
Pension reform in Europe

in the 1990s:

lessons for

Latin America

Louise Fox

*Lead Economist,
World Bank
Lfox@Worldbank.org*

Edward Palmer

*Professor of Social
Insurance Economics,
Uppsala University,
and Head of Research,
National Social
Insurance Board,
Sweden
edward.palmer@abc.se*

Reform of European pension systems started from a situation in which income differentials were fairly small, partly owing to the high coverage of the system. In Latin America, informal working and inadequate coverage are still problems, and income inequality is high. Even so, both regions are moving towards individual account systems with strong links between contributions and benefits. Latin America has introduced compulsory financial accounts. Europe is moving towards lifetime pay-as-you-go accounts. Some European countries have set up notional defined contribution systems. In Latin America, the need to provide guarantees for the poor and the specific problem of women's poverty will be at the forefront as long as coverage remains inadequate. Other important issues are the minimum retirement age and the moral hazard associated with systems that encourage or support early retirement. Where these points and the problems of poverty are concerned, the European experience repays careful study.

I

Introduction

Public pension systems in Latin America date back to the 1930s. System design was based on what was then the dominant model: “Europe”. In the initial stages, systems in Latin America covered primarily employees in the public sector and in multinational companies. In Europe in the 1930s, with the possible exception of the Mediterranean countries, systems tended to be more universal although benefits were low. As in Europe, Latin American systems expanded in the 1950s and 1960s. For the most part, however, they remained fairly elite, reflecting the small formal-sector labour force and high income inequality. The strong role of the State in post-war Latin American industrialization also meant that the covered labour force was predominantly within the public sector. As the workforce was young and growing, they were affordable.

This changed in the late 1970s. The oil crisis and the ensuing inflation, the public borrowing undertaken to keep economies afloat and then the subsequent debt crisis of the 1980s and the ensuing decade of stabilization and slow growth left public finances devastated. Stabilization laid bare the sustainability problems of the public systems, as benefit promises could no longer be inflated away. The inequities became clear as well. In many countries, the same contribution record brought vastly different benefits depending on

occupation. Pension reforms were adopted to reduce government debt and improve the equity of the system. Latin American reforms, starting with Chile and spreading throughout the continent, brought forth a new model of public pension system: the defined-contribution (DC) individual account, fully advance-funded and privately managed (World Bank, 1994).

Latin American reforms have been influential around the world. As European countries began to focus on the need to reform their systems, the ideas of Latin America were often discussed. Europe has ended up by forging its own way in pension reform, but traces of Latin American thinking can be found in the reforms of 1990s. Individual accounts are now seen as key to reform in Europe as well.

Although the Latin American model has held up well, some problems are emerging. One of the biggest issues is coverage (Holzmann, Packard and Cuesta, 2000). It was widely expected that this would improve with reform, but the experience of Chile is that it has not. As a result, Latin American systems are not expected to prevent continued old-age poverty over the next few decades. In the face of this growing poverty challenge, some are looking back to Europe to see what the Old World has done with the quintessentially New World idea of individual accounts.

II

The Organisation for Economic Co-operation and Development in the 1990s

Public old-age pensions were originally introduced in Europe and elsewhere to reduce poverty in old age by providing coverage for the entire working population and their survivors. Although as a rule high-income industrial countries had some form of public pension scheme by the 1930s, the standard of living of the elderly was still a major political concern in the reconstruction period of the 1950s.¹ A priority of many

governments was to create schemes that could benefit persons whose human capital and savings had been ravaged by two wars and a depression.

In a number of countries, public defined-benefit systems with generous rules emerged in the 1950s and 1960s. Some systems combined the same benefit for all with a benefit based on the number of covered years,

¹ The Beveridge Report, published in 1942, was commissioned by

Churchill with the aim of improving the situation in the United Kingdom after the war.

and in some cases the number of covered years needed for a full benefit was set much lower (e.g., 30 years) than normal male working careers at the time, which were 40-45 years as late as the mid-1970s (Palmer, 1999). In addition, the benefit itself may have been based on the participant's best *x* years of earnings, or the final *y* years. Thus, all years did not have the same weight. This type of benefit formula helped to bring higher benefits to workers retiring in the 1960s and 1970s, which was the goal in many countries. In the longer run, however, it has turned out to be a problem. It involves an unfair redistribution from those with longer and relatively flat earnings careers (typically blue-collar industrial and white-collar service jobs) to persons with shorter working careers and steep increases in their earnings profiles (typically professional and white-collar management careers). In addition, these systems typically offer a full benefit at a specific age, and sometimes also seniority rights that allow persons with a specified number of years to retire before this full-benefit age.

As generous rules² matured, the workforce participation of males declined in all the original Organisation for Economic Co-operation and Development (OECD) countries except Japan, and the retirement age was lowered by as much as six years in Spain and five in France, but also by four years in Sweden, where the full-benefit age was reduced by two years in 1976. Unisexual life expectancy from age 60 increased by around 2.5 years over the period 1975-2000. So regardless of whether the benefit was paid to a male worker or his surviving spouse (usually younger by one or two years and expected to live five to six years longer), the benefit period had increased by some five to eight years over the 25-year period from the mid-1970s (Palmer, 1999).

Another development in the 1960s and 1970s would also affect Europe for a long time to come. Bolstered by strong post-war economic growth, there emerged an alliance of "solidarity" between unions interested in good benefits for their members (from a low age) and employers who were interested in setting a contractual age limit for older workers in order to get around last-in/first-out agreements with labour. This alliance helped foster the idea of a life course with the three phases of education, work and retirement that emerged in the 1960s and 1970s. Full retirement

became a "life phase" specified by law and/or contract, not infrequently with contractual benefits supplementing statutory systems, making exit even more attractive.

