CHAPTER 3

FORGING A NEW CONSENSUS ON PENSIONS

Lawrence H. Thompson[162]

3.1 Introduction

During the past 15 years, debate about and actual change in the scope and structures of national pension systems have grown to unprecedented levels. The intense focus on pension systems and institutions is occurring throughout the world, in fully developed and developing economies alike. It is being driven by factors that vary in mix from one part of the globe to another, including the need or desire to restructure entire economic systems, reinvigorate ineffective pension institutions, or improve social protection in concert with improving economic conditions. Debate is often occasioned by the hope that alternative pension structures will improve macroeconomic performance and help respond to changing demographics, or the desire to reflect changes in social philosophy about the relative importance of individual and collective provision for retirement.

One of the most prominent features of the current debate is sharp criticism of the pay-as-you-go, public pension programmes that are the primary means of providing retirement income in many industrialized countries. For decades, these programmes were widely viewed as valuable social and economic institutions. Today, they are often accused of costing too much, reflecting outmoded social philosophies, and having undesirable consequences for the economy.

The most vocal critics of the current systems usually advocate the replacement of pay-as-you-go, defined benefit pension systems with advance funded, defined contribution retirement income systems. Such a change, they argue, would likely lead to lower costs, more adequate pension incomes and healthier economies.

This paper will examine the economic issues raised by this debate. It will argue that some of the criticisms of traditional public pension systems are valid, particularly where these systems are poorly designed or implemented. Many of the criticisms, however, are overstated and are not supported by the empirical evidence. Similarly, some of the advantages claimed for advance funded, defined contribution approaches are valid, but others are also overstated and not supported by the empirical evidence. The two approaches do appear to have different advantages and disadvantages. In recognition of this, the best approach to pension policy is probably to rely on a mixed, multiple pillar arrangement that combines institutions with different management responsibilities, funding strategies and benefit calculation procedures.

The most common criticisms of pay-as-you-go pensions involve their impact on the economy as a whole, and that particular set of concerns will be reviewed first. Pension systems, however, are not created because of the impact they might have on the macroeconomy. They are designed, first and foremost, to be mechanisms that provide retirement income to the aged population. This role is examined in detail in the next sections of the paper. The paper concludes with an analysis of the advantages of a multi-pillar pension system that mixes the approaches and offers some observations on factors that are likely to influence the relative size of the different pillars.

My analysis leaves out many important social and cultural issues that also ought to be an important part of this debate, including the role of national pension programmes as social institutions and the conditions under which different kinds of public and private institutions are likely to succeed or fail. Each of these is just as important to the debate as is the analysis of the economics of public pensions, but both have received far less attention. The role that public pensions play in ensuring social cohesion in a modern society may well be as important as any economic effect that they may have. In addition, history shows that serious problems with the operation of public pensions are frequently as much the

[162] The ideas presented in this paper are developed at greater length in three other publications by the same author: *Older and Wiser: The Economics of Public Pensions* (Washington, D.C., The Urban Institute Press, 1998); "Balancing the public and private sector roles in the management of public pension programs", *Promoting Pension Reform: A Critical Assessment of the Policy Agenda* (Manila, Asian Development Bank, 1998), pp. 76-83; and "Individual uncertainty in retirement income planning under different public pension regimes", in R. Arnold, M. Graetz and A. Munnell (eds.), *Framing the Social Security Debate* (Washington, D.C., National Academy of Social Insurance, 1998). The author gratefully acknowledges the financial support of the member institutions of the International Social Security Association. The views expressed are the author's alone, and not necessarily those of The Urban Institute or any funders.

result of institutional weaknesses as of design flaws. Designs that appear to work fairly effectively in one institutional setting can easily prove to be a disaster in another setting.

3.2 Economic impacts

(i) Why mandatory retirement programmes are created

The logical starting point for this discussion is the question of why public pension programmes exist at all. What purposes are they supposed to serve and what impact should we expect them to have?

Both supporters and critics of the traditional pay-as-you-go pension systems agree that governments ought to require working-age people to make provisions for their retirement. The agreement demonstrates a shared belief that free markets would not work properly to provide all citizens with adequate financial protection in retirement in the absence of government intervention.

One reason for government intervention is the desire to alleviate poverty, particularly among those no longer expected to work. In many countries, public pension programmes are the most important tool for discharging this responsibility, since they are effective in supplying at least a modest level of income to most of the aged and do so in a manner that preserves dignity and self-respect. The scope and structure of most public pension programmes go far beyond the type of government effort that would be required just to provide a "safety net" to assure minimum living standards, however. It is this expanded scope that requires additional explanation.

The most common argument for this greater government role is worker myopia. In the absence of a government mandate, many people would not have the foresight or discipline to save adequately for retirement. By the time they realized their mistake, it would be too late. In effect, the government acts paternalistically to enforce a mandate that people may resent when they are young but will grow to appreciate as they get older.

A second argument is that the government mandate is required to protect the prudent members of society from free-riders. If, in the end, people believe that the government will ensure that all of the aged have access to a minimum living standard, some may make a conscious decision not to save on their own. To avoid having to pay both for themselves and for any imprudent neighbours, the prudent members of society force everyone to contribute.

A third argument focuses on the possibility of reducing the uncertainty involved when each individual is required to make his or her own retirement arrangements. Government interventions can reduce the difficulty of preparing for retirement in the face of uncertainty about the pace of future economic activity, the path of future investment returns and inflation rates, and the length of one's life.

Several observations about the structure of public pension plans flow from a review of these arguments. First, while the arguments suggest that some form of mandatory programme is desirable, they do not suggest that the programme must offer full earnings replacement for middle- and upper-income retirees.

Second, the arguments presume that many working-age people would not voluntarily make adequate provision for retirement. One key to successful implementation of a public pension programme, therefore, is the willingness and ability of the government to enforce collections from reluctant individual and organizational contributors. One sometimes hears suggestions that compliance problems could be solved simply by linking benefits more closely to contributions. While such a change might have a beneficial impact, expecting it to produce a major increase in compliance would seem to ignore the basic assumptions about human behaviour that motivated the creation of the pension programme in the first place.

A third observation involves the likely impact of a public pension programme on participant behaviour. Public pension programmes are designed to make it easier for people to retire at an "appropriate" age. The assumption is that, in their absence, people would have saved too little and thus been forced to work too long. It should be expected, then, that the implementation of a mandatory pension programme will cause many participants to retire earlier than they otherwise would have, thereby reducing the labour force participation of the aged. To some degree, such an impact is the intended result.

(ii) The economic cost of pension programmes

One source of confusion about the economic impact of a public pension programme can be traced to a failure to distinguish between the actual cost to the economy of the pension programme and the level of the social insurance contributions that are levied to finance those costs. The economic cost of supporting the retired population is best measured as the fraction of each year's total national economic activity that is devoted to supplying the goods and services the retired consume. This assumes that whatever part of the economy's capacity is used for this purpose cannot be used for some other purpose, such as producing consumer goods for the rest of the population or making new investments to increase future productivity.[163]

[163] Two other elements of cost could also be added: any reductions in GDP associated with the operations of pension programmes and resulting from unintended changes in labour or capital markets, and costs associated with administering these programmes.

This economic cost is financed through some combination of transfers from the labour earnings of those who are not retired (usually in the form of pension contributions) and allocations of a portion of each year's returns to invested capital (usually in the form of earnings on assets owned by individual retirees or by pension funds). Different approaches to pension finance often involve different allocations of these costs between contributions and returns on assets. Confusion can occur when one approach appears to be cheaper than another because it involves lower pension contributions from earnings. If the lower charge to labour is offset by a higher charge to capital income, the total cost to the economy is the same even though it may be distributed differently.

The share of total economic activity devoted to the consumption of the retired – the actual economic cost of their support – is influenced by a variety of economic, demographic and public policy developments. Perhaps the easiest way to understand how these various elements interact is to focus on the behaviour of three key ratios: (1) the aggregate consumption ratio, which is the fraction of economic activity that is devoted to producing consumer goods and services for domestic use; (2) the retiree dependency ratio, which is the fraction of the population that is retired; and (3) the living standards ratio, which is the ratio of the average consumption of the retired population to the average consumption of all persons. When multiplied together, these three ratios will produce the ratio of retiree consumption to total economic activity, which is the economic cost of supporting the retired.

The relationship between changes in any of these three ratios and the corresponding change in the economic cost of the retired population is direct and proportional. Anything that causes one of these ratios to rise by a given percentage will increase the economic cost of supporting the retired by the same percentage. By the same token, the cost of supporting the retired can only be reduced through the introduction of changes that reduce at least one of these key ratios.

As populations age, and if no other changes are made, the retiree dependency ratio will rise and the economic cost of supporting the retired will increase proportionately. The two most common adjustments that are discussed as ways of offsetting some of this cost increase are increasing the statutory retirement age, which would reduce the retiree dependency ratio, and reducing retirement benefits, which would lower the living standards ratio.

Shifting some or all of the responsibility for managing public pension plans from the public sector to the private sector has also been advocated as a mechanism for reducing the cost of supporting the retired. Whether such a change has the desired effect depends entirely on whether it serves to decrease one of these key ratios. For example, if the shift is accompanied by changes that increase retirement ages or reduce the relative incomes of the retired population – or will be more effective at keeping retirement ages from drifting down or relative incomes from drifting up – it may well be an effective mechanism for reducing costs. If the shift is not accompanied by changes in dependency ratios or in the relative living standard of the retired, however, it will have no impact on the actual economic cost. Indeed, such a shift can actually increase the cost of supporting the retired if it produces higher retirement incomes. Higher incomes for the retired will most likely lead to an increase in their living standards relative to the rest of the population, causing the cost of supporting retired persons to rise.

