate (US$)	Fee per Unit of Asset (%)	Expenses per Unit of Assets (%)
Mexico	106	110	87	91	8.82	9.19
Bolivia			46	62	3.00	4.04
Colombia	234	388	112	185	4.00	6.63
Peru	296	273	134	124	7.31	6.74
Argentina	290	222	142	109	7.66	6.80
Chile	368	307	196	162	1.36	1.13

Source: PrimeAmerica Consultores, taken from reports of Superintendencias.

* Countries are arranged in order of total assets/affiliates at 1998 exchange rate

Note: In Colombia and Argentina AFP's engage in other insurance activities whose fees and costs are difficult to disentangle from pension administration. In Bolivia an additional 0.2% of assets is paid to the custodian.

Table 4

Assets, Fees and Expenditures in Chile Through Time

Year	# of Affiliates (millions)	Contributors/Affiliates	Assets (1998 US$ mill.)	Total Assets /Contributors (1998 US$)	Total Assets /Affiliates (1998 US$)	Marketing Costs as % of Total Exp.
1982	1.44	0.74	1277.74	1205	887	46
1983	1.62	0.76	2212.50	1799	1366	40
1984	1.93	0.70	2842.46	2090	1473	36
1985	2.28	0.68	2290.61	1470	1003	30
1986	2.59	0.68	3112.55	1779	1201	24
1987	2.89	0.70	3812.46	1884	1319	21
1988	3.18	0.68	4868.26	2246	1529	23
1989	3.47	0.65	5844.70	2577	1684	22
1990	3.74	0.61	8144.61	3558	2178	24
1991	4.11	0.61	11999.98	4825	2920	26
1992	4.43	0.61	14265.43	5292	3217	30
1993	4.71	0.59	17839.38	6389	3788	35
1994	5.01	0.57	24206.33	8406	4827	38
1995	5.32	0.56	27039.54	9129	5082	43
1996	5.57	0.56	28366.44	9088	5091	49
1997	5.78	0.57	31133.98	9445	5386	52
1998	5.97	0.53	31060.16	9861	5206	46
Year	Fee per Contributor (1998 US$)	Expenses per Contributor (1998 US$)	Fee per Affiliate (1998 US$)	Expenses per Affiliate (1998 US$)	Fee per Unit of Assets (%)	Expenses per Unit of Assets (%)
1982	113	145	83	106	9.39	12.00
1983	101	102	77	77	5.63	5.65
1984	102	97	72	68	4.90	4.65
1985	52	50	36	34	3.54	3.41
1986	52	46	35	31	2.93	2.57
1987	49	42	34	29	2.60	2.22
1988	58	50	39	34	2.57	2.23
1989	64	51	42	33	2.49	1.97
1990	71	63	43	39	2.00	1.77
1991	81	68	49	41	1.68	1.41
1992	95	74	58	45	1.79	1.39
1993	103	92	61	54	1.61	1.43
1994	123	114	71	65	1.47	1.35
1995	143	124	79	69	1.56	1.35
1996	145	128	81	72	1.59	1.41
1997	148	131	84	75	1.56	1.38
1998	134	112	71	59	1.36	1.13

Source: PrimeAmerica Consultores based on reports of Superintendencias, and authors' calculations.
Exchange Rates: 1982—0.017103, 1983—0.013734, 1984—0.011233, 1985—0.005445, 1986—0.004878, 1987—0.004200, 1988—0.004041, 1989—0.003372, 1990—0.002969, 1991—0.002668, 1992—0.002616, 1993—0.002320, 1994—0.002475, 1995—0.002456, 1996—0.002353, 1997—0.002274, 1998—0.002111.

Table 5 A

Regression Analysis: Determinants of Costs and Fees, Chile, 1982-98: Aggregate Analysis

	Dependent Variables					
Independent Variables	Total Admin. Cost	Total Cost / Assets	Total Cost / Affiliates	Total Fee Revenues	Total Fees / Assets	Total Fees / Affiliates
Assets	0.012 (24.38)*	-0.00004 (4.14)*	0.001 (12.00)*	0.013 (30.47)*	-0.00005 (5.39)*	0.002 (16.48)*
Dummy, start-up year=82	92.781 (4.74)*	9.581 (20.16)*	77.936 (14.91)*	47.948 (2.54)***	6.629 (16.14)*	50.182 (11.61)*
Dummy, start-up years=83-4	53.611 (3.44)*	2.787 (7.81)*	42.486 (10.83)*	43.532 (3.07)**	2.567 (8.33)*	39.383 (12.14)*
Constant	45.780 (5.18)*	2.476 (12.22)*	26.704 (2.23)***	55.269 (6.87)*	2.826 (16.14)*	31.078 (16.87)*
R^2	0.976	0.974	0.951	0.985	0.967	0.956
N	17	17	17	17	17	17

Note: t-statistics are in parentheses

* Significant at 0.1% level ** Significant at 1% level *** Significant at 5% level

Units of measurement: costs, fees, and assets are 1998 US dollars in millions; # of contributors and affiliates are in millions; cost/assets and fees/assets are in %; cost/affiliates, fees/affiliates and assets/affiliates are in 1998 US dollars.

Table 5B

Fixed Effects Regression for Chile: Disaggregated by AFP and Year

Indept. variable		**Cost**		**Cost/Affiliate**			**Cost/Asset**	
		quadratic	Logs	Quadratic	Logs	No logs	Quadratic	Logs
Affiliate		3.711 (0.65)	0.350 (5.54) *	-78.510 (-0.79)	-0.650 (-10.31) *	11.712 (0.49)	13.587 (3.71) *	0.350 (5.54) *
Affiliate square		-2.211 (-0.95)		28.336 (0.70)			-3.651 (-2.47) ***	
Asset		0.011 (11.95) *	0.535 (14.53) *	0.046 (2.76) **	0.535 (1.248)		-0.002 (-2.82) **	-0.465 (-12.61) *
Asset square		-1.5e-07 (-1.01)		-5.5e-06 (-2.10) ***			1.3e-07 (1.33)	
Asset/Affiliate						0.009 (4.56) *		
Dummy,start-up year=82		6.692 (5.38) *	1.248 (16.45) *	89.603 (4.14) *	1.248 (16.45) *	96.328 (4.89) *	15.121 (19.06) *	1.248 (16.45) *
Dummy, start-up year=83,84		3.384 (3.50) *	0.655 (11.53) *	44.172 (2.63) **	0.655 (11.53) *	47.804 (3.15) **	4.316 (7.00) *	0.655 (11.53) *
Constant		3.556 (3.94) *	-0.339 (-0.98)	84.942 (5.42) *	-0.339 (-0.98)	51.181 (4.57) *	0.695 (1.21)	4.266 (12.33) *
R-sq	Within	0.923	0.917	0.134	0.703	0.173	0.681	0.868
	Between	0.938	0.931	0.137	0.775	0.036	0.110	0.533
	Overall	0.916	0.935	0.0003	0.817	0.210	0.335	0.753
N		234	232	234	232	234	234	232

Indept. variable		**Fee**		**Fee/Affiliate**			**Fee/Asset**	
		quadratic	Logs	Quadratic	Logs	No logs	Quadratic	Logs
Affiliate		16.266 (2.66) **	0.803 (9.99) *	-146.971 (-2.94) **	-0.197 (-2.45) ***	-3.719 (-0.36)	3.865 (2.28) ***	0.803 (9.99) *
Affiliate square		-9.792 (-.97) *		27.307 (1.36)			-1.631 (-2.39) ***	
Asset		0.010 (10.27) *	0.389 (8.17) *	0.047 (5.64) *	0.389 (8.17) *		-0.002 (-5.37) *	-0.611 (-12.86) *
Asset square		5.5e-7 (3.45) *		-3.8e-06 (-.90) **			1.9e-07 (4.36) *	
Asset/Affiliate						0.010 (12.81) *		
Dummy,start-up year=82		4.433 (3.35) *	0.828 (8.41) *	16.121 (1.49)	0.828 (8.41) *	32.772 (3.87) *	5.401 (14.72) *	0.828 (8.41) *
Dummy, start-up year=83,84		3.992 (3.88) *	0.814 (11.07) *	33.096 (3.94) *	0.814 (11.07) *	44.289 (6.81) *	2.969 (10.41) *	0.814 (11.07) *
Constant		2.569 (2.68) **	1.439 (3.23) **	85.478 (10.91) *	1.439 (3.23) **	33.238 (6.92) *	2.428 (9.13) *	6.044 (13.56) *
R-sq	Within	0.946	0.903	0.285	0.552	0.495	0.699	0.715
	Between	0.947	0.946	0.138	0.179	0.882	0.850	0.697
	Overall	0.956	0.915	0.278	0.275	0.832	0.702	0.566
N		234	234	234	234	234	234	234

Note: t-statistics are in parenthesis.
Significance level: 0.1% *
Significance level: 1% **
Significance level: 5% ***
See Table 5A for units of measurement. Similar results were obtained in a random effects analysis.

TABLE 6

Annual Asset-based Fee Equivalent to 15.6% Fee on New Contributions in Chile (as percentage of assets)

Starting Age	Contribution Made For 1 Year Only At Given Age	Contributions Made For 20 Years Only, Starting At Given Age	Contributions Made Every Year Until Age 65, Starting At Given Age
	1	2	3
25	0.45	0.57	0.76
35	0.60	0.85	1.05
45	0.91	1.65	1.65
55	1.86	-	3.50
64	33.37	-	33.37

Assumptions:

This table shows the annual fee based on assets that will yield the same capital accumulation at age 65 as would a 15.6% front-loaded fee on in-coming contributions. In column 1 a single year of contributions is assumed at the starting age. The annual fee for age 64 is 33.37% because contributions and fees are assumed to be paid monthly, including the last month. In column 2 the worker continues contributing a fixed percentage of wage for 20 years. In column 3 the worker continues investing a fixed percentage of wage from starting age until age 65. A rate of return of 5% is assumed. For columns 2 and 3, annual wage growth of 2% is assumed. Similar results were obtained for 3% rate of return and 1% rate of wage growth. In US $'s, the average contributor pays $134 today in Chile. The fee would increase 2% per year under these assumptions.

TABLE 7

Composition of Mutual Fund Expenses, 1997
(as % of assets and $'s per account)

	Simple Average Passive	Asset-Weighted Average	Active
Expenses Included in Expense Ratio			
Investment Advisor	0.56	0.49	0.52
	0.08		
Distributor for 12b1 fees*	0.35	0.21	0.22
	0.02		
Transfer Agent (R&C)	0.13	0.12	0.12
	0.05		
Other (legal, audit, etc.)	0.23	0.09	0.08
	0.13		
Reported expense ratio	***1.27***	***0.91***	***0.95***
	0.28		
$'s per account**	$320	$228	$238
	$70		
Other Investor Costs			
Brokerage fees (trading costs)	0.26	0.12	0.12
	0.03		
Annualized front-loaded sales charge paid by shareholder**	0.31	0.40	0.43
	0.01		
Total investor costs as % of assets	***1.85***	***1.43***	***1.50***
	0.32		
$'s per account**	$463	$360	$375
$80			

* The 12b1 fee is a fee that is paid annually by the fund, primarily for distribution of new shares and related service. It is financed by a charge paid by all shareholders, whether or not they have purchased their shares through a broker. It is part of the fund's expense ratio and is based on assets. The front-loaded sales charge is paid directly to the distributor by investors who purchase through brokers, as a % of their new investment. It is not included in the fund's expense ratio. The average front-loaded fee is 4.48%. It is charged by about 1/3 of all funds. In this table, this one-time fee has been annualized according to the procedure described in endnote 1.These numbers are averaged over all funds, ignoring the big distinction in costs to shareholders between funds that impose sales charges and those that do not.

** For average account size = $25,000

TABLE 8

Determinants of Expense Ratios of Mutual Funds in the U.S., 1997
(dependent variable is total expenses/total assets, in basis points) [1]

	1		2		3		4		5	
CORE GROUP										
Intercept	113.7	*(59.63)**	112.1	*(55.35)**	111.0	*(22.22)**	83.4	*(22.03)**	125.0	*(26.09)**
Assets in $billion	-9.2	*(-9.55)**	-7.9	*(-10.03)**	-9.1	*(-9.61)**	-3.9	*(-5.65)**	-5.2	*(-5.67)**
Asset^2	0.1	*(5.22)**	0.1	*(7.20)**	0.1	*(5.48)**	0.1	*(-6.17)**	0.1	*(4.51)**
# Shareholders in 000's	0.1	*(3.14)**			0.1	*(3.02)**	0.0	*(-1.48)*	0.0	*(0.89)*
Assets/Shareholders			-0.4	*(-4.9)**						
Assets in Fund Complex	-0.1	*(-7.99)**	-0.1	*(-7.61)**	-0.1	*(-8.66)**	-0.1	*(-7.31)**	-0.1	*(-10.07)**
3 Year Net Return[2]	-1.5	*(-13.73)**			-0.9	*(-6.26)**	-0.7	*(-6.37)**	-0.7	*(-4.84)**
# Year Gross Return			-1.1	*(-9.73)**						
3 Year Standard Deviation	4.6	*(29.56)**	4.4	*(27.93)**	3.5	*(14.24)**	3.1	*(17.94)**	3.3	*(14.32)**
ASSET ALLOCATION										
Bond					-1.9	*(-0.52)*	-9.6	*(-3.71)**	-8.0	*(-2.35)***
Small Cap					3.2	*(0.76)*	11.6	*(3.98)**	-0.2	*(0.05)*
Specialty					23.0	*(6.01)**	11.7	*(4.33)**	16.4	*(4.61)**
International					28.9	*(7.61)**	24.1	*(8.96)**	24.5	*(6.89)**
Emerging Market					37.6	*(5.25)**	37.5	*(7.43)**	39.9	*(5.53)**
INVESTMENT AND MARKETING STRATEGY										
Institutional							-15.4	*(-4.23)**	-52.8	*(-11.45)**
Initial Investment							-0.4	*(-3.22)**	-0.4	*(-1.9)***
Index							-38.5	*(-8.72)**	-51.7	*(-8.86)**
12b1 fee<1,>0							18.4	*(9.73)**		
12b1 fee = 1							43.5	*(14.19)**		
Front load							2.7	*(-1.43)*		
Deferred Load							47.3	*(16.86)**		
Turnover							4.3	*(8.21)**	6.0	*(8.65)**
Bank Advised							-8.1	*(-4.44)**	-18.7	*(-7.88)**
Fundage							-0.2	*(-3.26)**	-1.1	*(-12.37)**
Adjusted R2	23.8		22.2		26.9		64.2		38.0	
Dep Mean	127.6		127.6		127.6		127.6		127.6	
N	3610		3610		3610		3610		3610	

1 Brokerage fees and front and deferred loads are not included in expense ratios.
For each equation, first column gives coefficient and second column gives t statistics
1 Basis Point = 0.01%

2 3 year net returns are gross returns adjusted for expense ratio and loads

* Significant at 0.2% level
** Significant at 5% level

TABLE 9

Determinants of Expense Ratios of Mutual Funds, US, 1992-97
(dependent variable is total expenses/total assets, in basis points) [1]

	1		2		3		4	
CORE GROUP								
Intercept	22.6	*(12.73)**	23.0	*(12.31)**	26.4	*(9.17)**	65.0	*(31.91)**
Assets in $billion	-3.5	*(-5.97)**	-2.2	*(-5.97)**	-2.7	*(-7.05)**	-2.3	*(4.64)**
Asset [2]	0.1	*(5.77)**	1.0	*(5.33)**	0.1	*(6.18)**	0.1	*(6.21)**
# Shareholders	0.03	*(2.68)***					0.0	*(1.3)*
Assets/Shareholders			-1.0	*(-3.11)**	-0.1	*(-3.17)**		
Assets in Funds Complex	-0.1	*(-6.27)**	-0.1	*(-8.47)**	-0.1	*(-8.23)**	-0.1	*(-12.94)**
3 Year Net Return [3]			-0.6	*(-16.25)**	-0.5	*(-13.5)**		
# Year Gross Return	-0.4	*(-11.31)**					-0.3	*(-8.89)**
3 Year Standard Deviation	0.13	*(16.79)**	1.5	*(19.2)**	1.0	*(-11.59)**	1.0	*(12.82)**
ASSET ALLOCATION								
Bond					-12.6	*(-7.57)**	-23.8	*(-19.25)**
Small Cap					14.9	*(5.12)**	11.5	*(6.25)**
Specialty					15.7	*(5.59)**	6.8	*(3.96)**
International					18.5	*(7.65)**	21.7	*(13.72)**
Emerging Market					59.9	*(12.92)**	48.2	*(15.64)**
INVESTMENT AND MARKETING								
Institutional							-15.4	*(-8.09)**
Initial Investment							-0.3	*(-2.48)***
Index							-38.6	*(-14.18)**
12b1 fee<1,>0							17.7	*(13.84)**
12b1 fee = 1							49.9	*(23.16)**
Front load							6.2	*(4.71)**
Deferred Load							49.7	*(25.3)**
Turnover							2.0	*(7.46)**
Bank Advised							-2.4	*(-1.92)***
Fundage							-0.4	*(-8.95)**
Time	2.3	(11.17)*	2.3	(10.66)*	2.3	(10.96)*	1.2	*(6.41)**

1 See notes for Table 8

TABLE 10

Marketing Expenses in U.S. Mutual Funds*

	UNWEIGHTED		WEIGHTED	
	1992	**1997**	**1992**	**1997**
Prevalence of commissions (% of total funds)				
- funds with 12b1 fees	55.00	61.00	49.00	46.00
- funds with Fload	50.00	35.00	52.00	42.00
- funds with Dload	9.00	27.00	9.00	12.00
- funds with no load or 12b1 fee	34.00	32.00	36.00	44.00
Expenses as % of assets – all funds				
Average 12b1 fee	0.21	0.35	0.18	0.21
Average annualized Fload	0.46	0.31	0.50	0.40
Reported expense ratio	1.16	1.28	0.87	0.91
Brokerage fees (trading costs)	0.27	0.26	0.15	0.12
Total expenses	1.89	1.85	1.52	1.43
Marketing expenses as % of total expenses	*35.00*	*36.00*	*45.00*	*43.00*
Expenses as % of assets - Funds with either 12b1 or Fload				
Average 12b1 fee	0.38	0.52	0.36	0.37
Average Fload	0.65	0.46	0.75	0.72
Reported expense ratio	1.27	1.46	0.98	1.09
Brokerage fees	0.28	0.28	0.15	0.11
Total investor cost ratio	2.20	2.20	1.88	1.92
Marketing expenses as % of total expenses	*46.82*	*44.55*	*59.04*	*56.77*
Expenses as % of assets – Funds without 12b1 or Fload**				
Average 12b1 fee	0	0	0	0
Average Fload	0	0	0	0
Reported expense ratio	0.94	0.89	0.68	0.68
Brokerage fees	0.29	0.23	0.17	0.12
Total investor cost ratio	1.23	1.12	0.85	0.80

- For 12b1 fee, FLoad and Total Expenses, see Table 7 and endnotes

TABLE 11

Institutional v. Retail and Passive v. Active Mutual Funds
Average Expense Ratios and Investor Costs as % of Assets, 1997*

A. Expense Ratio – Unweighted		ALL		ACTIVE		PASSIVE	
	ALL	RETAIL	INSTIT.	RETAIL	INSTIT.	RETAIL	INSTIT.
Domestic Stock Funds	1.43	1.47	0.91	1.50	0.98	0.71	0.37
Domestic Bond Funds	1.08	1.12	0.62	1.12	0.62	0.65	0.35
International Stock Funds	1.69	1.75	1.09	1.77	1.15	0.95	0.66
Emerging Market Funds	2.12	2.19	1.39	2.21	1.39	0.57	
All Funds in Universe	**1.28**	**1.31**	**0.79**	**1.33**	**0.81**	**0.72**	**0.42**

B. Expense Ratio - Weighted by Assets		ALL		ACTIVE		PASSIVE	
	ALL	RETAIL	INSTIT.	RETAIL	INSTIT.	RETAIL	INSTIT.
Domestic Stock Funds	0.93	0.94	0.51	0.99	0.85	0.31	0.19
Domestic Bond Funds	0.80	0.82	0.53	0.82	0.54	0.25	0.31
International Stock Funds	1.18	1.19	0.96	1.20	0.97	0.42	0.68
Emerging Market Funds	1.75	1.77	1.25	1.81	1.25	0.57	0.00
All Funds in Universe	**0.91**	**0.93**	**0.56**	**0.96**	**0.69**	**0.31**	**0.20**

C. Total Investor Costs Including Annualized Floads and Brokerage Fees - Weighted by Assets		ALL		ACTIVE		PASSIVE	
	ALL	RETAIL	INSTIT.	RETAIL	INSTIT.	RETAIL	INSTIT.
Domestic Stock Funds	1.44	1.47	0.60	1.55	0.97	0.37	0.21
Domestic Bond Funds	1.30	1.35	0.62	1.36	0.65	0.31	0.33
International Stock Funds	1.83	1.87	1.05	1.89	1.09	0.48	0.70
Emerging Market Funds	2.29	2.33	1.34	2.38	1.37	0.63	
All Funds in Universe	**1.44**	**1.48**	**0.65**	**1.52**	**0.81**	**0.37**	**0.22**

* For 12b1 fee, Fload and total expenses see Table 7 and endnote 1.

TABLE 12

Marginal and Average Asset Management Fees for Institutional Investors How they Vary with Amount of Investment (in basis points)[1]

Passive Domestic Equity	Large cap.	Small & Mid cap.
<$5 million	20.0	25.0
5-10 million	10.0	15.0
10-25 million	8.0	10.0
25-100 million	6.0	7.5
100-200 million	3.0	5.0
Balance	1.0	2.5
Average fee for $100 million	7.2	9.1
Average fee for $500 million	2.6	4.3
Median cost-large US pens. Funds[2]	4.0	7.0
Median cost-largest US pens. Funds[3]	1.0	6.0

Active Domestic Equity	Value	Growth	Small Cap.
<$5 million	65.0	80.0	100.0
5-25 million	35.0	80.0	100.0
Balance	35.0	50.0	100.0
Average fee for $100 million	36.5	57.5	100.0
Average fee for $500 million	35.3	51.5	100.0
Median cost-large pension funds	37.0		69.0
Median cost-largest pension funds	25.0		55.0

International Equity	Index	Active
<$10 million	25.00	90.0
10-25 million	25.00	70.0
25-40 million	20.00	70.0
40-50 million	20.00	60.0
50-100 million	15.00	60.0
Balance	10.00	60.0
Average fee for $100 million	18.75	66.0
Average fee for $500 million	11.75	61.2
Median cost-large pension funds	12.00	54.0
Median cost-largest pension funds	8.00	34.0

Emerging Market	**Index**	**Active**
<$50 million	40	100
Balance	40	80
Average fee for $100 million	40	90
Average fee for $500 million	40	82
Median cost-large pension funds	23	77
Median cost-largest pension funds	12	70

Fixed income	**Index**	**Active**
<$25 million	12.0	30
25-50 million	8.0	24
50-100 million	5.0	17
Balance	3.0	12
Average fee for $100 million	7.5	22
Average fee for $500 million	3.9	14
Median cost-large pension funds	6.0	24
Median cost-largest pension funds	5.0	25

Other asset management costs for institutional investors[4]	
Internal administrative costs:	
- median cost-large pension funds	6
- median cost-largest pension funds	2
Brokerage costs (trading costs):	
- median cost-large pension funds	10
- median cost-largest pension funds	7

1. Sliding scale fees for institutional commingled funds, the BT Pyramid funds, were supplied by Bankers Trust, a large money manager of indexed and actively managed institutional funds. Data on large US pension funds is from: "Cost Effectiveness Pension Fund Report", prepared by CEM, 1997 for CALPERS

2. These are median costs of external money management for given type of assets, reported by 167 large US pension funds ranging in size from less than $100 million to over $100 billion. Median fund = $1.5 billion. Average of 14 external money managers per fund, managing $194 million each, median amount managed per manager = $113 million

3. These are median costs for 10 largest US pension funds, excluding Calpers, ranging in size from $29-65 billion. Average of 34 external money managers per fund managing $646 million each ($543 million median)
4. This includes brokerage (trading costs) plus internal administrative costs of money management, such as executive pay, consultants, performance measurement, custodial arrangements, trustees and audits. The breakdown by passive and active is not available, but brokerage costs are estimated to be much lower for passive.

TABLE 13

Administrative Costs of Thrift Saving Plan 1988-98

Year	Expense Ratio As % of Assets	Average Size Account (in 000$'s)	Administrative Cost per Account (in $'s)	(*in 1998 $'s*)	Investment Cost per Account ($'s)	R & C Cost per Account (in $'s)	(*in 1998 $'s*)
1988	.70	2.4	16.8	*(22.7)*	1.0	15.8	*(21.4)*
1989	.46	3.7	17.1	*(22.21)*	1.5	15.5	*(20.2)*
1990	.29	5.1	14.81	*(18.00)*	2.0	12.8	*(15.6)*
1991	.26	6.7	17.4	*(20.71)*	2.7	14.7	*(17.6)*
1992	.23	8.5	19.6	*(22.53)*	3.4	16.2	*(18.6)*
1993	.19	10.7	20.3	*(22.81)*	4.3	16.1	*(18.0)*
1994	.16	12.8	20.6	*(22.39)*	5.1	15.4	*(16.7)*
1995	.14	16.5	23.1	*(24.57)*	6.6	16.5	*(17.6)*
1996	.13	20.1	26.2	*(27.01)*	8.0	18.1	*(18.7)*
1997	.12	25.3	30.3	*(30.61)*	10.1	20.2	*(20.4)*
1998 (*)	.11	27.4	30.1	*(30.10)*	11.1	19.2	*(19.2)*

Source: Thrift Saving Plan publications and authors' calculations.

Expense ratio in column 1 is reported gross expense ratio as reported in TSP publications (before adjustment for forfeitures) plus 3 basis points imputed by authors for brokerage (trading) fees. Columns 5 and 6 are authors' estimates separating R&C from investment expenses. Investment expenses are assumed to be 3 basis points of trading costs plus 1 basis point for asset management, custodian, legal and auditing fees related to investments. R&C costs are the remainder. TSP does not report its brokerage costs or breakdown of other expenses between investment and R&C.

(*) Based on Jan.-Aug., annualized

TABLE 14

Fee Ceilings in Swedish IA System (as % of assets)

A. Marginal Fee Kept by Mutual Funds by Tranche of Assets they Attract in IA System*

Million KR	Marginal fees	VOLFEE = 200	VOLFEE = 150	VOLFEE = 40
0 – 70	0.40 + 0.75 (VOLFEE – 0.40)	1.60	1.23	0.40
70 – 300	0.35 + 0.35 (VOLFEE – 0.35)	0.93	0.75	0.37
300 – 500	0.30 + 0.15 (VOLFEE – 0.30)	0.56	0.48	0.32
500 – 3000	0.25 + 0.05 (VOLFEE – 0.25)	0.34	0.31	0.26
3000 – 7000	0.15 + 0.05 (VOLFEE – 0.15)	0.24	0.22	0.16
7000 +	0.12 + 0.04 (VOLFEE – 0.12)	0.20	0.18	0.13

B. Average Fee Kept by Mutual Funds by Total Fund Assets they attract in IA System

Million KR	VOLFEE = 200	VOLFEE = 150	VOLFEE = 40
70	1.60	1.23	0.40
150	1.24	0.97	0.38
500	0.87	0.71	0.35
1000	0.61	0.51	0.30
3000	0.43	0.38	0.27
7000	0.32	0.29	0.21
15000	0.25	0.23	0.17

Source: PPM

This table shows the share of the mutual fund's fee in the voluntary market (VOLFEE) that it is permitted to charge in the mandatory IA System, depending on the assets that it attracts in the IA System. Fees are all expressed as a % of assets. One $US = 8.2 Kronors. Panel A shows marginal fees, panel B shows average fees. Based on current rates, an additional 0.2% fee is estimated to be charged to cover trading costs (brokers' commissions). This is charged as a deduction from net assets. While this is the current fee, competitive forces may push it lower in the new system.

TABLE 15

Average Annual Fees as % of Assets for Alternative IA Systems

	Retail	Institutional
Latin America	Chile	Bolivia – Competitive Bidding
Start up	9.39	3.00
Current	1.36	3.00
Lifetime simulation	0.76	0.54
Sweden	**Mutual Funds**	**IA Systems – Price Ceilings**
Current	1.50	0.80
Long run	-	0.50
United States	**Mutual Funds**	**Hypothetical IA Systems**
Active	1.50	0.64
Passive	0.32	0.16
		TSP (competitive bidding, passive)
		0.11

See text and tables, especially tables 2, 6, 7, 12, 13 for derivation of these numbers.
Lifetime simulations are derived from Tables 2 and 6.
These numbers include imputed brokerage commissions (trading costs) and custodial costs.
Numbers for Sweden are guestimates, based on assumption that average fee kept by participating mutual funds will be .3% of assets in short run, .2% in long run. PPM costs are .3% in short run, .1% in long run, trading and other costs = .2% of assets.

Figure 1 Costs of Chilean AFP System, 1982-1998

Relation Between Fee as % of Assets and Average Account Size

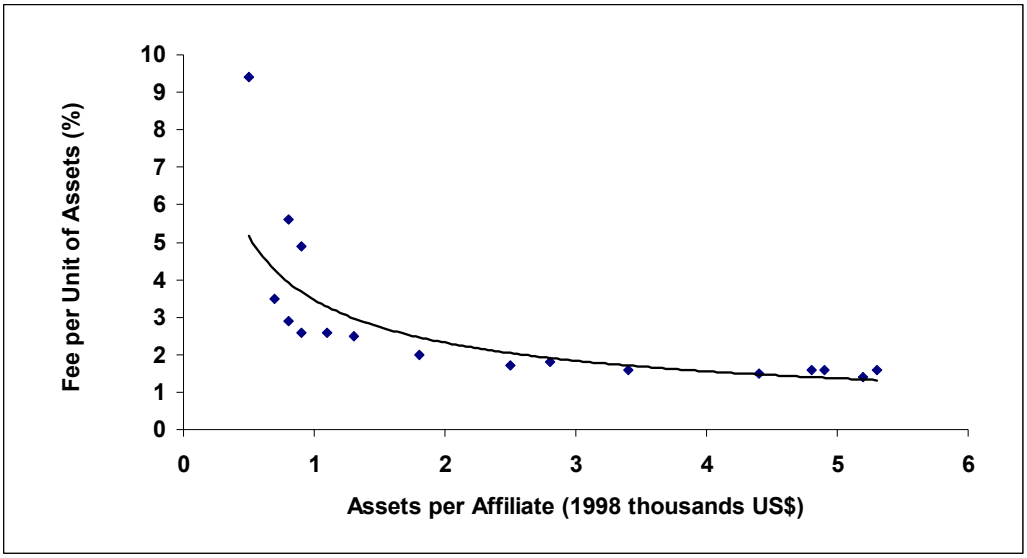


Figure 2: Costs of Latin American AFP Systems, 1998

Relation Between Cost as % of Assets and Average Account Size

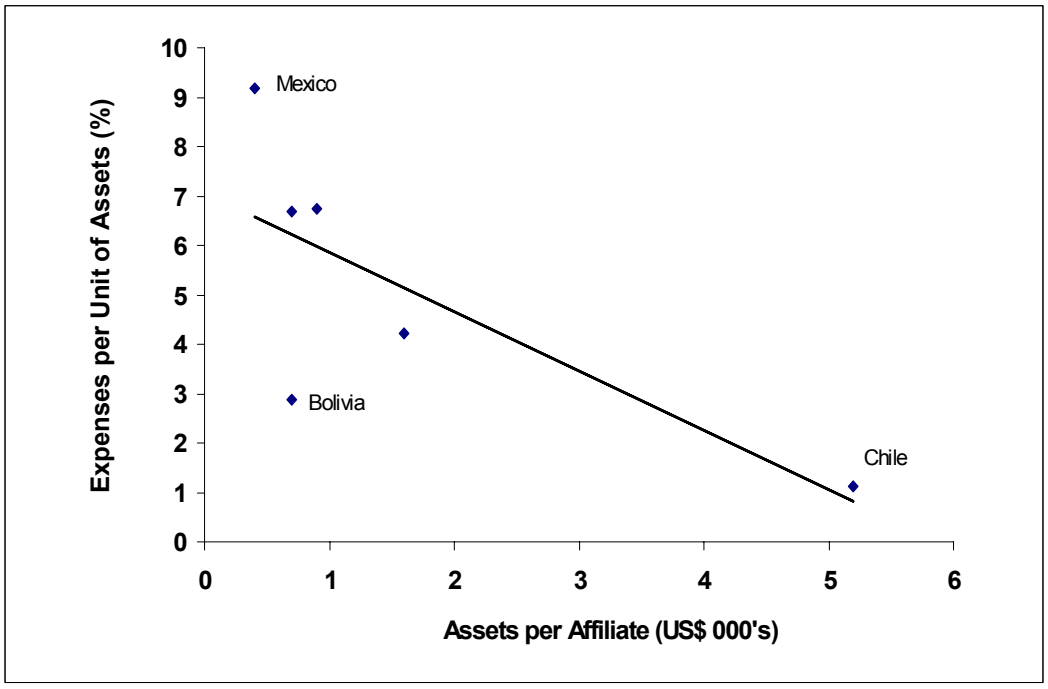
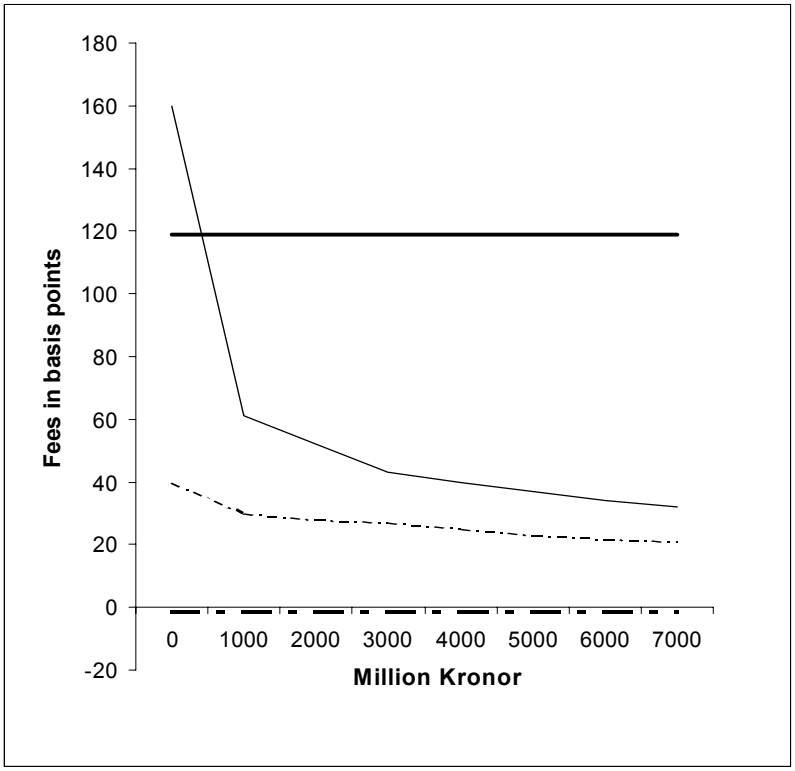


Figure 3 :

Average Fees Paid by Worker and Kept by Fund in Swedish System



Fee in Voluntary Market	Net Fee Kept by Fund	Net Fee Paid by Worker
2%	_____	_____
0.4%	--- - --- - --- - --- - --- -	--- - --- - --- - ---

Bibliography

Bateman, Hazel. 1999. “The Role of Specialized Financial Institutions in Pension Fund Administrations.” Processed.

Bateman, Hazel and John Piggott. 1999. “Mandatory Private Retirement Provision: Design and Implementation Challenges.” Processed.

Blake, David. 2000. “Does it Matter What Kind of Pension Scheme you have?” *The Economic Journal* 110(461): F46-81.

Chalmers, John M. R., Roger M. Edelen and Gregory B. Kadlec. 2000. “An Analysis of Mutual Fund Trading Costs.” SSRN Electronic Paper Collection.

Dahlquist, Magnus, Stefan Engstrom and Paul Soderlind. 1999. “Performance and Characteristics of Swedish Mutual Funds 1993-97.” Stockholm: Stockhom School of Economics.

Daykin, Christopher. 1998. GAD Survey of Expenses of Occupational Pension Schemes. London: Government Actuary’s Department.

Elton, E.J., M.J Gruber, S. Das, M. Hlavka. 1993. “Efficiency with Costly Information: A Reinterpretation of Evidence from Managed Portfolios.” *The Review of Financial Studies* 6(1): 1-22

Guerard, Yves and Martha Kelly. 1997. *The Republic of Bolivia Pension Reform: Decisions in Designing the Structure of the System.* Montreal: Sobeco, Ernst and Young.

Gruber, Martin J. 1996. "Another Puzzle: The Growth of Actively Managed Mutual Funds." *Journal of Finance* 51(3): 783-810.

Ippolito, Richard A. 1992. “Consumer Reaction To Measures of Poor Quality: Evidence from the Mutual Fund Industry.” *Journal of Law and Economics* 35:45-70.

James, Estelle and Robert Palacios. 1995. "Costs of Administering Public and Private Pension Plans." *Finance and Development* 32 (2): 12-16.

James, Estelle, Gary Ferrier, James Smalhout and Dimitri Vittas. 1999. “Mutual Funds and Institutional Investments: What is the Most Efficient Way to Set Up Individual Accounts in a Social Security System?” forthcoming in … University of Chicago Press.

Lipper, Michael. 1994. "The Third White Paper: Are Mutual Fund Fees Reasonable?" New York, NY: Lipper Analytical Services.

Malhotra. D.K. and Robert W. McLeod. 1997. "An Empirical Analysis of Mutual Fund Expenses." *Journal of Financial Research* 20(2): 175-190.

Malkiel, Burton G. 1995. "Returns from Investing in Equity Mutual Funds 1971 to 1991." *Journal of Finance* 50(2): 549-572.

Maturana, Gustavo and Eduardo Walker. 1999. “Rentabilidades, Comisiones y Desempeno en la industria Chilena de Fondos Mutuos.” *Estudios Publicos* 73: 293-334.

Mitchell, Olivia. 1998. “Administrative costs in Public and Private Retirement Systems.” In M. Feldstein, ed., *Privatizing Social Security.* Chicago: University of Chicago Press.

MPIR. 1998. “Utformning av ersattningsmodell inom ramen for preipensionssystemet—analys och forslag.” (Design of compensation model within the framework of the premium pension system—analysis and proposal). Stockholm: processed.

Muralidhar, Arun S. and Robert Weary. “The Greater Fool Theory of Asset Management or Resolving the Active-Passive Debate.” WPS98-020. Washington DC: The World Bank.

Murthi, Mamta, J. Michael Orszag, Peter Orszag. 1999. “Administrative Costs Under A Decentralized Approach to Individual Accounts: Lessons from the United Kingdom.” Conference on New Ideas About Old Age Security. Washington DC: World Bank. Processed.

Patel, Jayendu, Richard J. Zeckhauser and Darryll Hendricks. 1994. "Investment Flows and Performance: Evidence from Mutual Funds, Cross-border Investments, and New Issues." In R. Sato, R. Levich and R. Ramachandran, eds., *Japan, Europe, and International Financial Markets: Analytical and Empirical Perspectives*. New York: Cambridge University Press.

Palacios, Robert. 1999. “Managing Public Pension Reserves”. Conference on New Ideas About Old Age Security. Washington DC: World Bank.

Pozen, Robert. 1998. *The Mutual Fund Business*. Cambridge, MA: MIT Press.

Queisser, Monika and Dimitri Vittas. 2000. “The Swiss Multi-Pillar Pension System: Triumph of Common Sense?” Washington, DC: World Bank. Processed.

Rea, John D. and Brian K. Reid. 1998. “Trends in the Ownership Cost of Equity Mutual Funds.” *Perspective* 4: 1-15. Washington, DC: Investment Company Institute.

Shah, Ajay and Kshama Fernandes. 1999. “The relevance of Index funds for Pension Investment in Equities.” Conference on New Ideas About Old Age Security. Washington DC: World Bank.

Sirri, Erik R. and Peter Tufano. 1997. "Costly Search and Mutual Fund Flows," mimeo.

Srinivas, P.S. and Juan Yermo. 1999. *Do Investment Regulations Compromise Pension Fund Performance? Evidence From Latin America.* Washington DC: World Bank.

Valdes, Salvador. 1999a. “Fiscal and Political Aspects of Transitions from Public to Private Pension Systems.” Processed.

Valdes, Salvador. 1999b. “Las comisiones de las AFPs” Caras o baratos?” *Estudios Publicos* 73: 255-291.

Von Gersdorff, Hermann. 1997. *The Bolivian Pension Reform*. Washington DC: Financial Sector Development Department, World Bank.

Wyatt Company. 1990. "Investment Company Persistency Study Conducted for the National Association of Securities Dealers."

Part III

View of Academic Experts

Factors Determining the Success of Pension Fund Development.

*Mr. Nipon Poapongsakorn**

1. Introduction

Since Chile has successfully replaced its unfunded pay-as-you-go retirement system with a private fully funded pension system in 1981, many countries, both developing and industrialized, have followed the Chilean model. Some, including Thailand, are in the process of studying or reforming their pension systems. The impetus for this comes from a variety of directions, two of which are perhaps the most important factors. First is the rapid decline in birth rates and longer life expectancy. The proportion of population aged 60 years and over will increase from 9 per cent in 1999 to 18 per cent in 2020[1]. The second factor is that there has been a major concern among the pension experts that the newly created unfunded pension system will be financially bankrupt within less than 44 years after its birth (Phananiramai, 1994 ; IMF….). Thanks to the economic crisis in July 1997, the government realizes that it will not be able to contribute to the pension scheme. It, therefore, decides to revise the social insurance law and set up an old-aged pension committee to make recommendations on the structural reform of the pension systems.This paper will compare and contrast the strength and weakness of two major pension systems, namely, the pay-as-you-go system (or the defined benefit) and the defined contribution system. Emphasis will be given to, among other factors, the redistributive effects, the administration cost and investment risks. Then, it will identify the factors affecting the success of pension fund development, drawing from the experience of other countries.

Part 2 will discuss the rationale for government intervention in social security. Key characteristics of pension fund systems in some OECD and Latin American countries are explained in parts 3-4. Part 5 is the analysis of factors affecting the success of pension fund development, followed by a conclusion.

It is very difficult to write a paper on a topic which has already been written and researched extensively. It is even more difficult to write a paper, knowing that one of the commentators will be the President of the National Retirement Systems Commission of Mexico. The author, therefore, hope that he will be able to receive valuable comments and advice from Mr.Guillermo Prieto and Mr. J. Ahmed on their experience about some critical issues in the design of the reform process of the pension system.

2. Government Intervention in Social Security

In the industrialized countries, the social security system normally covers five main elements, i.e., targeted income transfers to the poor elderly, uniform transfers to the elderly, disability and health insurance, mandatory pension schemes for the employed and tax incentives for voluntary savings. Although some of these elements are found in the developing countries, coverage tends to be much narrower, depending on their stage of development. As the economies

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[1] The number of workers for every retired person is projected to decline from 6.27 to 3.26 for the same period.

have experienced more economic and social development, there is a growing need to widen the coverage of their social security system.

In principle, many of these elements could be left to the market mechanism. But there are economic reasons for public intervention in the provision of some of those elements, particularly, retirement income. For developing countries, the needs for government intervention are more compelling because some markets do not exist. The rationale for intervention can be conveniently classified into 3 types : income redistribution, savings and insurance market failure arguments.

Income Redistribution: Public pension systems can be seen as one of the many instruments available to government for redistribution. Some individuals' lifetime earnings may be so low that they can only provide for their current consumption need and are completely unable to save for future consumption when they retire. Without public or family support, these retired persons will be destitute. But why do we need to target transfers to the poor elderly, rather than the poor in general? There are 3 reasons, i.e., the elderly have unique characteristics (such as ability to work and special needs); providing income support in a form of a pension may reduce the stigma associated with welfare scheme; and an entire generation may be unable to save for their retirement because of economic depression (just like the current Asian crisis) or war. The first two reasons are the so-called "intergenerational transfer, the latter is intergenerational[2]".

The issue is who ought to finance the transfers to the poor elderly. If it is financed from general revenues, i.e. the plan is unfunded, it will incorporate some intergenerational redistribution component. However, there is a counter argument against intergenerational transfers, namely, the government's myopia is more likely to lead to an excessive intergenerational transfers.

Savings: There are three reasons for public intervention in the area of retirement savings. Some people will not save enough for their retirement. Should the government intervene and force its citizens to save. The answer depends on whether one thinks the government should play a paternalistic role. But even if an individual is not myopic, he may miscalculate how much he must save in order to have a reasonable level of consumption in his retirement years. In such a case the governments may have a role in providing information about saving rates and investment strategies. But even with adequate information, some people may still make mistakes and undersave. But whether or not such errors justify public intervention is still not settled.

A stronger case for public pensions is the so-called Samaritan's Dilemma, i.e., some people are super-rational in the sense that they realize that if they do not save for their own retirement, governments will provide for them. If the government provides an income support program for the elderly, some individuals can take advantage of the retirement income support program. This is because government cannot distinguish the deserving elderly poor from the undeserving. A compulsory saving scheme is, therefore, necessary.

There is also an externality argument for government intervention in pension schemes. It is well-known that saving for future generations carries with it potential benefits not only for those who save but also for the savers' heirs. But the empirical evidence of this argument is not clear. Finally, aggregate savings should also be encouraged because increased savings will stimulate investment, which in turn will result in positive externalities via technical change and productivity improvement.

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[2] There is an additional argument for intergenerational redistribution,i.e., it is a way of evening out the benefits of economic growth which will make the future generations better off than current generations. But there are difficulties with this argument (Broadway, et.al.1997)

Market Failure: Why should the government intervene in the provision of retirement insurance[3]? Although the private sector could be more efficient at providing insurance than the public sector, there are well-known potential sources of market failure on insurance and capital markets. We will briefly discussed some of them.

In the case of pensions, there is a problem of adverse selection in the market for annuities. A person who saves for his retirement runs the risk of out-living his saving. By purchasing an annuity, he ensures that he will receive some income as long as he lives. Only those who expect to live for a long period are willing to buy an annuity. The problem arises because the insurers are unable to discriminate among persons according to their life expectancy. A mandatory pension is one way to overcome this problem.