Where there is at least a theoretical choice between work and retirement, in some countries the implicit tax on working longer (loss of lifetime resources, after tax benefits, from working one year longer compared to extra earnings from continued work) can be high. The evidence from 11 OECD countries suggests that workers react rationally and exit the labour force at a younger age if it is to their advantage economically (Gruber and Wise, 1999). It is now generally recognized that the de facto retirement age has to increase in the coming decades and that this can only be accomplished by changing benefit systems in the direction of actuarial neutrality with regard to the timing of retirement and life expectancy at retirement. This has led countries to move in the direction of lifetime accounts, and some (in Europe these include Italy, Latvia, Poland and Sweden) to introduce life expectancy as an explicit determinant of annuities.

What has happened with the goal of alleviating poverty among the aged? As income grew rapidly, especially during the quarter century that began with the period of reconstruction, it was possible to transfer increasing percentages of gross domestic product (GDP) from workers to pensioners. Financing improved benefits was not so difficult because people spent more of their adult lives working, and less in retirement. As schemes matured, the relative income status of pensioners steadily improved.

By the mid-1990s, poverty among pensioners was low in the OECD. Measured as 50% of median disposable income adjusted for household size, a little under 14% of persons aged 65 and over were in poverty (Förster, 2000). At one extreme, represented by Canada, the Netherlands and Sweden, the poverty rate among persons aged 65 and over was only 3%, using the 50% of median income measure. Interestingly, countries achieve similar results with rather different mixes of private and public provision (OECD, 2000).

There is variation in the poverty results within the OECD. For example, in the United States, with its less generous safety net, considerable immigration and larger income distribution spread, some 20% of persons aged 65 and over were in poverty in 1993 (Förster, 2000). However, poverty in the United States defined as 50% of median income represents a standard of living that is high compared to poorer countries both within and outside the OECD. Keeping this in mind, we note

² Systems in some countries required only 20-30 years of coverage for a full DB benefit.

that the poverty rate was about 20% in Turkey and 30% in Greece.

In sum, systems in the OECD that were originally designed to provide better benefits to persons retiring in the initial decades after the war were affordable up until the 1990s owing to transition rules, work patterns and lower life expectancy. The life-course model –with its three phases of education, work and retirement– produced lower de facto retirement ages which, combined with increasing longevity,

lengthened the retirement phase. As a result, pension costs rose dramatically, with prospects of even more significant changes to come as population ageing continued. In conclusion, countries succeeded in transferring growing prosperity to the elderly, but at the same time system design and tax rules were working in the wrong direction for financial sustainability. By the late 1980s it was clear that many OECD countries needed to re-engineer their pay-as-you-go systems.

III

Latin America compared to the high-income countries in the 1990s

In the half century after the Second World War, the high-income OECD countries³ changed from industrial into post-industrial economies, characterized by a high degree of urbanization with formal market economies, decreasing reliance on extended family structures and increasing female labour-market participation. These economic and cultural trends were bolstered by well-functioning legal institutions and efficient government administration of taxes, contributions and transfers. There are some similarities, but also some important differences between the high-income OECD countries and Latin America in these respects. We consider some of these here.

As a rule, universality is a key feature of pension schemes in just about all the OECD, although the term “universality” has admittedly different meanings in different countries. Some OECD countries have special regimes for various occupations, including the self-employed. An example is Italy which, in addition to special treatment of the self-employed, had pay-as-you-go occupational schemes that ceased to be self-supporting financially. In the 1990s, Italy moved increasingly towards true universality, extending to the self-employed. Others make no exceptions (e.g., Scandinavian countries, the United Kingdom and the United States). Australia and Ireland differ in that they

have employer-based schemes. In Australia these became mandatory in 1992, but still backed up by a public safety net.

Compliance in high-income OECD countries has been facilitated by the growth of large and medium-sized business and government employers, and the decline in self-employment. As the labour market moves towards looser contractual arrangements, and with a shift away from contracts occurring in the new century, the OECD may also be facing an environment in the future that will make evasion easier. The legitimacy of the public pension system depends on a public perception that people are paying their fair share. The implication of the informal economy (non-compliance) is that some pay, usually through their employers, while others –in the informal economy– do not, and that in the long run those who do pay also bear the cost for those who do not pay. Systems that strongly link benefits to contributions are attractive because they underpin legitimacy for those who pay.

Pension systems in many of the countries of Latin America are in principle universal, as in Europe and North America, but low compliance and the informal economy have meant that coverage is low in practice. According to the Inter-American Development Bank (IDB), the average rate of informality in Latin America is 27%, but it varies greatly between countries within a range of 10% to 60% (IDB, 1998). Increased formalization can both increase and decrease inequality, depending on the point of departure. Formalization may increase inequality up to a threshold, from which

³ Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, the United Kingdom and the United States.

continued improvement contributes towards reducing inequality. IDB estimates this threshold at about 25% to 30% informality. According to the IDB study, roughly half of the Latin American countries are now close to the point where increasing formality can be expected to reduce inequality.⁴ In other words, taxes, contributions and transfers are either neutral or progressive, with redistribution to the poorer rather than the richer.

The financial account systems that became so popular in Latin America during the 1990s, but also the notional defined-contribution (NDC) account schemes that entered the European scene during the same period, redistribute the participant's individual resources over his or her lifetime. In principle, the tax wedge of traditional public defined-benefit (DB) schemes has been eliminated, i.e., benefits are directly linked to contributions. The corollary of this is that redistribution policy is moved to the general tax-transfer system.

The financial account schemes introduced in many Latin American countries in the 1990s constitute a vehicle for transferring individual resources over the life cycle, but are also a means for developing financial markets (Holzmann, 1997). What Latin America may still have to learn from Europe is that pay-as-you-go schemes can also be designed to emulate financial account systems, when designed as NDC account systems.

