

Maintaining Prosperity in an Ageing Society



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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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PREFACE

by Donald J. Johnston, Secretary-General of the OECD

The ageing of our societies over coming decades presents OECD countries with a complex and formidable set of interrelated challenges. It is for this reason that, at their meeting in 1996, OECD Ministers requested the Organisation to further its analysis of the challenges in key policy areas in relation to population ageing, and to report back in 1998.

The OECD's work on ageing populations was also recognised by the heads of state and government of the seven leading industrial countries (Canada, France, Germany, Italy, Japan, the United Kingdom and the United States), and Russia at their summit meetings at Denver in 1997, where they requested the OECD to undertake further specific work in this area.

This report makes clear that meeting the challenge of ageing populations will require comprehensive reform that addresses the fiscal, financial and labour market implications of ageing, as well as the implications for pensions, social benefits, and systems of health and long-term care. The goal must be to harness the skills and experiences of older people and to ensure adequate living standards for them without placing an unfair burden on younger people.

The magnitude of the problem is underscored by the fact that the ratio of the older population (aged 65 and above) to that of working age in the OECD area has already risen from 15 per cent in 1960, to just above 21 per cent currently. Looking ahead, it is expected to increase much more rapidly, reaching around 35 per cent by 2030.

Successful reforms will bring large rewards. They would avoid major fiscal problems, improve living standards and the quality of life, and result in a more equitable, cohesive society. The temptation to delay action is strong, but the message that the OECD seeks to communicate as widely as possible on behalf of its Member governments is that solutions will be much more difficult and painful if needed reforms are postponed.

At their meeting in 1998, OECD Ministers agreed to take into account this report's principles for interrelated policy reforms in developing national strategies, and to monitor progress through the OECD.

The scope of this report demonstrates the need for interdisciplinary teams to work on the challenging issues faced by OECD societies. In this context, I am happy to see our Member countries exploiting the OECD's comparative advantage of tackling important national and international problems in a multidisciplinary and forward-looking way.

A handwritten signature in black ink, appearing to read 'Angel Gurrutxaga', written in a cursive style.

ACKNOWLEDGEMENTS

This report sets out some of the key economic, financial and social policy challenges for responding to the ageing of OECD societies. Thus, it has involved contributions from many parts of the OECD Secretariat, and is the work of a broad, interdisciplinary team.

Kumiharu Shigehara, Deputy Secretary-General, assumed an oversight role for this project, and chaired the Steering Group. The principal directorates and agencies involved were the : Economics Department (ECO); Directorate for Education, Employment, Labour and Social Affairs (DEELSA); Directorate for Financial, Fiscal and Enterprise Affairs (DAFFE); Directorate for Science, Technology and Industry (DSTI); Public Management Service (PUMA); and Development Centre. A drafting team comprising Hans Blommestein from DAFEE, Peter Hicks from DEELSA and Nick Vanston from ECO reported to this Steering Group. Peter Hicks also acted as overall co-ordinator of the programme at the technical level. Sveinbjörn Blöndal from ECO made a very important contribution to the editing of the report for publication.

The original analytical work on which this report is based is available in the form of working papers, the titles and authors of which are listed in Annex 3.

This work programme was aided by extra-budgetary funds contributed by the governments of Austria, Canada, Japan, the Netherlands and the United States.

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I. THE DEMOGRAPHIC CHALLENGE AND THE POLICY RESPONSE

SUMMARY

The implications of ageing for OECD societies are deep and pervasive. The effects have been positive in recent decades. However ageing trends are likely to result in a smaller proportion of the population being in employment in the years after 2010. That poses major challenges. There is likely to be reduced growth in material living standards. Fewer workers to support more retirees raises fiscal issues and issues of inter-generational fairness. Growing periods of life being spent out of contact with the labour market in retirement raises fundamental issues about the allocation of work and leisure over life.

Responding to these challenges requires action on many fronts. Spending on public pensions, health and long-term care must be contained. The structure of retirement income must be reformed and incentives to early retirement eliminated. There must be more support for people, as they grow older, to play a productive life in the labour market and society. Financial market reforms are required in response to the huge growth in pension funds. Reforms that result in higher economic growth would alleviate the pressures of ageing.

Strategic frameworks need to be in place at the national level in order to harmonise and sustain ageing reforms and to build-up public understanding and support. A set of seven policy principles has been developed to guide these reforms, which are applicable with different degrees of urgency in different countries (Box I.1). International co-operation will facilitate the success of the reform process. Because many of the reforms require advance notice and gradual implementation, the time for action is now. Demography provides only a narrow window of opportunity before reform will become much more painful (Box I.2).

The first part of this chapter describes the demographic challenge and the nature of the policy responses that are required. The second part describes the principles for reform and the kind of practical action that will be needed to address them.

AGEING TRENDS ARE LIKELY TO RESULT IN A SMALLER PROPORTION OF THE POPULATION BEING EMPLOYED

In 1960, the older population aged 65 and over accounted for 15 per cent of the working-age population. By 2030, this could jump to 35 per cent, with particularly strong growth after 2010. In the past 25 years, the number of people of pensionable age (65 and over) in OECD countries¹ rose by 45 million, but the population of working age rose by 120 million. As a result, population ageing has so far posed no major economic or social problems for our societies. However, the effects of declining fertility and the ageing of the baby-boom generation will have particularly large implications for policy-makers in future. In the next 25 years, the number of persons of pensionable age will rise by a further 70 million, while the working-age population will rise by only five million.

Not only are there more people in “retirement age” groups, but also people are retiring earlier and living much longer. For example, men in 1960 could expect to live some 68 years with 50 of those years spent in employment. Today men can expect to live 76 years, with only half of those years – 38 years – spent in employment.

The combined effects of all the ageing phenomena – population ageing due to fertility declines, individual ageing resulting from increasing longevity, and changing labour force participation within age groups – is that the percentage of the population who are employed has been growing, and will continue to grow until about 2010 and then will start to fall (Figure I.1). A reversal of trends towards early retirement would be the only major way to keep the employment ratio from falling.²

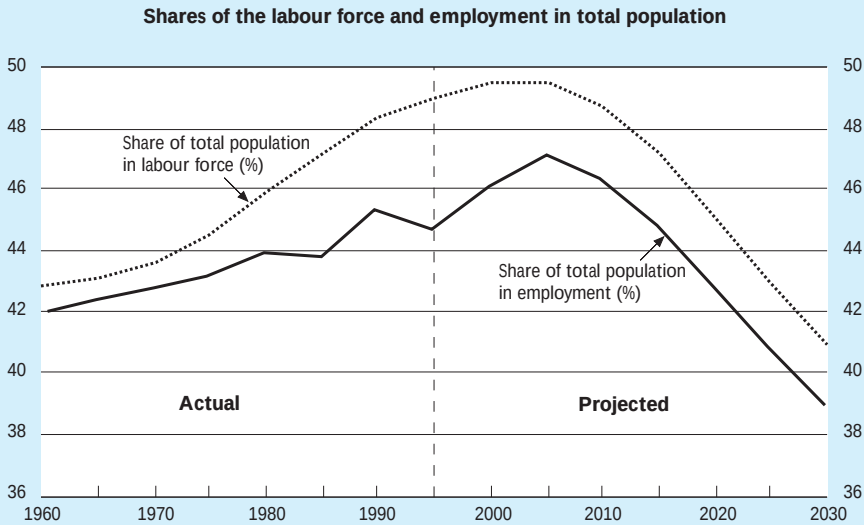
A SMALLER PERCENTAGE OF THE POPULATION AT WORK HAS LARGE SOCIAL AND ECONOMIC CONSEQUENCES...

... including reduced growth in material living standards...

The goods and services produced by an economy mainly determine the material living standards of a society. The amount of goods and services produced depend mainly on the number of people working and their productivity. If productivity continues at its post-1973 average growth rate of 1.5 per cent annually, the decline in the proportion employed would mean that the growth in material living standards will be cut in half in the decades after 2010.

... a different allocation of income across generations...

Once the baby-boom generation starts to pass into retirement in about 10 years time, the goods and service produced by a relatively smaller number of workers will be consumed by themselves and by a relatively larger number of

◆ Figure I.1. *Employment will fall as a share of the total population after 2010*

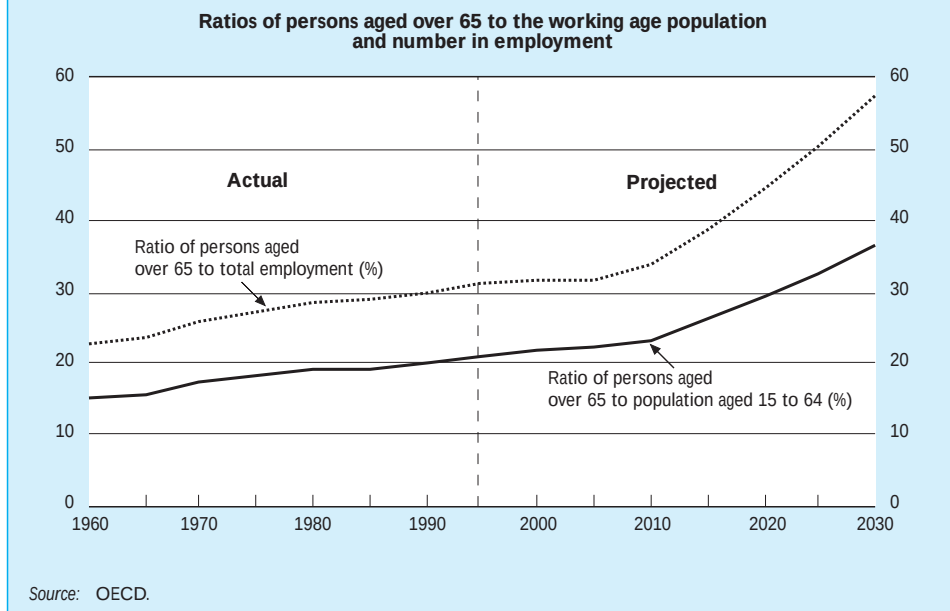
Source: OECD.

people not at work. If the balance of living standards between workers and retirees is to be maintained, more will have to be put aside during working years – either through individual savings or pay-as-you-go taxes and contributions – in order to support longer periods of time in retirement. Figure I.2 shows that in 1960, for every older person there were over 4 employees to provide support. Currently, there are about 3 employees for each older person and that will continue for another decade. After 2010, the trend changes sharply. By 2030, the size of the older population will grow to 50 per cent. That is, there will be only two employees for every older person

... people living longer and healthier lives but retiring earlier and earlier

There is no economic or biological basis for retirement when people are in their 50's or 60's, yet the length of leisure in retirement is increasing rapidly. The implications for the continuing evolution of the institution of retirement is discussed in Chapter IV, while broader life-course implications – effects on health,

◆ Figure I.2. *The ratio of older people to employees will grow rapidly after 2010*



employability, social participation and care-giving for frail elderly people – are discussed in Chapter VI.

POLICY MUST RESPOND ON SEVERAL FRONTS...

Critical policy issues for the future stand out as a result of the inevitable ageing of our societies:

- will it continue to be possible to share societies' resources between the working generation and its dependent non-working members in ways that do not give rise to unacceptable societal and inter-generational conflicts?
- how can the contribution of older people to society and economic prosperity be enhanced?
- how should pension, health and long-term care best be reformed?
- which changes in the financial infrastructure are needed to support the development of advance-funded pension systems?

- to what extent will ageing OECD countries be able to improve their well-being through growing trade in goods and services and assets, in particular with younger, faster-growing non-OECD countries?

... spending on public pensions, health and long-term care must be contained...

In most OECD countries, sharing societies' resources between working people and retirees importantly involves public pension systems, which are usually financed by payroll taxes. Even though many Member countries have already taken steps to reform their public pension systems, these are insufficient to cope with demands on them in future. The public pension accounts in most Member countries will start to go into sustained deficit in about ten years time. Public provision of health and long-term care for retirees will add to the burden.

Countries could finance future social spending obligations by raising payroll taxes to whatever level was necessary, but these would be so high as to discourage work effort and would cut deeply into working people's living standards. These considerations point to the overriding importance of curbing the growth of spending on public pensions, health and long-term care.

... and the structure of retirement income must be reformed

The provision of income in older age should take account of all the resources available to older people including public and private pensions, earnings and assets. Existing public pension systems which enable older people to maintain adequate standards of living are likely to remain the major source of old-age income for many retirees for some time to come. However, other sources may have to play a growing role, with the objective of spreading the burden across generations and enabling individuals to diversify risks across the different sources of retirement income. Such reforms are likely to mean that middle and high-income earners will want to supplement their public pensions. Hence, it will be important to establish a sound regulatory framework for private pension funds, including occupational pension schemes.

Reforms along these lines would change the current "implicit contract" between many governments and future retirees, and must therefore be implemented with enough warning to allow people time to adjust to the new "contract", i.e. how to begin to anticipate problems only likely to arise two or three decades down the road. In addition, there are limits on the speed that a country can move to an advance-funded scheme because of inter-generational equity considerations: current workers will be "paying twice", into their own pension fund and for the pensions of the current retired.

Population ageing will put a premium on more effective health and long-term care spending

People are living longer and healthier lives. Nevertheless, population ageing means that health and long-term care costs are likely to rise, although perhaps by less than was once feared. The central challenge is to ensure that these expenditures are cost-effective and meet the most pressing requirements – reducing time spent in dependence and time in chronic care. This means that medical research and technology should be focused on the reduction of dependence arising from conditions which particularly afflict older people, such as senile dementia or arthritis.

Care-giving for frail older people is now often fragmented and unnecessarily costly. As demographic trends point to a particularly large growth in the numbers of people in the oldest age groups, it will be important now to develop explicit policies and financial arrangements for care-giving that deliver quality and cost-effective services.

Incentives for early retirement should be eliminated...

Material standards of living, and hence the tax base, would also be higher if people worked longer. It is not a question of “forcing” older people to work longer. The current trend to early retirement is, in part, a reflection of a rising demand for leisure as societies become more prosperous as well as a response to high and persistent unemployment. But current public pension systems, tax systems and social programmes interact to provide a *strong* disincentive for workers to remain in the labour force after a certain age. Removing these disincentives, perhaps even providing positive incentives to work longer, coupled with effective steps to enhance the employability of older workers, could make an important contribution to sustaining the growth of living standards.

But an increased willingness on the part of older workers to work longer will have to be matched by a sufficient number of job opportunities for them if higher unemployment is to be avoided. This, in turn will require a major change in the attitudes of firms towards hiring and retraining older workers. Since these changes will have to be reflected in wage and labour cost structures, the co-operation of the social partners could play a very useful role in this process.

... and “active ageing” should be encouraged

A more flexible work-retirement transition is one example of “active ageing” – the capacity of people, as they grow older, to lead productive lives in the society and economy. Active ageing implies a high degree of flexibility in how individuals and families choose to spend their time over life – in work, in learning,

in leisure and in care-giving. Public policy can foster “active ageing” by removing existing constraints on life-course flexibility. It can also provide support that widens the range of options available to individuals via effective life-long learning or by medical interventions that help people maintain autonomy as they grow older. Indeed, the available evidence shows that the more active older people are, the better the quality of life they enjoy.

Significant financial market reforms are also necessary

Ageing will change saving and investment patterns nationally, including through the build up and subsequent unwinding of private pension assets by the retiring baby-boom generation. Differences in ageing patterns across countries – particularly between the OECD and the non-OECD regions – will give rise to shifts in patterns of savings, investment and international capital flows. A more efficient global allocation of savings and risks could raise productivity, and therefore the goods and services available to consumers in OECD countries as the baby-boom generation retires.

These considerations call for:

- strengthening of financial market infrastructure through improved legislation and codes of conduct and the introduction of rigorous rules of transparency, fiduciary responsibility and disclosure;
- improved supervision, an upgrade and modernisation of pension asset investment rules, and better domestic co-ordination among the different regulatory and supervisory agencies involved in the provision of retirement income;
- structural reforms in emerging market economies to ensure efficient allocation of savings into the most productive investment opportunities in the mutual interest of OECD and younger, faster growing non-OECD economies.

Higher economic growth would alleviate pressures

Higher economic growth will alleviate pressures arising from population ageing. Taxes to support the retired will be easier to bear when the working-age population can look forward to rising prosperity. Encouraging people to work longer would raise economic growth, increase the tax base, and reduce the numbers of dependent older persons, a triple gain. The higher national saving, if used productively, will result in higher capital stock and thus more output over the long term.

Although higher productivity is central to increasing living standards of the whole population, it does not directly address all of the economic, financial and

Box I.1. **Diversity and simplicity**

For the sake of simplicity and manageability, this account of ageing and its policy implications abstracts from details particular to any individual OECD country. All parts of the analysis and conclusions are relevant to most Member countries, but to different degrees. National reform strategies will, of course, need take account of the diversity that actually exists. Most countries are already in the process of reform* in many of the areas described. The starting points for a practical ageing reform strategy are quite different.

There is diversity in the basic demography. Not all countries had a marked “baby boom” after the second world war. The duration and extent of this phenomenon differed between countries, as did the timing and extent of the subsequent fall in birth rates, although the latter demographic development has been a general one. Life expectancy differs significantly between OECD countries, but it has been rising in all of them (and in the majority of non-Member countries). Thus all OECD countries are ageing, but at different rates and with different timing. Ageing will likely be quicker and sooner in Japan and Italy. Mexico and Ireland will age appreciably more slowly and later.

OECD countries also differ, and will continue to differ, in the structure and evolution of their labour forces. Male participation rates in the 55-64 year old age group are close to 90 per cent in Japan and Iceland, and below 40 per cent in Belgium and Luxembourg. There are very wide variations in female participation rates across countries: in the low 40 per cent range in Greece, Italy and Mexico, and in the 70-80 per cent range in the United States and Scandinavian countries. Demographic projections indicate that the population of working age will start to fall in absolute terms in several countries (for example Japan and Italy), but will likely continue to grow slowly in the United States.

Similarly, no two OECD countries have identical pension systems, nor do they face identical fiscal pressures. But in almost all of them, reforms have already had to be introduced to prevent expenditure on public pensions from running ahead of receipts, and in most of them, it is estimated that further significant reforms will need to be implemented in future. Income positions of retired households vary widely within and across countries, in ways that cannot be captured by summary “replacement rate” measures. Although real incomes of retired households have grown faster than the average for all households, there remain pockets of poverty. Those with patchy employment histories or health handicaps are particularly affected, as are the growing numbers of older women living alone, especially after the death of a spouse.

Besides having different participation patterns in the labour market, men and women have different health patterns. Women live longer and provide far more family-giving.

(continued on next page)

(continued)

It is also the case that treating all employees as homogeneous disregards important factors influencing willingness and ability to remain in the labour force. Employees whose working life has been confined to manual labour since their mid-teens on relatively low wages may have an understandable desire to retire sooner than those with less physically demanding occupations.

* A detailed description and analysis of recent reforms can be found in OECD, *"The Caring World: National Achievements"* and *"The Caring World: Analysis"* (forthcoming).

social policy aspects of ageing populations discussed above. Nevertheless, while an increasing proportion of national output will need to be transferred to retirees, the higher economic growth is, the easier it will be to ensure that making one group better off does not entail making another group worse off.

Ageing in a global context

Populations of OECD countries are on average the oldest in the world (Mexico and Turkey are exceptions). However, ageing is taking place in all countries. Indeed, the relative importance of the world's older population has been growing for centuries. What is new is the rapid pace of change. In the non-OECD world, the rate of growth in the number of older people is much faster than in OECD countries. Nevertheless, the percentage of older people is still relatively small compared with the OECD, especially in Africa and southern Asia, because fertility rates began to decline only after child mortality rates fell. China, however, will soon become an older country.

The ageing of populations, and policy reactions to it, will have direct and indirect implications for current balances and international flows of goods, services and capital, both within the OECD area and between OECD and non-OECD countries. The consequences of these flows for living standards in OECD countries are likely to be positive, although perhaps not large.

PRINCIPLES FOR ACHIEVING REFORM

The agenda for policy reform for maintaining prosperity in an ageing society requires a policy response cutting across traditional boundaries of economic, financial and social disciplines, and across traditional areas of responsibility of government administrations. *Strategic frameworks*, including implementation struc-

Box I.2. A window of opportunity

The main demographic changes start to come about in 10 to 15 years' time. This gives our societies a limited window of opportunity in which to introduce reforms in areas such as pensions and other social programmes, financial markets, health and long-term care. Advance action is desirable on several counts.

Some reforms will affect future retirees, who have few means of adjusting once they are retired, and advance announcement of reforms, together with clear timetables for phasing them in, gives them time to adjust in an optimal manner while they are still of working age. Those adjustments in themselves will likely reduce eventual fiscal and social strains.

Second, if reforms are delayed until the demographic pressures dictate them, they will have to be all the more severe, and risk either distorting labour markets to an unacceptable degree, or sparking off a renewed period of climbing public sector deficits and debt, thus undoing all the hard-won gains of the recent past. It would, for example be much easier to manage the new fiscal pressures from a position of fiscal surpluses.

Further, clear goals and timetables would help build support for sustained reform. The need for reform is understood in general terms. For example, many younger people do not now believe that decent public pensions will still be available when they retire. However there is less understanding of the solutions, such as working later, that will be needed.

tures and timetables, should be put in place at the national level *now* in order to implement these reforms in a coherent way over time.

The central objective of reforms is to ensure that the way societies transfer resources to a rapidly growing number of retired people creates neither major economic nor social strains. This points to the desirability of speeding up the growth of output, reducing the numbers of dependants by encouraging people to work longer, and ensuring that the transfer mechanisms operate efficiently. Since the main demographic pressures will start to emerge in about 10 years' time, our societies have a very limited window of opportunity to put reforms in place. Seven principles have been identified to guide these reforms:

1. Public pension systems, taxation systems and social transfer programmes should be reformed to remove financial incentives to early retirement, and financial disincentives to later retirement.

2. A variety of reforms will be needed to ensure that more job opportunities are available for older workers and that they are equipped with the necessary skills and competences to take them.
3. Fiscal consolidation should be pursued, and public debt burdens should be reduced. This could involve phased reductions in public pension benefits and anticipatory hikes in contribution rates.
4. Retirement income should be provided by a mix of tax-and-transfer systems, funded systems, private savings and earnings. The objective is risk diversification, a better balance of burden-sharing between generations, and to give individuals more flexibility over their retirement decision.
5. In health and long-term care, there should be a greater focus on cost-effectiveness. Medical expenditure and research should be increasingly directed to ways of reducing physical dependence, and explicit policies for providing care to frail older people should be developed.
6. The development of advance-funded pension systems should go hand-in-hand with that of a strengthening of the financial market infrastructure, including the establishment of a modern and effective regulatory framework.
7. Strategic frameworks should be put in place at the national level now in order to harmonise these ageing reforms over time, and to ensure adequate attention to implementation and the build-up of public understanding and support.

Following are examples of how the policy principles could be applied in practice in national reform strategies. Not all the reform directions described here will apply in all countries, but most of them should apply in most countries.

Retirement incentives and disincentives

First, public pension systems, taxation systems and social transfer programmes should be reformed to remove financial incentives to early retirement, and financial disincentives to later retirement.

Chapter III analyses the incentives to early retirement that are now common. In the longer-term, the central pension reform must be to increase the average age of full public pension entitlement. This increases the length of time in which contributions can be made and reduces expenditures. It would slow or reverse trends towards ever-longer periods of healthy life being spent in retirement.

However, public pensions systems interact with other social transfer programmes and multiple reforms are needed to accomplish the basis objective of

providing an incentive structure that will increase the time spent at work and slow or reverse the trends towards ever-longer retirement. Reforms include:

- increasing length of the contribution period for full benefit and generally linking life-time benefits and contributions. At a minimum, benefits should continue to accrue with every year that is worked;
- removing pension earnings rules and other penalties for working later;
- increasing the average age of entitlement to full pension as a one-time policy change or by formulae that automatically tie pensions to longevity. Increasing the lower age limit for early retirement;
- moving strongly in the direction of actuarial neutrality of pension benefits for people who retire earlier or later than the standard age;
- aligning more closely early retirement ages in occupational pensions and public old-age pension systems where the private and social costs and benefits associated with earlier retirement differ.
- phasing out programmes that encourage early retirement for labour market reasons;
- phasing out preferential treatment for older people in disability, unemployment insurance and other social programmes, *i.e.*, ending their role as quasi early-retirement programmes.

Jobs for older workers

Second, a variety of reforms will be needed to ensure that more job opportunities are available for older workers and that they are equipped with the necessary skill and competence to take them.

Measures which will result in an increased supply of older workers will need to be accompanied by policies to increase their employability. Chapter VI assesses the policy responses that are required. There are two issues: the overall demand for labour and special factors that would hurt the employment opportunities of older workers. As well, there is a need to provide retirees with the means to play a more active role in the society and economy. General directions for reform include:

- increasing the priority to lifelong learning for all – the operational means of investing in human capital. A key challenge will be to gain a stronger empirical understanding of the linkages among learning, skills, productivity and wages as workers grow older;
- increasing labour market information, including that related to means of achieving employability for longer working lives;

- providing comparable information to support retirees in playing a more active role in the economy and society, including care-giving roles;
- developing effective Active Labour Market Programming to help older workers find new jobs;
- removing discrimination against hiring older workers;
- maintaining and increasing action in response to OECD Job Strategy recommendations, which will contribute to the overall health of the labour market, including that for older workers.

Fiscal consolidation

Third, fiscal consolidation should be pursued, and public debt burdens should be reduced. This could involve phased reductions in public pension benefits and anticipatory raises in contribution rates.

The broader fiscal and international macroeconomic dimensions to ageing are discussed in Chapter II. Especially in countries with large public pay-as-you-go pensions with high replacement rates, and in countries with high levels of health care expenditure, medium-term programmes of fiscal consolidation designed to reduce debt-to-GDP ratios should be pursued.

- action on pensions, in particular, is needed well before the main effects of population ageing take hold after 2010. The full effect of those reforms will not be felt for some time. Delays will make the problem much more difficult to solve, while early action will provide those still in work with time to adjust.
- agendas to contain health care costs and improve effectiveness must be a continued priority and the growth of public pensions expenditures reduced, significantly so in most Member Countries. In financing health care or additional long-term care costs, incomes from all sources (including pension income and the scope for recourse to private health insurance) should be taken into account;

Retirement income reform

Fourth, retirement income should be provided by a mix of tax-and-transfer systems, advance-funded systems, private savings and earnings. The objective is risk diversification, a better balance of burden-sharing between generations, and to give individuals more flexibility over their retirement decision.

The analysis of Chapter IV shows that there can be no “one-size-fits-all” pension reform solution. Countries have chosen quite different routes, in large part because the starting-points of their reforms differ. Moving in the following

directions will not only ease fiscal pressures, it will also play an important part in increasing living standards and quality of life:

- increasing the size of advance-funded elements in countries where pay-as-you-go systems now dominate. This can be done by increasing advance-funded elements within public plans, by encouraging advance-funded occupational schemes, by introducing mandatory individual accounts, by reducing benefit levels in pay-as-you-go public plans in order to make room for other sources of retirement income, or some combination thereof;
- reducing the size of public pension benefits where these are now unnecessarily high. Once poverty alleviation goals have been met, the total amount of an individual's retirement income should not be a goal of public pensions in isolation but reflect individual choice based on *all* resources available on retirement including earnings, private savings or the use of assets such as reverse-mortgages for housing.
- adjusting earnings-related pensions so that there is a direct link between life-time benefits and contributions in those countries where this is not yet the case. This could involve reforms in the formula for calculating benefits or shifting to defined-contribution accounts within pay-as-you-go systems, or in encouraging greater use of advance-funded accounts by individuals and private sector employers;
- providing significant voluntary and mandatory elements in earnings-related pensions;
- funding pensions aimed at anti-poverty objectives out of general revenues (in countries where there are separate public anti-poverty and income-replacement programmes);
- as a long-run target, separating out the anti-poverty and income-replacement elements of public pensions into different programmes, each with its own objectives and characteristics;
- targeting in the anti-poverty programme, especially if done through means such as refundable tax credits that operate unobtrusively and at low cost. However, a low basic minimum to all also has merit, including fewer work disincentives;
- abolishing pension benefit arrangements that are obsolete or not consistent with stated policy objectives. This could include subjecting pensions to income tax in countries where this is not the case, phasing out or targeting subsidised privileges for seniors such as discounts on public services, and consideration of reducing excessive preferential tax treatment for occupational pensions and individual retirement savings plans;

- maintaining the confidence of both beneficiaries and the public at large in private pension schemes by upgrading the regulatory framework. This would safeguard the right of both beneficiaries, particularly in respect of non-discriminatory access to pension schemes, the protection of vesting rights, and the transferability of pension rights.