The retired will also face the risk of inflation that could substantially reduce their incomes from annuities. The private market for annuities is not efficient at insuring against such inflation risk, particularly if capital markets themselves are very thin as in most developing countries. The government has less difficulty than the private sector providing inflation – indexed pensions because tax revenues normally increase as rapidly as the inflation rates. The government also has a great deal of influence over rates of inflation. Individuals who are saving for their retirement are exposed to the risk that the real rate of return to their investment is less than anticipated. A sharp decline in the value of property and stock in Asia since the mid 1997 has already imposed severe hardship on those who invested their retirement savings in such assets. The asset price depression can also bankrupt insurance companies and private pension funds. Such investment risk can be partially offset through regulations of the portfolios of the financial institutions. However, it should be noted that there is a trade-off between portfolios that offer protection against inflation – those with a high percentage of assets invested in real estate and stock market – and those that offer protection against investment risk.

Private insurance may be inefficient for other reasons. Firstly, the costs of administration in competitive insurance markets may be quite large. Centralized public provision can economize on administration costs. Secondly, the insurance markets may be far from competitive since the relatively large firms can take advantage of risk-pooling opportunities. Thirdly, the suppliers of the services being insured against may have informational advantages which can be used to manipulate the market. Fourthly, the coverage of the private pensions may be limited to only larger firms because of high administrative cost to operate a company pension fund. Finally, most, if not all, private pensions are often not portable among firms.

3. Key Characteristics of Pension Systems in OECD Countries

Given the above rationale for government intervention, there are a number of ways of intervention in the pension systems. Following the three-pillar system as outlined in the World Bank study (1994), we can classified the public pension policies into three pillars : public transfers to the elderly out of general revenue, contributory pension plans (either defined benefit or defined contribution; fully funded or not), and additional voluntary savings for retirement[4]. The pension systems of most countries are the mixed forms of these three systems. This part will brief discuss the public pension systems in OECD countries which are most characterized by the pay-as-you-go system. But in recent years, the financial crisis of the pay-as-you-go public

[3] We will not discuss the reasons for intervention in the other kinds of insurance, e.g., health, disability and spousal survivor benefits.

[4] Within each of these categories, there are a number of policy choices to be made, especially what should be the extent of government involvement. This issue will be discussed along with a discussion of the pension systems in some selected countries.

pension systems has led many countries – both the industrialized and developing ones – to reform their pension systems. The Chilean system, which replaced an unfunded one starting in 1981, is held up as a model pension system (Diamond and Valdes - Prieto 1994; Diamond 1993; Mesa-Lago in Ahmad, Dreze and Stern 1991). The Chilean system will be discussed in the next part.

Examing the pension systems in OECD countries, one find both substantial diversity and a lot of similarities (Dahlby 1998). Appendix 1 compares some of the basic characteristics of the pension systems in some selected OECD countries. Some countries, such as New Zealand and Netherlands, have relatively simple unified public pension systems. Others, such as France, have a complex system which is collection of diverse occupational based programs each with different terms and conditions. The pension expenditure to GDP ratios in the English speaking countries are lower than the European economies due to differences in the generosity of the pension systems. Both the replacement rates (pension income as a percentage of median earnings) and the proportion of population over age 65 years are lower in the English speaking countries.

There are three important common features of the OECD pension systems, i.e., they are mostly financed on a pay-as-you-go basis (see more discussion below); public pensions are an important source of income for the retired in all countries; and the average standard of living of pensioners is comparable to that of the non-retired population (Dahlby 1998). It should also be noted that the poverty incidence among the elderly has dramatically declined. The success of the OECD countries in providing relatively high income for the retired population and in reducing the poverty rates among the elderly can be attributed to the fact that the OECD countries have adopted diverse ways of organizing public pension systems and choosing the mix between public pensions and private occupational pensions and savings. One important lesson is that there is more than one way to provide adequate retirement income for the retired (Dahlby 1998).

Attractiveness of the Pay-as-you-go Financing: Under the pay-as-you-go (pay-go, here after) method of financing, the benefits paid to current retirees come from the payroll taxes of those who are currently working or from general tax revenues. The pay-as-you-go system can be either unfunded (such as in Germany) or partially funded (such as in the USA), or fully funded (Australia).

Despite its well known weaknesses, the pay-go system has some attractive features. Firstly, if the economy's total wages and salaries is growing faster than the rates of return on investment that are held by pension funds, everyone who reaches retirement age is given retirement benefit privileges that far exceed anything he has paid in. This point has been proclaimed by the Nobel laureate Paul Samuelson in the 1960's. But the Ponzi game will not last forever, given the rapid demographic transition in Thailand.

Secondly, the case for financing transfers to the poor elderly out of general revenues is that the transfers are to address redistributive objectives[5], including intergenerational redistribution. It should also be noted that the defined benefit pensions are valued as more redistributive than the defined contribution system because the consumption risk due to lifetime low income can be better protected by the former system. Finally, the pay-go financing is very politically attractive since the government can offer the benefits to the first generation of pensioners that are for in excess of their contribution. If that first generation had low retirement prospects because of economic depression, then such intergenerational transfer could be justified. Otherwise, it is difficult to be justified on equity grounds.

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[5] However, Estelle James (1997) argues that the traditional pay-go systems in fact produce many inequities both within cohorts and across cohorts.

Problems of the Pay-Go Systems: Since the problems of the pay-go financing systems have been widely studied and documented (Rodriguez 1997; Stightz 1986; Dahlby 1998), we will only provide a list of the problems:

- The pay-go public pension schemes in most countries are very vulnerable to changes in demographic factors. The effects of population aging and longevity, which used to produce severe impact on the OECD countries, are now beginning to exert pressure on the pension schemes in many developing countries.
- People tend to live longer because of better nutrition and medical advance and make the pay-go systems towards bankruptcy.
- The pension schemes are not financially sustainable since pensions are projected to increase sharply. The sustainability can be maintained only if there are changes in some of the important parameters, especially the increases in the contribution rates.
- Political pressure has resulted in a bias towards increasing pension benefits as well as growth of disability benefits (which have been used to reduce the cost of unemployment insurance).
- Moreover, there has been a bias in the pension reform process towards increasing the contribution rate on current and future generations rather than through reduction in benefits paid to current pensions.
- The public pension systems in OECD countries have also contributed to a decline in the labor force participation rates of men over age 60 (Gruber and Wise 1998). They might have reduce the national saving rates in many countries (Feldstein 1974), though the evidence is not entirely conclusive.
- The old-age financial security has been made to depend on the political process. Social Security is a compulsory and impersonal government program that redistributes wealth among different groups and generations. Its universality is based on the false assumption that people are irresponsible during their working years (and thus unable to plan for their retirement) an indigent during their old age (and thus unable to provide for themselves).
- The substitution of political action for private action has served the link between the individual responsibilities and individual rights. In other words, individuals try to minimize their contributions to the system while they are active workers and to maximize their retirement benefits.
- The account set up by at the US department of the Treasury where all payroll taxes are deposited is no trust fund at all, but rather an accounting illusion that conceals the real size of the US federal government (Rodriguez 1997).

4. The Chilean and Argentine Pension Reforms

Chile was the first country in the world to completely privatize the old public pension system. The landmark reform, according to some economists, has contributed significantly to the exceptional macroeconomic performance of Chile (Rodriguez 1997; de Mesa and Bertranou 1997). Since the implementation of the reform in 1981, pensions in the new system has been 50 to 100 per cent higher than that in the old system; the private pension funds are now about 40 per cent of GDP. Such a success has had a strong influence on other pension reforms, not only in Latin America, but also in other developing as well as developed countries.

The Chilean Private Model

Chile's individual pension saving account system is a defined-contribution system. Each month, all covered workers are required to contribute 10 per cent of their wages in their own individual Pension Savings Account with a highly regulated intermediary (called the

Administradoras de Fondos de Pensioners or AFP) that manages a single fund and also provides survivor and disability insurance. Workers also pay a commission charge to cover the costs and profits of the intermediaries, and they are free to use the AFP of their choice, and could transfer funds among them. Once eligible to receive benefits, they can choose between a sequence of phased with drawals and a real (or indexed) annuity. Contributions are tax exempt, but benefits are taxable. Funds are sheltered from taxation while they are accumulating, so there is still a tax advantage from holding them. Additional voluntary contributions are allowed, and with the same tax advantages.

The defined contribution system, which has no redistributive role, is supplemented by a public pillar of assistance to the less well-off elderly, which takes two forms. One is the Assistance Pension financed from general revenue and paid to the elderly and disabled who have no pension income, based on a needs test. The other is the Minimum Pension for persons who contributed to the pension system for 20 years. The MP is not indexed, but adjusted from time to time. Both of them are financed on a pay-as-you-go basis.

The AFP, which are private institutions, are given considerable beway to manage pension funds to their best advantage. But they are subject to various regulations to ensure both their solvency and a containment on the riskiness of their investment.

Therefore, the Chilean system combines the three pillars in an attractive way. The first public pillar, provides for the poor elderly. The second pillar is the mandatory savings for retirement and allows for the regulated private sector participation that induces both competitiveness and high rates of return. And the third pillar is a voluntary, tax-assisted pillar which encourage additional savings (Boadway, et.al 1997). In addition, the Chilean reform also gets high marks for defending the system from political risk and for its effects on capital accumulation and on the functioning of the capital market (Diamond 1993; Rodriguez 1997). Pensions are not affected by demographic trend. Since the workers have property rights over their pension contributions, they care deeply about the value of their saving accounts.

But according to Diamond (1993), it gets low marks for the provision of insurance and for administration cost. In fact, the cost of running a privatized social security system is higher than the inefficient system that it replaced. Furthermore, during the transition, the Chilean reform has produced significant fiscal imbalances, that will have effects for decades. Thirdly, there is no conclusive evidence that the privately fully-funded pension has changed the aggregate saving rates of the economy (Marcel and Arenas 1992; Diamond 1993; Mesa-Lago 1994). Finally, there are some serious coverage problems, eg., 45 per cent of the total insured are not paying contributions regularly; and low coverage in the informal and self-employed sectors. One reason for the low coverage is that participation of the self-employed is voluntary.

The Argentinean Integrated System

Argentina's old pension system was also a defined-benefit scheme financed on a pay-go basis. In the 1960, the system began to experience growing deficit, which became worse in the 1970's and the 1980's due to factors also common in other pay-go systems : low dependency ratio, high replacement rates, lax entitlement conditions, a short period of wage averaging to determine benefit, etc. Therefore, in 1993 the Congress passed a bill that structurally reformed the National Pension System.

The new pension system, which has an integrated structure, consists of two alternatives : the public reformed scheme and the mixed scheme. Workers can choose any option. Those who choose the latter scheme are allowed to make contributions exceeding mandatory requirements.

These contributions, like the Chilean model, are placed in the workers' capitalization accounts receiving special tax treatment.

In both options, a universal basic pension (UBP), that constitutes a defined-benefit scheme financed on a pay-go basis, is paid to every worker that reaches 30 or more years of contribution. For those who choose the reformed publicly managed program, they are entitled to receive an additional pension (AP). For those who choose the mixed scheme, they will contribute to the privately fully funded pension funds (PFF) based on the defined contribution scheme.

The public pension benefits funded on a pay-go basis are administered by the government. The defined-contribution scheme is run by companies created specifically to manage pension funds called AFJP and supervised by a public institution.

Comparing the Chilean and Argentinean Pension Systems

Although the reformed pension system in Argentina has been influenced by the Chilean experience, it has several features that are different from the Chilean model. The differences are as follows (de Mesa and Bertranou 1997):

- Institutional difference : In Chile, all workers are mandated to join a unique private pension fund. The Argentinean workers have a choice between joining the public reformed system (UBP+AP) or the mixed scheme (UBP+PPF)
- Solidarity: The Chilean program does not have an endogenous mechanism to redistribute income inter-or intragenerationally. Although it has secured a minimum pension, it is financed by the capital accumulation of the insured and general tax revenue. It is not indexed and defined exogenously by the government. On the other hand, the Argentinean system preserves the traditional redistributive element of the social insurance schemes. The pensions are finance by the employer's contribution and general tax revenues.
- Transition cost : The Chilean system recognized the contributions to the old system and thus the recognition bond was issued. In Argentina, no such bond was issued. Although there is compensation for the previous contribution, the fiscal burden of such benefit is uncertain.
- Argentina established tougher entitlement conditions than Chile, i.e. workers are eligible for pensions after 30 years of contribution, comparing to 20 years in Chile; longer periods of wage averaging are used to determine the level of benefits, which help reducing a distorting labor supply behavior.
- The workers' and employers contributions in Argentina are higher than those in Chile, resulting in higher labor cost on the Argentinean economy.
- Although the Argentinean individual fully funded scheme is based on the Chilean model, the Argentinean public sector is still responsible for the task of collection of contributions. Moreover, the public institutions in Argentina are allowed to participate in the pension fund management business. Thus, the Argentinean system has lower administration cost.
- Chile allows higher maximum limits for investment in different instruments than Argentina, though the latter has higher maximum limits for public and foreign securities

Although it is still too soon to assess the performance of the Argentinean pension system, available statistics tend to suggest that its performance in term of coverage and yields of its portfolio is as satisfactory as the Chilean system. But one major weakness in Both systems is that

there has been a tendency for higher degree of concentration of affiliation in the privately pension management funds (AFP) and lack of competition in commission charges.

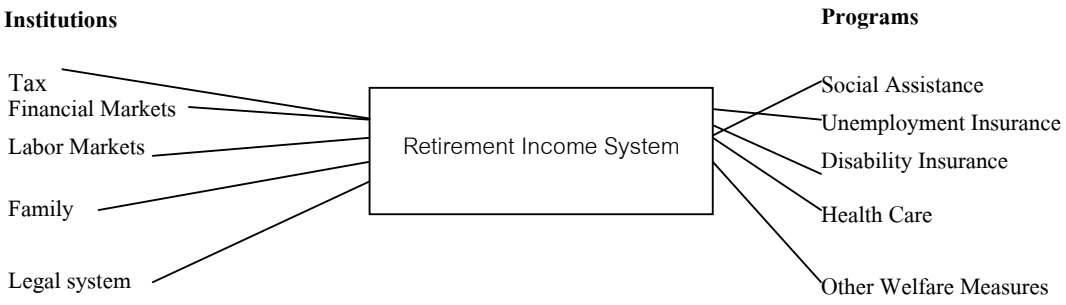
5. Factors Determining the Success of Pension Fund Development

Although the Chilean new pension system has attracted worldwide attention and had a strong influence on subsequent reforms in many other countries, no country has fully replicated the Chilean model of private fully funded social security pension fund system. This implies that there is no "one best" model of pension fund development. Factors affecting the success of pension fund reform are not only complex but also dependent upon other social and economic institutions which differ from country to country. And yet, experience drawn form the pension systems in other countries can provide some valuable lessons and allow us to draw a list of some common ingredients behind their success. Of course, the ingredients are interactive and were introduced in conjunction with other institutional or policy reforms. The success, therefore, is based on a combination of factors that have to be evaluated as a package. However, this paper will only attempt to provide the list of factors. We will classify them into 5 groups as follows.

Interdependence with Other Social Security Programs and Social, Economic and Political Institutions Dahlby (1998) argued that one of the most important consideration in the design of a pension fund system is how the system will interact with other existing social security programs and with other social and economic institutions (see Figure 1).

Figure 1

Interdependence of the Pension System and Other Institutions



Source : Dahlby 1998 : 26

Some of the issues that arises from the interaction between the pension system and other social programs and institutions are as follows:

- If the public pension contains a redistribution pillar, then should the social assistance benefits be comparable to the pension income received by the retired poor elderly?
- Should the pension income system provide disability coverage for workers before they reach the retirement age? Should the unemployed older workers who have exhausted their unemployment benefits be eligible for early retirement benefits?
- Are the elderly in the pension scheme eligible for other social assistance benefits such as housing and nursing care? If these benefits are means-tested, how do they affect the overall implicit tax rate on savings for retirement?
- Tax system is perhaps the most important issue in the design of the pension system. For example, should pension income be subject to personal income tax? Should investment income from pension funds be taxed? If yes, should it be different from tax on labor income? If retirement benefits are means test, and pension income be taxed, how does this affect the overall marginal tax rates faced by the retired?
- The Chilean experience shows that the private pension fund model can work well only if there is a prudent and strong regulation of the financial intermediaries. How should the funds and annuity contracts be regulated in other countries?
- How does the reformed pension system affect the labor market flexibility and the employment cost of employers?
- How will the public pension system affect the traditional support that the retired can expect to receive form their family? (see more discussion below).

The Design of the Redistribution Pillar

One of the common ingredients in recent pension reforms is a more explicit separation of the distributive from the nondistributive component as recommended by the World Bank (1994). The Bank argues that old age security programs should be both an instrument of growth (through force saving) and a social safety net. The Bank proposes a three pillar pension system, i.e., redistributive, privately mandatory saving scheme, and voluntary saving scheme. The Bank's proposal did not favor the pay-go system and attempt to tie up the issues of savings and pension. Such proposal has been criticized on the ground that the replacement of the social insurance (financed on the pay-go basis) by mandatory savings scheme could result in a higher risk for workers.

The fact that most countries such as Argentina do not adopt the World Bank-Chile scheme reflect that it may be politically difficult to eliminate the existing social insurance scheme and replace it with a private mandatory scheme. Chile was able to take a drastic reformed scheme mainly because it was ruled by the dictatorial government. On the other hand Argentina, which is under a democratic government, decided to preserve the basic structure of traditional social insurance system. The pension is financed by the employer's contribution and general tax revenues. Although the employer's contribution may distort the labor market, there are good reasons to maintain the employer's contribution. In countries where the workers have low earnings, the employer's contribution component may be a necessary bargaining chip to convince the workers to accept the second pillar of mandatory saving. But the tax rate on employer should be kept at the minimum.

In principle, financing the first pillar of the public pension system out of general tax revenue is desirable if the redistribution objective is to be achieved. However, it might be advisable that a developing country deviate from such a rule if the pension scheme is restricted to urban workers in the formal sector. In such a case, the payroll tax can be justified.

Although the government contributions to the pension scheme is anomalous, there may be some benefits from government contributions. They serve as a better incentive for workers to participate in the program in an economy where the income tax is not well developed and hence income tax exemption is not an effective incentive. Moreover, since the government contribution comes from general revenues, some redistributive component is built into the system. But there are also disadvantages of government contribution. First there is always the political danger that it will be a mean for government intrusion. Moreover, it may lead to a compromising of the full funding of the program. To avoid these pitfalls, the government should rely more on private contribution as the income tax system become more developed.

Another basic design question is : should the benefits be paid to everyone who satisfies certain age or residency requirement (the so-called universal pension) or should receipt of the pension be targeted to those with relatively low income? The answer is not simple and depend on the structure of the labor market and economic institutions. If the persons in the pension scheme are restricted to the urban workers in the formal sector with relatively higher income, then the targeted pension may be desirable.Furthermore, to protect the retired workers from unanticipated inflation, it is necessary for the government to provide inflation protection by indexing the public pension benefits, by issuing inflation-indexed bonds as well as permitting international diversification of pension fund investment.

Finally, the scheme designer has to determine the age for those eligible to receive benefits under the redistributive pillar. The eligible age should depend on the normal age at which average persons stop working, and life expectancy. These two factors will affect the tax rates required to finance the public pension.

The Design of the Compulsory Saving Pillar

The World Bank recommends that the compulsory savings plan should be privately managed because the privately-managed funds have provided higher rates of return. But there are also other considerations:

- Since the choice of compulsory savings rates can have severe disincentive on labor supply, the compulsory savings rate should not be simply determined on the basis of generating a target replacement rate, but should also be determine on the impact on incentive to work and to save.
- The Chilean experience shows that it is necessary to establish the strong regulatory framework and regulatory agency to oversee the working of the privately managed funds. In many developing countries where such institutions do not yet exist, it may be necessary to temporarily depend on the publicly managed funds.
- Since the Chilean privatized social security scheme has high administration cost, one should consider the role of the public sector in the management of pension funds, particularly the public responsibility in the collection of contributions as found in Argentina.

Tax Treatment of Voluntary Savings

Since the objective of the third pillar of the pension scheme is to promote aggregate savings, the major policy issue is the tax treatment of such savings. In most countries, the pension schemes provide expenditure tax treatment for contribution up to some limit. The investment income generated by the accumulated contribution is also not taxed. But annuity payments and pension benefits are usually taxed at the time of withdrawal.

There are two main questions concerning the incentive schemes: (a) do the program increase the net savings rate, particularly in the Asian countries which already have relatively high savings rate? (b) Is there social benefit from the increase in saving and induced investment? So far, the research work has not produced any conclusive evidence. If so, the appropriate tax treatment of savings will have to be considered to some extent on a wider context of the optimal tax rates for labor income and investment income.

Other Key Problems of the Pension Reforms

In addition to the basic design of the three pillars pension system, there are some additional problems that need to be tackled if the pension reforms are to be successfully pursued. These problems will affect the financial sustainability of the pension scheme:

- *Coverage*: A major problem with the pension scheme in many developing countries is its low coverage. In Thailand, for example, only 27 per cent of its total active labor force participate in five formal pension programs. This is party due to the voluntary participation in the program, and partly due to the importance of the informal sector and a large number of small firms. Addressing the voluntary participation is straightforward. Workers in all firms should be required to participate. There should be a definite time table to bring most of the small firms into the program. But reaching the informal sector is quite a challenge. Some forms of incentives may be necessary.
- *Social Safety Nets and Family Support* : Unlike most industrialized countries with well developed social safety nets, developing countries such as Thailand still rely heavily upon traditional forms of support through families and communities. The current economic crisis signals an urgent need for Thailand to expand the social safety nets for the poor and the poor elderly. But, care should be taken that the social assistance to the poor will not discourage the traditional forms of support.
- *Eligible Age*: Given the fact that the Thais have higher life expectancy, it is unreasonable to keep the eligible age for persons to be eligible for the pension benefits at 55 years of age.

Reforming Financial Infrastructure

The retirement system reform works most effectively when there is at the same time an effort to reform the financial institutions, which include legal and accounting procedures, the organization of trading, servicing, and clearing facilities, and the regulatory framework that govern the relations among the users and the suppliers of the financial system. Since the pension reforms, particularly the introduction of privately managed pension fund scheme, will result in higher rate of savings, it is necessary to improve performance of the financial intermediaries. The performance of the financial institutions will ensure that the pension funds are efficiently channeled into the most productive investment activities. The reforms in the financial sector include:

- Bank reform and strengthening regulatory framework
- Ensuring smoothly functioning and well regulated stock market, establishing rating agency, allowing access to international financial expertise
- Strengthening the insurance sector, particularly reforming insurance law and regulations
- Instituting good corporate governance. In many developing countries, investors' rights are not well protected. As a consequence, it is difficult for firms to mobilize resources in the equity market and have to depend heavily upon debt-financing, resulting in highly leverage. Thus it is necessary to protect the investors' rights,

without which it make no sense for the pension funds to invest in the corporate sector.

The detailed analysis of the financial infrastructure reforms is discussed in Mitchell (1997).

6. Conclusion

Before the Asian economic crisis, the East Asian economies had enjoyed a long period of economic growth and prosperity. The economic progress was so fast that the Asians neglected to establish certain type of shock-absorbing institutions that can provide economic and social security during the periods of difficulties. Although it is financially difficult to establish social safety net system during the depression years, the crisis also provides a critical opportunity to launch serious institutional reforms.

Given vast experience from other countries, it is not difficult to come up with a good design of the new pension system. The World Bank has already recommended the multi pillar system. Many other countries have already reformed their systems in a way which is different from the famous Chilean model and the World Bank's model. Other developing countries can learn many valuable lessons from those models and adopt/modify the system to be consistent and compatible with local economic and social institutions. But in some cases, it is necessary to establish new institutions, particularly if one want to adopt the Chilean private mode. Markets can only work with appropriate institutions.

Four more important factors that will contribute to the success of the reform are as follows:

Firstly, the World Bank's multi pillar pension system which separates the redistributive pillar from the insurance scheme is an important innovation. However, the methods of financing the redistributive pillar will differ from country to country, depending upon social and political institutions. Pension reforms in the democratic countries will not be successful without a strong redistribution program which is not too costly to the society.

Secondly, the reform should be in the direction of minimizing the danger of political intrusion. This does not mean that every thing has to be privately managed.

Thirdly, the good pension reforms must be financially sustainable. The designers have to pay serious attention on the parameters that will affect the financial status of the pension program.

Finally, the reforms must be a continued and proactive process. The approach will have to be top down since this is a highly technical issue. And yet the policy makers will have to be able to address the stakeholders' concern. One way of doing this is to organize a series of public hearings. Last, but not least, the reform process has to be based upon facts and detailed analysis of policy variables. In effect, there are no cookie-cutter solutions.

Bibliography

Alberto Arenas De Mesa and Fabio Bertranou.1997, *Learning from Social Security Reforms: Two Different Cases: Chile and Argentina*, World Development 25(3), pp.329-348.

Boadway, Robin; Cuff, Katherine and Flatters, Frank.1997, *Reforming Social Security in Thailand: Issue and Alternatives*, International and Development Studies Working Paper, John Deutsch Institution for the Study of Economic Policy, Queen's University.

Dahlby, Bev. 1998, *Public Pension: Lessons from Canada and Other OECD Countries*, International and Development Study Working Paper, John Deutsch Institution for the Study of Economic Policy, Queen's University.

Diamond, Peter. 1993, *Privatization of Social Security: Lessons from Chile*, National Bureau of Economic Research, NBER Working Paper No. 4510.

Feldstein, Martin. 1997, *Transition to a Fully Funded Pension System: Five Economic Issues*, National Bureau of Economic Research, NBER Working Paper Series No. 6149.

Gruber, Jonathan and Wise, David.1999, *Social Security and Retirement around the World*, National Bureau of Economic Research, The University of Chicago Press.

James, Estelle .1997, *Pension Reform: Is There An Efficiency-Equity Trade-Off?*, Policy Research Department, World Bank.

Klisch, David and Aman,Tetsuya. *Retirement Income Systems: The Reform Process across OECD Countries*, Social Policy Division, Joint ILO-OECD Workshop, OECD

L. Jacobo Rodriguez. *1999, Chile's Private Pension System at 18: Its Current State and Future Challenges*, The Cato Project On Social Security Privatization, SSP No. 17.

Mitchell, Olivia S. 1997, *Building an Environment for Pension Reform in Developing Countries*, Pension Research Council, Wharton School, University of Pennsylvania, PRC WP 97-7.

----------. 1998, *Development in Pension*, Pension Research Council, Wharton School, University of Pennsylvania, PRC WP 98-4.

Mitchell, Olivia S. and Piggott, John . 2000, *Developments in Retirement Provision: Global Trends and Lessons from Australia and the US*, Pension Research Council, Wharton School, University of Pennsylvania, PRC WP 2000-2.

Mukul G. Asher.1999, *The Pension System in Singapore, Pension Reform Primer*, The World Bank.

Osberg, Lars.1998, *Economic Insecurity in the Malaysian Context*, International and Development Studies Working Paper, John Deutsch Institution for the Study of Economic Policy, Queen's university.

Phananiramai, Mattana and Engpornprasit, Nirat. 1994, *The Population and Survival of Social Security: In the Case of Retirement Benefits(in Thai)*, Thailand: Thailand Development Research Institute, Working Paper No. 5.

Stiglitz, Joseph E. 1986, *Economics of the Public Sector,* w.w. Norton

The World Bank. 1994, *Averting the Old Age Crisis: Policy to Protect the Old and Promote Growth*, A World Bank Policy Research Report, Oxford University Press.

Turner, John.*Retirement Income System for Different Economic, Demographic and Political Environments*, ILO

Investment Policy of Pension Fund

Mr. Raymond Tam

Investment policy

In designing investment policy for pension plans, there are a number of areas we need to consider.

First of all, we have to identify who the stakeholders are for different types of pension plans. For private pension plans, the stakeholders are employers and workers while for country pension plans, the stakeholders include government, workers and employers. Investment policy should be designed taking into account the interests and responsibilities of stakeholders. However, in many circumstances, there may not be a perfect alignment of the interests of different stakeholders. In such situation, we should aim at striking a proper balance of the interests of different stakeholders.

Secondly, we have to consider what the investment objectives are. We have to take into account the target level of benefits to be provided under the plan and how that is affected by the investment policy. For defined contribution (DC) plans, the benefits are determined as the sum of contributions and accumulated investment income. The amount of benefits will depend on the investment results. For defined benefit (DB) plans, the benefits are eventually funded by contributions and investment income. The investment performance will affect the contribution rates. The investment objectives are designed so as to keep the funding and contribution rates affordable over the long term as well as to maintain a certain degree of stability in the funding and contribution rates. If we place a higher reliance on investment income to meet the target level of benefits, we should beware that high investment return normally goes with high investment risk. In this respect, we have to think about what the acceptable level of risk is and who will bear such risk. For a country as a whole, fully funded pension plans will accumulate substantial amount of assets that would facilitate the development of financial markets.

Depending on the types of pension system, investment policy of a pension plan may be decided by the government, employer, worker and plan sponsor. In some cases, investment policy would be decided by a combination of the above parties. For example, the government would set the overall regulatory framework taking into account the interests of different parties. The plan participants would then work out details of the investment policy within the boundary set by the government.

The construction of investment policy would be different for DB plans and DC plans. For DB plans, the investment risks would be borne by plan sponsors. DB plans, pension plans in particular, have longer investment horizon compared to DC plans. Since plan sponsors have to provide adequate funding to ensure that the target level of benefits can be met, they would like to minimize the long term funding costs and to reduce the short-term volatility in funding costs. With a weaker linkage between contributions and benefits for DB plans, plan sponsors would have greater flexibility in determining investment policy. However, due to the tightening of funding rules, there is a global trend for employers to move away from DB plans and migrate to DC plans.

Funding requirements and funding ratio will have a significant impact on investment policy of DB private plans. For well-funded plans, a more aggressive investment policy can be pursued whereas the investment policy for under-funded plans tends to be more conservative. The introduction of funding rules to regulate DB plans has led to more attention being paid to investment policy as investment results on DB plans may affect the sponsor's operating results. Actuarial valuation should be performed to ascertain the funding status of a DB pension plan. In this respect, there should be a consistency between the actuarial assumptions adopted in the actuarial valuation and the investment policy of the plan. Traditionally, an actuarial valuation of the recommended funding rate is based on a deterministic view of the expected rate of investment return. More advanced actuarial models now attempt to assess the impact of investment policy by performing dynamic testing to match the expected cash flows generated from plan assets and contributions against future stream of plan liabilities. Tax treatment of pension plan investments will also affect the investment policy of DB plans if pension plans are exempt from tax on investment income.

Contrary to DB private plans, DB country plans are usually unfunded or partially funded as they are not subject to general funding rules applicable to pension plans. The initial contributions of DB country plans are often used to finance government budget deficits. It provides a cheap source of government funding when the population is relatively young and growing. However, the eventual deficits from an aging population will become a heavy burden to the government fiscal budget. DB country plans also have a preference to invest in government securities - a source of government finance. Due to the low investment returns on government securities, there is a global trend to diversify investments into private investments. Some have argued that an unfunded country plan has an implicit rate of investment return equal to the economic growth rate of the country. However, viability of unfunded plans in the long term would be susceptible to demographic shift of the population.

Compared to DB private plan, DC private plans have shifted the investment risk from employers to workers. In general, workers are more conservative in selecting investments at least in the initial stage. Employers also tend to be more conservative in setting the investment policy when compared to those who sponsor DB plans. Since plan benefits are immediately affected by investment results, stakeholders of DC private plans are often overly concerned about short-term volatility in investment performance and as a result, DC plans tend to have shorter investment horizon. The trend of DC private plan is to offer a number of different investment options and to allow workers to choose the suitable investments among those options. The offering of investment choice to workers can relief the concerns of employers on poor investment performance.

DC country plan can either be a centralized one or a de-centralized one. For a DC centralized country plan, there is a preference to invest in government securities. Plan members generally expect more stable rates of investment return and often demand the government to provide guarantees on investment returns. Government securities can offer stable rates of investment return with an implicit investment guarantee by the government. Such types of investments can provide a cheap source of government finance. The low rates of investment return will result in higher benefit risk - the sums accumulated fall short of the target level of benefit to provide for retirement needs. Some DC centralized country plans are considering the need to diversify investments to provide better rates of investment return. Another alternative is to allow workers to diversify investments after they have accumulated certain minimum sums.

A DC decentralized country plan is part of the three-pillar pension system recommended by the World Bank. It is the preferred model for pension reform in many countries. For such type of plan, individual accounts are established and managed by plan operators from the private

sector. DC decentralized country plans may adopt the structure for operating DC private plans, e.g. to be governed by trust. As a country plan, there should be tighter government regulations. Policies to be considered include - asset allocation rules, minimum investment guarantees and foreign investment limit.

Asset allocation rules can be in the form of placing a maximum or minimum limit of investment in different types of instruments, such as equities, bonds, etc. However, the imposition of investment limits has its drawbacks. Limiting the exposure to equities may undermine the effectiveness of hedging against general price and salary inflation. There is often a misplaced fear of short-term volatility on investment returns and the failure to recognize the long-term investment horizon of pension plans. Imposing investment limits would also hinder the flexibility to cope with the dynamic market conditions and reduce the ability to diversify investment risk across different asset classes. Artificial limits may lead to sub-optimal rates of investment return.

Under a DC decentralized country plan, the investment risk would be borne by the workers themselves. Due to this factor, the workers often expect and demand for minimum investment guarantees so that they would have a certain level of comfort on the level of their ultimate benefits. Although on the face of it, mandating minimum investment guarantees is attractive there are serious implications we need to pay particular attention. There is an implicit costs of providing minimum investment guarantees. The guarantees would lead to conservative investments and would reduce the rate of investment return. Where the guaranteed investment return is determined based on an industry benchmark, it could lead to similar investment strategies and mediocre investment performance. The problem of moral hazard would arise if the government provides the investment guarantee. With a third party providing investment guarantee and therefore minimizing the downside risk, investment managers would have the incentive to invest very aggressively without considering the downside risk and ignoring the risk-return profile of individual plan participants. Furthermore, offering investment guarantees would constrain investment choices. It may meet the demand of some workers (e.g. those who are close to retirement) at the expense of other workers (e.g. young workers). As an alternative of mandating a minimum investment guarantee requirement, we may consider a money market fund be offered. As a low-risk investment fund, it is a close proxy for investment guarantees.

A de-centralized country plan cannot avoid the issue of exposure to foreign investments. Restrictions in foreign investments can be imposed by way of strict limits or a special tax on foreign investment income. Investment restrictions may be imposed because foreign investments are riskier and it may be necessary to reduce contributors' exposure to foreign currency risk. Currency hedging may be allowed as an alternative to physical investments. The drawback of imposing investment restrictions is that it would limit the ability to diversify country-specific risks.

Corporate governance

We now turn to another topic, the corporate governance of pension plans - a proposed model for a de-centralized DC country plan.

First of all, there needs to be proper separation of funds, segregation of duties and arm's length investment transactions. Proper separation of funds requires constituting a plan under trust or similar types of arrangements, separating funds from all other financial undertakings and placing limits on self-investment into the plan sponsors. Example of segregation of duties is to hold a plan's assets by a trustee or custodian who is independent of the investment manager.

The Prudent Man's Rule is the overall guiding principle in the management of pension plans. Prudent Man's Rule covers the fiduciary duties of plan operators which include exercising care, skill, diligence and prudence, using professional and expert knowledge, diversifying investments to minimize risk of large losses, acting in the best interests of plan members, complying with plan rules and supervising and exercising control over delegates. Officers of the plan operators can be held liable personally for errors and omissions in management and administration of the plan.

There should be proper delegation of duties in managing a pension plan. This can be achieved by entering into proper contract of delegation (such as investment management contract, custodial agreement and sub-custodial agreement). The regulatory authority may demand prior vetting of the terms and conditions of the contracts before they become effective. There should also be an on-going reporting and monitoring of performance (such as regular reporting between plan operator and its delegates) and requirement for plan operators to be accountable for the acts of their delegates. Delegation should be made only to qualified institutions.

Plan operators should be properly licensed and supervised by relevant regulatory authorities. In licensing plan operators and managers, we need to consider their capital adequacy and their resources in plan management and administration. We have to ascertain the fitness and properness of directors of the operators. Requiring one or more independent directors can provide checks and balances on the performance of the operators. Directors of a plan operator are expected to have relevant skills and experience in managing pension plans. Professional indemnity insurance should be acquired to protect plan assets from losses due to mis-management. There should be adequate internal control procedures in place in plan administration and investment management. The selection process of investment managers must be properly documented.

To enhance the transparency of investment operation of a pension plan, a statement of investment policy should be drawn up for each plan and for each investment option. The statement should cover the investment objectives, asset allocation between different asset classes, expected level of risk, expected investment return and the performance benchmark. All fees and charges should be properly disclosed to plan members. Pre-approval of all disclosure materials by regulatory authority is necessary.

Drawing on the experience on developing a DC country plan in Hong Kong, a recommended investment standard is to prescribe permissible investments based on a number of factors. These include diversification of investments such that other than securities issued by supra-nationals, no more than 10 per cent of a plan's assets can be invested in the securities of any single issuer. Minimum quality of investments would be based on what is regarded as investment grades. Appropriate quantitative limits should be placed on riskier investments, e.g. warrants. Valuation and liquidity considerations would be important factors to consider for DC plans, e.g. not to permit investment in illiquid assets like real estate. Leveraging should not be permitted.

A suggested list of permissible investments cover shares listed on well-established stock exchanges around the globe, bonds meeting investment grade ratings given by international credit rating agencies, deposits with licensed banks or those with high short term credit ratings. The inclusion of the following investment activities also has the ancillary benefit of enhancing market liquidity and fostering market development. These include stock lending and repurchase agreement on bonds subject to adequate collateral requirement, initial public offer of listed shares and subscription of bonds from underwriters provided they meet the standard on permissible

investments, and derivatives traded on established exchanges restricted for the purposes of hedging.

Concerning the regulation of investments, a plan may either maintain an internal investment portfolio or take the form of a fund of funds arrangement by investing in approved unit trusts, mutual funds and insurance funds. Such underlying funds should be subject to the same standard as that of a plan and approved by a regulatory authority. For insurance funds, we would require separation of the insurance protection element and the savings element. Separate statutory insurance funds must be established. Qualified investment managers and custodians should be appointed to manage the insurance funds. Where an insurance fund provides investment guarantee, stringent reserving requirements should be observed. There should be market valuation of the underlying investments of an insurance fund from time to time. Insurance funds should be unitized except for non investment-linked funds offering investment guarantee.

There should be proper measures for on-going monitoring of compliance of pension plans. These include regular reporting and submission of accounts to the regulatory authority to allow the authority to ascertain the financial position of the plan and any material changes to the plan during a year. The accounts should be subject to audit by independent third party auditors. The regulatory authority may conduct routine and special audit to plan operators to ascertain how well their daily operations are performed. Service providers offering different kinds of services may be required to alert the regulatory authority any malpractice conducted by other service providers. Code of conduct on investment practice should be published to specify a common benchmark for investment practice. There should also be regular disclosure of investment results to plan members. This can be achieved by publishing unit price, providing regular benefit statements to plan members and providing annual reports to plan members upon request.

In general, the degree of decentralization should commensurate with the standard of regulations and the maturity of market infrastructure.

Building Pension Institutions: Administrative Issues

Mr. Stanford G. Ross

Abstract

This paper describes the basic administrative elements of pension institutions and suggests what is required to build them successfully. Particular focus is placed on collection mechanisms since in many ways they are the most essential aspect of building viable pension institutions. Data and record keeping issues as well as accounting and transparency issues are also treated. Finally, the linkages between the core administrative elements of effective pension institutions are addressed.

The implementation of pension system designs inherently involves the creation of pension institutions. Pension institutions may be viewed as the embodiment of the design of pension systems. Too little attention is generally paid by policymakers to the fact that building pension institutions is problematic and difficult work. It often turns out that some elements of the design of a pension system may not be feasible to implement. It is often the case that the necessary resources, such as human capital and information technology, may not be available. The political culture or bureaucratic environment may not be supportive of the creation of the prescribed pension institutions.

Implementation issues should be taken into account realistically when doing pension design. Sometimes the design of pension systems should be specifically tailored to what it is practically possible for pension institutions to accomplish. In all events, it is the case that only appropriate design and effective implementation together will lead to successful pension institutions.

This paper describes the basic administrative elements of pension institutions and suggests what is required to build them successfully. Particular focus is placed on collection mechanisms since in many ways they are the most essential aspect of building viable pension institutions. Data and record keeping issues as well as accounting and transparency issues are also treated. Finally, the linkages between the core administrative elements of effective pension institutions are addressed.

Basic Administrative Aspects of Pension Institutions

There are five core functions for a pension institution: (1) reliable collection of revenues; (2) payment of benefits in a correct way; (3) secure financial management and productive investment of pension assets; (4) maintaining an effective communications network, including development of accurate data and record keeping mechanisms to support collection, payment and financial management activities; and (5) production of financial statements and reports that are tied to providing effective governance, transparency, and accountability.

There are two basic administrative models for public pension institutions: one is a full service social insurance institution; the other is a benefit payment institution. A full service social insurance institution handles all the major functions, including collection of revenues and payment of benefits. These institutions can be found in countries such as Japan, Germany and France, and here in Thailand. In contrast, the benefit payment model relies on a tax

administration for collection and focuses its attention primarily on the payment of benefits. Examples of this can be found in the United States, Australia and Sweden. There are, however, many variations on these basic models. For example, in the United States, while the Social Security Administration is a benefit payment agency, cash management and the investment of its assets are handled by the Treasury Department. In other countries, such as Sweden, the benefit payment agency handles cash management and investment of pension assets.

In fact, no two countries have identical pension institutions. Pension institutions are characterized by a great deal of diversity that reflects different economic and social conditions, as well as political and legal traditions. However, whatever institutional model is used, it is important that the core functions be carried out effectively. Moreover, there are objective criteria for measuring efficiency. Thus, Figure 1 sets forth the core functions of a public pension system, the administrative structures that are needed to carry out those functions, and the criteria that can be used to evaluate the efficiency of those structures.

In mature, well-run social security systems, administrative costs of old age and survivor pension programs are often less than one percent of contribution collections (or benefits payments, depending upon which ratio is most appropriate). Even with more difficult to administer programs like disability pensions, administrative costs are often less than five percent. A relatively high level of costs may be justifiable in the early phases of introducing a new system or adapting an old system to new circumstances. However, many systems, especially in developing and transition countries, unfortunately display very high administrative costs with low levels of efficiency, a situation that should be remedied.

Important Parameters of Pension Institutions

Basic choices must be made as to pension design and the resulting pension institution. Figure 2 sets forth the basic parameters of pension institutions.

The first basic parameter is whether the scheme will be public or private or mixed. Mandatory pension schemes generally have the collection done by public sector agencies, either the pension institution itself or a tax administration. Similarly, with mandatory pension schemes, payment of benefits is generally done by public sector institutions. However, it is possible to get variations in these patterns. Thus, a mandated private pension system may involve private institutions collecting revenues and making payments. This is the case, for example, in Chile, where the government is bypassed and employers remit money directly to pension funds. It is possible to have investment management even for public sector institutions done by private sector firms, as is the case in Thailand. There is a tendency increasingly to blur the public versus private sector categories and to develop institutions that have elements of both. For example, the pension institutions in the United Kingdom allow employer pensions, or individual pensions, as substitutes for state pensions.

A second basic parameter is whether the pension system is a defined benefit system or whether it is a defined contribution system or some blending of the two. It is important to recognize that this parameter is distinct from the public versus private parameter. There can be defined benefit systems in both the public and private sectors. There can be defined contribution systems in both sectors. The plans can be mixed as they are, for example, in Argentina, where there is a defined benefit first tier and a defined contribution second tier. Many private sector pension arrangements in the United States increasingly blend defined benefit and defined contribution approaches.

Mandatory versus voluntary schemes is a third basic parameter. Again, this choice is distinct from the public versus private and defined benefit versus defined contribution choices. While historically most mandatory schemes were public, defined benefit plans, in recent years there is more variation in forms. Many countries are increasingly mandating supplemental employer or individual pension arrangements.

A fourth parameter relates to the state of capital market development. Depending on a country's capital markets, investment guidelines may be needed that are highly restrictive or which can be relatively flexible. If one of the principal purposes of a pension reform is to help develop the capital markets, as was the case in Chile, then that dictates certain parameters for the investment of funds and the payment of benefits. In a country like the United States that has well-developed capital markets, there are only very limited restrictions on the kinds of investments that private pension funds can make.

The state of a country's banking system is another major parameter. In fact, whether contributions are collected by a pension agency or a tax administration, generally funds come in through the banking system. Moreover, if there is a developed treasury function at the ministry of finance, neither the pension institution nor the tax administration will be much involved in the handling of funds. It will take place through the treasury's cash management mechanisms. Similarly, on the payment side, benefits may well be paid through the banking system or, if there is not a well-developed banking system, resort may be had to the post office or other institutions that can provide an efficient payment network.

Another parameter relates to the state of public sector infrastructure development. If the public sector infrastructure, for example, tax administration, is not well developed so that collection is difficult, it is usually the case that social contribution collection will be weak, whether done by the tax administration or a full service pension institution. Similarly, in countries where tax administration is relatively strong, there will probably be strong collection performance whether it is done by a full service pension institution or the tax administration. It is important that a country be realistic about where it is at with respect to its public sector infrastructure and that it proceed in accordance with a practical appraisal. It is often the case that pension institutions need to be started with relatively simple tasks and to only take on complexity as the developing infrastructure permits.

Another factor relates to a country's level of economic and social development. Basic levels of economic development generally lead to a need for formal social security arrangements to augment informal support structures. But even higher levels of economic development may produce private sector institutions that alleviate the need for public sector social protection mechanisms. Pension system design and pension institutions need to be in line with actual economic and social conditions in a country.

Finally, the political culture is critical. In some places, pension institutions may flourish and in others they may not. Pension institutions need to take into account what legal and political traditions can be expected to support.[i]

Collection Issues

In many respects, the critical function of a pension institution is to be able to reliably collect revenue to establish a strong financial base for the system. Reliable revenue flows are the key to a viable system. Contributory pension systems cannot pay benefits unless the required contributions are made. Further, there are no assets to manage to produce investment returns if

collections are not made. While all of this may seem elemental, it is indeed the fact that in many places in the world weak collection mechanisms are conspicuous.