The structure of production and degree of urbanization in Latin America is surprisingly close to that in the high-income countries (table 1),⁵ but here the resemblance ends, and where the two groups of countries differ is mainly on points important for pension financing. The growth of the labour force is much higher in Latin America, and the fact that the fertility rate is still well above two children per woman

means that Latin America will continue to generate an expanding labour force for some time to come. Furthermore, there is still considerable latitude for increased female participation in the workforce. On the other hand, as women focus more on careers and their own earnings, the evidence from the OECD countries shows it is likely that they will give birth to fewer children. In sum, the demographics say that Latin America is much better situated than the OECD for the first quarter of the twenty-first century, but with declining fertility even Latin America will inevitably be faced with the situation now confronting the OECD countries, although much later.

Another feature distinguishing Latin America from the OECD is the relative prevalence of extended households. In the United States, for example, only about 15% of the population live in extended households, whereas around 30% live in single-person households. In Latin America the picture is very different. From 40% (Brazil) to 55% (Argentina, Peru and Venezuela) of the population live in extended households, and only around 5% live in single-person households (IDB, 1998). This suggests that transfers within the extended family are important in Latin America, and that they play a major role in alleviating poverty, especially in old age. With continued economic growth and increased formalization, the situation in Latin America may come to resemble more closely the present situation in the high-income countries of the OECD, although whether people choose to live in extended families even if they are affluent enough to live on their own is a separate, cultural question with considerable variance even within the OECD.

In sum, Latin America has the prerequisites for productivity growth in the coming quarter century, through growth of human capital. Labour-force growth will augment this. The challenge will be to bring the entire population into this growth process and include them within the institutions of the formal economy and pension systems that transfer individual resources over the life cycle. The process of formalization implies inclusion of most of the population in such pension systems. In the high-income countries of the OECD, economic growth has been a prerequisite for successful reduction of poverty in old age, but highly formalized labour markets with high tax compliance and legal structures to facilitate this have also played a major role.

⁴Note that inequality as measured by the Gini coefficient is typically under 0.3 in the high-income countries, where markets are formalized, but is typically around 0.5 or higher in Latin American countries.

⁵In this context, high-income countries are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Kuwait, the Netherlands, New Zealand, Norway, Singapore, Spain, Sweden, Switzerland, the United Arab Emirates, the United Kingdom and the United States. The data are rather old, from 1970, and it is likely that the regions have drawn closer since then.

TABLE 1

**High-income OECD countries and Latin American and Caribbean countries:
Some data from 1970**
(Percentages)

Indicator	High-income countries		Latin America and the Caribbean	
	1970	1993	1970	1993
1. <i>Structure of production</i>				
Agriculture	12		4	
Industry	35		38	
Services	53		58	
2. <i>Labour force</i>	1980-1993	1993-2000	1980-1993	1993-2000
Average annual growth	0.7	0.3	2.5	2.3
3. <i>Employment</i>	1970	1993	1970	1993
Female share of labour force	36	38	22	27
4. <i>Urbanization</i>	1970	1993	1970	1993
As % of population	74	78	57	71
5. <i>Fertility rate</i>	1970	1993	1970	1993
	2.3	1.7	5.2	3.1

Source: World Bank (1995).

IV

Storm clouds in the OECD: lessons for Latin America

The focus of the discussion on public pension schemes in the OECD shifted gradually from adequacy to financial sustainability and intergenerational fairness. By 1990, much of the OECD was discussing pension reform, with the focus on these two issues. The discussion and the measures taken by OECD countries may provide some important insights for Latin America.

The logic of pay-as-you-go (PAYGO) systems is straightforward: increases in outlays must be accompanied by additional financing in order to maintain financial balance. In a stable setting with no changes in fertility, age-specific mortality and net immigration, the population size and composition would remain static. If, in addition, the work patterns and age structure of labour participation were to remain unchanged, old-age PAYGO systems would not encounter serious long-run financial strain. The financial future of DB PAYGO systems in the OECD began to be called into question because these parameters were all changing, and projected to carry on doing so in the direction of increasing financial strain on schemes. Fertility has fallen well below the level needed to

reproduce the population, mortality is improving and the labour-force participation of older workers, especially men, has been declining.

Because of low fertility rates, labour-force growth will turn negative within the coming decade and remain so in most of the high-income OECD countries. In fact, even if fertility rates were to increase to the rate of over two children per woman needed to reproduce the population within the next decade, this incremental growth would not reach productive age until 2025-2035. It is estimated that Europe may need to encourage net immigration of around 30 million persons in the next three decades to retain a labour force of close to its present size. The problem will not be resolved in the long run, however, even by a one-off increase in the number of people of working age. As long as the overall fertility rate remains below the level needed to reproduce the population, permanent net immigration will be necessary in order to maintain a labour force of a given size.

Although real GDP grew at around 3% from 1970 until the mid-1990s (World Bank, 1995), the growth in

the contribution base was not high enough to keep contribution rates in PAYGO systems from creeping up to cover cashflow deficits. By the 1990s, high and rising contribution rates created concern not only about the future cost of pensions and the long-term sustainability of commitments based on current rules, but also about the long-term effects of high contribution rates on employment and compliance, the former due to the tax wedge built into traditional DB systems and the latter because individuals and employers will be more inclined to take advantage of any opportunities to avoid paying contributions when contribution rates are high.

The greatest pressures on OECD PAYGO old-age pension schemes come from the trend of increasing longevity and the tendency for older workers to leave the labour force earlier, frequently using the public disability system. In the OECD, people over 60 are projected to increase from around 20% of the population at the close of the century to 27% in 2020 and 30% in 2030 (table 2). Longevity has increased at different rates in OECD countries, and has risen faster for women than for men. However, men have recently made rapid gains with major breakthroughs in cardiovascular treatment, and these gains have yielded quality life years.

In Germany, Sweden and the United States, for example, the average gain in unisexual life expectancy at age 60 has been about one year for every 10 years that have passed since 1960. This means that life expectancy from age 60 increased from about 17 to 21 years in Germany, from 18 to 22 years in Sweden and from about 17.5 to 21.5 years in the United States. In Japan the increase has been from a little over 16 to more than 23 years! Demographers expect longevity to continue to increase at about the same rate, although this may be conservative, since this sort of estimate is based largely on historical developments rather than an assessment of the net impact of new medical technology and changes in living habits.