Others advocate economic policies which they believe will accelerate economic growth as part of a strategy to deal with the rising cost of an ageing population. While such policies may be desirable for other reasons, it is not at all clear that faster economic growth should be expected to reduce the economic cost of supporting the retired. If faster economic growth translates into more rapidly rising living standards of the working-age population without having the same impact on the living standards of the retired population, the relative cost of supporting the retired will drop. On the other hand, rising living standards among the working-age population may cause them to prefer earlier retirement and to offer less resistance to gradually rising pension contribution rates. Either reaction could mean that faster economic growth actually has the effect of increasing the cost of supporting the future retired population.

In summary, the economic cost of supporting the retired population is best measured by looking at the resources devoted to their consumption. Public pension benefit payments are a major source of support for the consumption of this population. For this reason, the best measure of the economic cost of a pension programme is the benefits it provides. If it is important to prevent too great an increase in the costs of supporting the aged population, the evaluation of alternative policies to constrain these costs should focus on how effectively each will be in keeping pension benefit payments from rising.

(iii) Pensions and savings

Even if the way that pension plans are financed is unlikely to have a significant impact on the share of national production devoted to supporting the retired, the financing approach may still have an important impact on everyone's living standards if it influences saving behaviour, labour force behaviour or international competitiveness. Each of these three possible effects is discussed widely in the popular press, often as if the linkages were obvious and all of the impacts significant. Serious students of economics have been able to establish some, but not all, of the linkages. Where linkages have been found, many of the impacts appear to be relatively modest.

The relationship between pension finance and saving behaviour has attracted the attention of economists for several decades and has produced a considerable volume of statistical studies. The primary issue has been whether pay-as-you-go pension systems reduce aggregate national savings and/or whether greater reliance on advance funded pension plans would increase national savings. If a consistent relationship can be found, pension policy changes could be used to increase aggregate national savings and produce a somewhat higher level of per capita economic activity.

Careful reviews that assess the whole body of recent analyses usually conclude that no consistent evidence exists which links the introduction of pay-as-you-go pension programmes to declines in national savings rates. The linkage may well exist, but either it is too small to show up in the data or its impact is obscured by other factors.

In a similar vein, there is evidence (based largely on data from the United States) that the accumulation of assets in retirement accounts will cause total household savings to increase, though by less than the increase in the balances in the retirement accounts themselves. This positive effect from advance funded pensions appears to be either overshadowed or offset by the behaviour of other components of national savings, however. Among these are the fiscal operations of government, business finance strategies, and customs and practices used to finance housing and other major consumer expenditures. At least among OECD countries, there is essentially no correlation between the rate at which pension assets have grown and the total savings rate in the economy.

All of this suggests that if higher savings is an important national goal, pension policy may have a role to play, but it is unlikely to have a discernible impact by itself. Pro-savings pension policies would have to be accompanied by other interventions such as a pro-savings tax code, government fiscal surpluses and policies which discouraged consumer lending.

Several recent studies have found that the development of financial markets can provide an independent impetus to economic growth. Although the results are still controversial, they suggest that using advance funding for at least a portion of the pension system may have a beneficial economic impact independent of any impact on aggregate savings. The finding has potential importance for transition and developing countries, but less relevance for the developed world.

(iv) Pensions and labour supply

Public pension plans may also cause a reduction in productive economic activity through their impact on labour supply. One possibility is that mandatory pension plans may unduly discourage individual work effort both by lowering net pay during people's prime working years and by encouraging retirement when people reach the age at which benefits become available. Another is that they may encourage an artificial movement of people into less easily taxed, and often less productive, sectors of the economy if they force younger workers to set aside more for their retirement than these workers would prefer to do.

Studies of worker behaviour offer some confirmation of the first concern. Pension contributions (and other earnings taxes) seem to have little effect on the work effort of those who are the primary source of support for themselves or their family. For those who have alternative sources of support, however, these studies find that social insurance contributions and other taxes on earnings do tend to reduce work effort, at least somewhat.

The availability of pensions for older workers also seems to reduce work effort, especially among those whose health has deteriorated. Not surprisingly, there is a tendency for more generous pensions to have a more dramatic effect on work effort, although a change in the age at which pensions first become available would probably have a more powerful impact on retirement behaviour than would a modest change in the amount paid at a given age. This means that if population ageing forces pension retrenchments, a reduction in the monthly benefit payable beginning at a given age is as likely simply to produce lower retirement incomes as it is to lead to an increase in the average retirement age.

Since mandatory pension programmes are established to require people to make more adequate provision for retirement, it must be assumed that their successful implementation will allow people to retire earlier than they would have without access to pension income. Current studies of labour supply impacts tell us that people do retire earlier than they would have without access to pension income. Since most societies have never articulated the social, political or economic criteria for judging the impact of their policies, however, these studies are unable to tell us whether the actual impact is more or less than is desirable or if the benefits paid are too generous or not generous enough. We are also unable to say whether some discouragement of work effort among secondary earners is a reasonable price to pay for the gains that are secured when a pension plan is established.

Levying pension contributions creates an incentive for people either to hide from the tax collector in informal labour markets or to classify themselves as self-employed, since ensuring compliance among the self-employed has always been a challenge. By itself, reclassifying oneself as self-employed may have little impact on aggregate economic activity, although by reducing tax compliance it can create fiscal problems for the government and, depending on how closely benefits and contributions are linked, for the pension plan as well. Aggregate economic activity will suffer, however, if people seek out fringe employers in the informal labour market who operate in somewhat less productive sectors of the economy but who can offer a higher net wage by not paying pension contributions.

The situation can be particularly troublesome if the link between pension benefits and contributions is weak. In these cases, workers may be able to spend much of their careers in informal employment (or self-employment), escape the full payment of contributions and still draw full pensions. In addition to any economic losses, such situations will cause major financial problems for the pension plan.

Pension systems in which the link between contribution payments and benefit receipt is as direct and clear as possible introduce fewer compliance disincentives and are better insulated from the financial problems associated with any remaining compliance problems. Compliance problems should still be expected no matter how clear and close the linkage, however. If a clear and close linkage between contributions and benefits were sufficient by itself to assure compliance, there would be no need to have mandated the programme in the first place.

(v) International competitiveness

The recent slowing of economic growth in much of the industrialized and developing world together with the globalization of commerce has caused concern that overly generous pension systems may be undermining international competitiveness.

It is generally acknowledged that well-designed pension programmes can enhance international competitiveness by, for example, helping to smooth transitions from one industrial structure to another or facilitating worker movement to new employment opportunities. Poorly designed programmes can discourage work effort, however, and even the best-designed programmes can also be expensive. The question is whether the positive impact of these programmes is being offset by the impact that financing them has on the cost of doing business in a particular country.

Economic theory suggests that the costs of running pension programmes should not cause any particular international competitiveness problems where product markets, labour markets and foreign exchange markets are allowed to operate fairly freely. In such an environment, any increase in pension contributions (or other pension charges) will translate into reductions in worker take-home pay rather than increases in the cost that businesses incur to hire labour, regardless of whether the contributions are collected initially from the employer or the employee.

Both labour market and international competitiveness problems can arise for an extended period of time, however, if some combination of government policies and labour market rigidities prevent the normal market adjustments to increases in pension contributions. When either government policies or private labour agreements prevent real wages from falling, an increase in employer contributions can cause business costs to rise and lead to increased unemployment. This situation can also cause international competitiveness problems if, in addition, either government policies or private capital movements prevent exchange rates from adjusting to trade imbalances, at least for a while.

Analysis of the relative competitiveness of different countries supports the view that pension programmes can be beneficial to a country’s competitiveness, but that high employer charges to finance them can be a problem. When OECD countries are ranked by their relative competitiveness, the more highly ranked tend to be those that spend a higher fraction of their GDP on pensions. At the same time, higher employer contribution rates tend to be associated with somewhat lower competitiveness scores.

3.3 Choosing among the pension approaches

The choice of a particular approach to providing mandatory public pensions has implications for both pension financing and the adequacy of pension benefits. Financing considerations include the relationship between pension approaches and contribution rates and the challenges involved in changing from one approach to organizing public pensions to another. Adequacy concerns include the predictability of pension benefits at retirement and the effectiveness of the system in assuring retirees continuing access to a decent standard of living.

(i) Setting pension contribution rates

The economic cost of a pension programme is best measured by looking at the relationship between aggregate benefit payments and total economic activity. However, the contribution rates needed to finance a given level of benefits may be higher under one approach to providing pensions than under another.

Contribution rates under pay-as-you-go, defined benefit pension plans are set so that the aggregate receipts from all workers are sufficient to finance the aggregate benefit payments to all retirees. In these plans, contribution rates are sensitive to demographic changes but fairly insensitive to economic developments. A decrease in the number of contributors relative to the number of pensioners will force rates to rise, since the cost of financing a given quantity of pensions is spread among a smaller number of contributors. On the other hand, a change in prevailing earnings levels often has relatively little impact on the contribution rates needed to finance these plans, since any change is likely to cause more or less equal percentage changes in receipts and expenditures.[164]

Under the individual savings approach that is characteristic of most defined contribution plans, contribution rates need to be set so that each individual can accumulate financial assets of an amount sufficient to finance their desired level of retirement income. Since the financing plan focuses on the balance in each individual's account, declining birth rates (and the changes in the contributor/pensioner ratio that they induce) have no direct effect on the contribution rate calculation.[165] Contribution rates needed to obtain a specified level of retirement assets are determined instead by the interaction of interest rates (or, more generally, capital returns) and the rate of wage growth. An increase in the interest rate makes it easier to accumulate the necessary balance in retirement accounts and allows the system to operate with lower contribution rates. In contrast, an increase in the rate of earnings growth raises the amount of retirement assets that the pensioner must accumulate in order to finance a pension that will preserve the relationship between retirement income and pre-retirement earnings. This forces contribution rates to rise.