One of the key aspects of any pension system is its effective coverage, that is, the number of people who actually are brought into the system as contributors and who will ultimately receive a pension as a beneficiary. Where collection systems are weak, effective coverage is weak. Indeed, if systems are not carefully managed, people can come in without having made the required contributions and that makes a system even weaker. If effective coverage is inadequate, government subsidization generally becomes important and, while subsidies for some social pensions may be in order, major government subsidization of a contributory scheme often undermines its basic rationale.

Another issue that is tied to collection is the adequacy of benefits. Unless contributions are reliably collected at a sufficient level, benefits cannot be adequate. Moreover, benefits need to be calibrated to collections in a contributory system. If the level of collections is low, benefits need to be kept low. In this regard, it is important for policymakers to avoid over-promising about the benefits that will be forthcoming based on dubious assumptions about revenues. Prescribed benefits may become impossible to pay when actual collections lag those erroneously assumed.

Finally, revenues are essential to achieving financial solvency and fiscal sustainability. Given the importance of the collection function, this aspect of pension institutions deserves far more attention than it is sometimes given.

In some places, it is believed that labeling a mandatory payment to a pension institution as a "contribution" makes it easier to collect than if it is labeled a "tax" and collected by a tax administration. This may well be true in some places, but in most countries, any mandatory payment, whether labeled a contribution or a tax, is subject to resistance by the persons upon whom it is levied. Whether viewed as a contributor or a taxpayer, the individuals involved are being deprived of currently disposable income for a longer-term promise of questionable credibility. This aspect of collection issues is an especially critical reform issue in developing and transition countries where revenue collection infrastructure is generally in need of modernization.

But collection is also an issue in some advanced economies of the OECD. For example, in Italy collection has been a major issue. Even where the issue is not apparent, as in France, it is a critical factor in shaping the design of the system. In France, for example, multiple pension systems are used in the hopes that contributors will believe they are contributing on a direct basis to their own retirement and not that of the general public.

There are two fundamental ways in which the collection function can be organized.[ii] One is to run dual collection systems, as in the case of Germany and Japan. The other is to run integrated collection systems, as is the case in the United States and Sweden. Historically, in Western Europe, dual systems developed, but in other places, integrated collection systems have always prevailed, as in the United States and Australia. In other places, dual systems have converted to a single integrated collection system, such as in Sweden and the United Kingdom. Recently, some transition countries, such as Hungary, Latvia and Bulgaria, have begun to take steps to move from dual systems to integrated systems. Interestingly, there appear to be no cases of a well-run integrated collection system converting to a dual collection system.

There are always issues as to how to move forward from one system to the other and when to do it. Much depends on the relative strength of the tax administration and the social

security institution's collection mechanisms. Unfortunately, in many places both collection institutions are weak and it is necessary to build a new revenue collection agency that transcends the existing ones.

Many consequences flow from the way that the collection function is organized. If a full service social insurance institution model is followed, then all of the duplicative costs of running dual collection systems must be justified. As Figure 3 sets forth, while some operations of social security and tax administrations differ, many are common and do not have to be duplicated. In some environments, building one modern, state-of-the-art collection system is a challenge and the possibility of building two is not within reach. If, on the other hand, an integrated collection system is used, then mechanisms must be in place to assure a steady flow of pension contribution revenues into the pension system so that it can pay benefits on time and properly manage the investment of its assets.

Whatever system is followed, there must be cooperation between various government agencies. Ministries of finance and ministries of social affairs, as well as social security organizations and tax administrations, need to cross-match data and exchange information with one another. They need to be supportive of each other in all kinds of ways if they are to succeed in their respective missions.

It is frequently not well understood that tax collection or contribution collection in modern societies requires a government-wide approach. It is necessary to have the cooperation of a number of government agencies to be effective. Parochial bureaucratic interests in agencies are often self-defeating. Thus, an isolated full service social insurance institution cannot be effective at collection in most places, and an integrated collection system cannot be effective without the cooperation of the social security organization and other governmental agencies. Mutual trust and strong mechanisms for effective coordination are essential ingredients for success whatever model is used. The highest levels of government must assure that all involved agencies are cooperative and follow the government's overall strategy.

Core Elements of Collection Systems

There are some basic core elements that are present in any effective system for collection of social contributions. This section briefly describes those core elements.

First, there must be a registry of employers and insured persons. To do this most cost-effectively, there should be a single, unique identifying number used on a government-wide basis. Moreover, this number must be protected against official or other misuse to ensure privacy concerns.

Second, there must be straightforward reporting of insured earnings and withholding of contributions at the source. Development of a single reporting form is highly useful. It is in the interests of the government and contributors to avoid complexity and duplicative activities by multiple governmental collection agencies.

Third, there must be data taken from the reports and turned into lifetime records that can be used to pay pensions. This function is solely that of the pension institution. While tax collection agencies record some of the same information, tax collection records generally are maintained for only limited periods of time.

Fourth, there needs to be information technology systems, including computerization and telecommunication networks, that handle the assignment of identifying numbers, collection of

data, record keeping, and payment of benefits. Systems development is essential and ongoing. Both internal resources and outsourcing are usually required.

Fifth, there must be functional collection organizations in place which send notices quickly in the case of nonpayment or substantial underpayment. There must be audits and enforced collection mechanisms to follow up promptly if notices are ignored. Enforcement must be balanced with incentives for compliance. In this regard, a functional organization is standard for tax administrations since it is essential to address all aspects of the collection process in an orderly process.

On the other hand, when collection is done by a full service social insurance organization, the collection function is often not as readily organized and special efforts must be taken to produce adequate collection activities. While in principle, a functional collection organization could be installed within a functional full service social insurance organization, it is seldom organized this way. Thus, collection is almost inevitably organized in a manner that is related to the payment organization regardless of its efficacy. The result usually is that collection activities are weaker in a full service social security organization than a comparable organization whose sole purpose and design is for revenue collection.

Sixth, there must be emphasis on human capital development, particularly recruiting people with proper background and experience and engaging them in specialized training. There is a need for targeted audits, which are a result of human interaction with information technology systems and, particularly in newly emerging sectors of the economy, such as the self-employed, there must be special compliance and audit techniques. All of these kinds of specialized administrative developments are generally somewhat easier to accomplish in a tax administration than in the tax collection part of a full service social security organization.

Figure 4 sets forth a sample program for reaching the self-employed and the small to medium business sectors in developing or transition economies. As is obvious, this kind of intensive collection work generally is more readily accomplished by tax administrations than social insurance organizations.

Record Keeping and Data

Pension institutions inevitably need to keep individual account records.[iii] Whether defined benefit or defined contribution, funded or unfunded, public or private, most pension designs require keeping track of lifetime earnings and/or contributions by individuals in order to do accurate benefit calculations. Increasingly, information technology makes this a relatively straightforward challenge that can be done cost-effectively, provided the basic core elements of the system are in place.

Second, indexing of wage records and indexing once initial benefits have been set are important functions of most pension systems. This, again, can be done through information technology in a cost-effective and straightforward way.

Third, eligibility and initial benefit calculations must be done. This is based on accessing record systems and can be highly computerized.

Fourth, old age pensions must be kept up to date for address changes, status changes, and again provided the core elements of the system are in place, this also can be an efficient operation.

Disability pensions present a more challenging assignment for data collection and record keeping. Medical data very often are difficult to reduce to electronic form. Also, beneficiaries' conditions change and there is more frequent need for reevaluation and post-entitlement actions. It is more difficult to develop electronic systems for disability determinations than old age and survivor pensions, but it can be done.

In time, moreover, new information technology should make all data collection and record keeping easier. The biggest problem is developing pension designs that do not make overly difficult the design of internal systems for data collection and record keeping. Too often, legislators, as part of a political process, produce unduly complex and convoluted systems. This, in turn, makes the systems development and computerization of the internal record keeping more difficult. Some accommodation must be reached between the resources available for data collection and record keeping and the degree of difficulty imposed by policymakers in the enabling legislation.

Accountability: Accounting and Transparency Issues

Any pension institution needs to issue on a timely basis various kinds of reports to ensure for both contributors and beneficiaries, as well as the public, that it is correctly performing its functions. Thus annual reports to contributors are produced increasingly by pension institutions. Also, annual reports on the activities of the organization as a whole are produced. All of these reports and the activities of the organization are generally subject to internal audit. The business processes are subject to quality control and reporting on the results. In addition, there are management reports that bring timely information together to help identify issues that need special attention. Moreover, accounting and other data are necessary for policy development. This also becomes a core function of the pension institution.

Accountability is closely related to governance systems. Governance of pension institutions should always be based on having adequate checks and balances. Thus, there should be strong oversight of an agency's collection, payment and investment functions. The governance mechanisms provide a structure for the entire system.

It is obvious in private systems where there are fiduciary duties and regulatory regimes that these functions should take place. However, it should be equally obvious that public institutions need such control mechanisms just as critically, even if they are organized somewhat differently. Particularly if a public institution is autonomous or semi-autonomous within the government, having adequate governance mechanisms is a critical issue.

Accountability is also closely related to maintaining political and public support for a pension system. The system needs to conduct its business openly and in public with full explanations for its performance. In public systems, resources are usually provided by a legislature and the legislature must have good information if it is to provide resources adequate to ensure successful performance. Similarly, the public must have confidence that the institution is functioning in accordance with the laws and their understanding of its purposes. Thus, any corruption, or creation of special privileges in the system often undermines the pension scheme and the administering pension institution. Accountability and transparency are keys to the success over the long term of pension institutions.

Linkages Between Core Administrative Functions

It is seldom recognized that if individual core functions are properly done they require tight linkages with other core functions and provide for seamless pension institution operations.

Thus, if collection is done in an efficient way with a single reporting form that is well designed, data collection and record keeping follow from this process, and benefit payment can follow smoothly from the record keeping. Tight relationships and a seamless flow of information can take place even if more than one agency is involved. Indeed, it is frequently the case that many parties, including some outside the government, may do particular functions, provided it is pursuant to a system that is reliable and in which there is mutual trust and support between the parties.

Another factor is that there are always multiple systems involved. In addition to the pension institution, the banking system, the capital markets and financial community, the tax collection operations, and the information technology and human resource development areas of the government, are always implicated. The notion that any pension institution can be entirely self-sufficient is misleading.

In order to provide for these tight linkages and seamless operations, it is necessary to have a proper legal framework to ensure clear designation of responsibilities and precise accountability.

Cash flows generally differ from information flows. Thus, cash flows and information flows inevitably, while involving different actors, must be coordinated and focused on together. This becomes a major focus of the management of pension institutions.

Perhaps most importantly, in addition to having a proper legal framework and solid and reliable administrative institutions, is the role of strong leadership and resourceful management. Inevitably institutions must adapt and change. The world changes, communities change, and the needs of the people being served by the pension institution change. Leadership is providing vision and educating people internal to the organization, as well as in the political world and the broad public, of the changing nature of the pension institution. Creative management is often called upon because administrative assets are scarce and it is necessary to employ them as effectively as possible.

Conclusions

Making pension institutions operate effectively is an enormous challenge. Many things can and do go wrong. In some parts of the world, pension institutions work with reasonable reliability even if policy issues abound. Thus, in Western Europe, the United States and Japan, pension institutions, both public and private, work reasonably effectively even though, because of changing demographics and other factors, there are major policy issues to be resolved.

In other parts of the world, having reliable institutions is very problematic even apart from policy issues. Thus, in Latin America, there is a new generation of defined contribution plans that have developed out of failed defined benefit schemes that dated back to the 1920s. But the same political cultures that affected the previous pension institutions are affecting the newly developing pension institutions. There are often overarching practical problems in developing pension institutions that transcend theoretical policy and design issues.

Asia presents a particularly complex variety of pension institutions. There are all manner of institutions and a great deal of experimentation. Thus, there are established provident funds in Singapore and Malaysia. Thailand has recently introduced a public defined benefit plan. Korea and the Philippines have public defined benefit plans. Responsible policymakers in a country need to know what they want and to determine their own destinies. In many places, significant amounts of money have been wasted on consultants and information technology procurement.

The key consideration in developing pension institutions is to have good design and then strong project management to implement that design. Building effective pension institutions is not easy and takes a sustained effort over a long period. There are fundamentals that need to be respected and, if they are, challenges can be met. If the fundamentals of sound administration are ignored, failure inevitably follows.

First, it is important not to try to reinvent the wheel. Pension design should be sufficiently straightforward that implementation can be straightforward. There is much knowledge and experience available about what works and what does not work.

Second, the political system and policymakers should be educated so that pension institutions are not called for that cannot be delivered. Pension institutions need to be designed so that they can be run cost effectively over the long run.

Third, it is necessary for the people who are to carry out building pension institutions to receive adequate training and information. A cadre of professionals must be built up who can take control of and manage the institution. Countries where appointments are too often made for political reasons, and who lack management and administrative experience, are designed to fail.

Fourth, it is generally necessary to use outside consultants. Even in countries as advanced as the United States and Germany, the pension institutions use outside consultants for information technology and human resource development. But it is necessary to use such outsiders intelligently. It is important not to be fooled by credentials or reputation, but for responsible managers in the organization to understand their own needs and to make sure that they get from the outside consultants what is needed, nothing more or nothing less.

Fifth, it is necessary to have a strategy for the short and long term and to follow it. Strategies may need to change in the light of changing circumstances, but without a strategy for the long term, there is generally overreaction to short-term crises and lurching along rather than steady progression in the building of the institution.

Sixth, it is necessary to have political and public recognition of the importance of sound institution building and to give proper worth to professional, highly competent management and administration. Politicians, policymakers, and the public must understand and give respect to the managers of pension institutions if they are to succeed in their work.

Seventh, in the long run, the efforts of the professionals running pension institutions will be worthwhile if their institutions contribute to the growth and effectiveness of social and economic security in their countries. It must never be lost sight of that the purpose of pension institutions is to increase the well-being of the population of a country and everything must be subsidiary to that end. Creating pension institutions is not an end in itself; it must serve larger societal purposes.

Figure 1: Administrative structures: Relationship of major functions; establishing criteria for evaluation

Function	Structure	Criteria for evaluation
1. Revenue base	Contribution collection system	Evasion rates based on ratio of actual collections to those legally required
2. Benefit payments	Benefit payment system	Error rates based on ratio of correct payments to those legally required
3. Financial management and investments	Actuarial office for projection of revenues and expenditures and financial office to control investments	Accuracy of projections in relationship to actual results; performance of investments
4. Communications	Data and information systems; computer systems and telecommunication networks	Record accuracy; usefulness of data bases; timeliness of reports
5. Reporting and accountability	Program management office that uses data and information to analyze results and issue reports	Usefulness of reports; transparency of activities

Figure 2: Basic parameters of pension institutions

1. Public or private or mixed
2. Defined benefit or defined contribution or hybrid
3. Mandatory or voluntary or combination
4. State of capital market and financial institution development
5. State of banking system
6. State of public sector infrastructure
7. Economic and social development
8. Political and legal culture

Figure 3: Common operations of tax/social security administration

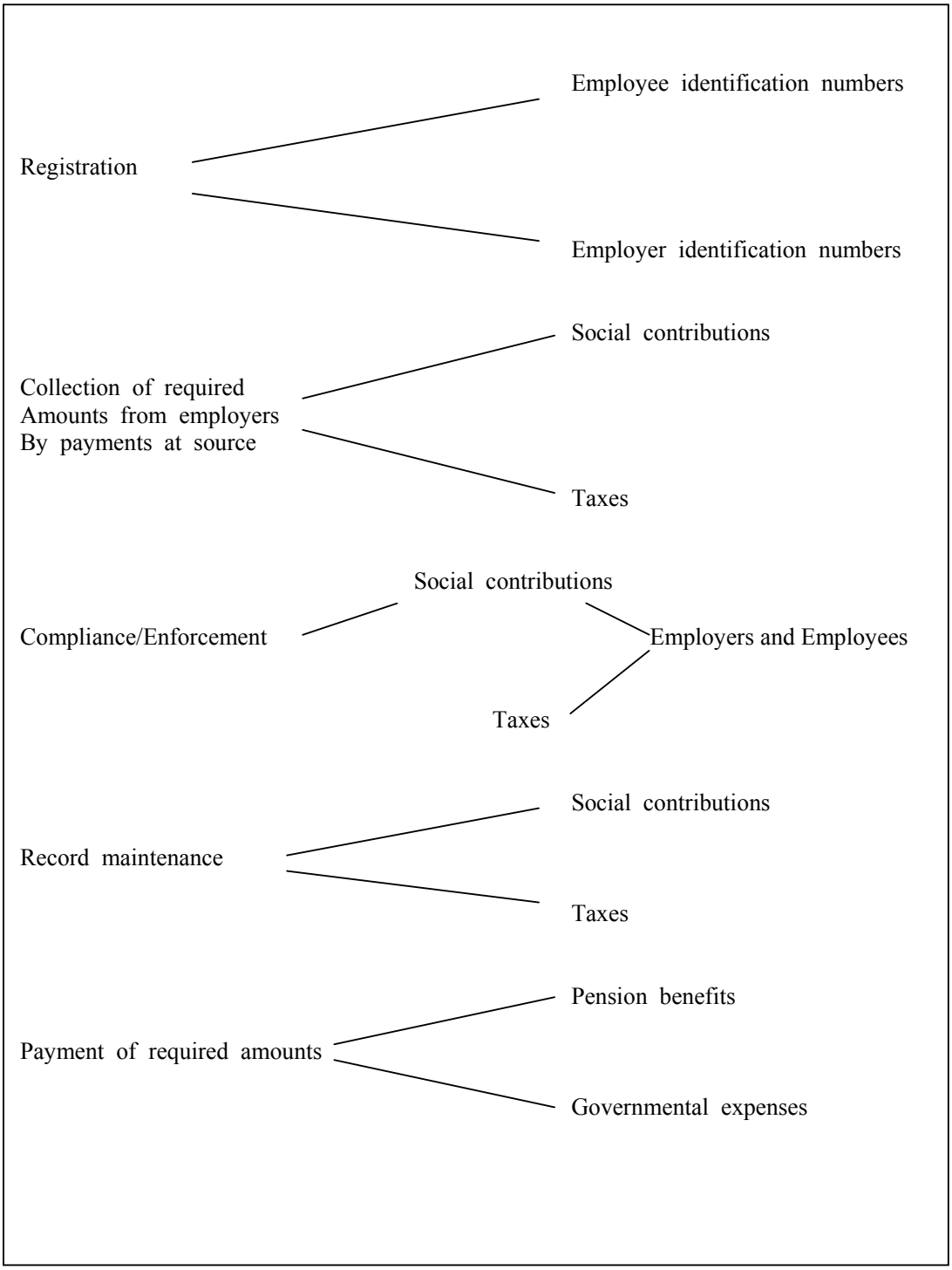


Figure 4: Sample program for increasing compliance in small-medium business sectors

Locate and register nonfilers

Inspectors need to be on the street identifying nonfilers and forcing registration. Newspapers and advertising can be surveyed to find unregistered businesses. In other words, non-complying enterprises must be brought into the system.

Rapid response to stopfilers and underreporting

Once in the system, any stopfiling or underreporting of income needs to be followed up on by telephone within a short period (e.g., three days). In other words, once in the system, these enterprises must be closely controlled to keep them in the system.

Rapid response to payment lapses

When amounts become due, if unpaid after reasonable requests, action should take place, such as liens on bank accounts or sequestration of amounts due from major customers. This represents a system of continued close control.

Simplify forms and filing

The contribution/tax regimes should be as straightforward and clear as possible. Compliance should be facilitated as much as possible, such as through a single reporting form.

Improve taxpayer service

Help should be offered in a courteous way to encourage taxpayers to comply with their responsibilities. Sanctions must be balanced with assistance.

Impose penalties and make payments for informers

Appropriate penalties should be imposed for noncompliance. Appropriate rewards should be provided to persons helping administrators identify noncompliers.

Publicize program widely

The program should be described in the press and efforts made to make the wider public aware of the administrators' goals and strategies. Occasionally, publicity should be given to the work to impose and collect from nonfilers and other evaders of the system. Public relations efforts should make understandable the balanced inventive and penalty approach being followed.

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[i] See Stanford G. Ross, "Doctrine and Practice in Social Security Pension Reform," International Social Security Review, Vol. 53, 2/00 at p.1.

[ii] See Stanford G. Ross, "Common Issues of Social Security and Taxation Systems," Interactions of Social Security and Tax Systems, ISSA and OECD, 1997.

[iii] See Stanford G. Ross, "The Logic of Individual Accounts," Second APEC Regional Forum on Pension Fund Reform, Viña del Mar, Chile, 1999.

Pension Systems and Fiscal Sustainability

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Pension reform is a complex process involving many diverse elements, including governance and regulatory structures, administrative, compliance and coverage issues; investment policies and performance, and taxation arrangements. Success in pension reforms also depends on reforms in other areas such as financial and capital markets, labour markets, and civil service reform. Moreover, like any process, it requires continuous professional level attention to details over time. A typical pension arrangement needs to be sustainable for about 70 years. Given such a long time horizon, any mid-term systemic or even large parametric changes need to be minimized as they may create arbitrary and unanticipated gains and losses, and raise significant transitional issues.

Any reform involves bringing about a better trade-off among objectives than the one existing at present. In the case of pension reform, this involves a better trade-off between adequate replacement rate, broad coverage, minimizing uncertainty of benefits and political risk, and fiscal sustainability.

Appreciation of initial conditions and political economy issues, educating opinionmakers, policymakers, and the public in the essentials of pension economies, and a sense of strategy, tactics, timing, and sequencing are essential if the pension reforms are to succeed. The art of drawing lessons from the pension reform experiences is thus a difficult one.

Based on considerable research and empirical evidence, there is now a broad consensus on the need for a multi-pillar framework for providing social security (though not all pillars need to be of equal strength or importance, and the timing of their development may vary), and about the "best practices" concerning design, governance, investment policies, and other aspects. However, within the parameters of this broad consensus, there is considerable scope and indeed a need for country-specific pension reform strategies and tactics.

We know that how the pension systems in the formal sector is structured could have an impact in other areas of public policy. My remarks today are directed at the linkages between pension systems and fiscal sustainability. Such sustainability requires that the budgetary outlays and deficit be financed in a growth sustaining, non-inflationary manner, and without adversely affecting international competitiveness. It is now widely recognized that globalization forces, aided by the technological revolutions in communications and information processing, have made the task of attaining fiscal sustainability both more urgent and complex; and that without such sustainability other reforms necessary to be competitive in a globalized economy are more difficult to pursue vigorously.

There are at least three major channels through which pension systems may affect fiscal sustainability. The first is through the fiscal costs or obligations incurred under civil service pension arrangements. The second channel is more indirect. It concerns contingent liabilities on the budget of various types of state guarantees on investments undertaken by the pension fund authorities. The third channel involves taxation arrangements, including implicit subsidies (or in some cases implicit taxes) to pension funds and their members.

All three channels are evident among the Southeast Asian countries which have traditionally exhibited a marked dualism in their social security arrangements. Thus, for the public sector employees, the pension benefits have been financed largely (in some countries such as Malaysia entirely) from the current budgetary revenues, and the benefits have covered longevity and inflation risks to varying degrees. The coverage ratio for the government employees has been quite high and the replacement rates have been typically between 50 and 70 per cent. Survivors' benefits have also been usually provided. In contrast, pension benefits for the private sector employees (with the exception of the Philippines) have been financed primarily through defined contribution type mandatory (or voluntary) schemes, often in the form of provident funds. The accumulated balances have usually been paid in lump sum, and thus have not covered for inflation and longevity risks. The coverage ratios as well as the replacement rates for the private sector employees have been rather low. There has also been an absence of survivors' benefits.

It is also worth noting that health care benefits, often stipulated in terms of service provisions rather than nominal amounts, for the government pensioners and their families are also typically far more generous than for the private sector employees as the substantial proportion of health care inputs such as medicines and equipment are imported, the health care costs of the public sector employees remain vulnerable to depreciation of domestic currencies, as happened in the 1997 East-Asian economic crisis.

Such dualism and the absence of portability provisions in the pension arrangements hinder labour mobility between public and private sectors. Such mobility and labour market flexibility have become more essential in this era of globalization.

The preliminary analysis of the civil service pension arrangements in the region (even when health care expenditures are not included) suggest that the current methods of financing them will create fiscal sustainability challenges in all Southeast Asian countries except Singapore. Thus, for the Malaysian civil service, during the 1981-1998 period, Average Annual Cumulative Growth Rate (AACGR) was 9.4 % pension recipients, 10.4 % total pension expenditure, and 11 % for nominal GDP. In 1998, total pension expenditure to GDP ratio was 1.03 %. This is expected to rise as full effects of the sharp expansion in government employment undertaken during the 1970s as apart of its New Economic Policy (NEP) on pension expenditures are likely to manifest themselves sometime from the latter part of this decade. Some pre-funding of the pension benefits therefore will need to be considered in Malaysia.

While some countries, such as Thailand, have taken important initiatives in increasing the share of pre-funding in financing civil service pensions, much more attention needs to be given to this issue. It should be stressed that pre-funding will raise similar design, implementation, governance, and investment policies and performance issues as defined contribution arrangements for the private sector employees.

Currently, the accrued pension benefits of the civil servants, usually termed implicit pension debt, are not being incorporated in the fiscal accounts. The acturial studies projecting the financial viability of the existing civil service pension schemes have also been not made public. Simply setting up a trust fund from the past budget surpluses, and making annual budgetary contributions to it to finance the pension expenditures, as Malaysia and Singapore has done, does not materially alter the unfunded nature of the civil service pension systems. Some degree of pre-funding and greater transparency is essential to fundamentally alter the present arrangements. However, making such implicit pension debt explicit, requires financing, and therefore has significant implications for the budgetary balance in the short and medium term, and therefore fiscal sustainability. Thus, moving from unfunded to partially or fully funded pension arrangements requires careful planning. A more gradual approach to such a shift would be to require only new civil servants to be on funded scheme, and

gradually provide material incentives for the existing younger civil servants to shift to the funded scheme. This can be combined with progressively limiting the category of government employees eligible to receive the non-contributory pensions, as Singapore has done.

The 1997 economic crisis in East Asia has underscored the close connections between business and government. In some countries in the region, pension and provident funds have been utilized for a variety of governmental initiatives such as privatisation, and officially favoured projects. In some cases, these have not met the criteria of adequate economic return, thereby potentially creating fiscal costs to the government. It should be stressed that such costs are especially likely to occur when the provident and pension funds require the government to provide guarantees for officially encouraged lending. The 1997 economic crisis has made the issue of such contingent liabilities more important, though much more empirical research needs to be done to quantify their impact on the fiscal magnitudes. Failure to collect the contributions effectively could also potentially impose large fiscal costs on the government, particularly when minimum pensions are guaranteed.

The tax arrangements for pensions in Southeast Asia are quite generous. Usually, contributions, accrued interest on balances and gains from pre-retirement withdrawals, and retirement benefits are all tax exempt in Southeast Asia. In the Industrial countries, at least one of these flows is taxed. Given the greater importance of fiscal sustainability, and unaccustomed budgetary deficits, these countries may reconsider the present taxation arrangements for pensions. To the extent, pension funds are required to hold a significant proportion of their assets in government securities, and to the extent the interest rates on these securities is administratively determined fiscal effects may arise. Thus, if the administered interest rate paid on the securities is higher than the arms-length market rate, the fiscal impact will be negative, as perhaps was the case in Malaysia earlier. If on the other hand, the interest rate paid on these securities is lower than what is earned on the members' balances, implicit taxation may arise, as has been the case in Singapore.

The above analysis thus strongly suggests that when considering best practices in pension reform, it is essential to address the link between pension systems and fiscal sustainability. This applies particularly strongly to the unfunded and sometimes open-ended nature of the civil service pension arrangements. Without commencing on the process of reform in this area on a priority basis, there is a danger of weakening of fiscal discipline, of adversely impacting flexibility of budgetary policies and crowding out of other priorities such as education and infrastructure expenditure, and of imposing a substantial fiscal burden on future generations. At the same time, reforms should aim to develop a multi-pillar system, instead of excessive reliance on one pillar such as the mandatory savings pillar. Such a multi-pillar system is more likely to provide financial security in retirement to a large proportion of eligible population without adversely impacting on fiscal sustainability and international competitiveness.

Pension Scheme in Indonesia

Mr. Isa Rachmatarwata

HISTORICAL PREVIEW

- The Indonesian retirement system may be backdated to the era of Dutch colonialism. During the years of Dutch occupancy, Indonesians who worked for the government received monthly pension from the government after retirement. Few others who worked for private companies might also have received pensions, but unfortunately, so far no records have been found which show such pension payments.

- The first milestone on Indonesia retirement system history was the enactment of the Law number 11 year 1969 on the Pension Benefits for Civil Servants and Their Beneficiaries. Although the Law covers civil servants only, it became a specimen for private pension plans which were established and grew during the 1970s and 1980s. Previously, the Law number 2 year 1959 and the Law number 6 year 1966 were enacted to regulate pension plan for members of the armed forces. Private plans themselves did not sprout until early 1970s, when the Government started to grant income tax privilege to pension arrangements.

- The development of private pension industry in Indonesia got an important impulse when the Law number 11 year 1992 on Pension Funds (hereafter will be called the Pension Law) was sanctioned by the President at 20 April 1992. This Law introduces "Pension Fund" as a legal entity which is separated from its founder. The separation, which entails the segregation of a Pension Fund's assets from its founder's, is intended to secure pension promises which are stated in pension plan regulations. The Law and its implementing regulations also provide guidance to employers for designing an acceptable pension plan.

- A remarkable advancement in pension industry is also achieved with the introduction of Financial Institution Pension Funds in the Pension Law. These Pension Funds established by banks or life insurance companies arrange pension schemes for individuals, including self-employed workers. The availability of Financial Institution Pension Funds will expectedly extend the coverage of participation in the pension system.

- Just few weeks before the sanction of the Pension Law, Indonesia started to have a law on labor social security. The Law number 3 year 1992 on Labor Social Security gives authorization to the government to execute four welfare programs for workers. The programs had actually been in force since 1977, based on the Government Regulation number 33 year 1977, but the enforcement was considered less successful than expected due to the lack of legal basis.

- their implementing regulations, may have not perfectly structured the Indonesian retirement system yet. But, they are extremely important foundation for the building of the system. Nowadays, the system has not become the major provider of retirement income, but the assets accumulated within the system have indeed contributed to the formation of capital for the development of the country. As anticipated, and several other countries have encountered, the retirement system is becoming a significant source of capital and performing an important role in capital markets of the country.

CURRENT RETIREMENT SYSTEM

- The legal framework for the Indonesian retirement system has been put in place. Theoretically, all income-earners in Indonesia are able to participate in the system and may expect retirement income after they quit from the work force.

- Civil servants and members of the armed forces are covered the government pension plans. The plans are administered by PT Taspen (for civil servants) and PT Asabri (for members of the armed forces). Both are state owned enterprises. Currently, the plans cover about 3.7 million active civil servants and 550 thousands members of the armed forces. They have also been paying pension benefits to around 2 million beneficiaries.

- Participation in the government pension plans is compulsory for both civil servants and members of the armed forces. The benefits are expressed as percentage of final salary and vested after 20 years (or 10 years, in the case of work force cutback due to reorganization or restructuring). The benefits are paid to retirees for life and reduced to 48% (paid to eligible widows/widowers or orphans) after the death of retirees.

- Workers of private establishments are mandatorily protected by provident fund program, regulated under the Law number 3 year 1992 on Labor Social Security. The program is administered by PT Jamsostek (another state owned enterprise).

- Currently, participation is a must for workers engaged in companies which employ more than 9 people or pay wages of 1 million rupiahs or more. The Law itself expects that eventually all workers, including those who work in informal sectors and self-employed, participate in the program. As of 31 December 1999, the number of participants was around 11.4 millions.

- In addition to provident fund provided through the labor social security arrangement, employers may promise pension benefits for their employees. Such employers should state the promise in pension plan regulations and establish a Pension Fund which will execute the pension plan regulations. Pension plans should not be in force before the Minister of Finance approval is obtained by the founder.

- As of 31 December 1998, less than 950 thousand workers were active participants of 325 voluntarily established Employer Pension Funds. They worked for around 1800 employers who are founders or co-founders of the Funds. About 127 thousands other people are receiving pension benefits from these Pension Funds.

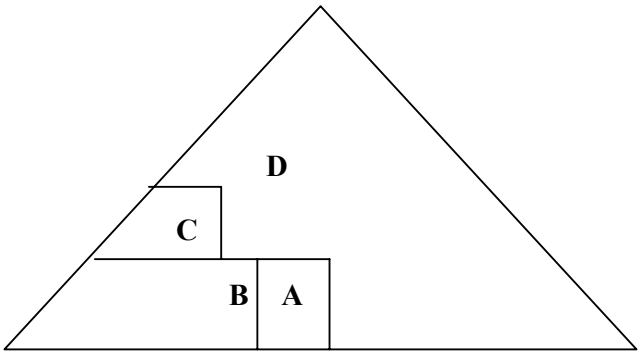
- For some reasons, other employers do not desire to establish their own Pension Fund although they still want to promise pension benefits to employees. They prefer to enroll their employees into a Financial Institution Pension Fund and agree to contribute for the employees. They also help collecting contributions from employees and remit the money to the Financial Institution Pension Fund.

- As of 31 December 1998, the number of participants of 25 registered Financial Institution Pension Funds is about 200 thousand people; 30% of them registered with such Funds on their own initiative.

- The low rate of participation in pension arrangement in Indonesia does not necessarily mean that Indonesians have little protection against old age income disruption. An ever increasing number of Indonesians have been utilizing such other mechanism as deposits in banks, insurance policies and, lately, mutual funds. Many others have been depending on family or local society supports which are still highly valued in the country.

- In summary, the current retirement system in Indonesia has three components (besides informal family or society support). The first component is mandatory pension plans for civil servants/members of the armed forces (administrated by PT Taspen and PT Asabri) and employed workers (PT Jamsostek). The second is voluntarily private pension plans which may be devised by employers through the establishment of Pension Funds or participation in Financial Institution Pension Funds. Finally, retirement income may individually be arranged by purchasing "long term" financial instruments or participating in Financial Institutions Pension Funds.

Figure 1: Retirement Support System in Indonesia



A Government pension plans for civil servants and members of the armed forces.
B Provident fund program under the labor social security.
C Private pension plans administered by either Employer Pension Funds or Financial Institution Pension Funds.

D Individual savings, including personal participation in Financial Institution Pension Funds, or family/society supports.

STATISTICS

▲ The following table presents several key indicators for Indonesian economy.

	1995	1996	1997	1998	1999
Economic growth (%)	8.2	8.0	4.7	-13.2	0.2
GDP at 1993 Market Prices (in trillion Rps)	383.1	413.8	433.7	376.1	376.9
Annual Change of GDP (%)	8.2	8.0	4.8	-13.3	0.2
Inflation rate (%)	8.6	6.5	11.1	77.6	2.0
Exchange Rates (Rps per US$ 1)	2,253	2,347	8,325	8,025	7,100
Labour force (million)	85.7	87.8	90.1	92.7	94.4

	Civil servant (PT Taspen)	**Members of the armed forces (PT Asabri)**	**Labour provident fund (PT Jamsostek)**
Active members	3,993,611	621,409	11,387,762
Benefit recipients	1,742,348	206,767	658,796
Annual Benefit Payments*	8,577	1,237	852
Net Assets*	9,536	-	8,789
Invested Assets*	9,636	-	8,789
Operational Expenses*	63.29	n.a	228
* in billion rupiahs		Source: PT Taspen, PT Asabri, and PT Jamsostek	

From various source

- The following table presents the number of active members and beneficiaries, monthly benefit payments, net assets, invested assets and operational expenses of the government pension plans administered by PT Taspen and PT Asabri and provident fund administered by PT Jamsostek in 1999.

Note that the above table does not show any figures for net and invested assets of the plan administered by PT Asabri. The plan is currently run on pay-as-you-go basis. The government pays amounts required to pay benefits in excess of the contributions made by the current active members.

- The following table presents the number of active members and beneficiaries, annual benefit payments, net assets, invested assets and operational expenses of Employer Pension Funds and Financial Institution Pension Funds in 1998.

	Employer Pension Funds	**Financial Institution Pension Funds**
Active members	942,366	199,496
Benefit recipients	126,655	n.a
Annual Benefit Payments*	1.174	42
Net Assets*	21,492	721
Invested Assets*	20,492	584
Operational Expense*	134	4

* in billion rupiahs Source: Pension Annual Report 1998

Financial Institution Pension Funds do not pay pension benefits to beneficiaries. Instead, they purchase life annuities from life insurance companies to disburse their liabilities to pension beneficiaries.

ON-GOING REFORM

- Participation rate to the mandatory provident fund program is still low (12.1% of the labour force). Many employers try to avoid the obligation to contribute to the program. For employees, deduction in salary for contribution to the program is considered burdensome. Due to economic crisis, the participation rate becomes even lower.

- Thoughts have been devoted to combine compulsory nature of the provident fund program and private management of Pension Funds. Employers and employees will continue to make mandatory contributions, but may opt to manage the accumulating fund separately.

- Consideration has also been given to the funding issue of the government pension plans. Current economic condition does not allow the government to fully fund the plans' obligation, but efforts to restructure the funding program have to begin.

- On-going reform are supported by international agencies such as the Asian Development Bank, the World Bank and the Canadian International Development Agency.

An Overview of the New Pension System in Mexico

Mr. Jaime Villasenor

This is a working paper and its contents are constantly being changed. The views expressed in this document do not necessarily express the position of CONSAR. The author is the sole responsible for any mistakes. If you may have any questions on this article please contact the author at: asesores@mail.internet.com.mx

1. Executive Summary

The pension system in Mexico is largely based on mandatory, defined contribution (fully funded), individual accounts which are privately administered by various specialized pension fund managers. It has existed since July 1997 after the Social Security Law was reformed. This scheme applies to the private sector workers who are affiliated to the Mexican Institute of Social Security (IMSS)[1]. Government employees have a pension plan covered by the ISSSTE which is based on a pay-as-you-go (PAYG) system. Government agencies may set-up alternative pension plans and in the private sector a few companies (mainly multinationals) have developed incipient defined benefit programs, which are complementary to the mandatory private scheme.

For the mainstream program, the first pillar consists of a minimum pension guarantee (a lifetime annuity equal to the minimum salary in the country) that is earned under certain conditions if resources from savings in the second pillar are not sufficient to purchase the annuity. The second pillar consists mainly of the defined contribution venue with private administration in individualized accounts. Contributions are mandatory at 6.5 per cent of salary and the government supplements this amount with a fixed amount. For minimum wage earners this is 5.5 per cent of their salary decreasing for higher wages. Average contributions for the Mexican population are 8 per cent of total salary. If workers do not use mandatory housing savings for such purpose that amount can be added to pension savings, which would make for an average contribution of 13 per cent.

The reform can be considered a success due to the high affiliation rate, 74 per cent of the potential market has already chosen a fund manager before it becomes mandatory in year 2001.[2] Resources under management represent close to 25 per cent of the internal government debt and by the end of 1999 the total amount will be well over 10 billion dollars.

Fund collection and individualization is done efficiently for both pensions and housing monies, using the same infrastructure that the IMSS uses to collect health contributions. A centralized database helps to maintain bookkeeping integrity and enables the regulator to carry out a close surveillance. The banking system has an important participation in the collection process, attending the employers.

The investment guidelines are very restrictive due to a misunderstanding of prudent behavior. However, they have not affected performance due to high local real interest rates.

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[1] Refer to appendix A for a key to commonly used abbreviations in the text.

[2] In the mean time the resources remain in the "Concentrating Account" or Cuenta Concentradora. It remains a direct liability of the Federal Government, earning a guaranteed positive real rate of return.

Prudential risk management regulation will foster coherent risk control and will allow changes in the guidelines.

2. Mexican Social Security

Social Security services in Mexico are considered to include not only pension related services (old age retirement, severance at old age and life insurance), but also health care (including maternity, childcare and disability), and housing. In an oversimplified description, these services were provided to private and government employees by the following institutions previous to the 1997 reform:

The Mexican Social Security Institute (IMSS) and the Housing for Workers National Fund Institute (INFONAVIT) provided health-pension and housing services respectively for private sector workers. The IMSS has existed since 1944 and the INFONAVIT was created in 1972 to provide housing to IMSS affiliates. At first, the housing institute was a full-fledged real estate developer and beneficiaries could only get loans to buy houses built by INFONAVIT. Since 1992 the institute has evolved into a financial institution that provides loans to buy houses (old or new). The institutions that provide the analogous services for government employees are the ISSSTE and the FOVISSSTE. The former provides health and pension services and the latter facilitates housing related assistance.

Previous to the reform, the pension system was, either through the IMSS or the ISSSTE, a pay-as-you-go system (PAYG) which had all the demographic and incentive problems that these traditional schemes have.[3] The funding for the first pillar came from workers, employers and the government and due to local hiring arrangements the second pillar was practically non-existent. Also the third pillar was really never developed because very little disposable income was available for voluntary savings.[4]

3. The Old Pension System

The main reasons for the first pillar reform were the actuarial imbalance of the pension system managed by the IMSS, that some studies had estimated at 80 per cent of GDP, and the distortions in the design of the old-system which resulted in a poor relation between contributions and benefits. This chapter draws heavily on the study by: Sales-Sarrapy, Solís-Soberón and Villagómez-Amezcua.[5]

The financial deficit was brought by many factors which will be briefly explained.

Demographics. The Mexican population is quickly aging, population growth has gone from 3.7 per cent in the 70's and 80's down to 1.9 per cent at the beginning of the 90´s. Life expectancy has gone from under 50 years in 1950 to 71 years in 1995. The ratio of contributing workers to pensions granted has dropped from 65 workers per pension in 1950 to only eight in 1995. These isolated figures give an idea of the demographic component of the problem.

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[3] For a detailed explanation on the reasons for the Mexican reform please refer to "Pension System Reform: The Mexican Case"; Sales-Sarrapy, Solís-Soberón and Villagómez-Amezcua in "Privatizing Social Security", edited by Martin Feldstein, NBER 1998.

[4] The World Bank has proposed an analytical model base on three "pillars" concept to describe different pension providing schemes.

[5] Sales-Sarrapy et al (1988).

Benefits. In the old-system pension rights were earned at age 65 with barely 500 weeks of contributions, this had an implicit return that could not be reasonably achieved in the local or international markets.[6] The benefits not only covered the workers but also their relatives, making the pension system too generous in relation to the received contributions. As an example, on the average the IMSS paid a pension or 18 years after retirement for each insured worker and afterwards another pension to the corresponding widow for 12 more years. In many cases this benefit was obtained with slightly more than ten years of contributions that was the minimum vesting period; this has no relationship to a thirty-year payment. The implicit rate of return required on contributions to ensure the financial feasibility of such an operation is approximately 43 per cent annually in real terms. The Mexican annual long-term real return rate has been 6.5 per cent for peso denominated government securities and 13.3 per cent for the Mexican Bolsa.[7] Therefore it was impossible to cover the benefits with the stated contributions.

Lack of Transparency. Due to the nature of the IMSS as the pension system administrator, it was able to decide how the resources from social security contributions were spent. At various points in time there were subsidies between different services provided by IMSS in which the pension fund resources were contributing to health expenditures.

"Although there is a legal provision which establishes that every branch of insurance at IMSS should be self-financing, it has been a common practice to cross-subsidize programs with deficit. In particular, surpluses from the pension system have been used to cover expenses related to health and maternity insurance".[8]

In certain cases, some expenses which were not necessarily related to health were covered. Over the years, the IMSS has been owner of soccer teams, theaters, recreation centers, etc., which stretches the definition of the social purpose of the institute.

Incentives. The pay-as-you-go structure had many deficiencies in terms of incentives, especially with poorly designed vesting rules. As was mentioned before, once the worker had contributed for 500 weeks he earned rights far more valuable than the paid resources. Furthermore, once this minimum requirement was fulfilled then the worker did not have any incentives to continue contributing.

On the other hand, if contributions were less than 500 weeks the worker had no rights on the paid contributions. This situation was especially unfair for many women that participated for a few years in the labor force before dedicating themselves primarily to child raising. It was more convenient for them to look for a job through informal employment, in which neither they or the employer would loose money through the payment of social security contributions.

Also, the pension base salary was calculated on the average of wages earned in the last five working years and not on the average of all contributing years. For workers with a high salary growth, especially in their final working years this meant they were retiring with an unfair replacement rate in comparison to their contributions. Workers in their final earning years had the incentive to retire before they normally would if their salaries were likely to decrease.

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[6] Retirement could occur at an earlier age with lower benefits.

[7] Source: CONSARs calculations with information from the Central Bank (BANXICO) and the Mexican Bolsa.

[8] Sales-Sarrapy, et al (1998).

Cost of hiring. As can be seen in the table 1 social security contributions could represent over 30 per cent of total payroll and increase the total cost of hiring. This creates the incentive in employers to underreport and since the benefits were imperfectly tied with contributions, employees did not always care about the situation. Informal work flourished in Mexico and coupled with a decrease in real salaries, contributed to the relative decrease in IMSS' resources.

All of the above demonstrated that there was an indisputable need to reform the pension system. Since the situation is of a slow but persistent deterioration the sooner it is done the better. Simultaneously other countries, mainly in Latin America, undertook the reforming task. Ironically, the countries with the worst demographic and funding problems have still not been able to attack the problem because the cost is impossible to absorb immediately. In the Mexican case, the government could afford to discuss the issue because the stakes where not as high as in other countries, it can be said that the country was still "on-time".

Nonetheless, it is always the case that a reform which involves any part of a country's Social Security, ends up immersed in political battles. The Mexican reform was not the exception and it took a lot of effort to pull through a law which despite all its shortcomings has been quite successful compared to similar experiences in other countries and also to the expectations previous to the reform.

3.1 Defined Benefit (DB) vs. Defined Contribution (DC) considerations

One of the first issues that emerges from a pension reform discussion is the defined benefit (DB) vs. defined contribution (DC) consideration. Abundant literature has been written in the topic and there are truly opposing views in this respect. At the time of the Mexican reform, recent history had witnessed "success" stories in Chile (1981) and Argentina (1994) in defined contribution schemes, in fact nowadays it is common for people to refer to the "Chilean Model". This model can be depicted in the following terms:

- Defined Contributions (old DB system phased out)
- Private Administration of Pension Funds
- Minimum Pension Guarantee (relative to average salary)
- Minimum Rate of Return Guarantee (relative to market average)
- Discretionary Limits in the Investment Guidelines (required maximum and/or minimum investments in certain asset classes)

The design of any pension reform should be forward looking in trying to resolve the problem in such a way that is financially sound in the long run. At the same time it is important to consider the institutional, social and political setting that exists and is expected to exist in the future. In an excellent proposal to reform the U.S. system[9], Modigliani, et al, propose a New Fund (NF) that is a complete restructuring of the traditional PAYG system that keeps the defined benefit component through an implicit or explicit government guarantee. The central idea is that it is possible to have a defined benefit program that is fully funded by appropriate individual bookkeeping and a return guarantee. The proposal has many characteristics that may lead into a very efficient way of dealing with the pension problem, however analyzing some of the features individually it is evident that a U.S. like environment is needed to make it a working option.