The following formula is helpful in illustrating the PAYGO predicament:

$$\text{Contribution rate} = \frac{\bar{p}}{w} * \frac{\text{pensioners}}{\text{contributors}}$$

If we want to maintain a target ratio between an average benefit p and an average wage w , in order for the contribution rate to remain constant the number of contributors must increase at the same rate as the number of pensioners. If longevity is going to increase at the rate of one year for every 10 years that pass in

TABLE 2

Organisation for Economic Co-operation and Development (OECD): Share of the population aged over 60
(Percentages)

	2000	2010	2020	2030	2050
OECD	19.9	23.1	27.0	30.7	31.2
Transition countries	17.0	18.2	21.5	22.7	26.6
Latin American countries	7.7	9.3	12.2	16.0	23.5
Asia	7.3	8.6	11.6	15.0	20.7
Middle East and North Africa	7.3	8.1	10.0	12.4	18.1
Sub-Saharan Africa	4.4	4.5	4.9	5.9	9.9

Source: World Bank (1998).

the future, then this is an increase of 20-25% in the next 40 years. With a constant number of contributors this means the contribution rate will have to increase by the same percentage. The problem is that the growth of the native-born labour force will be negative, and if the trend in increasing disability take-up continues this will become even worse. In sum, the OECD countries cannot afford a shrinking workforce if average pensions are to maintain their present status with respect to the average wage, and if contribution rates are to remain close to present levels.

There is considerable downward pressure on the age of exit, too. In many countries, workers and employers have taken advantage of generous seniority rules within old-age systems and seemingly open-ended disability systems for older workers. The result is that the average age at which people leave the labour force has fallen in the past three decades, as we have already noted. Although the retirement age for a full old-age benefit in many OECD countries is typically 65, the average age at which people left the labour force in the mid-1990s was as low as 56-57 for women and 59 for men.

There is considerable evidence that indicates the trend towards earlier exit is not justifiable in the high-income OECD countries on health grounds. As a rule, industrial work environments have improved greatly in the past half century and, on top of this, only around a third of the workforce has been employed in industry. Disability grants have increased dramatically over the past three decades,⁶ while the percentage of persons with physically demanding jobs has been relatively constant or decreased.⁷

⁶ See, for example, Aarts, Burkhauser and de Jong (1996).

⁷ For example, Steuerle, Spiro and Johnson (1999) for the United States and NSIB (2001) for Sweden.

In part, the early exit of older workers is determined by economic incentives.⁸ There is another force behind the increase in disability grants to older workers when employers need to slim down their workforces. Especially in Europe, there seems to be a general consensus among the social partners (management, unions and government) that disability is a legitimate exit path for older workers. As a result of this implicit consensus, employers, with the support of unions, are not especially interested in paying attention to the work environment and on-the-job training of older workers. This, even though on average the special requirements of older workers are few and inexpensive to provide (Ilmarinen, 1999). The gain to employers of laying off older workers is a social welfare loss for the nation.

There are fewer people employed and those who have employment have to pay higher taxes to support the early exit of the others. The gain to employers is myopic, too. With scarcity of labour this behaviour depletes the supply and increases the cost of labour.

To summarize, rising longevity, declining fertility and the current practice of pushing older workers out of the workplace are all working in the wrong direction for pension finances. This last tendency may undermine the true purpose of disability, which is to provide satisfactory income maintenance for persons with severe illnesses and injuries. In short, adverse demographic change and the cost-push effects of generous systems overly utilized were the driving forces behind OECD reforms during the 1990s.

V

The emergence of pay-as-you-go notional defined contribution systems

The goal of reforms in the OECD during the 1990s was to create more intergenerational fairness. This has been accomplished by shifting more of the risk on to workers while they are working by moving towards lifetime earnings as a basis for benefit calculation. The result is lower benefits for less work, but also usually actuarial gains for remaining in the labour force.

A second goal was to create greater intragenerational fairness. Schemes based on career earnings meet this goal, too. The PAYGO NDC scheme adopted in Italy (1995) and Sweden (1994) goes all the way and implements a full DC career earnings model that also accounts for changing life expectancy in the computation of the annuity.

What is NDC PAYGO? In the NDC PAYGO system, wage earners pay contributions based on a fixed contribution rate and the value of these is accredited to their notional accounts, this being the defined-contribution feature of the system. Contributions are paid on earnings as long as people work. The previous

year's account values are indexed annually using a nominal per capita wage index in Sweden⁹ and a GDP index in Italy. Information about changing life expectancy and its effect on an annuity claimed at a specific age, given an individual's account record, is available at any time in the Swedish administrative system. In other words, changing life expectancy is a parameter than can be taken into account in individual decisions about when and how to exit from the labour force. In principle, the NDC structure makes it possible to claim any percentage of a benefit at any time after a legal minimum age for eligibility. People can combine a full or partial NDC benefit with work (and continue to contribute and acquire new rights), and then get a recalculated benefit at some later date.

Lastly, it should be pointed out that redistribution issues have not fallen out of the picture. All countries have some form of guarantee and/or means-tested social assistance to provide income support for the lifetime poor in old age.

⁸ This is the subject dealt with in Gruber and Wise (1999).

⁹ This will be supplemented, however, by a downside brake based on the contribution wage sum, which will affect the indexation of both notional capital and benefit payments.