Health and long-term care

Fifth, in health and long-term care, there should be greater focus on cost effectiveness, on medical expenditure and research that are focused on reducing dependence, and on explicit policies for providing care to frail elderly people.

Older people require more health care than younger people. With ageing populations, health costs will rise, although perhaps by less than was once thought. The central challenge is ensure that these expenditures are effective and aimed at the most pressing problems. Chapter VI examines the issues. Policy responses require:

- continuing and strengthening health cost-containment and financing reforms, which are well developed in most OECD countries;
- providing analytic frameworks that will lead to: consistent measurement of the cost-effectiveness of interventions, including multiple interventions, and to the dissemination of this information; improved measures of health status; and international co-operation in data provision such that the experience of other countries can be used as benchmarks;
- increasing the incentives to foster the use of the most cost-effective interventions, for example through payment systems to health-care providers and the use of primary-care physicians as gate-keepers;
- focusing medical research and technology on the elimination or reduction of dependence associated with conditions such as senile dementia, migraines or arthritis;
- a rebalancing of priorities that results in less growth in spending on remedial interventions and more on preventive measures.

A stage of frailty in very old age should be treated as a normal part of the ageing process, subject to explicit policies and financial arrangements. While, again, there is no single best solution, reforms should result in:

- treating long-term care as a normal risk of life with the burden of financing shared by the working-age and older populations;
- providing coverage against catastrophic costs, while insuring a balanced access to home help and institutions;

- encouraging a multiple-pillar system of delivery – with more emphasis on supporting people in their own home or in similar home-like settings and less in publicly-subsidised nursing homes. Provision of long-term care in hospitals should be avoided;
- harmonising long-term care policy with health reforms in order to support the best mix of health and care-giving elements.

Financial markets

Sixth, the development of advance-funded pension systems should go hand-in-hand with a strengthening of the financial market infrastructure, including the establishment of a modern and effective regulatory framework.

Chapter V shows that a productive, safe investment of retirement savings requires well-functioning capital markets. The needed infrastructure to support this involves legislation and codes of conduct, internationally acceptable accounting standards and disclosure rules, proper pension asset investment rules and co-ordination among the different regulatory and supervisory agencies involved in the provision of retirement income. A competitive mutual funds and asset management industry is needed to minimise the costs of managing retirement assets. All of these need to reflect the challenges and opportunities of the new financial landscape. In particular, public policy attention should be focused on :

- developing effective regulatory and supervisory frameworks for pension schemes. This involves: upgrading of regulation (*e.g.* licensing, technical provisions, funding rules, valuation of assets and liabilities); more effective oversight of the financial situation of pension funds; and proper design of limited government guarantees (if any) and privately-run insurance insolvency schemes for pension systems;
- designing adequate investment rules for pension funds. This involves agreement on proper and consistent investment regulations for pension funds and other institutions involved in the provision of retirement income products. In countries with a modern financial infrastructure, consideration should be given to the introduction of the prudent person principle and to the liberalisation or relaxation of investment restrictions (domestic and international). Since this involves an increased reliance on modern and effective risk management, industry-wide risk management standards for pension funds, and other institutions involved providing retirement income, need to be promoted. Supervisors involved in retirement income systems need to be encouraged to agree on modern risk management standards that reflect current challenges in financial markets;

- supporting the development of new financial instruments and new markets such as index-linked markets and the improved functioning of retirement annuity markets;
- better monitoring of the financial market behaviour of pension funds and other financial institutions involved in the provision and management of retirement assets. This involves: improved statistics on financial assets of pension funds and other institutions that are part of the retirement income system; better understanding of the investment and trading strategies of pension funds and other institutions and their impact on the functioning of financial markets; monitoring of the adequacy of regulatory and supervisory developments;
- ensuring consistency of policies at national and international levels including the consistency of tax and other regulatory regimes (e.g. the tax treatment of surpluses of defined-benefit plans), or agreeing to use internationally acceptable risk management standards (such as the “prudent person” principle) across various jurisdictions;
- monitoring the corporate governance role and governance capacity of pension funds. This includes: the role of statutory or voluntary guidelines for governance activities; the impact of shareholder activism by pension funds on corporate behaviour; and the governance of pension funds themselves and the role of trustees;
- emerging market economies should implement radical structural reforms – including financial market reforms – so as to make investing OECD retirement funds in non-OECD countries more attractive.

Strategic frameworks for reform

Seventh, strategic frameworks should be put in place at the national level now in order to harmonise these ageing reforms over time, and to ensure adequate attention to implementation and the build-up of public understanding and support.

Taken one at a time, the reform directions described above would be desirable quite apart from ageing considerations. By and large they are prudent policies that need to be pursued more forcefully and over a prolonged period. Taken collectively, however, they represent a considerable new challenge for government policy-making – a challenge that resides in the policy-making process as much as in the specific content of each reform.

Chapter VII explores a number of the dimensions of achieving practical reform given this complexity and inter-relatedness. Part of the challenge involves adopting and sustaining policy-making perspectives that are much longer-term than is customary. Common information gaps exist that should be filled on a

co-ordinated basis, particularly as they relate to active ageing perspectives. The long time-frames involved, and the complexity of the issues, also result in a challenge for building public understanding, engagement and viable political support. These considerations suggest:

- developing national frameworks or reform strategies now that will provide co-ordination among the various separately-managed reforms and that will sustain them over time. The scope of these strategic frameworks should be broad – identifying priorities for action, roles and responsibilities.
- using the development of the strategy to provide a means of building public understanding and support for reform directions. This includes using the strategy as a means of developing proposals for collecting and disseminating statistics and other information that is needed by reform process itself.

ROLE OF INTERNATIONAL CO-OPERATION

Action at the international level can supplement national action. While specific reforms must be tailored to meet the circumstances of each country, there are many common directions and much that can be gained by international co-operation during the reform process. Areas for international co-operation include:

- collection and sharing of new statistical data on an internationally comparable basis and exploitation of existing information;
- monitoring of reforms and sharing of lessons in a multilateral setting; and
- assisting emerging market economies to implement successful structural reforms and sound macroeconomic policies in order to facilitate the mutually beneficial flow of trade in goods, services and financial assets between OECD and non-OECD economies.

II. DOMESTIC AND INTERNATIONAL MACROECONOMIC ISSUES

SUMMARY

The proportion of OECD populations eligible for public pensions will start to rise more quickly in about ten years time, but the proportion that contains the main contributors will shrink. If neither contribution rates are raised nor individual benefit entitlements lowered, public finances will deteriorate severely and for a prolonged period. The size of the potential shortfall in many Member countries is such that continuing major reforms to public pension systems will be required, but these might not be sufficient in themselves to ensure desired living standards for retirees without unacceptable rises in contribution rates. Other reforms are desirable. Public expenditure on health care for retirees may also rise rapidly, compounding the fiscal problem.

Ageing is likely to influence the evolution of private and national saving rates. The passage of the large baby-boom cohorts through the high-saving stages of the life cycle will tend to boost the private saving rate, but it may subsequently drop as older people draw down accumulated assets. Increases in government saving through medium term budget consolidation could play an important role in sustaining national saving rates. Increased use of advance funded pensions could help to contain the drop in national saving, although there is considerable uncertainty as to what extent such pension arrangements increase private saving.

Ageing in OECD countries will very likely induce changes in desired savings and investment balances, to different extents and with different timing. Model-based analysis suggests that the net effect will first be to lower OECD investment by more than saving, but then saving rates will fall faster. At the international level, this implies that the OECD area will at first build up assets in non-OECD countries, then run them down, helping to offset a part of the negative impact of ageing on material living standards. At the same time, private pension schemes are growing in importance, and institutional investors in OECD countries are diversifying the geographical spread of their portfolios to include non-OECD countries where returns may be higher than in OECD countries. The resulting changes in gross flows could add to the endogenous saving/investment mechanism, but various considerations make it unlikely that the OECD could entirely “beat demography” by this means.

Ageing is likely to change patterns of private and public saving and investment, as will policy reactions to it. The first part of this chapter examines the impact on public finances of the likely evolution of public expenditures on pensions and health, in the absence of further reforms.³ The second analyses how ageing might affect private and national saving rates, and the third assesses the current account implications of changes in the demographic structure and changes in foreign asset positions in response to efforts by OECD (and non-OECD) savers to diversify their financial assets geographically.

DOMESTIC FISCAL ISSUES

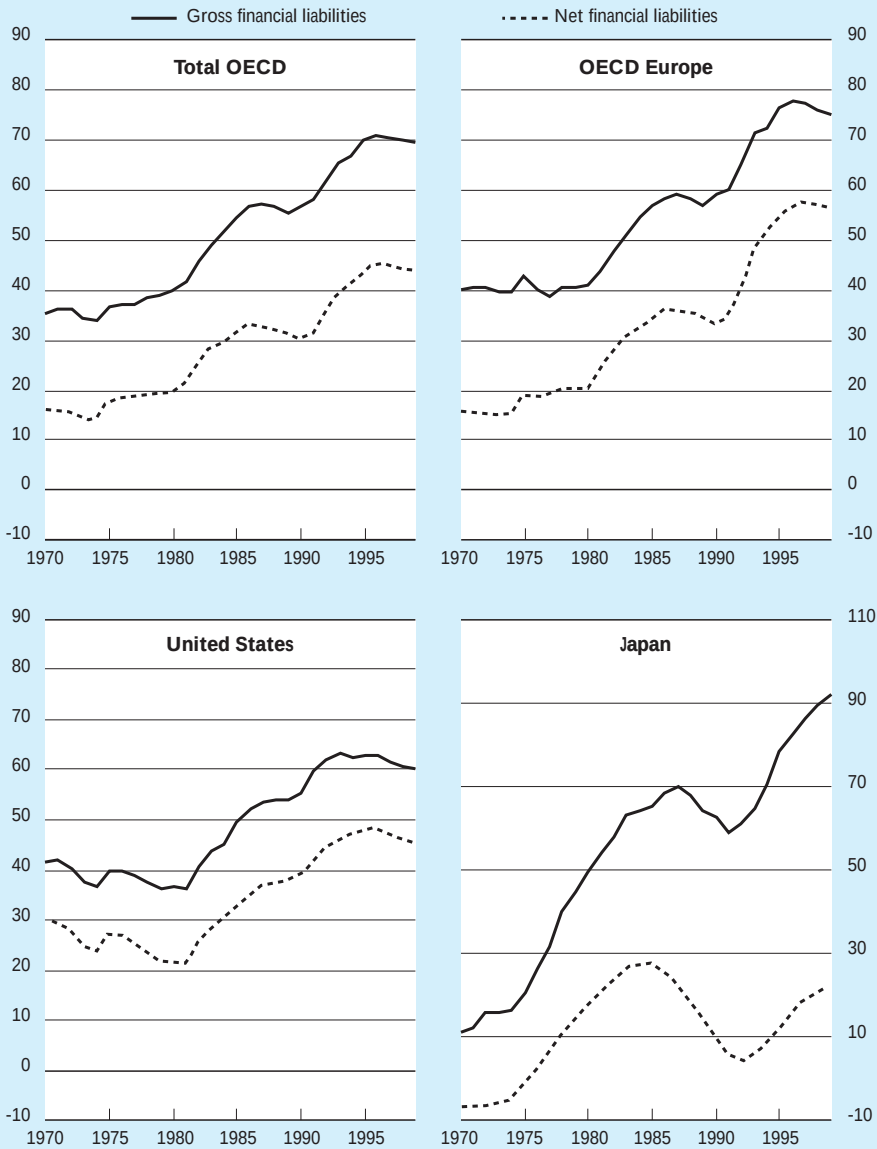
OECD countries have experienced public-sector deficits and rising ratios of debt to GNP since the 1970s. In particular, public debt levels remain very high by peace-time standards in many countries and have probably not yet peaked in some (Table II.1, Figure II.1). Prolonged consolidation efforts, and a pick-up in growth, have reduced deficit levels in most Member countries and the near-term outlook is for relatively low deficits and rises in primary surpluses (Table II.2). It is accepted that continued high public sector deficits and rising debt levels depress growth through their impact on interest rates, and contribute to raising inflationary pressures. Hence OECD countries are committed to keeping deficits low as a pillar of their medium-term fiscal strategies, for example in the framework of the European Union's Stability and Growth Pact.

Table II.1. **General government gross financial liabilities**
As a percentage of nominal GDP

	1965	1970	1975	1980	1985	1990	1995	1999
United States	48.7	41.5	39.9	37.0	49.5	55.5	63.1	59.7
Japan	..	10.9	20.7	49.6	65.3	62.6	77.8	99.5
Canada	59.5	52.8	43.3	44.0	64.1	72.5	97.6	84.2
Germany	17.3	18.1	23.8	31.1	42.8	45.5	62.2	64.2
France	..	..	..	30.9	38.6	40.2	60.1	66.4
Italy	35.4	38.1	57.6	58.1	82.3	104.5	124.3	116.1
United Kingdom	..	77.1	61.6	54.0	58.9	39.3	59.7	57.5
Belgium	..	62.9	57.7	77.3	120.7	128.2	131.2	115.4
Netherlands	..	51.5	41.8	46.9	71.5	78.8	78.5	68.9
Sweden	..	30.5	29.5	44.3	66.7	44.3	79.8	71.4
European Union	..	40.1	42.6	40.8	57.2	59.5	69.8	75.0
Total OECD	..	35.6	37.0	40.2	54.5	56.8	70.0	70.5

Source: OECD.

◆ Figure II.1. **Gross and net debt**
As percentage of nominal GDP



Source: OECD.

Table II.2. **General government primary balances**

As a percentage of nominal GDP

	1965	1970	1975	1980	1985	1990	1995	1999
United States	1.3	0.1	-3.0	-0.3	-1.2	-0.7	0.2	1.8
Japan	0.1	1.4	-2.9	-3.2	1.0	3.7	-3.1	-1.6
Canada	2.1	2.3	-1.3	-0.9	-3.3	0.7	1.3	6.5
Germany	-1.9	-1.1	-6.3	-1.6	1.1	-0.1	-0.1	1.0
France	..	1.3	-1.9	0.8	-0.8	0.8	-1.4	0.5
Italy	-3.9	-3.5	-10.3	-4.4	-5.8	-2.9	2.4	3.8
United Kingdom	..	5.2	-2.5	-0.3	0.5	1.2	-2.6	2.3
Belgium	..	0.5	-2.1	-3.4	0.6	4.0	4.5	5.5
Netherlands	..	0.4	-0.3	-1.9	1.0	-0.7	1.2	2.5
Sweden	..	3.8	1.6	-4.4	-0.8	4.3	-4.4	3.0
European Union	..	0.6	-4.1	-1.4	-1.2	0.1	-0.3	1.5
Total OECD	0.3	0.6	-3.2	-1.1	-0.8	0.5	-0.3	1.5

Source: OECD

Mounting pressure on public finances in coming decades...

In the absence of further strong public pension reform efforts, fiscal stability will likely come under strain in the next century. The oldest members of the baby-boom generation are now in their early 50s, and will start to retire in about ten years' time. Expenditure on public pensions will rise strongly for several years as this large cohort passes into retirement. But they leave behind them a smaller number of younger employees, whose payroll taxes finance public pay-as-you-go pensions. Health-care costs are also likely to rise, as expenditure on older citizens is higher than on younger ones, and there will be many more older citizens. There may be some easing of expenditure on education, but there is also a strong trend towards increasing time spent in full-time education.

Assessing the fiscal impact is not straightforward. Although estimates of the numbers reaching the standard retirement age can be made reasonably accurately, assumptions also have to be made about average longevity, the numbers retiring before the standard retirement age, real and nominal wage trends, and tax receipts. No two countries have exactly identical pension systems. In all countries, pension systems are complex, and some countries have reformed their pension arrangements in important ways in recent years. Projections also have to be made for several decades into the future. Uncertainties about the economic and demographic environment increase as the time horizon lengthens. Uncertainty as to the nature of the relationship between age and health expenditure further complicates the task of forecasting the fiscal impact of ageing.

For these reasons, it is desirable to approach the issue in several ways and to see how robust the results are to different sets of simplifying assumptions. In fact, the analyses carried out by national administrations, the IMF,⁴ and the European Commission⁵ (see Box II.1) and the OECD⁶ itself all point in the same direction: with unchanged policies, projected pension benefit levels will greatly exceed projected pension contributions in the majority of Member countries, resulting in large increases in deficits in the pension accounts, and in public finances in general.

The OECD has visited the issue several times in the past decade. A comprehensive set of calculations for 20 OECD countries was published in 1995.⁷ They were based on common assumptions about unemployment and productivity growth rates, and they showed that under “no-policy change” assumptions, pension expenditures would rise by up to 8 percentage points of GDP over the next half-century in one country, Finland, but could even fall in the United Kingdom and Ireland, reflecting very strong reforms introduced earlier. The effects of alternative policies were explored, including raising the retirement age, targeting public pensions on the poorest households, and tying global pension benefits to

Box II.1. European Commission and the IMF: Pension projections

Pension projections by the European Commission and the IMF point to major pressure on public finances in coming decades.

The European Commission calculations were based on national projections, which have the advantage that they can take into account the complexities and institutional particularities typical of individual country systems. They incorporated the estimated effects of very recent reforms. However, it was not possible to impose common demographic and economic assumptions, and relatively favourable hypotheses were adopted. For the majority of countries examined, only minor pressures arise in the next few years, but expenditures begin to mount rapidly in the second decade of the next century. In most European Union countries, the rate of payroll tax required to stabilise the pension accounts also nearly doubles, even in countries where such rates are currently relatively high.

The IMF exercise examined trends in selected OECD countries and found that in order to keep public pension accounts in balance, contribution rates (including transfers from central government budgets) would have to rise relative to 1992 by the equivalent of as much as 20 percentage points of the wage-bill in major continental European countries, by six percentage points or so in the case of the United States, Canada and Japan, but could remain stable in Sweden and the United Kingdom.

trends in nominal GDP. All of these greatly reduce the growth in public expenditures (especially the targeting option), but they also reduce the individual generosity of public pensions.

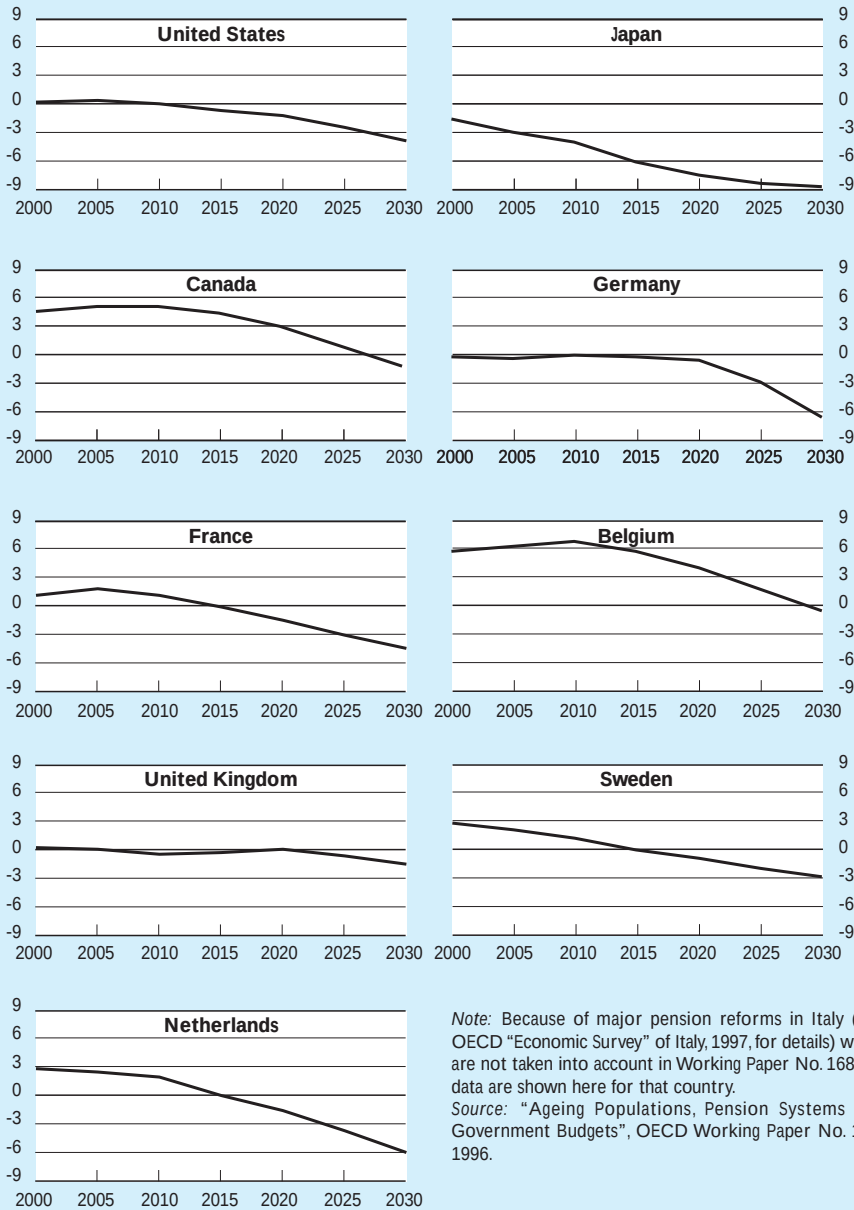
Other calculations relating to the same countries concentrated on the impact on fiscal positions of the growth of health as well as pension expenditures, if payroll taxes are not increased to compensate.⁸ Figure II.2 summarises the main results for public sector primary balances, and Figure II.3 the implications for public debt. For most countries (the United Kingdom and Ireland are again exceptions), primary balances deteriorate by about 5 percentage points of GDP over the next 30 years, and the ratios of net public debt to GDP deteriorate in most countries, generally by 100 per cent or more of GDP. Not all of these simulations incorporated recent reforms designed to reduce benefits and to raise contribution rates.

More recent work by the Secretariat extends its earlier analyses.⁹ A global model-based approach provides insight into the interaction of public and private saving and investment in a world in which countries are ageing at different rates, and where resulting changes in international capital flows affect exchange and interest rates – and hence real incomes. This work finds that the fiscal impact of ageing, assuming no change in contribution rates or other public expenditures beyond those already programmed, is broadly similar to that calculated in the earlier work: as previously, fiscal balances deteriorate by about 3 per cent of GDP in the United States by the year 2030, by 6 per cent in Japan, and by 3 per cent in Europe (Europe is treated as one area in these calculations). The new analysis pushes the projection period out further, showing that deterioration of public finances continues until the middle of the next century. When the impact of ageing on expenditures on health and education is factored into the model, public net debt levels would rise by about 80 per cent of GDP in the case of Japan, by some 30 per cent for the United States and by 40 per cent for the European Union by mid-21st century. For the United States and Europe, the deterioration in public finances does not accelerate until the second decade of the next century: for Japan, the deterioration starts very soon.

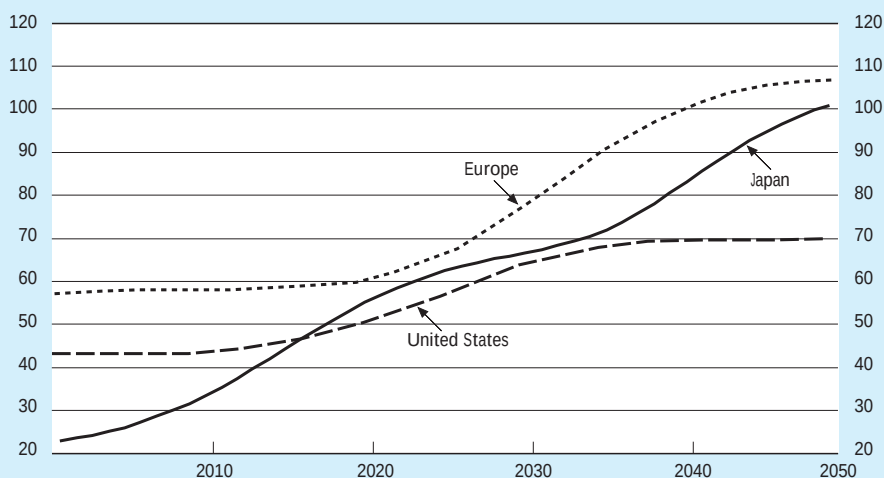
... requiring major reform of public pension systems

Although none of the various analyses can capture the full complexity of individual country pension systems, the fact that all the various approaches give very similar results implies that it is very likely that, despite recent reforms in many countries, there will be important strains building up on public finances in 10-15 years' time. The seriousness of the problem varies from country to country depending on the timing and size of the demographic transition, and the details of the public pay-as-you-go pension systems (*e.g.* retirement age, programmed

◆ Figure II.2. **General government primary balances**
 Surplus (+) or deficit (–) as a percentage of GDP



◆ Figure II.3. **Public debt**
As percentage of GDP



Source: Turner *et al*, OECD Economics Department, Working Paper No. 193.

changes in contribution rates, whether benefits are earnings-related, partially or fully indexed to prices and wages, etc.).

Increased spending on transfers to the retired could in principle be financed by reducing public expenditure in other areas. Increased deficits in pay-as-you-go systems would in this case be financed within the budget. However, such a policy could seriously compromise economic efficiency and dynamism if cuts were to be concentrated in areas such as education, research and development, and infrastructure. Financing increased spending on public pensions by reducing social transfers to the younger generation would also raise serious equity concerns. And financing retirement income by reducing spending on health would not seem to be feasible, given that health spending will also grow as a consequence of ageing.

There would thus seem to be no alternative to keeping public pension accounts in balance in face of ageing populations. This could be achieved in various ways:

- increasing contribution rates,
- lowering individual generosity of benefits, and/or

- increasing the effective retirement age, thus modifying the rise in the number of pensioners relative to the number of contributors.

While it is of no direct consequence for fiscal balances what levers are used to bring contributions in line with spending, the overall efficiency and equity implications differ significantly from one measure to another. Raising contribution rates can have adverse effects on employment in general, and may impose excessive burden on the successors of the baby boom cohort.¹⁰ Lowering individual generosity of benefits could raise concern about income adequacy in retirement, while it might reduce disincentives to work after the pensionable age. And while raising the effective retirement age would increase economic efficiency and enhance incomes of older people, it might be resisted by a population that has come to regard a long time in retirement as a normal reward for productive working life. Chapter IV evaluates some of the possible pension reforms which would alleviate the pressure on public finances in future, and at the same time meet concerns about equity and efficiency.

THE IMPACT ON SAVINGS

The national saving rate could fall and lower living standards...

Ageing could in itself depress private and national savings rates in the longer term, thereby lowering future economic growth and the level of *per capita* consumption. It is often argued that the private saving rate of a country benefits for a while from the passage of the larger cohorts (born in a baby-boom) through the high-saving stages of the life cycle. Subsequently, surges in the proportion of older people in the population reduce the private saving rate as older people draw down accumulated assets. Unless this age-induced decline in the private saving rate is offset by higher public savings, the national savings rate will fall. However, as discussed earlier, ageing will also adversely affect government balances. The combined influences of ageing and unchanged public policies would thus imply a fall in both private and government saving in the future.

Increases in government saving through medium-term budget consolidation could play an important role in sustaining national saving rates, provided that this was achieved in ways that do not undermine incentives for private saving. The extent to which national saving rates could fall in different countries will depend on interaction between private saving ratios and the rate at which their populations are ageing and their success in pursuing fiscal consolidation. Hence the timing and size of *ex ante* movements in national saving rates might be very different across OECD countries and especially between them and demographically younger countries outside the OECD.

... but increased use of advance funding of pensions could help to contain the drop

The evolution of national saving rates may also depend on how national retirement systems will change in coming decades. It is often argued that pay-as-you-go systems discourage private savings: individuals knowing that they will be entitled to pensions in their old age will not save, or will save less, for their retirement; whereas advance funded systems by definition encourage individuals to save for their retirement. Available evidence¹¹ suggests that advance funding can boost national savings under certain circumstances, notably when traditionally low-savers are required to enter into advance-funded schemes and when tax privileges related to such schemes are not excessive. The experience of some Latin American countries which have increased the use of advance funding confirms that the impact on savings is positive but unlikely to be very large.¹²

Exploratory analysis by the Secretariat¹³ suggests that moving towards advance-funded arrangements will increase national saving only modestly. Even if public pensions are gradually abolished altogether, the combined effects of induced voluntary increases in private saving and constant public saving would not suffice to offset the negative impact on saving of ageing itself. If the transition to a funded system were to be financed via public debt (corresponding to the unfunded liabilities of previous schemes), the impact on national saving would be negligible. However, other studies¹⁴ indicate that the private saving response to the introduction of advance-funded pensions may be higher than allowed for in this analysis, permitting a rise in national saving despite the ageing of the population. But even if there is considerable uncertainty about the magnitude of the saving response, it would at least under most circumstances help to contain some of the age-induced drop in national saving.