Contribution rates under pay-as-you-go and funded plans are equally sensitive to changes in life expectancy at retirement. An increase in retiree life expectancy increases the amount that each worker must accumulate under an individual accounts approach, since the accumulation must last longer. (It has the same impact on the amount that must be accumulated for an entire cohort of retiring workers under a funded, defined benefit plan.) It also causes the ratio of contributors to pensioners to fall, thereby forcing contribution rates up in the pay-as-you-go approach. In all cases, the desirable impact on individual life prospects is accompanied by an undesirable impact on pension contribution rates.

The relationship between the pension contribution rates required under pay-as-you-go and funded approaches is fairly straightforward and predictable as long as one is operating in a simple world in which nobody dies before reaching retirement age and pension plans have no administrative costs. In such a world, relative contribution rates depend on only two numbers: the rate of population growth and the gap between the interest rate and the rate at which wages are growing. If the amount by which the interest rate exceeds the wage growth rate is larger than the population growth rate, the funded approaches will have lower contribution rates. If the gap is smaller than the population growth rate, the pay-as-you-go approach will have lower contribution rates.

One reason why the funded approaches have attracted more attention in recent years is that population growth rates have been falling and, at least in OECD countries, interest rates have been rising relative to wage growth rates for the last couple of decades. Assuming that both trends will continue into the future, the funded approaches will produce a given average pension with a lower contribution rate.

The relative attractiveness of the approaches may change, however, when more realistic assumptions about mortality structure and administrative costs are introduced into the comparison. Defined benefit pension plans incorporate certain insurance features not found in defined contribution plans. When a worker dies in the years just prior to retirement, the pension obligations under a defined benefit plan are reduced, allowing the plan to be financed with a somewhat lower contribution rate. In contrast, pre-retirement mortality has no impact on the contribution rates required under the individual savings, defined contribution approach, since each account is financed on the assumption that its owner will survive.

Managing the accumulated financial assets causes administrative costs under advance funded plans to exceed those under comparable pay-as-you-go plans. Moreover, among advance funded plans, administrative costs are consistently higher under a system of individual accounts than under a group defined benefit plan, due to the loss of some economies of scale and to differences in marketing expenses. Finally, defined benefit plans usually pay benefits in the form of life annuities automatically, whereas holders of individual accounts must purchase annuities in order to achieve the same degree of assurance that their income will last for as long as they live. When purchased separately, annuities introduce another set of marketing and administrative costs.

These effects can cause the costs of running a defined benefit plan, particularly a pay-as-you-go plan, to be substantially lower than the costs of operating a defined contribution plan producing a similar retirement income. Depending on the particular demographic and economic conditions prevailing in a given society, the effects of early mortality and increased operating costs can amount to the equivalent of a 1.5 to 2.5 percentage

[164] The situation is slightly more complicated when, after retirement, benefits are adjusted for price increases rather than earnings increases. In that case, revenues grow in line with earnings whereas benefits grow in line with prices, and contribution rates can rise or fall if the two grow at different rates. Although this can be a serious issue for a few years during a severe recession, the effects tend to be far less dramatic over the longer run than are those of changes in birth rates.

[165] Changes in population growth rates may have an indirect effect through their impact on prevailing real wage and interest rates. Such indirect effects are not considered in this analysis.

point reduction in the annual rate of return earned on individual accounts.

(ii) Changing from one approach to another

The single most important reason for creating a pension programme is to help ensure adequate incomes in retirement. This objective will be achieved much more rapidly under some approaches than under others, however, because the different approaches phase in at different speeds. Non-contributory programmes phase in the most rapidly. Whether the programme is income tested or universal, its adoption can quickly improve the income of all of the aged, including those retired at the time the programme is initiated. Contributory, defined benefit approaches will be of no benefit to those already retired at the time they are instituted, but can be used to ensure adequate retirement incomes to those who are close to the retirement age as well as all who will follow. Defined contribution plans are the slowest to mature. They require over half a century to approach their full potential as a source of retirement income and are of limited benefit to anyone beyond the midpoint of their work career at the time they are instituted.

Because of the differences in the speed of maturation, the defined contribution approach is frequently not the option selected when a country is setting up its first public pension arrangements.[166] Over time, however, preferences about national pension policy are likely to evolve as systems mature and the pressure to assure adequate retirement incomes eases, and as economic, demographic and social conditions change. For example, many countries which began by following one approach have subsequently broadened their strategy by combining several different approaches to form a mixed or "multi-pillar" system. Contributory approaches are added to older, non-contributory approaches, and privately managed approaches are added where older systems were largely run by government. The new approaches frequently supplement and occasionally partially replace the earlier programmes.

Many of these transitions occur gradually and relatively painlessly. Often, as income levels rise, the newer approaches are simply added in lieu of an expansion of the older ones. The added programmes may be voluntary or they may be mandated.

The one transition that cannot be achieved gradually and painlessly is the transition in which a publicly managed, pay-as-you-go, defined benefit plan is replaced by a system of privately managed, advance funded, defined contribution accounts. The challenge is that the transition requires paying off the express and implied liabilities for future benefits under the pay-as-you-go system, while at the same time financing the new, defined contribution programme. This involves duplicate payments which can easily be as much as 5 or 6 per cent of a country's gross domestic product every year for several decades.

This kind of transition is difficult to justify on the basis of narrow cost calculations. Even if the transition payments are financed entirely through more government borrowing, under current economic conditions the additional cost just to service the new government debt is likely to be more than the cost of keeping the pay-as-you-go pension system in financial balance. For this reason, phasing out a pension system is usually not a very effective way of dealing with government fiscal problems, since it will likely make them worse for quite a few years into the future. Moreover, at least in principle, any positive economic impact that might be associated with such a change could have been achieved much more easily and with equal effectiveness by changing the benefit structure in the public system or by introducing a degree of advance funding to a system that had previously operated on a pay-as-you-go basis.

This type of transition may be justified, however, if it is the only effective way to solve certain political or institutional issues. It may provide the only politically acceptable way to reduce future benefit commitments, making it the most practical strategy for reducing the cost of supporting an ageing population. It may also provide the most effective way for assuring that future benefit commitments don't grow beyond levels that the society can afford, or that assets accumulated to help pay retirement benefits are actually used for that purpose. In some societies, such a transition may be deemed the only practical way of assuring a reasonable quality of service to pensioners, or may be favoured on general ideological grounds.

(iii) Mid-career economic and demographic risks

As noted previously, one rationale for setting up a mandatory pension programme is to give individuals a more predictable source of retirement income than they could obtain on their own. The amount that needs to be set aside each month (the contribution rate required) in order to accumulate a given volume of assets grows larger or smaller as investment returns fall or rise, but people in the earlier stages of their careers cannot predict future investment returns accurately. Moreover, the amount of assets that must be accumulated in order to assure a regular retirement income at a particular percentage of pre-retirement earnings depends on how fast earnings levels grow during the person's career and how long the person can expect to live once they have retired, which also are difficult to predict at the beginning of a career.

When a public pension programme has been instituted, it promises (either explicitly or implicitly) that

[166] With the notable exception of the provident funds popular in many current and former members of the British Commonwealth.

pensions will be available to those who make the required contribution payments. People measure the reliability of these promises in large measure by the degree to which a pension in the amount promised at the beginning of an employment career is actually available at the end of the career.

Pension promises are rarely realized precisely. Invariably, adjustments to earlier promises are required to reflect developments occurring during an individual's employment career. Unexpected economic and demographic changes are likely to affect pension promises under each of the various types of public pension systems.

Pay-as-you-go, defined benefit plans generally have less risk of substantial benefit change than advance funded, defined contribution plans for two reasons, one related to the financing principle they employ and the other to the way benefits are set. Because of the way they are financed, the benefits provided under a pay-as-you-go plan are not nearly as sensitive to unforeseen economic developments, particularly changes in the rate of wage or price growth or changes in the rate of return on investments. This advantage is partially offset by the fact that pay-as-you-go approaches are more sensitive to changes in the rate of growth of the working-age population than are funded approaches. Historical evidence suggests, however, that sensitivity to economic changes is likely to be a more serious source of unpredictability than is a sensitivity to changes in the growth rate of the working-age population, making the funded, defined contribution approach more risky than the pay-as-you-go, defined benefit approach. The two financing approaches are equally vulnerable to changes in mortality experience among those who are retired.

When unforeseen problems do arise, prospective retirees under defined benefit plans are usually not required to absorb the entire impact of any necessary adjustment. Under defined benefit plans, unforeseen changes in economic and demographic conditions lead initially to an imbalance between receipts and expenditures rather than to a change in the promised benefits. Sooner or later, the imbalance is eliminated through some combination of benefit and contribution rate adjustments. Typically, the impact of correcting the imbalance is spread among current retirees, future retirees, and other contributors, with each absorbing a fraction of the total impact. In contrast, under the funded, defined contribution approach, all unanticipated economic changes are reflected fully in changes in the retirement assets and future retirement income of each participant.

(iv) Post-retirement risk

Once individuals are retired they face two more kinds of uncertainty: unanticipated inflation and uncertainty about their own life spans.

Traditional pay-as-you-go public pension programmes all but eliminate both of these risks by paying benefits in the form of life annuities and adjusting the benefit amounts periodically to reflect changes in price or wage levels. The major risk that retirees bear is that benefit adjustments will be delayed or altered in the face of adverse economic conditions or unanticipated financial problems in the pension plan.