VI

Financial account systems

In the 1980s, the United Kingdom was the only OECD country to move part of its mandatory scheme from PAYGO to financial accounts. In 1992, Australia mandated existing employer-based private pension schemes, and in 1994 Sweden passed legislation mandating a financial account system on top of its new NDC system. The United Kingdom and Sweden kept the PAYGO foundations in their schemes.¹⁰ Australia kept its general revenue-financed support programme for the elderly.¹¹

Other countries introducing financial account systems in the 1990s within the framework of the mandatory public scheme have kept large PAYGO first pillars, examples being Argentina, Hungary and Poland. Europe has not followed Chile in eliminating the PAYGO pillar, although both Hungary and Poland have adopted the Chilean administrative model in financial account system design. Sweden has not followed Chile in this respect either, however, and countries legislating for financial account systems more recently (e.g., Croatia and Latvia) have tended to follow Sweden in design. In this section we explain what lies behind the path taken in Europe.

1. Financing the transition to financial account systems

Why haven't more countries followed Chile and eliminated the PAYGO pillar altogether? There are at least two reasons. First, Chile cut public expenditure in the years prior to the reform, creating a surplus of 5.5% of

GDP which was used to cover most of the transitional debt. Only about 1.5% of GDP per annum represented a double burden.¹² Neither Australia nor Kazakhstan had large PAYGO commitments requiring replacement to begin with, and thus were not confronted with the conversion problem. In the case of Australia, the 1992 reform simply mandated employer-based schemes that were already relatively widespread. The mandate meant that all employers were obliged to set aside funds for their employees and that the contribution rate for these had to at least match the mandate.

The OECD and transition countries, and also some Latin American countries, are demographically older than Chile was at the time of its reform. In the OECD, acquired rights are considerably greater. The acquired rights that would have to be monetized with a large or complete shift to financial account systems would be substantial, as would be the taxes required to do this.

There is a second, more fundamental reason why countries reforming after Chile have chosen not to abandon their PAYGO system entirely. Both the PAYGO and financial account systems are associated with downside risks, and combining the two pillars in the social security portfolio provides better security. In Europe, Sweden and Poland¹³ argued along these lines.

How have countries found the means to introduce advance-funded systems? Various mechanisms have been employed to phase in second pillar financial account systems. These include reducing PAYGO commitments to pensioners, usually by changing indexation formulas; reducing PAYGO commitments to present workers by tightening benefit rules; taking advantage of demographic cycles; moving other assets into the pension system to help finance the transition; collecting more contributions than are credited to individual accounts, i.e., taxation; and reducing other forms of government consumption spending (creating a budget surplus to help finance old PAYGO commitments) (Fox and Palmer, 2001).

Many reforms introducing financial accounts have taken advantage of more than one of these at the same

¹⁰ Sweden kept a large PAYGO component –with NDC PAYGO contributions accounting for 16% of the overall contribution rate and individual financial accounts for 2.5%– but topped up for a large part of the workforce with newly established occupation-based financial account systems with additional contribution rates of 2% to 4% (e.g., 3% for blue-collar workers). Thus, for example, a young blue-collar worker now has 65% of the total contribution rate in individual financial accounts.

¹¹ Since 1992, employers in Australia have been required to arrange a pension account and contribute a minimum percentage (rising from 3% in 1992 to 9% in 2002) into it for employees. People can supplement on a voluntary basis. About 35% of the self-employed and 95% of full-time employees are covered. Coverage of all employed was about 80% in 1995.

¹² Valdés-Prieto, 1997, p. 205. Note that this is 3.75% of the covered wage bill, assuming covered wages are 40% of GDP.

¹³ The slogan for the Polish reform was “Security through diversity”.

time. A typical combination consists in reducing commitments to present workers, taking advantage of demographics and partially financing through taxation. The first has been accomplished by moving in the direction of career earnings in the PAYGO benefit formula, increasing the pension age for a minimum and/or full benefit and, in the case of countries introducing NDC schemes, taking life expectancy at retirement into account in computing the lifetime benefit. Examples are Hungary, Latvia, Poland and Sweden, but only the last three have implemented NDC schemes. Countries can take advantage of demographics by reforming in good time before a large birth cohort become pensioners. This is a typical advantage in Eastern Europe, where the baby boom came around a decade later than in the OECD. Lastly, some countries in Europe, like Chile, have accepted that the introduction of a mandatory financial account system may need to be tax-financed, at least to some extent.

Bolivia and Poland are examples of countries that have moved other assets into the system. In Sweden, large PAYGO reserves will help pay for the baby-boomers of the 1940s, thereby keeping transition costs within a fixed contribution rate for the NDC PAYGO and funded pillar together. The introduction of NDC reduced future commitments in Sweden by about the amount needed to phase in the financial account system, reducing benefits in the PAYGO scheme for younger cohorts but giving them a larger share in the new financial account system.

In Chile, Australia, and Kazakhstan, financial account systems are combined with various guarantees. In Australia, there is a universal means- and asset-tested income floor. Chile has a minimum pension guarantee for covered workers plus social assistance for the poor who are not covered. Kazakhstan also has a minimum pension guarantee for covered workers.

Lastly, we note that there are some implicit costs of reform that countries may have underestimated. In countries where coverage is low, the future cost of the guarantee could be substantial, implying an increase in the tax rate on future workers. Even in countries where guarantees seem affordable, costs may be underestimated too. For example, the minimum guarantees in Sweden and the United Kingdom are price-indexed, but there is now pressure in the United Kingdom to raise the floor. On the other hand, the argument for separating out redistribution from social insurance is that proposals to change guarantees can be weighed against alternative uses of taxes within the normal political process.

2. The construction of financial account systems

Chile (1981), the United Kingdom (1986), Australia (1992) and Sweden (1995) represent four models of how to set up financial account systems that have evolved in the past couple of decades (table 3). Countries introducing advance funding in the 1990s have tended to follow one of these. There are several issues that come up in designing financial account models. Some of these are described and analysed in Palmer (2000).

An issue often raised is whether a social insurance system should allow people a free choice of funds, or restrict choice, for example to a small number of index funds. The latter view is put forward by a number of economists in the United States who believe that the United States old-age social security system should be totally or partially redesigned in the direction of advance funding. The logic of this point of view is first that this minimizes the risks if individuals are allowed to make their own fund choices, while yielding a market index return. In order to minimize administration costs, the fund or funds managing the assets of the scheme would be chosen through a bidding process. In one version of this model, workers would be allowed to mix bond with stock portfolios. In the most extreme version they would be mandated to participate in a single portfolio, with no opportunity for individual choice.