It would be difficult to implement the NF idea in countries like Mexico. As an example let us take the proposal to mandate a passive indexation in order to decrease management fees and

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[9] "An MIT solution to the Social Security Crisis", Franco Modigialini, Maria Luisa Ceprini and Arun S. Muralidhar. Sloan Working Paper 4051, March 1999.

mitigate the risk that politicians manipulate the invested funds. As it will be explained, trying to import the idea into Mexico would be close to impossible.

In Mexico, the congress has restricted investments to local issuers thus increasing country risk by not allowing the best kind of diversification available for a Mexican citizen. With this restriction in place a fund manager is not going to be able to passively invest by indexing because there are no local bond indices and the only known local benchmark is the Bolsa Index and even this index is hard to use for liquidity considerations. Furthermore, stocks are still not allowed in the very primitive investment guidelines that are in place.[10]

In the Mexican reform (which substituted DB for DC) many people claimed that the government was renouncing its responsibility to support retirement for individuals. This argument is also used to criticize corporations that favor a DC alternative to their current plans. For the most part these ideas are supported by the fact that "institutions" are better prepared to meet return volatility or replenish insufficient reserves when needed. When this happens to a corporation, it can be considered a potential liability that stockholders could end up disbursing. This is not a risk that is closely related to the underlying business and therefore the firm may attempt to hedge it by a DC implementation. From a societal point of view, the worse thing that can happen is that by sponsoring a DB plan the corporation will decrease its earnings.

However, when the guarantor of the DB plan is the government it becomes a different problem. When shortfalls happen it is the taxpayers that end up paying the tab. Even assuming that an extremely efficient fund administration emerges from the government, financial feasibility is still at stake. Optimal fund management from this perspective would engage in a long-term zero-sum course of action. This means that funds will be supplied in economic downturns and recuperated in good times. It sounds easy and reasonable! Unfortunately most of the times it is not.

The three relevant variables that determine terminal pension wealth are: size of contributions, time contributing and return. All three have to be carefully balanced to achieve the desired result. For national mandatory pension plans the first two are decided by congress (at least in Mexico), whose economic prowess depends on the prevailing political moment.

The above considerations may result in high implicit return requirements that cannot be reasonably achieved. Moreover, it may happen that the mean-reversion assumption that is expected to predominate for the governments' counter-cyclical intervention to work, does not occur and those temporary pension deficits become permanent.

With this in mind, there is a strong argument in favor of stating that each country has to find a particular solution to the pension problem. Experience shows that even small differences in certain characteristics adopted within the "Chilean model" in the Latin American countries have brought what appear to be substantial different outcomes. Unfortunately, it is hard to tell whether these come from the small design differences or due to particular country settings. Too little time has elapsed since the adoption of reforms that would allow having a definite conclusion that would permit us to separate generic sound recommendations for pension reform from interesting results of an isolated experience.

The Mexican solution relies basically on the idea that financial soundness and optimal surveillance is difficult to achieve through a defined benefit program. As was mentioned before,

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[10] The Mexican government is currently working in a totally new approach to investment guidelines that may be enacted by the year 2000. It will follow the Prudent Man Rule venue with "buyside risk" concepts.

some authors have argued for the benefits of optimally structured defined-benefit programs. They claim that fund administration and bookkeeping is less expensive, to the extent that the bargaining power of a big fund (e.g. Provident Fund of Singapore) can lower trading, hedging and security analysis costs through "soft-dollars". On the other hand, there is a way of keeping a centralized bookkeeping even in a DC context, as the ensuing description of the Mexican solution will illustrate.

3.2 The reform is attempted in 1992

The first attempt to reform the old pension provision structure was done through a fully funded vehicle that featured individualized retirement accounts in 1992 known as the "Retirement Savings System" (Sistema de Ahorro para el Retiro -SAR). It was complementary to the existing PAYG and both workers from the IMSS and ISSSTE participated. Funds were deposited in the Central Bank and earned a guaranteed return of 2.0 per cent in real terms at inception, although the return level was increased to reflect levels closer to market conditions.

To fund the accounts an additional 2 per cent was charged to employers' pockets, but in the end, since the SAR was also mandatory it added all up to the total cost of hiring. It really didn't matter in the private sector who was nominally paying it, the employers perceived it as a rise in employment expenses. On the other hand, it would be difficult to say that the workers saw this as an increase in their wealth, as an income they would receive in the future. A partial explanation for this is that there was practically no experience from people in retirement savings and the due to small contribution percentages to the SAR the initial amounts were very small. Moreover, economic and political uncertainty coupled with a small GDP per capita have forced Mexican workers to focus on the short term; saving for retirement is not an issue of prime importance for the average Mexican.

This first attempt to reform the pension system (SAR-92) can be considered a qualified failure. This happened in part because the country did not have a reliable national identification number (e.g. social security number). After a few years of existence this system had created a logistical nightmare. For an estimated universe of 10 million workers contributing to the IMSS, the SAR managed to create more than 40 million accounts! The account multiplicity is still a problem nowadays and it highlights the critical importance of infallible accounting.

Table 1. Social Security Contributions in the Pension System (1992-1997)

	Total % of payroll	Source of Contribution		
		Employer	Employee	Government
IMSS				
IVCM	8.5%	70%	25%	5%
Health and Maternity	12.5%	70%	25%	5%
Workers Compensation	2.5%	100%	-	-
Child Care	1.0%	100%	-	-
SAR system				
INFONAVIT	5%	100%	-	-
Retirement	2%	100%	-	-
Total	31.50%	25.20%	5.25%	1.25%

IVCM – Invalidez, Vejez, Cesantía y Muerte (Disability, Old-Age, Dismissal and Life Insurance) Contributions applied to a base salary that had an upper limit of 10 times the minimum wage salary. Retirement, health and maternity are now limited to 25 minimum wage salaries. Base salary calculations for housing (INFONAVIT) are lower than for the others.

In addition, since no true verification was done in the SAR-92, there was the possibility of an employer to pay its Social Security contributions in full without ever stating who the beneficiaries were. There are extreme cases in which the firm no longer exists and therefore there is no way the individual can prove it has contributed money to its retirement. As a consequence there are resources which will never be correctly individualized.

When the recipient of social security services is part of a defined benefit environment or is receiving state provided health care these accounting failures end up being minor issues. However, in a defined contribution scheme the operational processes have to be practically fault-free to ensure fairness and credibility. The importance is derived from the fact that in defined contribution programs the individual ends up being its own sponsor.

Notwithstanding all of this, the SAR accumulated more than 5 billion dollars of pension money in the 1992-1997 period. The best part of this period are the lessons that were shown at the time which paired to the experiences from other DC reforming countries molded what is now the Mexican Pension System.

For the purpose of supervising the SAR-92 system the National Commission for the Savings for Retirement System (CONSAR) was created in 1994. This regulatory agency worked through the next step of the pension reform which was part of a comprehensive social security package.

4. The IMSS Reform in 1997

The “real” pension reform had to wait for a far-reaching Social Security reform which was discussed to great lengths between 1992 and 1995, until finally, major objectives were set. During 1995, Congress received a proposal submitted by the president which was approved in December of that same year.

The Social Security and Pension reform took place briefly after the worst financial turmoil Mexico has lived (1994-1995). Banks and bankers had the worst reputations with the general public and other financial intermediaries were not total absolved from this sentiment.

Not surprisingly the regulation philosophy was "draconian" in all respects and as such it is reflected in the "Ley de los Sistemas de Ahorro para el Retiro" or *System for Retirement Savings' Law*. In all fairness it has served its purpose by breaking with old ways of conducting asset management business that were against the best interest of the individuals that had conferred its assets in care of third parties. Nonetheless regulation is quite imperfect and needs to be improved.

The reform redirected the funds that the IMSS had been using for the first pillar part of the system to a second pillar with individual accounts. Vested liabilities were recognized by an option offered by the government to the "transition workers".[11] At retirement each individual will have his/her earned amount calculated as if they had stayed in the previous DB system, this would be compared to the amount of money they have saved in their individual account and individuals can choose the higher of both. This means that transition workers should not be worried about losing benefits due to the introduction of the new scheme.

Individuals who have and will join the working force after July 1st 1997 will have to retire with a lifetime annuity that they have to purchase with resources that accumulate in their individual account.

The Mexican second pillar is complemented by a new first pillar, which consists of a government guarantee that individuals will retire with at least a lifetime annuity equal to the minimum wage (MW) indexed to the local Consumer Price Index. This pillar is used only if the -second pillar- individualized resources cannot provide the person with an annuity equal to a MW. The reform also provides individuals with the possibility of investing voluntarily on their own accounts.

Table 2. Contributions to Pensions in Mexico
(as % of payroll)

	Before the Reform	**After the Reform**

[11] A transition worker is anyone who held a job in the private sector previous to July 1st 1997 and was not retired at the time.

Contributions	DOSL (IVCM)	RDO	LDA
IMSS contributions	8.5%	4.5%	4.0%
SAR retirement	2.0%	2.0%	
SAR housing	5.0%	5.0%	
Social contribution	0.0%	2.0% [2]	
Total [1]		13.5%	4.0%
Contributors	15.50 %	17.50%	
Employer	12.95%	12.95%	
Employee	2.125%	2.125%	
Government	0.425%	2.425%	

Source: IMSS and CONSAR

[1] Contributions were not recorded in an individual account due to the nature of the PAYG system.

[2] The government pays a fixed amount of 5.5 per cent of a minimum wage (mw). The contributions was equivalent to 2.0 per cent of the average wage of workers affiliated to the IMSS in 1997.

DOSL: Disability, old age, severance at old age, and life insurance.

RDO: Retirement, severance at old age, and old age.

LDA: Life and disability.

At the time the workers are affiliated to the system (workers have four years to choose a fund administrator until July 2001)[12] they select a pension fund manager of their choice and this information is fed to a centralized database (BDNSAR). Before the affiliation process is completed, the database manager (PROCESAR) does a verification process to check that the individual has not previously chosen another manager. Also, whenever a worker switches managers this change is registered. In Mexico individuals may change managers without cost at the time they earn a year of seniority with their current manager.

In relation to the investment of the assets, the fund managers have to comply with stringent investment guidelines.

This national DC plan is structured with a centralized database, which has all the relevant information on individuals that are affiliated to the system, and has its unique identifying system based on the Social Security Number[13].

Pension money collection is done through the same process that Social Security Institute collects its contributions. The funds are dispersed after the information is verified and transferred to the fund managers that each individual has selected.

[12] After this date the remaining workers will be "assigned" to a manager by a process designed by CONSAR.

[13] Since this number has proven to have some deficiencies, the government is currently engaged in a project whose sole objective is to provide a unique number to every Mexican (CURP). It will take some time before it is completely achieved.

Being an important part of the Mexican pension design, the next sections describe in detail the collection and fund dispersion processes.

4.1 Collection Process

Emisión - Notificación {740,000 empresas notificadas Agosto 1999}–Recaudación – Verificación – Fiscalización 98 per cent de éxito en el pago de la emisión (pagan correctamente) Subdeclaración y Evación

An interesting and extremely important feature of the Mexican Retirement System is that the collection of contributions is done hand-in-hand with the collection of all other social security monies. Collection is primarily employer-based with few workers contributing on an individual, voluntary basis to the IMSS. Every month the firms (regardless of size) receive a statement issued by the IMSS that makes an estimate -based on the previous collection period- of the amount that each employee is supposed to be contributing for health. Information on housing and pension is distributed every two months.

4.1.1 IMSS and contribution collection

In 1997 the IMSS made a significant advance in its collection process by the introduction of a software program that facilitates the collection process. This program goes by the cryptic name of Self-determination Sole System (Sistema Unico de Autodeterminación - SUA). Through it, the IMSS receives the contributions of more than 93 per cent of the workers (out of a total of 15 million) that make up close to 97 per cent of the monetary value of the collection.[14] This system has a version for Windows® and for DOS.

SUA allows to update information on the employer, employee and its different activities or "movements". It has built-in tables for: fees for work risks, minimum wages, the Consumer Price Index and fines. The outputs of SUA are:

1. Employer and employee contributions to IMSS, INFONAVIT and the employee SAR account.
2. Amortization of housing loans to the INFONAVIT.
3. Extemporaneous payments and differences.
4. Affiliate activities such as: reinstatement, withdrawal from the firm, and salary change.

The SUA software has to be used if the employer hires more than five affiliates. Otherwise the employer pays the amount reflected on the statement generated by the IMSS or presents itself to one of the IMSS "sub-delegations" to make the necessary changes and get a "payments diskette". The latter is also required when paying through the normal SUA but is generated by it.

The IMSS has a whole department in charge of making sure that all employers comply with their obligations. It can be said that in Mexico the most successful government agency in terms of making people contribute is the IMSS. Since the pension system is sharing this entire infrastructure to get its monies it can be said that the Mexican Retirement System is probably one of the best systems in terms of direct and indirect collection costs and efficiency.

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[14] Source: "SUA 2000 para Windows". IMSS e INFONAVIT. August 1999.

It is also important to mention that the fund managers (AFORES) pay the IMSS for this service. The fee at this moment is $16.9 pesos for each active worker in a year.[15] Which means that the collection process costs the pension system about 20 million dollars per year.

4.1.2 Banks and contributions collection (Collecting Entity)

The IMSS has entered into an agreement with thirteen banks to expedite the collection process. When acting on behalf of the IMSS the banks are known as "collecting entities" (CE). This allows the IMSS to have over two thousand bank branches around the country involved in the collection process.

The CEs (banks-"collecting entities") receive information and money from the employers. Validation is done as soon as the CE receives the information and if things don't match certain preestablished criteria, the payment is refused and the employer is notified. The integrity of the information is extremely important and this process guarantees the quality of the information, avoiding the problems that occurred in the SAR-92 experience as was described before.

The information is given by the employer through the "payments diskette" or through the statements printed by the IMSS that were described before. The CEs charge the IMSS for participating in the collection process. Currently the fee is $22 pesos per diskette or statement regardless of company size and the process is done on a monthly basis. Retirement and housing contributions are collected every two months. There are approximately one million employers in Mexico.

If the information is correct the CE sends the monetary resources to the Central Bank and the information to the centralized database (PROCESAR). At this time, additional verifications are done to the information.

4.2 Fund Dispersion Process and Individualization of accounts

4.2.1 Centralized National Database for the RetirementSystem (Base de Datos Nacional del SAR - BDNSAR)

An important element of the pension system is the centralized national database for all the information related to the pension fund system. This database known as National Database for the Retirement System (BDNSAR), contains information on each individual and the fund manager he/she is affiliated to. The primary function of this database is the identification of the individualized accounts with each manager, the control of the possible manager migration by the affiliates and the distribution of the periodic money flow to each account.

This component of the Mexican pension system effectively separates the employer from the decision that each individual worker makes in relation to the choice of asset manager. One important piece of information, which is not part of the SUA process, is the pension fund manager that the individual chose. This information is fed into the BDNSAR by the pension fund manager which "affiliates" the workers. A diagram in appendix B illustrates the whole collection process.

4.2.2 Corporation in Charge of Managing and Information Processing of the BDNSAR

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[15] Approximately 1.78 USD (9.5 pesos/USD).

(PROCESAR)

The database is property of the federal government and it is operated by a private entity called PROCESAR. This company is the only one authorized by the government to operate the database. One of the most important tasks of PROCESAR is to help in the unification of accounts, the purpose is that each individual affiliate will not have more than one account in the system.

Participa en procesos de afiliación, recaudación, traspasos, retiros, administración de cuentas de trabajadores que no han elegido AFOR. IMSS envía a PROCESAR sus actualizaciones al CANASE (Catálogo Nacional de Asegurados)

The funds are "dispersed" to the selected fund administrators who have to "individualize" the resources. At the moment this only implies they have to correctly assign a determined amount of shares in the only fund that they actually manage. The law allows different funds being offered to the public but at the moment only one has been approved and it has to be invested "fundamentally" (more than 51 per cent) in securities which are indexed to inflation.

An important consequence of this process design is that the pension system is in practice non-dependant on the employers. The centralized database (BDNSAR) with PROCESAR and the CEs effectively allows workers to choose pension fund managers without the intervention of the employer. This is also an important part of the Mexican Retirement System design, the direct employer participation would bring along conflicts of interest and undesirable affiliating conducts between the fund managers and the employers or labor unions.

This operational structure fosters individual selection versus employer selection. This was important in the Mexican case because it makes it more difficult for those with a potential conflict of interest to influence the decision of the individual.

4.3 Supervision by CONSAR

The system has stressed from the beginning a tight supervision on the funds. The regulation agency receives information on a daily basis and compliance is sanctioned on a t+1 basis. This setting is typical for Latin reforming countries. One of the advantages of developments in the late twentieth century is that technology in terms of communications and computer processing capabilities are such, that with good planning it is quite inexpensive to have all the necessary information on a timely basis.

Accurate bookkeeping is central to the supervision task and the rules have gone as far as having CONSAR publishing the "official" accounts up to a third level. Moreover, CONSAR also publishes "accounting guides" that give a detailed explanation on how to fill out the accounts.[16]

The information is sent early in the morning and processed for regulatory purposes before noon. This is the basis of the daily supervision done with the accounting information on a mostly

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[16] The CNBV had previously set the example, although CONSAR might have gone a bit further. Presently the CNBV was trying to more flexible and allow for a more dynamic bookkeeping. It often happens that whenever new operations surfaced, for which there were not any defined accounts, the managers had to wait until the CNBV had put the new accounts in auxiliary regulation to account for it "correctly". Most of the time it was recorded incorrectly. Nonetheless, the CNBV is maintaining "regulatory reports" which homogenize the reported information, allowing managers to record events at their discretion while following accepted accounting principles.

automatic way. Discrepancies originate an inquiry or if non-compliance is demonstrated a penalty.

On the other hand, there is also a part of the supervision that is done "in-situ". Field inspectors have different supervision programs that are applied on a continuous basis. This is important since there are a number of qualitative aspects that have to be closely examined by inspectors who decide if there is something to be concerned about. This is a quite labor intensive task that requires experienced people who have acquired a complete working knowledge of the Mexican pension system.

5. Relevant statistics of the recently reformed system

At the beginning CONSAR authorized 17 pension fund managers that had relationship with banks and/or insurance companies. Close to 50 per cent of the capital of the managing firms was Mexican.[17] By the end of May 1999 there are only 13 managers left and further consolidation is expected.

By the end of August 1999, there are over 14.9 million workers already signed up in the pension system out of a potential universe of 20.1 million. Of these affiliates only 12.9 million are active contributors (the definition of active for this document is a worker who has had at least one contribution since the system started). The others have either retired, are unemployed, their employers are not paying contributions, etc. Almost half of the economically active population is part of the informal sector which doesn't contribute to this system.

Table 3. Registered Workers (total and with a contribution)
(end of August 1999)

Total Registered Workers	Registered Workers with a Contribution

[17] Appendix C shows shareholders percentage of holdings and also shows nationality of ownership.

	(TRW)		(RWC) [1]		
Manager (AFORE)	Number of Workers	% of total	Number of workers	% of total	RWC / TRW
Banamex-Aegon	1,742,930	11.7%	1,655,617	12.8%	95.0%
Bancomer	2,364,074	15.9%	2,123,680	16.4%	89.8%
Bancrecer-Dresdner	619,789	4.2%	534,265	4.1%	86.2%
Bital	1,499,758	10.1%	1,290,397	10.0%	86.0%
Garante	1,633,528	11.0%	1,413,039	10.9%	86.5%
Génesis-Metropolitan [2]	140,957	0.9%	122,013	0.9%	86.6%
Inbursa	378,376	2.5%	376,135	2.9%	99.4%
Principal	332,999	2.2%	299,967	2.3%	90.1%
Profuturo GNP	1,998,211	13.4%	1,492,000	11.5%	74.7%
Santander Mexicano	2,026,656	13.6%	1,864,478	14.4%	92.0%
Sólida Banorte Generali	1,260,762	8.5%	1,040,799	8.0%	82.6%
Tepeyac	228,621	1.5%	179,494	1.4%	78.5%
XXI	462,473	3.1%	437,137	3.4%	94.5%
Zurich	185,576	1.2%	119,413	0.9%	64.3%
Total	14,874,710	100.0%	12,948,434	100.0%	87.0%

[1] Registered with at least one contribution to the individual account.

[2] By September 1999, Génesis-Metropolitan has been merged with Santander Mexicano.

The congress approved the reform proposal after it included a provision to impede concentration. There is a rule in the LSAR that establishes that the maximum percentage that any fund manager can have of the total potential market measured in number of affiliates is 17 per cent. This can grow up to 21 per cent with CONSAR's approval.

There are over 10 billion dollars under management in October 1999 after 27 months of operation. The average wage per individual in Mexico is close to $4,300 annually.

Table 4. Participation of Fund Managers on the Potential Total Market
(end of August 1999)

Fund Manager (Afore)	Total Registered Workers	Share of Potential Total Market [1]

Banamex-Aegon	1,742,930	8.7%
Bancomer	2,364,074	11.7%
Bancrecer-Dresdner	619,789	3.1%
Bital	1,499,758	7.4%
Garante	1,633,528	8.1%
Génesis Metropolitan	140,957	0.7%
Inbursa	378,376	1.9%
Principal	332,999	1.7%
Profuturo GNP	1,998,211	9.9%
Santander- Mexicano	2,026,656	10.1%
Sólida Banorte-Generali	1,260,762	6.3%
Tepeyac	228,621	1.1%
XXI	462,473	2.3%
Zurich	185,576	0.9%
Total	14,874,710	73.8%

[1] Potential Total Market is defined by the IMSS. 30 - Dec - 1998 (20,149,340 individuals)

6. Investment Guidelines

Although the fund managers could offer more than one fund, until now only one has been authorized for each manager. By law, this fund has to be invested "fundamentally in securities which are Mexican inflation protected". Specific guidelines for this fund are as follows:

At least 51 per cent of the funds Total Asset Value (TAV)[18] must be invested in inflation linked or inflation protected securities, this directive is supposed to give compliance with the law. Due to the lack of local securities with these characteristics the federal government had to issue securities complying with the guidelines. The latter are floating rate notes which pay the maximum of observed inflation in the period or the nominal coupon tied to the 3 month Mexican Treasury Certificate (CETE).

At least 65 per cent of the funds TAV must be invested in securities that either have a maturity shorter than 183 days or have floating rate notes whose rate is revised in less than 183 days. The reason for this is Mexico's high interest rate volatility and the mark-to-market valuation of the funds' securities. At the moment this is not really a "binding" rule for managers since anyway most of medium and long term debt instruments in Mexico are issued as floating rate notes.

There have been criticisms to this part of the investment guidelines because it is said that the pension wealth is not being invested in long-term securities as is supposed to be for pension funds. As was mentioned before, the guidelines follow a discretionary limit philosophy and therefore it was considered appropriate to control interest rate sensitivity to avoid a potential drop

[18] Accounting standards for the pension funds allow very few liabilities. Therefore there is practically no difference between Net Asset Value (NAV) and Total Asset Value (TAV). The reason that it was decided to use TAV is that when using NAV a certain portion of the assets have to be cancelled out with the liabilities and therefore in repurchase agreements or not-same-day settlement operations it could be possible to have non-authorized securities.

in the price of the funds. The rules have not been able to achieve this due to volatility and there have been many days since July 1997 that pension fund returns have been negative. Investment regulation has not affected returns at all due to the macroeconomic situation which has maintained real interest rates extremely high. However, if rules are kept in their current fashion it is estimated that yearly return losses may exceed 80 basis point with no real gain in terms of risk control.[19]

The managers can invest 100 per cent of the funds TAV in securities issued by either the federal government or the "Banco de Mexico" (the central bank). This only applies to securities issued in Mexican pesos, for securities issued outside of Mexico -Brady Bonds and other sovereign debt instruments- a 10 per cent limit of the TAV applies.

The managers can invest up to 35 per cent of the funds TAV in corporate bonds and debt issued by private or development banks. The manager cannot invest more than 10 per cent of the NAV in debt issued by private banks.

For securities other than those issued by the federal government and the Central Bank (Banco de México) the following restrictions apply to the funds:

- Up to 10 per cent of the amount outstanding of any given issue can be bought
- Up to 10 per cent of the funds TAV can be invested in debt issued by any single issuer
- Up to 15 per cent of the funds TAV can be invested in debt issued by related entities (for example when two companies are part of the same holding company)
- Up to 5 per cent (or under special authorization 10 per cent) of the NAV can be invested in securities issued by entities with which the fund manager has any kind of financial relationship (beneficial interest)

The funds can only invest in issues which have been awarded the two highest ratings by the rating companies authorized in Mexico (Standard & Poor's, Duff & Phelps and Fitch IBCA) in long-term securities. If securities are issued in maturities shorter than a year, then the top three ratings in the scale are allowed

7. Fund Valuation

In the Mexican pension system the funds' resources flow continuously for various reasons. Worker's contributions, individuals changing managers after they earn a year of seniority, fund managers' money, [20] voluntary contributions, etc. are all money flows in and out of the pensions funds; hence, it is in everybody's best interest to have correctly valued fund prices everyday. For example, if an individual were to leave the fund after an important rise in the interest rates, and the fund price did not reflect this correctly, he/she would leave with more money than economically deserved. This would having a negative impact on the remaining individuals of the fund, the converse is also true.

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[19] CONSAR estimates based on a long-term return model.

[20] The fund managers are required to have a capital invested in the amount of 1 per cent of NAV. This money has to be invested in the same fund in which worker's assets are managed. It was thought that this was a good way to align the investing incentives of the managers and the workers. Since money in excess of 1 per cent can move freely, valuation has to be precise and CONSAR closely supervises these movements.

Even more important, a financially sophisticated individual could theoretically try to "arbitrage" the funds if they didn't reflect current market conditions. The money saved on a voluntary basis can be withdrawn after being in the fund for six months and contributions have to be accepted anytime. And as has been mentioned individuals can switch managers periodically with no cost.

For this reason, the fund managers required to mark-to-market the funds' assets everyday. Valuation philosophy may seem awkward, it is certainly more common worldwide to have non mark-to-market valuations in pension funds. But in light of the particular Mexican economic circumstances and the specific pension system design the correct valuation procedures seem to be market oriented.

In reality the funds are marked-to-model instead of marked-to-market. True mark-to-market is not done because of the characteristics of the Mexican money and bond market, which is relatively liquid only in the shorter maturities for a limited type of debt assets.

The employed valuation models are neither proposed nor developed by each fund manager. The models and the input sources are determined in the "Comité de Valuación" (the Valuation Committee). This committee is attended by all the financial regulators[21], the regulated institutions through their representative associations[22], the "Bolsa Mexicana de Valores" (Mexican Stock Exchange) and some selected independent financial industry practitioners. The institution in charge of carrying out the daily pricing (called the "Price Vector") is the Mexican Bolsa.

As it can be imagined, determining pricing models through a committee is a very inefficient and cumbersome process. In addition to this, the Bolsa is only responsible for applying the models but has no real responsibility over the quality of the actual prices. These two factors have led to a questionable condition of many of the securities prices, in particular in volatile days. Despite this, the "Vector" system has had the advantage of having a single price for all the securities.

However, the committee has decided that a possible solution would be the creation of entities whose only purpose will be the selling of securities' prices. This institutions will be called "Vendedores de Precios" ("price vendors"), once authorized will have the responsibility of creating and implementing the price models. Fund managers (also each bank or insurance company) will buy their prices from the price vendor of its preference. With this, it is hoped that the quality of the prices will be higher. Unfortunately the unified pricing which was the sole virtue of the original pricing vector will be lost and supervision of the fund managers will be more complex.

8. Risk Analysis in the Pension System

[21] CNBV (Banking and Securities National Commission), CNSyF (Insurance and Bond National Commission) and CONSAR.

[22] ABM (Mexican Bankers' Association) AMIS (Mexican Insurance Institutions Association), the AMIB (Brokerage Houses Association), and the Pension Fund Managers' Association (AMAFORE).

The supervising agency conducts market and credit risk analysis on a weekly basis and is capable of conducting it daily. It also measures and publishes performance on the funds, before commissions, after commissions and risk adjusted returns. Different sensitivity measures are also calculated.

The funds are required to be "rated" on the basis quality of the assets, management and market risks; currently this rating is conducted by the local rating agencies.[23] This obligation is extremely important in a defined contribution arrangement since individuals are responsible of their investments and getting reliable information is very costly and time consuming, therefore CONSAR decided to require a public rate. It was also important to have a third party responsible of giving this "unbiased" opinion.

Self-regulation has also been attempted, specifically through the adoption of risk standards for these institutional investors. The seminal work by Capital Markets Risk Advisor has served as a guide. The results have not been satisfactory at the moment, but the strict timetable should force the industry to converge in a brief period of time.

8.1 Credit Ratings

According to the law (LSAR) non-government securities must be rated before they are elegible for investment by the pension funds, these ratings have to done by a locally authorized rating agency.[24] The fund managers can invest in securities that are rated in the first three rating levels for short term (less than a year) and in the first two rating levels for medium and long-term instruments. This requirement is above the local "investment grade" of BBB (i.e. A & AA and above). The allowed ratings are published by CONSAR in the investment guidelines.[25]

A national minimum "investment grade" requirement (BBB) exists since 1991 for securities to be issued. A lack of institutional investors in the local market and the oligopoly of financial intermediaries has altered the ratings into a mere requirement without real market support. A proof of this is that it is impossible to distinguish a credit spread in the Mexican market. This is due to the fact that the underwriting agent could normally sell an issue in the primary market to investment vehicles at prices close to or higher than sovereign risk. These small investors are badly informed and have a hard time opposing this behavior. Furthermore, Mexican banks are currently paying around 5 per cent in money market accounts whereas Mexican Treasury Bills pay close to 20 per cent.

The minimum-rating requirement for pension funds (A & AA), which was thought to be a prudent measure due to local instability, has brought unwanted situations. Issuers engage in a "rating shopping" pressed by the fact that pension funds are major clients for local issues, particularly the sizeable ones. This has driven rating agencies into a tight spot, because aside from the IPO requirement, the only entities requiring the rates are government regulating agencies like CONSAR. The rate is still only a requirement not something that could influence pricing in any significant way. Only now the rating is higher than the previous "investment grade" limit.

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[23] Since this kind of rating is not exclusively credit oriented it is really not necessary or even desirable that the credit rating agencies conduct it. However, it was decided to do it this way due to local institutional arrangements.

[24] Until September 1999 the rating agencies that rate locally are Duff&Phelps, Fitch-IBCA and Standard&Poors. A fourth agency specialized in banks joined the market recently: Bankwatch.

[25] Investment Guidelines are written in the "Circular 15-1 & 15-2".

The situation just described is slowly changing, however some years may have to elapse before Mexico has macroeconomic conditions and institutional settings such that local ratings have the importance that they have in other more developed markets.

8.2 Credit Risk Analysis

Within this limited framework the supervising agency (CONSAR) performs credit analysis of the pension funds. Taking advantage of the ratings requirements it was decided that these would be used instead of attempting to do individual credit risk analysis of debt securities issued by different companies.

The first step was the construction of an historical database of all the instruments that have been rated in Mexico, the information was not available in any reliable form. This database includes all the ratings that Mexican locally issued securities have had, including every ratification or change in their credit rating. The information is directly supplied by the rating agencies on a monthly basis.[26] As was mentioned before, in Mexico credit ratings started to be a regulatory obligation for debt securities issued since 1991, so the historical information of ratings begins in that year.

Once the credit database was complete with the help of the rating agencies, the next step in the credit risk analysis was to estimate the probability that a security could change its rating in a period of time. These probabilities are estimated using a probability transition matrix for the rating migrations. To compute a one-period transition probabilities for every rating category, each security's rating at the end of a particular period is compared with its rating at the beginning of the same period. Intermediate rating changes within the same period are discarded.

Each one-period matrix displays all rating movements between rating levels from the beginning of the period through the end of the same period. These one-period matrices were averaged into a final transition matrix that includes all the historical information of the ratings' changes and confirmations. This average matrix is a summary of the historic information, whose probabilities represent the likelihood that the ratings listed on their first column (see table below) will change to the ones listed on their top row in the course of a period. The matrix diagonal indicates the probability that an instrument will have the same rating at the beginning and at the end of the period. The period that is used is one year.

In Mexico there are three authorized rating agencies, each one has a different rating scale, to make them comparable it was necessary to build a homogenizing table. The matrices were computed using this scale that consists of numbers from one to six, where one is the best rating level (representing a AAA) and where six represents default. A Mexican transition matrix for medium-term securities with historical information from 1991 to May 1999 is presented in the next table.

Rating Transition Matrix (1991 – 1999)
(Medium-term securities, 3 – 5 years)

[26] Ratings change in a continuous basis and at the moment they are supplied on a monthly basis but the agencies could be supplying the information as the ratings change.

	1	2	3	4	5	6
1	91.46%	1.22%	4.88%	2.44%	0.00%	0.00%
2	0.54%	87.43%	8.64%	0.68%	2.03%	0.68%
3	0.10%	3.77%	77.50%	13.74%	3.30%	1.60%
4	0.00%	0.00%	2.11%	76.80%	15.48%	5.61%
5	0.00%	0.00%	0.00%	2.54%	71.82%	25.64%
6	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%

These matrices are recalculated on a monthly basis including the information that the rating agencies provide concerning the ratings movements and confirmations that took place in the previous month. The information is classified into different terms to maturity (short, medium and long) and three transition matrices are produced.

For each one of the rated securities in which the Mexican pension funds invest, the probability of default is estimated using the rating transition matrices. The probability that a debt instrument may have a change in its rating such that it would no longer be permitted by the investment guidelines is estimated as well. The latter can be estimated by adding the probability that an instrument changes its rating to level three, plus the probability of a change to level four, plus the one for level five. For example, a security rated in level 2 has a probability of 0.68 per cent of going on default, and a probability of 11.35 per cent of having its rating changed to a level that is no longer allowed by the investment guidelines.

Since the reform started there have been no defaults or downgrades that would bring a security to non-complying ratings.

The statistical confidence level that these numbers have is doubtful because there's not enough history in the local market coupled with the ratings industry previously described. Credit risk analysis is quickly evolving and CONSAR's work can be catalogued as elementary. However, by attempting to quantify the credit risk, the pension system has given a big step forward in the direction of utilizing risk analysis tools.

8.3 Operational Risk in the Mexican Pension System

Operational Risk has recently become an important issue in world financial markets. Thus the quantification and mitigation of it is an important feature of sound risk management practice. Operational risk can be defined as the risk resulting of losses caused by events that happen within the organization or external ones that may affect the normal operation of it. These events can be errors, omissions, frauds, breaches of confidentiality, system failures and catastrophes. Operational risk is generally associated with inadequate processes and controls, human and system failures in day to day operations.

To help the participants of the Mexican pension funds system to identify this risk, CONSAR conducted in 1998 an investigation on the processes related to the investment function in the AFORES and the internal controls that had been adopted. The investigation was divided in three aggregated processes:

- Investment decision (Investment Committee)
- Buy-sell operation (Senior Investment Officer and Traders)
- Settlement and payment (Backoffice)

The research helped to identify many of the internal controls that were in place, if any, in the different AFOREs. Observed internal controls included: bookkeeping, confirmations, auditing of compliance, opportunity of market and transactions information, communication barriers, segregation of duties, money and securities transfer systems and authorizations.

CONSAR was able to get together and interview most of the people related to the investment process including the CEO. In some cases, the interviewers had the opportunity to sit at the trading desks and follow the process first-hand. The processes survey gathered information on the operational risk losses and the precise specific that generated them. All of the above helped to have a complete vision of what was needed to mitigate operational risks.

After recognizing the futility of regulating away this risk by mandating ways of undertaking particular tasks, CONSAR published a document that reflects "Best Practices" recommendations for investment operation processes. The first version of the document was issued in early 1999.

A working group with the participation of the pension fund industry was organized to discuss this document. Modifications to the document are still taking place and since many of the risks emerge from the interaction with other financial system participants. Many have been invited to make comments to the Best Practices document (Mexico's Central Bank, the centralized depository institution, banks, custodians, the Bank and Securities Commission, etc). Simultaneously these entities have been asked to contribute to this objective in whatever influence they may have in the pension funds.Based on the results of this investigation and on various documents published by BIS (Bank of International Settlements), the Basle Committee for Banking Supervision, the Risk Standard Working Group, a second document with recommendation for operational risk mitigation was released in October of 1998. This document describes the various forms the fund managers (AFORES) use to execute these processes and makes recommendations to improve settlement, controls, accountability, communication, and catastrophe recovery.

The final document still needs participants work, but at the end it will serve as guideline for future control implementation and for development of techniques for identifying and supervising Operational Risk.

9. Fund Performance

Performance measurement is a very controversial topic, the law (LSAR) states that CONSAR is the only entity authorized to officially report information related to pension fund performance. Officially released information consists of nominal and real performance before and after commissions, and is published in periodical press releases, in the bi-monthly information bulletin, and in CONSAR's own web page.[27] The fund managers may use the provided information as they deem adequate subject to the marketing regulation.

Nevertheless, CONSAR also produces "internal" reports that in addition to the previous statistics disclose performance on a risk-adjusted basis and for periods different to the ones

[27] The web page is: www.consar.gob.mx .

reported “officially”. These reports are elaborated on a weekly and end-of-month basis. It may be said that in calculating all performance measures AIMR standards are followed but absolute compliance cannot be claimed as will be explained later.

These “internal” reports are provided to the fund managers and the rating agencies twice a month. This serves the purpose of introducing those managers who don’t have internal performance analysis to the basic concepts and the trade language. For those with proprietary analysis it serves the purpose of benchmarking their own internal calculations and have comparisons of all the funds with a homogeneous methodology.

It is hoped that providing comparative information on all the pension funds allows the individuals to evaluate the performance and the expected profitability due to the different fees charged by the fund managers. This paternalistic attitude of the regulation agency is considered necessary because:

- performance-reporting task is quite difficult due to the various ways in which commissions can be charged
- only CONSAR has the information needed on a timely basis to undertake the performance reporting task
- it accomplished true comparability because the same methodology is used to report all performance numbers

It should be said that performance measures disclosed to the media were discussed with the pension fund industry prior to their release and adaptations were made based on their opinions. There are four performance measures that are used for the published and internal reports:

9.1 Return Before Fees (managers performance ex-commissions)

Each pension fund (SIEFORE) has a daily market price at which money inflows are converted to fund shares or withdrawals are paid. Unfortunately returns calculated using only the funds’ stock price, are not comparable from any point of view due to the diversity in the commission structure. Front-load commission information is not reflected on the fund price as the money is held before the money gets to the fund.

Table 5. Commissions for Fund Management

(end of August 1999)

Fund Manager (AFORE)	Flow Based[1] (% on SBC)[2]	NAV Based (% on NAV)[3]	Performance Based (% over benchmark)[4]
Banamex Aegon	1.70		
Bancomer	1.68		
Bancrecer Dresdner	1.60	0.50	
Bital	1.68		
Garante	1.63	0.50	
Génesis Metropolitan	1.65		
Inbursa	1.35		33.00
Principal	1.67	0.75	
Profuturo GNP	1.70	0.70	
Santander Mexicano	1.45	1.00	
SólidaBanorte Generali	1.60	1.00	
Tepeyac	1.50	0.15	
XXI	1.45	0.20	
Zurich		0.50	

[1] Front Load Commission based on SBC
[2] SBC: Base Salary Calculation (Salario Base de Cálculo)
[3] Annual commission charged on a daily basis
[4] Perfomance over Mexican Consumer Price Index

There are various ways to overcome the comparability problem depending on the information that is needed. The first one is calculating a return that eliminates commission distortions such that prices reflect performance had fees not been charged at all. The SIEFOREs charging fees based on NAV or performance over a benchmark affect the fund's price as opposed to those that charge a front-load only. To compensate for this, the NAV or performance commissions charged on a daily basis by fund managers is added back to the fund's assets and commission adjusted price are obtained.

This statistics is used to analyze the manager's investment strategy regardless of fee structure. It is on this data that performance attribution can be calculated to evaluate strategic and tactical asset allocation decision. A sample of all the performance reports is in Appendix D.

9.2 Return After Fees (return for the affiliate after commissions)

To evaluate the actual returns gained by the fund's affiliates, a return net of commissions for the period is calculated. However, true individual statistics can only be observed on the values calculated individually not on this aggregated way. There are many reasons for this: contributions are not homogeneous during the analysis period, some may not have contributed at

all during the period, neither the "social contribution"[28] nor voluntary pay front-load commissions, etc. The asymmetry made it necessary to assume the presence of a "representative worker" and make the calculations as a representation of the outcome for the fund.[29] The data is used to generate annual flows and proceed to estimate an internal rate of return that is a fair assessment of the return that the worker can expect at the end his/her working life.

The assumptions normally used are:

1. Earning of 3.0 minimum wages.
2. Growth in salary of 1.5 per cent annually.
3. 25 years until retirement.
4. No initial balance (which means that nothing was accumulated in the SAR-92 reform).
5. Commission structure will remain stable (e.g. seniority discounts).
6. No voluntary contributions.
7. Real returns since observed from July 1997 to measurement date remain constant in the future.

The last assumption should be eliminated and this would make a fair comparison of different commission structures. It might have been kept in order to illustrate that return does matter independently of commission structure.

9.3 Equivalent Commissions

As has been mentioned, the fund managers charge fees based on: flow (front load based), NAV (asset based) and performance. To simplify commission comparisons it is necessary to compute a standardized measure of fees. There are two kind of equivalent commissions: flow equivalent fees and NAV equivalent fees. The equivalent fees show the fee that should be charged by each fund in order to get the same return as the after fees return, assuming that the other kind of commissions does not exist. The same assumptions made to compute the after fees returns are applied.

9.4 Risk-Adjusted Return Measures

In accordance with best practices to evaluate returns efficiency given the risk taken by the asset managers, risk-adjusted performance is measured. They are calculated using benchmarks computed by CONSAR, this is done because there are few good quality benchmarks (when available) in Mexico. The risk adjusted measures computed are: the Sharpe Ratio, the Information Ratio and the M-squared measure.

10. The Three Pillars and other pension schemes

The 1997 pension reform was aimed specifically at workers of the private sector. Government employees currently participate in a DB government administered plan. Simultaneously there is the old voluntary venue for firms that provide the "standard" DB plans for their workers. Statistics on both of these are non-existent or highly unreliable because

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[28] The "social contribution" is an amount paid by the government on the basis of days worked. This was decided to enhance replacement rates for low-income earners. It is a fixed amount of 5.5 per cent of one minimum wage and indexed to the CPI.

[29] To appropriately reflect performance for each individual the statement of account reflects an internal rate of return based on the all the particular flows (positive or negative) that he/she had over a period of time. This statement has to be sent at least once a year.

disclosure has not been enforced or even strongly suggested either by the government or the local accountants' professional organization.

11. Integration of "reforming countries"

In October of 1997 in Argentina the AIOS (International Association of Pension Funds Supervisory Organs) was formed with the objective of discussing experiences in the transition of pay-as-you-go to individual capitalization (DC) pension systems. After this first meeting, there have been other five meetings in Mexico, Peru, Uruguay, Costa Rica and El Salvador, the next one will take place in Mexico next November.

The AIOS doesn't have fixed offices or personnel. It works through Technical Commissions where the member countries are represented. There are four of these technical commissions and they deal with the following topics: Investments, Supervision, Benefits and Statistics. The objective of these commissions is to give general recommendations and guidelines for the members on the issues discussed. The issues that have been discussed in the Investment commission are: investment guidelines, asset pricing and risk management and in the Benefits commission the topic of international portability has been explored.

In the next meeting in Mexico the following issues will be discussed within the investment commission: the creation of a self-regulatory best practices guide by the fund managers and the use of risk statistics to determine investment guidelines versus the use of traditional investment guidelines. Within the statistics commission the issues will be: the use of a unified methodology to calculate the funds fees and the publishing of a bulletin with comparable statistics for all the member countries.

This association now comprised exclusively by Latin-American countries is open to countries from any continent. The current members are: Argentina, Bolivia, Chile, Colombia, Costa Rica, Mexico, Peru, El Salvador and Uruguay. New members include Guatemala, Nicaragua and Venezuela. Hungary and Poland have also been invited to become members.

Appendix A

Abbreviations used in the Mexican Pension System

AFORE	Administradora de Fondos de Ahorro para el Retiro	Administrator of Funds for Retirement. Pension Fund Manager.

BANXICO	Banco de México	Bank of Mexico (The Central Bank)
BDNSAR	Base de Datos Nacional del SAR	National Database of the Savings for Retirement System. Centralized Database that allows the operation of the pension system.
CETE(S)	Certificado de la Tesorería de la Federación	Federation Treasury Certificate. The Mexican Treasury Bills are currently issued in 28, 91, 181 and 364 day maturities. Weekly auctions are normally held on Tuesdays and settlement occurs on Thursdays.
CNBV	Comisión Nacional Bancaria y de Valores	National Banking and Securities Commission
CNSF	Comisión Nacional de Seguros y Fianzas	National Commission of Insurance and
CONDUSEF	Comisión Nacional para la Protección y Defensa de los Usuarios de Servicios Financieros	National Commission for the Protection and Defense of the Users of Financial Services. It is the financial services industry ombudsman and was given legal existence in 1999.
CONSAR	Comisión Nacional del Sistema de Ahorro para el Retiro	National Commission of the System for Retirement Savings. Mexican Pension Fund Regulation Agency
FOVISSSTE	Fondo de la Vivienda del Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado	Fund for Housing of the ISSSTE
IMSS	Instituto Mexicano del Seguro Social	Mexican Social Security Institute
INFONAVIT	Instituto del Fondo Nacional de la Vivienda para los Trabajadores	Institute of the National Fund of Housing for the Workers. Provides health services for formal private sector workers.
ISSSTE	Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado	Institute of Security and Social Services for the State Workers. Provides health and pension services for most government workers
LSAR	Ley de los Sistemas de Ahorro para el Retiro	Systems for Retirement Savings' Law. Law that governs the newly reformed system (August 1996)
PROCESAR	Empresa Operadora de la BDNSAR	Database Manager of the National Database of the Savings for Retirement System.
SAR	Sistemas de Ahorro para el Retiro	Systems for Retirement Savings. Name given to the defined contribution pension reform taken place first in 1992 and in 1997.
SBC	Salario Base de Cálculo	Base Salary for Calculations. The salary definition used for Social Security and Pension Fund contributions. Flow based commissions are charged on SBC.
SIEFORE	Sociedad de Inversión Especializada en Fondos de Ahorro para el Retiro	Investment Fund Specialized in Retirement Savings. Pension Fund.