Dealing with these two sources of uncertainty is a somewhat bigger challenge under traditional defined contribution approaches, where retirees must support themselves for the rest of their lives by drawing down the stock of financial assets accumulated during their working lives. Where financial markets are reasonably well developed, both kinds of uncertainty can be reduced through the purchase of variable annuities. Absent some form of government intervention, however, the private market for variable annuities is likely to have two shortcomings: costs will be higher than under collective insurance schemes due to adverse selection problems, and the annuities will probably be indexed to financial market returns rather than to inflation or wage growth.

Governments can effectively remove these two problems by mandating that all retirees purchase annuities, thereby all but eliminating the risk of adverse selection, and by selling bonds whose principal and interest are indexed to prices, allowing the sale of private annuities whose benefits are indexed to inflation. However, both of these actions have drawbacks. In addition to possible philosophical objections, the disadvantage to mandating the purchase of annuities is that it may permanently harm cohorts who happen to reach retirement age at a time when the value of investment portfolios is temporarily depressed. The disadvantage of issuing indexed bonds is that they create for the government a pay-as-you-go liability which, though smaller than that associated with a pay-as-you-go public pension system, will be less amenable to modification in times of economic distress. Governments find it much easier to postpone or alter pension benefit adjustments than to postpone payments on bonds that they have issued.

3.4 Advantages of a mixed, multi-pillar system

Where practical, the most desirable configuration for a nation's pension system is a mixed system, a system which combines: (a) public and private fund management, and (b) pay-as-you-go and capitalized financing. The advantages of such a mixed system include the ability to more effectively spread individual risks and the possibility of promoting efficient and effective administration.

(i) Spreading of risks

Pension systems make long range promises. In return for participation as a tax payer/contributor during one's working years, people are promised a certain level of income during their retirement years. The social value of the system depends critically on whether working-age people can rely on the promises made by the managers of the pension system.

All pension systems involve some risk that pension promises will not be fulfilled, but the threats that these risks impose differ among the different pension approaches. Some of the risks involve demographic and economic uncertainty of the type discussed previously. Other risks involve uncertainties about how the political process will operate and how institutions will evolve. Plans that are managed by the public sector are particularly vulnerable to some risks whereas plans that are managed by the private sector are vulnerable to other risks. Similarly, some risks arise primarily or exclusively under pay-as-you-go plans and some apply mainly or exclusively to plans that rely on advance funding.

Demographic risks involve the impact of unexpected changes in either birth rates or in retiree life expectancy. As noted previously, the risk introduced by unexpected changes in birth rates affects primarily pay-as-you-go plans, while both pay-as-you-go and funded plans are affected more or less equally by changes in retiree life expectancy.

Economic risks include unpredictable and irregular rates of growth in average earnings levels and rates of return in capital markets. Pension payments under pay-as-you-go plans are not particularly sensitive to economic risks. In contrast, payments under advanced funded plans, particularly those that rely on accumulations in individual accounts, are quite sensitive to these kinds of risks.

Political risks can include the tendency of the political system to make excessive benefit promises, the risk that a political stalemate will prevent timely adjustments in pension programmes in the face of unfavourable financing trends and the risk that pension adjustments will be made in response to general budget concerns rather than as a result of conscious pension policy. Each of these has traditionally posed a far greater threat to publicly managed plans than to privately managed plans.

On the other hand, the shift from public and pay-as-you-go to private and funded plans opens up new risks. One is that either pension benefits or other government services may be disrupted if the costs of transitions from one system to another are underestimated. Another is that workers will gain premature access to their account balances (or be able to borrow against them), undermining the adequacy of retirement incomes. A third is that the government will change future tax policies or make other adjustments that reduce the value of the accumulating accounts. Privately managed systems also introduce a new political risk of a breakdown in effective regulation.

Institutions can also fail to operate as intended, opening up pension systems to additional risks. Institutions responsible for managing asset accumulations can experience major investment losses due to poor judgement, the general financial climate, fraud or mismanagement. Other threats to pension adequacy include ineffective enforcement of the rules governing contribution payments and ineffective administration of records.

Unfortunately, history shows that both publicly and privately managed plans are susceptible to these risks. In some cultures the risks may be greater under publicly managed systems; in other cultures they may be greater under a privately managed system.

A basic principle of risk management is that risks can be reduced through diversification. Since different pension systems react differently to different risks, a pension system that mixes pay-as-you-go with capitalization and that mixes public management with private management will involve less risk to participants than one which relies almost exclusively on one approach or another. From the perspective of predictability, then, multi-pillar approaches appear to have an advantage over exclusive reliance on any one approach.

(ii) Relative size of the two pillars

Concluding that the most desirable approach to pension policy is the creation of a multi-pillar system leads to a host of additional questions about the relative size of the pillars and details of how each ought to be designed and operated. For the most part, these issues must be left to another day. It can be noted in passing, however, that the variation from one country to another is likely to reflect such factors as:

- The relationship between the average pension that a society can afford and the minimum living standard it seeks to guarantee its aged. The closer are the two, the more important a pay-as-you-go element is likely to be;
- The ability of a political system to control the respective pillars. Where political traditions make controlling a pay-as-you-go system problematical, the first pillar should probably be smaller. Where traditions make control of private financial institutions problematical, the second pillar should probably be smaller;
- A country's unique political history. Where the government has traditionally attempted to guarantee full earnings replacement but has failed to deliver on the promise, society may favour a fairly dramatic shift toward mandatory private accounts. Where government institutions have been run effectively, the constituency for shifting a major portion of the

responsibility for pensions to the private sector may be weaker. Where government has never assumed a commitment to nearly full earnings replacement, systems which place substantial reliance on voluntary supplementation may be a viable option;

- A country's stage of industrial development. Where labour unions are powerful and large employers play a major role in the economy, collective bargaining may be able to play a role in pension design and management that would otherwise have to be assumed by the central government.

3.5 Closing observations

Certain elements of the economic critique that has been directed at traditional defined benefit, pay-as-you-go pension programmes deserve to be taken seriously, but much of the criticism is either not supported by a careful review of current economic knowledge or seems overstated. Advance funding of public pension programmes may yield economic benefits if pursued as one part of a plan for developing efficient financial markets. At the same time, there appears to be far less justification for assuming that advance funding will increase a nation's saving rate, and there is no reason to believe that it will reduce the economic cost of dealing with an ageing society by itself.

One danger in focusing too much attention on how pensions are financed is that too little attention will be focused on a set of issues that is much more central to the challenge of dealing with the costs of an ageing society. The economic cost of a retirement programme is best measured by the benefit payments it makes; these benefit payments are also the major route by which the programme affects the economy. If an ageing society is causing these costs to rise to undesirable levels, adjustments will most likely require raising retirement ages and reducing retirement benefits. Changing the way pensions are financed changes the distribution of the costs, but doesn't necessarily change their magnitude.

The economic critique has focused on the perceived shortcomings of the macroeconomic effects of the defined benefit model without paying sufficient attention to the relative merits of each pension model as an efficient device to supply retirement income. As a mechanism for supplying retirement income, the defined contribution model suffers from several marked shortcomings. The size of the retirement income stream produced is less predictable, while ensuring that retirement incomes last an entire lifetime and keeping benefits up to date with prevailing wage or price trends is more difficult. Individual defined contribution accounts have also proven expensive to administer, artificially increasing the economic cost of the retirement income system.

Neither approach to providing pensions is free of risk, but the risks are different. Because of this difference, a strong case can be made for a pension policy that combines a publicly managed, defined benefit, mostly pay-as-you-go system with privately managed, advance funded, defined contribution approaches, rather than relying too heavily on either one or the other by itself. The relative size of each pillar is likely to vary from country to country, however, reflecting differences in economic development and political traditions.

Discussion of chapter 3

3.A Forging a new consensus on pension reform: further considerations

Johann K. Brunner

Professor Thompson has presented an excellent overview of the various aspects to be considered for an assessment of the different ways pension systems can be organized. His presentation of the merits and shortcomings is well-balanced and I agree with most of his conclusions. In particular, I follow his view, expressed in the title of the paper, that one should try to establish a solid consensus on the important role of social security instead of only proposing radical changes.

In my contribution I want to concentrate on three issues. The first one is a direct comment on the concept of the economic cost of pension programmes as it is developed in the paper. The second concerns an additional aspect which I regard as important for the judgement of pension programmes, namely redistribution within a generation. Finally I will shortly state my view on the appropriate measures to overcome the expected difficulties of pay-as-you-go pension systems due to ageing of the population, with emphasis on countries where such a system is the almost exclusive provider of old age income, as in Austria or in Germany.

(1) Let me turn to the economic costs of pension programmes. In the paper, it is said that they are "best measured as the fraction of each year's total national economic activity that is devoted to supplying the goods and services the retired consume". Consequently, it is mentioned that reducing these costs requires a reduction either of the dependency ratio or of the living standard ratio or of the aggregate consumption rate. This is all correct, of course, but I suspect that this might lead attention in the wrong direction, when the question arises of how to reform the pension system. My objection is based on two reasons:

  (i) To the extent that the pensioners live on private savings, or the pension system is funded following a defined contribution plan, there is no legal way to reduce the economic costs, as pension claims are more or less guaranteed by property rights;

  (ii) To the extent that the pension system is of an unfunded pay-as-you-go type, reducing the costs necessarily means some form of redistribution from the retired to the working population.

I would think that economists, when they speak about cost reduction, probably have in mind enhancing efficiency instead of performing redistribution. As a consequence, if efficiency is the important issue, than the expected rate of return on contributions to the pension system seems to be the essential point in comparing systems. For this, and I should stress that it is well discussed in the paper, the capital market rate of return (reduced by administrative costs) and the growth rate of aggregate wage income are relevant, taking into account the associated risks. Economists frequently consider the – alleged or real – lower rate of return of the pay-as-you-go system as an important source of distortions of the labour market, even if there is equivalence between contributions and benefits.