The argument in favour of a free choice of funds, as in Sweden, is that the State does not need to be paternalistic, other than to guarantee through supervision of funds that they operate within the limits of good practice. No fund can consistently lose money while the majority are making positive earnings and yet retain its participants. These will be well informed by the mass media and will choose funds offering positive returns. In other words, people can make informed decisions. The bottom line is nevertheless that the returns of neighbours can diverge, and considerably. Those who argue for the limited or single fund model argue that people find it difficult to accept that the returns of separate funds can differ. What they seem to forget, however, is that this situation must always arise across age cohorts even if everyone is in the same fund, simply because not everyone has the same investment period in the unified fund (Palmer, 2001).

At the end of the investment period, individuals would be allowed to purchase an annuity with their accumulated pension capital. Here too a number of alternative models arise. Annuity products could be offered by a monopoly provider or by private companies supplying annuity products mandated in law.

TABLE 3

Mandatory financial account models at the time of reform

	Who chooses fund manager?	Who collects contributions?	Who keeps accounts/sends statements?	Number of funds/ who chooses the funds?	Who chooses annuity provider?	Insurance provider(s)	Benefit forms
Chile 1981	Worker	Private manager	Private manager	Each manager has one fund. This becomes the worker's fund.	Retiree	Choice of leaving the account with the same manager or purchasing an annuity from an insurance company.	Gender-specific annuity or programmed withdrawal from pensionable age. A withdrawal can be exchanged for an annuity.
Australia 1992	Employer	Private manager	Private manager	If the manager chosen by the employer has more than one fund, the worker chooses the fund.	Retiree	Choice of leaving the account with the same manager or purchasing an annuity from an insurance company.	Lump sum or gender-specific annuity from age 55. Survivor benefit if the institution allows it.
UK 1986	Worker	Tax authority	Private manager	Managers provide more than one fund choice. The worker chooses the fund.	Retiree	Choice of leaving the account with the same manager or purchasing an annuity from an insurance company.	Up to 25% lump sum and/or gender-specific annuity from pensionable age to age 75. Possible survivor benefit.
Sweden 1995-2000	Worker	Tax authority	A public agency, which is part of the social insurance organization, operates as a "clearing house" between individuals and funds.	Worker chooses among (several hundred) registered mutual funds.	Government	State monopoly/ part of social insurance organization.	Unisex annuity, partial or full from pensionable age. Possible survivor benefit.

Source: Palmer (2000).

How have models been designed?¹⁴ The first issue is who chooses the fund manager. Should it be the worker or the employer? In Chile, the United Kingdom and Sweden, the choice has been given to the worker.

In Chile, each participant has one fund. In Australia, the employer chooses the fund manager, but may opt to contract one with several funds among which individuals can choose. In the United Kingdom, the fund manager that the individual contracts with may have more than one fund to choose among. In Sweden,

¹⁴ See, for example, Palmer (2000) and Fox and Palmer (2001).

people are presently limited to five fund choices among several hundred registered funds.

A related issue is who chooses the annuity provider. In Chile, Australia and the United Kingdom, individuals themselves choose among a number of possible providers. In Sweden, the government provides the annuity products. The Chilean, Australian and United Kingdom models follow more closely the traditional insurance approach, whereas Sweden has chosen to privatize savings during the accumulation period, allowing people to choose just about any sort of fund, while the annuity products are standardized for all.

Annuity products differ also. In Chile, Australia and the United Kingdom annuities are gender-specific, whereas in Sweden they are based on unisexual life expectancy. The Swedish model involves redistribution from men to women, which is consistent with the European court ruling on gender with regard to social insurance benefits. All but Sweden allow lump-sum benefits to be taken. The question is whether a lump-sum benefit is consistent with the principle of social security, i.e., the goal of providing income protection throughout a pensioner's life.

Countries introducing individual financial account systems after Chile have been aware of the high administration costs incurred by the Chilean system and have attempted to hold back costs with alternative forms of administration. A first step in this direction is to centralize the collection of contributions. This was an obvious choice in Sweden. Contributions for social insurance were already collected by the tax authority. Collection of contributions creates essentially no marginal cost.

The remaining marginal cost is that of transferring information and money to the fund managers. Sweden created a clearing house to direct contributions to the participating funds and perform net transactions on behalf of all fund participants vis-à-vis a specific fund. In all the other three models, either individuals or their employers, or both, deal directly with the fund managers.

Another question is who should keep the accounts and send out statements. In Chile, Australia and the United Kingdom the private manager does this. In the Swedish clearing house model, a public agency (the same agency that provides annuities) does this. The clearing house model provides an efficient method for executing transactions with individual fund managers, since the agency can aggregate all sales and purchases in a transaction day into one single transaction.

In sum, the OECD countries have not followed Chile in attempting to rid themselves of PAYGO schemes and introduce financial account schemes. The one exception, Australia, did not have a PAYGO system to begin with, but had an extensive general revenue-financed safety net that should be expected to become smaller as the newly mandated employer-based financial account schemes mature. The traditional OECD countries have large acquired PAYGO rights, compared with Chile at the time of its reform. To date, this has cooled any interest in mandating financial account systems. Where financial account systems have been introduced, younger generations have traded rights in the PAYGO scheme for rights in the financial account scheme. What European countries that have introduced financial account schemes have done is to mix these with PAYGO, diversifying participant risk between economic and financial rates of return.