Appendix B

Diagram in Powerpoint showing the collection process.

Appendix C

Excel archive has the table with the appendix. Ownership.

Appendix D

Excel archive has the table with the appendix. Performance Reports.

Pendientes para hacer a Enero de 2000:

Punto 3.1 Defined Benefit (DB) vs Defined Contribution (DC)
Analysis of Pension Savings
Review Arun's Model
One fund vs. multifunds
Allowing to buy funds from various administrators
Danger of fund growth
Benchmarks

Punto 4 IMSS Reform in 1997.
Proceso de Traspaso Afore-Afore. Individual Transfers from Afore to Afore.
Opciones al Retiro. Options at Retirement.

- Retiro Programado. Programmed Withdrawal of Funds.
- Pension Vitalicia. Lifetime Annuity.
- Excedentes

Social Contribution (government contribution). La Contribución Social no se describió en forma adecuada y se menciona en las comisiones solamente

Voluntary Contributions. No se describió en forma apropiada las contribuciones voluntarias.

Punto 5 Risk Analysis in the Pension System
Mostrar la ausencia de una curva creditica local. Podría dentro de un apartado de Investment Environment.
Riesgo de Mercado
Explicación de los reportes de riesgo
Buyside Risk Recommendations
Asset-Liability optimization (articles from the World Bank)

Punto 6 Investment Guidelines.
Current Status (lo que existe ahora)
Investment Environment (explicar los problemas de ahora)
New Developments (corrigiendo las broncas actuales)

- Nueva SIEFORE y su filosofía

Punto 7 Fund Valuation
Sustituirlo por:
Valuation

1. Instrument Valuation (Bolsa's Price Vector, Price Vendors, etc.)
   Mark-to-Market
   Mark-to-Model

Book Value or Cost
2. Fund Valuation (Valuadoras)

Punto 8 The Three Pillars and other pension schemes.
Pensiones del ISSSTE, Pemex, CFE, etc.
Tampoco se abundó en el esquema pensionario privado existente. Documento de Marcelo Kroepfly.

Punto 9. Fiscal Considerations
La parte fiscal fué tocada sólo en forma superficial

Peru: The Private Pension System

Mr. Elio Sanchez

I. THE PENSION SYSTEM IN PERU

A. Crisis in pension systems in Peru in the 1980s

Like most countries up to the decade of the 1960s, the pension system in Peru was made up of several different systems, which granted differentiated treatment for affiliates. The creation of these systems occurred in different periods in response to pressure from various sectors of the economy.

The distortion that arose as a result of these systems forced the State to undertake a series of changes which at the start of the 1970s led to the publication of Decree Law Nº19990 which created the National Pension System (SNP).

This pension system basically featured the transfer of resources from one generation to another, where all workers paid into a common fund that was used to finance the payment of retired workers' pensions as well as sharing the responsibility of contributions to the SNP. This system included

That meant the Peruvian pension system was broken down into two regimes. The first included nearly all the young workers in the public sector and nearly all workers in the private sector according to the regulations established in Decree Law Nº 19990. The second one that included state employees, who were not included in the SNP, as was laid down in Decree Law Nº20530. This is one is a special system for public sector, and it covers a reduced group compared with the National Pension System.

Despite this reform, the pension system continued to be plagued by major problems, both structural and due to the country's situation, which plunged the SNP into financial crisis in recent years. This forced the state social security system IPSS[1], the entity in charge of pensions and state health care, to shelve pension index linking, opting instead to grant minor increases on a periodic basis to compensate for inflation.

One of the main structural flaws in the system that sparked this financial crunch was the decrease in the ratio of dependency (contributors/pensioners: how many contributors finance pensions). In effect, by late 1991 barely ran at 11 to 1, after having been 24 to 1 at the start of the 1980s. The lack of relation between contributions and benefits, as well as the lack of uniformity in the treatment of pension affiliates, explains the decrease of the indicator. Besides that, there are some other factors that influenced the overall performance and we will discuss it later.

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1 Starting June 1, 1994, the administration of the funds in the National Pension System was transferred from the Social Security System to the Office of Provisional Normalization (ONP), because government considered separating the administration of pensions from health.

As a result, there was an implicit fiscal financing commitment that was further aggravated by the growing evasion in contributions, which was a result not just of omitted payments but also their understated value.

At the same time, the system barely covered 2 million workers out of a total of 8 million-strong labor force, most of them concentrated in Lima. In fact, the structure of the labor force changed drastically over the past decade.

Meanwhile, the level of personal savings had dwindled and institutional savings were practically non-existent, as there were few instruments available in the fledgling capital markets. That meant the main source of financing for the productive sector stemmed from the banking sector, giving companies few alternatives for financing.

What is more, operations in the financial sector were concentrated in a small group of banking and financial institutions, which is why medium- and small-scale firms have seen their capacity to get access to financing squeezed. This sparked a major crisis in the national pension system, as well as the fact other sectors of the economy were also in disarray. That meant it was time to come up with a system that could meet the needs of its affiliates in terms of pensions, and which could also promote internal savings at both personal and business levels, capital markets, and the search for a competitive banking system.

However, to achieve this turnaround, the State not only had to create a new pension system but also modify regulatory aspects in issues such as foreign investment, unfettered competition, and the regulatory framework for private investment among other issues.

B. The New Pension System

As part of the structural reforms begun by the government in 1990, the State set up the Private Pension System (SPP). The system aimed to contribute to help develop and boost the pension system. The system was drawn up as an alternative to the National Pension System (SNP), as workers can now choose to which system to belong.

This new pension system is based on the freedom and responsibility of the individual, as well as the solidarity of society with those most in need, with its main characteristics running as follows:

- Individual capitalization because there is a direct balance between the pension an affiliate receives and the amount he pays into his own pension fund.
- Free choice, as the worker is free to choose the administrator (AFP) that he would wish to handle his pension funds, as well as the way he would like to receive the benefits of the system. Workers also have the freedom to switch from one AFP to another, and to select the most convenient pension.
- Active participation, the worker monitors his contributions, thereby helping the system to function efficiently.
- Transparency, because the affiliate has continuos access to be able to track what is being done with his money and the yield the funds come up with. Affiliates receive regular reports on investments being made with his funds and profit ratings of the pension funds handled by the AFPs.
- Competition, as this perfects the level of services being offered by the private pension fund system to affiliates and improves profit ratings of the funds.
- Supervision, as there is a AFP Superintendency (SAFP) designed to regulate the operations of the private pension fund system and to ensure it functions correctly.

It is important to point out that one of the main characteristics of the SPP is that of individual capitalization. This ensures that the contributions made by each worker and the profit posted by his individual pension funds will directly finance the worker's pension in the future.

According to the Law, the transfer of workers from the SNP to the SPP meant the State had to recognize the contributions made to the state system via an instrument called a *Recognition Bond*. This bond is redeemed in the moment a worker requests a pension and becomes part of the worker's pension fund and thus helps finance his pension.

The main characteristics of both systems run as follows:

PERUVIAN PENSION SYSTEMS
PRINCIPAL CHARACTERISTICS

Characteristics	National Pension System (SNP)	Private Pension System (SPP)
Type of System	Pay as You Go System (PAYG)	Individual Capitalization System
Benefits	Retirement, Disability, Survivorship relatives and burial expenses	Retirement, Disability, Survivorship relatives and burial expenses
Monthly Payments • Retirement: • Insurance premium: Disable, surviving relatives and burial expenses • Societies fees	Rate as percentage of salary: 13,0 % (general)	Rate as percentage of salary: • 8,00 % (no ceiling), until December 2000. Then will be 10%. • 1,30% - 1,44 % (with a ceiling of US$ 1 670) • 2,30 %-2,50% (no ceiling)
Retirement age	65 years	65 years
Early retirement	None	Only if participant meets legal requirements. [2]
Minimum Contributions	20 years	Those made by the worker
Maximum pension	With a ceiling of US$ 234,1 monthly	No ceiling
Minimum pension	-.-	Established by law. Needs to be regulated.
Pension index linking	Solely by Supreme Decree	In line with inflation
Tax exemptions	None	None
Others		Recognition Bond for past contributions to the SNP

[2] The requirement established is that the pension should be at least 50% of the average of the salary earned the last 120 months. Every salary must be actualized with the Consumer Price Index of Lima.

II. THE DEVELOPMENT OF THE SPP

Since the SPP was set up until today, a series of changes have been carried out to achieve an efficient and solid pension system that makes it possible to cover the expectations of its affiliates.

2.1 Legal framework

The main changes in the pension system over these first five years can be summed up in the different topics. First, the modification of the process of charging back-payments from forced collection to judiciary and executive ones created an executive title called Settling Accounts, and the establishment of a prior administrative procedure to scale down accumulated back-payments.

In July 1995, the system redistributed the structure of payments to be made by the employer and worker towards social security. At the same time, the system temporally (although still valid thorough December 1997) lowered the obligatory amount to be paid from 10 per cent to 8 per cent, and leveled out the retirement ages at 65 years in both private and state pension systems. The aim of these modifications stemmed from the need to create the conditions to be able to compete in a pension system where a state and a private system exist side-by-side.

In January 1997, a new system of AFP commissions came into effect, which eliminated fixed commission. At the same time, the system regulated the differentiated commissions, under which the AFPs can offer their affiliates discounts in commissions depending on the performance and regularity in the payment of contributions. The direct objective of these modifications was to reduce costs to make the system more attractive. The system also introduced the possibility of making voluntary contributions without being allocated to pensions, as long as affiliates have been making payments to the private pension fund system for five years or are more than 50 years old. This innovation makes end use of contributions more flexible, making them an additional alternative way if saving money on the market.

The setting of compensatory interest rates for debt owed to the private pension system in order to prevent the rates do not outstrip the limit down in Article 33 of the Tax Code approved by Legislative Decree Nº 816. The redefinition of the interest rate with incentives to employers for them to reduce their debts with the pension system. In September 1996, a procedure was established to incorporate those employers, who have outstanding payments into the Special Installment Regime (SIR). This system allowed employers to get up to date on payments over a period of three years at a benign interest rate, although higher than the pension fund profit rating. At the same time, other incentives were introduced to encourage employers to sign up to the SIR. For example, to cover pension fund payments, contributions declared in the regime will be considered as pension payments.

It is important to say that, the system created up the 1996 Recognition Bond for workers who had been making payments to the national pension system, and who decided to switch to the private pension system by December 31, 1997. Besides that, a Recognition Bond 20530 was created for all those workers who belonged to the state system to join the private pension system. The changes aimed to get more workers to sign up to the pension fund. On the issue of payments, major changes and complementary regulations were issued to tighten up the procedure of awarding pensions. This included extending the term of validity for the Temporary Invalidity Pension and Survivor Regime thorough December 31, 1997.

The Superintendency of AFP modified some main issues about the regulation of the SPP, and has published the “Texto Unico Ordenado” (TUO) and its regulations in May, 1997 and

January, 1998, respectively. These publications were the support of news rules about specific issues. The Superintendency modified the investment regulations and introduced mechanisms that favored better risk administration and a wider diversification of pension fund investment portfolios, the membership process and payments of quotas looking increase their efficiency. Also, was issued new regulation about pensions, membership, contribution, penalties, fusion and liquidation of AFP, managerial performance, information to affiliates and public in general, etc.

Finally, in June 1999 the Superintendency of AFP was authorized to inspect the payrolls and another registers of workers.

2.2 Main achievements

The system's main achievements include the following:

MAIN ELEMENTS

- *The number of affiliates signed up with the SPP reached the figure of 2 258 361 workers through end-February 2000.*
- *Through February 29, 2000, a total of 273 113 requests came in for refund bonds for a total value, including inflation, of US$ 2 745.53 million.*
- *By end-February 2000, a total of 212 859 workers have executed their right to switch systems.*
- *Through February 29, 2000, the system awarded 3 462 retirement pensions. At the same time, pensions have been awarded to 13 881 surviving relatives, while 1 056 affiliates have received pensions as disables.*
- *The pension funds, which add on their income collected each month, and the performance of these funds, were valued at US$ 2 580.7 million through February 29, 2000. Taking into account the amount that has to be deposited by law, US$ 29.6 million, the total amount of portfolios run by the AFPs runs to US$ 2 551.1 million.*
- *The average annual real rate of return performance of the funds between February 1994 and February 2000 ran at a profit ranking of 7.28 %.*
- *There are four AFPs currently operating, with four others merging with the currently operating AFPs.*
- *Through February 29, 2000, total assets of the AFPs totaled US$ 98.3 million, with net equity for US$ 48.45 million.*
- *During the first two months of the year, the AFPs have posted earnings for US$ 26.44 million, marking up a profit of US$ 11.12 million.*

2.3 Membership

From the time the AFPs started operating until today, more than 2,27 million workers have affiliated to the system, more than 80 per cent of them younger than 40.

The total only includes active affiliates, which involves those who have a valid contract with the SPP, which does not include affiliates who have returned to the SNP, deceased or those who have opted for a full-time pension. The data on the speed of affiliations reflect an average growth rate in the number of affiliates of 24.6 per cent, which is expected to be lower in the coming years, given the fact the system is entering a maturing process.

ACCUMULATED AFFILIATES in the SPP by year and AFP
(1993 -2000)

	1993	1994	1995	1996	1997	1998	1999	2000*
Horizonte	76 267	222 038	263 275	389 373	445 446	497 201	559 230	**569 123**
Integra	136 947	208 215	248 813	376 915	424 552	474 143	545 357	**557 929**
Megafondo 1/	70 576	--	--	--	--	--	--	**--**
Nueva Vida	19 674	47 356	58 455	76 946	112 094	119 856	140 350	**559 418**
Profuturo	163 107	235 665	254 346	426 297	433 218	526 857	579 721	**588 098**
Providencia 2/	5 116	--	--	--	--	--	--	**--**
El Roble 3/	77 409	106 298	120 821	--	--	--	--	**--**
Unión 4/	75 802	141 798	184 782	280 324	320 192	361 154	409 658	**--**
TOTAL	**624 898**	**961 370**	**1 130 492**	**1 549 855**	**1 735 502**	**1 979 211**	**2 234 316**	**2 274 568**

1/ Starting August 26, 1994, the AFP Megafondo pension fund was officially taken over by AFP Horizonte.
2/ Starting November 3, 1994, the AFP Providencia pension fund was taken over by AFP Nueva Vida.
3/ Starting 13, 1996, the AFP El Roble pension fund merged with Profuturo AFP.
4/ Starting November 7th 1999, the AFP Unión pension fund was officially taken over by AFP Nueva Vida..

Although the total number of affiliates represents some 20 per cent of the labor force, and that represents major possibilities for further worker affiliation, it is important to point out that part of this group is made up of self-employed workers. This implies some difficulty to achieve a higher elevated rhythm of monthly affiliations. In fact, the SPP has still not created the necessary incentives to motivate this kind of worker to sign up, nor for administrators to consider that this kind of worker is a potential affiliate, thereby focusing promotions on this target market.

2.4 Transfers

The concept of worker freedom of choice is the fundamental element of the system, and since November 1995, the possibility has been left open for affiliates to transfer from one AFP to another, complying with the requisites established in the corresponding regulations. With this possibility put to one side, what is being sought is for the AFPs to strive to post stronger results regarding the quality of service. Up to February 1999, a total of 195 687 workers transferred from one pension fund to another. However, it is important to note that the number of transfer requests has decreased notably (1,200 monthly during 1999), when the number was running at 8,000 a month up to December 1997. This change in the tendency was the result of modifications in the corresponding regulations with an eye to getting the affiliate to study his decision before transferring from one AFP to another.

It is important to mention that in February 1999, was issued a new regulation regarding to transfers of affiliates between AFP in order to deep the effects of the previous legislation for promoting a more rational choice of affiliates about that issue.

2.5 Benefits awarded

Given the fact the SPP started operations in June 1993, the number of retirement pensions issued to date is fairly low compared to the total number of affiliates. Through February 29, 2000, 3 462 affiliates received a pension, a fairly low figure. It is not expected to vary substantially in

the coming years, as if one were to analyze the age breakdown, there are just 19 502 affiliates who are to reach retirement age within the next five years.

The number of pensions to relatives awarded to date totaled 13 881 pensions, the equivalent of 47.4 per cent of pensions awarded to affiliates' children. As far as disability pensions are concerned, up to February of this year, some 1 056 pensions have been awarded.

2.6 Recognition Bond

Through July 1998, a total of 919 365 affiliates to the SPP declared they had a right to the refund bond. This information is received directly from the affiliation contracts signed by the worker at the moment he enters the SPP, which means the figure is an estimate of the potential number of bonds that will have to be issued in the future. It is important to say that after that the affiliate has to fill in a request form.

In that direction, a better estimate of the number of bonds that the State will have to issue is stated in the request forms filed at the ONP to issue these documents. To date, the number of requests totals 273 113 for a total value of US$ 2 745,53 million.

2.7 Investments

Administration of portfolios is run by the AFPs, companies whose goal is to make the maximum profit they can with the funds they manage, but within a strict security framework.

The investments made by the AFPs with the portfolios they manage are handled within a framework established by Supreme Decree 054-97-EF. This legal framework approves the new Law of the Private System of Pension Fund Administrators, as well as the corresponding regulation, approved by Supreme Decree 004-98-EF. In general terms, the regulations established a series of criteria, which seek to achieve an adequate management of risk levels taken on by investing the funds in the portfolios they manage.

MAIN REGULATION ASPECTS

- The pension funds involve equity that is independent of the administrators, which is why the AFPs are not their owners. To meet that goal, the AFPs are obligated to manage separate accounts for their operations as a company and for operations carried out with fund resources.
- To guarantee an adequate risk management, the AFPs are obligated to invest money from the funds in instruments that are duly classified by risk consultants, according to policy established in the Stock Market Law and the Superintendency. Instruments exonerated of this requisite include deeds issued by the Central Government and the Central reserve Bank and instruments that comply with certain parameters established regarding stock market performance and the issuing entity's equity.
- Maximum investment limits have been established for capital used from the funds according to the type of instrument. These limits can only be modified by the Central Reserve Bank with the approval of the Superintendency.
- At the same time, limit has been issued for each bond issue, which means that only 15 per cent of the value of the fund can be invested in debt papers and issues of a single company
- At the same time, the system imposed a limit of 25 per cent of the value of the fund for investments made in companies that belong to the same economic group.
- To monitor the proper management of funds, the expenses and commissions generated by the purchase and sales of real estate or financial instruments for the funds are paid directly by the AFPs and cannot be charged to the funds.
- In the custody of stocks and bonds, the AFPs have to hire specialized firms to handle custody so that they keep the documents deposited as a minimum 85 per cent of the value of the funds in these institutions. The contracts signed between an AFP and a custody firm are approved directly by the Superintendency.
- To ensure strict supervision of fund management, the AFPs report on a daily basis to the Superintendency, investment portfolios and impositions carried out with capital from the funds. That way, the investments are valued on a daily basis.
- AFPs have the obligation to post a certain profit each month that does not run below minimum profit rankings established regarding certain parameters established by the pertinent regulations.

Looking at results posted over the past six years in the administration of resources of pension funds through end-February 2000, the total value of portfolios administrated (that takes into account the value of pension funds and corresponding legal deposits) totaled US$ 2 580.7 million. This represents a 5.3 per cent increase over December 1999. Of the total, US$ 1 797.45 million comes from accumulated collection of payments from affiliates and transfers from the ONP for payment of refund bonds. The difference is the product of the high performance that in real terms the fund investments have rendered.

In fact, the pension funds have posted real-term gains of 7.28 per cent on average a year over the past six years (in Nuevos Soles), a figure reached after a close evaluation of profits and investment risks.

In the breakdown of investments, during the first years of the system, the main investment by the funds involved instruments issued by the Central Government and the Central

Reserve Bank, which covered 31.9 per cent of investments by end-1993, while through February 2000 these instruments more Brady Bonds accounted 8.2 per cent of investments. This radical about -turn in the breakdown of investments is due to the fact that during the early years of the pension fund system, the Peruvian stock market had seen little development due to the lack of security in the country.

However, as the value of the administrated funds reached major levels, and trust in the country blossomed, given the macro-economic performance and security they exhibited, private companies found major demand amongst the AFPs for investment instruments. Some of them are bonds, mortgage bonds and long-term deposits among others, giving them the opportunity to launch major bond issues.

That meant through end-December 1998, a major part of the funds was invested in variable income instruments (32.7 per cent), corporate, subordinate and financial leasing bonds (37.6 per cent) and long-term deposits in Nuevos Soles and US Dollars (22 per cent), while investment in Brady Bonds was 5 per cent (ceiling).

SPP INVESTMENT PORTFOLIO BY TYPE OF INSTRUMENT
(in thousands of dollars)
(1993 – 2000)

	1993	1994	1995	1996	1997	1998	1999	2000*	%
Central Government Bonds	3702	15728	10121	5782	63	0	26739	27923	1.1%
Brady Bonds	--	--	--	---	---	85868	118 922	125057	4.8%
BCRP Securities	5410	52123	119574	-,-	4 868	0	25061	58214	2.3%
Current Accounts	115	2671	-155	2286	12243	12916	15900	14744	0.6%
Long-term Deposits in Soles	16909	84039	150153	193362	260750	263311	324217	334812	13.0%
Long-term Deposits in Dollars	523	3364	7536	43678	103539	118992	196834	163105	6.3%
Financial Leasing Bonds	1905	27421	52518	46135	98409	179340	260591	278569	10.8%
Corporate Bonds	-,-	8557	55313	209756	314029	326290	393863	414225	16.1%
Subordinate Bonds	-,-	25139	74086	125851	155587	149113	116159	118192	4.6%
Mortgage Bonds	-,-	3356	3591	5453	7054	6080	4609	3703	0.1%
Voting Shares	-,-	21740	68966	228580	396065	470529	734279	845814	32.8%
Labor Shares	-,-	14867	36632	73936	129080	98316	160629	152770	5.9%
Exchange Transactions	-,-	973	196	-,-	-,-	--	--	--	--
Quotas of Investment Funds	-,-	-,-	-,-	-,-	-,-	13951	13896	14003	0.5%
Debt Papers/ Commercial Papers			4899	14380	28756	7842	6858	19154	0.7%
Securities assets	-,-	-,-	--	--	--	6 664	10 909	10 432	0.4%
TOTAL	28 565	259 977	583 430	949 198	1 510 443	1 739 212	2 409 466	2 580 717	100.0%

* Through February 2000.
Source: Annual Reports of the AFPs Superintendency.

It should be noted that investment in assets involving variable income has drawn over the limit imposed on pension fund investments, which has run at a constant since 1996, and which has accentuated since last year as a result of the fact shares that are being traded on the Lima Stock Exchange have sunk to attractive price ranges, the result largely of the El Niño phenomenon and the Southeast Asian, Russian and Brazilian financial crisis.

At the same time, the AFPs have played a vital role in developing local capital markets, which has reflected not just in the number of financial instruments issued, such as corporate, financial leasing and subordinate bonds, but also to the development of new instruments, such as quotas of investment funds and mutual funds, instruments representing securities, structured instruments and others. This has made it possible to diversify investments and risk for pension funds.

Regarding investments in pension funds by issuing entity, one can see a clear preference for instruments issued by banking entities, a tendency that has been a constant ever since the system was set up right up until today. However, in the first two years, this represented more than 50 per cent of the invested value, and through February 1999, fell to 33 per cent. This decrease allowed sectors like industrial firms and public utilities to post major gains as destination of fund investments. In this latter aspect, the telecommunications branch of the public utilities sector has become the second-most important investment preference (14.7 per cent, Energy and Telecommunications), behind banks, and followed by mining company instruments (9.4 per cent).

SPP INVESTMENT PORTFOLIO BY ISSUING ENTITY
(in thousands of dollars)
(1993 – 1999)

	1993	1994	1995	1996	1997	1998	1999	2000*	%
Government	9 112	67 851	129 694	5 782	4 931	85 868	170 721	211 194	8.2%
Banks	17 526	134 580	227 786	370 033	581 778	652 048	854 904	849 074	32.9%
Finance Houses	100	12 667	12 005	1 763	10 483	16 669	16 759	16 906	0.7%
Leasing Firms	1 805	6 792	23 906	21 126	57 517	95 349	119 990	130 654	5.1%
Other Financial Firms	-,-	-,-	31 226	42 359	80 168	69 717	160 636	165 291	6.4%
Investment Funds	-,-	-,-	-,-	-,-	-,-	13 951	13 896	14 003	0.5%
Foodstuffs Industry	-,-	-,-	21 870	111 050	112 878	106 140	90 522	91 071	3.5%
Beverages Industry	-,-	6 959	35 735	35 868	83 063	59 055	87 071	87 990	3.4%
Cement Industry	-,-	-,-	11 957	34 712	111 654	107 643	171 309	163729	6.3%
Machinery & Equipment Industry	-,-	-,-	-,-	-,-	-,-	--	33 691	33 318	1.3%
Other Industries	-,-	13 537	12 242	8 020	16 344	34 032	1 685	1 499	0.1%
Mining Firms	-,-	3 860	17 532	73 688	118 182	163 690	291 833	320060	12.4%
Public Utilities - Energy	-,-	-,-	650	40 552	73 463	124 272	164 145	217048	8.4%
Public Utilities - Telecommunications	-,-	11 225	31 931	135 803	205 696	130 817	169 889	228460	8.9%
Real Estate	-,-	-,-	-,-	4 338	9 606	26 311	22 599	18 731	0.7%
Fishing	-,-	-,-	-,-	12 615	28 246	31 543	23 093	23 059	0.9%
Various	-,-	-,-	28 304	54 025	9 015	15 653	10 817	11 290	0.4%
Others	21	2 504	-1 410	-2 536	7 420	6 454	5 906	-2 660	-0.1%
TOTAL	28 565	259 977	583 430	949 198	1 510 443	1 739212	2 209 466	2 580 717	100%

* Through March 1999.
Source: Annual Reports of the AFPs Superintendency.

It should be noted that some AFPs have already begun to acquire quotas to take a stake in investment funds, which would indicate that as more of these instruments appear, investments will diversify to a greater degree.

III. PERSPECTIVES

Although the market potential due to the characteristics of the labor market does not allow the system to sign up more workers swiftly, in the medium- and long-term, economic growth will ensure a steady affiliation of new workers, although not in high numbers.

That means the average number of affiliates signing up each month will tend to drop over the next three years, fluctuating between 5,000-10,000 workers, which will push the total number of affiliates in the SPP to more than 2.5 million at the end of year 2000.

Considering this forecast and in the expectation of real profit margins of 5 per cent a year, the accumulated value of the pension funds should reach a figure bordering US$ 3.1 billion by the year 2000, representing a major contribution to the rate of savings in Peru.

It is worth noting that over the next four or five years, a tendency similar to the one at the start of the system will occur; however, when pension funds reach significant levels of accumulated capital, the growth of these funds will be significant.

On the issue of the fiscal cost of paying out refund bonds, it should be noted that taking into account the current age structure of affiliates, the greatest impact on accounts will fall due between 2020 and 2025, which is not a significant fact in itself.

Combating Contribution Evasion: Singapore's Experience

Mr. Wu Wai Mun

CPFB's Mission

The Central Provident Fund (CPF) was set up in 1955 to provide financial security for workers in their retirement or when they are no longer able to work. Today, the CPF is a comprehensive social security savings scheme which not only takes care of a member's retirement, home ownership and healthcare needs, but also provides financial protection to CPF members and their families through its insurance schemes.

Adequacy of CPF

CPF savings should give an employee who has worked continuously for 35 to 40 years, a monthly retirement income of about 20 per cent(for high income earners) to 40 per cent (for low income earners) of his last take-home pay (subject to a salary ceiling of $6,000 a month), after paying for a home which is commensurate with his income and setting aside savings for his medical needs in old age.

CPF Contribution Rates

CPF is a defined-contribution scheme whereby the current contribution rates for employers and employees are 10 per cent and 20 per cent of the employees' wages respectively. The employer contribution rate was reduced from 20 per cent to 10 per cent in 1999 to help Singapore companies cope with the then economic recession. The Government intends to restore the rate to 20 per cent in a few years time.

Coming back to the subject of combating contribution evasion, applying the principles mentioned in the paper helps CPF achieve a low payment default rate. In December 1999 only 0.65 per cent of the employers had defaulted payment for two months.

Legal Framework

Mr McGillivray mentioned that social security schemes must have the statutory authority required for effective enforcement. In Singapore, the CPF is implemented under the CPF Act which was enacted in 1953. The CPF Act requires employers to pay monthly contributions on wages within 14 days after the end of the month.

Contributions are also payable for part-time, casual or temporary employees whose wages exceed $50 a month. Failure to pay contributions constitutes an offence and is punishable under the CPF Act. Employees are also required to contribute to CPF. The employees' share of CPF is deducted before their salaries are paid to them. Also, the CPF Act empowers CPF inspectors to check employers' audited statements of accounts and other records.

Enforcement of CPF Contributions

Mr McGillivray gave suggestions on how social security organizations can enforce compliance, many of which had already been adopted by CPF. With regard to detection and enforcement, CPF Board's computerised system detects employers who default or underpay for

follow-up action. Letters of demand are sent to these employers informing them that legal action will be taken unless CPF contributions, penalty interest and compound fines are paid within seven days. Penalty interest (calculated daily at the rate of 1.5 per cent per month) and compound fines of up to $500 per charge are imposed to deter future late payment by employers. If the employers fail to pay up, they will be charged in court within 28 days.

The Sub-Court Registry operates a night court which enables more CPF cases to be mentioned, thus speeding up the clearing of CPF cases. Upon conviction, the employers will be fined by the Court and ordered to pay CPF arrears to the CPF Board. Recalcitrant employers will be reported to the employees. Employees whose contributions are not paid are kept informed of the non-payment.

Convicted employers with cashflow problems are allowed to pay the CPF arrears in instalments by providing an acceptable guarantee on their abilities to meet the full CPF payments. Most of the late payment cases are closed within 30 days upon demand of payment. For convicted employers who still do not pay up, their companies' assets will be seized and sold to settle the CPF arrears. Bankruptcy or winding up proceedings may be instituted against the defaulting employers as a last resort.

In addition, CPF Board systematically conducts audit checks at the employers' premises. Such checks are carried out over a period of 5 years, with 20 per cent of the employers checked in each year. The 3-month contribution history of employers will be checked against the wage records. If discrepancies are found, the wage records of the prior 9 months will be checked. Employers who are found to have underpaid or omitted the CPF contributions will be required to settle the CPF arrears and penalty interest. Such employers will be checked again in subsequent years.

CPF Board also investigates complaints made by employees against employers for non-payment and underpayment of contributions. Such complaints are treated with the strictest confidentiality to allay employees' fears of possible retaliation by their employers. Employers' wage records are examined to determine if they have underpaid or omitted the contributions. Complaint cases are investigated within 3 days and closed within 60 days.

Mode of Submitting Contribution Details

To facilitate payment of CPF contributions, the CPF Board allows employers to submit their CPF contribution details electronically via the CPF Board's website or Electronic Data Interchange (EDI), or manually through payment forms. Employers are also encouraged to make payment electronically. All employers and employees paying CPF must register with the CPF Board. Each registered employer is given a unique Employer Reference Number with which all transactions made by that employer with the CPF Board are tracked. Each employee is also given a unique CPF Account Number which is his NRIC number. The names, CPF account numbers and last CPF contribution paid for each employee are pre-printed on the forms to ensure accuracy and facilitate payments. If there is no change in the CPF contribution, the employer only needs to put a tick in a box.

Public Education/Employer Services

In public education to encourage compliance, the CPF Board publishes Employer News about three to four times a year in the major newspapers. This is a newsletter for changes in policies to be communicated to the employers. Employers are kept updated on the CPF Board's services, employers' CPF obligations, the enforcement process and other related matters. CPF

matters which employers have doubts in are clarified, e.g. whether transport allowances and overtime pay attract CPF.

The Employer's Handbook which contains information on what employers need to know about CPF is sent to all new employers on an on-going basis to give them an overview of their liabilities.

Employers can obtain training on CPF liabilities and payments via the online Employer Classroom. This is a simple and interactive system which allows employers to learn at their own pace. All these are available at the CPF Board's website.

Focus group discussions with employers are held two to three times a year. During such discussions, employers give feedback on identified issues so as to enable the CPF Board to fine-tune and improve its services and procedures. Feedback is given on issues such as the ease-of-use of the Employer Classroom, the effectiveness of the CPF Board's publicity efforts and the clarity of the CPF Board's publications for employers.

Member Services

A 6-monthly Statement of Account detailing all transactions is sent to all employees. Employees are encouraged to check their statements to ensure that their employers have paid their CPF contributions correctly. They can inform CPF Board of any underpayment or omission by their employers.

Employees can also check their CPF accounts via a computerised telephone enquiry system or the Internet. The Internet service is available anywhere in the world for 23 hours daily. They can also call personally at CPF offices, which are open, six full days a week.

Harnessing Information Technology

Information technology (IT) is used extensively in the administration of CPF. The CPF Board's fully computerised systems have enhanced the efficiency of the CPF Board's operations and increased employees' confidence about CPF. Staff can readily retrieve information online. The CPF Board's website provides useful information and services to both employees and employers. The intelligent character recognition data capturing system is used to capture details in the payment forms. CPF contributions received from employers are credited into employees' accounts within 7 working days. CPF monies will be paid to a member on his 55th birthday if his withdrawal application is submitted at least seven working days before his birthday.

Self-Employed

With regard to extending CPF coverage to the self-employed, currently the self-employed have to make contributions to their Medisave accounts, whereby the savings can be used to pay for medical expenses. Self-employed persons who hold licences need to show that they are up-to-date in their Medisave contributions before their licences are renewed.

Conclusion

In summary, the success of CPF in collecting contributions from employers can be attributed to: a supportive legal environment, timely detection of evasion, strict and efficient enforcement, simple administrative procedures which facilitate payment, public education

programmes to encourage employers' compliance and employees' ease of access to information pertaining to their own CPF accounts, all of which are propounded by Mr McGillivray.

Pension Fund, Provident Fund and Social Security Systems in Thailand: Past Experiences, Obstacles, and ways to Reform

Ms. Nawaapore Ryansakul

Overview

The world is undergoing demographic changes, which will have serious repercussions on the structure of its retirement system, and Thailand is no exception.

In the developed world, the government has played the important roles in social security and welfare system by rationing tax revenue collection from the working population to support the retirees. Periods after World War II saw baby-boomers joining the ranks of working population and enhancing the government's tax revenues to the level more than sufficient to support the aged population. However, the number of tax-paying workforce has been shrinking at astonishing pace as a result of successful population control. Actuarial studies have indicated that the number of working population will not keep pace when the baby-boomers enter retirement age. Concurrently, modern medical technology enables retired population to live longer. In recognition of the demographic changes, the developed world is now moving towards more self-reliance - the World Bank recommended Multi-Pillar system.

By tradition, elderly Thais rely on their extended families for supports. However, increasingly urbanized Thai society saw the breakdown of the traditional family structure. With younger Thais' growing preference for nuclear family structure, the elderly Thai parents are increasingly expected to rely more on themselves and less on their children. As in other countries, the life expectancy of the Thais is also higher. According to the World Bank study entitled Averting Old Age Crisis: Policies to Protect the Old and Promote Growth, the number of workers to support each elderly person in 20 years' time will be half of the current 6.3.

Owing to this fact, the systematic implementation of "safety net" for future retirees is necessary for Thailand, without which the country will face a serious old age crisis within the next two decades. Although the government has begun to lay the groundwork and broaden scope of savings for retirement over the past ten years, much still needs to be done both to increase the extensiveness of the coverage and to ensure reasonable living standards for the retirees. Furthermore, the current structure still has a lot of room for improvement in terms of income, sustainability, and growth.

The objectives of this paper are to identify the problems and obstacles encountered by the Government Pension Fund (GPF) as well as private sector provident funds (PPF). Despite some unique characteristics, both are defined contribution with many shared similarities.The representative from the Social Security Office will discuss social security system on a separate paper.

It may be necessary to first provide a brief discussion on the background of the pension system development in Thailand. The paper will then discuss the problems and obstacles faced by the system as well as issues pertaining specifically to the funds GPF and PPF - before elaborating ways to reform. There are real needs to enlarge the structure to cover the vast majority of the population and to correct the imbalance of the system among different sectors or even within the same sector. There is also room for improvement to make the saving programs

achieve its real objectives of 0savings for retirement. The paper will conclude with the obstacles on operational level of fund administration and management.

Development of Pension System in Thailand

The first pension system in Thailand was instituted during the reign of King Rama V with the enactment of the Pension Act in 1902 upon the expressed wish of the King that government officials should be well-taken care of with respect to welfare and security after retirement. The Act was later superseded by Pension Fund Act in 1951.

Private Sector's Provident Fund (PPF)

It was not until 1987 that the Provident Fund Act was enacted to encourage private sector employees to save for retirement. The fund is voluntary and is established upon mutual agreements between employers and employees. The scheme is often offers by participating employers as part of the employment package. Tax incentives are also provided. The employees will receive lump sum proceeds at the time of their resignation or retirement. Segregation of the fund as separated juristic person from the company, the plan sponsor, is required.

Social Security System

The Social Security Act, which came into force on March 1, 1991 provides the legal framework for a comprehensive tripartite (government, employees and employers) social security program for Thai private sector. The scope was very limited in the early years following its promulgation. Owing to social and economic considerations, the system has to be implemented in stages with the national mandatory defined benefit old age pension (OAP) element of the system put in place only in December 1998. Thai social security scheme that is administered by Social Security Office of the Labor and Welfare Ministry, is currently in its fourth stage.

Stage 1: Effective March 1991, four types of benefits – sickness, disability, maternity, and death must be provided for employees of enterprises with 20 or more workers, effective in March 1991.
Stage 2: Effective September 1993, the coverage is extended to enterprises with 10 or more workers.
Stage 3: Effective September 1994, voluntary insurance service was introduced.
Stage 4: On December 31, 1998, old age pension insurance and child allowance schemes were implemented.
Stage 5: Unemployment benefits are to be provided on a date to be announced by the ministerial regulation.

Government Pension Fund (GPF)

Of all the laws regarding welfare and pension, the Government Pension Fund Act was the most recent promulgated, in September 1996. This is to provide defined contribution scheme to government officials. The membership participation is opened to all eligible government officials. However, membership is voluntary for officials who entered the government service prior to GPF's inception, on March 27, 1997. Eligible officials who were in government service prior to the Fund's inception were given a one-off opportunity to join GPF. At the cut-off date of March 27, 1997, about 70 per cent of the then eligible total of 1.5 million opted to join and were given a choice of saving or non-saving membership. Membership in GPF is mandatory for all eligible officials joining government service after the cut-off date and they must join as saving members.

Saving members agreed to have 3 per cent of their monthly salary withheld and remitted to the Fund, the amount of which is matched by the government contribution. Members are currently not allowed to contribute above and beyond the mandatory 3 per cent. Membership in GPF can be terminated upon resignation or retirement.

Current Structure of Pension System in Thailand

The Thai pension system is characterized by imbalances, the most notable of which is between public and private sectors. Officials opting for pension (rather than gratuity) effectively enjoy a 'SuperPillar I' scheme which gives them wage replacement rate of about 70 per cent. This may be due to the fact that the compensation package of the government officials has been oriented more on future retirement income than current salary. The seemingly high wage replacement rate is partly due to the fact of low salary structure. The original pension system, administered by the Finance Ministry of the full-scale unfunded pay-as-you-go defined benefit scheme for central and local government officials and regular employees of central government has for almost 100 years provide monthly life income after retirement for government officials. The government's obligation to pay is annually set as part of the budget.

Private sector employees are now provided with certain degree of safety net under Provident Fund Act and the OAP element of the Social Security Act. The scope of current coverage as in the case of PPF is rather narrow and the wage replacement rate in the case of OAP is still low. It could be argued that private sector employees who by and large enjoy higher current salary structure should be expected to be more self-reliance upon retirement. In theory, PPF covers all private sector employees, but in practice as less than one million workers. The OAP which, is the partially funded pay-as-you-go defined benefit is only about a year old with mandatory contribution of one per cent.

Comment: by and large, higher pay/salary structure

Although it may seem that the government officials are well taken care of with respect to their safety net for retirement, the unfunded nature the scheme implies that the ability to meet the gratuity and annuity payment is susceptible to the government future budget and incomes. In addition, the choice or the eligibility of each government officials to receive gratuity and pension has different implication with respect to the ability to maintain his/her standard of living. With higher life expectancy, a lump sum payment (gratuity) to a member as opposed to gradual annuity payment (pension) can make the former group more susceptible to the risk of the decrease in purchasing power.

Moreover, there is still the issue of imbalance among different group in public sector. Central government temporary employees are not eligible for pension or gratuity benefits, whereas local government officers are covered by original pension scheme but are not eligible for GPF membership. Central government regular employees, on the other hand, are covered by the defined benefit scheme and PPF but not GPF. Local government officers are covered by the original scheme only. Employees of other entities, namely state enterprises, some autonomous entities already established like the Bank of Thailand, SEC, and GPF as well as those which have yet to be established are provided only with PPF.

It can be seen that the Thai system contains gaps if it is measured against the World Bank's recommended multi-pillar system. Table below summarizes the types of schemes offered in Thailand.

		Mandatory Defined Benefit		Mandatory Defined Contribution		Voluntary Defined Contribution	
		Annuity	Lump sum	Annuity	Lump sum	Annuity	Lump sum
Public Sector	Central Government Officials	Original Pension	-	GPF	-		-
	Central Government Regular Employees	-	Original Pension	-	-	-	Provident Fund
	Central Government Temporary Employees	-	-	-	-	-	-
	Local Government Officials	Original Pension		-	-	-	-
	Government-related Organization Employees	-	-	-	-	-	Provident Fund
	State Enterprise Employees	-	-	-	Provident Fund	-	-
Private Sector	Salary-type Employees	Old-Age Pension		-	-	-	Provident Fund
	Wages-type Employees	Old-Age Pension		-	-	-	-
	Self-employed	-	-	-	-	-	-
	Seasonal Workers	-	-	-	-	-	-
	Family Workers	-	-	-	-	-	-

Past Experiences, Obstacles, and Ways to Reform

1. Issue pertaining to the system:

1.1 Although the government realizes the importance of providing its citizen with safety net for old, the national scheme constituting PPF, GPF and OAP at this level of implementation does not provide universal coverage. Less than four per cent of the Thai labor force contributes to the existing PPF. The issue must be addressed now, given the rapidly aging population because working age population will be expected to support growing number of retirees. According to the NESDB, the number of Thais age 60 and over will increase from the current nine per cent of the total population to 18 per cent and the number of the very old (over the age of 75) will triple by 2020.

1.2 For the majority of those who are covered, the rate of wage replacement is too low to provide them with adequate income after retirement. According to the World Bank's study cited earlier, the wage replacement rate of 60-70 per cent of the last monthly salary is defined as adequate old age income, thus the goal to be achieved. As for the private sector employees, the basic OAP offered by the government alone is not sufficient. Workers need to augment their future income with wider/more extensive participation in defined contribution schemes as well as by voluntary individual savings schemes.

2. The Missing Mechanism to Achieve Real Savings for Retirement

Although Thailand has established PPF, GPF and OAP to some extent, the system still lacks the mechanism to keep those savings for retirement only. Restrictions on withdrawal prior to retirement age, portability and gradual benefits payments which are the key characteristics to achieve such objectives are still absent in the Thai system.

2.1 The lack of ultimate restriction on withdrawal until retirement age lessens the uninterrupted flow of the contractual savings. In Singapore and Malaysia, for in stance, the governments impose the statutory requirement that mandatory savings for retirement cannot be withdrawn until the member reaches 60 years of age. In Thailand, relevant ministerial regulation stipulates that PPF must pay its member his/her eligible portion in *one lump sum* within 30 days, and the GPF within 7 days after the termination of membership. The clause, put in place 15 years ago with the intent to give legal protection to workers, in the event that employers are reluctant to release the proceeds. Despite its recent enactment, regulations applicable to GPF are very heavily based on the PPF's concept of investment and payment requirements. The protection of employees' rights over payment upon membership termination takes precedence over the legal facilitation on the uninterrupted flow of mandatory savings for retirement in case of job mobility.

2.2 Existing regulations do not facilitate for the portability of the funds. Membership must be promptly terminated upon resignation or retirement. The stipulation on payment as elaborated above makes transferability to new employer's sponsored fund not possible except in the case of prompt availability of new job. Leaving the money with the former employer's sponsored fund is likewise not possible, even if it is the willingness of the employees. It is highly probable that the proceeds when paid out of the fund will be spent instead of continually being set aside as savings for retirement in any forms.

2.3 The requirement on the fund administrator to pay its members lump sum within a short period after termination of membership including retirement and make gradual pension payment or choices of annuity not possible under the current regulatory framework. This may cause potential problems to the retirees since they may prefer to entrust the money in the hand of professional management instead of exercising their own investment decisions, which they may not possess any expertise. The problem may even be more threatening when taking the perspective of 15-20 years time horizon of income management after retirement.

2.4 GPF members are currently not allowed to make contribution above and beyond the 3 per cent of monthly salary and PPF members are allowed the maximum of 15 per cent. In the case of GPF, the percentage of government contribution cannot be made without taking fiscal constraints into consideration. This makes it all the more important that needed laws, which would complement basic the amount of saving set aside, be speedily passed. The power of compounding could not be over-emphasized - the earlier the saving, and the higher the growth of return. Basic mandatory savings, alone, at the current rate is likely to be insufficient and require additional saving and income growth at the sustainable rate.

2.5 The pool of decision making on investment policy instead of allowing for the individual choice makes the asset allocation not optimal for risk/return profile for member under different age group. Under the pool of investment policy, it is difficult

to weigh optimally between the two objectives of capital growth and preservation of capital to suit different risk profiles. Besides, economic crisis has made people all the more risk avert especially when they view the proceeds as " safety net" and thus preservation of capital alone is of utmost importance. However, they have forgotten that default and market risks are not the only two risk elements to be concerned. Inflation risk, to a very large extent, is as much a threat for fund of very long-term nature like pension fund. This implies that capital growth must be adequate to cope with erosion of purchasing power over the 15 to 20 years after retirement.