THE INTERNATIONAL IMPLICATIONS OF AGEING**Protracted current-account imbalances may emerge...**

Changes in current-account balances could also attenuate the negative direct impact of ageing on material living standards. Current account balances, and the associated change in net foreign asset positions, result from domestic saving (public as well as private) and investment decisions. As ageing is likely to depress the national saving rate, there will be concomitant changes in current account balances in individual countries, unless investment moves in tandem with saving, and in the global pattern of net foreign asset positions and the flow of investment income.

With relatively fewer workers due to ageing, capital requirements would rise less quickly than in the past, or even fall in some countries, thus reducing gross

domestic investment needs. It is not easy to predict whether ageing would cause domestic investment to fall more than national saving. It may be that domestic investment would react more quickly than national saving initially, since savings habits tend to be persistent, but the fall in saving may eventually outweigh that in investment. National saving-domestic investment balances of individual countries, and hence their current account balances, are therefore likely to evolve in complex ways as populations age.

Furthermore, even if the impact of ageing on national saving is greater than that on domestic investment for an individual country, this cannot be true simultaneously for all countries in the world, even though the populations of virtually all countries are ageing to some extent. This is because at the global level, changes in individual country current balances must net out to zero. Hence, it is not the absolute fact of ageing that is of importance in assessing the effects on current balances, but rather the speed at which a given country is ageing relative to others. The pressures on saving-investment balances in a given country will thus be attenuated or amplified by demographic developments in all other countries, with these pressures modulating, and being modulated by, exchange rates, terms of trade, and interest rates. Hence the impact of ageing on the current account positions of OECD countries, and the impact of their current account positions on their living standards, are not a straightforward matter to analyse or predict.

Work in this field is still in its early stages, and only tentative conclusions can be drawn. The recent model-based exercise by the OECD¹⁵ implies that, in the absence of further pension reforms or further fiscal consolidation, and assuming that private saving rates fall with age, the OECD area would nevertheless experience significant current-account surpluses for the next couple of decades. This is partly because the demographic pressures will not emerge in full in the industrialised countries for another decade or so, and partly because the faster-growing non-OECD countries are expected to be net capital importers. However, well before the middle of the next century, OECD countries would be running significant current-account deficits, and would have run down most of the stock of net foreign assets. Investment income from abroad would boost living standards only for the first two to three decades of the next century. It would modestly offset the negative direct impact of ageing on material living standards during the period when that direct impact is likely to be most intense. However, under this no-policy-change scenario, ratios of public debt to GDP would start to soar in 10 years' time in Europe and the United States, and straight away in Japan.

This analysis also explores the effects of early implementation of different policy options, such as strong medium-term fiscal consolidation, raising retirement ages, and pursuing labour market reforms, that could be used to ameliorate the impact of ageing on public finances and output. All of these policies tend to

raise national saving rates, and thus greatly extend the period during which the OECD would experience current-account surpluses and Member countries on average would thus accumulate larger stocks of net foreign assets. Investment income from abroad would therefore also be larger, and longer lasting. Even if the higher national saving rates would drive down interest rates and exchange rates, worsening the terms of trade, the positive impact on living standards is greater than in the no-policy-change case.¹⁶

... and this should not be resisted by policy makers

The implications for policy are that, abstracting from other influences, ageing will very likely result in prolonged swings in current-account positions of OECD countries *vis-à-vis* each other and *vis-à-vis* the rest of the world, that could cumulate to large changes in net foreign asset positions. While there is considerable uncertainty surrounding such estimates, the weight of evidence is that current accounts of most OECD countries will move towards surplus during the next decade or so, and even more decisively towards smaller surplus, or deficit, thereafter. These swings would reflect fundamental changes in domestic saving/investment balances, and not changes in relative competitiveness nor relative cyclical position, and there would be no reason to resist them. However, other countries – mostly in the non-OECD area – would have to accept sustained current-account deficits.

Gross capital flows to the non-OECD area are likely to increase...

The growth of global capital markets and especially the growth of OECD pension fund assets might independently lead to a higher level of *gross* flows of capital from OECD to non-OECD countries. OECD investors will be seeking higher rates of return than they can expect to get in the capital-rich home countries and greater stability in rates of return on their overall portfolios (see Chapter V). By reducing risk and increasing investors' protection, the build-up of a modern financial infrastructure in the non-OECD area would further increase its attractiveness as a destination for investment funds from the industrialised countries. However, unless this (or other factors) independently led to a change in domestic saving/investment balances in non-OECD countries, the net flows to them would not change. Investment by them in OECD countries would rise by as much as OECD investment in them.

... but this is unlikely to allow the OECD countries to “beat demography”

It has been suggested that investing in younger capital-poor non-OECD economies could permit the older capital-rich OECD economies to “beat demography”. However, the changes in gross asset positions would have to be very large

to generate significant benefits for the OECD countries, unless returns on non-OECD assets are persistently very much higher than those which can be obtained on OECD assets.¹⁷ Also, if portfolio diversification were to take place on a large scale, then returns to capital would rise in the OECD area and fall elsewhere, tending to reduce the net benefits to OECD countries. And finally, gross flows from the non-OECD countries are likely to increase in the future as these high-saving countries will seek to diversify their asset portfolios and prepare for the ageing of their own populations, thus reducing the net investment income for the OECD countries from the area.

III. AGEING POPULATIONS, LABOUR MARKETS AND THE RETIREMENT DECISION

SUMMARY

Workers in almost all OECD countries have tended to withdraw permanently from the labour force at earlier and earlier ages. In part, this represents an increased demand for leisure as incomes increase. However, changes in the design of most public pension systems in recent decades have tended to encourage employees to retire early: the standard age of entitlement to pension has fallen, the generosity of pensions has increased, the pension accrual rate has declined and the opportunity of older workers to obtain old-age pensions prior to the standard age has increased. Moreover, changes in entitlement conditions for unemployment-related and disability benefits have made it possible to use such benefits to finance early retirement in some countries, and special early-retirement schemes have been created in a few countries.

Reforms to public pension systems and other social transfer programmes that would ensure actuarial neutrality in the work-to-retirement transition would be a major step forward, and would help ease the fiscal burden as well as reducing barriers to working longer in life and supporting a better allocation of societies' resources. While the raising of the standard age of entitlement to old age pensions is likely to reduce disincentives to work at older ages, it may not be very effective as long as other features of current pension systems remain intact. Disability and unemployment-related benefits need to be carefully scrutinised to ensure that they do not distort the choice between continuing employment and retirement in favour of the latter. Financial disincentives to working after the standard retirement age also require scrutiny.

The age at which workers retire is of critical importance to both future material living standards, and to fiscal pressures. If people work longer, the output that can be shared among the population will be greater, the tax base will be larger, and there will be fewer dependent older persons receiving pensions.

This chapter first discusses whether the trend towards earlier retirement in most OECD countries reflects individual preferences for leisure or whether it can be ascribed to incentives that attract workers out of the labour force. The second part examines the incentives to retire embedded in the old-age pensions; the third looks at how other public income-support systems have influenced the

decision to retire; and the fourth assesses how policies should be changed to remove barriers to working longer in life.

FALLING RETIREMENT AGES: CONSEQUENCES AND CAUSES

At the beginning of the 20th century, workers who managed to survive into old age and retirement often lived in comparative poverty and ill-health for the few remaining years of their lives. At the end of the century, most adults expect to spend an appreciable fraction of their life in retirement, enjoying relatively good health and a relatively comfortable material standard of living. More strikingly, at the beginning of the century, those workers who survived into their early 60s were still working in their late 60s. By its end, very few people are still working after the age of 65, and in some OECD countries, the average age at retirement has fallen below 60 years. Hence longer life and better health has not been accompanied by longer working lives – on the contrary, citizens of OECD countries are retiring earlier and earlier.

If the trend towards earlier retirement continues, the adverse impact on future material living standards could be as great as the purely demographic impacts¹⁸ and the fiscal cost of ageing would be compounded. This is because increased participation rates of women will probably be insufficient to offset the drop in participation rates of older workers. However, if the average retirement age for males gradually returned to something close to that ruling in the early 1960s (when today's state pension systems were being crafted), and female participation rates continued their upward trend, a considerable proportion of the expected slowdown in material living standards would be avoided¹⁹ (it would be necessary, though, to raise the effective age of retirement to as high as 70 to offset completely the adverse implications of ageing on fiscal balances). It is therefore important to understand why participation rates of older workers have fallen and to assess the scope for policy to stabilise or reverse the trend to earlier retirement.

The fact that retirement ages have fallen everywhere as real incomes have risen might only imply that leisure in later life is a luxury good which individuals “consume” more of as they become richer, trading off increased leisure against lower material living standards. Surveys of older workers and younger retirees suggest that a large proportion of older workers (55-64 years-old) who leave their last job and become inactive do so voluntarily, even allowing for pressure from employers, younger colleagues and the existence of publicly-subsidised early retirement schemes for individual companies or sectors.²⁰ If strong preference for leisure later in life has been dominating in the retirement decision in the past, there would be little prospect of a reversal of the trend towards earlier retirement.

However, it is becoming increasingly evident that public and private income-support programmes designed for, or used by, older people have made work at later ages less financially attractive, and that public policies distort the retirement decision in other ways as well:

- in many countries, public pension schemes discourage workers (especially, but not only, the low-paid and low-skilled) to remain in the workforce until the standard retirement age or beyond.²¹ The rate at which pension benefits accumulate with extra years of work may drop to zero well before the standard retirement age, and because of pension floors and collateral benefits for dependent spouses, the effective replacement rate even for early retirement is relatively high. Pension incomes on early retirement are higher than they would be on an actuarially neutral basis;
- in some countries, the authorities have actively or tacitly encouraged early retirement as an unemployment reduction mechanism, relaxing entitlement conditions for the receipt of disability or unemployment-related benefits for this purpose;
- some funded or quasi-funded²² private pension schemes of the defined-benefit type²³ allow retirement earlier than the “standard” age, with little or no additional private pension benefits accruing after this age. If the public systems are not actuarially neutral (the usual case), then the public systems in effect subsidise early retirement on private benefits;
- when income is taxed progressively, the difference in the size of the tax wedge on earned and retirement income distorts the income/leisure trade-off in favour of more leisure even when pension systems are actuarially fair for individuals;
- in all countries, self-employed workers (who have more flexibility in choosing when to retire, and are often entitled to lower public pensions than employees) retire at significantly later ages than dependent employees.

Thus, one conclusion that could be drawn is that employees’ desire to retire earlier than the standard retirement age (60-65 years in most OECD countries) has to some extent been transformed into reality at possibly high cost to society as a whole by developments that are in principle susceptible to policy. To the extent that social and private interests diverge, and existing policies – public and private – have encouraged the latter at the expense of the former, there is a clear case for policy changes.

THE OLD-AGE PENSION SYSTEM: IMPACT ON RETIREMENT DECISIONS

Studies by the OECD²⁴ and others²⁵ show that old-age pension systems discourage work at older ages in virtually all Member countries. Expected pension

wealth – the discounted value of pension benefits less the cost of obtaining them – usually falls with continued work after a certain age rather than being independent of it, as would be the case for an actuarially neutral system. The disincentives depend on the standard and minimum ages of entitlements to pensions, benefit levels and pension accrual rates at older ages.

The standard eligibility age has only modest effect on the actual retirement age...

For males, the “standard” age at which male workers qualify for a full state pension is 65 years in more than half of the OECD countries, and tends to be lower for females. There are differences between sectors, with public-sector employees typically retiring earlier.²⁶ Only a few countries have lowered the standard retirement age since the 1960s, and a few countries have already started to increase the standard age.

Although there are good reasons to believe that raising the standard retirement age will raise participation rates of older workers, it is unlikely that the actual age at retirement will rise by as much as any increase in the standard age. There is a strong desire to take advantage of any mechanism permitting early retirement, but not vice versa, as shown by the fact that actual retirement ages have fallen during the period when the standard age has remained stable. And in fact, the majority of workers have left the labour force well before the standard age of retirement in most countries.²⁷

The standard age of entitlement may, however, act as an effective barrier to continued work for those few who remain in employment up to this age. This is because the opportunity cost of continuing in employment is typically very high: foregone pensions and paid contributions while in work, with little or no increases in eventual pensions after retirement. The extent to which pensions are affected by continued work after the pensionable age differs from country to country. Some countries have a statutory ban on combining work with the receipt of old-age pension, while the combination of means-testing of pensions and low permitted earnings in others implies that the bulk of pensions would be lost at earnings close to the average level. Even in the few countries where pensions and earnings can be combined in principle, the start of pension payments is often conditional on quitting the current job. Although they are free to take up employment elsewhere, it is generally difficult for older workers to find alternative employment, especially in Europe.

... while the minimum eligibility age may have strong effects

Several countries allow pensions to be accessed prior to the standard age under certain conditions. Many European countries have introduced seniority

pensions for those who have a long contribution history and who have reached a certain age. The minimum age for such seniority pensions differs from country to country, and is well below 60 for males in some of them. Other countries permit older citizens to obtain their pension prior to the standard age, subject to permanent actuarial reduction of benefits. Again, the minimum age varies across countries, but is typically around 60 for males.

The opportunity cost of working beyond the minimum age is generally high. The reasons are the same as for work after the standard retirement age: foregone pensions and continued contributions while working with little or no gains in eventual pensions (even where an early access to pensions results in some actuarial reductions). Moreover, the receipt of early pensions is often conditional on withdrawal from the labour market. Raising the minimum age for pension receipt would close an important route into early retirement, and could have a powerful effect on actual retirement ages provided that other early-retirement options were foreclosed. The same might apply if early-retirement pensions were subject to an actuarially neutral adjustment.

The level of pensions is unlikely to have major effects...

The higher the pension relative to wages of older workers, the greater the incentive to withdraw from the labour force once pensions can be obtained. Hence, lowering the individual generosity of public pensions for future retirees should encourage workers to carry on working for longer. Although replacement rates have tended to rise in OECD countries over the past three decades, and average age at retirement to fall, there is no clear relationship between the evolution of the replacement rate and that of the retirement age. At one extreme is Japan, where the replacement rate has risen strongly, but participation rates of older workers remain very high, and at the other extreme is France, where replacement rates have increased only modestly, but retirement ages have fallen steeply. Hence it cannot be stated with any confidence that pension reforms that reduce the size of benefits for future retirees will indeed induce them to remain significantly longer in the workforce. Recent OECD analysis²⁸ confirms this: a 20 per cent reduction in benefits in Germany and Italy is estimated to encourage males to remain in the labour force for only a few months.

... but pension accrual rates at older ages are important

The rate at which pension rights accrue has a significant impact on the retirement decision. These rates differ greatly between countries. At one extreme is Australia, where the basic pension age is unrelated to employment or contributions. In Germany and the Netherlands, rights accrue steadily in line with contributions throughout working life. In most countries, though, rights accrue at a

steady rate (though vesting periods differ) only until the individual attains a maximum number of years – commonly 35–40 years – of contributions, after which there is no further increase in eventual pension rights. This implies that 55 year-old workers who started to work at 20 will not increase the size of their public pensions by working a further 10 years, thus increasing the incentive to retire earlier (contributions normally continue to be obligatory even after additional rights disappear).

It was not always thus. A 55 year-old worker in Belgium in the late 1960s could increase his or her eventual pension by as much as a third by working a further 10 years, and by more than a fifth in France and Canada. This reflected in part the introduction of contribution-related pensions in the early days of pay-as-you-go systems, which meant that continuing work at older ages raised pensions considerably. And in France until the 1980s, the replacement rate for older workers rose by 4 percentage points per year for workers over 60, providing a powerful incentive to remain in employment. These kinds of incentives are much rarer today. Incentives have even been reversed in some special early retirement schemes, which continue to pay pension contributions on behalf of the retired worker, while recipients of disability benefits typically do not suffer any reduction in their pension rights during their non-employment status.

Private occupational pension schemes also tend to discourage work at older ages

In most Member countries, private occupational pension schemes are widespread, and are indeed legally obligatory in France, Switzerland and Greece. They typically specify a retirement age that is the same as that for the public pension system, or lower. In some cases, occupational pensions can be drawn (at a reduced rate) before the “normal” retirement age. Neither the replacement rates nor the penalty for early retirement are generally actuarially neutral, and in this sense their sensitivity to demographic developments is similar to that of public pay-as-you-go systems. As with public schemes, working beyond the pension age adds little to eventual benefits, but it is open to the employee to change jobs and accrue rights elsewhere. This is what appears to occur in the United Kingdom, especially for employees whose pension schemes often specify a retirement age lower than that of the public scheme. However, where schemes are of the defined-benefit type and specify retirement at an earlier age than the public scheme, and especially where they permit early payment of pensions, the incentives to retire early are strengthened. It would seem important to regulate occupational schemes to remove such incentives, or at least greatly weaken them, and not to impose large burdens on younger workers.

OTHER PUBLIC INCOME-SUPPORT SYSTEMS

There are a number of public transfer programmes which in practice permit older workers to withdraw from the labour force before the standard and early retirement age, and provide them with income support until then, even if this is not their purpose in theory. They are currently of three main types: disability pension schemes, unemployment-related schemes and special early-retirement schemes. Their importance varies very widely across countries. In the United States and the United Kingdom, for example, only 20 per cent of those in the 55-64 age group receive public non-employment benefits of one kind or another.²⁹ More than half that age group receive such benefits in Finland and Austria.

Disability programmes have been used in several countries to facilitate early retirement...

It is to be expected that older people figure disproportionately in the disability statistics. However, the very large differences between countries and over time (and over the business cycle) make it evident that to some extent at least, disability benefits have been used to aid early withdrawal from the labour force as much as to support those who are incapacitated for health reasons. The proportion of older citizens of working age drawing disability benefits has risen in most OECD countries despite steady improvements in health status. It is hard to believe that a third or more of those aged 55-64 in Austria and some northern European countries are incapable of working, when a far smaller proportion is so designated in other countries. Income from disability pension schemes also varies very widely, with replacement rates around 70 per cent for the older people in Austria, Sweden, Spain and Portugal, but below 30 per cent in the United Kingdom and New Zealand (Table III.1).

In some countries, eligibility to receive disability benefits is explicitly based on labour market criteria as well as purely medical criteria. Access to the benefits is more readily granted when unemployment is high or rising or when there are particular local difficulties in labour markets. This is so in Germany, Italy and Finland, and has been the case in the Netherlands (until 1987) and Sweden (until 1991). While there is no particular reason to assume that older workers would disproportionately benefit (for a given level of genuine disability) from such policies, in practice there seems to be a tacit acceptance that conditionality is made easier for older workers who are close to the standard retirement age, especially if they have worked for enough years to qualify for a full public pension.³⁰ Even in countries where there is no labour market criterion, examination of the inflow into disability schemes shows that it tends to be higher in times of labour-market strains.

Table III.1 **Non-employment benefit schemes: summary generosity indicators for older workers, 1995**

	Per cent		
	Disability schemes	Unemployment schemes	Special ER schemes
Australia	0.273	0.275	0
Austria	0.681	0.489	0.681
Belgium	0.292	0.200	0
Canada	0.331	0.179	0
Czech Republic	0.224	0.056	0
Denmark	0.388	0.715	0
Finland	0.600	0.641	0
France	0.250	0.230	0.325
Germany	0.441	0.394	0
Hungary	0.279	0.186	0
Iceland	0.390	0.419	0
Ireland	0.322	0.240	0
Italy	0.360	0.500	0.700
Japan	0.251	0.030	0
Luxembourg	0.529	0.776	0.240
Netherlands	0.700	0.525	0.400
Norway	0.570	0.172	0
New Zealand	0.252	0.240	0
Poland	0.469	0.162	0
Portugal	0.717	0.616	0
Spain	0.715	0.371	0
Sweden	0.696	0.144	0
Switzerland	0.434	0.107	0
United Kingdom	0.275	0.169	0
United States	0.448	0.064	0

Source: Blöndal and Scarpetta, forthcoming.

The wisdom of using disability pension schemes to “solve” labour market problems is very doubtful, however. They reduce the official unemployment rate to the extent that exiting older workers are replaced by previously unemployed younger workers, but, at best, the level of employment does not change. Realisation of this has led some OECD countries to tighten conditionality for entry into these schemes, and/or to reduce effective replacement rates (Germany, Italy, Sweden, Netherlands, Australia). However, experience (*e.g.* in the case of Sweden) indicates that even when labour-market criteria are eliminated, actual inflows to disability schemes remain sensitive to labour market conditions.

... and unemployment-related benefit programmes support early retirees in many countries

In more than half of OECD countries, it is possible in principle to draw unemployment benefit from the age of 55 to the standard retirement age, either

because there is no limit in time for such benefits, or because special arrangements exist for older workers. Typically, job-search requirements are applied less stringently to older workers, or not at all, either tacitly or as official policy (Belgium, France, Germany, the United Kingdom, Australia, Denmark, New Zealand and the Netherlands). In some countries, the long-term unemployed can also access old-age pensions at an early age and exit the labour force. Where relaxed entitlement conditions go hand in hand with generous benefit levels, exit into retirement via spell of unemployment becomes financially attractive. Indeed, empirical analysis³¹ confirms that generous unemployment-related benefits (both in terms of the level of benefits and the length of benefit periods) do tend to depress labour-force participation of older workers.

Special early retirement schemes remain important in a few countries

A few countries have operated special early-retirement schemes designed specifically to facilitate early withdrawal from the labour market. They were originally intended to help reduce unemployment or to ease the social cost of major structural changes in the economy. Benefit levels tended to be relatively generous. Such schemes have fallen very substantially in importance over the last decade and currently help finance a significant number of early withdrawals only in the Netherlands (where they are being phased out) and in Luxembourg (and possibly Norway in the near future).

POLICY REQUIREMENTS

The analysis reported in this chapter shows that the retirement decision is strongly influenced by policy, and that reforms could play an important role in reducing barriers to working longer in life. However, it will not be enough simply to raise the standard retirement age at which people qualify for old-age pensions. It will require major changes in various features of old-age pension systems, and an overhaul of entitlement conditions in other social programmes. It will also require flanking policies to ensure that older workers remain employable. Chapter VI examines the steps that can be taken to prepare for longer careers in the labour market.

Public pension wealth must become much less dependent than at present on the age at which people retire. At a minimum, benefits should continue to accrue with every year that is worked and contributions paid, before and after the standard retirement age. Pension income should also be subject to the same income tax schedules as other kinds of income. The case for withholding all or part of pension income if the recipient re-enters the labour force also needs to be scrutinised with care. Of course, to the extent that workers still decide to retire early, accepting the financial penalties involved, there would be no gain in output

and material living standards. But this would get incentives right, reduce public pension costs, and offer more choice to individuals.

Some aspects of private occupational pension systems need to be examined, especially those involving earnings-related pensions. It would be desirable for contributors to, and recipients of, such schemes to take better account of emerging demographic pressures, and take early action on benefit levels and contribution rates, so that older members can adjust to a possibly lower level of benefits than currently promised.

Nevertheless, even with sweeping reforms in public pension schemes, the Secretariat analysis indicates that other social programmes would continue to aggravate the trend towards earlier retirement. Reforms directed only at public pension systems will encourage older workers to take advantage of other sources of public transfer income, notably disability and unemployment benefits. Savings on public expenditures, and gains in material output, will be reduced. This implies that concerted efforts need to be taken in most OECD countries to assure consistency and coherence between public pension systems, occupational pension systems, and all social programmes which transfer income to those in their pre-retirement years.

IV. RETIREMENT INCOME REFORMS

SUMMARY

Many OECD countries are actively engaged in reforming their public pensions. Contribution rates are being increased. The effective age of retirement is being raised and benefit levels reduced. There is a move towards multiple-pillar systems of providing retirement income. However, reforms in most countries will not be deep enough to handle the challenges that will occur in the period from about 2010 to 2030 when the baby boom generation retires. And the reforms have only modestly reduced disincentives to work at older ages.

The need to maintain public pay-as-you-go pension system in financial balance in the future will most likely involve reducing their generosity. This may not have serious consequences on the overall income of retirees at large. In fact, international comparisons show that living standards of older people do not depend directly on the generosity of public pension levels, as people make other arrangements to support themselves in retirement when public pensions are low. However, the lowering of public pension levels may have to be accompanied by increased targeting to ensure that those who do depend on public pensions are not adversely affected.

Lower public pensions will imply that individuals will have to rely on other “pillars” to support themselves in retirement. Advance-funded private pensions will grow in importance, and it might be necessary to make some minimum contributions to such schemes mandatory. Defined-contribution arrangements will have greater weight. It will also be necessary to ensure that private pension providers are adequately regulated. Earnings should become a greater source of income of older people, especially if retirement becomes more gradual, and other pillars should also become more important.

Many countries are in the process of changing their pension systems with the aim of meeting the challenge of the ageing of populations in the next century. The first part of this chapter briefly evaluates these reforms. The second looks at pension reforms in the future. It assesses whether cuts in the generosity of public pensions will have serious consequences for retirees' standards of living, and how such cuts may influence private alternatives to public retirement arrangements.

ASSESSMENT OF CURRENT PENSION REFORMS

Reforms of current pay-as-you-go systems are underway in many countries...

Many countries are in the process of phasing in changes to their pension systems or have decided on changes but have not yet started the implementation phase. Reforms differ from one country to another (Figure IV.1) but will generally result in lower pensions and higher contribution rates. None of the reforms have affected existing retirees, or those close to retirement, because imposing a burden on those who have few means to adjust would undermine trust in the pension system. Some of the more radical reforms will be phased in very gradually to allow sufficient time for young working to adjust to the changes.

In all reforms it is ultimately the younger generation, mainly those who are currently less than 40 years of age, who will have to carry the bulk of the pension burden one way or another. The general objective of reforms in most countries has been to find the most reasonable way of making the adjustment, to see whether the existing generation of older people can make at least some contribution to the cost, and to put systems of retirement income on a sustainable basis for coming generations.

Fears have been expressed that a continuation of large public transfers to older generations in these circumstance could result in inter-generational conflict, even if there is currently little evidence of it. Since the main effects of ageing will only be felt after 2010, this lack of conflict may be the calm before the storm. But it may also reflect large inter-generational transfers to young people in families. Many young people are themselves dependent (directly or indirectly) on the income their parents or grandparents receive, and do not recognise that the difficulties they encounter in finding employment or in earning adequate take-home pay may be related to the payroll-based taxes which finance the pensions and other social transfers received by their parents and grandparents.

... but are neither sufficiently ambitious to prevent a deterioration in public finances in the future...

Although pension reforms are narrowing the gap between projected growth in expenditure and revenues, they are unlikely to prove sufficient to deal with the fiscal implications of ageing populations. As discussed in Chapter II, even with the reforms under way, government budget balances will come under serious strain after the large baby-boom cohort starts retiring from about 2010. Putting the systems of retirement income on a sustainable basis for future generations will require further reductions in pension generosity, higher contribution rates than currently envisaged, and/or a reduction in the number of pension beneficiaries relative to the number of contributors.

◆ Figure IV.1. *Selected recent reforms in OECD countries*

Reductions in the generosity of pension payments

- Reductions in the final benefit available after the usual number of years of work and/or contribution, in Germany, Italy, Norway, Canada, Finland, United Kingdom, New Zealand, Sweden and Portugal.
- Less generous adjustment of benefits to changes in inflation in Japan, Germany and Finland.
- Increases in the level of contributions and/or years of employment required to generate the same level of benefits, in Turkey, Portugal and Finland (gradual increase in contributions until 2030).
- Increases in the number of years of earnings used to calculate final pension payment, in Spain, France and Sweden.
- As part of its broader pension reforms to operate from 1999, Sweden is to incorporate an element in the benefit calculation which adjusts the pension for increases in the average life expectancy of new cohorts of retirees.

Increased advance-funding

- Mexico is moving to a fully-funded privately managed system of individual accounts.
- Canada and Sweden are planning to increase the funded element of their public earnings-related benefits.
- Hungary, Poland and the Czech Republic are looking to private pension arrangements as a means of supplementing retirement pension benefits for workers without further expanding large public schemes.
- Other OECD countries encouraging greater reliance on the private pension system to provide retirement benefits include Australia, Denmark, Japan, Korea, Canada, New Zealand, Germany and the United States.

Working longer and greater flexibility in the work-retirement transition

- Increasing age of entitlement to age 67 in the United States over the next 25 years. Italy will increase the male retirement age from 63 to 65 by the year 2000 at the same time as the female retirement age is increasing from 58 to 60 years.
- Increasing the retirement age for women up to the same age as for men (as in Australia, Belgium, Germany, Hungary, Japan, Portugal and the United Kingdom).
- Increasing the minimum age at which early retirement payments can be accessed, in Finland and Poland.
- Increasing the number of years of prior employment or prior contributions before individuals can access early retirement benefits in Belgium, Hungary and Italy.
- Reductions in benefit payments for those who retire early in Australia, Hungary, Sweden and the Slovak Republic.
- Increasing the rate of pension according to actuarial adjustments (in Canada since 1987, Luxembourg and Sweden from 1999) while other countries have set permanent increments according to the number of months the pension is deferred (Finland, Hungary, Germany, the Slovak Republic and Sweden). Australia plans to introduce a single lump-sum bonus for those who defer retirement.
- Greater direct relationship between years of contributions and final payments in many countries including Sweden.
- Partial pensions to smooth the transition from work to retirement, enabling people below the statutory retirement age to reduce their hours of work with the loss of income from earnings partially compensated by the partial pension.
- Denmark, Japan, Luxembourg, Germany and Sweden.