VII

Poverty and women

One of the strengths of post-war OECD systems has been their poverty reduction impact. Most of this can be attributed to the high coverage level. Two other factors are also important: i) special provision for women and ii) added safety-net factors. The expansion of coverage in OECD systems took as its starting point the need to provide income security for families, especially widows. System designs usually included the following additional benefits, which almost exclusively helped women:

- survivors' benefits for a spouse with no pension or a lower pension and for minor children until they reached maturity or left school (to replace the loss of the main breadwinner's income or pension);
- pension credit for time out of the labour force having children (to boost the pensions of women who are in the workforce except when raising children); and
- for funded systems, unisex annuities in a DB or DC scheme (compensating women for a longer life expectancy than men).

These factors have been important in reducing the poverty rate among the ageing population. Many systems originally included a lower retirement age for women as well. These were put in place because women tended to be younger than their husbands, and it was considered desirable to have both partners retiring at the same time. For women, this provision was a mixed blessing. In DB systems with low eligibility thresholds, it meant redistribution to women. In systems where benefits are tied tightly to contributions, this provision can result in lower pensions for women owing to a shorter contribution time.

Poverty reduction is also achieved through targeted redistribution in old-age systems. All OECD systems include some type of minimum pension. In some cases, this is a demogrant, providing a minimum income floor for all those above retirement age, regardless of contributions (Sweden before system reform, Denmark, Australia, New Zealand, United States). In other cases, it is a minimum pension with a years-of-contribution eligibility requirement. The purpose of minimums with an eligibility requirement was twofold: they increased incentives to participate for lower-income workers, increasing coverage and thus public support for the system, and they reduced poverty.

The European reform trend towards a stronger link between contributions and benefits has changed, but not eroded, many of these benefits. Most systems have

retained a minimum benefit. For women, non-discrimination statutes are causing most countries to equalize retirement ages. However, the same statutes are requiring unisex annuities, entailing a transfer especially to single women (for married couples, it is effectively an intra-household transfer if survivor benefits are in place). Many countries are keeping the childcare pension credit in public systems (although not in occupational systems). In Sweden, the childcare credit is paid for by a transfer from the general budget to the social insurance budget so that the funds are even available for investment into the mandatory funded DC system. In that country, the high labour-force participation of women, the relative equality of men's and women's wages and the childcare credit that compensates women for time out of the labour force are expected to lead to a fairly equal distribution of pensions and adequate protection for women. As a result, Sweden is gradually eliminating the survivor benefit for spouses in the PAYGO system, but has given participants in the financial account system a choice of a joint annuity.

Lastly, most OECD countries have social assistance systems providing benefits in cash and in kind, which offer the ultimate social safety net. These are being eliminated; yet the move towards contribution-related pensions is expected to make these systems more important, not less important, over time.

VIII

Lessons for Latin America

For reasons quite similar to those seen in Europe, Latin American countries have been moving away from redistributive DB systems towards contribution-related systems. The goals have often been the same:

- reducing future expenditures by raising the retirement age;
- reducing moral hazard;
- increasing public savings.

A number of important differences have emerged, however, between Latin America and European reforms. European countries: i) have retained a stronger PAYGO component than, for example, Chile and those countries in Latin America which followed the Chilean model; ii) have maintained the anti-poverty component, but redistribution is more targeted, and is low-cost

owing to the high overall coverage rate; iii) have maintained or encouraged supplementary occupational systems; iv) have continued to include special protections for women, and v) have been looking for a way to wholesale fund management and thus realize economies of scale in this key area.

José Piñera's dream of closing down the public PAYGO system is not one shared by the majority of voters in Europe today. European voters continue to value the public pension system for several reasons. By contrast with the situation in Latin America, it has provided adequate pensions for most households, thus preventing deprivation among older households. Younger as well as older voters value this. The movement to individual accounts is a politically acceptable reform of PAYGO

because in Europe, with near-universal coverage and more equal lifetime wage distributions, an individual account system will still provide adequate old-age security. Maintaining partial PAYGO allows European systems some flexibility in the event of further shocks, and allows some redistribution (towards women and the lifetime poor) to continue at a fairly low cost. A system which mimics the distribution of wage and salary income in the distribution of pensions is broadly acceptable because the underlying income distributions are more equal.

In most Latin American countries, the distribution of income is much more unequal. Macroeconomic shocks are greater and spells of unemployment tend to be more frequent. As a result, pensions based on contributions alone may not be adequate for old-age security. The contribution-based pension model, with a retirement-age life expectancy of about 12 to 15 years, is affordable on a fully or partially advance-funded basis for most countries. It should provide adequate protection against poverty for those who contribute for about 40 years. The problem is the uncovered population, or the partially covered population: those with long spells out of coverage due to time out of the labour force to raise children, unemployment or time in the informal sector between formal-sector jobs. The main issue is how to increase coverage and thus old-age security for the rest of the current workforce. This most likely requires some redistribution, which a pure individual accounts system cannot provide.

European systems expanded coverage at a time of low public debt, low wage and income inequality and rapid wage and labour-market growth. They did this with low eligibility requirements and minimum pensions. These policies were redistributive within and between generations, the latter because of PAYGO financing. As coverage expanded and the population matured, these policies became too expensive. As we have seen above, the story of the 1990s was the scaling back of this redistribution (now that coverage was near-universal). Minimum pension policies now tend to be more targeted on the lifetime poor.

Latin American economies do not currently have this fortuitous configuration. Although the labour force is growing rapidly, real wages have not been rising rapidly in most countries except Chile, and income inequality is high. Public debt is also high, in part because of the need to pay down generous pensions

granted under the old system. As a result, significant redistribution would be quite expensive if adopted now with PAYGO financing (as some countries have already experienced).

There may, however, be some scope for increasing coverage and poverty alleviation through limited redistribution. Chile, for example, provides a guaranteed minimum pension given x years of coverage. Bolivia provides the Bonosol, a demogrant given at age 65. Other countries could consider using privatization revenues to provide a guaranteed minimum, perhaps requiring only 10 years of contributions but a high retirement age. The key in enacting such a policy is i) to keep the guarantee low and ii) to keep the retirement age high. If not, the incentive to contribute is eroded and the cost becomes unaffordable.