(2) Secondly, in many countries – and certainly so in Austria – the public pay-as-you-go pension system performs considerable redistribution within a generation, for instance by guaranteeing a minimum pension to every retired person, or through a survivor's pension. It is, of course, a matter of value judgement whether one considers this type of redistribution justified, and there may certainly exist other, more efficient ways of performing it outside the pension system. I only want to point out that if the present system is at least partly replaced by another one, the question of how to deal with the redistributive role has to be solved. In particular, if one thinks of private accounts, one can hardly imagine how these can be the source of redistribution.

(3) My third comment is on the conclusion drawn in the paper by Professor Thompson, where a multi-pillar system is suggested. In doing this, I admittedly take the perspective of Austria, where a rather large public pension system with a high replacement rate, working on a pay-as-you-go basis, is established. The situation is similar in other countries, for instance in Germany. The question is then: given this existing system, which provides by far the main source of financing the expenditures of the old, should at least a second pillar be created, as suggested by the paper? Of course, this could only be a funded system, and we are talking only about a mandatory system, because voluntarily everybody can buy as much insurance as they want.

As mentioned above, the reason for the introduction of a funded system is mostly seen in its higher efficiency, that is, a higher rate of return on contributions. However, I fully agree with Thompson's view that this advantage may be considerably overstated. Moreover, any transition from a pay-as-you-go system to a funded system imposes a double burden on some generations. It must be stressed therefore that a value judgement is required to impose this double burden in order that future generations might profit through a higher rate of return. I personally would not favour such a change, notwithstanding the better spreading of risk in a two-pillar system.

Next, I want to consider the coming problems for the existing pay-as-you-go system due to the expected ageing of the population. Again, any of the three measures – increasing contributions, decreasing benefits and increasing retirement age – has specific consequences for intergenerational distribution, therefore decisions about them require a value judgement in the first place. My judgement is that contributions should be held constant, because increasing them would shift the burden caused by the ageing of the population to generations still further in the future.

As a consequence of this judgement, any imbalance of the pension system can only be avoided by increasing the retirement age and/or by reducing the benefits for the pensioners in the pay-as-you-go system. In fact, a first step toward reducing future benefits has already been taken in Austria and in other countries, and one might deduce from this that it is high time to start a funded system, i.e. a second pillar. As some studies have tried to show, this could provide enough supplementary pension payments in 20 to 40 years, when the demographic problems become acute, to keep the replacement rate at its present level, while it will fall without a second pillar. To me, an answer to the question of whether such a second pillar is necessary, depends on the expected level of the pension benefits from the first pillar, holding the contribution rates constant. There can be no doubt that if a rather low level is to be expected, such that the standard of living of pensioners would fall below what is desired by society, then forced additional savings are an appropriate measure. If expectations are different, however, i.e. if pension payments from the first pillar allow a reasonable living standard, taking into account future economic growth, one might question whether it is justified to create a new public institution administrating the second pillar. One might well hold the opinion that an increase in savings can be left to individual decisions and need not be prescribed by the state, the more so if the effect is uncertain because of possible dissavings in other assets. At least, this is the liberal point of view.

I am aware that there are problems associated with the suggestion of sticking to a single pillar, see for instance the discussion of risks offered by Thomson's paper. There may be adverse selection problems when supplementary funding is left to individuals and, as a serious concern, the old may gain such a weight in the political process that the ageing crisis may be solved by increasing contributions instead of decreasing benefits. There is no simple choice to make.

3.B Pensions and the fight against poverty and inequality in old age

Joakim Palme

I too have a fundamental problem in being too much in agreement with Lawrence Thompson. However, I will try to be a little provocative and take up issues that I think should be considered more, issues which are not fully developed in his paper.

First of all, I would suggest that we may perhaps now be winning the battle against those who only praise the presumed miracles of a fully-funded pension system – but that we might be in danger of losing the war against other threats to old age security in the countries of western Europe. Among other things, these problems concern the long-term prospects of achieving the social policy goals and the coordination of various sorts of benefits, public as well as private.

For countries in other parts of Europe, and elsewhere, it may be fruitful to reflect on the problems we are experiencing, along with the achievements we have made.[167]

Starting from a social policy perspective, I would turn the audience's attention back for a moment to the origins of the pension systems in western Europe, back to the underlying goals that were attached to them. In Bismarck's reform the underlying goal was to provide income security for the working population and to maintain social order. The explicit goal in other parts of Europe, in Britain and in Scandinavia, was to combat poverty, rural as well as urban. From these two different traditions, the corporatist tradition in continental Europe and the basic security model in Scandinavia and Britain, we can see very distinct development paths, and it is clear that we can observe, as Lawrence Thompson did, that these institutions have had a very strong effect on the way we discuss pensions.[168]

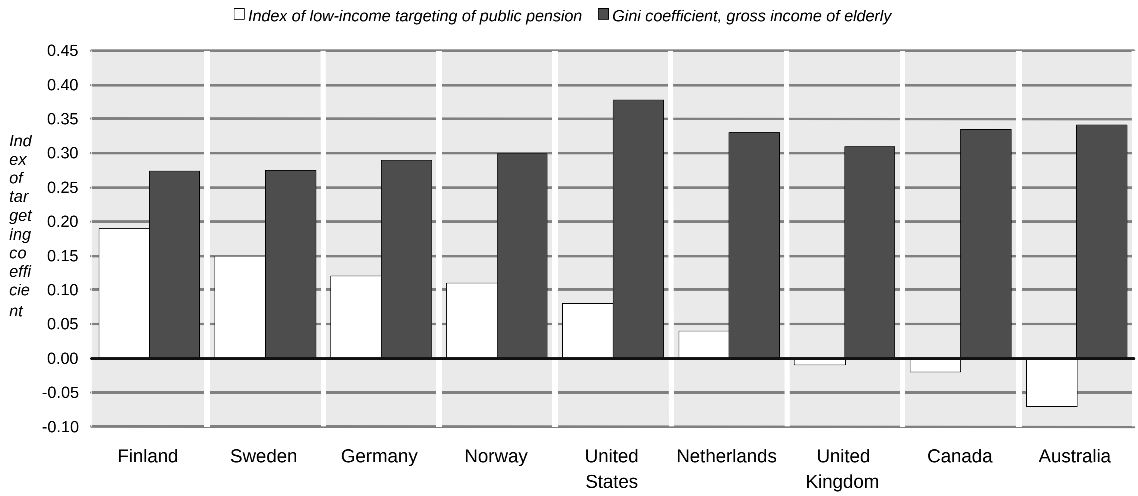
Over the postwar period, however, these two different traditions began to converge, as countries in northern Europe and Britain sought to legislate separate earnings-related additions to the basic benefits, whereas countries in continental Europe sought to introduce a second tier programme directed at poor people, those that

[167] See, for example, J. Palme, A. Koni, R. Pettinger, G. Predosanu and V. Todorova, *Welfare State in Crisis: How to Protect the Rights Whilst Controlling the Costs*, Council of Europe, 1999, forthcoming.

[168] More discussion on this can be found in, for example, J. Myles, *Old Age in the Welfare State* (Boston, Little Brown, 1984).

CHART 3.B.1

Targeting of public pensions and income inequality among the elderly in nine OECD countries



Source: Luxembourg Income Study; see W. Korpi and J. Palme, "The paradox of redistribution and strategies of equality: welfare state institutions. Inequality and poverty in the western countries", *American Sociological Review,* No. 63, 1998.

is, who had not qualified for an adequate contributory pension.[169]

I would argue that the combination of strategies within the framework of a public system was very successful, at least in terms of distribution. When we examine poverty in old age in most European countries we see a clear decline.[170] If we contrast this with the poverty life cycle identified by Seebohm Rowntree[171] in York at the turn of the last century, we observe very clear patterns: when families had children the risk of poverty increased, and when they reached old age and work capacity declined they also faced a new phase of poverty. Now that pattern has changed a great deal. It is evident that the most rapid decline in old age poverty has come in countries in Scandinavia where the right to the basic benefit is based on residence or citizenship and not on means-testing.

There is a paradox within this development.[172] As the perhaps overly complicated bar-chart in chart 3.B.1 shows, if we focus on the shaded bars which indicate the inequality of public pensions – that is the degree to which they are earnings-related – we see that Finland has the most unequal public pension system in the western world because they have a high degree of earnings-relatedness in the public system. Australia, on the other hand, with a means-tested system, has actually got a negative concentration coefficient indicating that poor people get a higher public pension than rich people.

Here we find support for the argument that private pensions are not all that important in distributive terms. When we consider the total income of older people we see that a country like Finland, with high earnings-related public pensions, has the most equal income distribution for older people. On the other hand, countries which leave more to the market in private pensions have a more uneven distribution.

Actual ineffectiveness of targeting

We can draw two lessons from this and other analyses I have done with Walter Korpi (see footnote reference above) on welfare state institutions and various redistributive strategies: the first is that when we "target" the support to old people on the basis of means-testing we are actually less effective in combating poverty among old people. However, when we direct the support towards all persons irrespective of income, we are apparently more successful. The second lesson is that the encouragement of earnings-related pensions within a public system actually turns out to be more beneficial in terms of promoting a more equal overall income distribution.

The fact that the western European countries converged for a while in the postwar period did not mean that they reached a common end state. What we have seen over the past two decades is that the countries of western

[169] J. Palme, *Pension Rights in Welfare Capitalism. The Development of Old Age Pensions in 18 OECD Countries, 1930-1985* (Stockholm, Swedish Institute for Social Research, 1990).