Also, the fund members comprise the people of different age group and thus different risk/return preference. The optimal portfolio should balance between capital growth oriented for young age group with long time horizon before retirement and relatively more stable income for the nearly retired. This conflicting requirement for different asset allocation profile makes pool of investment decision quite difficult. It is therefore more beneficial to each individual and fair to each member of different risk appetite to have choices.

3. Problems in Operation: Fund Management and Fund Administration

On the Industry Perspectives

Investment Management.

3.1 The limited supply of quality securities is a major obstacle for efficient asset allocation to achieve the objective of optimum balance of capital growth and preservation of capital. For defined contribution schemes like GPF and PPF, diversification is prudent and of utmost importance to protect the investment from specific risks. The lack of broad range of quality instruments due to relatively small and immature financial and capital markets in developing countries, makes it difficult especially for large funds to achieve efficient diversification. For GPF with fund size in excess of BHT 110 billion, the flexibility to adjust its positions without causing market impacts is limited.

3.2 The development of the underlying financial and capital markets infrastructure should keep pace with the anticipated huge demand by large funds in the event that laws are passed to expand mandatory savings. The problem may be somewhat chicken and eggs. It is apparent that the establishment or enlargement of the multi-pillar system will be beneficial to the country in terms of economic growth through mobilizing domestic savings and thus increases GDP, strengthen capital market, lessens dependence of the Thai economy on foreign fund to finance expansion. Nevertheless, the supply/demand gap will prevent funds from achieving the level of diversification they deem prudent. Large inflow into the pool of funds under management may find its way into unproductive or speculative investments that could trigger another crisis once again.

3.3 Inability to make cross-border investment also makes portfolios highly vulnerable to systematic risks. It's the prerogative of the Bank of Thailand to control capital outflow. For an increasingly liberalized economy, the control may need to be relaxed, in stages, after carefully weighing all the pros and cons. The authority must keep in mind that while foreign investors are reaping benefits of higher returns and diversification via investments in developing countries, Thai funds are at present legally barred from doing likewise. It should be noted that cross-border investment

helps mitigate the undesirable trait, the dominance of oligopolistic players, common to the immature markets.

3.4 Both GPF and PPF's investments are governed by rigid investment rules which require at least 60 per cent of the fund be invested in low risk instruments e.g. Thai sovereign risk securities, state-enterprises securities, bank fixed deposits, investment grade securities. A maximum of 40 per cent is allowed to be invested in relatively higher risk instruments e.g., deposit at financial institutions, mutual fund, corporate debentures and stocks. However, GPF is subject to even more stringent aggregate and individual limits than PPF. Whereas PPF could invest, in aggregate, up to 25 per cent in stocks and corporate debenture and up to 5 per cent in individual companies, GPF is limited to 10 per cent and 2 per cent, respectively. The rigid rules also leaves fund managers little maneuvering room to achieve suitable balance between capital preservation and growth.

Moreover, definitions of low risk instruments are arbitrary and outdated. For instance, deposit at bank, irrespective of each individual bank's credit rating, will no longer be regarded as low risk once the Thai government lifts the implicit sweeping guarantee on bank deposits.

Besides, there are still other inherent risks, which the authorities had not given much weight – systemic risk , market risk, inflation risk, etc. Besides, the regulation fails to take into account the current situation of high liquidity in banking system, and the incoming trend of liberalized economy, privatization, and the probability of future government surplus which will subsequently cause a scarcity of low risk instruments as defined by the regulation. As a consequence, this will create potential obstacle for large size of fund to meet the above requirement in asset allocation.

On the GPF's Perspectives

Member's Records Administration.

With over one million members in a single fund, GPF has encountered the obstacles of maintaining correct data and membership records. The lack of experiences in administrating such a big number of member records created problems unanticipated at the early stage of implementation. PPF which operates funds of similar nature has been in existence long before GPF has to contend only with member records in the thousands. It is therefore quite difficult to find a well-experienced operator in this area. Even when the fund administrator is found, the task is so challenging that it requires both time and efforts from several parties involved including GPF to work out the problems.

Administration.

As already mentioned, GPF, the largest fund in the country is subject to austere control and supervision of its operation to protect against any moral hazard. The Government Pension Fund Act (1996) stipulates that the entity be autonomous to prevent any political interference. The fund is overseen and supervised by its own Board of Directors. The board members comprise representatives from stakeholders of both employers and employees. Representatives from employer, which in this case is the government, include the diversity of all important government offices, namely, Permanent Secretary of the Ministry of Finance, the Governor of the Bank of Thailand or his representative, the Secretary General of the Securities and Exchange Commission or his representative, the Director of the Fiscal Policy Office or his representative, etc. Each category of government officials who is entitled to become members of the fund can

elect every two years his/her representative to sit on the Board. The Board also has 3 outside directors in order to comply with good governance.

Despite the autonomous legal auspices, GPF is still at the point to find what should be the optimal way of administration. As an entity set up to take care of government officials' pension, GPF board consists almost entirely of government officials, be they representatives of employer or employees. The decision making process - way of thinking and tackling issues therefore is public-sector oriented. While it is apparent that adequate supervision and control are required and desirable to create transparency and good governance, some degree of flexibility similar to those practiced by privately owned entities should be incorporated, if the fund is to be administered to the best interest of members. Pay structure must also reflect the elements of the two necessary factors.

Although the regulation allows the alternatives of in-house management, outsourcing, or the combination, the choice should be made in terms of which alternative is most beneficial to members. International experiences have shown that each of the three alternatives is good. The choice as to which is the best alternative depends on particulars of each fund and each country. Three main factors that should normally be put into consideration to justify in-house management are economies of scale, core business, and in-house infrastructure.

As opposed to the majority of individual PPF, the large fund size provides GPF economy of scale in building its owned in-house team. Not much sophistication of products in the Thai market also favors the cost-saving in having its own resources. Being a core business has rendered GPF team focus and full commitment on fund investment. Benefits derived from technological transfer and complexity of some markets in the case of cross-border investment are the supporting factors for outsourcing. Out-sourcing also provide the basis for performance comparison between in-house and out-sourced fund management. Nevertheless to achieve efficient in-house management, proper infrastructure including decision making process and a pay scale competitive with the industry must also be in place.

4. The Problems with Application of Standard in the Emerging Market

The problem is the consequence of the relatively shallow and imperfect market common to all emerging markets. Although it is undeniable that the international-accepted standards which Thailand has adopted have much merits, some application problems in the emerging markets environment must not be overlooked.

One of the good example is the lack of appropriate benchmark that could both reflects the objective of the fund and serves as a good measurement of the fund's performance. The one-year fixed deposit rate has played the dominant role as benchmark for provident fund in the past despite the fact that it is short term as contrast to the relatively long-term nature of the fund, and the rate does not reflect the necessity and benefit of diversification. (GPF is effectively a longer-term fund in nature than the PPF because of the very low turnover among officials.) Should the laws be changed in future to allow fund withdrawals only upon retirement age, the fund will become even more long term.

Then there is the problem of risk free instruments which in the past were not regularly issued since the law does not allow the government to issue government bond if there is the fiscal surplus. The OTC market, like Bond Dealer Club is recently established and benchmark available is just only one year. As yet, the market still lacks appropriate benchmark portfolio for performance measurement.

Another example is the mark-to-market standard. It is the best standard in terms of reflecting the current status of the fund, and providing fair valuation for benefit distribution to individual members. Nevertheless, it is not in absence of some drawbacks. In emerging market characterized by illiquidity and the lack of diversity and quality of supply where there exist oligopolistic players, the market is to certain extent subject to manipulation. As a consequence, price may not always reflect real market value, and sometimes it is hard to find fair value.

In addition, in the market where there are limited supply of long term instruments and also without adequate liquidity for prompt exit, it is difficult for defined contribution fund especially the very large size of fund to invest in long-term products. Under the mark-to-market standard, long-term investment cannot be treated as a buy and hold position for long-term holding, and simultaneously, the short-term performance is often hurt along with the movement of interest rate. It is quite a dilemma when taking into account the necessity to diversify in terms of maturity, market, as well as credit risks whereas there is constraint on variety of supply and cross border investment is not allowed, on one hand. On the other hand, the fund is long term in nature and thus also needs high return to combat against inflation. Without adequately liquidity for big size fund to exit, the portfolio reallocation is quite difficult and it is difficult for the fund manager to go for long term product since mark-to-market may show negative impact on short-term result as opposed to long- term performance.

Ways to Reform & Conclusion

System Reform

At the system level, it is important that the government plays a key role in laying out a master plan on pension systems to ensure adequate safety net for its citizen to prevent potential burden of aging population in the long run. The multi-pillar as defined by the World Bank has its merit as the three pillars form an integral pension systems needed to provide individuals with adequate income after retirement.

Although certain pillars have already been in existence in Thailand, they are not extensive enough to cover the majority of the population. There is still room for improvement in terms of coverage, sustainability, and proper balance among sectors. Fairness of rationing constrained budget is a factor that should also be taken into consideration. For a long time, the secured retirement income has long served as an incentive that differentiate the government pay scales with those of private sector. The government officials have traded off low current income with relatively more secured future pension and welfare benefit. The employees in private sector, on the other hand, have earned high current income but have to rely solely on their own savings for retirement. However, the security net in some form has been in existence for some employees in the private sector as well. The demarcation between the trade-off of current and future income has thus become blurred. The government should take into consideration the issue of fair rationing when contemplating about pension reform. This is in order to create fairness of the pension system with respect to implication on ability to retain good personnel in both government and non-government sectors.

It is a positive sign that the government's efforts are now being further pursued, with the assistance from ADB. It is quite natural to see some resistance from parties involved since pension programs usually incur current cost but with future benefit as the trade-off. The argument will be especially strong in time of economic crisis. Therefore, it calls for the government to carefully launch the campaign and well balance the constraints and benefits during the hearing and the drafting of legislation for a successful reform. It is likely that the government may have to sacrifice some current tax revenues to induce incentives for program participation.

However, these foregone current incomes will be more than justified by less future obligations. The more each individual saves, the more ability of his/her self-reliance when retired, and thus the fewer burdens on the government's future budget. This benefit will, in turn, reflect to the society as the whole. Everyone benefits

Legislation Changes

As for the problems and obstacles of the schemes already in existence, most of the problems have to deal with the legislation. As Thailand is now in transition of demographic changes and financial liberalization, the regulations must also respond properly to these changes. Some past concerns are no longer in this dynamic world, but new concerns must be carefully anticipated.

For PPF, the supervisory authority, currently the SEC, is now under the study to replace the pool of decision-making on investment with individual member's choice of portfolio. However, the concept is only at very preliminary stage and it will be sometime before it could be materialized. This is also in line with what GPF is contemplating since it will best benefit individual member if he/she can have his/her own choice to suit risk/return profile different among age group. Nevertheless, it requires the substantial amendment of the Ministerial Regulation No.4., as well as educational campaign for members in preparation for good understanding of choices and nature of risks involved. At the initial step, GPF has presently undergone the first amendment of the said regulation, but it only involves slight changes due to urgency of some issues. The recent amendment focus on enhancing more room for certain category of investment that considered low risk to temporary respond to the constraint of diversity of quality of supply for such a large fund like GPF.

Additional savings, uninterrupted saving scheme, graduated benefit payment instead of one lump sum, restriction on withdrawal unless retirement, additional tax incentives for voluntary savings are issues for further reform. If amended, they will enhance the current scheme to the best benefit of the members, and simultaneously relieve future burden of the government and the society as the whole.

Social Security Systems in Thailand:

Past Experiences, Obstacles, and Ways to Reform

Ms. Jiraporn Kesornsutjarit

1. Demographic Structure

Currently, the population in Thailand is about 62 million. It has increased from 55.8 million in 1990 to 60 million in 1996. By 2020, the population will have grown to approximately 70 million.[1] For the year 1999, the population was approximately 61 million with 49.84 per cent male and 50.16 per cent female.

About 33 million people (54.1 per cent of total population) were in the labour force. The agriculture sector accounted for 14 million people (43 per cent of total labour force), followed by 11 million in services (33 per cent of total labour force) and 6 million (19 per cent of total labour force) in industry. In 1999, the employed population was about 31 million which accounted for 94 per cent of the labour force.

Due to the successful implementation of family planning program, the rate of population growth in Thailand has decreased. The birth rate shows a continuous decline from 20.26 per 1,000 people in 1990 to 17.04 per 1,000 people in 1999. By 2020, it is estimated to decrease to 12.72 per 1,000 people. The total fertility rate was 2.26 in 1990 and rapidly fell to 1.96 in 1999 and is predicted to fall further to 1.76 in 2020.[2]

While the majority of the population is of labour force age, the proportion of those aged 60 years and over continues to increase. The percentage of the elderly in the overall population was 7.22 in 1990, 8.9 in 1999, and is expected to increase to 15.28 in 2020. This increasing trend is largely caused by improvements in average life expectancy. During the period 1990 to 1999, life expectancy at birth increased from 65 years to 67 years for males and from 70 years to 72 years for females. By 2020, it is projected to extend to 70 years for males and 74 years for females.

The dependency ratio for the old-age group (age 60 years and over) which increased from 11.61 per cent in 1990 to 13.67 per cent in 1999, is projected to increase further to 23.51 per cent by 2020. This indicates that there will be a greater burden on the labour force to care for an aging population.

2. Economic Growth and Levels of Income

Thailand's economy grew rapidly during the 1980s. The average GDP growth during the first half of 1980s was 5.5 per cent per annum and was considerably higher (around 10.3 per cent per annum) in the second half of 1980s. These growth rates decreased slightly each year from 1990 to 1995 and dropped sharply from 8.9 per cent in 1995 to -10.4 per cent in 1998 during the period of the economic crisis. It was estimated that growth rate was 4.1 per cent in 1999. As population growth has slowed down, the growth of the economy in 1980s has translated into

[1] Subcommittee on labour force, employment and unemployment estimation (NSO, MoL, TDRI).

[2] The National, Economic and Social Development Board.

higher per capita GDP growth rates in 1980s and the first half of 1990s: over 3 per cent in 1980s and over 6 per cent in the first half of 1990s. The drop of GDP in the second half of 1990s lead to the decrease in per capita GDP in 1997 and 1998. It is estimated to have increased again in 1999. GDP at current prices was US$182 billion in 1996 and it was estimated at US$112 billion in 1998 and projected to be US$134 billion in 2000. The projection of per capita GDP is US$2,168 for 2000.

3. Existing Social Security System

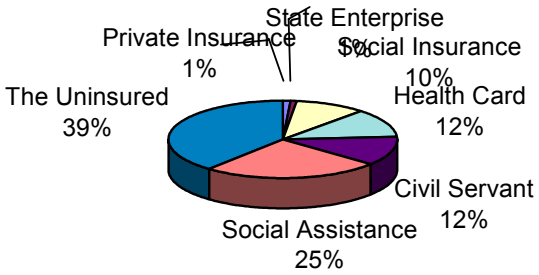
The standard definition of social security adopted by the ILO is "protection which society provides for its members through a series of public measures against the economic and social distress that would otherwise be caused by the stoppage or substantial reduction of wages resulting from sickness, maternity, employment injury, unemployment, invalidity, old age and death; the provision of medical care; and the provision of subsidies to families with children." This definition is essentially based on the ILO Social Security (Minimum Standards) Convention (No 102), 1952.

It is estimated that the various social security systems in Thailand provide protection to around 61 per cent of the total population.

Among the 1999 population as a whole :

- 25 per cent receive health care protection from the Social Welfare Health Scheme provided by the Ministry of Public Health to :
  - low income families (a household with income less than 2,800 Baht per month or a ingle person with income less than 2,000 Baht per month)
  - the elderly (people aged 60 or over)
  - children under 12 years old.
- ! 10 per cent of this group (those working in enterprises with 10 or more employees) are protected by the social insurance system, work injury scheme and the provident fund. 12 per cent of this group (civil servants and their dependents– spouse, parents, children under 20 not exceeding 3 children–and government pensioners) are protected by the Civil Servant Benefit Scheme.
- ! The remaining 12 per cent of this group are the rural population who are neither covered by the Low Income Scheme of the Ministry of Public Health nor the Social Insurance system, and who hold the Voluntary Health card provided by the Ministry of Public Health. One card protects the holders and their families (in total, up to 5 persons per card).
- ! The state enterprises scheme offers protection to 1 per cent
- ! Private insurance provides protection to another 1 per cent
- ! The uninsured group which accounts for 39 per cent of the population can receive other several welfare programs.[3]

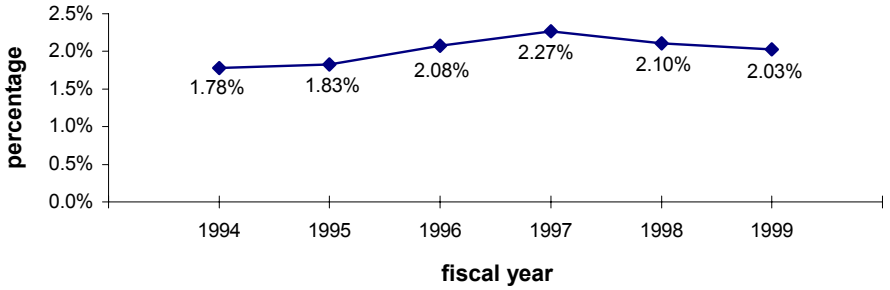
[3] Tangcharoensathien Viroj, Characteristic of Health Insurance and Welfare Scheme in Thailand, 1999



Percentage of Thai Population in Social Security system, 1999

The social security public expenditure in Thailand has continued to increase year after year reaching 107,190.7 million Baht (US$3,417.0 million) in fiscal year 1997. It fell to 98,118.8 million Baht (US$2,371.7 million) in 1998 and again to 96,651.1 million Baht (US$2,563.0 million) in 1999 due to the economic crisis in Thailand.[4]

Percentage of Total Social Security Expenditure compared to GDP at current price



4. Development of the Social Insurance Scheme in Thailand

[4] Bureau of the Budget, Thailand's Budget in Brief, Fiscal Year 1999.

The earliest attempt to establish a full-fledged social insurance scheme in Thailand dates back to 1932, set in the context of a national economic policy. However, the subsequent political environment prevented this program from being implemented even when the first Social Security Act was passed in 1954.

In 1973, the government put the employment injury insurance into force by the Announcement of the Revolution Party No. 103, which offered protection to workers for work-related sickness and injury. In 1990, the Social Security Act was passed and the Social Security Office was established by the end of that same year. It later became part of the Ministry of Labour and Social Welfare.

The scope of protection offered by the Social Security Scheme is growing, both in terms of the number of people who are protected by the scheme, and the range of protection that they are offered.

The Social Security Act initially covered enterprises with 20 or more workers in 76 provinces throughout the country. In 1993, the scheme extended to cover enterprises with 10 or more workers.

Since its inception in 1990, with technical assistance from the ILO, four types of benefits: sickness, maternity, invalidity and death have been provided to the insured persons funded with tripartite contributions of 1.5 per cent from each of employers, employees and the government.

In 1994, many articles of the Social Security Act were amended resulting in the enactment of the Social Security Act (No. 2). At the same time, it was decided that the date of implementation of the old age pension and child allowance benefits would be postponed from 1996 to 1998. The old age pension scheme came into force on 31 December 1998. It will be discussed in detail later in this paper.

5. The Current Pension Systems in Thailand

With the changing global demographics, the proportion of old people in the world population is rapidly growing and the requirement to address income replacement after retirement is increasing. Governments in many countries are concerned with all these phenomena and are seeking solutions. The global awareness of this matter is reflected in the many instances of pension reform–aimed at the dual objectives of making pension systems provide for the basic needs of the elderly whilst preventing too heavy a burden to people in the society and the public sector. Thailand is not alone in facing these same problems.

The proportion of the elderly in Thailand is growing rapidly. In 1999, the Thai government launched a study on Pension and Provident Fund Reform in Thailand with the assistance of the ADB. The study proposed guidelines for the provision of sufficient income to the elderly during their retirement with the dual conditions that :

- all employees have to be protected by the social insurance system (not just those who work for companies with 10 or more employees)
- the pension system has to be financial sustainable in the long run and also be enable to enhance growth and stability of economic system.

At present, the old age pension provided under the social insurance program is not the only scheme that provide incomes to the elderly. There are various schemes that provide income to the elderly:

5.1 Monthly Subsistent Allowance

The Department of Public Welfare provides a 300-Baht monthly-subsistent allowance to the elderly who live on their own, through a means-tested social assistance system. In 1999, 1,101.6 million Baht (US$29.2 million) was provided to 400,000. 763.2 million Baht (US$20.2 million) was funded from government budget with a further 338.4 million Baht (US$9.0 million) from the Miyazawa Loan.[5]

5.2 Private-Sector Provident Funds (PPF)

The creation of provident funds is by voluntary agreement between the employers and employees in accordance with the Provident Fund Act, 1987. Benefits must be paid in lump sum to the employees in case of retirement, death, termination of employment or resignation from the fund. At present, the Ministry of Finance is the regulator and is soon to transfer regulatory authority for private provident funds to the Securities and Exchange Commission (SEC).

Employee's contributions must be at least 3 per cent of wages but must not exceed 15 per cent of wages. Employer's contributions must not be less than the employee's contributions.

In Thailand, Provident Funds are always established in large enterprises. As of December 1999, they covered 1.03 million workers in 4,005 enterprises. In 1999, the total value was estimated at 182,735.7 million Baht (US$4,845.8 million), managed by 30 fund managers.

5.3 State-owned enterprises' provident fund

At present, 54 of the 64 state enterprises in Thailand provide a provident fund coverage according to the Provident Fund Act, 1987. The total state enterprise's provident fund, as at the end of 1999, is valued at 10,213.6 million Baht (US$270.8 million). Currently, there are about 211,000 state enterprise employees covered by the provident fund. Under this scheme, the employees of the state enterprises a receive lump sum from the provident fund, not a pension. The formula to calculate lump sum payment is similar to that used for government officials. However, those employees can use the lump sum to buy annuity from private insurance if they so wish.

5.4 Government Permanent Employees' Fund

This fund was established according to the Provident Fund Act, 1987 for permanent government employees who are not government officials. The permanent government employees make voluntarily monthly contributions at a rate of 3 per cent of salary, and the government matches these contributions. When the employees retire, they will receive two benefits. The first is a gratuity from the government budget in accordance with the Ministry of Finance's Regulations on Employees' Gratuity 1976. The second benefit is the repayment of their accumulated share of the fund plus interest. As of February 2000, there are 120,000 permanent government employees covered by the fund. The total value of the fund, as of the end of 1999, is 1,488.23 million Baht (US$39.5 million).

5.5 Government Pension Fund (GPF)

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[5] Statistic and Report Section, Technical Studies and Planning Division, the Department of Public Welfare, 2000.

Every government officer (except political officials) is covered by the Government Pension Fund. This system came into force on 27 March 1997. Government officers who worked before 27 March 1997 can voluntarily become members of the fund. If they do not select this system, they can become members of the old PAYGO system.

The government officers who join the new plan have to pay 3 per cent of monthly salary and the government will match their contribution, as well as providing an additional contribution of 2 per cent of salary. Those who have worked for 25 years are entitled to the choose from the options below:

1. Pension paid from government budget, contribution from employees and government, compensation from government plus associated interest.
2. Gratuity calculated from final months salary multiplied by the number of working years that the person was paid from government budget, and the contributions from employees and government plus associated interest.

As of December 1999, there are 1.12 million government officers covered by GPF with the fund value at 117,406.39 million Baht (3,113.4 million).

5.6 Old Age Pension Fund for Private Sector (OAP)

A compulsory old age pension scheme for private sector employees was introduced in Thailand on 31 December 1998. The scheme is defined by the Social Security Act 1990 amended by Social Security Act (No.2) 1994 and Social Security Act (No.3) 1999 and is administered by the Social Security Office.

6. Old Age Pension System (OAP)

6.1 Coverage

The insured persons covered by the OAP system are the employees in those enterprises with 10 or more workers. They are the same group who are entitled to receive the other five benefits described in the Social Security Act. As of January 2000, the scheme covers 5,759,517 workers in 101,635 enterprises.

The Social Security Act is not applicable to:

1. government officials and regular employees of the central administration, provincial administration and local administration except for temporary employees,
2. employees of foreign governments or international organizations,
3. employees whose employers' office is in the country but are being stationed aboard,
4. teachers or headmasters of private schools under the Private School Law,
5. students, student nurse, undergraduates or apprentice doctors who are employees of schools, universities or hospitals,
6. other employees as prescribed in the Royal Decree.

6.2 Contributions

The Social Security Act defines the combined contribution rate for old age pension and child allowance to be collected from 3 parties: employer, employee and the government, at a rate which altogether does not exceed 9 per cent of salary. However, the actual contribution rate for the old age pension has been set at 2 per cent (employer 1 per cent, employee 1 per cent) for 1999, and will rise to 4 per cent (employer 2 per cent , employee 2 per cent) in 2000, and from 2001 will rise again to 6 per cent (employer 3 per cent, employee 3 per cent). All of these

contribution rates are subject to a ceiling of 15,000 Baht per month or 180,000 Baht per year. The Social Security Act 1999 also provided for the maximum and minimum wages used to calculate contributions to be adjusted using Ministerial Regulation, without needing to change the Act directly.

6.3 Eligibility

The qualifying conditions for receiving a full pension are:

1. The insured person must reach 55 years of age and quit their job
2. The insured person has paid contributions for not less than one hundred-eighty months irrespective of whether the period is consecutive.

6.4 Replacement rate

The pension scheme offers a modest pension under a partially funded defined benefit approach. The insured persons who work more than 30 years will receive a replacement rate of 30 per cent of their average wage over the last 60 months. This rate consists of 2 components :

1. A flat component corresponding to the 180 months minimum period of contributions required to be eligible for pension. The corresponding flat replacement rate is 15 per cent of the last 60 months of average wage.
2. An earning-related component corresponding to each additional 12 months worth of contributions, made above the required minimum of 180 months. Therefore, 1 per cent is granted for each additional 12 months of participation.

The reason that the SSO selected a defined benefit plan is to guarantee the pension amount as a proportion of the salary of the insured persons during their working life, and to provide income redistribution. Workers who contribute for less than 15 years will always be paid the sum of their contributions, if they contribute more than 1 year they will, in fact, be paid the sum of their and their employers' contributions.

If an insured person dies before entitlement to pension or dies within 60 months following the date of entitlement, the dependants will receive a lump sum payment.

Under the law, no pension will be payable until 2014. At that time, the annual cash surplus of contributions over expenditures is estimated to be approximately 1.5 trillion Baht.

The contributions paid to the Social Security Fund by employers and employees are tax deductible, and the benefit payments are not taxed.

6.5 Minimum pension

It was stated in the Ministerial Regulation relating to the Social Security Act 1990, that the amount of pension must not be less than a certain minimum pension. This minimum rate is prescribed by SSO based on a consideration of the economic situation at the time of payment.

6.6 Investment of Pension Fund Assets

The current investment guidelines for the Old Age Pension Fund comply with the regulations of the Social Security Sub-Committee on Investment. The Sub-Committee on Investment consists of employers, employees, government representatives and highly experienced investment experts. This Sub-Committee provides recommendations to the SSO, who then

request approval from the Social Security Committee, in compliance with the Ministry of Finance guidelines.

The framework for the investment of the OAP fund follows the investment guidelines of the following four SSO administered benefits: sickness, maternity, invalidity, death. The proportions and principles of investment are as follows:

1. Investment with very low risk–at least 60 per cent of the Fund must be invested in the following manner :
   - 1.1 In State Enterprises or commercial Banks
   - 1.2 In government bonds, treasury bills, or state enterprise bonds
   - 1.3 In debentures issued by Government, state enterprises, the Industrial Finance Corporation of Thailand (IFCT) or the Small Industrial Finance Corporations (SIFC)
   - 1.4 Debt instruments which are as secure as the fixed deposits of the commercial banks in which the Social Security Office invests

2. Investment with low risk–at least 30 per cent of the fund can be invested as follows:
   - 2.1 Debt instruments issued or aval by a finance company or a finance and securitiescompany (not exceeding 15 per cent of the Fund)
   - 2.2 Common stock of Krung Thai Bank, Bang Jak Petroleum Company and privatized state enterprises of grade AA; not exceeding 3 per cent of Fund for each business and not exceeding 24 per cent of equities for each business; altogether not exceeding 15 per cent of the Fund.

3. Social investment in projects which generate indirect benefits for insured persons, to not exceeding 10 per cent of fund. For instance;
   - 3.1 Renting and Leasing Project of the Housing Authority of Thailand
   - 3.2 Loan for Working Abroad
   - 3.3 Loan for enhancing liquidity of the enterprises

As of 31 December 1999, the OAP fund contained 6,870 million Baht (US$182.2 million) which is equal to 0.13 per cent of GDP (GDP at current prices in 2000 is 5,092 billion Baht). At the end of 1999, the annual return on investment of the OAP fund was 5.43 per cent. The proportions of investment were as follows;

1. State Enterprises / Commercial Banks	49.1 per cent
2. Government Bonds	32.0 per cent
3. State Enterprises Bonds	5.8 per cent
4. Debentures issued by the Industrial Finance Corporation of Thailand	13.1 per cent

The SSO is currently in the process of hiring a financial consulting company to develop investment and fund management guidelines for the OAP fund. The guidelines for OAP fund investment will remain the same as the regulations of the four benefits (as described above) until the new investment guidelines are developed by the consulting company.

Plans for improving the fund investment and fund management are as follows:

1. Hire a financial consulting company to develop a fund management system, investment policy, control mechanisms and enhance the potential of personnel.
2. Hire professional fund managers to invest some parts of the Social Security Fund.

3. Hire investment advisors to formulate an inspection system and monitor the performance of fund managers.
4. Hire custodians to perform fiduciary duties on the assets and interest of the fund.

6.7 Administration

The Social Security Office is a Department of the Ministry of Labour and Social Welfare. It is led by a Secretary General whose position is equivalent to a Department Director General. SSO has its headquarters and also 7 branches in Bangkok, with a further 75 provincial offices giving it a local presence in each province.

A tripartite Social Security Committee composed of representatives from employers, employees, and government controls the policy and implementation of social security administration according to the Social Security Act. An Appeals Committee decides upon appeals made against decisions of the administration. Various sub-committees are appointed by the Social Security committee to focus on specific areas, for example, the sub-committee on investment.

The number of staff as of 2000 is 2,309. This number represents both civil servants and permanent employees. In addition, there are 2,228 temporary employees working in SSO offices all over the country.

Article 24 of the Act stipulates that the administration cost should not exceed 10 per cent of the annual contributions. In 1998 to 1999, SSO spent between 4-5 per cent of contributions for administration.

6.8 Obstacles

An initial obstacle to operating the OAP scheme was caused by the economic crisis at the end of 1998. The crisis hit just as contribution collection was being initiated. As a result of the crisis, the contribution collection during that time represented a particularly heavy burden for employers, employees, and the government. In response, the Ministry of Labour and Social Welfare, via the SSO, announced a temporarily reduced contribution rate. They also announced that the rate would increase gradually, based on a projection that the economic situation will be improved by 2001. Therefore, in 1998-1999, the contributions were collected at 1 per cent of wages from each of employers and employees, with a rate of 2 per cent set for 2000 and 3 per cent for 2001 and beyond.

SSO is responsible for two high-volume data processing areas–contributions and benefits. It must collect and maintain personal and financial information securely over very long periods of times. The processing of contributions alone involves nearly 6 million transactions per month.

The current contribution process is one characterized by high volumes of personal, employment, and financial data that all need to be up-to-date each month. The processes are all heavily reliant on the accuracy of information provided by the employers, and also on the need to keep an individual's contribution history up to date on a monthly basis over their whole working lives. Each contribution is recorded each month. This means a workload of approximately 6 million transactions per month, or 72 million transactions per year in routine processing alone. SSO encourages employers to provide contribution information on disk, but a very small percentages of employers choose to send information on disk.

It would be prudent to make significant improvements to the contribution process before the scope of the fund is increased. This improvement is made all the more crucial with the introduction of the Old Age Pension Fund which places particular demands on the management of long-term liabilities for paying pensions. All other SSO administered benefits are predominantly short-term in nature, which also sheds light on why different investment strategies will be needed for the pension fund.

SSO is neither totally civil service nor private sector in terms of the nature of its business. As a government organization subject to staffing and spending regulations, it is difficult to recruit high quality staff from the private sector for specialist functions where public sector skills are lacking, such as fund management and information technology.

6.9 Proposed Scheme Modification

The SSO has not paid any pensions at this time because the old-age pension scheme is still within the first 15 years of its existence. However, the SSO realizes that the current pension system has some limitations and it is necessary to modify the scheme as follows in order to ensure that the fund will be able to meet its long term liabilities:

1. Retirement age

The current retirement age specified by the Social Security Act is 55. The age of 55 is very low by international standards. Moreover, life expectancy of Thai population is increasing at an ever increasing rate. If nothing is changed, this will result in an old age pension fund that is unsustainable in the long run. The retirement age at which full benefits could be received should be gradually extended.

2. The old age pension benefit rate

According to the Ministerial Regulations, the old age pension is paid at the rate of 15 per cent of the average wage of the last sixty months for those insured persons who have paid contributions for 180 months, plus an additional 1 per cent for each additional twelve months of contributions above 180 months. This rate is below the minimum standard specified in the ILO Social Security (Minimum Standards) Convention, 1951 (No. 102). If the insured person has made 30 years worth of contributions, the old age pension benefit rate would be equal to only 89.3 per cent of poverty line.

3. Coverage

The old age pension system according to the Social Security Act does not cover all workers in the labour force. At present, the Social Security Act covers only those enterprises with 10 or more employees. This represents just 18 per cent of the employed labour force. Therefore, the SSO plans to extend coverage to all enterprises (regardless of the number of workers) by the end of 2001. This will bring a further 3.62 million workers into the social security scheme. Altogether, the scheme will cover 9.54 million workers (1,239,124 enterprises) which represents 30 per cent of employed labour force.[6]

As a result of the limitations mentioned above, the SSO has launched a study and acturial valuation to make the pension system sustainable in the long run and also to ensure that it will provide a pension which is sufficient to guarantee a certain standard of living. The study has been done to seek the impact of increasing the retirement age from the age of 55 to 60 and increasing the pension for those insured persons with a minimum of 15 years of contributions from 15 per

[6] Estimation, Technical studies and planning division, Social Security Office, 1999.

cent to 25 per cent. For the acturial analysis of the old age pension fund, the SSO uses the acturial program written by the World Bank Actuary (Mr. John C. Wilkin). Details about the funds sustainability are as follows:

6.10 The Old Age Pension Fund Financial Status

Scenario 1

This scenario is in accordance with the current Social Security Act. The contribution rate for employer and employees totals 2 per cent for 1999, 4 per cent for 2000 and 6 per cent from 2001 with at least 15 years of contributions being required for a full pension. The retirement age is 55 and the pension rate is equal to 15 per cent of average wage of the last 5 years plus 1 per cent per additional 1 year of contributions above 15 years.

The results of actuarial analysis showed that the fund reserves will be sufficient for 51 years from 1999 and by 2042 the fund ratio will have reached the 500 per cent level.

Scenario 2

In this scenario, the retirement age and the pension rate are changed but the contribution rate and years of contributions are still according to the Social Security Act as Scenario 1. The retirement age has been set at 55 years during 1998-2003, 57 years during 2004-2009 and 60 years from 2014. The pension rate will be adjusted to 25 per cent of average wage of the last 5 years plus 1 per cent per additional 1 year of contributions above 15 years.

With respect to the gradual adjustment of retirement age increasing from 55 years to 60 years in 2014 which is the first year of pension payment and the adjustment of pension rate increasing from 15 % + 1 % to 25 % + 1 %, the result shows that the financial sustainability of the fund is not much different from Scenario 1. The fund reserves will be sufficient for 52 years and by 2043 the fund ratio will have reached the 500 per cent. Therefore, to make the fund sustainable for longer, the contribution rate should also be increased.

7. Pension Reform

In Thailand, the Old Age Pension under the Social Security Scheme provides the first tier of retirement income protection. The OAP defined benefit plan is a public program of social insurance which assures minimum living standards. It aims at poverty alleviation while the defined contribution Private Provident Fund system promotes saving and serves as the third tier.

Multipillar systems on a mandatory or contractual basis already exist in advance countries such as Australia, Denmark, Netherlands, Switzerland and United Kingdom and most of the recent reforms in Latin America and eastern Europe are based on this approach.[7]

A multipillar approach has several distinct advantages. It allows a distinction to be made between poverty reduction and income replacement goals.

For the pension reform in Thailand to be based on the establishment of multi-tier system with a mandatory publicly or privately defined contribution scheme as a second tier, it will first

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[7] Robert Holzmann, The World Bank approach to pension reform, International Social Security review, Vol. 53, No. 1 (January-March 2000), p. 20.

be necessary to obtain consensus among economists, financial experts and all stakeholders. In particular, the following criteria should be considered:

7.1 Political feasibility

The politicians have to understand and support the need for the second tier. From the previous experience in Thailand when the first Social Security Act passed in 1954, one can see that without public support, politicians could suspend the scheme from implementation.

7.2 Economic situation and ability to pay

The findings of the ADB/NESDB study entitled, "Impact of Economic Crisis on the Standard of Living in Thailand by N. Kakwani and J. Pothong, 1998." indicate that the economic crisis has had a particularly severe impact on the small and medium size enterprises. Therefore, mandatory schemes can create a burden to employers if they have to make significant contributions. It was found that 10 per cent enterprises delayed their contribution payments. The OAP has as one of its objectives, to provide income support to the elderly insured persons with very low contribution rates. This attempts to reflect an acknowledgement of the financial difficulties faced by the enterprises during the current economic crisis. SSO are particularly aware that the plan to introduce unemployment benefits in the future will add an additional burden to both employees and more particularly employers, who have to contribute for every employee.

The burden of the first and second tier compulsory savings can lead to increased non-compliance of employers, which will impact all SSO funds

Apart from an assessment of ability to pay, the question of compliance should be considered. In democratic world, voluntary compliance is a critical success factor.

7.3 Coherence with social protection, economic and labour market policies

As mentioned earlier in the paper, social security protection is only available to certain sections of the Thai population. 39 per cent of total population are uninsured. Questions to consider are, "Does the scheme only provide protection to the well-off members of the population?" "Is it coherent with the overall economic and labour market policies within Thailand?"

If the insurance approach is given priority over the welfare and assistance approach, the poor and the inactive members of the population may be penalized. If, on the other hand, the welfare and assistance objective is given higher priority, then the rest of the population including the middle class may doubt whether it is to their advantage to participate in a scheme that they are unlikely to benefit from. Unless the right balance can be reached on these basic questions, how can there be any agreement on the technical content of the reform? [8]

7.4 Institutional capacity, management and operation of pension scheme in reality

The issue surrounding the development and reform of pension schemes largely reflect the difference between the ideals expressed in this normative view of the world and what has actually

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[8] Karl Gustaff Scherman, President ISSA, The future path of Social Security, Social Security reforms and economic and social policy. Social Security Documentation, Asia and Pacific series No.21, 1997, ISSA-Manila, p. 227

been achieved in practice. The implementation of these principles in terms of design, management and operation of pension schemes can be difficult in reality.[9]

From SSO's experience, it appears that the amount of data to be managed is increasing significantly. A more systematic approach is needed to deal with incorrect data, under-reporting of income, support from the banking system in the collection and recording of contributions. The significant personnel issues, in particular regarding experts in financial investment and IT, should be considered as well.

7.5 Regulation and capacity to enforce regulation

If the administrative agency of the second tier is not a government agency, it will have particular problems with compliance and enforcement. The agency can expect to have to deal with problems such as nonfilers, under-reporting of income, nonpayment or late payment of contributions, employers who may not report when an employee quits job or changes employers.

7.6 Capital Market Development

To the question of how to develop the capital market institutional framework and how to educate institutional investors to cope with the pension reform policy will also need to be considered.

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[9] Colin Gillion, The development and reform of social security pension: The approach of the ILO, International Social Security Review. Vol. 53, No.1 (January-March 2000) p. 40

Pension Fund Reform: The Case Study of Thailand: Establishing a Multi-Pillar Pension System in Thailand for Reforming and Options for Implementation

The Asian Development Bank's consultant

KEY FINDINGS AND RECOMMENDATIONS

The Project culminating in this Report had four objectives: 1) develop an economic and social rationale for pension and provident fund reform in Thailand; 2) identify options for reform; 3) recommend the best option for Thailand; and 4) outline the specific actions required to implement the recommended option.

Accordingly, the Report is *organized into four sections,* as follows:

1. Rationale for Reform
2. Options for Reform
3. Recommendations for Reform
4. Roadmap for Reform

The Report finds that the rationale for further Government action is compelling. If further action is not taken soon to ensure adequate retirement income for the majority of Thai workers, **Thailand will face a serious old age crisis within the next twenty years** that could threaten the country's continued economic growth and stability. While recent Government actions, such as the launching of the Social Security Office's Old Age Pension (OAP) Fund, will have substantial positive impact, **Thailand's current pension programs will not meet the rising income needs of a rapidly aging population.** The sooner the Government takes action to address this gap, the better its chances of success.

In seeking to fill the gap between the country's needs and the ability of current systems to meet those needs, the Government has pursued and should continue to pursue four *key objectives:*

1. Ensure *adequate old age income* for covered workers
2. Move towards near-universal pension coverage of the labor force overtime
3. Ensure that pension programs *are financially sustainable* in the long term
   Promote *economic growth and stability*

The Project identified four *broad options* for addressing the gaps and meeting the objectives outlined above:

Option 1 - Make only the currently planned improvements to existing pension systems
Option 2 - Replace the current Pillar I program (OAP) with a Pillar II program
Option 3 - Make Pillar III (employer-sponsored provident funds) mandatory
Option 4 - Establish a multi-pillar pension system by strengthening and expanding the current Pillar I and Pillar III programs while launching a new Pillar II program

The Report evaluates each Option against the four key objectives of a national pension system and then assesses the likely political feasibility of each Option. The first three Options are found to leave substantial gaps against one or more of the key objectives. The fourth Option, establishing a multi-pillar pension system, would best meet each of the four objectives. It would also do so in a way that causes the least amount of increased fiscal

SECTION I: RATIONALE FOR REFORM

A serious old age crisis is looming in Thailand. Three trends - a rapidly aging population, rising income needs and expectations, and the likely decline of traditional old age support systems - are converging to create a need for greater Government involvement in ensuring adequate retirement income for Thai workers. While recent Government actions in this area will have positive impact, Thailand's current pension systems will not meet the needs of the aging population. Further Government action is urgently required to meet the four key objectives of a national pension system - income, coverage, sustainability and growth.

I.1 Need for Government Action

Thailand's population is aging rapidly. Within the next twenty years, the per cent of the population over the age of 60 will double from 9 per cent to 18 per cent [1]. In most of the industrialized countries of Western Europe and North America, this same demographic transition took four to five times as long to occur; and many of those countries faced serious obstacles in restructuring their existing pension systems. In Thailand, there are currently 6.3 workers to support each elderly person; by 2020 this ratio will drop to 3.3. The World Bank predicts that Thailand's aging trend will continue at least until the year 2150[2]. Also by 2020, the per cent of the population over 75 will triple to 5.1 per cent. Individuals in this group of "very old" are more likely to have outlived their savings and less likely to be able to support themselves through continued employment. Finally, the "very old" group will have a higher proportion of widows and unmarried women, who are most at risk of poverty in their old age.

At the same time, Thais' needs and expectations for retirement income are rising due to two related trends - continuing urbanization and economic growth. As more Thais move to the cities, their expected standard of living and the income required to support that standard rise Sustained economic growth over the past decades has resulted in consumption growing as quickly as, if not faster than, disposable income. What was once considered a basic minimum standard of living will no longer be acceptable to many Thais.

While needs and expectations for retirement income are growing, the ability of traditional sources of old age income to meet those needs and expectations is likely declining. In the past, elderly Thais have relied on younger family members for support. Nearly 80 per cent of Thai parents expect to receive old age support from their children[3].But their children might not be able to provide this support as their own consumption needs increase and savings decline. Only 30 per cent of employed persons who had migrated from one region to another between 1995 and 1997 sent any money home to their families, and nearly 70 per cent of those migrants who did send money home sent less than Baht 2000 per month[4]. Elderly Thais have also relied on their own accumulated savings to provide old age income. But personal savings have been decreasing steadily in Thailand (as a per cent of Gross Domestic Product (GDP) for more than ten years). As a per cent of disposable income, savings dropped from 16 per cent in 1986 to less than 9 per cent

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[1] Source: National Economic and Social Development Board, Human Resources Planning Division, April 1995 (adjusted using World Bank PROST model).

[2] Source: World Bank. *Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth.* New York: Oxford University Press, 1994, p. 353.

[3] Source: World Bank. *Averting the Old Age Crisis,* p. 62. Adapted from Kagitcibasi, 1982.

[4] Source: National Statistics Office. Report of the Migration Survey, 1997 p.68.

in 1996. Another way in which Thais support themselves in their elderly years is through continued employment, especially in the agricultural sector. But as Thailand's economy becomes more technology and knowledge based, it is less likely that older persons will have the skills necessary to find employment that meets their income requirements.

I.2 Objectives for Government Action

Thailand's rapidly aging population, combined with rising retirement income needs/expectations and the decline of traditional old age support systems, is creating a need for the Government to play a more active role in ensuring adequate old age income for Thai workers. In taking this action, the Government has pursued four key objectives and should continue to do so:

1. Ensure *adequate old age income* for those participating in the pension system
2. Promote *near-universal coverage* of workers-by the pension system
3. Ensure *the long-term financial sustainability* of the pension system
4. Support *economic growth and stability through* the pension system

The main ways in which these objectives can be achieved are summarized below:

Objective	How Pension Systems Can Achieve the Objective
Provide adequate old age *income*	• Achieve a target average *wage replacement rate* (50% to 60%)[5] • Ensure a *minimum income level* for retired workers (possibly 20% to 25% of average wages) [6]
Achieve near-universal *coverage*	• Enforce *compliance* through legal means and effective monitoring • Promote *participation* by making the plan attractive to workers
Ensure financial s*ustainability*	• Ensure target *benefits are linked to contributions* • Minimize the *risk of loss* to the Government and plan participants • Keep *operating costs* as low as possible relative to plan size
Support economic *growth*	• Promote (and not distort) proper *labor market incentives* • Mobilize *personal savings* to fund investment in the economy • Support the development of *efficient capital markets*

I.3 Review of Recent Government Actions in Pension Provision

The Government of Thailand has taken a series of actions to achieve these objectives over the past ten years. In 1990, the Government passed the Social Security Act containing a provision for the establishment of a defined benefit Old Age Pension (OAP). The OAP Fund was launched in late 1998 for workers in organizations with 10 or more employees and is scheduled to expand to the majority of the labor force within the next eight years. In 1999, the Government proposed a series of amendments to the Provident Fund Act that would tighten and refine regulation of employer-sponsored provident funds (Pillar III). The proposed amendments would

[5] Recommended notional target rate to be achieved over long term.