Another way to keep the public system affordable is to develop a complementary occupational pension system, outside the public system. Schemes inside the public system are a bad idea, as they generally transfer tax revenues from poorer households to richer ones. However, privately organized schemes (including those organized by unions) can release pressure from public schemes. They can be both a bridge to the public scheme in the case of early retirement and a solution to the problem of special groups such as teachers or civil servants. Two lessons from Europe emerge, however. First, careful regulation is required irrespective of whether schemes are DB or DC. Second, DC pensions are more affordable and easier to regulate, and facilitate labour mobility and economic restructuring.

Pensions have been an important factor in keeping many widows and single elderly women out of poverty. Individual account systems, which provide less redistribution, may reverse this. Adopting the European approach to gender issues in pensions would help Latin American systems reduce poverty. Most countries which now have individual account systems also stipulate a lower retirement age for women. In a contribution-based system, as noted above, this will lead to lower pensions for women, especially when combined with gender-specific annuities. As a result, many women will find themselves collecting the minimum pension if they collect any pension at all. Survivors' pensions and joint annuities would help to counteract this trend.

IX

Summary and conclusions

There are important differences in the economic histories of the Latin American and European countries, and these have shaped pension systems and reform options as we move into the first half of the twenty-first century. In Europe, expansion of systems was closely tied to expansion of formal labour-market participation. Universality of pension systems developed simultaneously with other labour market institutions, and inequality decreased as a result. In Latin America, this did not occur. As a result, attempts to provide universal coverage through contributory systems did not work. Expansion required large and unsustainable public transfers. In addition, Latin American systems developed some of the same early exit problems as European ones, but were financed from a much narrower contribution base. Financial problems occurred much earlier, and were far more serious.

Latin America has learned that public pension system objectives and means need to be consistent with economic fundamentals in order to be sustainable. Latin American reforms have shown European countries new ways of reconciling pension systems to these

fundamentals: financial DC individual account schemes. This approach has brought financial stability to Latin American pension systems. However, these systems effectively replicate the inequality of labour income in retirement income, and reflect the degree of formality of the economy. Increased poverty reduction may require increased attention to the causes of old-age poverty (low lifetime income, especially among women) and structured, low-cost approaches to managing this risk, financed on a PAYGO basis. These may include:

- increased transfers to formal-sector women from men during the working years, so that retirement income will be adequate. This might include childcare pension credits or unisex annuities;
- affordable minimum pensions (many Latin American systems now include these);
- affordable means-tested transfers to ageing households.

However, all these mechanisms need to be developed slowly and expanded gradually to avoid the unsustainability problems of previous attempts.

Bibliography

- Aarts, L.J.M., R.V. Burkhauser and P.R. de Jong (1996): *Curing the Dutch disease. An international perspective on Dutch disability policy reform*, Aldershot, England, Avebury.
- Förster, M. (2000): *Trends and driving factors in income distribution and poverty in the OECD area*, Labour Market and Social Policy Occasional Papers, No. 42, Paris, Organisation for Economic Co-operation and Development (OECD).
- Fox, L. and E. Palmer (2001): New approaches to multipillar pension systems: What in the world is going on?, in R. Holzmann and J. Stiglitz (comps.), *New ideas about old age security*, Washington, D.C., World Bank.
- Gruber, J. and D.A. Wise (1999): *Social security and retirement around the world. National Bureau of Economic Research conference report*, Chicago and London, University of Chicago Press.
- Holzmann, R. (1997): *Pension reform, financial market development and economic growth: Preliminary evidence from Chile*, IMF Staff Papers, vol. 44, No. 2, Washington, D.C.
- Holzmann, R., T. Packard and J. Cuesta (2000): *Extending coverage in multi-pillar pension systems: Constraints and hypotheses, preliminary evidence and future research agenda*, Social Protection Discussion Paper, No. 0002, Washington, D.C., World Bank.
- IDB (Inter-American Development Bank) (1998): *Facing up to inequality in Latin America. Economic and social progress in Latin America, 1998-1999 report*, Washington, D.C.
- Ilmarinen, J.E. (1999): *Aging workers in the European Union*, Helsinki, Finnish Institute of Occupational Health.
- NSIB (National Social Insurance Board) (2001): *The dilemma of the welfare system. Coping with ageing means working longer*, Stockholm.
- OECD (Organisation for Economic Co-operation and Development) (2000): *Reforms for an ageing society*, Paris.
- Palmer, E. (1999): Exit from the labor force of older workers: Can the NDC pension system help?, *The Geneva Papers on Risk and Insurance*, vol. 24, October.
- _____ (2000): *The Swedish pension reform model: Framework and issues*, Social Protection Discussion Paper, No. 0012, Washington, D.C., World Bank.
- _____ (2001): Swedish pension reform: how did it evolve and what does it mean for the future?, in M. Feldstein and H. Siebert (comps.), *Coping with the pension crisis: Where does Europe stand?*, Chicago, Illinois, University of Chicago Press.
- Settergren, O. (2001): *The automatic balance mechanism of the Swedish pension system*, Stockholm, National Social Insurance Board.

- Steuerle, E., C. Spiro and R.W. Johnson (1999): Can Americans work longer?, *Straight Talk on Social Security and Retirement Policy*, No. 5, Washington, D.C., Urban Institute.
- Valdés-Prieto, S. (1997): Financing a pension reform toward private funded pensions, in S. Valdés-Prieto (ed.), *The economics of pensions: Principles, policies and international experience*, Cambridge and New York, Cambridge University Press.
- World Bank (1994): *Averting the old age crisis: Policies to protect the old and promote growth*, Washington, D.C.
- _____ (1995): *Workers in an integrating world. World development indicators*, Oxford, Oxford University Press.
- _____ (1996): *From plan to market. World development report*, Oxford, Oxford University Press.
- _____ (1998): *World development indicators, 1998*, CD-ROM version, Washington, D.C.