[170] O. Kangas and J. Palme, "Does social policy matter: poverty cycles in the OECD countries", paper presented at the panel on "Rethinking Poverty: From 1966 to Today", 14th World Congress of Sociology (Montreal), 26 June-1 July 1998.

[171] S. Rowntree, *Poverty. The Study of Town Life* (London, Macmillan, 1901).

[172] Also in W. Korpi and J. Palme, "The paradox of redistribution and strategies of equality: welfare state institutions. Inequality and poverty in the western countries", *American Sociological Review*, No. 63, 1998, pp. 661-687.

Europe are attempting to reform their systems under very heavy fiscal constraints and they are focusing on different aspects of the system, to a large extent depending on the remaining institutional differences. I would identify a large problem in some of the countries that have followed the basic security tradition in trying to means-test pensions, or to use clawback in order to control costs. They are, in that way, creating a system in which the higher income groups have less and less interest in the public system, knowing that the earnings-related part is too weak to actually provide an adequate pension for a retired person. In this way we create what Richard Titmuss in the 1950s called "two nations of welfare".[173] That is, we create a situation in which one part of the population is dependent on highly parsimonious public benefits, and another part of the population which does not depend mainly on public pensions but rather on occupational pensions. Thus I would conclude on this point, that with a short-sighted perspective on the issue of basic security we may actually impair the fight against old age poverty in the longer run.

Changes in other countries, with a clearer reliance on earnings-related benefits are moving in the direction of linking the size of the benefits more closely to contributions. This seems to involve a twofold strategy: providing incentives for people to work longer, and also controlling the costs of further developments. It might be an efficient strategy, combining both social and economic goals and balancing consumption between the retired population and the working-age population, but it also creates another dilemma.

This dilemma lies in the fact that if we have a very tight linkage between contributions and benefits, and if we want to encourage people to work longer, we must address the fact that we have a vulnerable group of persons who often have low incomes – manual workers, who are often in poor health when they reach retirement age.[174]

These elderly workers will thus be losing out if they cannot qualify for an adequate old age pension at that point. If we just focus on old age pensions we may lose sight of this very important distributional dilemma, the problem of also securing the incomes of those with poor health.

"Former socialist country of Sweden"

In the time I have remaining, I will try to be a bit chauvinistic, and discuss the situation in what some people see as "the former socialist country of Sweden". Here I want to illustrate something which I think is missing in Lawrence Thompson's paper, and that is a consideration of how the different parts of the system of old age security are linked. I think it is very important to reflect on how the basic provisions for those who do not have full contribution records are linked to the earnings-related component, and how the entire public system is linked to the private system.

Here, in chart 3.B.2, I present a rough outline of what the reformed Swedish pension system will look like on the benefit side. The figure describes the size of the pension benefit from the poorest pensioner to the richest. The reader has to imagine that we have ranked all the elderly on the x-axis with the person with lowest public pension to the left and the person with the highest pension to the right. The y-axis measures the size of the pension. We see that we have a universal guarantee in the reformed Swedish system. No one should fall below this level. The goal here is to eradicate poverty. However, the reformed system is primarily an earnings-related system based on contributions. Most people will have contributory benefits because most people have been employed. For those who have only earned small contributory benefits there will be a supplement. So even if their pension does not reach the guaranteed level on the basis of their past contributions, they will be given some credit for past contributions and receive a higher total pension, indicated by the "additional pension from contributions" section of chart 3.B.2.

I have to admit though, that the way of coordinating basic benefits with earnings-related ones is not a Swedish invention but a Finnish one. More importantly, it gives good incentives also for persons with low incomes to earn pension credits.

Another important aspect of the pension system is that it is insulated vis-à-vis private pensions. The universal guarantee is not affected by incomes other than contributory public pensions. This provides a good incentive for private savings.

I see it as a problem that in many countries, for example as proposed in the British pension reform,[175] it is projected that the guaranteed minimum might actually be higher than the contributory benefits. This provides very little incentive for people to take part in the public system. It also means that if you have a means-tested minimum that provides a disincentive for savings, because people who have saved will not get the basic pension, there might very well be a negative effect on savings overall.

Thus, in conclusion I would underline the point that in discussing these different pillars we have to be very careful in the design, so that we create a good combination of basic benefits, of compulsory earnings-related benefits and private pensions. I have argued that

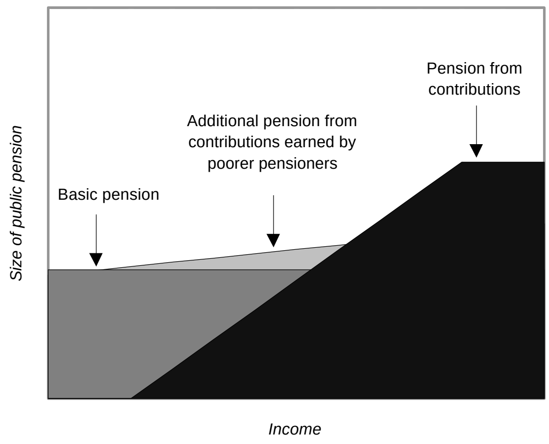
[173] R. Titmuss, "Pension system and population change", *Political Quarterly*, No. 26, 1955, pp. 152-166.

[174] This is shown in an analysis of Swedish data. J. Palme, O. Lundberg, D. Vågerö and Örjan Hemström, *Klasskillnader i ohälsa och dödlighet kräver robust finansiering av förtidspensionerna* (Class differences in ill-health and mortality demand a robust financing of early retirement pensions), Appendix 4, Official Government Publication, No. 166 (Stockholm), 1997, pp. 603-622.

[175] K. Rake, J. Falkingham and M. Evans, "Tightropes and tripwires: new labour's proposals and means-testing in old age", London School of Economics (STICERD), CASE Paper, No. 23 (London), 1999.

CHART 3.B.2

The reformed Swedish pension system
(Constant 1993 prices)



Source: Government of Sweden, *Reformerat pensionssystem: Betänkande fran Pensionsarvetsgruppen* (A Reformed Pension System: Proposal from the Pension Working Group), Official Government Investigation, No. 20 (Stockholm), 1994.

it might well be harmful for the long-term viability of public systems to have strong elements of means-testing.

If we want a good combination of public and private benefit I consider that there is a good argument for insulating the public system from whatever happens on the private side. This might be a good way of stimulating savings and producing other desirable incentive effects.

My final conclusion is about what pension systems can and cannot do. West European experience demonstrates that a public pension system can be very efficient in eradicating poverty among the elderly. It can also be a very efficient means of securing sufficient income for those who retire. However, pension systems alone cannot solve the problems of employment, savings or the situation of elderly workers. But in designing the public system in a reasonable way, in taking incentive problems into consideration, both when it comes to labour force participation and when it comes to savings, they can assist. However, I am afraid all these measures will not help us if we do not succeed in securing a macroeconomic policy framework which is more employment-oriented than is now the case in western and other parts of Europe.

A final lesson to be drawn from Lawrence Thompson's important book:[176] there is freedom of choice. We can make public systems efficient if we want to. But this puts strong demands on us for wise reforms, and I think we see too little of that in Europe today.

[176] L. Thompson, *Older and Wiser: The Economics of Public Pensions,* Urban Institute and ISSA (Washington, D.C.), 1998.

3.C Forging a new consensus on pensions: a Latin American perspective

Andras Uthoff

I would like to thank the ECE for inviting me to comment on this very interesting paper by Dr. Thompson, and also for allowing a member of ECLAC to share some insights on the status of pension system reforms in Latin America.

I join the other discussants in praising the paper by Dr. Thompson. He provides an important check list for the assessment of macro issues, pension parameters and considerations as to who bears the different risks when reforming a pension system. There is no doubt that this paper should be helpful to any group interested in assessing their current pension system as well as in designing any potential reform. He does not only provide a list of the relevant issues to consider but offers a very balanced revision of what can be expected as the outcome of different options.

Pensions and macro issues

Let me first highlight his balanced view by checking the macro issues in relation to the fashionable Chilean pension reform. The paper clearly states that one cannot isolate the impact of pension system reform from its context and the effects of other policy reforms. That is very important when seriously assessing the Chilean experience. Therefore one must be very careful when consultants promoting a "Chilean type" of reform claim that at least five outcomes were obtained there:

- *The economic cost of running the system was reduced*. This is true, but was primarily the result of changes in the eligibility conditions and the indexing rules prior to the reform.[177]
- *The national savings rate was increased*. This is also true, but it was primarily the outcome of fiscal policy aimed at generating surpluses needed to cover transition costs, and at creating incentives for the reinvestment of profits by private firms once the economy started growing at high rates.[178]
- *The capital market was developed*. Definitely true, but primarily as a result of institutional developments needed to implement prudential and organizational regulation for both the banking system and the capital market after the financial crisis of 1982.[179]

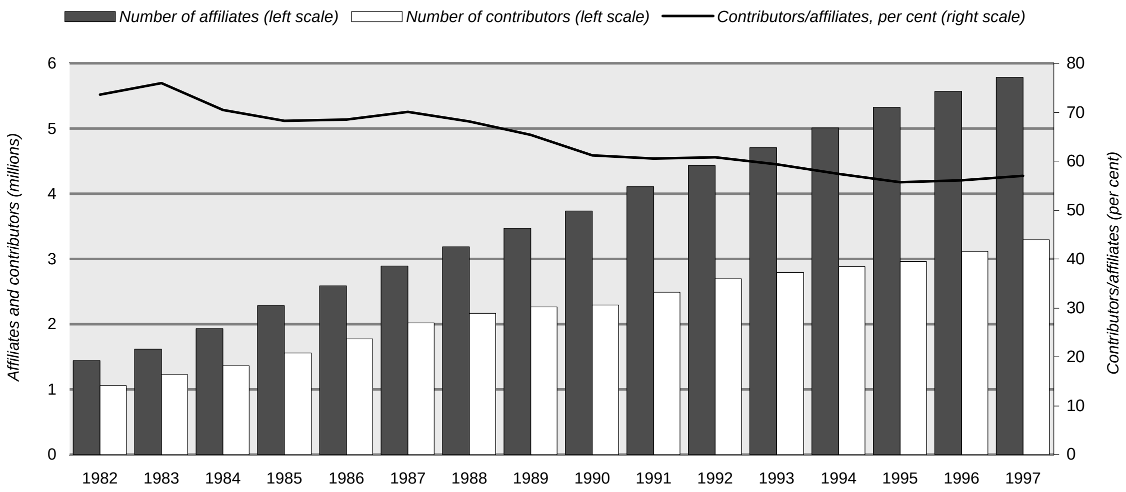
[177] J. Arellano, "Sistemas alternativos de seguridad social; un análisis de la experiencia Chilena", *Colección Estudios CIEPLAN,* No. 4 (Santiago), November 1980.