[6] Average wages could be set by covered groups. The proposed minimum pension would be adjusted for workers with relatively short careers.

also transfer regulatory authority for private provident funds from the Ministry of Finance to the Securities and Exchange Commission (SEC). Finally, the Government passed the Labour Protection Act in 1998, which calls for the establishment of a mandatory Employee Assistance Fund. While this Fund has not been implemented, this provision in the Act demonstrates the Government's acknowledgement of the need for a Pillar II system in Thailand and may provide a legal vehicle for establishing such a system.

These and other actions taken by the Government in recent years will do a great deal to provide pension coverage to Thai workers. However, they do not go far enough in meeting the objectives outlined above, as the next section demonstrates.

I.4 Gaps in Thailand's Current Pension Systems

Thailand's national pension system consists mainly of six elements, summarized below:

Program	Target Group	Key Features
Social- security OAP Fund **(OAP)**	• Private-sector workers in firms with 10 or more employees, to be expanded to all private-sector employees by 2007	• Defined benefit of 1% of final 60 months' average wage for every year of contributions • 6% combined employee/employer contribution[7]
Employer-Sponsored Provident Funds **(Pillar III)**	• In theory, all private-sector employees; in practice, less than one million workers	• 900 funds sponsored by 4000 employers and managed by about 30 fund managers • Average employee/employer contributions are 4%/8% and employees may not contribute more than employers
Government Provident Fund **(GPF)**	• Government officials	• Defined benefit plan paid through general revenues offering 60% replacement rate after 30 years • New defined contribution plan funded by 6% combined contributions
Government Permanent Employees Fund **(GPEF)**	• Government permanent employees (non-officials)	• Voluntary funded program modeled on GPF (6% combined contributions)
State-Owned Enterprise Provident Funds **(SOE Funds)**	• Employees of 54 state-owned enterprises	• 54 funds, all relatively new, 7 as yet unfunded • Program features vary

[7] Current contribution rates are 1 per cent each from employees, employers and the Government. While the maximum contribution allowed is 3 per cent each, employee and employer contributions were set at the lower rate in response to the economic crisis and are expected to increase to 3 per cent each by 2001. The Government contribution is set aside for child allowances and is not figured into calculations in this Report.

Taken as a whole, these six programs represent Thailand's national pension system. While the public sector programs (GPF, GPEF and SOE Funds) and the MTSP are reviewed in some detail in the Report, this summary will focus on the OAP Fund and Pillar III programs as these are the most relevant to the vast majority of Thai workers.

I.4.1 Income Gaps

Most workers covered by both OAP and Pillar III will receive high wage replacement levels upon retirements[9]. A worker earning the national average wage for formal, private-sector employees and contributing to both programs for thirty years would receive 67 per cent of final average wage. However, less than 4 per cent of Thailand's labor force participates in employer-sponsored retirement programs. Workers currently covered by OAP only will receive 30 per cent of final 60 months' average wage after 30 years of contributions. For workers earning the National Average Wage (NAW), this will result in a retirement income that is slightly less than 24 per cent above the poverty line. However, two-thirds of all private-sector workers earn less than the NAW. On average, OAP benefits after thirty years will provide an income beneath the poverty line.

I.4.2 Coverage Gaps

Combined target coverage (eligible employees) for the five formal programs listed above is about 32 per cent of the total active labor force (MTSP is not included as it is a social assistance program that focuses on poor elderly persons). Actual coverage (participating employees) is about 27 per cent per cent So, more than 80 per cent of *eligible* workers actually participate in formal pension programs - an impressive result given that most of the programs are relatively new. However, overall coverage is still quite low relative to the size of the labor force. By 2007, the Social Security Office plans to expand OAP coverage to approximately 70 per cent of the *total* active labor force. Actual coverage, however, is not likely to increase as quickly as SSO plans. Even in the United States, which has a mature and relatively efficient Social Security program, non-compliance rates among the self-employed are nearly 60 per cent [10]. The administrative and enforcement capabilities of SSO and other agencies must be upgraded substantially in order to achieve higher rates of actual coverage.

I.4.3 Sustainability Gaps

Pillar III programs are inherently sustainable, barring a prolonged economic crisis, to the extent they are well regulated and supervised. Thailand's Old Age Pension Fund, however, is not sustainable in its current form. Assuming that combined contributions increase to 6 per cent by 2001 and the retirement age remains at 55, the OAP Fund's benefit payments will exceed its contributions in the year 2028. Accumulated reserves will be depleted in 2046. In order to ensure

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[9] Virtually all workers participating in employer-sponsored funds would also be covered by OAP.

[10] Non-compliance rate is defined as the aggregate amount of social security contributions not paid voluntarily, as a percentage of the true liability for contributions. A significant portion of the non-compliance in the United States is believed to be among self-employed women with relatively low earnings. In comparison, the non-compliance rate of social security contributions among employees in the United States was about 4 per cent in 1997. Source: " Compliance in Social Security Systems Around in the World" by Joyce Manchester, Chapter 12 in *Prospects for Social Security Reform*, edited by Olivia S. Mitchell, Robert J. Myers and Howard Young. Philadelphia: University of Pennsylvania Press, 1999, pp. 302-303.

solvency through the year 2075 under the current benefit formula, contributions would need to be raised immediately to 11 per cent.

I.4.4 Economic Growth Gaps

Because contribution rates are relatively low and the formal programs cover only a small percentage of the labor force, any positive or negative effects the existing pension programs might have on the economy are likely to be marginal. The OAP Fund probably improves labor mobility somewhat among workers covered both by OAP and employer-sponsored provident funds. While it cannot be concluded that OAP contributions offset personal savings, they clearly do not represent new savings. Pillar III programs might increase economic efficiency by promoting the development of capital markets and reallocating personal savings to more efficient investment vehicles, but long vesting schedules and limited portability probably limit labor mobility for higher-income workers. Finally, to the limited extent OAP alleviates poverty among future elderly, it promotes economic growth and stability by allowing the Government to reallocate resources to more productive uses.

The following table provides a summary look at the performance of Thailand's formal pension programs against the four key objectives. The overall assessment takes into consideration the relative size of each program.

Program	**Income**	**Coverage**	**Sustainability**	**Growth**
OAP	Low	Moderate / High	Low	Low
GPF	High	Low	High	Moderate
GPEF	Low	Low	High	Low
SOE Funds	Not available	Low	High	Moderate
MTSP	Low	Low	Moderate	Low
Pillar III	High	Low	High	Moderate
Overall System	***Low***	***Low/Moderate***	***Low/Moderate***	***Low***

I.5 Implications for the Government of Thailand

If nothing is done to fill the gaps between Thailand's old age income needs and the ability of current pension systems to meet those needs, the situation will worsen over time. Many Thai workers will have no formal source of income in their retirement years, and even more disturbingly, many workers who are covered by OAP will retire without enough income to support a subsistence lifestyle. The labor force will continue to shrink relative to the population, reducing potential economic output. The percentage of very old will grow increasingly larger, straining the ability of the Government and communities to provide adequate support. The personal savings rate is likely to continue to decline, causing Thailand to continue to be somewhat dependent on foreign investment to fund growth.

There are substantial risks of doing nothing. At the same time, there are substantial benefits *to taking action now rather than later.* This is not to suggest that the Government should move hastily or recklessly to address the gaps in the current pension system. Clearly, the situation deserves further analysis and an inclusive dialogue among all of the stakeholders in the system to decide upon a carefully designed and practical course of action. But *the Government of Thailand should begin now* to carefully weigh its options and develop a course of action based on rigorous, fact-based analysis and consensus among interested parties. The situation is urgent, and addressing it property will take a long time. Therefore, the process should begin as soon as possible.

SECTION II: OPTIONS FOR REFORM

There are four broad Options available to the Government for addressing the gaps outlined above. Each Option is assessed in terms of its likely impact against the four objectives and evaluated in terms of political feasibility. Each of the first three Options involves inherent problems that would make them very unlikely to achieve the objectives. The fourth Option, establishing a multi-pillar pension system, would best meet all four objectives and would do so in a way that creates the least amount of additional fiscal burden and risk to the Government in the long term.

II.1 Reform Options Available to the Government

The Report identifies four broad Options for addressing the gaps in Thailand's current old age pension system:

- *Option 1 - Make currently planned improvements only:* Expand coverage of the OAP Fund as planned and implement the recently proposed amendments to the Provident Fund Act to strengthen Pillar III regulation.
- *Option 2 - Replace Pillar I with Pillar II-*. Replace the OAP Fund (Pillar I) with a fully funded, mandatory savings program for private-sector employees (Pillar II).
- *Option 3 - Make Pillar III mandatory:* Compel all employers to provide their employees with provident funds. Participation in employer-sponsored provident funds would ultimately be made mandatory for all private-sector employees.
- *Option 4 - Establish a multi-pillar pension system:* Strengthen and expand the OAP Fund in its present form, improve the regulation of Pillar III funds, and establish a mandatory retirement savings program using *privately-managed* pension funds.

It should be noted that these are hypothetical Options, not detailed proposals. This limits the level of analysis that can be performed. They are presented here in order to compare the merits of various possible courses of action for the Government of Thailand and concentrate attention on *the fundamental decisions* facing the Government.

II.2. Option 1-Make Currently Planned Improvements Only

This Option assumes the Government takes only the following improvement actions:

- Expand Social Security coverage to workers in organizations with less than 10 employees and then to the self-employed and agricultural workers according to the schedule set out by the Social Security Office[11].
- Raise Social Security contribution rates to 3 per cent employee and 3 per cent employer over the next two years, assuming continued economic recovery.
- Transfer regulatory authority for employer-sponsored provident funds from the Ministry of Finance to the Securities and Exchange Commission (SEC) (per the pending amendments to the Provident Fund Act).

None of the proposed changes listed above would have a significant direct effect on the amount of old age income to be provided to workers covered under Social Security or those participating in Pillar III programs.

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[11] The current schedule for OAP expansion is allows: Organizations with 5 or more employees in 2001, all other employers and the self-employed in 2003, agricultural workers in 2006, and fishery and forestry workers in 2007.

SSO's expansion plan could increase the OAP Fund's *target* coverage from a current level of less than 20 per cent of the total active private-sector labor force to more than 70 per cent, leaving only unpaid family workers uncovered. However, actual coverage may fall short of this target depending on the ability of the SSO to enforce compliance as it expands the program. If by 2010 SSO can achieve compliance rates of 95 per cent of workers in organizations with more than 10 employees, 80 per cent in formal organizations with fewer than 10 employees, and 50 per cent among the self-employed and agricultural workers (including fishermen and forestry workers); it will have achieved an *actual coverage* rate of approximately 54 per cent of the total active private-sector workforce. This rate of actual coverage may be the best that can be achieved in Thailand given the large percentage of the labor force in the informal sector.

The long-term financial sustainability of a pension program depends on the link between contributions and benefits, the program's operating costs, and the risk of loss. The planned expansion of the OAP Fund will not materially affect the program's sustainability, assuming that the relationship between contributions and benefits remains the same as new groups of workers are added. One advantage of the expansion program is that it should allow SSO to reduce its administrative costs relative to the number of participants by leveraging economies of scale. However, if SSO's administrative capability lags behind expansion, individual workers may be able to evade contributions but still receive benefits. Such a situation would have the potential to substantially reduce the Fund's long-term sustainability if it went unchecked for a long period of time. Transferring regulatory authority to the SEC will improve the long-term sustainability of Pillar III to the extent that the risk of loss is reduced.

Expanding OAP to smaller organizations and the self-employed *may* have a positive impact on economic growth by encouraging the formalization of the economy and perhaps by expanding the tax base (assuming that those registered under SSO would also be registered with the tax authorities). However, this effect will only occur if informal sector workers are convinced that participating in Social Security provides them with a net benefit. Improved regulation of Pillar III funds will positively impact economic growth to the extent that it reduces the risk of loss by provident funds and to the extent that the perception of improved soundness encourages more workers to participate in mandatory employer-sponsored or voluntary individual retirement savings plans. In this way, total savings could be increased, funding additional investment in the economy and increasing the rate of GDP growth. This effect however, cannot be quantified accurately and would likely be quite small.

Option 1, because it calls for the least change to the status quo, is considered the simplest, and thus the most politically feasible Option. It also results in no significant new fiscal burden to the Government, except for costs related to upgrading SSO's administrative capabilities[12]. Expanding mandatory participation in Social Security too rapidly and without preparing target groups could create serious political problems. These problems will be exacerbated if new groups of workers are forced to pay more taxes as a result of their participation in the OAP Fund or if contributing to the Fund is perceived as too heavy a burden relative to the expected benefit.

Option I Scorecard - Make Currently Planned Improvements Only

Criteria	Impact	Comments

[12] These costs must be incurred **regardless** of which Option the Government chooses.

Income	**None**	• No significant impact on old age income for covered persons under any program
Coverage	**Mixed**	• Potential to dramatically increase Pillar I coverage, but SSO administrative capacity must be increased
Sustainability	**Low**	• No improvement in OAP sustainability Expanding OAP too fast may damage sustainability unless contributions are closely monitored and target groups educated in advance on benefits of participation
Economic Growth	**Low**	• Little measurable impact on economic growth
Political Feasibility	**High**	• Easiest option to implement

II.3 Option 2 - Replace Pillar I with Pillar II

This Option would result in a system similar to that which has been in place in Chile for nearly twenty years. While Chile's system has performed well, there are two concerns that would make this Option difficult to implement in Thailand with any degree of success:

- *Political feasibility:* Abolishing or radically restructuring the OAP Fund scarcely more than a year after its inception would be a very difficult move for the Government to make. Doing so could be politically difficult for those officials who have publicly supported the program. It could also cause a loss of public confidence and diminish the public's trust in the ability of the Government to implement an effective national pension system. Establishing a successful Pillar II program in such an environment would be nearly impossible. Finally, despite its sustainability problems, the OAP Fund is an important program that SSO appears to be administering in a professional and effective manner. Getting rid of the OAP Fund does not make sense, politically or economically.
- *Risk of loss:* Relying exclusively on a mandatory individual savings plan (Pillar II) to provide old age income security for the majority of Thai workers[13] would be a risky approach. While a funded program based on individual accounts can offer many benefits, it is inherently more risky than a pay-as-you-go (PAYGO) financing system (not including demographic risk). A prolonged economic crisis could substantially reduce the accumulated personal savings of many contributors. Even if the Government I not guarantee a minimum benefit, an implicit guarantee would arise from the fact that the plan is mandatory. Without the OAP Fund as a "back-up" source of funds, the Government might need to dip into the budget, or even borrow, to meet this implicit obligation. Without a Pillar I program, there would be no automatic "social safety net" for low-income workers.

The OAP Fund is a useful and beneficial program that should not only remain in place, but should be strengthened and expanded (albeit carefully). The OAP Fund has the potential to be an essential component in a comprehensive, effective multi-pillar pension system.

Option 2 Scorecard - Replace Pillar I with Pillar II

Criteria	Impact	Comments

[13] Pillar III would, remain in existence under this Option, but it should be remembered that employer-sponsored pension funds are currently only available to a very small percentage of the labor force.

Income	**Low**	• Without Pillar I, unlikely to provide adequate old age income to low-income workers
Coverage	**Moderate**	! May be easier to enforce compliance if contributions are seen as a savings, not a tax, but high contribution levels would have the opposite effect
Sustainability	**Mixed**	• Addresses problem of rapidly aging population more effectively than PAYGO system • But introduces risk of Government fiscal burden to fund minimum benefits, even if guarantee is implicit
Economic Growth	**Moderate**	• Potential to substantially increase rate of economic growth and support development of capital markets (see Option 4 for detailed discussion) • But likely to be less effective at alleviating poverty
Political Feasibility	**Negative**	• Negative public image effects of eliminating or reconstituting Social Security probably unacceptable • Increased risk of Government fiscal burden

II. 4 Option 3 - Make Pillar III Mandatory

For comparison purposes, we assume that this Option would entail requiring all private employers both to make provident funds available to all of their employees and to make contributions on behalf of employees. It is also assumed that employees would be required to contribute to employer-sponsored provident funds. We further assume that all other aspects of current Pillar III funds would remain unchanged in terms of plan design, investment guidelines and regulatory and tax treatment. The only change is that they become mandatory. Participation would, of course, be phased in over some period of time to allow employers to make necessary preparations. Finally, we assume that the OAP Fund would remain as is.

If Option 3 were pursued in this form, four problems would arise that would make it unable to meet the objectives of a national pensions system:

- *Lack of individual choice:* Making Pillar III mandatory would cause individual workers, in aggregate, to have *less power over the investment of their own money* than they do now. In virtually all employer-sponsored provident funds in Thailand, employers, not employees, choose the investment manager, and as such, probably have some influence over the manager's investment strategy (within the general guidelines set by the Government). Many current Pillar III participants earn above average wages, so they are assumed to have enough disposable income to invest on their own. Workers not currently participating in Pillar III typically earn less, and would be forced to invest much of their remaining disposable income at the guidance of their employer. As mentioned earlier, individual choice should be considered a worthy goal in itself, and may also encourage voluntary retirement- savings.

- *Crowding out of private investment:* Under current Pillar III regulations, employees are prohibited from contributing more to their provident fund than their employer does[14]. If this regulation remains in place, workers would be prohibited from making

[14] Legislation has been proposed which would remove this prohibition. However, at the time of writing it had not yet been approved.

voluntary contributions to secure, efficient retirement savings vehicles. In this sense, making Pillar III mandatory would, ironically, eliminate Pillar III as a *voluntary* savings alternative. Of course, employees would still be able to contribute as much as they want in other savings vehicles. But this would complicate the investment process for employees and cause an overall loss of efficiency. Also, there are few reliable and efficient retirement savings vehicles currently available in Thailand other than employer-sponsored provident funds.

- *Regulatory complexity:* There are about 900 separate provident funds in Thailand sponsored by about 4000 employers. If Pillar III would be made mandatory, there would be some larger number of funds sponsored, ultimately, by perhaps 300,000 employers. All of these funds pursue different investment strategies, set different contribution rates from employers and employees and are subject to different by-laws and employer- mandated guidelines. Making Pillar III mandatory would give the Government the responsibility of guaranteeing a minimum benefit, even if implicitly. In order to protect workers and to protect itself from the need to pay minimum benefits in the case of poor fund performance, the Government would be required to regulate mandatory pension funds much more closely than it currently regulates voluntary funds. This in turn causes two effects: 1) a larger bureaucracy would need to be establish to regulate and monitor the funds; and 2) the more complex the regulation, the greater the risk of evasion and the larger the costs of compliance to the fund managers and employers.

- *Reduced mobility of labor:* At present, employer-sponsored provident funds are not fully portable between jobs. Vesting schedules and tax treatment of transferred funds penalize workers who change employers. As more workers are required to participate in a mandatory Pillar III, and as the private retirement savings of lower-income workers are crowded out, more workers would have most of their retirement savings employer-sponsored funds. Unless vesting schedules and tax treatment were modified to improve portability, overall mobility of labor would be reduced. This can cause reduced economic efficiency and could reduce the rate of economic growth.

It can be contended that these problems can be overcome by changing the regulations. Employees can be given the power to select investment vehicles, contribute more than their employers do and transfer funds more easily between employers. Regulatory complexity could be reduced by licensing a relatively small number of fund managers to manage mandatory savings plans. But the more this Option is modified to fit the requirements of a national, mandatory retirement program, the more it comes to resemble Option 4. Once all of the required modifications are made, the difference between a mandatory Pillar III and a privately-managed Pillar II becomes little more than semantic.

Option 3 Scorecard -Make Pillar III Mandatory

Criteria	**Impact**	**Comments**
Income	**High**	• Could match Social Security benefit levels, depending on contribution rates
Coverage	**Low**	• Difficult for small employers to set up and administer

		provident funds
Sustainability	**Mixed**	• Privately managed funds better than publicly managed • But increased regulatory burden and risk to • Government due to complexity of multitude of funds
Economic Growth	**Mixed**	• Could increase overall savings • But reduces labor mobility and individual choice
Political Feasibility	**Low**	• Likely opposition from small employers • Potential opposition from employees • More regulatory / monitoring needs from Government

II. 5 Option 4 - Establish a Multi-Pillar Pension System

Establishing a multi-pillar pension system would best meet the Thai Government's objectives for a national pension system; and could do so in a way that minimizes additional fiscal burden and risk to the Government. Establishing a Pillar II program in particular would realize the Government's intentions, expressed in the Labour Protection Act, to create a mandatory, funded retirement program for all private-sector employees. To illustrate the potential benefits a multi-pillar system can offer Thailand, we first discuss the conceptual merits of a multi-pillar approach then examine the likely impact of the specific multi-pillar system recommended in the Report against each of the four key objectives.

II.5.1 Conceptual Benefits of a Multi-Pillar Approach

In theory at least, a carefully designed and well-managed *multi-pillar pension system can provide all of the strengths and overcome all of the weaknesses inherent in each Pillar.* In Thailand, a multi-pillar pension system could represent a "Middle Path", between a pure PAYGO system and a pure individual account, funded system. In a system with only one mandatory Pillar, whether defined benefit (such as the OAP Fund) or defined contribution (such as a mandatory savings plan), the vast majority of workers would have "all their eggs in one basket". With two complementary, mandatory Pillars, the risk inherent in each Pillar is mitigated by the presence of the other. At the same time, a multi-pillar system provides workers with individual ownership and accountability (through Pillar II), while allowing the Government to alleviate poverty by providing minimum benefits and redistributing income (through Pillar I). A well-designed multi-pillar system could provide the highest benefits at a relatively low level of fiscal burden to the Government. Finally, a multi-pillar system could help the Government to *leverage market forces to increase savings for investment,* and thus support economic growth.

In summary, a multi-pillar pension system can offer the following benefits:

- Achieves the highest *wage replacement rate* relative to contributions
- Allows for *minimum guaranteed pensions* to be provided with limited risk/cost to Government
- Offers workers the best incentives *for participation* in the system and, by doing so, lowers the cost to Government of *enforcing compliance*
- Ensures *long-term sustainability,* as Pillar I is immune to investment risk and Pillar II is immune to demographic risk and less susceptible to political manipulation
- Reinforces *labor market incentives* by promoting individual accountability and mobility, linking benefits to contributions more closely and lessening the risk of wage manipulation
- Mobilizes *savings to fund investment in economic growth,* Rely increasing the rate of growth and reducing the country's dependence on foreign capital

- Promotes the development of *efficient, robust capital markets* by creating demand for reliable investment instruments and building better incentives for good corporate governance

All of these are *potential* benefits, and whether they are realized in Thailand depends on how well a multi-pillar system is designed, regulated, and administered. But assuming these requirements are met, how would a multi-pillar pension system in Thailand perform against the four key objectives of income, coverage, growth and sustainability? To answer this question, first we must lay out the key design features of the multi-pillar system recommended in the Report.

II. 5.2 Potential Impact of the Recommended Multi-Pillar System

The *core recommendation* made by the Report is that the Government establish Pillar II - a mandatory retirement savings plan in which employees and employers both contribute a fixed percentage of the employee's wage into an individual account owned by the employee. The Government would license a number of private provident fund managers to invest these accounts on behalf of the employees and would set general investment guidelines for the fund managers. Within those guidelines, however, workers themselves would chose among a finite range of investment strategies. It is our recommendation that workers be given a choice among aggressive, balanced or conservative fund management (the "A, B, C" approach). At the end of their careers, workers would have available their own and their employers' accumulated contributions plus the returns generated over the life of the account. They could then use these funds to purchase an annuity providing guaranteed monthly retirement benefits for the rest of their lives. Alternatively, the mandatory system could provide for scheduled withdrawals from the account over the course of the worker's retirement.

The *key secondary recommendations* made by this Report are:

- *Raise the normal retirement age incrementally* first to 60, then perhaps eventually to 65
- *Strengthen the legal and regulatory frameworks* governing Pillar I and Pillar III
- *Rely on existing agencies to regulate, supervise and administer Pillar II*, but establish a new independent agency with a small staff to oversee the program
- *Guarantee a minimum pension* that would provide workers with a full career of contributions an income of approximately 20 per cent to 25 per cent of average wages (approximately 100 per cent to 125 per cent of poverty level).

Several alternatives regarding contribution and benefit levels for Pillar I and Pillar II are presented in the Report. For now, however, we will assume the following: Employers and employees each contribute 3 per cent of wages into the OAP Fund. In addition, each contributes 3 per cent to Pillar II. Upon retirement, the employee receives benefits from *both* the OAP Fund and the Pillar II program. Social Security benefits are derived using the current benefits formula. Pillar II benefits are equal to accumulated contributions plus whatever returns the fund has generated over the course of the worker's career. Contributions would be phased in over a period of three to five years from the current combined 2 per cent of covered salary to an ultimate combined level of 12 per cent of pay (6 per cent from employees and 6 per cent from employers).

Impact on Income

Option 4 meets the income objective in two ways: by providing covered workers a wage replacement rate as near as possible to the notional target rate of 50 per cent - 60 per cent of final wage and by providing workers whose earnings were very low during their working lifetimes with a guaranteed minimum pension related to the covered group's average wage. A typical Thai

working couple earning average wages and contributing to both OAP and the Pillar II program would retire with an estimated annual pension over 45 per cent of their final 60 months' average wage and more than twice the poverty line. If the couple had also contributed a small portion (3 per cent) of their earnings to a voluntary retirement savings program, their replacement rate could be as much as 10 per cent higher than Pillar I and Pillar II alone. Even the two-thirds of Thai private-sector workers who earn less than the average wage would receive benefits that would, on average, provide an income nearly 50 per cent above poverty level. There are three reasons, however, why workers might not achieve adequate old age income even under a multi-pillar system; 1) their wages were too low; 2) their careers in the formal sector were too short; or 3) their individual accounts under Pillar H did not provide an adequate rate of return. In any of these cases, the Government could provide a guaranteed minimum benefit financed either through OAP or through an *explicit* reserve set aside from general tax revenues. Also, as is the case in Chile, private fund managers could be required to maintain a small reserve to guard against unexpected investment losses. In either case, the *expected cost* [15]of a properly defined and managed guaranteed minimum pension would likely be very low relative to the overall scheduled contributions under our recommended approach[16].

Impact on Coverage

There are two ways in which a multi-pillar system could make the objective of near-universal coverage easier to achieve. First workers participating in Pillar II would have a strong incentive and the ability, through periodic statements, to monitor employers' contributions to their accounts. This would likely reduce the Government's cost of enforcing compliance among employers. Second, if workers can be educated as to the benefits of the system, some workers might join the formal sector, which would increase actual coverage as a per cent of the total labor force. This is likely to be a marginal effect at best, however, and studies on the subject have proven inconclusive. A recent study indicates that the poor, the uneducated and the self-employed pose a special challenge to the extension of pension coverage, and further research work is underway to analyze the causes and develop appropriate solutions[17].

It would be difficult to project coverage rates under Option 4, because target coverage rates are determined by Government decision and actual coverage rates are determined by the Government's ability to enforce compliance. It is recommended that expansion of Pillar II be carried out in parallel with the expansion of the OAP Fund, even if it means slowing down SSO's expansion plan. If this is agreed, then *target* coverage as a percent of the workforce would expand as under Option 1 - ultimately reaching nearly 80 per cent of the total active private-sector workforce. Actual coverage could be expected to expand *at least as fast* as the scenario explained under Option 1 and possibly faster, due to the reasons given above.

Impact on Financial Sustainability

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[15] *Expected cost* = cost of providing a guaranteed minimum pension multiplied by the probability that this cost will be incurred.

[16] Sources: George Pennachi. *Government Guarantees on Pension Fund Returns.* World Bank Human Development Network Social Protection Discussion Paper 9806, April 1998; World Bank. *Averting the Old Age Crisis,* p. 228-229.

[17] Source: Robert Holzmann, Truman Packard and Jose Cuesta. "Extending Coverage of Multi-Pillar Pensions Systems: Constraints and Hypotheses, Preliminary Evidence and Future Research Agenda." Paper presented at World Bank conference, *New Ideas About Social Security,* held in Washington, DC, September 14-15,1999.

The recommended multi-pillar system would best ensure financially sustainable benefits in the long term, barring any severe economic shocks such as war or a prolonged depression. it would be better insulated from demographic shocks and political manipulation than Option 1, and less at risk of investment losses than Option 2 or, arguably, Option 3. As stated earlier, long-term financial sustainability is largely determined by three factors: 1) the link between benefits and contributions; 2) the risk of loss both to the Government and to system participants; and 3) the level of operating costs relative to the size of the system.

A well-regulated and monitored, defined contribution retirement program based on individual accounts is, by definition, financially sustainable in the long term. Because individual workers save for their own retirement, changes in demographic trends are less relevant. So Pillar II can meet the sustainability objective easily. The sustainability of Pillar I would also be improved by raising the retirement age incrementally, first to 60, then possibly to 65. If, for example, the retirement age were increased from 55 to 60 on a phased-in basis beginning in the year 2015, the OAP Fund would remain solvent for an additional ten years, until the mid-2050s.

The risk of loss to Pillar II participants will be manageably low, if the program is property designed, regulated and monitored. If provident fund managers are required to set aside reserves against potential investment losses, the risk of loss to the Government is lessened even further, but provident fund managers' costs would be raised. The risk of loss to participants in employer- sponsored Pillar III funds can be further reduced by strengthening regulation. The risk of loss to the Government arising from demographic shocks would be lowered substantially, since a substantial portion of workers' retirement funds would be generated by Pillar II, which is immune to such shocks. However, there is one way in which the recommended multi-pillar system *might increase* the risk of additional fiscal burden to the Government - by introducing a guaranteed minimum pension benefit. Depending on the structure and management of the minimum pension program, the *expected cost* (cost times probability of incurring it) could be quite low.

For example, a guaranteed minimum pension of 20 per cent of covered groups' average wages (reduced proportionately for less than 30 years of contribution) would cost just over one-half of one per cent of covered salaries (under "intermediate" demographic and economic assumptions).

The potential cost to the Thai Government of guaranteeing a modest minimum pension is thus relatively low when compared with the certain benefits of doing so in terms of public confidence and poverty alleviation, thus helping to avoid additional future social costs and promoting economic growth.

The cost of establishing and operating a new Pillar II program can be kept low by utilizing existing agencies to regulate and administer the program. While a new “juristic person”(independent agency) would need to be created to oversee the program, its total staff level can likely be kept to a maximum of 150 individuals[18]. SSO and SEC will likely need to increase their budgets and staff levels, but these agencies would need to take these steps under any Option. Making Pillar III mandatory would also likely require the creation of a new oversight agency. Therefore, establishing a multi-pillar pension system would not increase the Government's fiscal

[18] This number is derived from the staffing levels of other Pillar II and multi-pillar countries. Source: Gustavo Demarco and Rafael Rofman. *Supervising Mandatory Funded Pension Systems: Issues and Challenges.* World Bank Social Protection Discussion Paper Series No. 9817. Washington, DC, 1998.

burden any more than making Pillar III mandatory would. In fact it would probably cost less over the long term.

Impact on Economic Growth

The primary way in which the recommended multi-pillar system could promote economic growth in Thailand is by *mobilizing new savings for investment.* An econometric model presented in the Report suggests that the recommended Pillar II program *could increase Thailand's real GDP growth rate by at least 8* per cent *by 2015,* even assuming a 50 per cent offset of personal savings and Pillar II coverage limited to workers in organizations with IO or more employees. The cost to employers of achieving this benefit would be an increase in operating expenses of perhaps 0.5 per cent.

In addition to this direct, quantifiable effect on economic growth, the recommended multi-pillar pension system could *promote growth* in at least five other ways:

- By reallocating offset savings into more productive instruments
- By creating demand for more reliable long-term investment instruments
- By improving corporate governance by closely monitoring performance
- By promoting labor mobility
- By promoting the formalization or the economy

Political Feasibility

Establishing a multi-pillar pension system could offer Thailand substantial benefits by ensuring adequate old age income for the majority of Thai workers, reducing the risk of future fiscal burden to the Government, and promoting accelerated growth and economic stability. These benefits must be painstakingly explained to all stakeholders - policymakers, employers, labor, poverty advocates, and the financial sector - in order to ensure they can be achieved. The benefits of a multi-pillar system are not immediately apparent to all, while the risks are more so. Establishing a multi-pillar system is likely to be politically challenging if the benefits are not clearly explained. If the Government decides to pursue this course of action, it will need to undertake a carefully planned consensus-building campaign to ensure support for the concept and address stakeholders' concerns.

Employers, particularly smaller employers, are those most likely to oppose the idea of establishing a multi-pillar pension system in Thailand. Long-term economic benefits, they are likely to contend, do not affect them directly, whereas doubling their pension contributions would. in addition, not all workers will immediately appreciate the benefits a multi-pillar system would bring them, and will need to be convinced. Groups advocating the poor and the elderly, on the other hand, will be more easily convinced of the benefits. Thailand's financial services industry could also potentially be a strong supporter of a multi-pillar system. Finally, and most importantly, workers themselves can be rallied in support of the plan if they can be convinced of its benefits.

On balance, then, establishing a multi-pillar pension system will certainly not be as easy politically as doing nothing, or making currently planned improvements only. With the proper preparation and communication, establishing a multi-pillar pension system in Thailand should be easier than replacing Pillar I or making Pillar III mandatory. Proper preparation and communication, along with a well-designed transition plan are the key factors in ensuring political support.

Option 4 Scorecard - Establish a Multi-Pillar Pension System

Criteria	Impact	Comments
Income	**High**	• Most Rely to reach target replacement rate with affordable contributions • Minimum pensions can be provided through OAP Fund *Coverage*
Coverage	**Moderate**	• More attractive to workers than PAYGO, so • compliance might be easier to enforce
Sustainability	**High**	• Takes pressure off PAYGO system • Pillar II risks mitigated by presence of Pillar I
Economic Growth	**High**	• Likely to increase rate of GDP growth • Improves labor mobility • Alleviates poverty more effectively than other Options • Could strengthen capital markets considerably • Could improve corporate governance
Political Feasibility	**Moderate**	• Provides benefits to all, but these must be carefully explained and concerns addressed • Workers and employers must be "brought on board' early and carefully

II.6 Summary Analysis of Options for Reform

In conclusion, establishing a multi-pillar pension system would be the best Option to achieve the key objectives of income, coverage, sustainability and growth. This Option would allow the Government to fill the gaps in the current system, avoid an old age crisis in coming years and promote continued economic growth and stability better than any of the other Options. Making only currently planned improvements will not fill the gaps in terms of income, sustainability or growth. Replacing Pillar I with Pillar II would be difficult politically, and would expose the Government to a greater degree of risk. Making Pillar III mandatory could achieve many of the same objectives, but at the expense of individual choice and probably over the strong objections of many employers. It would also likely place a higher regulatory and fiscal burden on the Government. Establishing a multi-pillar system represents the “Middle Path” that allows Thailand to best hedge its risks while securing old age income for, ultimately, the vast majority of Thai workers. It is sustainable, and best supports economic growth. While political obstacles will almost certainly arise on the road to reform, these can be overcome through a deliberate and inclusive process of communication and planning.

Summary Comparison of Options Against Objectives

Objective	Option 1	Option 2	Option 3	Option 4
Income	None	Low	High	High
Coverage	Mixed	Moderate	Low	Moderate
Sustainability	Low	Mixed	Mixed	High
Growth	Low	Moderate	Mixed	High
Feasibility	High	Negative	Low	Moderate
Overall	**Moderate**	***Low***	***Low/Mixed***	***High***

SECTION III: RECOMMENDATIONS FOR REFORM

Establishing a multi-pillar system that best meets Thailand's long-term objectives will require the Government to take action in three areas:

- *Strengthen and expand the OAP Fund (Pillar I)*
- *Design and launch a mandatory, funded national retirement savings plan in which workers 'individual accounts are managed by private fund managers (Pillar II)*
- *Improve regulation of employer-sponsored provident funds and private, voluntary individual retirement savings vehicles (Pillar III)*
- *The Government should first agree in principle on the multi-pillar concept and the basic design features of a new Pillar Il program; and then address more specific issues related to contribution levels, benefits, fund manager selection criteria and investment guidelines.*

III.1 Summary of Major Recommendations

The Report details *specific, practical action steps* that the Government can take to accomplish each of the three tasks listed above, along with a discussion of alternatives, pros and cons, and international examples for each recommended action. Major recommendations proposed in the Report are summarized below.

Pillar I	1. Introduce a **guaranteed minimum pension** (20% to 25% of covered group's average wage) for long-term (30 or 35 year) contributors 2. Increase **normal retirement age** incrementally to 60, then possibly to 65 3. Terminate the **Government contribution** to the OAP Fund and reallocate funds to focused poverty alleviation programs 4. Expand the Fund's **coverage to SOE employees and non-official Government employees** not currently eligible for defined benefit pensions 5. Clarify the OAP Fund's **legal and regulatory framework** Strengthen **compliance and administrative capacity** before expanding coverage to new groups of workers

Pillar II	1. Design, build support for, and launch a **mandatory national retirement savings** **program based on privately-managed individual accounts** 2. When appropriate, **establish a inter-agency task force to develop specific Pillar II design features** related to four areas: - Methods of paying Pillar II **benefits** - Pillar II **tax treatment** - **Custody** of Pillar II assets - Pillar II (and Pillar I) **contribution levels** and treatment

	3. Select Pillar II investment managers using **standard qualifying criteria**; and allocate funds among them according to criteria that include the **previous year's performance** 4. Allow participants to select among **three fund types (A, B, C)** 5. Set specific **investment guidelines for each fund type**, and allow fund managers to make foreign investments (up to 20%) 6. Establish **new juristic person** (independent oversight agency) to supervise Pillar II, staffed initially by a Directorate and small staff; to be expanded later to include additional staff as required 7. Give responsibility for **Pillar II collections and administration to SSO**; consider outsourcing functions such as record keeping and data collection 8. Give responsibility for **regulation and supervision of Pillar II fund managers to SEC**

Pillar III	1. Pass the **proposed amendments** to the Provident Fund Act 2. Consider **additional amendments** to the Provident Fund Act designed to: - Make **asset managers more independent** from contributors and custodians - Strengthen **independent custody** of assets under management - Clarify and strengthen **provident fund governance** - Upgrade provident funds' **reporting requirements** - Require periodic **independent audits** of provident funds - Require **graduated benefits payments** instead of lump sum withdrawals 3. Amend Provident Fund Act or Regulations to **limit vesting** of employer contributions to not more than five years with proportional vesting in each year (e.g., 20% per year for five years). 4. Amend Tax Code definition of insurance reserves to encourage **insurers to offer annuities to retiring workers**. 5. Make benefits from **Retirement Mutual Funds tax exempt** (as for Provident Funds) but **over time, make both types of Funds' benefits taxable** Additional *option for consideration:* Replace the Provident Fund Act with a **new law governing Retirement Mutual Funds and provident funds.**

III.2 Multi-Pillar Alternatives

The Team has constructed three Alternatives for contributions and benefits, in order to highlight the main characteristics of Pillar I and Pillar II retirement programs and illustrate the different ways in which the two Pillars can interact. Total combined contributions in all three Alternatives are phased in over a five-year period from the current 2 per cent of covered wages (1999) to 12 per cent of wages in 2004 onwards. The Alternatives differ, however, in terms of benefit formulas, but all would result in larger pensions than those provided under the current system. All three Alternatives assume a retirement age of 60, phased in incrementally. Summary observations related to each of these design Alternatives appear at the end of this section.

III.2.1 Alternative 1 – Balanced Approach

Following a 5 -year transition period assumed to begin in the year 2000, employers and employees contribute 3 per cent each to Pillar I and 3 per cent each to Pillar II. Upon retirement, workers receive their Pillar I benefits under the current OAP benefits formula (1per cent of final 60 months' average wage for each year of contributions) in addition to the savings accumulated in

Pillar II plus returns achieved by the fund manager. To the extent that the addition of a minimum guaranteed pension amount (20 per cent to 25 per cent of the covered group's average wage)[19] could not be supported by existing Pillar I + Pillar II contributions, the Government would need to provide any additional funds required from general tax revenues.

This Alternative would, by 2045, provide average replacement rates of about 49 per cent for workers with 30 years of contributions. It would address Pillar I sustainability only by increasing retirement age to 60, thus postponing insolvency for an additional ten years.

III.2.2 Alternative 2 - Emphasis on Pillar I

Following a 5-year phase-in period, employers and employees contribute 6 per cent and 3 per cent respectively, to Pillar I, and employees contribute 3 per cent to Pillar II. Employers are not required to contribute to Pillar II. Upon retirement, workers could expect to receive a combined Pillar I + Pillar II benefit that is more generous than the current OA.P formula would provide - somewhere between the current 1.0 per cent and a higher 1.5 per cent of final 60 months' average wage for each year of contributions. In addition, if combined benefits fall beneath a set minimum level (20 per cent to 25 per cent of the covered group's average wage), the marginal additional benefit costs could be provided either by a slight increase in OAP contributions, or through a nominal subsidy from general tax revenues. This Alternative would provide replacement rates by 2045 of about 38 per cent, somewhat below those provided by Alternative 1, but a smaller percentage of benefits would be exposed to investment risk. OAP sustainability would be largely resolved, assuming an "intermediate" demographic/economic scenario.

III.2.3 A1ternative 3 - Emphasis on Pillar II

Following a 5-year transition period starting in the year 2000, employers contribute 3 per cent to Pillar I (a de facto "guaranty fund) while employees contribute nothing to Pillar I. Employees contribute 6 per cent into Pillar II while employers contribute 3 per cent. Upon retirement, the vast majority of workers receive *only their Pillar II benefits.* However, if the Pillar II accumulated account balance is insufficient to provide a new basic formula pension of 1.5 per cent of final 60 months' salary times years of contributions, in addition to a floor of protection based on 20 per cent to 25 per cent of the covered group's average wage, the OAP Fund would utilize part of its accumulated 3 per cent contribution account/guaranty fund to supplement the Pillar II benefit as needed to reach the newly prescribed guaranteed minimum pensions.

Replacement rates in 2045 under this Alternative would equal about 40 per cent of final wages, lower than Alternative 1, but slightly higher than Alternative 2. OAP sustainability would also be resolved, as the Fund would typically only pay benefits to the lowest income Workers.

Finally, guaranteed minimum pensions could likely be provided through OAP without compromising solvency, without the need for the Government to utilize general tax revenues.

Comparison of Alternative 1,2 and 3

Issue	Alternative 1	Alternative 2	Alternative 3
Adequacy of	Relatively high	Somewhat lower	Stable, moderate

[19] The minimum guaranteed pension would be reduced proportionately for workers with fewer than 30 to 35 years of contributions under each Alternative on this page.

Pensions	potential combined replacement rates, but Pillar I promise is weak due to severe long-term actuarial imbalance	replacement rates, and limited ability for worker to improve pension through private investment	replacement rate guarantee, with high potential to improve pension through private investment
Average Replacement Rate in 2045 [20]	**49.1%** 26.9% Pillar I 22.2% Pillar II	**38.0%** 26.9% Pillar I 11.1% Pillar II	**40.2%** 0% Pillar I 40.2% Pillar II
Pillar I Solvency	Some improvement. Fund balance remains positive for 10 more years, if retirement age increased to 60	Solvent if retirement age gradually increased to 60; as Pillar I contributions increased above currently-scheduled levels	Solvent if retirement age gradually increased to 60; as Pillar I used only as guarantee fund for minimum pensions
Size of Pillar II Funds	Peaks in 2043 at 19. 1 % of GDP then drops to 8.7% of GDP by 2075 (117 trillion Baht)	Peaks in 2045 at 9.5% of GDP then drops to 4.3% of GDP by 2075 (58 trillion Baht)	Peaks in 2044 at 28.6% of GDP then drops to 13.0% of GDP by 2075 (175 trillion Baht)
Distribution of 12% Contributions	Pillar I: Employer: 3% Employee: 3% Pillar II: Employer: 3% Employee: 3%	Pillar I: Employer: 6% Employee: 3% Pillar II: Employer: 0% Employee: 3%	Pillar I: Employer: 3% Employee: 0% Pillar II: Employer: 3% Employee: 6%
Risk of Political Manipulation	*Moderate:* Government has access to fund reserves, but reserves are relatively low due to actuarial imbalance between benefits and contributions.	*High:* Large Pillar I fund reserves can accumulate and could be susceptible to manipulation for political purposes.	*Low:* Only one-quarter of total contributions go to Pillar I. Government has less incentive to use the funds for political Purposes.

III. 3 Guiding Principles in Pursuing Pension Reform

The Report offers specific, action-oriented recommendations for strengthening Thailand's Pillar I and Pillar III system. These actions will provide substantial benefits on their own, and should be taken regardless of whether the Government agrees to establish Pillar II. The Report also identifies the key decisions facing the Government in establishing Pillar II, examines various options for each decision and recommends those options that would provide Thailand the most benefit for the least cost. Even if the Government accepts all of our recommendations and begins to implement them immediately, it would still need to make a series of important policy decisions.

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[20]The average replacement rates shown here assume age 60 retirement. They are based on an assumed 30 years of contributions. Benefits would increase for longer contribution periods and as the systems mature. Intermediate actuarial assumptions were used to calculate Pillar II replacement rates. Overall benefits could be substantially higher if Pillar II actual real rates of return are higher than those assumed in this chart. For additional actuarial details see Appendix 1.

It is recommended that the Government adhere to the following **three guiding principles** as it embarks on this decision-making process:

- *Continue the process without interruption:* The Report marks an important step at the beginning of what will be a long process of analysis, decision-making, support building, planning and implementation. It takes a long time to establish a successful multi-pillar pension system, and the problems facing Thailand are quite pressing.
- *Work top-down, not **bottom-tip:*** It does not make sense to attempt to resolve specific, detailed issues without first agreeing on the more basic design features. First agree on the overall objectives the Government wants to achieve, then weigh potential options against these objectives. Once the best option is chosen, then decide the fundamental design features. Only then should more specific issues be addressed.
- *Make the proces s as inclusive as possible:* When people can participate in making decisions that affect them; and when their concerns are both voiced and addressed, they feel they have a stake in the outcome and are more likely to support the final decisions. The Working Group assembled to assist the Team has demonstrated this fact. The Government should continue this approach and broaden involvement to include as many interested parties as possible without sacrificing efficiency or confidentiality.