Source: These are highly selected examples taken from a comprehensive review of social policy undertaken in conjunction with a meeting of OECD Social Policy Ministers in June 1998. OECD (forthcoming), "The Caring World: National Achievements".

... nor to remove disincentives to work at older ages

Many of the changes being implemented to pension systems will encourage people to work longer in life. As discussed in Chapter III, increased standard retirement ages, lower benefit levels, higher pension accrual rates at older ages due to longer required contribution periods for full pension would all reduce the disincentives currently embedded in public pension systems. However, increases in pension contribution rates go in the opposite direction, raising the opportunity cost of remaining in work. Also, since pension reforms have typically not involved flanking changes in other benefit systems, important distortions remain. All in all, reforms to pay-as-you-go systems have only modestly reduced financial barriers to working later in life.

... but the ground is being laid for deeper reform

Many reforms have, however, laid the ground for future change. The extent of advance-funding and defined-contribution arrangements has increased through several mechanisms. A major theme has been to strengthen linkages between lifetime benefits and contributions. New approaches such as notional accounts which combine the advance-funding with defined-contribution accounts have been introduced. The use of refundable tax credits to replace flat-rate pensions has been explored. The variety of approaches that have been taken will allow sharing of experience and lessons that have been learned.

DIRECTIONS FOR THE LONGER-TERM

Further reforms of pay-as-you-go pension systems are needed in most cases to bring future contributions and expenditures into line and to reduce the disincentives to work in public retirement-income systems. This is a problem that must be addressed now. Transparency and public trust require an explicit plan for doing this. Unless there is a major reversal of the trend towards early retirement, the adjustment needed to maintain government budgets in balance is likely to fall on lower benefit generosity to a large extent. This raises the issue of whether living standards of older people can be maintained in the future.

Reform must also take account of the desirable long-term evolution of the institution of retirement itself. The discussion of active ageing in Chapter VI suggests that a continuation of ever-lengthening periods of leisure in retirement is unlikely to be the preferred course. A more probable scenario involves a world where incentives would no longer encourage an abrupt division in life between work and leisure.³² There would be less constrained choices about work and leisure, including more flexible options for using time to raise children or for education over the course of life. However, under any reasonable planning hori-

zon, retirement would still remain as a normal “third age” phenomena. That is, most people would have a period of welcome leisure between their working years and the “fourth age” – the later years of life where frailty becomes common. Collective support would be for a standard period of retirement that was linked in some fashion to longevity, and that would not continuously grow in length as is now the case. People could decide to retire earlier or later, or abruptly or gradually, with appropriate actuarial adjustments to pensions to ensure neutrality.

Reform must take account of the variety of existing starting points, directions for the long-term future, and the urgency of fiscal action. This points to a flexible reform strategy and one that takes account of the retirement income system, not only public pensions.

Starting points for reform are diverse...

In some countries, for example, people in older ages are supported by 1) a transfer to low income older people in order to prevent poverty, 2) a public contributory system designed to provide replacement income up to a certain level, 3) tax-subsidised company plans, both defined-benefit or defined-contribution, 4) tax-subsidised voluntary individual retirement saving accounts, 5) other tax support in the form of income tax deductions, 6) the use of their now mortgage-free house, 7) other private savings and assets, 8) health and long-term care programmes, 9) transfers within families and 10) earnings.

The list would vary for country to country but, in all cases, it is far longer than the number of pillars that are typically given “official” recognition. Many people would not recognise some of the elements in the previous paragraph as retirement-income “pillars”. Yet all the elements can be influenced by public policy to a greater or lesser degree. The effects of changes to public transfers might well be offset, for example, by changes in private savings or in-family transfers. Analysis would be clearer if the complexity of existing arrangements were taken more fully into account.³³ There would be merit in giving fuller recognition to the diversity of pillars that exist, in a better understanding of their interactions and in assessing the policy implications of changes in both the number of pillars and their weight. Transparency and understandability would also improve in a system where each pillar had its own objective. Where programmes now have multiple objectives, this would lead to an increase in the number of pillars.³⁴

... and diversity has many virtues

A system of retirement provision that is based on many elements has the potential to reduce risk by diversifying across producers. A public pay-as-you-go system suffers from the risks associated with uncertain demographic trends, and from the non-contractual nature of implicit pension promises. These risks are

mostly absent in advance-funded private systems, but such arrangements are inevitably subject to risks associated with financial market developments and the risk of default of private funds. Indeed, each of the elements of the system has its own strengths and weaknesses and a flexible balance among them not only diversifies risk but also offers a better balance of burden-sharing between generations and gives individuals more flexibility over their retirement decision.

A starting point for reform: high public pension income is not critical for the well-being of older people in general...

A starting point for long-term reform must be that a further large allocations from workers to retirees is neither fiscally sustainable nor necessary. The income of older people has been growing relative to the rest of the population in most, but not all, OECD countries (Table IV.1). The income of individuals in older households has reached some 84 per cent of the average income of all individuals in a typical OECD country, about the same level as for individuals in households where the household is age 30 or less (and incomes of these younger people have been falling relative to everyone else). If existing trends continue, the average income of older people will soon exceed that for the population as a whole in a number of OECD countries.

These trends have taken place against the backdrop of an increasing number of two earner families, with both partners being entitled to a public pension. Such families often have other significant resources to support themselves in retirement, including housing assets. In fact, there is much evidence that retired people do not consume the resources³⁵ at their disposal, but give money to children and grandchildren during their retirement years and as bequests.

Income adequacy of older people and inter-generational equity do not necessarily require a pension system with high total replacement rates. As can be seen from Figure IV.2, other elements of the retirement income system – especially earnings and savings – play an important role. Indeed, in Canada, the country that rates highest in Figure IV.2, replacement rates in the earnings-related pension programme are relatively low compared to those in many European countries. However, the Canadian system is able to ensure a high degree of income adequacy because of a large targeted programme aimed at older people with lower income.³⁶

A recent comparison of people just before retirement age with those just after retirement age suggests that living standards for most do not drop on retirement, and that the generosity of public pensions is not a large factor in changes in material standards on retirement. Figure IV.3 shows that, on average, households in many OECD countries set targets for income just after retirement

Table IV.1. **Relative disposable income of individuals, and population share, by age of the household head**

Equivalence scale elasticity = 0.5

	Young head <i>Below 30</i>		Prime age head <i>Between 30 and 50</i>		Older working age head <i>Between 50 and 65</i>		Retirement age head <i>Above 65</i>	
	Relative income	Population share	Relative income	Population share	Relative income	Population share	Relative income	Population share
Australia, level 1993-94	101.1	13.3	101.4	53.7	110.9	19.9	68.2	13.1
Changes, 1975-1994	-4.4	-5.3	1.4	0.9	3.1	0.8	-5.7	3.6
Canada, level 1990	87.7	11.3	101.5	48.3	111.9	23.9	87.3	16.6
Changes, 1975-1994	-1.8	-1.8	0.4	1.8	0.5	-0.6	-0.4	0.6
Denmark, level 1994	89.6	16.7	105.9	48.1	117.3	19.0	73.4	16.2
Changes, 1983-1994	-10.9	-1.3	-1.5	0.0	10.7	0.6	4.7	0.6
Finland, level 1995	80.3	13.2	106.8	53.8	114.5	18.2	78.1	14.7
Changes, 1986-1995	-7.6	-4.8	0.3	0.5	6.4	1.4	1.1	2.7
France, level 1990	78.7	10.5	101.7	52.7	110.1	22.1	95.0	14.7
Changes, 1979-1990	-8.9	-1.1	0.8	2.5	2.3	-1.3	0.8	-0.1
Germany, level 1994	78.5	9.8	100.9	45.7	113.0	25.1	89.3	19.4
Changes, 1984-1994	-1.9	0.4	-1.5	-1.6	0.6	-1.2	4.3	2.4
Italy, level 1993	92.1	4.5	98.1	46.5	109.9	31.3	84.7	17.6
Changes, 1984-1993	-4.8	0.2	1.5	-1.1	-2.7	-2.8	2.9	3.6
Japan, level 1994	75.9	5.0	94.2	52.5	120.7	30.3	93.1	12.2
Changes, 1984-1994	-6.0	-1.2	-0.9	-7.2	3.6	3.7	-0.8	4.7
Netherlands, level 1994	85.2	11.5	100.8	52.9	114.0	20.6	87.5	14.9
Changes, 1977-1994	-5.9	-1.0	5.0	3.4	-2.2	-3.4	-8.9	1.1
Norway, level 1995	78.0	14.8	107.3	53.1	117.3	17.2	73.7	14.8
Changes, 1986-1995	-11.5	-0.4	0.6	1.4	4.6	-1.6	4.0	0.4
Sweden, level 1995	73.3	17.8	104.2	46.0	125.8	18.6	89.3	17.6
Changes, 1975-1995	-15.8	-2.1	-5.3	3.9	12.2	-2.2	16.5	0.4
United States, level 1995	75.0	13.4	101.5	53.4	120.0	18.9	91.9	14.2
Changes, 1974-1995	-9.5	-3.9	0.9	6.0	1.8	-4.0	6.4	1.9
Unweighted average of level values	83.0	11.8	102.0	50.6	115.5	22.1	84.3	15.5
Unweighted average of changes	-7.4	-1.9	0.1	0.9	3.4	-0.9	2.1	1.8

Source: OECD.

that are about 80 per cent of income just before retiring. For most families, that amount does not depend directly on the generosity of public pension benefit levels. People simply make other arrangements such as increasing private

Figure IV.2. **Relative positions of countries: ranking of income in retirement in terms of adequacy and equity**

Country (Year of reference)	Share of pension income in total net household income	Ratio of net equiv. income pensioner/ non-pensioner (old OECD scale)	Difference between female/male single pensioners	Inequality among pensioners (combined top and bottom share)	Poverty among pensioners 50%-Line old OECD scale
	low 60 % med. 60-80 % high 80 %	low 85 % med. 85-95 % high 95 %	low 25 % med. 20-25 % high 20 %	low 30 % med. 20-30 % high 20 %	low 16 % med. 8-16 % high 8 %
<i>EU-States</i>					
Belgium (1992)	high	medium	low	high	high
Denmark(1992)	medium	low	high	high	high
Germany (W) (1989)	high	medium	medium	high	medium
Spain (1990)	medium	high	medium	medium	medium
France (1989)	high	high	medium	medium	medium
Greece ¹ (1987/88)	low	medium	high	low	low
Ireland (1987)	medium ²	medium	high	high	medium
Italy (1989)	low	low	high	medium	low
Luxembourg (1985)	high	high	low	high	medium
Netherlands (1991)	high	high	medium	high	high
Portugal (1989/90)	low	low	low	low	low
United Kingdom (1991)	medium	low	high	low	low
<i>North America</i>					
Canada (1991)	medium	high	high	high	high
United States (1991)	medium	high	high	low	low

1. Including pensioner households with head of household 42-54 years and main income from pensions.

2. Including non-contributory pensions.

Note: The term "high" is used if a country is among the top group with respect to the preferred value of an indicator. Low inequality or low poverty leads to the qualification "high". Quantitative limits are given in the column headings based on judgement by the author.

Source: Richard Hauser, "Adequacy and Poverty Among the Retired" forthcoming.

pension contributions, saving more or working longer. When assets and the lower living costs are taken into account, many people see their living standards increase on retirement.

The policy implication is that a lowering of public pension replacement rates in the future is unlikely to have a major impact on living standards of most retirees. The survey results demonstrate the need to look at all resources available to retirees in assessing the distributional consequences of changes in public pension systems. Lower public pensions may lead to spontaneous changes in other pillars, offsetting the detrimental impact on the income of older people. Unfortunately little systematic evidence is available about the response of the different sources of income when one level of one component changes.³⁷

◆ Figure IV.3. *The adequacy of retirement income does not depend on public pensions*

This chart explores the adequacy of retirement income by comparing income levels before and after retirement. These are preliminary data that are still under development, but further refinement is unlikely to change the basic message.

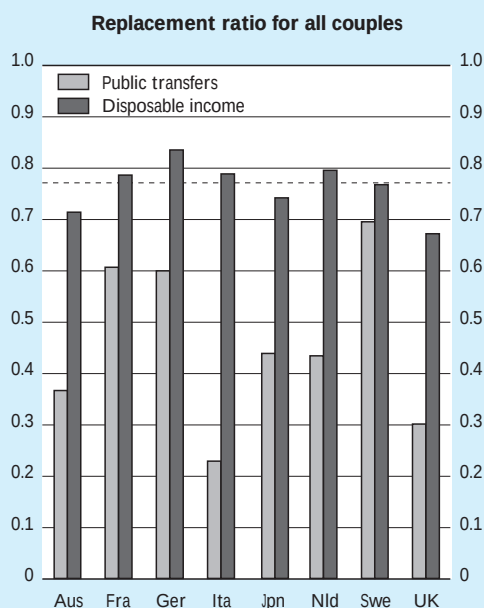
The black bars:

- Compare the 1995 income of households where the head is aged 67 with the income of households where the head is aged 55. Income from all sources is included – earnings, capital, pensions and other transfers. For ease of presentation, the data are for couples only.
- The dotted line shows that, on average, income at age 67 (when most people are retired) is about 78% of the income of people at age 55 (before retirement in most cases).
- Similar ratios exist in all of the eight countries compared; replacement rates are in the 70% to 80% range. (Replacement rates calculated for the United States are lower, but the data are not completely compatible).

The grey bars:

- Compare public transfers for people aged 67 – mainly public pensions – with the total income from all sources of people aged 55.
- The role of public pension income accounts for a large share in replacement income in Sweden and much smaller role in Italy, Australia and the United Kingdom.
- That is, people appear to target an amount of income they need in retirement that is related to the earnings prior to retirement. This is an amount that is similar in different countries – *an amount that does not depend directly on the level of public pension generosity in that country*. People and employers make up the difference by means like occupational and private pensions, working later, saving more etc.

The situation is quite different for people at different income levels:



Source: OECD.

- For the richest fifth of the population, the target replacement rate for total income is in the 70% to 90% range. In this group, public pensions account for less than 20% of replacement income in Australia, Italy and the United Kingdom, but over 40% in France, Germany and Sweden.
- For the fifth of the population with the lowest income, total replacement rates are generally higher, around 90% in several countries – with most of this coming from public pensions. Since income at age 55 was low, public pensions play a large role in preventing people in this group from falling below poverty lines when they retire.
- In addition to the income shown above, people in all income groups also accumulate significant assets such as housing. The 55 year old group have, on average, market wealth that ranges from two to six times their annual income. Market wealth in relation to income rises substantially for the 67 year old group (because of more valuable assets, retirement bonuses and lower incomes).

Conclusion: the level of public pension benefits is critical for low income households, but not for the majority of the population. Low public pension generosity does not, on average, directly affect the adequacy of retirement income. People simply make the necessary adjustments by other means. Taking account of market wealth and lower living costs on retirement, the standard of living of many people rises when they retire.

... but the lowering of average public pensions might have to be accompanied by greater targeting

It must be borne in mind, however, that many people approach retirement with few resources. Cuts in pensions for this group would have serious consequences for their living standards. They include low earners who have not been able to save throughout their working life. They also include persons who may have experienced family breakdown or have had a marginal attachment to the labour force over life and thus less ability to make traditional contributions to retirement. For these groups, the generosity of public pensions is of critical importance to sustain living standards in retirement.

Greater targeting of public pensions is one response to meeting redistributive objectives in the context of lowering overall pension generosity. Redistribution can be achieved in pay-as-you-go systems by stipulating high floors and low ceilings on pensions. Floors and ceilings are already common in pay-as-you-go schemes, and would have to be adjusted in order to protect certain groups from reduced pensions. However, earnings-related systems are not designed to redistribute income to people who have had only marginal attachment to the labour force. Income adequacy for this group is best ensured by budgetary transfers funded by general revenues.

Lower public retirement income will imply greater reliance on advance-funded elements...

With reduced pay-as-you-go benefits, many families will seek to top up their pensions with private savings for retirement. As discussed in Chapter V, there has already been a big increase in such saving, channelled through private pension funds. It can take various forms, including occupational pensions organised along sectoral or company lines and individual retirement schemes. These are now typically advance-funded and tie pension benefits much closer to contributions than has been the practice in public schemes. Greater advance-funded elements can also be accomplished by building up reserves within public plans that are primarily pay-as-you-go.

Although increased use of advance-funded private pensions is likely to be spontaneous, public policy can play an important role in this process through changes in regulations and taxation. Most countries also give favourable tax treatment to certain forms of retirement saving, for example contributions to private funded schemes, and to other types of saving accounts, of which the “401K” in the United States is a well-known example. To the extent that such tax-favoured and compulsory saving do not simply replace other forms of personal saving, total resources for retirees are increased.

As discussed in Chapter II, national saving can be expected to rise somewhat with increased use of advance-funded saving. The evidence is ambiguous, however, about whether tax-breaks for private pensions result in a higher total amount of private savings for retirement. It seems to be fairly clear that, once the impact on public finances is taken into account, national savings are at best unaffected, and are probably lowered.

The growing reliance on private pension schemes also calls for an adequate regulatory framework, which is a precondition for maintaining the confidence of both beneficiaries and the public at large. Appropriate regulations will contribute to safeguarding beneficiaries' rights, which include *inter alia* non-discriminatory access to pension schemes, protection of vested rights, the implementation of provisions for transferability and the related promotion of labour mobility and the adequacy of benefits. Regulations concerning investors' protection are also critical to guard against an abuse of the system.³⁸

... and a shift towards defined-contribution arrangements

A shift to more advance-funding often brings with it a shift to defined-contributions and a resulting strong linkage between what an individual contributes and receives. This is an important element in promoting greater choice in the decision to retire. However, lifetime contributions and benefits can also be more strongly linked within pay-as-you-go systems and, indeed, this has been a major theme of reform in many countries. Pay-as-you-go systems can shift their benefits to a defined-contribution basis, mimicking some of the features of advance-funding.³⁹ Company plans can be shifted from defined-benefit to defined-contributions. The problem with defined-contribution plans is that they transfer risk to individuals. They therefore make most sense in a system where risks of low-income are covered by other programs and where there are real opportunities to work later in life.

... earnings, and other non-pension resources, should become a greater source of income for older people

Greater reliance on earnings is a particularly crucial element for people in their earlier "retirement" years. Earnings that arise from a gradual retirement process can be an important pillar in their own right. Chapter III described the large unwarranted incentives in public pension systems to early retirement that now exist. The inevitable lowering of the average generosity of public pensions could encourage people to work longer, though much depends on how cuts would be achieved. Increased use of advance-funded pensions of the defined-contribution type would also help in this respect, since such pensions do not distort the

retirement decision. As discussed in Chapter VII, there is also a need to support people in working longer and more flexibly.

Older people can also draw on other “pillars” to support themselves in retirement. For example, the principal asset of many older people is their owner-occupied house, which provides income in kind and can be the basis for reverse-mortgage arrangements. The sale of a business can be an important source of income for the self-employed who often have inadequate coverage in public schemes.

... resulting in a significant role for both mandatory and voluntary elements

Taken as a whole, the retirement income system should provide a better balance between individual and collective responsibilities. In most OECD countries that balance is currently too tilted toward collective provision. Certainly, there should continue to be an adequate mandatory anti-poverty element, preferably funded out of general revenue. A strong case exists for mandatory earnings-related pension saving – but only up a point that is significantly lower than the replacement levels that individuals themselves would choose. Such mandatory arrangement can be through public pensions. Or, governments can stimulate saving by making it compulsory to contribute to private saving funds.

The future retirement system in a nutshell

The picture drawn up in this section is of a future retirement-income system that can consist of a flexible mixture of elements: pay-as-you-go and advance-funded, defined-benefit and defined-contribution, public and private, mandatory and voluntary, saving and earnings. The particular combinations will reflect country circumstances. However, on balance, the demographic and fiscal pressures mean a larger role in coming years for the second element in of each of these pairs.

A multi-tiered approach also will help the long-term evolution of the institution of retirement itself. People could decide to retire earlier or later, or abruptly or gradually, with appropriate actuarial adjustments to pensions to ensure neutrality. It would thus put an end to collective arrangements encouraging healthy and skilled people to spend ever-growing periods of leisure at the end of their life, out of contact with the labour market and, as will be discussed in Chapter VI, with many of the institutions of society.

V. THE FINANCIAL SYSTEM AND THE PROVISION OF RETIREMENT INCOME

SUMMARY

OECD pension funds are already key players in many financial markets and their importance seems clearly set to increase. The benefits of advance-funding for living standards, however, hinge crucially on the performance of financial markets. Financial rates of return on private pension funds have varied significantly across countries in the past, but ageing may adversely affect returns in the future.

Gains in performance may be obtained by strengthening the financial market and pension system infrastructures, including by changing the regulatory environment surrounding pension funds. The “prudent person” approach to the regulation of pension funds has resulted in better financial performance than quantitative restrictions on asset allocation. Regulatory reforms aimed at giving pension funds greater choice in how to allocate their asset portfolio, accompanied by modern guidelines on risk accounting and risk management, could boost returns without greater exposure to risk. Gains can also be expected from pension funds increasing the weight of assets from the younger non-OECD countries in their portfolios. However, in the recent past average returns on non-OECD assets have not exceeded those in the OECD countries, and the benefits of portfolio diversification across different countries appear to be weakening due to increased financial integration.

Growing flows of savings into retirement accounts should promote increased breadth and depth of financial markets and encourage the creation of more financial instruments, including better retirement products. These developments can be expected to lead to more efficient allocation of resources and risks. They also raise some systemic concerns, such as the impact on asset prices, volatility and stability of financial markets, and solvency risk and government intervention.

The performance of pensions funds and financial markets is crucial for the success of advance-funded retirement arrangements. This first part of this chapter briefly reviews the importance of pension funds in the OECD countries, their financial performance in the past and how this might be influenced by ageing. The second part looks at the regulatory framework for pension funds, and how different regulatory structures influence financial performance. The third part

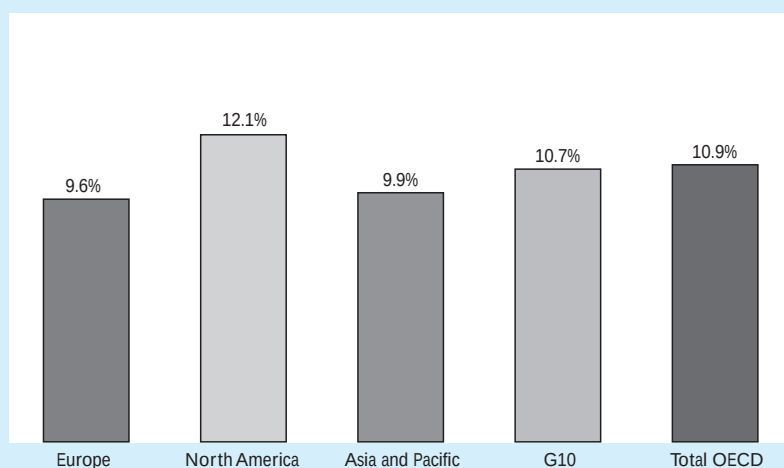
examines the scope for pension funds to increase their performance through international portfolio diversification, the fourth part assesses the impact of the likely expansion of private pension funds on financial markets and the fifth reviews some systemic issues. The concluding part looks at the implications for corporate governance.

THE SIZE AND FINANCIAL PERFORMANCE OF PRIVATE PENSION FUNDS

Pension fund assets are already sizeable in some countries and set to grow fast...

The holdings of financial assets by pension funds have grown at a rate of 11 per cent over the last decade for the OECD area as a whole (Figure V.1), the stock rising from 28 per cent of GDP in 1987 to nearly 39 per cent of GDP on average in 1996. These aggregate figures hide a great variation among individual OECD countries (Table V.1). In many continental European countries pension fund assets amounted to less than a tenth of GDP in 1996; they exceeded 50 per cent of GDP in the United States, United Kingdom, the Netherlands and Switzerland.

◆ Figure V.1. *Average annual growth rate of total asset holdings by pension funds, regional breakdown, 1990-1996*



Source: OECD, 1998.

Table V.1. **Assets of pension funds as per cent of GDP**

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Australia	..	21.1	20.0	17.6	22.1	23.9	30.1	30.3	31.4	31.6
Austria	—	—	—	—	0.5	0.5	0.6	0.8	0.9	1.2
Belgium	2.4	2.4	2.7	2.5	2.7	2.5	2.8	3.1	3.7	4.1
Canada	26.4	26.8	28.7	30.0	32.0	32.8	35.7	37.7	41.0	43.0
Czech Republic	—	—	—	—	—	—	—	0.1	0.2	0.5
Denmark ¹	10.9	10.3	12.2	12.4	12.8	16.6	19.3	18.9	21.1	23.9
Finland ²	19.7	20.3	21.0	25.1	30.9	34.7	38.1	39.3	39.6	40.8
France	..	..	..	3.4	3.5	3.2	3.3	3.8	4.3	5.6
Germany ³	3.4	3.1	3.4	3.3	3.5	5.1	5.5	5.4	5.2	5.8
Greece	..	..	6.2	6.5	7.1	6.9	8.0	10.3	10.9	12.7
Hungary	—	—	—	—	—	—	—	0.2	0.2	0.2
Iceland	..	..	..	..	..	..	..	..	..	..
Ireland	..	29.0	34.0	31.5	35.2	30.6	40.1	38.9	40.5	45.0
Italy	..	..	..	..	0.6	1.1	1.7	2.2	2.6	3.0
Japan	38.0	33.7	31.8	37.4	37.9	37.3	41.0	49.4	40.6	41.8
Korea	3.2	3.4	3.0	3.1	2.9	3.2	3.4	3.3	3.1	3.3
Luxembourg	19.5	16.9	18.5	19.7	20.5	18.8	18.7	20.3	19.6	19.7
Mexico	..	..	..	..	..	..	..	..	..	..
Netherlands	45.5	72.7	81.6	78.4	81.1	72.1	83.5	85.0	86.6	87.3
New-Zealand	..	..	..	..	..	..	..	..	..	..
Norway	3.8	3.9	4.2	4.6	5.1	4.7	5.7	6.6	6.6	7.3
Poland	—	—	—	—	—	—	—	—	—	—
Portugal	..	..	1.4	1.9	3.2	2.9	5.6	7.3	8.0	9.9
Spain	—	0.1	0.4	1.5	3.0	2.9	2.1	2.3	3.1	3.8
Sweden ⁴	33.4	30.9	30.6	31.0	38.6	29.6	27.1	25.7	30.5	32.6
Switzerland	74.7	64.5	71.3	72.5	75.5	74.7	82.2	86.5	104.3	117.1
Turkey	—	—	—	—	—	—	—	—	—	—
United Kingdom	62.3	58.2	65.0	59.7	64.1	58.2	72.4	69.2	73.2	74.7
United States	35.7	36.8	36.3	38.1	48.0	48.2	53.4	50.6	58.9	58.2

1. Including company pension funds as from 1995.

2. Financial Assets.

3. Including company pension funds as from 1992.

4. Including first pillar assets up to and including 1991.

Source: Pragma Consulting, *OECD Institutional Investors Statistical Yearbook*, 1997, and OECD Secretariat estimates.

This range provides a broad indication of the scope for further growth of pension fund assets in ageing countries with relatively underdeveloped pre-funded systems. For example, the larger continental European countries could see pension fund assets grow from 5 per cent of GDP to the current OECD average of nearly 38 per cent or, even more dramatically, to the US level of around 60 per cent.

... their rates of return have differed significantly across countries...

The financial rates of return on pension assets have varied significantly across countries. Over the 1967-1990 period, the average annual real total return ranged

from close to zero in Sweden to close to six per cent in the United Kingdom (Table V.2). In a few countries the rates were no higher than the growth in average earnings (and in Sweden they were significantly lower), whereas they were significantly higher than the growth in labour income in several countries. As discussed below, the variability of returns across countries appears to be related to different regulatory structures and other structural factors.

... and may fall as the population ages

Future demographic trends may, however, weigh down rates of return on financial assets. As members of the baby boom generation start to move into retirement in 10-20 years time, they will most likely be net sellers of at least some of the financial assets they have accumulated over their working lives. The younger generation is much smaller in size, hence there is a possibility that financial asset prices will be depressed. Furthermore, and again because the younger generation is smaller in size, there will be an increase in the amount of physical capital relative to the size of the labour force, and this will tend to drive down rates of return on real capital assets. Thus, there is a possibility that the retired baby boom generation will find that retirement income from pension funds is lower than would be expected based on extrapolation of current trends.