[178] P. Arrau, "Evolución de la tasa de ahorro nacional en Chile, 1980-1994", *Serie de Financiamineto Para el Desarrollo,* No. 19, CEPAL (Santiago), 1995.

[179] G. Held, "Financial liberalization or development", *ECLAC Review,* No. 54 (Santiago), December 1994. A. Uthoff, "Pension funds, the financing of transition costs and financial markets development. Lesson from the Chilean privatization reform", *Proceedings of the Conference on Pension Funds and Financial Markets,* University of Paris IX (Paris Dauphine), forthcoming.

CHART 3.C.1

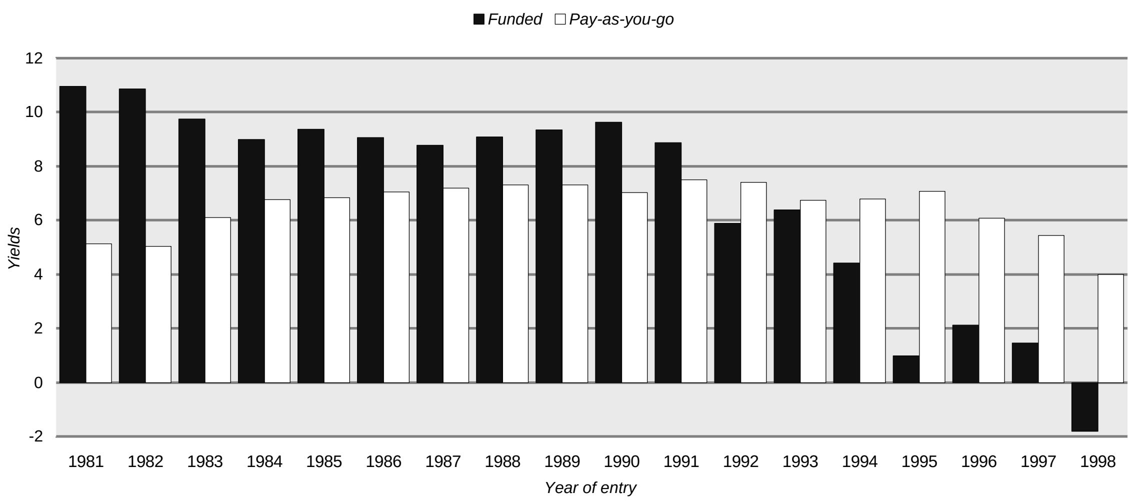
Number of affiliates and contributors, 1982-1997
(Millions, per cent)



Source: Superintendencia de Administradoras de Fondos de Pensiones (SAFP), *Evolución del Sistema Chileno de Pensiones, 1981-1997,* No. 3 (Santiago), 1998.

CHART 3.C.2

Average real returns by date of entry in Chile, 1981-1998
(Annual cumulative yield)



Source: Superintendencia de Administradoras de Fondos de Pensiones (SAFP), *Evolución del Sistema Chileno de Pensiones, 1981-1997,* No. 3 (Santiago), 1998.

- *Labour market distortions were reduced.* True, but as a result of reforms promoting flexibility in the labour market.[180]
- *International competitiveness was improved.* Also true, but mainly as the result of large falls in real wages and currency depreciation to overcome the 1982 balance of payments crisis by deliberately reactivating the tradeable sector.[181]

There is no doubt that these macro developments took place in Chile, but one cannot prove that they were the primary outcome of the pension system reform. Pension system reforms are not a "panacea" and one

[180] R. Cortazar, "The evolution and reform of labor markets in Chile", Conferencia sobre Mercados de Trabajo en América Latina, IBRD, The Brookings Institution (Washington, D.C.), 1995.

[181] R. Ffrench-Davis, M. Agosin and A. Uthoff, "Capital movements, export strategy and macroeconomic stability in Chile", in R. Ffrench-Davis and S. Griffith-Jones (eds.), *Coping with Capital Surges. The Return of Finance to Latin America* (Boulder, CO, Rienner, 1995).

should seriously weigh the expected outcomes in a balanced way as suggested in Thompson's paper.

In order to highlight other important lessons from the Latin American experiences and illustrate them with some evidence from Chile, I would like to get back to the subject of this session, pension reforms in market economies, and highlight the interaction of pension systems with three markets, namely, the labour market, the capital market and the pension fund managers' market.

Compliance and the labour market: the conflict between the equivalence and solidarity principles

When transiting from a centrally managed economy to a market economy, you will immediately face labour demand changes. Laid-off workers from former public enterprise jobs will not easily find employment as dependent workers. Before facing unemployment some will perform jobs as independent workers, and the labour market will become divided into wage earners and self-employed workers. Some of them will be underemployed and the social security system will face large compliance problems, because the self-employed will not contribute voluntarily and, if obliged to do so, it will be hard to enforce them to do so. As a consequence of compliance problems, the operation of pension systems will face serious conflicts between the equivalence principle and the solidarity principle. Following the first principle the system should be designed to provide each affiliate with a present value of retirement income that matches the present value of lifetime contributions properly capitalized. Following the second principle the system should be designed to implement cross-subsidies from high-savings agents to low-savings workers, and have all retired persons eligible for the minimum retirement income.

This conflict is also present in the Chilean experience. As chart 3.C.1 illustrates, the number of effective contributors to the system have levelled off at 60 per cent of the economically active population, and there is an increasing gap between the number of workers who have been affiliated and the actual number of contributors. The size of this gap is highly correlated with the share of the self-employed in the labour force.

This highlights three problems. First, and contrary to what was originally claimed, defined contributions and transparency in funded systems are not sufficient incentives to make independent workers contribute to them. Second, there will always be a distributive role to play by the state in the provision of retirement income for those who do not contribute. Third, a careful design of cross subsidies and definitions of retirement income guarantees and eligibility conditions will always be needed.

Income retirement benefits and the capital market: the conflict between risk and returns

From the point of view of the affiliate the intertemporal process of contribution outflows and retirement income inflows calls for an assessment of financing alternatives. They need to protect contributions against the risks of inflation by hopefully obtaining positive real yields. In a pay-as-you-go system these yields are equal to the rate of growth of the real wage bill of contributors. In that of a funded system it is equal to the returns from investment contained in the fund's portfolio. If a reform is willing to move towards a funded scheme, it should make sure that higher yields will be obtained and that these are not highly vulnerable to financial shocks. This brings to the fore the issue of the conflict between risks and yields. Given that most systems are mandatory, the state remains responsible for the outcome. Strong regulation must be put in place to guarantee sustainable real positive yields. In funded systems this means that the state must regulate the portfolio composition to assure an adequate balance between yields and risks.

Again the Chilean experience is very illustrative. In chart 3.C.2. accumulated annual yields from the year of entry to 1998 are reported. A comparison is made between the yields an affiliate would have received had he joined the capitalization system or remained in the old system. Yields reported for the first alternative are geometric averages of the annual yields in official records of the system, and yields obtained for the pay-as-you-go system are set equal to the geometric average of GDP growth rates. Chart 3.C.2 shows that for all those who joined the system before 1991, the new system has reported higher yields. However, that situation changed dramatically thereafter as a result of the shocks faced by the Chilean capital market. In order to understand the implications of this outcome chart 3.C.3 shows the portfolio composition of pension funds. During the earlier stages of operation of the reformed system, affiliates benefited from high yields stemming from new capital market segments where the regulatory framework allowed investment first in low priced government certificates, then in low priced mortgage bonds, and later in equities of companies that were underpriced. But as from 1991 such conditions changed and it is unlikely that they will be repeated.

Five lessons can be drawn from these events. First, regulation is necessary and portfolios of pension funds are highly influenced by prudential regulation. Second, if adequately managed, pension funds may benefit from the earlier stages of emerging domestic capital markets that need to operate in a sound macroeconomic context and within a proper institutional framework. Third, pension funds cannot necessarily maintain similar performances at later stages unless authorized to invest in international emerging capital markets. Fourth, in the long run, and in efficiently managed economies, the yields from capital markets will converge to the rate of growth of the economy. Fifth, without large changes in the functional distribution of income, the latter is similar to the yield of a pay-as-you-go system.