SECTION IV: ROADMAP FOR REFORM

Successfully establishing the recommended multi-pillar pension system will require a structured, deliberate approach to decision-making, support-building and implementation planning. The Report recommends a five-phase approach to he initiated immediately and carried out over the next two years. Responsibility for specific task in each phase should be assigned to appropriate individuals, not committees, and detailed objectives, tangible deliverables and key steps should be clearly defined for each phase.

Most elements of the multi-Pillar system, especially the introduction of a new Pillar reprogram, should be introduced gradually. Details of the transition plan necessarily depend on the particular design features agreed by the Government. At a minimum, however, the plan should be announced to the public well in advance of its rollout; and Pillar II contributions should be raised incrementally over a period of three years. Extension of coverage beyond the group curreiitly covered by OAP should be carried out over a period of no less than five years; and administrative capacity should he carefully monitored as coverage expands.

IV.1 Key Success Requirements

The most important guiding principles were outlined earlier: *Continue the process without interruption, take a top-down approach to decision-making, and make the process as inclusive as possible.* Following these principles will significantly increase the Government's chances of success. There are six other key requirements for ensuring a successful transition:

- Base decisions on facts, not feelings
- Follow a structured process Assign clear responsibility for specific tasks Anticipate and address stakeholders' concerns
- Learn from the experience of other countries

- Utilize outside assistance effectively

These guiding principles and requirements for success underpin the approach to designing, building support for and transitioning to a multi-pillar system put forth in this Section.

IV.2 Immediate Next Steps

There are three *specific actions* that the Government can take *immediately* to continue the process of designing and implementing a multi-pillar system and ensure the success of the transition plan:

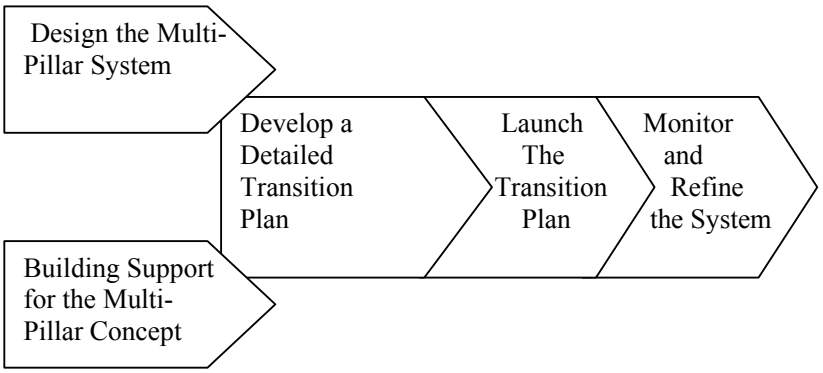
First*, assign a senior project "champion " and inter-agency task farce* to review our recommendations and drive the process forward. The interagency task force should include appropriate private-sector representation.

Second, *begin building awareness of the problems and support for a multi-pillar solution.* Using this Report as a basis for discussion, the Government can sponsor a series of workshops to which representatives of all stakeholder groups would be invited. These sessions would build appreciation of the serious issues facing Thailand caused by an aging population; build understanding and support for a multi-pillar solution to these problems; and perhaps most importantly, provide a forum in which all interested parties could express their concerns.

Third, *begin implementing the recommendations for strengthening Pillar I and Pillar II.* These recommendations are, for the most part, independent of the decision whether or not to establish a Pillar II program; and all of them would provide tangible short and long- term benefits. Implementing these recommendations without delay would also build momentum and support for change, as well as confidence in the Government's ability to implement needed improvements quickly and effectively.

IV.3 Five-Phase Approach to Establishing a Successful Multi-Pillar Pension System

The Report recommends that the Government take a structured, time-bound approach to designing, building support for and transitioning to the best multi-pillar system for Thailand. This overall approach would have five distinct phases, the first two of which would be conducted concurrently, as seen below.



It is important to note that, while building support is illustrated here as a specific phase, *communication and consensus building should be carried out in a structured fashion across all of the phases.* It is also important to note that this communication must be two-way - from stakeholders to the Government as well as from the Government to stakeholders.

IV.3.1 Phase 1: Design the Best Multi-Pillar Pension System for Thailand

Objective and Deliverables: The key objective of this first phase is to reach agreement among senior policymakers as to the basic design features of a multi-pillar system that will best meet Thailand's unique objectives. The Report has made *specific design recommendations.* It is now up to the Government of Thailand to accept, reject or modify those recommendations. This phase of the process would produce one critical deliverable: an official document ("White Paper") laying out the Government's proposed multi-pillar pension system.

Key Tasks: The tasks required to produce this official document would be as follows:

- Discuss this Report among key policymakers and list issues, questions and concerns
- Perform any further research or analysis needed to address questions/concerns
- Reach agreement in principle as to each of the key decisions put forth in this Report
- Identify the specific legal and regulatory changes required
- Draft a detailed document outlining the Government's proposed multi-pillar system
- Submit needed legal changes to the legislature for approval

Resources Required: This phase requires the attention of the most senior officials in the Ministries of Finance, Labour and Commerce, as well as other agencies likely to have a role in establishing and operating the system. A task force of mid-level officials could be assembled to prepare presentation materials, perform additional analyses, and facilitate discussions. Legal experts would be required to identify the legal and regulatory requirements and draft proposed legislation. A mid-level individual should be assigned to draft the policy document.

Potential Timing: In concept, this phase should not take more than **two months**. The Report has identified the key issues for discussion and analyzed the recommended multi-pillar system's likely impact on income, coverage, sustainability and growth. In practice, finishing this

phase would likely take longer as senior officials' schedules must be accommodated and other issues take precedence. The Government might consider setting the upcoming APEC Pensions Conference in March 2000 as a deadline for completing this phase.

IV.3.2 Phase 2: Build Support for a Multi-Pillar Pension System

Objectives and Deliverables: The key objective of this phase is to build awareness of the serious demographic and economic problems facing Thailand and support for a multi-pillar solution to those problems. The first priority would be to build consensus among senior members of the Government, as well as the Opposition, to the specific recommendations contained in this Report. The second priority would be to introduce the multi-pillar concept to a wider audience consisting of key opinion-leaders within each stakeholder group. This phase should also focus on understanding and later responding to the concerns expressed by key stakeholder groups. Tangible deliverables arising from this phase could include a series of seminars and working sessions, first for a select group of politicians, senior Government officials and others; and later for a wider audience including the press, labor representatives and employer groups, and academics. Later deliverables could include a series of press releases on the topic and policy papers made available to the general public.

Key Tasks: The key tasks to be completed during this phase would include the following:

- Schedule and arrange internal and external seminars and working sessions
- velop presentation material and questionnaires for seminars
- Draft press releases and position papers related to multi-pillar system options
- Hold one-on-one meetings with key politicians and private-sector opinion leaders to ensure understanding of and support for multi-pillar concept and design
- Catalogue stakeholder concerns and questions and develop responses

Resources Required: This phase requires effort from both senior and more junior officials. Senior officials would be called upon to present at seminars and hold one-on-one meetings with key opinion leaders. Junior officials would be required to arrange and schedule seminars and working sessions, develop presentation materials and draft press releases and position papers. Specific training and public relations expertise would be needed.

Potential Timing: This phase should develop into a continuing component of the transition process. However, once the Government has agreed to an overall approach to pension reform, an intensive communications campaign could be launched that would last for perhaps two to three months. The Government might consider preparing for this phase as soon as possible, and launching seminars to coincide with the APEC conference next March. After the seminars are held, and once the proposed multi-pillar system has been laid out, then senior officials could begin a second wave of meetings to encourage support for upcoming proposed legislation.

IV.3.3 Phase 3: Develop a Detailed Transition Plan

Objective and Deliverables: The next step in the process is to develop a detailed, time-bound action plan for making needed improvements to Pillars I and III and phasing in Pillar II over the course of several years. The plan should lay out specific tasks, timing, and the individuals responsible for each task. The plan details will depend largely on the input from stakeholders - What level of contributions would employers be able to support? How quickly would insurance companies be likely to start offering affordable annuities once the Tax Code is revised? How quickly could SSO upgrade its ability to collect and verify contributions? These and other questions must be answered before a plan can been put forth. This phase would result in

a single key deliverable: a detailed, time-bound transition plan. Related deliverables could include a structured process for monitoring plan rollout, and a large number of "sub-plans" related to each of the major tasks to be accomplished.

Key Tasks: The key tasks to be accomplished during this phase include the following:

- Set specific objectives for timing and extent of Pillar II roll-out, including groups to be covered, contribution levels, development of specific investment guidelines and reporting requirements, selection of fund managers, etc.
- Develop high-level transition plan and schedule
- Compile list of key stakeholder concerns and ensure that high-level transition plan addresses each concern
- Identify major tasks to be accomplished to achieve transition plan and assign responsibility for each major task
- For each major task, identify critical path and key tasks to be accomplished
- Develop sub-plans for each major task and assign responsibility for completion
- Design a mechanism for monitoring progress and ensuring critical tasks are completed on time as needed to support transition plan

Resources Required: This phase will require significant dedication of resources from each of the Government entities involved in the process. One senior official should be charged with overseeing development of the transition plan. Reporting to that senior official would be perhaps ten other officials, each charged with developing sub-plans for accomplishing key tasks called for in the overall plan. Each agency called upon to accomplish tasks or make changes must be involved in developing and approving the sub-plans. The key requirement is that the planning process be centrally managed in a top-down, but participatory, fashion.

Potential Timing: Once all of the system's design features have been agreed to and stakeholder concerns have been addressed, detailed transition planning can begin. If the Government assigns appropriate and sufficient resources to the effort, it should be able to complete the planning process **within six months**.

IV 3.4 Phase 4: Launch the Transition Plan

Objective and Deliverables: Once all of the sub-plans have been designed, reviewed and approved, the transition plan can go into action. The objective of this phase is to launch a transition process that the public and all stakeholders understand clearly and for which there is broad support. The transition to a full multi-pillar system covering a large percentage of the work force should be carried out gradually, over the course of no less than five years. Certain tasks, however, should be completed as quickly as possible. Establishing a legal vehicle for Pillar II can be accomplished without disruption. Training of SSO staff and others can begin once the basic design features are in place. *Two items must be rolled out very cautiously and gradually - mandatory contributions as a per cent of covered salary and extension of coverage to new groups of workers.* The model established by the OAP Fund should be followed: increase contributions in scheduled increments announced in advance, and begin by covering workers in larger organizations in step with OAP increases.

Key Tasks: Key tasks to be accomplished during this phase would be outlined in detail in the transition plan, but would likely pertain to the following broad areas:

- Upgrade SSO administrative capacity
- Ensure SEC capability to regulate managers of mandatory funds

- ! Establish, organize and staff a "juristic person" to oversee the Pillar II program
- ! Design and launch a communications program for employers and employees
- ! Provide training as required to SSO, SEC and oversight agency staff
- ! Establish procedures for monitoring transition progress

Resources Require: Launching the transition plan will require a focused, sustained effort from operating level staff in each of the involved agencies. Efforts should be coordinated and monitored by the oversight agency, which should have a staff of no more than 150 individuals. SSO and SEC in particular will be called upon to manage the process.

Potential Timing: Launch of a Pillar II program should be carried out incrementally. Contributions should be raised to the designated level over a period of not less than three years, and coverage to workers in smaller firms and the self-employed should be extended even more gradually, over a period not less than five years.

IV.3.5 Phase 5: Monitor Progress and Refine the System

Objective and Deliverables: The key objective of this ongoing phase is to ensure the continued viability and high performance of the multi-pillar system. Specific deliverables would include periodic analyses of compliance rates, economic effects, and fund performance. Other deliverables could include regular tracking of feedback from employees, employers and fund managers as well as accuracy testing of participant records, etc.

Key Tasks: Key tasks would include the following

- ! Monitor compliance rates and record keeping on an ongoing basis
- ! Perform periodic macroeconomic analyses to assess system effects
- ! Monitor fund performance and asset allocation on a quarterly basis
- ! Spot test record accuracy and collections information regularly
- ! Establish a mechanism for making effective, timely system adjustments

Resources Require: SSO would track compliance and keep records for both Pillar I and Pillar II (although outsourcing of certain functions should be considered). SEC would regulate and supervise fund mangers. The oversight agency would handle general questions and complaints from employers and employees. The oversight agency, in cooperation with SSO and SEC, would also perform economic analyses and design and implement adjustments to the system as required.

Potential Timing: **Ongoing**

IV.4 Leveraging Outside Assistance

The tasks facing the Government of Thailand, should it decide to pursue the establishment of a multi-pillar pension system, are complex and difficult. The world's experience with pension reform has not been any different. Technical assistance from external advisors will be required in many areas. This assistance can provide valuable benefits to the Government, but it must be carefully planned, managed and monitored.

Qualified outside advisors can assist the Government in three ways. First, the right advisors can help manage and coordinate the overall reform program and each of its components.

Second, external advisors can provide technical advice in specific areas. Legal consultants could assist in drafting legislation required to establish Pillar II, for example. Information technology consultants could design, test and install new software to help SSO meet the challenge of expansion. Finally, outside experts can assist by training staff. In performing these three functions, well-chosen advisors can create value for the Government in four ways. First, and most obvious, they can provide *technical expertise* that the Government might not possess in sufficient quantity. Second, good consultants bring *experience* to the process - not just their own personal experience, but knowledge of the experience of others who have undertaken similar processes. Third, consultants can offer an *objective perspective* on the process. It is difficult for those with a direct stake in Thailand's pension reform process to be truly objective about its outcome. Finally, external resources simply provide the Government with "an extra set of hands". Government officials are very busy juggling multiple priorities. It is often useful to have senior, capable external advisors on hand simply to help get the job done.

However, this value is not created automatically. Consulting assistance must be thoughtfully planned to fill important resource gaps and not duplicate effort; consultants must be carefully selected according to the right criteria; and their activities must be closely monitored to ensure they are performing the right tasks and delivering high quality products. First, as the process progresses, the Government should identify those areas in which it is likely to require assistance. Then, it can clearly lay out the required tasks and deliverables in each area. Next, it can identify the key skills that potential advisors in each area should possess, and use these as primary selection criteria. International donor agencies can play an important role in identifying appropriate advisors and funding their efforts. However, *the Government of Thailand, not the donor agencies, should determine what types of consulting services are required in each area.* The Government should also play the lead role in managing external advisors and ensuring their efforts are appropriate to the tasks at hand.

IV.5 Conclusion

Thailand is facing an impending old age crisis brought on by a rapidly aging population, rising income requirements and the likely decline of traditional old age support systems. Recent Government actions in the area of pension provision have been positive, but Thailand's current pension system will not meet the needs of an aging population. Of all the Options available to the Government for addressing these needs, establishing a multi-pillar pension system is clearly the best. A well-designed multi-pillar system would best meet the four key objectives of a national pension system: income, coverage, sustainability and growth. It would also do so in a manner that minimizes fiscal burden and risk to the Government. Establishing such a system, however, will not be an easy task.

The first step is for the Government to review, then accept or modify the recommendations contained in our Report. The next step is to begin building understanding of the issues and support for a multi-pillar solution first internally, then externally. Then a structured approach to designing, planning and launching a successful multi-pillar system can be embarked upon. Outside advisors can assist in the process, but they must be carefully selected and managed by the Government.

The Government of Thailand has demonstrated its commitment to ensuring the continued economic well-being of its people through its recent actions in the pensions area and its dedication to the Project culminating in this Report. While the road ahead will be long, difficult and strewn with obstacles, there is every reason to believe that the Government can successfully design and implement a multi-pillar pension system tailored to the unique needs of the people of Thailand.

Multipillar (Pillar I+Pillar II) Long-Term Projections
(Preliminary PROST Estimates under "Alternative 1" Plan)

(See Description of "Alternative 1" Plan in Introduction)

YEAR		Retirement at Age 55			Retirement at Age 60		
		PESSIMISTIC SCENARIO	**INTERMEDIATE SCENARIO**	OPIMISTIC SCENARIO	PESSIMISTIC SCENARIO	**INTERMEDIATE SCENARIO**	OPIMISTIC SCENARIO
2025	Pillar I Contributions	184,715	***226,052***	256,291	227,416	***277,674***	314,101
2025	Pillar II Contributions	184,715	***226,052***	256,291	227,416	***277,674***	314,101
2025	Combined Contributions	369,430	***452,103***	512,581	454,832	***555,348***	628,202
2025	Pillar I Benefits	213,526	***181,793***	169,228	128,644	***111,853***	104,725
2025	Pillar II Benefits	68,304	***107,566***	138,975	57,922	***88,614***	113,733
2025	Combined Benefits	281,830	***289,359***	308,203	186,566	***200,467***	218,458
2025	Guaranteed Pillar I Repl Rate	19.7%	***19.7%***	19.7%	21.5%	***21.5%***	21.5%
2025	Funded Pillar II Repl Rate	6.2%	***10.8%***	14.6%	7.2%	***12.1%***	16.2%
2025	Combined Replacement Rate	25.9%	***30.5%***	34.3%	28.7%	***33.6%***	37.7%
2025	Pillar I Fund Balance	2,483,828	***3,887,359***	5,178,122	3,400,976	***4,853,605***	6,223,911
2025	Pillar II Fund Balance	3,528,452	***5,245,348***	6,542,386	3,962,759	***5,874,891***	7,315,247
2025	Combined Fund Balnace	6,012,280	***9,132,707***	11,720,508	7,363,735	***10,728,496***	13,539,158
	% of GDP	14%	***21%***	27%	17%	***25%***	31%
2045	Pillar I Contributions	628,277	***815,414***	976,529	829,871	***1,062,924***	1,257,776
2045	Pillar II Contributions	628,277	***815,414***	976,529	829,871	***1,062,924***	1,257,776
2045	Combined Contributions	1,256,554	***1,630,828***	1,953,058	1,659,742	***2,125,847***	2,515,552
2045	Pillar I Benefits	3,012,743	***2,278,335***	1,965,951	2,838,834	***2,226,811***	1,947,921
2045	Pillar II Benefits	828,157	***1,534,926***	2,139,716	968,073	***1,781,841***	2,489,372
2045	Combined Benefits	3,840,900	***3,813,261***	4,105,667	3,806,907	***4,008,652***	4,437,293
2045	Guaranteed Pillar I Repl Rate	24.2%	***24.2%***	24.2%	26.9%	***26.9%***	26.9%
2045	Funded Pillar II Repl Rate	7.8%	***15.9%***	23.2%	10.8%	***22.2%***	33.0%
2045	Combined Replacement Rate	32.0%	***40.1%***	47.4%	37.7%	***49.1%***	59.9%
2045	Pillar I Fund Balance	(17,079,850)	***503,443***	15,666,925	(4,526,334)	***13,383,769***	30,614,397
2045	Pillar II Fund Balance	15,980,209	***27,637,946***	37,970,124	21,580,410	***37,457,812***	51,320,324
2045	Combined Fund Balance	(1,099,641)	***28,141,389***	53,637,049	17,054,076	***50,841,581***	81,934,721
	% of GDP	-1%	***16%***	30%	9%	***28%***	45%
2065	Pillar I Contributions	2,199,283	***3,091,689***	3,979,201	2,792,156	***3,882,727***	4,945,454
2065	Pillar II Contributions	2,199,283	***3,091,689***	3,979,201	2,792,156	***3,882,727***	4,945,454
2065	Combined Contributions	4,398,565	***6,183,377***	7,958,401	5,584,312	***7,765,453***	9,890,907
2065	Pillar I Benefits	16,063,548	***11,133,727***	9,484,052	16,161,781	***11,429,204***	9,669,758
2065	Pillar II Benefits	3,351,655	***6,755,193***	9,920,051	4,388,423	**8,825,498**	12,946,342
2065	Combined Benefits	19,415,203	***17,888,920***	19,404,103	20,550,204	***20,254,702***	22,616,100
2065	Guaranteed Pillar I Repl Rate	26.5%	***26.5%***	26.5%	28.7%	***28.7%***	28.7%
2065	Funded Pillar II Repl Rate	7.0%	***14.0%***	20.6%	9.6%	***19.9%***	30.1%
2065	Combined Replacement Rate	33.5%	***40.5%***	47.1%	38.3%	***48.6%***	58.8%
2065	Pillar I Fund Balance	(287,985,548)	***(143,777,860)***	(36,098,198)	(223,041,381)	***(79,921,071)***	48,885,140
2065	Pillar II Fund Balance	36,114,244	***67,065,232***	105,864,280	52,873,572	***102,233,880***	159,587,264
2065	Combined Fund Balance	(251,871,304)	***(76,712,628)***	69,766,082	(170,167,809)	***22,312,809***	208,472,404
	% of GDP	-36%	***-11%***	10%	-24%	***3%***	30%

Multipillar (Pillar I+Pillar II) Long-Term Projections
(Preliminary PROST Estimates under "Alternative 1" Plan)

(See Description of "Alternative 1" Plan in Introduction)

YEAR		Retirement at Age 55			Retirement at Age 60		
		PESSIMISTIC SCENARIO	**INTERMEDIATE SCENARIO**	OPIMISTIC SCENARIO	PESSIMISTIC SCENARIO	**INTERMEDIATE SCENARIO**	OPIMISTIC SCENARIO
2025	Pillar I Contributions	277,073	***339,077***	384,436	341,124	***416,511***	471,152
2025	Pillar II Contributions	92,358	***133,026***	128,145	113,708	***138,837***	157,051
2025	Combined Contributions	369,430	***452,103***	512,581	454,832	***555,348***	628,202
2025	Pillar I Benefits	213,526	***181,793***	169,228	128,644	***111,853***	104,725
2025	Pillar II Benefits	34,152	***53,783***	69,488	28,961	***44,307***	56,867
2025	Combined Benefits	247,678	***235,576***	238,716	157,605	***156,160***	161,592
2025	Guaranteed Pillar I Repl Rate	19.7%	***19.7%***	19.7%	21.5%	***21.5%***	21.5%
2025	Funded Pillar II Repl Rate	3.1%	***5.4%***	7.3%	3.6%	***6.1%***	8.1%
2025	Combined Replacement Rate	22.8%	***25.1%***	27.0%	25.1%	***27.6%***	29.6%
2025	Pillar I Fund Balance	4,288,494	***6,302,743***	8,182,686	5,373,742	***7,482,927***	9,480,213
2025	Pillar II Fund Balance	1,764,226	***2,622,674***	3,271,193	1,981,380	***2,937,446***	3,657,624
2025	Combined Fund Balnace	6,052,720	***8,925,417***	11,453,879	7,355,122	***10,420,373***	13,137,837
	% of GDP	14%	***21%***	26%	17%	***24%***	30%
2045	Pillar I Contributions	942,416	***1,223,121***	1,464,794	1,244,807	***1,594,385***	1,886,664
2045	Pillar II Contributions	314,139	***407,707***	488,265	414,936	***531,462***	628,888
2045	Combined Contributions	1,256,554	***1,630,828***	1,953,058	1,659,742	***2,125,847***	2,515,552
2045	Pillar I Benefits	3,012,743	***2,278,335***	1,965,951	2,838,834	***2,226,811***	1,947,921
2045	Pillar II Benefits	414,079	***767,463***	1,069,858	484,037	***890,921***	1,244,686
2045	Combined Benefits	3,426,822	***3,045,798***	3,035,809	3,322,871	***3,117,732***	3,192,607
2045	Guaranteed Pillar I Repl Rate	24.2%	***24.2%***	24.2%	26.9%	***26.9%***	26.9%
2045	Funded Pillar II Repl Rate	3.9%	***8.0%***	11.6%	5.4%	***11.1%***	16.5%
2045	Combined Replacement Rate	28.1%	***32.2%***	35.8%	32.3%	***38.0%***	43.4%
2045	Pillar I Fund Balance	(4,708,786)	***18,564,745***	40,817,484	10,055,481	***34,855,635***	60,132,131
2045	Pillar II Fund Balance	7,990,105	***13,818,973***	18,985,062	10,790,205	***18,728,906***	25,660,162
2045	Combined Fund Balance	3,281,319	***32,383,718***	59,802,546	20,845,686	***53,584,541***	85,792,293
	% of GDP	2%	***18%***	33%	11%	***30%***	47%
2065	Pillar I Contributions	3,298,924	***4,637,533***	5,968,801	4,188,234	***5,824,090***	7,418,180
2065	Pillar II Contributions	1,099,641	***1,545,844***	1,989,600	1,396,078	***1,941,363***	2,472,727
2065	Combined Contributions	4,398,565	***6,183,377***	7,958,401	5,584,312	***7,765,453***	9,890,907
2065	Pillar I Benefits	16,063,548	***11,133,727***	9,484,052	16,161,781	***11,429,204***	9,669,758
2065	Pillar II Benefits	1,675,828	***3,377,597***	4,960,026	2,194,212	**4,412,749**	6,473,171
2065	Combined Benefits	17,739,376	***14,511,324***	14,444,078	18,355,993	***15,841,953***	16,142,929
2065	Guaranteed Pillar I Repl Rate	26.5%	***26.5%***	26.5%	28.7%	***28.7%***	28.7%
2065	Funded Pillar II Repl Rate	3.5%	***7.0%***	10.3%	4.8%	***10.0%***	15.1%
2065	Combined Replacement Rate	30.0%	***33.5%***	36.8%	33.5%	***38.7%***	43.8%
2065	Pillar I Fund Balance	(218,441,681)	***(44,606,239)***	115,526,280	(149,029,335)	***37,719,181***	230,235,153
2065	Pillar II Fund Balance	18,057,122	***33,532,616***	52,932,140	26,436,786	***51,116,940***	79,793,632
2065	Combined Fund Balance	(200,384,559)	***(11,073,623)***	168,458,420	(122,592,549)	***88,836,121***	310,028,785
	% of GDP	-29%	***-2%***	24%	-18%	***13%***	44%

Investment Options and Defined Contribution Plans: The U.S. Experience

Ms. Mary Podesta

Many countries around the world are introducing new funded, individual account retirement programs to reduce reliance on their government sponsored pay-as-you-go social security systems. The new programs typically are defined contribution systems in which regular contributions are made to individual employee accounts, the money is invested, and a participant's retirement income depends on the proceeds in the account upon retirement. Many of these new programs allow participants to make decisions as to how their money is invested.

The private sector pension system in the United States has had significant experience with defined contribution plans that may be useful to other countries considering pension reform. Defined contribution plans, including participant-directed plans such as 401(k) plans, are used extensively today in the US.

This paper discusses the increasing popularity of the 401(k) defined contribution retirement plan among US employers and employees and the role that mutual funds have played in the 401(k) market.The paper provides a description of the 401(k) plan, places the 401(k) in the context of the US retirement saving system and describes why mutual funds are ideally suited for the 401(k) market.[1]

The paper then argues that defined contribution plans will work best if plans and participants are free to choose among a selection of investment options, market forces are allowed to operate with respect to products, fees and levels of service, and citizens are encouraged to take responsibility for their retirement savings.

I. The Place of the 401(k) Plan in the US Retirement Market

The 401(k) plan is an employer-sponsored retirement plan composed of individual accounts established for each employee. Its name is derived from the section in the US tax code—section 401(k)—that enables these plans to exist. Sometimes these programs also are referred to as cash or deferred arrangements or CODAs.

Both the employer and employee typically contribute to a 401(k) plan. Employees may elect to contribute, i.e., defer receipt of a percentage of their salary into the plan, and employers often match the amount or some percentage of the amount contributed by the employee. The accounts are invested in one or more of an array of investment media. Employers select the investment options, which usually consist of mutual funds, guaranteed investment contracts offered by insurance companies, money market funds and sometimes the employer's own stock. Under most 401(k) plan designs, the employees direct both their contributions and those of the employer into these investment options, allocating assets in accordance with their needs, individual risk tolerances and time horizon to retirement.

[1] This portion of the paper incorporates parts of an earlier paper, "The American Pension System, The Growth of the Section 401(k) Plan and Mutual Fund Success in the 401(k) Market" by Catherine L. Heron and Russell G. Galer, Investment Company Institute, October 1997.

To understand the popularity of 401(k) plans in the US and the role mutual funds have played in that market, some historical background regarding the US pension system is necessary.

The Three Pillars of the US Retirement System

The United States has a three pillar system, comprised of the government-sponsored, pay-as-you-go Social Security system in which participation is mandatory, voluntary individual saving and voluntary employer-sponsored retirement plans, including the 401(k) plan.

Social Security: The Social Security program is the government-sponsored pillar of the US retirement plan system. Established in the 1930s as the centerpiece of President Roosevelt's New Deal program, Social Security insures against individuals falling into poverty in old age. Social Security was meant to provide only a foundation for retirement income that was supplemented significantly by other sources of retirement income (personal savings, employer-sponsored pensions, and in some instances, employment earnings) and provide a floor of benefits above the poverty level. It is probably the most popular—and perhaps the most successful—government entitlement program, despite significant fiscal problems.

Individual Saving: The second pillar of the US retirement system is personal saving. In this area, in particular, the United States has lagged behind most other nations. The personal saving rate in the United States has always been lower than that of most other developed and less developed countries. Moreover, the personal saving rate has declined by 50 per cent over the past 15 years. In the late 1980s, the personal saving rate was about 8 per cent. In 1995, it dropped to 5.6 per cent. The saving rate has remained under 5 per cent since 1996.

To address this issue, the federal government has created tax incentives to save—most notably the Individual Retirement Account, or "IRA." Under these arrangements, individuals are permitted to place up to $2,000 in a trust or custodial account with a bank or other financial institution, such as a mutual fund. IRA assets grow on a tax-deferred basis. Depending on the type of IRA, contributions may be deductible or non-deductible, and taxes may be paid upon distribution.

The mutual fund industry manages about $930 billion in IRA assets. Mutual funds captured a growing share of IRA assets during the 1990s. In 1991, mutual funds accounted for about 30 per cent of the estimated $657 billion held in IRAs; in 1998 mutual funds accounted for about 44 per cent of the estimated $2.1 trillion market.

Employer-based Pension Plans: The employer-sponsored retirement plan market had assets of approximately $8.8 trillion at year end 1998, an increase of $6.4 trillion from the 1987 total of $2.4 trillion.[2] Prior to World War II, there was very little employer-sponsored pension plan formation in the United States. Wage and price controls implemented during the war, however, forced companies and unions to be more creative with regard to wage increases—thus, the growth of employer-sponsored pension plan arrangements.[3] The vast majority of these plans were defined benefit plans, rather than defined contribution plans.

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[2] Sources: Board of Governors of the Federal Reserve System, Investment Company Institute.

[3] Private pensions grew rapidly in popularity between 1900 and 1920 until about one in six workers was covered. Pension coverage in the United States then remained flat until between 1940 and 1960, when it grew rapidly. Growth of coverage leveled off in the 1970s at about 50 percent of the workforce.

In a defined benefit plan, the employer agrees to fund a benefit for retirees based on the number of years worked for the employer and the employee's salary history. The employer then establishes a trust to which it makes tax-deductible contributions to fund the projected benefit liabilities. The assets of the trust are invested pursuant to the direction of the employer or a professional investment manager hired by the employer. Favorable investment returns will reduce the amount of contributions that will be needed to pay benefits. Generally, the defined benefit plan is funded entirely by the employer, who bears the investment risk on the return on the plan's assets.

By comparison, defined contribution plans, such as section 401(k) plans, place the risk of investment performance on the employee. In these plans the employer and, typically, the employee make contributions to individual accounts established for each employee. Then, either the employer or each employee, depending on plan design, invests the assets. Where the employer invests the assets, it holds a pool of assets, much like in a defined benefit plan, and assigns a pro rata return on the assets to each individual employee's account. As the account grows or shrinks, so does the employee's benefit. The employer is under legal constraints to invest the assets "prudently" and in the "exclusive" and best interest of the employees. Where the employees direct the investment of their individual accounts, as is the case in the vast majority of 401(k) plans, the employer generally is obligated only to select a "prudent" range of investment options among which employees select. In all defined contribution plans, the employee, not the employer bears the risk of investment performance.

Historically, many defined contribution plans were not viewed as the primary retirement plan offered to employees. When offered, they often were used to supplement a defined benefit plan. In some instances, they were profit-sharing plans to which employer contributions would fluctuate from year to year depending on the firm's success. Or they took the form of "thrift savings plans" comprised of voluntary employee contributions.

The DB-DC Shift

In recent years there has been a dramatic change in the universe of employer-sponsored plans in the United States. In 1975, three-fourths of workers covered by a private pension had a defined benefit plan.[4] By contrast, between 1991 and 1997 the percentage of firms (of those with a retirement plan) that offered a defined contribution plan increased from 55 to 87 per cent, while those providing a defined benefit plan declined from 55 to 41 per cent. During the same period, the percentage of firms offering participant-directed, individual account types of plans, such as the 401(k) and 403(b)[5], increased from 36 to 70 per cent.[6] In 1995, 56.6 per cent of retirement plans established that year were 401(k) plans, 40.3 per cent were other defined contribution plans, and only 3.1 per cent were defined benefit plans.[7]

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[4] GAO report.

[5] The section 403(b) plan is a salary reduction vehicle similar to the 401(k) plan, that is available to employees of non-profit entities and funded through insurance company annuities or mutual funds custodial accounts.

[6] *8th Annual Merrill Lynch Retirement and Financial Planning Survey of Employers*, Merrill Lynch, (1997). (Hereinafter "Merrill Lynch.")

[7] Source: Form 5500 series reports filed with the Internal Revenue Service for plan years beginning in 1995.

The Growth of 401(k) Plans

In 1978, Congress approved a little recognized provision of the tax code—section 401(k), which was further clarified by Internal Revenue Service regulations implementing the provision in 1981. Section 401(k) permits employees to elect to defer through salary reduction arrangements a portion of their salaries into a profit-sharing or thrift saving plan. Previously, these plans were regarded as only supplemental arrangements into which employers made discretionary contributions and employees after-tax contributions. As of 1978, however, those employee contributions could be pre-tax rather than after-tax. The 401(k) is now the most popular retirement plan. In addition to the reasons cited above for the growth of defined contribution plans as compared to defined benefit plans, certain characteristics of the 401(k) plan have contributed to its remarkable growth.

First, research has shown the importance and popularity of saving through payroll deduction. Salary reduction is an effective, painless way for Americans to save. Salary reduction provides the discipline for saving that most employees do not otherwise have. Furthermore, because salary deferral amounts are deducted each pay period—weekly, biweekly or monthly depending on an employer's pay schedule—payroll deduction automatically establishes a "dollar cost averaging" investment strategy.

Employers also find the section 401(k) plan appealing. It reduces the administrative and funding burdens of the traditional defined benefit plan. The 401(k) plan makes the benefit more visible to the employee. Finally, 401(k) plans shift the risk of investment performance away from the employer.

In 1992, regulators provided an additional incentive for employers to establish participant-directed 401(k) plans, by adopting regulations clarifying the manner in which participants could direct the investments in their individual 401(k) accounts. The regulations offer employers reduced liability for the plan's investment returns where employees are permitted to elect their own investments from a sufficiently broad "menu" of investments. This clarification accelerated the establishment of 401(k) plans and the use of mutual funds as the plan investment options from which employees could choose. A family of mutual funds provides a convenient array of different investment options from which the employer may create a plan "menu."

An additional factor, a shift in American values, also has made the defined contribution plan—especially the participant-directed 401(k) plan—an attractive and popular retirement plan option. A philosophy of self reliance and individual responsibility, concepts inherent in the 401(k) plan, have replaced traditional notions of corporate paternalism and "big government." Employers like the 401(k) plan because it typically requires employees to take some responsibility in providing for their own retirement. Since employer contributions often are preconditioned on employee salary deferrals, employees must demonstrate their commitment to the plan before the employer incurs a funding obligation. Employees like the 401(k) because they have control over their retirement assets. According to a 1997 Merrill Lynch, survey 71 per cent of employees and 83 per cent of employers believe that the individual—not the employer and not the government—should bear primary responsibility for providing retirement income.[8] This response represents a recent, important shift in values and expectations.

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[8] Merrill Lynch.

Finally, technological advances, also have played a significant role in the growth of participant-directed 401(k) plans. The infrastructure needed to maintain such plans requires the availability of computer hardware, software and voice response systems technology, that generally was not available twenty years ago. These plans are much more feasible at cost-effective prices than they were previously. As discussed further below, it is, in part, the technological advantage of the mutual fund industry that has aided the industry's success in the 401(k) market.

The number of 401(k) plans has grown at a phenomenal rate since the mid-1980s. Between 1984 and 1993, for example, more than 137,000 new 401(k) plans, covering more than 15.5 million participants, were established.[9] In 1996, there were 44 million Americans who participated in defined contribution plans, of which 31 million were in 401(k) plans.[10] Coinciding with the growth in new plan formation has been remarkable growth in 401(k) plan assets under management. The overall asset size of the 401(k) market has expanded from an estimated $385 billion in 1990 to about $1.4 trillion in 1998.

II. The Role Of The Mutual Fund Industry In The 401(k) Market

In recent years, mutual funds have captured a larger share of the growing 401(k) market. Mutual fund assets in 401(k) plans have grown from $16 billion in 1990 to $593 billion in 1998, an increase in market share from 9 per cent to 42 per cent of the total market.[11]

For a number of reasons mutual funds are ideally-suited for 401(k) plans. First, mutual funds offer a broad array of alternative investments for plan participants, including a variety of equity funds (index, growth, growth and income, value, international, sector), balanced funds, income and money market funds, and so on. Mutual funds provide professional management and asset diversification to 401(k) plan participants, including participants who may be investing only a few dollars each pay period.

Second, mutual funds shares are priced daily, and exchanges between funds are readily available. Many 401(k) plan investors like to follow the progress of their 401(k) plan investments through the daily newspaper publication of mutual fund prices.

Third, under the securities laws, mutual funds are required to provide detailed public disclosures in the form of prospectuses and annual reports designed for the individual retail investor. These documents give 401(k) plan participants comprehensive information regarding the nature of their plan investment options. Moreover, most employers sponsoring 401(k) plans also seek to communicate to employees basic investor information regarding the effect of plan participation, principles of asset allocation, compounding, etc. Mutual funds firms are accustomed to communicating with retail investors and are well-equipped to assist in these communications and educational activities.

Fourth, the advanced technological capacity of mutual funds represents an important competitive advantage in the 401(k) plan market. As a result of enhanced technology many mutual fund companies perform the recordkeeping services required under a 401(k) plan. These services include processing payroll deductions, crediting contributions to employees' plan

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[9] Source: Employee Benefit Research Institute tabulation from US Department of Labor 1993 Form 5500s.

[10] Source: US Department of Labor

[11] "Mutual Funds and the Retirement Market," Investment Company Institute, July 1999.

accounts, investing contributions according to employee direction, recording earnings and distributions and maintaining accurate records of employee accounts. Quarterly or monthly participant statements showing all account activities, including contributions, distributions, earnings and plan expenses often are provided. Other convenient mutual fund services include tax and retirement plan information, newsletters and 24-hour phone access to fund personnel and account balances. Internet access and assistance is now quickly becoming a standard service available to plan participants.

Finally, because of the regulatory requirements applicable to participant-directed plans, such as the 401(k), mutual funds are uniquely suited for participant-directed, individual account plans. Employers, in order to limit their fiduciary liability under governmental regulations, must offer employees a minimum of three investment alternatives, constituting a broad range of investment alternatives.[12] Such "investment menus" must enable each participant to diversify by providing choices with materially different risk and return characteristics.[13] Furthermore, the regulations permitting a limit on employer liability require that each employee be permitted to change his or her investment choices no less frequently than would be appropriate for the most aggressive option offered, given its risk and volatility, and in no case less frequently than once a quarter. These regulatory standards have caused many employers to permit employees to make exchanges within their plans on a daily basis.[14] These regulations further require adequate disclosure to employees of the nature of each investment option. Existing mutual fund disclosure documents required by the securities laws should readily satisfy this requirement.

III. Investment Options for Defined Contribution Plans

Many countries around the world are actively engaged in creating new retirement security systems to decrease their historic dependence on "pay as you go" social security systems. In Europe, for example, a report published by the European Commission in late 1999 calls for increasing the role of funded pensions, which currently represent only 13 per cent of pension payouts, to 33 per cent by 2030 and tripling employee participation in funded pensions.[15]

Many of the proposals under consideration involve introducing or strengthening employer sponsored defined contribution plans or tax-advantaged individual savings programs. Legislation is under consideration in Japan, for example, to introduce defined contribution pension plans. Germany has created a new defined contribution pension plan and the United Kingdom has sought to strengthen its individual savings programs.

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[12] Within such a broad range of options, employees may select the fund or combination of funds appropriate to their individual situation and objectives. Thus, while the money market and income funds may be well-suited for the older employees who wish to generate maximum income for retirement at a low level of risk, aggressive stock funds may be attractive to younger employees interested in maximizing capital growth over the long-term.

[13] Although the regulations require at least three investment options to reduce employer liability, employers are increasingly adding options to satisfy employee demand. In fact, recent studies indicate plans offer an average of 8 – 10 investment options, "42nd Annual Survey of Profit Sharing and 401(k) Plans," Profit Sharing/401(k) Council of America (1999).

[14] Daily valuation and the ability to change investment elections daily is quickly becoming the standard plan design. The ability to reallocate daily has not resulted in over-trading of accounts. Individuals in plans with unlimited exchange rights actually reallocate account balances infrequently, "Building Futures: How American Companies Are Helping Their Employees Retire, A Report on Corporate Defined Contribution Plans," Fidelity Investments (1999), p. 92-95.

[15] Rebuilding Pensions: Security, Affordability – Recommendations for a European Code of Best Practices for Second Pillar Pension Funds. European Commission, 1999.

In connection with these initiatives, some countries have implemented or are considering policies that would restrict the types of investments that could be used in defined contribution plans and individual savings programs. Some of the limitations are:

- requiring the creation of entirely new funds as funding vehicles for these new programs, rather than allowing existing mutual funds or investment products to be used;
- requiring that only investment products with certain investment objectives or other characteristics can be suitable investments for these plans; and
- imposing fee caps or other restrictions on investment products that can be marketed to these programs.

The effort to impose these types of limitations seems to derive from three concerns – first, that employees will not make good investment decisions, second, that market forces cannot be trusted to assure effective competition with respect to products, fees and services, and third, that governments may be called upon to make up shortfalls if the new programs do not provide adequate retirement income for participants.

The Investment Company Institute believes strongly that these concerns are misplaced. Restrictions on investment freedom for plans and restrictions on the types of investment products that can be used as funding vehicles for plans are neither necessary nor appropriate.

First, the evidence indicates that participants can be trusted to manage their accounts prudently. The Institute and the Employee Benefit Research Institute recently analyzed the behavior of 6.6 million participants in over 27,000 401(k) plans holding nearly $246 billion in assets.[16] The data shows that employees as a whole are making allocations that are appropriate with respect to equity, fixed income, and stable value investments and that within each age group, employees are making asset allocation decisions that are appropriate to their age. Younger participants invest more heavily in equities and older participants invest more heavily in fixed income securities. The data also shows that older employees with longer tenure with a company tend to have the largest account balances, suggesting that these employees are using their 401(k) plans appropriately to accumulate wealth for retirement.

Second, the evidence indicates the market can be trusted to provide effective competition as to products, fees and services. Based on the US experience, allowing financial services companies, including mutual fund companies, to sell their existing products to defined contribution plans enhances competition to the benefit of plans and their participants. Since the introduction of 401(k) plans in the US in 1978, the retirement market in the US has been highly competitive as banks, insurance companies and mutual fund firms have sought a share of this market. This competition has resulted in improved services and lower costs. In addition, allowing providers to sell existing products to plans, rather than having to create new funds exclusively for these plans, allows for economies of scale that lowers costs for plans and participants.

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[16] Holden, VanDerhei, and Quick, "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 1998." Perspective, (Investment Company Institute, January 2000) Vol. 6, No. 1. As part of the project, EBRI and the Institute have assembled a comprehensive data set to determine whether 401(k) plan participants accumulate adequate retirement savings and make effective investment choices in their plans. The database, the largest of its kind, includes data for 7.9 million active plan participants in over 30,000 plans with assets valued at $372 billion. This data, collected from certain EBRI and Institute members that serve as 401(k) plan recordkeepers and/or administrators, reflects about 22 percent of all 401(k) participants, 11 percent of all 401(k) plans and 27 percent of all 401(k) assets. The data include demographic information, annual contributions, plan balances, asset allocation and plan loans. The database is updated annually.

Institute research on mutual funds, for example, demonstrates that over the last twenty years, the period in which mutual funds have been used increasingly in 401(k) plans, the total cost of investing in mutual funds has declined significantly. During this period the total cost of investing in equity funds fell 40 per cent Our research also demonstrates the importance of economies of scale to the total cost of mutual fund investing. Larger funds have significantly lower operating expenses than smaller funds.[17] Government rules that would restrict the ability of mutual fund sponsors to market their existing funds to defined contribution plans, thus, are not only unnecessary but could well lead to higher costs and lower levels of service for these plans. This would be especially true in the critical, early years of a program.

Third, government regulations to limit the types of products that can be used in defined contribution plans also are not needed or desirable to protect the government from being called upon to make up any shortfalls in their citizens' retirement income. Rather, detailed government restrictions may discourage citizens from taking responsibility for their retirement security.

There is ample evidence that pension plans in countries that allow broad investment freedom, subject only to the duties of prudence and diversification, have experienced the highest long-term returns on pension assets. [18] Moreover, government prescriptions about eligible investments cannot take into account the different needs and situations of different plans and plan participants. Accordingly, optimum returns on pension assets will be produced if we allow plan sponsors to make decisions as to the appropriate range of investments for a particular defined contribution plan and if we allow plan participants to make the decisions as to how their accounts will be allocated. In fact, a government that imposes paternalistic requirements on defined contribution plans may actually encourage citizens to believe that the government will make up for shortfalls.

In short, the US experience indicates that defined contribution plans work best if plans and participants are free to choose among a selection of investment options, market forces are allowed to operate with respect to products, fees and levels of services, and citizens are encouraged to take responsibility for their retirement savings. Of course, a defined contribution system based on participant direction can only work if participants are provided with all relevant information needed to make informed investment decisions.

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[17] Investment Company Institute Perspective "Operating Expense Ratios, Assets, and Economies of Scale in Equity Mutual Funds," December 1999.

[18] See "The Impact of Market Access and Investment Restrictions on Japanese Pension Funds," *EBRI* Special Report, SR-26, October 1994. See also "Rebuilding Pensions: Security, Affordability – Recommendations for a European Code of Best Practices for Second Pillar Pension Funds." European Commission, 1999.

LISTS OF SPEAKERS
THE THIRD APEC REGIONAL FORUM ON PENSION FUND REFORM
30-31 MARCH 2000, BANGKOK, THAILAND

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