The possible future effects of ageing on financial rates of return have potentially important implications for the management of pension funds, and more broadly, retirement saving. First, the historical average rates of returns to pension funds and the equity premium may not be appropriate either for calculating expected future returns to pension assets or for drawing implications about whether baby boomers are saving enough for retirement. This is a particularly important issue for defined-benefit pensions. Second, pension managers (and individual savers) need to plan for the possible decline of equity and bond prices as the baby boomers start liquidating their savings and pension assets to finance consumption during retirement.⁴⁰

GOVERNMENT REGULATIONS OF PRIVATE PENSION ASSETS

Changes in the regulatory environment could potentially raise the performance of pension funds. Given the importance of pension assets for contributors, governments tend to subject pension funds to various regulations to ensure the interests of their members. If regulations put disproportionate emphasis on reducing risks, this may be reflected in lower asset yields. Moreover, traditional restrictions for reducing risks may be inefficient in the new financial landscape because of financial engineering. Regulatory reforms in the area might be able to allow pension funds to increase their earnings capacity for a given level of risk,

Table V.2. **Returns on pension fund portfolios 1967-90 (mean of real total return in local currency, standard deviations in brackets)**

	Portfolio Return ¹	Domestic Artificial Portfolio ²	Domestic and International Artificial Portfolio ³	Average Earnings Growth	Portfolio Less Average Earnings
Australia	1.6 (14.7)	2.7 (16.1)	2.8 (15.1)	0.7 (3.4)	0.9
Belgium	.. (18.4)	4.2 (16.7)	3.8	..	..
Canada ⁴	1.6 (9.8)	2.2 (11.2)	2.2 (10.8)	1.7 (2.8)	-0.1
Denmark ⁵	3.6 (12.7)	5.3 (18.9)	4.6 (13.4)	2.8 (3.6)	0.8
France	.. (18.0)	5.2 (15.9)	4.9	4	..
Germany	5.1 (4.4)	6.1 (15.2)	6.2 (13.4)	4 (3.1)	1.1
Ireland ⁴	5 (11.9)	3.8 (13.3)	3.8 (12.4)	2	3
Italy	.. (22.1)	1.9 (18.7)	2 (4.3)	3.1	..
Japan	4 (9.4)	5.5 (15.5)	5.3 (14.3)	4.2 (4.2)	-0.2
Netherlands ⁴	4 (6.0)	4.5 (17.0)	4.2 (15.2)	2.4 (3.2)	1.6
Sweden	0.2 (7.6)	3.8 (13.5)	3.7 (15.2)	1.5 (3.5)	-1.3
Switzerland	1.5 (6.4)	2 (15.4)	2 (12.3)	1.9 (2.1)	-0.4
United Kingdom ⁴	5.8 (12.5)	3.8 (14.8)	3.7 (14.1)	2.6 (2.5)	3.2
United States ⁴	2.2 (11.9)	2.1 (12.9)	2.8 (12.5)	0.2 (2.1)	2
Prudent Man	3.4 (11.1)	3.2 (14.2)	3.3 (13.4)	1.6	1.8
Asset Limits	2.9 (8.1)	4.5 (15.7)	4.4 (13.7)	2.9	-

1. Estimated return on actual pension fund sector portfolios.

2. 50 per cent domestic equity, 50 per cent domestic bonds.

3. 40 per cent domestic equity, 40 per cent domestic bonds, 10% foreign equity, 10% foreign bonds.

4. Countries with prudent man principle.

5. Danish pension funds are subject to tax on their interest income.

Source: E. P. Davis (1998), "Regulation of pension fund assets", in: *Institutional investors in the new financial landscape*, OECD, Forthcoming.

provided that the funds adopt modern risk control standards and risk management systems.

Two basic approaches to regulate private pension assets...

Governments have regulated private pension funds by either “asset restriction” or “prudent person” (usually referred to as “prudent man”) investment rules. In the “asset restriction” approach the authorities impose quantitative restrictions on the assets which can be included in pension funds’ portfolios: funds may be requested to hold a minimum amount of safe assets, such as government bonds; there may be a limit on the share of foreign assets in general or assets from certain geographical areas in particular; there may be restrictions to what extent investment in non-quoted companies are permitted; etc. Under the “prudent person” principle, quantitative restriction are not applied, but fund managers are expected to behave as careful professionals in making investment decisions.

... of which the “prudent person” rule has resulted in better financial outcomes

It is difficult to determine the exact quantitative impact of the different regulatory structures on the investment performance of pension funds. However, by comparing the aggregate returns on pension fund portfolios in countries that have less restrictive “prudent person” investment rules with those of countries that have stricter quantitative restrictions, it is possible to get a very broad or rough indication of the *relative performance* of the pension fund management industry.

The evidence indicates that over the period 1967-1990, pension funds’ portfolio returns have been higher in “prudent person rule” countries, exceeding the growth of average wages (Table V.2). However, it is important to note that these differences in returns may be the result of factors other than differences in regulatory arrangements, including macroeconomic policies, structural factors that influence economic growth (*e.g.* capital market segmentation, discoveries of mineral wealth, etc.) and various features of the institutional infrastructure. In countries with quantitative investment limits the difference between financial returns and wage growth was on average zero. It is of interest to note that a different allocation of assets (*i.e.* by constructing artificial diversified portfolio by holding 50 per cent equity and 50 per cent bonds between 1967 and 1990) would not have significantly improved average real financial returns in “prudent person rule” countries while financial returns would have been significantly higher in countries with portfolio limits (but also more volatile). International portfolio diversification would have yielded somewhat higher results (and lower risk) in “prudent person”

countries but not in countries with quantitative investments limits (although risk would have been lower) [see Table V.2].

Financial returns covering more recent periods show that the “prudent person rule” countries continue to outperform the pension funds from countries with quantitative investment limits. Thanks in large part to booming stock markets in most OECD countries (with Japan as a notable exception) the difference in financial returns between “prudent person” and “asset restrictions” countries widened from 2.6 percentage points in the period 1984-1993 to 4.3 percentage points in the period 1984-1996 (Table V.3).

Financial engineering may be undermining the effectiveness of traditional regulation...

The new financial landscape has made many of the conventional risk controls less effective or even obsolete (*e.g.* investment only in high-grade securities, quantitative limits on asset allocations, restrictions on average maturity, currency prohibitions, etc.).⁴¹ Against this backdrop, the role and scope of existing regulations of pension funds should be assessed taking account of the extent to which the implementation of sound risk management standards for pension funds can be linked to a relaxation of regulatory constraints concerning asset allocation. In doing so, one would ensure that those making the risk-return trade-off decisions on behalf of pension beneficiaries would be well-informed, have the proper

Table V.3. Returns on pension fund portfolios 1984-96

(mean of real total return in local currency)

	1984-1993	1984-1996
Belgium	8.8	9.0
Denmark**	6.3	6.0
Germany	7.2	7.0
Ireland*	10.3	11.0
Japan	6.5	..
Netherlands*	7.7	8.0
Spain	7.0	..
Sweden	8.1	..
Switzerland	4.4	4.0
United Kingdom*	10.2	10.0
United States*	9.7	9.0
Prudent Man	9.5	9.5
Asset Limits	6.9	5.2

* Countries with prudent man principle.

** Danish pension funds are subject to tax on their interest income.

Sources: EFRP Report, June 1996; Pragma Consulting; OECD Secretariat calculations.

incentives and be adequately supervised. In this context, consideration should be given to a supervisory framework best suited to deal with investment risks in the new financial landscape characterised by financial engineering and more complex risk situations.

The preferred regulatory approach in the age of financial engineering seems to be “prudent person” principles and risk management standards for both asset managers and pension plan sponsors that adequately address risk management activity. However, the question whether a prudent-man rule is better suited than quantitative restrictions on asset allocation is also dependent on the specific circumstances of the countries concerned. The prudent-man principle can be more readily implemented in countries with a modern financial infrastructure, including a professional asset management industry and the availability of sophisticated models and techniques to measure risk adequately.

... requiring guidelines on risk accounting standards

The implementation of risk management systems requires the adoption of a proper risk accounting framework. This will require more sophisticated investment guidelines based on sound risk management standards that take into account the unique characteristics of pension funds and other institutional investors. In this context, it has been suggested that financial accounting needs fundamental revisions to develop a specialised new branch called “risk accounting”. Traditionally, the financial accounting system focuses on value allocations (*e.g.* on the balance sheet of a hypothetical bank the accounting system indicates the value of assets on the left-hand side, and the value of deposits and the bank’s capital on the right-hand side). Conventional financial assets (equity, bonds, loans, etc.) can be measured in a traditional accounting system (book or market valuation). However, swaps and other off-balance sheet contractual arrangements cannot be incorporated in a similar value framework. The traditional accounting system is therefore not very suitable to identify risk allocations. Although contracts like interest-rate swaps and future contracts have no initial value, they can have an immediate and significant impact on the risk exposure of the various assets and liabilities on the balance sheet of pension funds and other institutional investors. Changes in accounting structure and methodology are required to address this inadequacy by developing risk accounting standards.

The prospect for such development is not just prospective and theoretical. Pressed by the reality of the marketplace, financial firms that deal extensively in complex securities have already developed risk accounting protocols as part of their internal risk management systems. With the benefits of real-world experience, these protocols could serve as prototypes for standardised risk accounting.

Regulations concerning the capital market infrastructure are of critical importance

In addition to an appropriate regulatory framework for pension funds, a well-functioning advance-funded pension system requires a stable, sound and efficient financial market infrastructure. The financial infrastructure consists of the legal framework; the financial accounting system; the regulatory and supervisory framework; clearing and settlement systems; and the micro-structure for trading securities.

Most OECD countries have made considerable progress in the development of a solid regulatory and supervisory framework, although progress has been uneven. Nonetheless, important weaknesses remain. Several OECD countries have not established the proper legal and regulatory basis for dealing with take-overs, minority shareholders protection, insider trading and institutional investor operations.⁴²

Differences in disclosure requirements among countries are significant, partly due to different legal systems. In emerging markets, the ability of regulators to monitor and enforce disclosure may be weaker than in more mature markets. The international community has been working on the harmonisation of disclosure requirements. Accounting standards are key because disclosure will be effective only if the financial information provided by the company is based on solid accounting principles and practices. Internationally acceptable accounting standards are essential for pension funds to be able to assess accurately the “value” of investments. In parallel, auditing standards and practices also need to be high enough to ensure the reliability of disclosed information.

INTERNATIONAL PORTFOLIO DIVERSIFICATION AND PENSION FUNDS

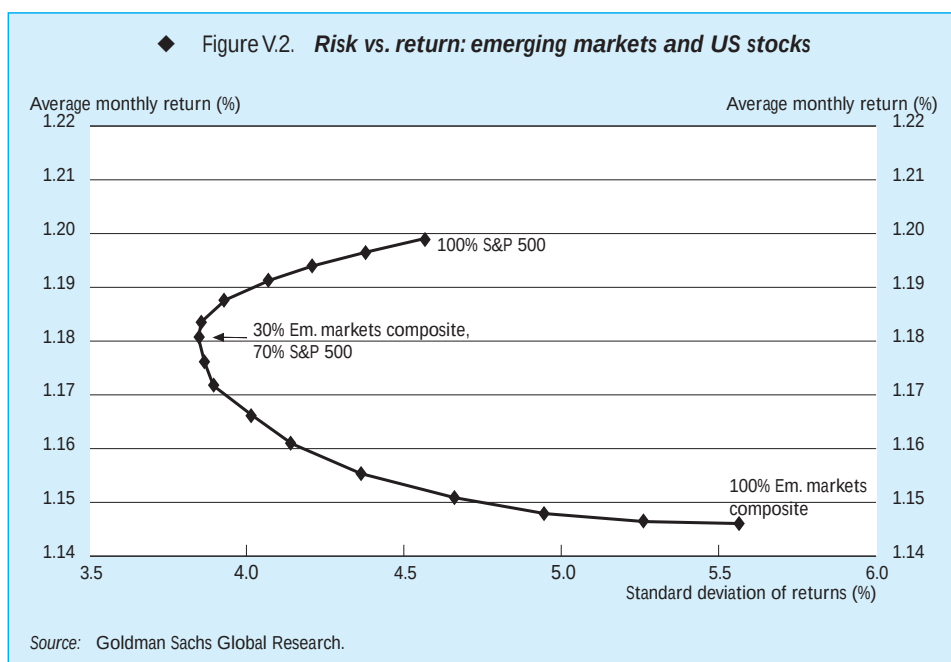
Pension funds can attempt to increase the overall rate of return on their portfolio by increasing their cross-border investments. As discussed in Chapter II, it would be beneficial, in principle, for OECD savers to invest in the younger non-OECD economies, and take advantage of potentially higher rates of return in these relatively capital-poor countries.⁴³ However, potential benefits of this strategy need to be carefully balanced against the risks and costs involved.

Returns in emerging markets have not been higher than in the OECD area...

There are a number of factors that reduce the potential benefits of the diversification of the financial portfolios of OECD pension funds.⁴⁴ These include investment-risk related to poor financial infrastructure, political risk, impact of capital exports on OECD security prices, and financial fragility in emerging markets. To some extent, these concerns can be addressed by investing in securities

issued by multinational companies or through the use of swaps and other derivative securities. The development of derivative securities markets on a global scale makes possible the linking of diverse national systems to exploit new possibilities for the efficient international transfer of risks as well as resources. Thus, national pension funds can retain the capital resources invested by their own pension funds, yet gain the benefits of international pooling of risks through such devices as international equity swaps.⁴⁵

A closer look at stock market returns and equity risk in emerging equity markets gives reason to be cautious. Although the growth record shows that in the period 1985-1995 the OECD countries have tended to grow more slowly than the developing or emerging economies, this has not been uniformly reflected in stock market returns. In fact, over the last 10 years, the G7 stock markets have given better returns than the emerging markets. The record shows that the Standard & Poor 500 basket has produced better returns per month than the average of all the emerging markets (Figure V.2). The same conclusion is valid for data recorded over the last five years. Average monthly returns in Latin America and Asia were somewhat higher than the S&P 500, but at the price of significantly higher risks.⁴⁶ These prudent assessments represent best guesses of the future. Naturally, the



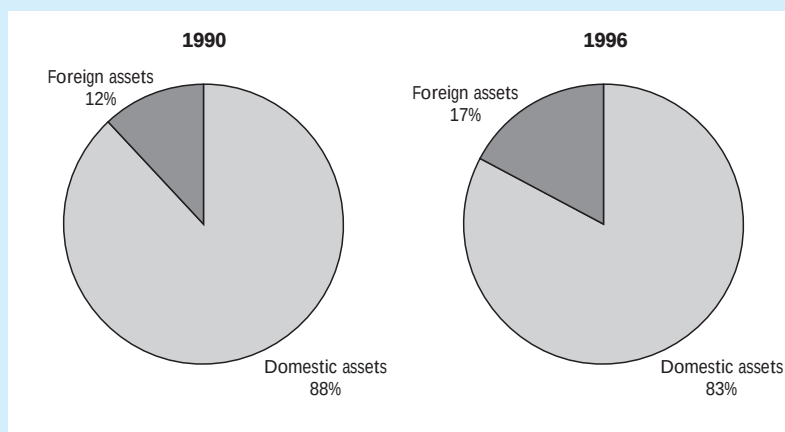
future might bring better news in terms of higher expected returns or lower risks. Prospects will improve if policy makers in the non-OECD area persevere with further improvements in the financial infrastructure in emerging securities markets and strengthen the domestic institutional investor base.⁴⁷

... and OECD pension funds have strong home bias...

In most OECD countries, only a relatively small portion of pension funds' assets are currently invested in foreign assets. Among G-10 countries, only pension funds in Belgium, the Netherlands and the United Kingdom have very significant foreign asset holdings, of which only a small portion is invested in emerging markets. For those G10 countries with significant pension fund holding, the share of foreign assets (including emerging market securities) increased from 12 per cent in 1990 to 17 per cent in 1996 (Figure V.3).

Hence, total holdings of emerging securities markets assets by OECD institutional investors is relatively low. Surveys suggest that US pension funds and mutual funds currently have about 2 per cent of their assets invested in emerging markets. Emerging market exposure of UK pension funds and mutual funds is somewhat higher (3-4 per cent) but Japanese and continental European institu-

◆ Figure V.3. *Foreign assets in portfolios of pension funds in selected* G10-countries*



* Belgium, Ireland, Japan, Netherlands, Switzerland, United Kingdom and United States.
Source: OECD, 1998.

tional investors have negligible emerging market assets in their portfolios. All the evidence points to the fact that all types of institutional investors are much less internationally diversified than the world market portfolio. Pension fund portfolios display a strong home bias.⁴⁸

... though they can be expected to increase their international exposure in the future

Against the backdrop of continued efforts to liberalise cross-border financial flows and to develop and strengthen capital markets in capital-importing countries, OECD pension funds and other large institutional investors will continue to seek to increase their exposure to international markets and to achieve greater diversification of portfolios. The extent to which they will increase their investments in emerging markets will depend on how returns and risks evolve in the future. Returns could go up and risks down if policy makers in the non-OECD area persevere with further improvements in the financial infrastructure and strengthen the domestic institutional investor base.⁴⁹

Recently, analysts have pointed out that the benefits of international portfolio diversification may be decreasing.⁵⁰ It is argued that increasing financial integration is leading to an increase in correlation of returns, in particular on the bond markets. The increase of integration of bond markets – especially in Western Europe – has reduced the potential for reducing risk on a bond portfolio through diversification. Moreover, the fact that an increasing amount of institutional money is managed using the concept of diversification is likely to increase financial integration and, therefore, may cause the benefits of diversification to get smaller. High correlation of returns between countries has in some cases led to a restructuring of portfolios by diversifying by sectors. Also the correlation between OECD stock markets and equity markets in emerging countries has increased. Table V.4 shows the increase in correlation between US and emerging stock markets.

Table V.4. The benefits of diversified risk – correlations between US and emerging markets

	Correlation Between S&P 500 and:	
	1975-95	1990-95
All Emerging Markets	0.27	0.41
Latin America	0.24	0.38
East Asia	0.16	0.27
South Asia	0.24	0.23
Africa	0.07	0.03

Source: ICFA

FINANCIAL MARKET IMPLICATIONS OF EXPANDING PRIVATE PENSION FUNDS

Deeper and more liquid financial markets...

In countries where pension funds are relatively important, financial markets are deep and liquid, and stock-market capitalisation is a high percentage of GDP. This is probably no coincidence. In societies where a growing number of older citizens derive a significant proportion of their income from their indirect ownership of capital, financial intermediation has to be more substantial than in countries where the retired derive their income by transfer from those working. The growth of the advance-funded pension system may lead to an increase in the supply of risk capital and productivity improvements and, therefore, generate extra growth of real resources. Whether this happens or not depends on various factors, including the internal and external investment rules for the different types of pension funds, the availability of projects with a high return, the quality of the market infrastructure, the degree of liquidity of the capital market, the tax regime, labour market flexibility, further deregulation, etc. More generally, the growth of advance-funded pension schemes can be expected to contribute to the development of an “equity culture”. In addition, in many OECD countries, pension funds are not willing (or able) to provide equity investment in start-up companies, unlisted companies, leveraged buy-outs, and in other forms of private equity. The exceptions are countries with a large advance-funded pension sector.

Clearly, regulations in the form of quantitative constraints on how much the various types of pension funds are allowed to invest in risk capital constitute potential obstacles to making institutional funds available for private sector projects. Onerous restrictions would also reduce the potential positive external effects, associated with a switch from pay-as-you-go to advance-funded systems, on financial market development and capital formation and productivity. For these reasons, many analysts have argued in favour of abolishing or relaxing these quantitative constraints. The challenge for regulators is to balance the fiduciary responsibilities and risk factors, on the one hand, and return on investment, on the other.

... and more innovative financial products

Sophisticated trading arrangements and investment techniques have been developed in response to the needs of pension funds and other institutional investors. The growing importance of institutional investors is generating also an increasing demand for risk-transfer techniques, which enable the investor to choose the desired combinations of return and risk. Such techniques include both securitisation, which enables the investor to transfer the credit risk as well as the market risk, and derivatives, whereby market or price risk is reallocated among

participants. The demand for risk-transfer techniques has been strongly driven by the nature of the liabilities of the different types of pension schemes and regulatory requirements. For example, defined-benefit schemes and strict minimum-funding requirements have stimulated demand for hedging by pension funds. In order to minimise the costs of hedging, pension funds and life-insurance companies have an incentive to immunise their defined-benefit liabilities via an investment strategy of duration matching.

However, the increased importance of private pension funds in many countries has not been accompanied by improved annuity markets. This is related to adverse selection problems, leading to the non-availability of annuities at an actuarially fair price for good risks.⁵¹ Although recent evidence for the United States indicates that the expected pay out on annuity policies has increased significantly, there seems to be still a need, in view of the growing importance of these markets for managing longevity risks, to investigate further what public policy role there may be for improving annuity markets. Several solutions can be envisaged. For example, the encouragement of the development of *variable* or *participating* annuity markets in which people buy annuity units whose prices fluctuate as market conditions change.

SYSTEMIC CONCERNS

Pressures on financial asset prices and the development of the risk premium

There have been concerns that the growing demand for high-quality private securities (equity and corporate bonds) associated with the growth of advance-funded pension systems and falling public sector borrowing requirements would put strong upward pressure on financial asset prices, and downward pressure on their returns, which are the ultimate source of income for the retired. In this context, the linking of privatisation of state-owned enterprises and pension reform offers opportunities to achieve important synergies. Undertaking pension reform (leading to an increase in demand for equity) and privatisation (leading to an increase in supply) at the same time permits, at least over the medium-term, a more balanced growth in private securities markets.

In a somewhat longer-term perspective, population ageing may have an impact on the risk premium (*i.e.* the difference between the returns on stocks and the yield on bonds). Because asset preferences vary across age groups, the ageing of the baby boom generation could affect both absolute and relative levels of stock and bond prices. On average, middle age is the portion of the life cycle when saving rates are highest.⁵² Moreover, middle-aged workers generally are more able and willing to hold a riskier portfolio; that is, one weighted more heavily towards stocks than bonds.⁵³ This is a consequence of two factors: 1) while still working, a stockholder is better able to make up for any bad equity returns,

and 2) in middle age, workers have a longer time horizon and thus are willing to accept more risk in exchange for the expectation of higher returns. In this case, the ageing of OECD populations will tend to increase the demand of stocks and bonds, exerting downward pressure on their rates of return. Moreover, higher demand for stocks relative to bonds should increase the price of stocks relative to bonds; *i.e.* decrease the equity premium.⁵⁴ After the baby boomers begin to retire, saving rates would tend to fall, stock and bond prices to decline, and the equity premium to rise as baby boom retirees shift their portfolios away from stocks toward bonds.

Volatility and stability of financial markets

In situations with no liquidity problems, there is nothing inherently wrong with the computerised portfolio insurance/programme trading strategies used by pension funds and other institutional investors, and herding may move prices quicker to their fundamental (*i.e.* equilibrium) values. If, in contrast, investment strategies are contrary to fundamentals, herding and computerised trading strategies may cause a rise in extraneous volatility. Pension funds have the trading technology and financial muscle to move markets rapidly, thereby inducing a possible increase in short-term volatility. Increased financial instability would be welfare-decreasing when institutional investors engage in “noise” trading or herding behaviour, leading to under- or overshooting of equilibrium prices. Moreover, recent periods with market turbulence seem to suggest that even very large financial institutions are not always willing or able to act as market makers in situations of massive imbalances between supply and demand in some markets. In these situations markets may become less liquid and more volatile, in particular the smaller ones.

Against this backdrop it can be argued that pension funds may find themselves exposed to a risk that is hard to quantify or anticipate, namely the risk that by their own investment decisions they may affect the direction of the markets in which they are operating and, thereby, over(under)shooting fundamental values. There may be a growing tension between what is reasonably prudent for the individual fund, and what is prudent for them collectively. The desirability of better monitoring of the financial market behaviour of pension funds and other financial institutions involved in the provision and management of retirement assets, as well as the need for the implementation of better disclosure practices by market participants, will increase. Better monitoring would require improved statistics on financial assets of the institutional sector (including the gross stock of outstanding foreign assets and gross cross-border investment flows); better understanding of the investment and trading strategies of pension funds and other institutions, and their impact on the functioning of financial markets, and

periodic assessment of the consistency and adequacy of the various regulatory and supervisory agencies involved in the retirement income system.

Solvency risk and government intervention

It cannot be excluded that even a well and prudently managed pension fund would find itself in difficulties in conditions of a general and protracted period of depressed asset prices and returns. And not all funds have been well or prudently managed in the past. The spectacle of many citizens finding themselves bereft of adequate income on retirement would probably generate pressure on governments to intervene in future, as in the past. There is a delicate trade-off here between individual and collective interests because of potential moral hazard problems.⁵⁵ If the government is perceived to be, in effect, guaranteeing a certain minimum return, the moral hazard risk is obvious. Setting up an explicit system of government pension guarantees might therefore inadvertently encourage excessive risk taking or inadequate funding by private pension sponsors.⁵⁶ The experience of financial policy makers in the design and operation of deposit guarantee systems seems especially relevant in this context.⁵⁷ Government interference might also impede the development of private mechanisms for insuring savers against losses. Properly designed privately funded safety net arrangements, such as insurance systems organised and financed by private market participants, could in principle limit the costs of managing financial pension fund crises while at the same time be successful in fostering confidence in the retirement income system.

In any event, the likelihood of an increased public policy interest in extreme circumstances points to the need for at least some government oversight, in particular when the financial position of pension funds with defined-benefit plans would deteriorate dramatically so that there will be a large short-fall in honouring promised benefits. Effective regulation and supervisory oversight of the financial situation of pension funds is indispensable for the development of sound private systems (see Box V.1). The primary objective is to protect beneficiaries from the effect of sponsor's insolvency, insufficient funding of the plans reflecting improper technical and/or investment decisions, misappropriations by managers or the risk of default by other operators involved in the provision of pensions.⁵⁸ Appropriate criteria should guide the licensing of pension operators and plans; proper funding, actuarial, accounting and disclosure requirements as well as limits on self-investment should be set in place. Adequate competition among retirement asset managers should also be ensured. Continued attention needs to be paid to the evolution of market practices so as to ensure that supervisory methods are adapted to the realities of the marketplace. Monitoring and understanding of developments in other countries may be particularly helpful in this regard.

Box V.1. Regulatory policies related to private occupational schemes

The following principles should be at the core of the regulatory framework for ensuring financial security of private occupational schemes:*

- strict enforcement of an institutional and functional licensing system on the basis of adequate legal, accounting, technical, financial and managerial (competence and honourability) criteria;
- legal separation of the fund from its sponsors or, at least, requirement of appropriate guarantees (*e.g.* reinsurance or insolvency insurance);
- prohibition of private unfunded pay-as-you-go schemes at company level;
- minimum requirements for equity capital or equivalent solvency rules;
- favourable tax treatment of over-funding/surplus;
- establishment of minimum funding rules;
- appropriate valuation and funding calculation methods, including actuarial techniques and amortisation rules;
- transparent accounting methods based on comparable standards;
- enhancement of ongoing supervision of the funds, including through the transmission of information to the authorities;
- strict limitations on self investments, unless appropriate safeguards exist;
- liberalisation of investments abroad, subject to prudent management principles;
- adequate regulation of insurance coverage of the fund (through group insurance or reinsurance);
- setting up standards for adequate information and disclosure to the beneficiaries;
- promotion of self-regulatory practices for fund managers;
- granting of priority rights to the fund in the event of employer's winding up;
- assessment of the role of insolvency insurance and other guarantee schemes;
- levelling of the playing field among operators.

* For a detailed analysis of the scope and applicability (*e.g.* defined-benefit or defined-contribution schemes), see A. Laboul, *Private Pension Systems: Regulatory Policies*, OECD, 1998.