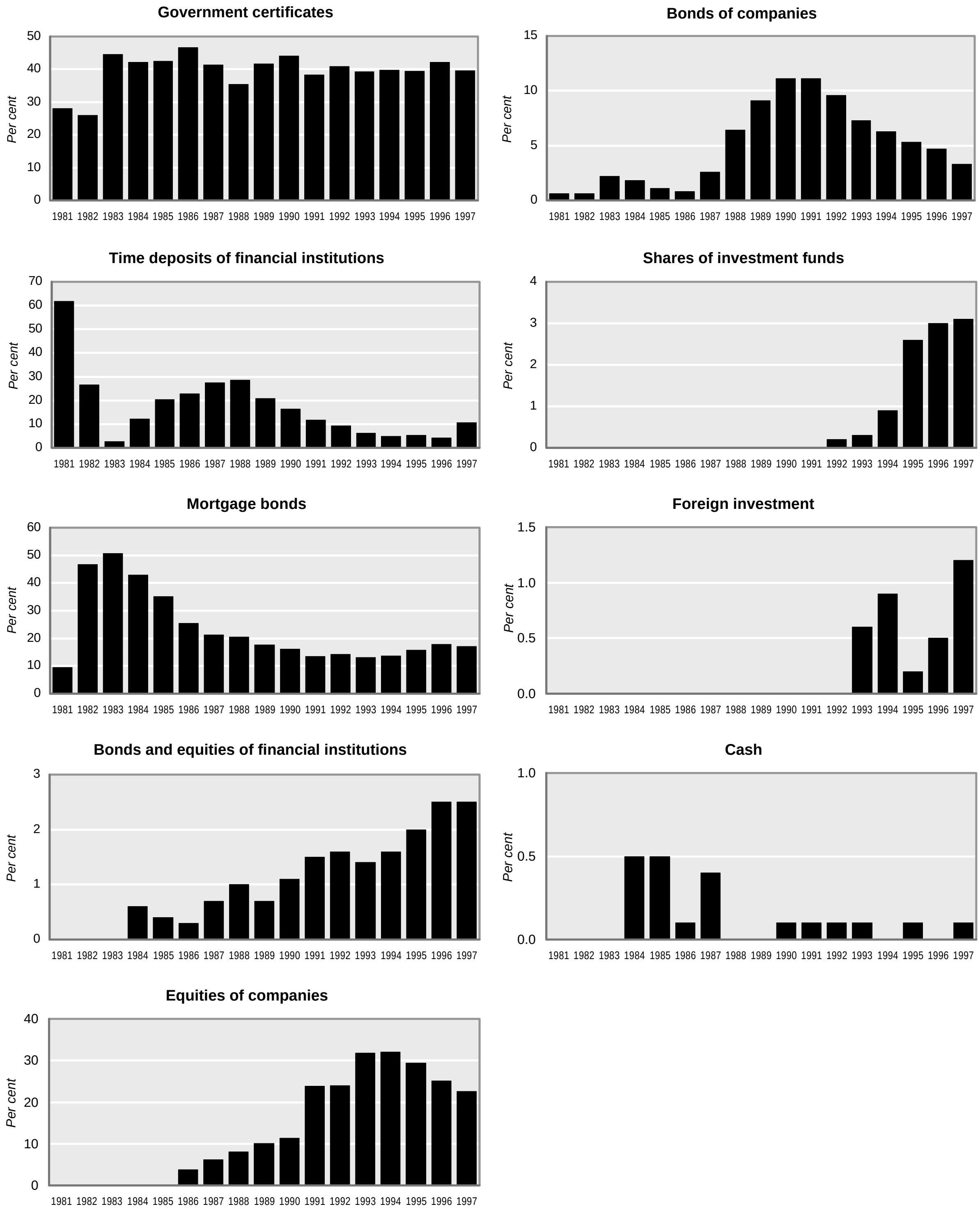
Retirement income and pension fund managers' markets: the conflict between choice and cost

The introduction of pension fund managers' firms as third parties in the system is justified because the former allows affiliates to improve welfare by increasing the number of alternatives from which to choose. Choice parameters for the affiliate are yields, risks and costs. Given that the primary goal of affiliates is to achieve higher long-run yields for their investments, they will choose those firms that offer a fund with the desired mix between yields and risks, and at the lowest cost. But as seen before, mandatory systems need to impose very restrictive regulatory norms on the managers' firms. In this particular Chilean case they allow for the administration of one unique fund per firm, and under very restrictive regulations governing their portfolio diversification. Hence, firms under those restrictions cannot differentiate their product to attract new affiliates, and so will end up competing for them by means of a large sales force and increasing marketing costs.

CHART 3.C.3

Portfolio of pension funds, 1981-1997

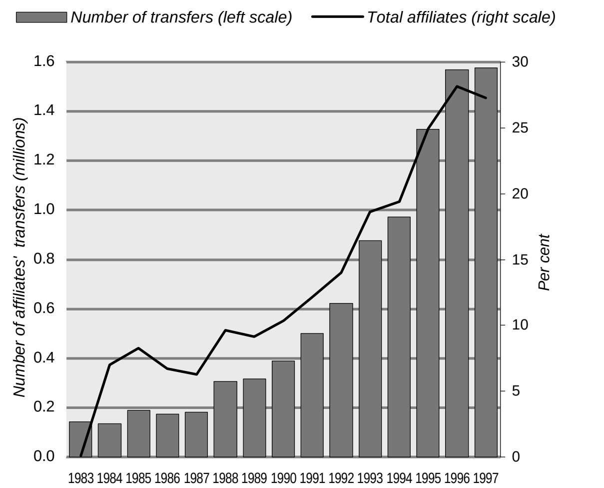
(Per cent)



Source: Superintendencia de Administradoras de Fondos de Pensiones (SAFP), *Evolución del Sistema Chileno de Pensiones, 1981-1997,* No. 3 (Santiago), 1998.

CHART 3.C.4

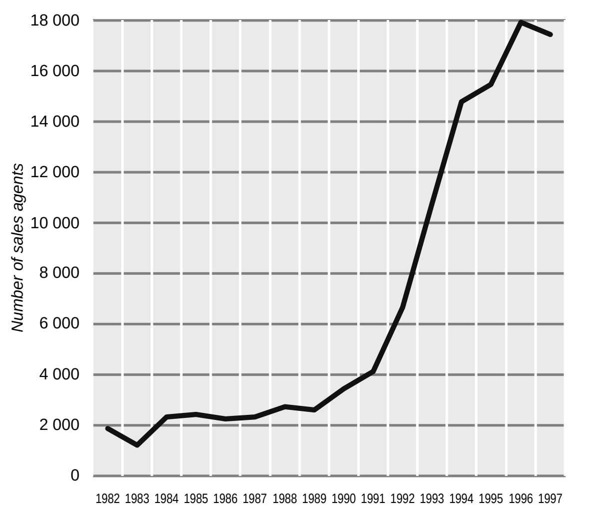
Affiliates' transfers between managers, 1983-1997
(Millions, per cent)



Source: Superintendencia de Administradoras de Fondos de Pensiones (SAFP), *Evolución del Sistema Chileno de Pensiones, 1981-1997,* No. 3 (Santiago), 1998.

CHART 3.C.5

Number of sales agents, 1982-1997
(Number)



Source: Superintendencia de Administradoras de Fondos de Pensiones (SAFP), *Evolución del Sistema Chileno de Pensiones, 1981-1997,* No. 3 (Santiago), 1998.

The Chilean experience provides again a critical example. Chart 3.C.4 shows that the number of affiliates' transfers between managers increased significantly, and implied an increasing number of sales agents in the industry (chart 3.C.5). During this period, the number of pension fund managers' firms increased from 12 to 20 and was later reduced to eight. As a result, affiliates have been charged high administrative costs that have remained close to 30 per cent of the amount contributed to the fund (including the purchase of life insurance), but have had very little choice among different firms.

Four lessons are important here. First, the industry of pension fund managers has large economies of scale. Second, if regulations do not allow for product differentiation, managers will compete for their share in the market by means of a large sales force. Third, if no regulation is imposed to reduce marketing costs these will be transferred to the affiliate. Fourth, with limited choice and high costs the affiliate is a net loser by bearing both the marketing costs and the financial risks.

What has been done?

Having learned from the Chilean experience of the need to overcome these three main conflicts, other countries in the region have developed alternatives. They have designed systems that combine multiple tiers constructed by mixing four dichotomies. They combine voluntary and compulsory regimes, funded and pay-as-you-go schemes, public and private management, and defined contribution and defined benefits subsystems. There are four criteria for choosing an adequate mix: the fiscal costs involved in making the transition and maintaining the distributive role of the state;[182] the willingness to limit marketing costs and increase the choice available to the affiliates; the degree of risk management that can be obtained given the current stage of development of their capital markets; and the willingness to improve compliance by accessing the informal sector. What you see in Latin America is that the Chilean reform that substituted a funded scheme for a pay-as-you-go system is an extreme case that has only been replicated without major changes in El Salvador, and with significant changes in Bolivia and Mexico. Argentina and Uruguay have designed a mixed system. Colombia and Peru have developed parallel systems from which the affiliates can choose.[183] Finally, in Brazil, where the fiscal issue is of great importance, they are considering developing a "notional defined contribution"

[182] Needless to say that the Chilean reform implied the recognition of liabilities that in present value represented 136 per cent of GDP, and required fiscal deficits of above 4 per cent of GDP from 1981 to the present. R. Holzmann, "On economic benefits and fiscal requirements of moving from unfunded to funded pensions", *Serie de Financiamineto,* No. 48, CEPAL (Santiago), 1997, and A. Arenas, "Learning from the privatization of the pension system in Chile: macroeconomic effects, lessons and challenges", PhD Thesis, University of Pittsburgh, 1997.

[183] C. Mesa-Lago, "La reforma estructural de pensiones en América Latina; tipología, comprobación de presupuestos y enseñanzas", in A. Bonilla and A. Conte-Grand (eds.), *Pensiones en América Latina. Dos Décadas de Reforma,* OIT (Lima), 1998.

system[184] similar to those implemented in some countries of Europe.

[184] For an explanation of this, see the section "Macroeconomics of pension reform" in the Overview and Summary of Discussion.