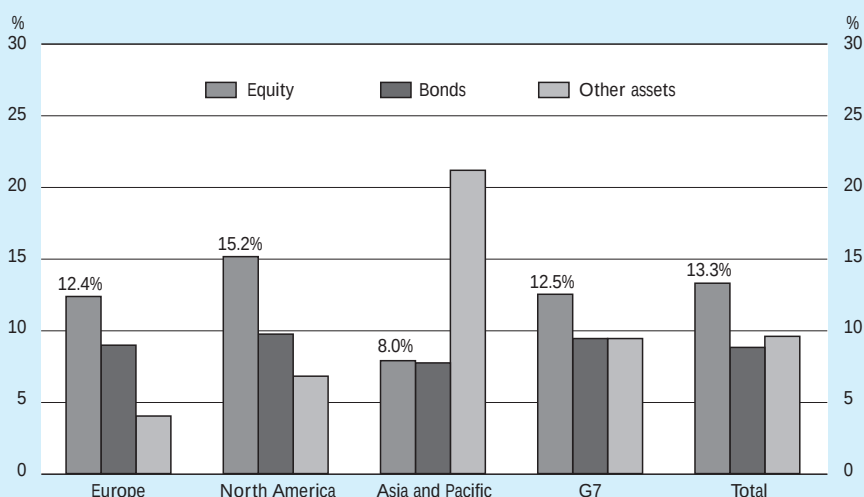
CORPORATE GOVERNANCE ISSUES

One purported advantage of the growth of equity markets with active pension funds as investors is that it provides alternative governance channels for influencing corporate decision-making. The growth of a dynamic institutional sector may contribute to a stronger role of capital market intermediation in so-called bank-based financial systems. In particular, pension funds that are investing

significant parts of their portfolios in equities would pressure for changes in laws and regulations of companies that usually can be found in “bank dominated” financial systems. In addition to a modernisation of the capital market infrastructure, pension funds can be expected to push for a move to laws and practices that would better protect the interests of equity holders. These include take-over codes, insider information restrictions, limits on dual classes of shares which seek to protect minority shareholders, as well as fair treatment of creditors in bankruptcy to protect their holdings of corporate bonds.

Fund managers have been accused of “short-termism”, but there is very little evidence that companies subject to pressure from pension funds have sacrificed long-term profitability.⁵⁹ In this context, it has been argued that pension funds own such a large percentage of the market that two of the factors driving short-term orientation – the need for liquidity and the competitive advantages of active fund management – are no longer important, or even prudent. The massive size of some funds substantially removes the option of full dis-investment from a company due to the potential adverse impact on share price. In addition, the growth

◆ Figure V.4. *Pension funds' annual average growth rate of equities, bonds and other assets, regional breakdown, 1990-1996*



Notes: Other assets: including non-financial assets, cash, loans and other financial assets.
Asia and Pacific: including Japan, Korea, Australia.

Source: OECD/DAFFE, 1997.

of indexed portfolios also means that funds are obliged to follow the view of the market. In effect, the large institutional investors are already “patient investors”. This view may help explain why the larger pension funds have become more active in influencing the business behaviour of companies where they are holding large investments.

Several empirical studies of the impact of shareholder activism by pension funds demonstrate that institutional investor monitoring of management is associated with statistically significant value gains, including stock price appreciation and increased financial performance. The little evidence that is available indicates that many target companies are poorly managed and that resources spent on identifying and restructuring those under-performing companies can create opportunities for earning higher-than-average returns.⁶⁰

The growing importance of pension funds as owners of productive assets (see Figure V.4 and Table V.5) has fuelled the debate about the formalisation of the corporate governance process. This formalisation embodies a commitment to exercise fiduciary responsibilities (*e.g.* voting) in accordance with published guidelines. This shift represents a major improvement over situations in which governance activities were exclusively conducted in an informal fashion (*e.g.* private conversations between fund managers and the management of companies) and without a clear accountability framework.

**Table V.5. Portfolio composition of pension funds' assets
in selected OECD countries**

In per cent of billion US\$ (end of year)

		1990	1991	1992	1993	1994	1995	1996
BELGIUM	Total Assets (Bn US\$)	4.8	5.5	5.5	6.0	7.1	10.2	11.0
<i>of which:</i>	Bonds	47.7%	47.8%	50.5%	47.4%	47.0%	46.4%	43.0%
	Shares	27.6%	33.0%	31.1%	38.2%	36.0%	39.5%	41.1%
	Others	24.7%	19.2%	18.4%	14.4%	17.0%	14.1%	15.9%
CANADA ¹	Total Assets (Bn US\$)	170.6	187.1	185.4	195.4	204.2	229.4	249.2
<i>of which:</i>	Bonds	56.4%	52.6%	50.0%	48.9%	46.7%	45.2%	43.7%
	Shares	25.4%	26.5%	27.2%	27.8%	28.1%	29.3%	29.3%
	Others	18.2%	20.9%	22.8%	23.3%	25.2%	25.5%	27.0%
FRANCE	Total Assets (Bn US\$)	41.0	42.2	42.0	41.0	50.6	66.2	86.5
<i>of which:</i>	Bonds	30.0%	30.0%	30.0%	39.0%	39.0%	38.0%	37.1%
	Shares	20.0%	20.0%	20.0%	20.0%	14.0%	13.6%	13.2%
	Others	50.0%	50.0%	50.0%	41.0%	47.0%	48.4%	49.8%
GERMANY ²	Total Assets (Bn US\$)	54.9	60.0	100.4	106.0	110.8	126.7	136.3
<i>of which:</i>	Bonds	45.0%	44.6%	82.0%	78.1%	75.0%	74.1%	77.8%
	Shares	–	0.2%	3.0%	7.2%	11.0%	7.7%	5.7%
	Others	55.0%	55.2%	15.0%	14.7%	14.0%	18.2%	16.5%
ITALY	Total Assets (Bn US\$)	..	7.3	13.9	17.1	22.7	28.7	36.3
<i>of which:</i>	Bonds	..	63.0%	63.3%	63.3%	62.4%	63.0%	63.7%
	Shares	..	6.8%	6.8%	6.7%	8.9%	7.7%	6.7%
	Others	..	30.1%	29.8%	30.0%	28.7%	29.3%	29.7%
JAPAN	Total Assets (Bn US\$)	1 111.6	1 288.3	1 389.2	1 752.5	2 318.7	2 085.9	1 919.7
<i>of which:</i>	Bonds	58.0%	61.1%	61.3%	62.6%	49.5%	51.6%	52.6%
	Shares	31.6%	29.6%	29.4%	29.2%	23.9%	26.0%	27.0%
	Others	10.4%	9.3%	9.3%	8.2%	26.6%	22.4%	20.4%
NETHERLANDS ³	Total Assets (Bn US\$)	222.5	235.4	232.0	261.3	286.8	344.3	345.7
<i>of which:</i>	Bonds	68.9%	69.3%	66.4%	61.3%	58.0%	63.0%	50.1%
	Shares	17.9%	16.5%	19.0%	24.9%	30.0%	26.0%	38.0%
	Others	13.2%	14.2%	14.6%	13.8%	12.0%	11.0%	11.9%
SWEDEN ⁴	Total Assets (Bn US\$)	71.2	92.4	73.2	50.4	51.0	70.7	82.0
<i>of which:</i>	Bonds	93.1%	93.2%	92.4%	92.4%	47.0%	62.1%	58.5%
	Shares	5.7%	4.1%	4.7%	4.7%	32.0%	27.6%	35.4%
	Others	1.2%	2.7%	2.9%	2.9%	21.0%	10.3%	6.2%
SWITZERLAND	Total Assets (Bn US\$)	165.5	175.7	181.8	194.6	226.0	321.5	344.8
<i>of which:</i>	Bonds	59.7%	63.0%	63.0%	63.0%	55.7%	54.0%	53.3%
	Shares	10.5%	11.0%	11.0%	11.0%	15.3%	20.0%	21.4%
	Others	29.8%	26.0%	26.0%	26.0%	29.0%	26.0%	25.3%
UNITED KINGDOM	Total Assets (Bn US\$)	582.3	648.5	610.3	683.1	706.0	810.0	861.9
<i>of which:</i>	Bonds	13.0%	13.0%	12.0%	10.0%	11.0%	13.9%	13.1%
	Shares	70.0%	75.0%	77.0%	81.0%	80.0%	77.6%	79.3%
	Others	17.0%	12.0%	11.0%	9.0%	9.0%	8.5%	7.6%
UNITED STATES ⁵	Total Assets (Bn US\$)	2 118.0	2 742.0	2 908.0	3 383.0	3 401.0	4 140.0	4 303.0
<i>of which:</i>	Bonds	36.2%	33.6%	33.8%	34.7%	34.7%	33.9%	32.4%
	Shares	49.5%	52.3%	52.1%	53.5%	53.5%	55.9%	57.6%
	Others	14.3%	14.1%	14.1%	11.8%	11.8%	10.3%	10.0%

1. Data on Canadian holdings of foreign loans, bonds and shares are not available separately, herein as 'Others'.

2. Including company pension funds as from 1992.

3. Asset structure excludes ABP and PGGM in 1993; ABP in 1996.

4. Including first pillar assets up to and including 1991.

5. Asset structure for Corporate DB plans only.

Source: Pragma Consulting, *OECD Institutional Investors Statistical Yearbook*, 1997, and OECD Secretariat estimates.

VI. ACTIVE AGEING – REFORMS IN EMPLOYABILITY, HEALTH, AND LONG-TERM CARE

SUMMARY

The question whether there will be jobs for an increasing supply of older workers has been much studied. The balance of evidence suggests that age itself may be not the fundamental barrier to employability, especially given likely occupational trends. Today, many older workers face difficulties in finding employment because of deficiencies in their education. Some of the problem will be solved as a result of higher education levels of future cohorts of older people, but even more emphasis will need to be placed on human resource development in the future for the whole population, not specifically for older workers. Lifelong learning is needed.

Recent evidence suggests that people now have the capacity to be active in society beyond the age of 70, and that serious incapacities are concentrated in the last two to four years of life. There is no biological reason for terminating work in people's 60s. However, data suggests increasing passivity in both the labour market and other domains of life as people grow older, especially beyond retirement ages. Lifelong learning and more flexible work-retirement transitions may help break down the tripartite division of life that appears to be an important factor in this passivity.

Older people, especially very old people, require more frequent medical care and far more long-term care. There is ample of evidence that more efficient ways of curing and caring are feasible for older patients. While the long-term care system is much less costly than the health care system, it is more in need of reform. Reforms should aim at better integration of health and long-term care, more equitable access to care, and improved protection against the financial risks associated with disability.

Existing demographic and labour market trends have been towards a concentration of leisure in the last third of life and of work in the middle of life. The active ageing concept described in Figure VI.1 suggests that a better alternative would be a more flexible mix of leisure and work (and of learning and care-giving) over the course of life.

◆ Figure VI.1. *What is active ageing?*

Active ageing refers to the capacity of people, as they grow older, to lead productive lives in the society and economy. This means that people can make flexible choices in the way they spend time over life – in learning, in work, in leisure and in care-giving. These choices are often constrained in ways that harm both individuals and society:

- Some of these are related to health – sickness or invalidity preventing people from working or enjoying leisure.
- Others are physical such as the lack of wheel chair ramps in buildings.
- Some are related to inflexibilities in the work place – such as time-off for raising children, giving care to elderly, or further education.
- Still others are the result of public policies that have not kept up with changes in demography, families and employment. Educational arrangements that are aimed only at young people rather than lifelong learning are an example. Social and labour market programming that encourage early retirement is another.

Active ageing reforms are those that remove these undesirable constraints on life course flexibility and that strengthen support to citizens in making life-time choices. Examples of the former of the removal of incentives to early retirement that are embedded in social programmes. Examples of the latter are lifelong learning and medical interventions that help people maintain autonomy as they grow older.

What is gained by grouping these diverse reforms under the heading of active ageing?

Reform directions in many of these program areas are similar. Convergent themes include:

- Greater emphasis on prevention – making inexpensive interventions such as providing public information at an early stage of life and thereby reducing the need for later remedial action.
- Use of remedial interventions that are less fragmented and that are concentrated at critical transition points in life – early identification of problems, use of case management techniques, on-the-ground co-ordination among various agencies responsible, and measurement of outcomes.
- Better balance in the life-time costs and benefits of programming to provide less constrained choices and greater responsibility at the level of individuals – such as greater linkage of life-time pension contributions and benefits.
- Without a common strategic framework for reform, changes in one area can offset reforms in another; reforms necessarily cut across traditional programme boundaries. A common framework would also improve the quality of on-the-ground service delivery by facilitating co-operation among many agencies. There would be opportunity for sharing of lessons learned across disciplines and providing of the common data and applied research that is needed.

Insight now; effectiveness later

Active ageing is a different way of looking at policies, a shift in paradigms that can result in new insights. At core, it is based on the simple notion that policy should take account of the continuity of life. This suggests, for example, that while the symptoms of ageing are found in older people, policy solutions usually involve interventions when people are younger. It suggests that policies should take account of their effects on the subsequent lives of individuals. This is rarely the case at present. The data does not yet exist to allow a systematic measurement of outcomes.

The full utility of active ageing in terms of improved priority-setting and programme effectiveness will only be realised once statistical information about the effects of policy life-course paths has been collected. Starting work on gathering that data should be a priority now.

Recent evidence suggests that people now have the capacity to work, learn, enjoy leisure and provide care for others for a much longer period. But the potential gains both to individuals and society of a more active life by people, as they become older, are not being fully realised. This chapter looks at the extent and scope for active ageing in society. The first part assesses employability in an ageing workforce, the second part examines health and activity as people grow older, the third part reviews health care costs and the final part looks at long-term care for older people.

EMPLOYABILITY IN AN AGEING WORKFORCE

As discussed in Chapter I, ageing implies that older workers will become a greater proportion of the labour force in the first half of the next century. This trend will be amplified to the extent that reforms succeed in removing or reducing the barriers to working longer in life. Integrating the increased supply of older people wishing to remain active will be a challenge for OECD labour markets.

Employment problems of older workers are mainly due to low skills...

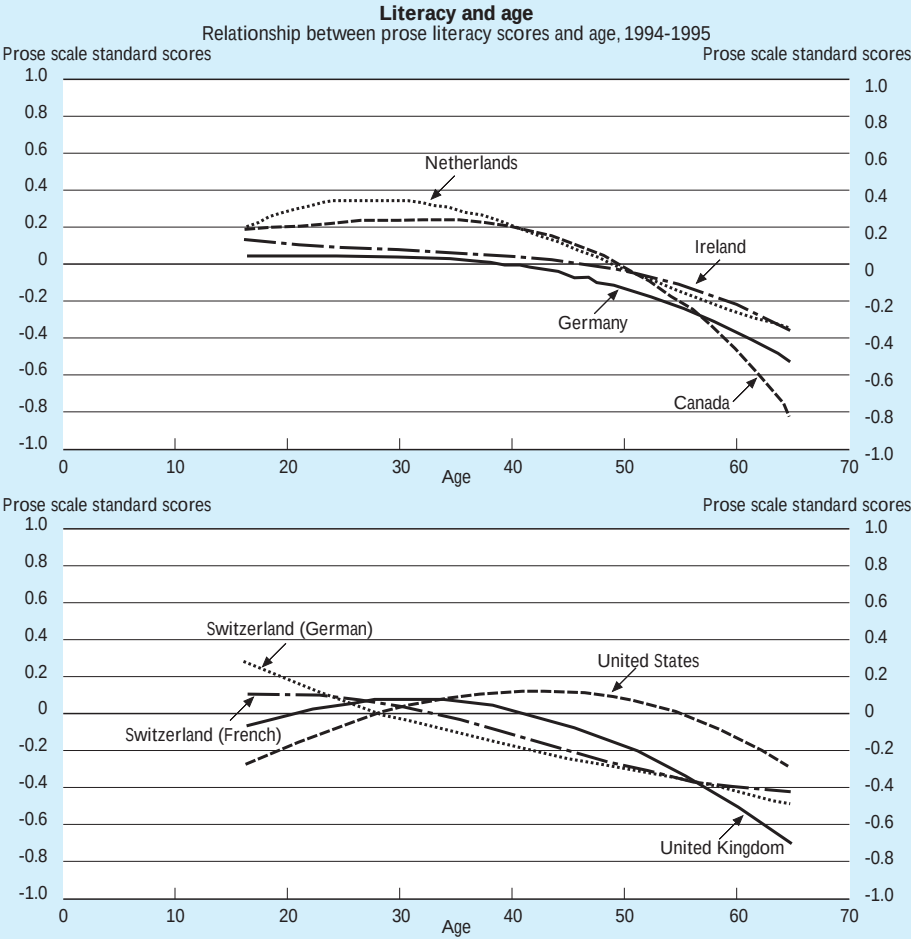
While older workers do reasonably well in today's labour market, older job losers often face serious difficulties. For many older people, the loss of a job means a prolonged spell in unemployment. Large cuts in wages may have to be accepted to get a new job. Several arguments have been advanced to explain the disadvantage of older workers compared with their younger counterparts: higher costs due to seniority wages and greater absence from work; lower productivity and lesser flexibility; and shorter employment periods in which training costs can be recuperated by the employer. A recent study⁶¹ has cast doubt on the validity of these arguments. The effects of seniority pay, and the relation between age and wages, may be less pervasive than earlier thought.⁶² Employer-sponsored training received by older workers is not as low as often thought, employees aged 45 to 54 receiving as much training as those aged 26 to 45. And while productivity does deteriorate with age in some occupations, such as hard physical labour, it is doubtful if this is a general pattern. The older worker should be well situated in a knowledge-based economy.

The present employment problems of older workers seem to be rooted in their relatively low levels of foundation skills, such as literacy and numeracy. The recent International Survey on Adult Literacy⁶³ shows that low skills are more prevalent among older workers than among younger adults in the countries surveyed (see Figure VI.2). This is likely to reflect that older workers today have had less opportunity than younger workers to undertake formal education when they were young, and low educational attainment has acted as a barrier for them to have access to training that would have maintained or increased their skills.

◆ Figure VI.2. *Skills and age*

The graph examines skill levels for one of the skills measured in the international survey of adult literacy for different age groups. It shows:

- Quite different results from country to country, indicating institutional factors are as important as anything to do with ageing itself. Indeed much of the difference can be accounted for by different educational levels at different ages – although again there is much variation across countries.
- That, generally, skill levels remain fairly steady throughout the “working years” of life and then tail off somewhat around the ages of 55 or 60. Other data from the survey support the view “use it or lose it view of skills” – that they are maintained through regular use.
- Similar conclusions hold for other types of skill that were measured.



Source: International Adult Literacy Survey, 1994-1995.

Indeed, empirical analysis⁶⁴ shows that low skills of older workers have more to do with cohort effects than age itself: when account is taken of a variety of demographic and economic variables, literacy skills show no more than a modest decline between the ages of 40 to 65.

... and may thus be reduced as new cohorts of older workers have better skills

As new cohorts of older people will be better educated than in the past (Table VI.1), the skill disadvantage of older people may be considerably reduced.

Table VI.1. **Distribution of educational attainment of the labour force, aged 45 to 64 years, 1995 and 2015**

Per cent of workers age 45-64 years

	1995				2 015 ^a			
	Less than upper secondary	Upper secondary	Non-university tertiary	University	Less than upper secondary	Upper secondary	Non-university tertiary	University
Australia	44.8	29.0	11.6	14.6	37.1	31.8	12.1	18.9
Austria	33.0	58.7	1.5	6.8	17.5	69.8	2.8	9.8
Belgium	46.2	27.0	13.3	13.5	25.7	35.6	19.1	19.6
Canada	27.7	24.8	29.3	18.2	14.1	30.1	33.8	21.9
Czech republic ^b	15.2	72.4	..	12.4	7.1	78.3	..	14.6
Denmark	35.5	42.4	6.1	15.9	23.5	49.6	8.3	18.6
Finland	43.4	36.0	8.6	12.0	17.9	56.2	10.5	15.4
France	38.4	44.0	6.5	11.1	15.4	57.8	11.0	15.8
Germany	15.4	58.1	11.7	14.8	8.6	63.5	10.8	17.1
Greece	71.4	14.4	3.6	10.6	41.5	29.6	9.9	19.1
Ireland	61.3	18.9	8.5	11.3	36.4	31.4	15.1	17.1
Italy ^b	67.2	21.9	..	10.9	44.6	42.3	..	13.1
Korea ^b	65.0	24.8	..	10.2	22.6	51.7	..	25.6
Luxembourg ^b	62.0	20.1	..	17.9	53.2	25.8	..	20.9
Mexico	85.1	7.0	0.5	7.4	64.7	16.7	1.9	16.7
Netherlands ^c	36.9	38.1	..	25.0	23.5	46.1	..	30.4
New Zealand	41.6	31.1	17.3	9.9	31.1	41.1	14.2	13.6
Norway	20.6	51.2	11.2	16.9	9.4	53.2	13.1	24.2
Poland	34.5	49.6	2.4	13.5	12.7	69.9	4.8	12.6
Portugal	84.0	5.2	3.8	7.0	67.8	14.7	4.3	13.2
Spain	78.8	7.1	2.7	11.5	49.5	20.1	8.4	22.0
Sweden	35.8	37.4	11.5	15.3	14.7	54.3	16.4	14.6
Switzerland	19.4	57.9	14.2	8.5	10.8	63.5	14.0	11.7
United Kingdom	27.6	51.3	9.9	11.2	13.0	61.3	9.4	16.4
United States	12.4	51.0	7.6	29.0	9.2	51.7	9.5	29.6
Unweighted average	44.1	35.2	9.1	13.4	26.9	45.9	11.5	18.1

a) The forecast distribution of the labour force in 2015 is based on applying education-specific participation rates for individuals 45-64 in 1995 to the population aged 25-44 years in 1995.

b) Data for non-university tertiary education are included in university education.

c) Non-tertiary university education is not applicable.

Sources: OECD Education Database. Data for Mexico are from STPS-INEGI, Encuesta Nacional de Empleo, unpublished data.

Whereas close to half of all workers aged 50 to 64 in the OECD area had less than upper secondary education in 1995, the proportion is expected to drop to only a quarter by the year 2025. This educational upgrading should provide the basis for workers to acquire skills throughout their working life, and thus enter their older age relatively well equipped. However, if there continues to be growth in the duration of schooling rather than lifelong learning, then incoming cohorts of younger workers will continue to have educational advantages compared with older cohorts, especially since their education may be perceived to be more relevant to the current job market.

Increased opportunity for people to change careers in mid-life would also increase the employability of older workers. People who start their career in jobs that require skills that may diminish with age (*e.g.* motor skills) could then transfer to occupations which required skills that were unaffected by age or even increased with age (*e.g.* communications skills). Such an opportunity would also contain the adverse effect of structural changes on the employability of older workers, with those whose skills had been rendered obsolete being re-tooled for a new career instead of becoming candidates for early retirement. For such greater flexibility to be a realistic possibility, the potential need for late-career job changes must be anticipated, and the needed training must occur at an early stage of life. In the majority of cases, however, abrupt changes in career are not needed. Most people can adjust to new work by building on skills acquired over the working life, provided the necessary learning opportunities exist and provided that the workplace is adaptable.

Age discrimination among employers may be a factor, as may an unwillingness among older workers to take lower-paid work. However, the evidence is not clear. There is no doubt that age discrimination is widely perceived to exist. For example, a 1993 survey of European countries⁶⁵ found that a large majority of people of all ages believed there was age discrimination in recruitment, promotion and training and indicated they favoured introduction of anti-age discrimination legislation. An argument is sometimes made that such legislation would have the perverse effect of making older workers less attractive to employers, although the evidence from countries with such legislation suggests that its direct effects may not be large. Certainly, it would be prudent to, at minimum, anticipate a period of adjustment where there would be an increased demand for active labour market programming for older workers and, possibly, for heightened public information to counteract ageism and to promote best practice.

Policy changes are required to increase the employability of older workers

Markets will adjust towards bringing wages, training and productivity into line with the realities of an ageing work force.⁶⁶ However, markets work imperfectly and public policy interventions will continue to be needed.

A good start has been made on changes that will increase investments in skills as people grow older. The economic importance of investments in human capital and human resource development is well understood. The most promising directions for reform have already been identified. It is now a matter of ensuring high government-wide priority to these agendas and translating them into practical policies for reform. Ensuring lifelong learning for all is a major challenge for public policy.⁶⁷

One theme in developing practical reforms is that career structures and options at *all* ages need to be adjusted in order to maximise the capacity of labour markets to adapt to labour force ageing. A pro-active approach, emphasising the skill base with which workers enter the later stages of their careers, holds more promise than heavy reliance on remedial training of older workers after they encounter employment difficulties. Thus, it is important that the training and other personnel practices of employers, as well as the career planning of workers, begin now to adapt to the prospect of labour force ageing. Although many of these adjustments are inherently highly decentralised, governments have an important educational and co-ordinating role to play. There may well be quite high payoffs from simply gathering and disseminating information about employment prospects for people as they grow older, information about available training opportunities, and information that counters myths about older workers that can create unwarranted stereotypes.

A second theme is the inter-relatedness of pay, training, job mobility and other personnel practices for determining the employment and earnings opportunities of older workers. Maximising the receptivity of labour markets to an expanded supply of older workers will require co-ordinated adjustments on all of these fronts. Adjustment here is primarily the responsibility of employers and workers, but again governments may play a useful expediting role.

A final theme is that enhancing the employment opportunities for older individuals should be addressed within the context of overall labour market conditions. The evidence does not point to any large factors that would automatically lead to a future lack of demand for older workers, on the grounds of their age. The main concern should be a lack of total demand. In particular, the potentially beneficial effects of increased labour supply among older workers will be very difficult to realise in labour markets characterised by high and persistent unemployment. The prospect of labour force ageing increases the importance of on-going efforts to develop and implement comprehensive structural reforms that can achieve high levels of employment and labour market adaptability.

HEALTH AND ACTIVITY AS PEOPLE GROW OLDER: THE ROLE OF OLDER PEOPLE IN SOCIETY AND FAMILY

Chapter I described the large growth in the numbers of older people. The growth is particularly rapid among the very oldest groups. Although there are uncertainties today about the extent of future increases, the balance of evidence suggests that further increases in the numbers of very elderly people should be expected. It makes a large difference both to quality of life and to the economy whether these extended years of life are spent in good health allowing for an independent active life. Poor health might, for example, be an obstacle to labour force participation, to leading an autonomous life, to the provision of family-care and community services, and to the enjoyment of leisure.

Health barriers to activity are not serious until people reach their mid seventies...

Health *per se* is difficult to compare internationally and that is why it is critical to assess health outcomes, particularly for older people. Here, the most satisfactory approach is to compare “active” life-expectancy using the measure of disability-free life expectancy. This refers to the length of life without disability – both the severe disabilities that require major social interventions and more moderate disabilities. There are many measurement problems in producing such data, especially on a internationally comparable basis.⁶⁸ However, a reasonably clear picture is emerging as shown in Table VI.2.

The table shows that for an individual the incidence of disability increases with age. As the oldest part of the population increases rapidly, the share of the population with some sort of disability increases. However, many disabilities do not require formal social interventions. Table VI.2 shows that in the countries covered, life expectancy at age 65 has been increasing in recent years and so has the number of years that were spent without either moderate or severe disabilities. Many of these findings are quite new, and are buttressed by newly-developed longitudinal data⁶⁹ that track older people over time. The techniques used to analyse traditional sources had often resulted in an exaggerated picture of disability.⁷⁰

In terms of severe disability of the sort that is likely to require social interventions, most findings suggest that it is concentrated at the very end of life. The relative prevalence of severe disability at a given age has tended to decline over time, particularly in age groups from 60 to 80; the share of life expectancy without severe disabilities has increased mildly in most countries. At the end of life, a constant period of disability of about two to four years on average can be expected. As people live longer, this period is shifted to later in life. These gains in disability-free life expectancy help to mitigate the effects of ageing. For exam-

Table VI.2. **Trends in total life expectancy and comparison of disability-free life expectancy**

Country	Life expectancy at 65	Disability-free life expectancy	Life expectancy at 65	Disability-free life expectancy
	Males		Females	
<i>Moderate Disability-Free Life Expectancy¹</i>				
Australia ²				
1981	13.9	7.9	18.1	10.1
1993	15.7	6.5	19.5	9.1
Canada ³				
1986	14.9	8.5	19.2	9.4
1991	15.6	8.3	19.7	9.2
France ⁴				
1981	14.1	8.8	18.3	9.8
1991	15.7	10.1	20.1	12.1
Netherlands ⁵				
1983	14	8	18.6	7.4
1990	14.4	9	19.0	8
United-States ⁶				
1980	14.2	6.8	18.4	9.3
1990	15.1	7.4	18.9	9.8
New Zealand ⁷				
1981	13.3	9.9	17.1	10.5
1993	14.8	10.0	18.4	10.2
Germany ⁸				
1986	13.8	10.6	17.6	13.0
1995	14.9	12.2	18.7	14.9
<i>Severe Disability-Free Life Expectancy¹</i>				
Australia ²				
1981	13.9	11.9	13.8	18.1
1993	15.7	13.4	18.7	14.8
Canada ³				
1986	14.9	12.8	19.2	14.9
1991	15.6	13.3	19.7	15.4
France ⁶				
1981	14.1	13.1	18.3	16.5
1991				
Japan ⁹				
1980	14.6	13.2	17.7	15.8
1990				
United Kingdom ¹⁰				
1980	12.9	11.8	16.9	15
1991				
Norway ¹¹				
1975	14.0	13.3	17.2	16.1
1985	14.4	13.3	18.2	16.9

Table VI.2. **Trends in total life expectancy and comparison of disability-free life expectancy (cont.)**

1. Health expectancy concepts are not yet totally harmonised. The "severe disability" measures are more comparable than those for "moderate disability". Levels for other OECD countries have been estimated for single years only: extrapolating from indirect evidence brings a prognosis of analogous trends. Results also available in OECD Health Data 98 partially based on *REVES (1997) Health Expectancies in OECD countries, paper n° 317*.
2. For moderate disability: *Functional limitation free life expectancy*; for severe disability: *severe handicap-free life expectancy*, Mathers C. Trends in Health Expectancies in Australia 1981-1993, Journal of the Australian Population Association, 13, 1, 1996.
3. Using a general scale including Activities of Daily Living, *general activity limitation*, severe disability score >11, no disability score zero, Wilkins Changes in health expectancy in Canada from 1986 to 1991. Statistics Canada.
4. Moderate: *general handicap free life expectancy*; Severe: *mobility handicap free life expectancy* from Robine J.M., Mormiche P. 1993, L'espérance de vie sans incapacité augmente, INSEE première 1993.
5. *Activity restriction free life expectancy*, Perenboom R.J.M., Boshuizen H., van de Water HPA, 1993, Trends in health expectancies in the Netherlands, 1981-1990, in Calculation of Health Expectancies: John Libbey Eurotext.
6. *Active life expectancy* including both major and secondary activities, moderate to severe disability, Crimmins E.M., Saito Y., Ingegneri D. 1997, Population and Development Review 23, 3, 555-572.
7. Davis and Graham, 1997, Personal Communication to REVES, 1997.
8. *General concept of disability*. Data refer to West Germany (Old Länder), Brückner G., (1997) Health Expectancy in Germany, October.
9. Japan *severe disability*, Activities of Daily Living, Inoue T., Shigematsu T., Nanjo Z., 1997, Health Life Tables in Japan 1990, *A quality of the longest life expectancy in the world*, Minzoku Eisei, 63, 4 226-240.
10. *Independent Life Expectancy*; Bone M.R., Bebbington A.C., Jagger C., Morgan K., Nicolaas G., HMSO 1995.
11. Norway, concept of *active independant life* Grotvedt L., Viksand G. (1994) *Life expectancy without diseases and disability*, in Mathers C., McCallum J., Robine J.M. eds, Advances in Health Expectancies, Australian Institute of Health and Welfare, AGPS Canberra.

ple, preliminary results by the Secretariat show that, if rates of disability were assumed to remain stable at existing levels over the next 25 years, one could anticipate a growth in the number of dependent older people of about 50 per cent or more in the United States and France as a result of the pure demographic effects of population ageing. However, if trends in the 1980's and 90's towards reduced disability were to continue, the increase in the number of dependent older people would be significantly less, at about only 15 per cent.⁷¹

As discussed in Chapter IV, there is increasing use of disability programmes by older workers, but this appears to reflect changes in the labour market and the administration of these programmes rather than a worsening of disability.

Taking all evidence into account, the health constraints on active ageing among people in their 60s and on into their 70's are broadly similar to the rest of the population. There is a gradual increase in impediments to daily activities as people grow older, but it is not sharp. Until one reaches very old age groups, the variations within age groups are much more important than variations across age groups. The stereotype that links ageing with infirmity is unfounded.

One implication of these findings for policy is that there is no biological basis for a retirement age set in people's 60s. Another implication is that a whole range of services, from the legibility of traffic signs to housing standards, need incre-

mental adjustment to reflect the ageing of the population. Another main policy implications is that active ageing measures – particularly those associated with prevention – are closely associated with health and dependence. Some countries with relatively low health expenses, such as Southern Europe or Japan, seem to achieve a high life expectancy and a much lower level of coronary disease for example as a result of a better diet.⁷² Evidence about the negative effects of smoking on health is overwhelming. It is known that older people who maintain or adopt a life style with increased physical activity gain numerous health benefits and increase the range of activities they can perform.⁷³

These newly emerging data also shed light on fundamental questions of equity that only become apparent when examined from a life-course perspective. There are strong links between social status, education and health – and these are perpetuated as people grow older. Rich, educated people live far longer and in far better health than poor, low-skilled people.⁷⁴

Unfortunately, in most areas, it difficult to move beyond these general findings to more specific policy prescriptions. The comparative evidence on outcomes and disease related patterns remain scanty across countries. Further efforts are needed to understand the dynamics and causes of health and dependence among older populations. Investing in regular surveys, research efforts and statistical information systems for gathering and interpreting longitudinal data on population health status and its determinants would be especially rewarding. Countries can learn much from the experience of others, but this will require the use of common classifications and concepts, and co-operative approaches to measurement and analysis.

... but older people tend to be passive

With the ageing of the population there will be a growing pool of healthy and (increasingly) skilled older retirees who can make other important contributions to the society and economy – including care-giving of family members, voluntary activities of various sorts, learning and other forms of public service. Indeed, most OECD countries have ministries or agencies related to older people whose mandates include promotion of independence among older people and of an active life by older people in the society and economy.

The evidence suggests that active participation of older people in society is not high, although there is much variation across countries.⁷⁵ While there are many individual examples of older people helping out in the classroom, or mentoring young workers, or undertaking community services, they are not common across the whole older population. In terms of daily life, passive activities such as watching television predominate. In most countries, the great majority of people over the age of 60 rarely or never participate in social gatherings, activities

and volunteering – with levels becoming smaller as people grow older. There also appears to have been a downward trend towards volunteer activities in the period since 1980. On the other hand, contact with family members remains high. There is a trend towards older people living apart from their children, but still close to them. Grandparents provide care for grandchildren. Frail elderly people received most care from spouses and children (usually their daughters) who are often themselves of retirement age.

When the baby-boom generation was young, the “dependency” problem centred on young people. The problem of dependency is now shifting to the large numbers of older people, particularly the very old. The most difficult problem lies with care-giving for frail elderly people. The role of government, heretofore largely confined to that of provider of palliative social care, is being transformed into a partnership empowering people to exert greater control over their lives, i.e. active ageing. This can only be carried out by governments acting at a very decentralised level. The dependence on large institutions is being replaced, in part, by a greater focus on community based care and care networks. This trend is known as ageing in place or deinstitutionalisation.

At the level of families, the issues are becoming more complex and, in the absence of good data, difficult to assess. Formerly there were three generations, the young, the active intermediate age, and the old. Now four generations are increasingly typical, the young, the middle age, the third age, and the fourth age. In most OECD countries, but to a lesser degree in Japan and southern Europe, the proportion of older people living with their children has been falling rapidly over the last decades. For the most part, it is now less than 20 per cent. Similarly, the share of the older population living alone has risen up to 30 or 40 per cent, although this may be now be near to a peak. The increase in female labour market participation may also negatively effect the potential resources for informal care-giving, although recent data suggest that this may not be as large a problem as once thought.⁷⁶

In summary, the evidence strongly indicates that there is potential for a much more active life in society for older people, certainly in the labour market but also in the broader society and community. There is evidence that stereotypes about age – and the tripartite division of life (school, work, retirement) – that are built into many social policies and institutions have a powerful negative effect on achieving this.⁷⁷ This suggests that changes which break down these stereotypes, such as lifelong learning and more flexibility in the work-retirement transition, would have a positive effect both on labour market participation of older people and their role in the society and community. What is needed is a culture that values learning and social activity at all ages.

The existence of large numbers of healthy, skilled, post-retirement people is a very new phenomenon. The rich complex of social and economic institutions

that give support and meaning to children and people in their middle years, therefore, does not yet fully exist for older people. The benefits from developing those institutions and structures are very large. However, our knowledge is not yet strong enough to know how to best go about the task. We lack, for example, data which would indicate the extent to which more flexibility at the beginning and end of working life will reduce the working-time “crunch” or would increase active participation in care-giving, and in voluntary and social activities as people become older, after retirement. In particular, there is much to be learned about the likely combined effects for the future of higher female participation, changing family structures and the changing nature of work on the kinds of activities that people undertake, or would like to undertake if the opportunity were there.

AGEING AND SYSTEMS OF HEALTH AND LONG-TERM CARE

Health and long-term care are closely related. Table VI.3 shows costs associated with each. Long-term care, or chronic care, encompasses both nursing care and other social services such as help in meal preparation, needed by a growing number of frail elderly people. There is a broad overlap in clientele and services provided, an overlap that becomes increasingly important in an ageing society. Unfortunately, they are usually not integrated in reality, either in delivery or funding. That fragmentation is an important policy issue that is discussed below under long-term care.

Ageing will increase health care costs...

There has long been a tendency to consider older people as a frail portion of the population and as a source of health care costs. The balance of evidence suggests that older people as a whole may account for 30 to 40 per cent of all health care costs. From a cost perspective, population ageing therefore was seen as a threat. As health care already accounts for around 8 to 10 per cent of GDP, even a modest growth in health care costs would imply a significant pressure on public finances. More recent evidence indicates reasons for concern, but also for optimism.

As noted, many of the health care costs associated with old age are associated with the period just before death, regardless of age of death. As more people are (by definition) dying in the oldest age groups, health care costs are increasing with age,⁷⁸ and particularly in the oldest age groups above 70. Costs reflect the reality, however, that during this period, the likelihood of death is not certain and treatment is often designed to prolong life. Costs taper off in the very oldest groups. Population ageing will therefore push medical spending up, but not by an amount as great as once feared. Cost may rise by about 10 to 20 per

Table VI.3. **Global comparison of health and long-term care expenditure**

	Total spending long-term care (1992-1995) % GDP	Public spending long-term care (1992-1995) % GDP	Share of private financing long-term care (1992-1995) % total	Public expenditure health care 1980 % GDP	Public expenditure health care 1995 % GDP	Total expenditure health care 1995 % GDP	Share of private financing health care 1995 % total
	(1)	(2)	(2)	(1)	(1)	(1)	(1)
Australia	0.90	0.73	19	4.6	5.7	8.6	34
Austria	1.40	n.a.	n.a.	5.4	6	7.9	24
Belgium	1.21	0.66	46	5.5	6.9	7.9	13
Canada	1.08	0.76	30	5.5	6.9	9.7	29
Denmark	2.24	n.a.	n.a.	5.8	5.3*	6.4*	17
Finland	1.12	0.89	20	5.1	5.7	7.7	26
France	n.a.	0.50	n.a.	6.0	8.0	9.9	19
Germany	n.a.	0.82	n.a.	7	8.1	10.4	22
Japan (4)	n.a.	0.15/0.62	n.a.	4.5	5.7	7.1	20
Netherlands	2.70	1.80	33	5.9	6.7	8.8	24
Norway	≅ 2.8	2.80	negligible	5.9	6.6	8	18
Sweden	n.a.	2.7	n.a.	8.7	5.9	7.2	18
U.K	1.3	1.00	24	5.0	5.8	6.9	16
United States	1.32	0.70	47	3.9	6.5	14.1	54
	(3)						
Greece	0.17	n.a.	n.a.	2.9	5.5	7.2	24
Ireland	0.86	n.a.	n.a.	7.2	5.2	7	26
Italy	0.58	n.a.	n.a.	5.6	5.4	7.8	31
Luxembourg	0.41	n.a.	n.a.	5.7	6.5	7.0	7
Portugal	0.39	n.a.	n.a.	3.7	5.0	8.2	39
Spain	0.56	n.a.	n.a.	4.5	6.2	8	23
Switzerland	0.75	n.a.	n.a.	4.9	7	9.6	27

n.a. Information is not available.

(1) OECD Health Data 98 for population and expenditure on health as of March 1998. Population data refer to 1994 for Denmark.

(2) Secretariat estimates using various sources and experts reports. Data refer to recent years, between 1992 and 1995. Long-term care spending refers to the care needed to help older persons leading an independent life, at home or in an institution. It excludes informal help. For home care, it should include all home care services, including district nurses services, excluding medical visits. For institutions, it includes all the costs related to care and lodging, including help for all self-care activities, but excluding medical costs. Public costs includes all costs incurred by public institutions, municipalities, sickness funds or old age funds. Private spending refers to out of pocket payments or payments by private long-term care insurance when the definitions are available. Definitions for the lower part of the table may be a little more restrictive than for the upper part.

Australia: Key facts, provided by the Department of Health, 1998

Austria: K. Leichsenring (1998), Social Protection for Dependency in Old Age, Vienna, European Centre for Social Welfare Policy and Research, February.

Belgium: Pacolet et al. (1998). Country report Belgium, The State of the Debate on Social Protection for Dependency in Old age in the 15 EU Member states and Norway, Research project for the European Commission DGV and the Belgian Minister of Social Affairs, Katolieke Universiteit Leuven.

Canada: Chartrand P. (1993) Description of long-term care services in provinces and territories of Canada, Federal/provincial/territorial subcommittee on continuing care.

Denmark: Department of Health, 1998.

Finland: Vaarama M., Kautto M. (1997) Social Protection for the elderly in Finland ISBN 851-33-0495-7, Gummerus Oy, Jyväskylä.

Table VI.3. **Global comparison of health and long-term care expenditure (cont.)**

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- France Joel, M.E., (1997) *La dépendance des personnes âgées en France*, mimeo, LEGOS, Université de Paris Dauphine.
- General Pacolet J., Versieck K., Bouten R., Lanoye H. (1997) *The State of the Debate on Social protection for Dependency in Old age in the 15 EU Member states and Norway*, Research project for the European Commission DGV and the Belgian Minister of Social Affairs, Katolieke Universiteit Leuven.
- Germany Rothgang H., Schmähl W (1995) *The Long-term Costs of Public Long-term Care Insurance in Germany*, Zentrum für Sozialpolitik Universität Bremen, Arbetispapier n° 9/95.
- Japan Data provided by the Ministry of Health and Welfare (1998)
- Netherlands Schuijt-Lucaassen N. (1997) *Social protection for dependent elderly in the Netherlands*, Institute for Applied Gerontology, Vrije Universiteit, Amsterdam.
- Norway Daatland (1997) *Social protection for the elderly in Norway*, Norwegian Social Research, NOVA, Skriftserie 4/1997.
- Sweden Secretariat for Long-term analysis, Ministry of Health and Social Affairs, (1998).
- United Kingdom HMSO (1996) 'Long Term Care: Future Provision and Funding', House of Commons n° 119, London.
- United States Wiener J., Illston L.H., Hanley R.J. (1994) *Sharing the Burden: Strategies for Public and Private Long-Term Care Insurance*. Washington DC. The Brookings Institution.
- Existing estimates for long-term care in OECD Health Data are somewhat lower but do exclude a considerable share of long-term care programmes.
- (3) In the lower part of the table, source for Long-term care spending for the other countries, see Markus Schneider & al. *Gesundheitssysteme im internationalen vergleich*, (1994), BASYS. data refer to the years 1992-1994 as supplied by the authors.
- (4) Japan. the data of 0.15 corresponds to present spending for care to the older persons, apart from hospitalisation costs. The additional .62 is a forecast and corresponds to a Secretariat's estimate of the spending involved by the current long-term care project adjusted with the 1995 population.
-

cent in the next 15 to 20 years – an important increase in health spending, but still not an explosion.

... but much will depend on the future cost of medical technology...

The cost of medical technology is central. It is mainly driven by economic incentives that influence the behaviour of providers – and not as much by the relative ageing of the population. Older people quite naturally tend to seek access to the latest medical technologies as a way to prevent or delay the onset of chronic conditions and disabilities. The fear would be that older people would therefore provide a new market where an excess of specialised providers could find a use for newly-developed, and expensive, technologies, with gains to health status that remain to be assessed in terms of cost-effectiveness. On the other hand, if it were linked to actual outcomes and re-oriented to address the burden of chronic diseases, high tech medicine could have an important role in dealing with an older population.

Knowledge to date about intensity of use or appropriateness of use of technology specific to older people is still scanty.⁷⁹ Some evidence suggests that the spread of technology – driven by providers' financial incentives – may lead to

intensive use of technology, beyond that suggested by cost effectiveness. On the other hand, useful technologies may not have been fully developed because of the lack of appropriate financial incentives. The benefits of newer genetic technologies as they relate to older people are not well understood, but are potentially large.

... and on reforms aimed at greater efficiency and cost effectiveness

Ageing therefore adds new priority to greater efficiency and cost-effectiveness in the delivery of health care. However, most reforms directed to efficiency and cost-effectiveness in health care will be similar regardless of the age mix of the populations.⁸⁰ Nevertheless, an older society does point to some areas where reform should have especially high priority. One of these is a more harmonious approach to providing health care and social services to frail elderly people. This is discussed below. Another is to ensure that financial incentives in the health care system, and the funding of medical research, are associated with areas where chronic conditions are most severe. For example, better treatments for dementia, arthritis or migraine may lead to much greater reduction in functional limitation than comparable efforts in other areas. This suggests more targeted outcome-oriented medical and social interventions to increase the independence of older people – particularly those that are directed to maintaining functional independence and avoiding hospitalisation.

LONG-TERM CARE AND THE NEED FOR DEEPER REFORMS

Relatively few older people benefit from public long-term care and public spending is still low

In a typical OECD country, only about a fifth of the older population receives formal care. A third of all formal care is provided in institutions and two-thirds is home care. However, the number of older people is growing, especially in the oldest age groups where chronic care is concentrated. Moreover, the demand for formal care is affected by the behaviour of social actors, both within and outside the family – and the type and design of benefits provided.

It appears from the available data that the costs of long-term nursing care are still rather modest, even if they are rising. They are usually less than 2 per cent of GDP in total.⁸¹ A major increase by around 50 per cent in the next two or three decades may hence only increase public spending by around one per cent of GDP.⁸² This does certainly add to the other costs of ageing, but the base is much smaller than that for health care. The share of long term care costs in GDP are currently about the same order of magnitude as the *increase* of social spending for health care from 1980 to 1995. With careful planning and adaptation, such an

increase should be reasonably met by most care systems, provided that the resulting burden is spread among workers and older people.

Some 40 per cent of people in the age 65-and-over group will eventually require long-term care. And costs per individual in care are very high – some 1.0 to 1.5 times the average yearly income. Care-giving arrangements are influenced by an individual's gender, age, income, and by the perceived price of the care purchased, especially for people with relatively few resources available to them. In addition, in spite of growing affluence among older people, income and wealth inequalities remain significant. In particular, incomes among the oldest groups, where care is most needed, are lower than for people in those age from 65 to 75 or 80.

A flexible system is required to respond to changing caseloads and a variety of needs...

The key policy challenge in most countries is one of developing a system that can readily adjust to changes in the numbers of people needing chronic care and that responds to a wide variety of needs. This involves a balance between ageing-in-place and institutional care, between the family and the formal systems, and between medical and social services. Many countries have found that balance hard to accomplish when formal chronic care was seen as a branch of either medical services or social services alone.

Until recently, few countries had identifiable policies for long-term care. It was provided in hospitals, at home and in old-people's homes or nursing institutions. It is still provided by complex networks of relatives and professionals that are buffeted by social trends, changing government policies and what public and private insurance systems cover. In this mix the extent of institutionalisation of older people is increasingly hard to define and measure. It is frequently difficult to assess the amount of formal care that is provided.

A variety of facilities and housing arrangements, have often replaced care that was once provided in hospitals. The available data suggest that between 5 and 7 per cent of those aged 65 or more are living in an institution. This may seem modest but these rates increase steeply with age⁸³ and current estimates lie between 20 and 30 per cent for those aged 85 or more. It seems that the share of institutionalisation may be largely driven by nursing home availability.

In recent years, reforms emphasising care-giving in the community, or "ageing in place" have attempted to encourage de-institutionalisation in the Scandinavian countries and the United States. The objective of reform was both to reduce costs and increase well-being, although more recent evidence suggests that difference between the costs of home and institutional care may not be as great as originally thought. Moreover, despite best efforts, it is not always easy to avoid institution-

alisation. For example, in most OECD countries, the leading cause of institutionalisation of older people is the loss of intellectual faculties, due to senile dementia linked with Alzheimer's disease, where alternatives to institutions are not promising. However, new institutions are emerging in some countries to fill this gap. These are not in the home, but still provide a home-like setting, with an emphasis on personal care rather than skilled nursing.

... and incentives, moral hazard and adverse selection must be dealt with

A critical feature in the design of formal systems is to avoid creating disincentives to family support. This could happen if the apparent prices of formal care are reduced by public or private insurance-type mechanisms. The result could be excessive demand for care or demand for an inappropriate type of care such as excess hospitalisation, if hospitalisation co-payments were lower than nursing homes. Policy measures to reduce excessive recourse to formal care include providing help in kind, introducing resource ceilings and income-adjusted co-payments.

Moral hazard also exist on the supply side. As the institutionalised population is the source their income, providers may favour longer stays. A policy of decentralised funding, with a fair degree of control over the creation of large nursing home capacities may help to control moral hazard. A socio-demographic adjustment of funding on a local level may help to ensure adequate financing and resource use, if the equity issue is addressed properly. In the case of an insurance type of financing, specific forecasting tools may be used, adapted from hospital prospective financing systems.⁸⁴ More generally, reform should stress – more than has been the case in the past – the importance of accountability structures such that financial incentives reward quality service, efficiency and cost effectiveness.

A problem with market-based solutions is that insurance markets are impaired by classical market imperfections, and even the more so in the field of long term care. Adverse selection – only the individuals with the higher self perceived risk may seek insurance – may hinder a sharing of the burden of this risk across an entire population.⁸⁵ Individuals may also be short-sighted and seek coverage for the risk only late in life. Hence, a balanced approach incorporating public coverage for catastrophic risks, could promote the development of individual coverage and contribute to alleviating the pressure on public finance.

Reforms differ from country to country

To balance all these factors, several OECD countries have developed reforms consistent with their own traditions that foster individual responsibilities. A basic element in reform is that long-term care is increasingly seen as a normal circumstance of life. Sharing of this increasing burden is hence required. Countries are

attempting to find the best balance between public and private responsibilities and in sharing the burden across working age and older populations. Bringing sickness insurance and pension systems closer together would be useful. Keeping financial transfers on independent tracks fails to recognise the reality that the onset of dependence transforms both the health needs and the daily life of individuals.

VII. ACHIEVING REFORM

SUMMARY

The magnitude and range of issues raised by ageing pose a formidable public management challenge. Effective budget management is important to bring public expenditures for age-related purposes in line with projected revenues. Because of their short-term nature, traditional annual budget frameworks are inappropriate for this purpose. The introduction of multi-year budgeting in several countries has not extended the time horizon for public budget long enough to account for the implication of ageing on public finances. Other techniques are required, including accrual-basis accounting standards for government financial reporting, but all have their limits.

It is necessary to develop a strategic framework to get the reform process underway. Governments can choose to launch a review aimed at addressing the full range of ageing concerns or to launch reviews through specific ageing issues. It is essential to co-ordinate reforms across the numerous departments and programmes at multiple levels of government with responsibilities for ageing issues, as well as to build public understanding and support.

To implement and sustain reforms it will be important to take full advantage of innovations in service delivery, including harnessing information and information technology to attain policy objectives. The collection, analysis and dissemination of empirical information will also be critical. To help sustain the momentum and support for reform, countries should also set in motion a process to monitor the progress of ageing reform strategies.

Governmental capacities which are relevant to the ageing issue need to be mobilised in order to achieve the recommendations of this report. Challenges include avoiding capture of the issues by those most directly affected rather than reflecting broader national interests; sustaining commitment by governments over the longer term; and co-ordinating the multiple agents concerned with ageing policies. This chapter points to actions that are required. The first part looks at budget management techniques and how they can be used to make future spending trends more visible in the budget process. The second part demonstrates the need to develop national strategic frameworks to launch and co-ordinate ageing reforms. The final part briefly addresses measures to implement and sustain reforms.⁸⁶

BUDGET MANAGEMENT IN SUPPORT OF LONG-TERM FISCAL HEALTH

Effective budget management is a key aspect of achieving this report's recommendation to bring public expenditures for age-related purposes in line with projected revenue. Budgets are legally enacted on an annual basis in Member countries. This time horizon impedes effective longer-term expenditure management. Most OECD countries recognise this and have introduced measures in recent years to expand the time-horizon of the budget.

Traditional budget frameworks are inappropriate to address ageing issues...

The use of budget frameworks that extend 3-5 years beyond the next fiscal year are now the rule rather than the exception in Member countries. The primary objective of these medium-term budget frameworks has been to increase fiscal discipline. However, paradoxically, when dealing with long time-term implications of ageing, these medium-term frameworks will, over the next several years, give a less realistic view of the future than the traditional single-year budget. As described earlier, demographic trends support economic growth until about 2010 and then begin to work in the opposite direction. This problem is transitory and can be readily addressed by using longer-term frameworks and projections.

The use of longer-term budget frameworks is, however, the exception rather than the rule in OECD countries. Action therefore needs to be taken to develop additional capacities for systematically identifying and exposing adverse expenditure trends and future budget commitments at an early stage, *i.e.* to act as early warning systems, and to track these trends through time. This will then inform decisions to be taken in time to prevent, moderate and/or finance these expenditures, and to build up a consensus in support of decisions.

... and new techniques are called for

Member countries have applied various techniques to better understand future commitments relevant to ageing. Actuarial analysis of public pension programmes, present value calculations of multi-year receipts and expenditures, assessments of contingent liabilities, scenario-building, risk analysis of public insurance or lending programmes and the use of generational accounting are among them. However, the methodologies behind them are often controversial. In addition, they are often "simple" financing models, which require a great many assumptions the validity of which is often uncertain. Moreover, long range projections may differ widely based on small differences in initial conditions. Nevertheless, these techniques are useful to begin assessing the long-term implications of policies. Their further use and development should be encouraged, without undue reliance on any one tool.

Several OECD countries have adopted or are adopting accrual-basis accounting standards for their government financial reporting and many are studying the feasibility of doing so. This has several implications. First, expenses are recognised when they are incurred rather than when they are paid. As a result, obligations which are building up over time, but that do not become payable until a later date, are nonetheless reported in the current period operating statement (and as liabilities in the balance sheet). Second, all recognised assets and liabilities are valued and reported in the balance sheet. For example, unfunded civil service pension plans are reported as liabilities in the financial statements.

Nevertheless, there are currently limits as to how far accrual accounting can assist. Not all future expenditure commitments may meet the definition of “expense” or “liability” for reporting purposes. For example, although obligations for civil service pension plans are recognised in accrual-basis financial statements, the future cost and liabilities of public pension (or old-age security) programmes are not. This suggests that accrual data requires supplementation with other information to estimate the long-term sustainability of budget settings. Nonetheless, accrual accounting improves the quality of fiscal reporting and increases awareness of long-term issues. There is a clear need to further improve reporting systems.

Reliable and transparent budget information and processes taking into consideration the long-term will not in themselves overcome the short-term nature of annual budgetary decision-making processes. However, they can highlight longer-term trends. This means that decision-makers will have to be transparent about the long-term fiscal impacts of policy decisions.⁸⁷ Moreover, longer term budget information together with an effective resource allocation system are necessary to provide a basis for moving resources to highest priority areas such as preventive or life-long learning programmes where investments may be required to meet strategic ageing objectives.

DEVELOPING A STRATEGIC FRAMEWORK

Success in achieving the goals set out in this report will depend on practical ways of ensuring that reforms work in harmony. The reforms are closely inter-linked and each can accomplish several objectives simultaneously. For example, working longer can simultaneously increase material living standards, reduce fiscal pressure, and provide meaningful activity for older people. However, this means that suitable work for older people must be available. One way of accomplishing this is through more flexible arrangements over life for inter-mingling work, learning, leisure, care-giving. Doing so would also facilitate family care-giving for the growing number of frail elderly people, better health and greater support for a more active life by older people in the broader community.

Increased advance-funding in the retirement income system provides another example of these linkages. If it is well managed – often in conjunction with a gradual reduction of pay-as-you-go earnings-related benefits – it can help address fiscal problems, diversify risk, support economic growth and reduce work disincentives. It can also increase individual choice in the level of income to be targeted in retirement, without harming the overall adequacy of retirement income. The viability of reducing pay-as-you-go benefits is, on the other hand, linked back to the possibilities of working later in life and making a gradual transition to retirement. It is also linked to overall economic growth since it is easier to rebalance shares of national income between workers and retirees if living standards for both are increasing although at different rates.

Responsibilities for ageing issues therefore span numerous departments and programmes at multiple levels of government. They touch a diversity of actors including private and voluntary institutions. Even at its most focused, a national government would have difficulty in co-ordinating a set of policies to meet such a complex problem. It is all the more important to develop a strategic framework to get reforms underway, establish priorities, build public understanding and co-ordinate reforms in different areas.

Reforms can be launched in different ways

Achieving an effective national strategy requires important choices regarding the structure for a review of ageing-related policies, with implications for co-ordination of policy development and consultation with the public. One choice is between launching a review aimed to address the full range of ageing concerns (see Figure VII.1 for examples of this); or launching review through “lead sectors” (see Figure VII.2). A “lead sector” approach should aim to raise most or all of the key issues as interactions are made clear. One practical political question is whether a particular policy area focuses the attention of the public and the media more effectively on ageing issues in general: changing demography or health may be a focus, but often public pensions and future retirement income are the subjects that ultimately raise the broad range of ageing issues for the public. The figures illustrate that in practice countries may be led to combine elements of both global and sectoral approaches.

A second choice is between a review process led from within the national government, albeit publicly; or from a non-executive body such as a standing advisory council or a special commission. One possibility (illustrated by Irish experience) is a comprehensive consultative approach bringing together in a high-profile forum representatives of concerned groups to work out broad policy guidelines.⁸⁸

◆ Figure VII.1. *Selected comprehensive ageing documents*

<i>Name</i>	<i>Issued by</i>	<i>Topics covered</i>	<i>Remarks</i>
Australia's Ageing Society (1994)	Economic Planning Advisory Council	Welfare, health, education, employment, home and institutional care for the elderly	Data through year 2051. Includes international comparisons
Older Australia at a glance (1997)	Australian Institute of Health and Welfare and Office for the Aged, Dept. of Health and Family Services	Retirement, health, social services, institutional and home care, and community activities	A collection of acts on older people prepared for the 1997 World Conference on Gerontology; includes international comparisons
Welfare Implications of Demographic Trends (Ireland)	Combat Poverty Study, prepared by the Economic and Social Research Institute	Dependency and support, fertility and marriage, labour force participation and population ageing	Population projection through 2026; a few international comparisons, mostly with the United Kingdom and the United States
"General Principles concerning Measures for the Ageing Society" (Japan)	Cabinet decision of the Japanese Government, July 1996; tentatively translated into English by the Management and Co-ordination Agency	Working income, health and welfare, learning and social involvement, living environment and promoting research	A comprehensive set of policy goals in support of the 1995 "The Basic law on Measures for the Ageing Society" (1995)
Ageing in Japan	Japan Ageing Research Centre	Population ageing, changes in families and households, labour force, social insurance, health care and social service support systems	Published in English for people outside Japan. An appendix contains the "General Principles" document described above.

Source: Mathiasen (1998).

◆ Figure VII.2. **Selected sectoral approaches to ageing issues**

Country	Document	Sector Emphasis
Australia:		
Saving: Choice and Incentive	Ministerial Statement (May 1997)	Relates national saving retirement and demography
National Healthy Ageing	Draft National Healthy Ageing Strategy	Health, related to age discrimination, indigenous people, community activities, and virtually all issues affecting the elderly
United States:		
Long-term Budgetary Pressures and Policy Options	Congressional Budget Office Report	Budgetary control and fiscal policy related to national social security and nationally funded health care services
Building a Better Future	Report by the Committee for a Responsible Federal Budget	Relates population ageing to economic growth, social security, nationally funded health care, tax policies and private pension and health benefits
Retirement Income for an Ageing Population	Report of the Congressional Research Service	Uses retirement income as the basis for a detailed review of most aspects of ageing, including savings, investment, dependency, health, work, and private pensions. Data projections through 2060
Japan:		
New Gold Plan	Bureau for the Elderly, Ministry of Health and Welfare	Focuses on welfare facilities and services for the elderly
France:		
Work in Twenty Years	Planning Commission	Explores four scenarios. Includes international comparisons
Ireland:		
Pension Strategy for the Future	Pensions Board report on the National Pensions Policy Initiative (to be published in May, 1998)	Focuses on the role of each pillar of pensions provision
Health and Social Care Implications of Population Ageing in Ireland 1991-2011	National Council on Ageing and Older People	One of a series of studies conducted by the Council, which has a direct advisory function in the development of policy on ageing in Ireland.

Source: Mathiasen (1998).

Co-ordination across different agencies and actors is critical

Co-ordination is a critical aspect of putting a strategic framework into practice. Many governments are delegating and devolving decision-making authority, whereas an effective policy towards ageing requires an adequate degree of central coherence and co-operation at least among departments and institutions responsible for education, labour, public pensions, and health care. Co-ordination of services across levels of government creates an additional difficulty, as municipalities, regions, provinces or states have considerable autonomy. The sheer pressure of immediate events tends to preoccupy central co-ordinating units more than longer term issues. Therefore, while a national strategy is critical to achieving coherent policies and public support for action, if it is too prescriptive in detail or purely centrally-directed it is likely to tax national governments' own capacities. Within a broad strategic framework, many of the major decisions in practice will be taken and financed by sectorally-based ministries and agencies.

Sustained political leadership is an essential part of maintaining the necessary incentives across ministries and departments to ensure continuing attention to ageing strategy and its co-ordinated implementation. Yet this will always be difficult in respect of ageing because of its special, all-embracing characteristics, and will require heads of government to ensure effective long-term attention. Ministerial time is a limited resource, and inter-ministerial committees are hard to sustain. Thus some form of particular political responsibility may need to be considered.

In some countries a cross-party coalition on ageing may be feasible, encouraging the integration of a wide range of interests; in most, the traditional operating agencies will remain in place with political leaders charged with overseeing policy co-ordination processes and their necessary trade-offs. Canada, France and New Zealand have experimented with the use of Ministers of State (or equivalents) who are given policy responsibility for cross-cutting issues while leaving in place the structure and responsibilities of operating agencies. More recently, Canada has aimed to provide an integrated approach by consolidating under one minister responsibilities for a range of national employment and income security programmes, many of which relate to ageing. The United States has a tradition of appointing "Czars" in the White House to co-ordinate policy. Finland has adopted a strong "lead ministry" approach. While different approaches to co-ordination and involvement at the political level appear to suit differing country circumstances, the essential common objective should be to create a structure that allows for cross-cutting consideration of interests and that avoids capture by any particular interest group or aspect of the issue.

Some countries have a special co-ordinator agency for ageing. Examples are the Office of Ageing in the United States' Department of Health and Human

Services, the Office for Ageing in the Management and Co-ordination Agency in Japan, and the National Council on Ageing and Older People, an advisory body in Ireland. Often, however, the mandates of these agencies may be restricted, for example to a focus narrower than the topics covered in this report. Global agencies may help focus attention, communicate and exchange information but they may not have the clout, expertise or resources of large programme agencies, they may be particularly susceptible to capture by “grey power”, and their co-ordination responsibilities are likely to overlap with those of agencies such as the Prime Minister’s Office or Ministry of Finance. In the last resort, there is probably no substitute for siting at least a powerful oversight responsibility in those latter central agencies.

IMPLEMENTING AND SUSTAINING REFORMS

Effective implementation of ageing strategies can be advanced by mobilising a range of policy instruments, including innovations in service delivery. Changing circumstances mean that traditional policy instruments and related service delivery may not remain the best choices. The recommendation in this report to base retirement income on a “multi-pillar system”, for instance, involves just such an approach: it brings together a balanced mix of pension and other elements, with a significant role for both mandatory and voluntary, advance-funded and pay-as-you-go, public and private elements, together with necessary regulatory structures and use of more non-pension sources of income in retirement.

In this context, an increasingly prevalent approach to the choice of public policy instruments and policy delivery is enhanced use of information as a potent policy lever, including innovative application of information technology. This is particularly relevant as regards encouraging savings, working longer, and maintaining health. There is already growing use of the Internet to disseminate public information on ageing issues (*e.g.* by the state governments of Florida (United States) and Western Australia), and to inform service providers so that they can implement ageing policies more effectively. These possibilities will surely increase as access to the Internet and interactive television becomes both technically simpler and less expensive.

Innovations in services delivery will also be an important factor. They include for example the development of “one-stop shopping” techniques either at the local level or via a computer interface. A one-stop public sector service centre can provide access to services from a broad range of government ministries, agencies and programmes. As people age they are likely to require more services but finding the programmes and understanding their rules may be difficult: thus one-stop shopping is of particular importance to this group.⁸⁹

The collection, analysis and dissemination of needed empirical information is a critical factor in sustaining reform. As noted, reform strategies should include plans for improved statistics and applied research related to ageing and to active ageing reforms. These involve manipulating existing data in new ways and the collection of new kinds of information, especially tracking the activities and health of cohorts of people as they grow older, make the transition from work-to-retirement and on into older ages. Examples of major areas where empirical understanding is weak are found throughout the chapters of this report. Where new empirical findings have become available in recent years, they have often had large and unanticipated implications for policy. One example is the new information about increasing healthy life expectancy; it raises basic issues about the nature of retirement as well as casting new light on health and care-giving costs. Another example is the new data on the multiple resources available to people on retirement; it raises fundamental questions about generosity of public pensions. Finally, as described in Chapter VI, there is potential for large gains in cost-effectiveness through a combination of new empirical approaches and an active ageing focus in policy-making.

To help sustain momentum and support for reform, countries should also set in motion a process to *monitor the progress of ageing reform strategies* and share information on results (such as changing public and private roles and unfolding behavioural reactions). Regular review and analysis of the relative effectiveness of different policy instruments will be particularly necessary. Processes for monitoring, providing and sustaining the supporting infrastructure of data and analysis, and specific programme evaluations mutually reinforce each other. Monitoring can also help ensure that strategies are adapted in response to new information and changing circumstances. In addition to domestic monitoring, countries should also consider how best they can operate through international organisations such as the OECD to monitor progress and learn from each other. This report is part of that process.

NOTES

1. Excluding Mexico and Turkey.
2. In some countries, increased participation by working-age women or by international migration could play a supporting role, but the effects would be small compared with working longer. See Annex 1 for a fuller treatment of the effects of demography.
3. Some of the studies discussed below do not fully take into account pension reforms already under way. Hence they tend to exaggerate the extent to which pension expenditures might rise, or gaps between expenditures and contributions widen. Against this, it is also the case that various projections made in the past decade have tended to become more pessimistic except in countries where very strong reforms have been made.
4. Chand and Jaeger, 1996.
5. European Commission, 1996.
6. Turner *et al.*, 1998.
7. Leibfritz *et al.* (1995). See also OECD, 1996a.
8. Roseveare *et al.*, 1996.
9. Turner *et al.*, 1998
10. The successors would have to finance the high cost of pensions for the baby-boom generation, while not getting high pensions themselves.
11. Bailliu and Reisen, 1997.
12. Holzmann, 1996.
13. Hviding *et al.*, forthcoming.
14. See e.g. Feldstein and Samwick, 1997.
15. Turner *et al.*, 1998.
16. Another scenario examines the impact of higher investment demand in developing countries. Although the inflows of interest and profits on foreign investment are of course higher, these are partly offset by the consequent reduction in investment in OECD countries, which has a negative impact on labour productivity and the tax base.
17. Very approximately, if returns on foreign assets are as much as 5 percentage points (500 basis points) higher than on domestic assets, gross foreign assets would have to rise by the equivalent of 10 per cent of GDP each year to offset entirely the depressive

effects of ageing on living standards (assuming no change in net foreign assets relative to GDP).

18. Earlier retirement has a greater impact on the ratio of those retired to those still working than does increased longevity, because it both increases the number of retired people and reduces the number of productive workers.
19. Very approximately, if employees retire one year earlier, GDP falls by about 2 per cent, and the pension contributions made by those still working to pay-as-you-go systems have to rise by about 7 per cent.
20. The US Health and Retirement Study found that about one-third of retirees felt they had been forced by circumstances to retire earlier than they wanted, often through part-time work. Canadian data show that about 25 per cent of retirees left the labour force involuntarily, although older workers are mixing paid work and retirement with greater frequency than in the past. In the countries of the European Union, some 58 per cent of retirees said they did not want to continue working. Over half of the two-fifths who did want to work longer said they wanted part-time work. (HHS, 1997: Commission of European Communities, 1993.)
21. Blöndal and Scarpetta, forthcoming. (Also on Internet as AWP 1.4. See Annex 3.)
22. Systems in which the managers of the pension accounts aim to break even, taking one year with another, but not necessarily each year, and which may intentionally accumulate surpluses for a few years when it is known that a large number of employees will be soon reaching retirement age.
23. Defined-contribution schemes are in principle actuarially fair, with benefits linked to contributions, for a given rate of return on the fund's assets.
24. Blöndal and Scarpetta, forthcoming.
25. See e.g. Gruber and Wise, 1997.
26. See Table 4.1 in OECD, 1995a.
27. Blöndal and Scarpetta, forthcoming.
28. Blöndal and Scarpetta, forthcoming.
29. Of course not all of them would have been in the labour force previously, and some of them may well be receiving more than one kind of benefit. Hence the figures overstate the proportion of the labour force in receipt of such benefits.
30. However, in some countries, for example Germany, the age of an individual is one of the criteria used to judge whether or not an individual receives a disability pension, and if so, of what size.
31. Blöndal and Scarpetta, forthcoming.
32. A very long-term vision might go even further and envisage a world where collective arrangements would no longer support a separate stage of life devoted to leisure in retirement. However, this would be beyond sensible planning horizons.
33. For example, analysis often refers to advance-funding as if there were only one type of arrangement. Yet there may be several types of advance-funding in play in a country: in a reserve within the public contributory system, in company plans and in private retire-

ment savings accounts. The risks and effects on behaviour associated with each are quite different.

34. There is merit both in terms of transparency and risk-diversification in having many pillars, if they are indeed quite distinct in terms of their objectives. However, there are clear limits. A very large number of pillars could cause confusion. Over the long-term, there would be merit in dropping smaller programmes that have little total effect – including, for example, programmes that provide seniors with reduced prices for some services or other in-kind benefits.
35. Esping-Andersen (1997) notes that in countries as different as Finland and Italy, pensioners save between 25 per cent to 30 per cent of their income. In Italy even the lowest income quintile saves.
36. Hauser, forthcoming. (Also on Internet as AWP 3.2. See Annex 3.)
37. Börsch-Supan, forthcoming.
38. Laboul, forthcoming.
39. These are referred to as notional accounts.
40. See also the considerations below concerning the impact of population ageing on the so-called risk premium.
41. Analysts have pointed out that new and structured products make conventional risk control guidelines inadequate. Reasons include financial engineering that renders some guidelines (in particular quantitative ones) less effective, and difficulties in formulating sufficiently specific investment guidelines.
42. OECD, forthcoming.
43. Reisen, 1997.
44. Blommestein, forthcoming.
45. Merton, 1989.
46. One might argue that in view of their long-term liabilities, pension funds should not care about short-term (e.g. monthly) volatility because market risk declines in the long run. In fact, the probability of an extreme shortfall (or maximum possible loss) actually grows over time. Put differently, if a pension fund based its investment decisions purely on the probability of making or losing money, it might make sense to invest more in the stock market when the investment horizon would be lengthened. But, when investment decisions are made on measures such as average return (mean) and risk (variance of return), there is not much presumption (if any) that stocks are safer for long-run investments.
47. World Bank, 1997; Blommestein, 1997.
48. Reasons for this home bias are given in OECD Financial Market Trends, No. 68, November 1997.
49. World Bank, 1997; Blommestein, 1997.
50. Kessler, 1996.
51. Friedmann and Warshawsky, 1990; James, 1997; and Blommestein, forthcoming.

52. This type of saving behaviour is a feature of both a theoretical life-cycle model and, more importantly, the type of saving behaviour seen empirically in household data.
53. The real return on United States stocks, for example, averaged 9 per cent over the period 1947-96 with a standard deviation of 17 per cent. This implies that there is about a 30 per cent probability of a decline bigger than minus 8 per cent or a rise bigger than 26 per cent in any given year. The average real return on long-term United States government bonds over 1953-96, however, is much lower – 3 per cent – but also less volatile – these returns have a standard deviation of 2 per cent.
54. It is generally held that risk aversion increases with age, holding length of life constant. Thus, some have hypothesised that an ageing population would cause the equity premium to increase. But if the age of the population is increasing at least in part because life span is increasing, and thus time horizons are lengthening, then the ageing of the population does not necessarily imply that average risk aversion should be increasing and the risk premium on stocks should be rising.
55. Merton and Bodie, 1992.
56. Bodie and Merton, 1992.
57. Bodie, 1996.
58. For a detailed analysis of regulatory aspects, see Laboul, forthcoming. (Also on Internet as AWP 2.2. See Annex 3.)
59. Blommestein, forthcoming.
60. OECD, forthcoming.
61. Casey, forthcoming.
62. See also OECD, Employment Outlook 1997, forthcoming. (Also on Internet as AWP 4.1. See Annex 3.)
63. OECD and Human Resource Development Canada, 1997.
64. Employment Outlook 1997, forthcoming. (Also on Internet as AWP 4.1. See Annex 3.)
65. Commission of European Communities, 1993.
66. For example, the trend towards lower labour market participation of older workers appears to be have slowed or reversed in some countries such as the United States. However, the reasons for this and extent to which this may occur in other countries is not fully understood.
67. OECD, 1996b.
68. For a description of the various approaches to methodology and supporting data, see OECD, (forthcoming), *The Caring World: Analysis*.
69. Particularly the waves of the National Long Term Care Surveys in the United States, see Manton *et al.*, 1997.
70. To measure health status one may use data on “self perceived health status”, or use data on a measure linked with functional health in terms of independent living. Measurement issues are complex and much effort is needed to develop internationally comparable measures. See a discussion in Dignity and Social Solidarity, OECD (forthcoming).

71. Preliminary results are available for France and the United Kingdom. Similar findings would hold for the United States. Wiener (1993) reports an increase of the elderly population of 49 per cent from 1993 to 2018, which would be only 35 per cent in terms of elderly people (all levels of disability considered) under a moderately optimistic hypothesis. See also OECD, 1998b.
72. For example as shown from results of the MONICA project co-ordinated by WHO.
73. Banta, 1997.
74. See OECD, 1998b. One study cited suggest that the gap in life expectancy between the richest and poorest sections of the community may be some six years, while the gap in terms of occupational handicap-free life expectancy may approach 15 years.
75. There are comparisons from 1980 to 1995 for Japan, the US, Korea, and Germany that suggest the extent of voluntary activity is declining. Social and community volunteer activity is uncommon among older people in Japan, Korea, and Germany but is higher in the United States. See *Policy Office on the Ageing of Society*. Formal volunteer activities are not widespread among members of the European Union. There is more informal volunteering (such as visiting sick relatives or neighbours) but this too declines over the age of 65, see Walker and Maltby, 1997.
76. For a review of the evidence see OECD 1998a.
77. Gerson and Patterson, 1995.
78. See data in OECD, 1996a.
79. Banta, 1997.
80. These are described in see OECD 1998a.
81. With the exception of the Scandinavian countries.
82. This would lead to a yearly increase due to pure demographic factors to around 1.5 per cent or 2 per cent a year which is within the range of potential growth for many OECD countries. Simulations in the US tend also to present a moderately optimistic view on these long term trends, see Manton *et al.*, 1997.
83. OECD, 1996a.
84. Resource Utilisation Groups developed in the US constitute a useful experiment for pricing long-term care.
85. Cutler, 1995.
86. Many issues referred to in this chapter are discussed in the working paper by D.G. Mathiasen 1998. (On Internet as AWP 6.1. See Annex 2.)
87. Discussion of these budget management issues is found in (OECD 1997a).
88. The recent US proposal for the American Association of Retired People and the non-partisan Concord Coalition to orchestrate a nation-wide debate on "saving Social Security" before spending any budget surplus also illustrates consensus-building in support of long-term solutions.
89. A wide range of public management and service delivery improvements is discussed in (OECD 1995k), (OECD 1996c) and (OECD 1997b).

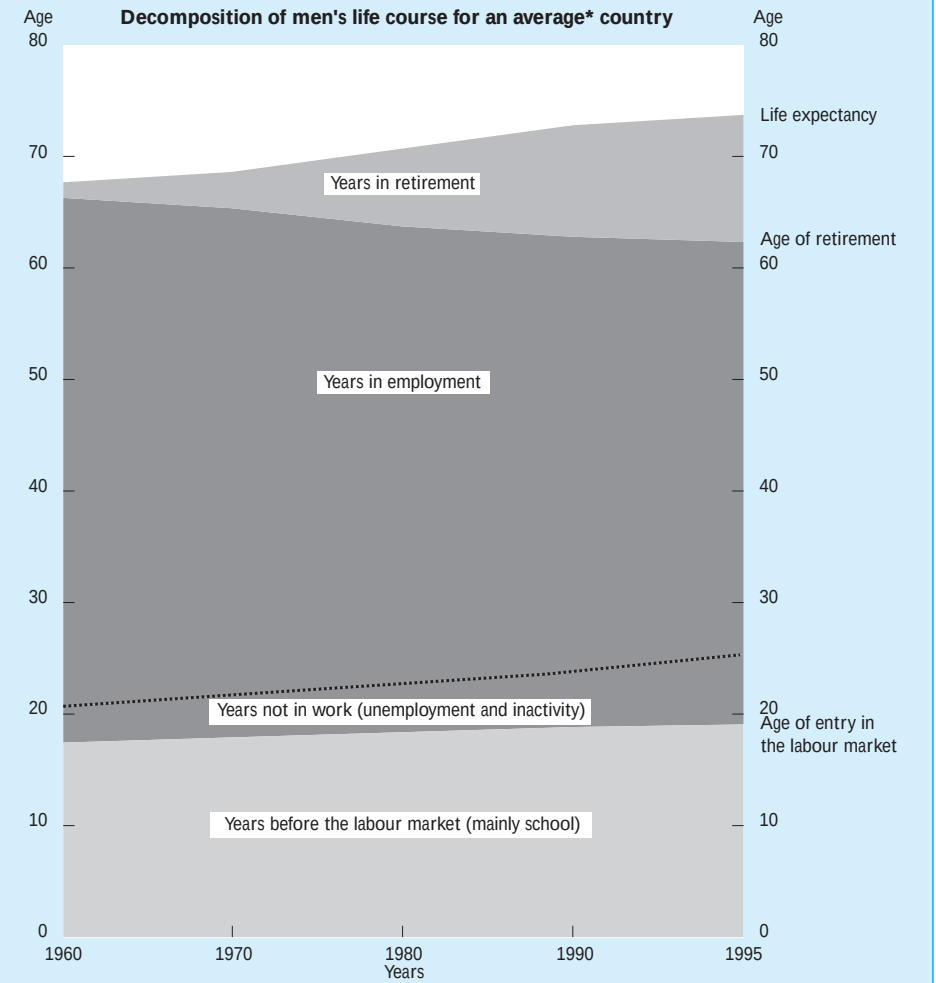
Annex 1

THE EFFECTS OF DEMOGRAPHY

The following figures describe the effects of changing demography. They amplify the story told in Chapter I.

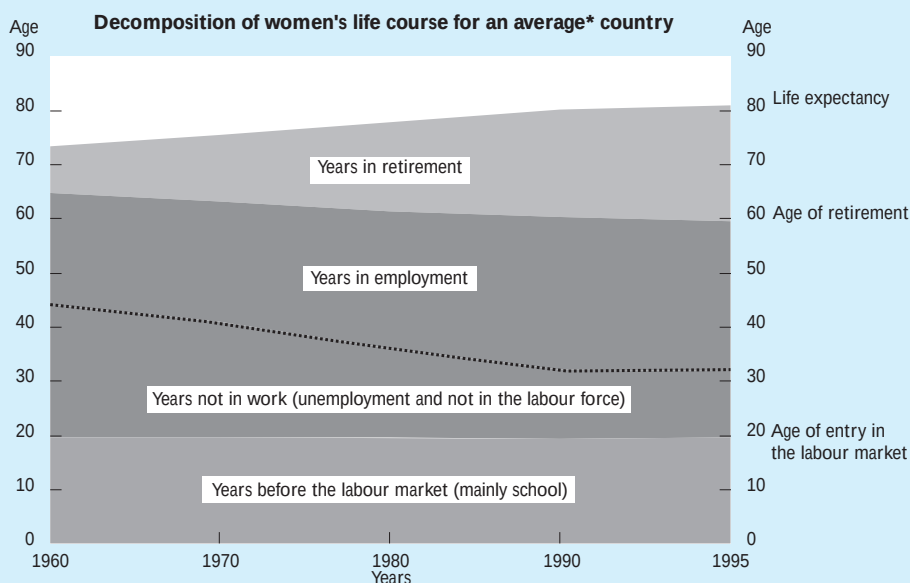
◆ Figure A1. *Large changes in how time is spent over the course of life*

The charts show the large change in the allocation of time by men and women over the course of life. They show average life expectancies and labour force patterns as they existed in the year in question. That is, they do not show the pattern of activity for any one cohort.



* Average made over 15 countries: Australia, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Norway, New Zealand, Spain, Sweden, United Kingdom, United States.
Source: OECD Labour Force Statistics, Part II; Éco-Santé ; ILO.

◆ Figure A1. (cont.) **Large changes in how time is spent over the course of life**



* Average made over 15 countries: Australia, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Norway, New Zealand, Spain, Sweden, United Kingdom, United States.

Source: OECD Labour Force Statistics, Part II; Éco-Santé ; ILO.

Between 1960 and today:

- The average time spent in retirement grew rapidly – up to over 11 years for men and 21 for women.
- For men, the time in work shrank accordingly
- While for women, it grew as a result of a large drop in the number of expected adult years spent out of the labour force.

Note the very short period of retirement in 1960, especially for men. These data show the average expected length of retirement for the whole population, including those who never retired and those who died before the retirement age. The duration would, of course, be longer for those who did reach retirement age. For example, in 1990 men on average could expect ten years in retirement. The life expectancy of those who did reach age 65 was about 15 years.

Conclusion: the length of time spent in retirement is growing both a result of increased longevity and decreased time in work for men – and time spent working at home for women.

Note: the numbers are approximations only. The age of retirement is based on calculations using changes in participation rates by age. Expected years in and out of work are based on labour force survey data. The typical OECD country is an unweighted average of the countries shown in the figure, with adjustments made to compensate for gaps in the data. Note that because of data limitations there are small differences in the data in this chart and those that follow.

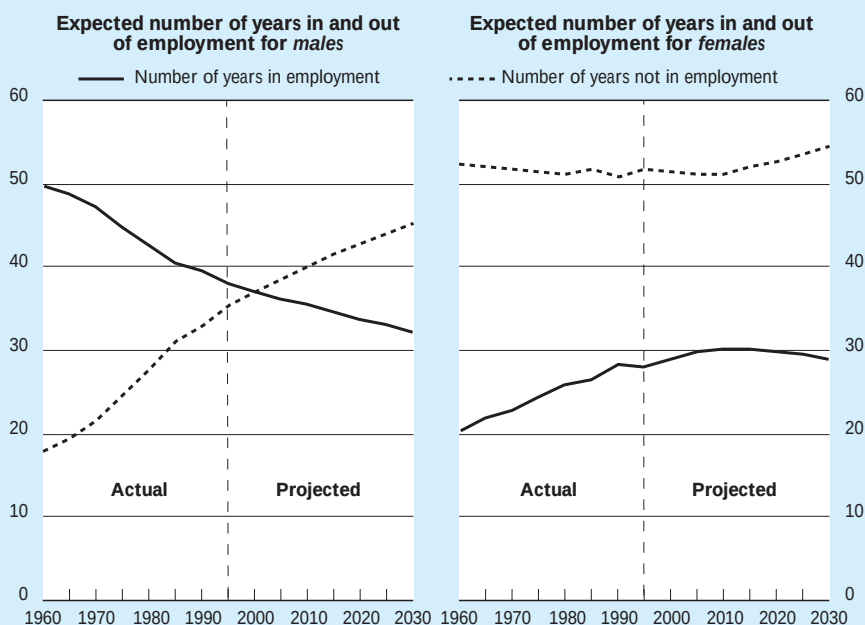
Source: OECD.

◆ Figure A2. *Large changes in the amount of time that individuals can expect to spend in employment*

This chart compares trends in expected years in employment and out of employment from Figure 1.1 and projects them into the future.

In a typical OECD country in 1960

- men lived some 68 years, of which 50 were spent in work;
- the other 18 years were mainly spent in infancy and school, and a short period of retirement;
- women worked in paid employment around 20 years on average.



Today,

- men live to 76 with only half of their lives – 38 years – spent in employment;
- the other 38 years are spent in much longer periods of time in education, unemployment and, especially, retirement;
- women live to 80 with 28 years spent in employment;
- women's employment will begin to fall after 2010. (See note below for the assumptions used in constructing the graph.)

Conclusion: If existing trends were to continue, by 2020 men would spend significantly more of their lives outside of work, and levels of employment rates for men and women would have become similar.

Note: The calculations are based on labour force data. A "typical" OECD country is an unweighted average of OECD Member countries for which data are available. Projections assume that recent trends in participation will continue except that, when women's participation rate reaches 90% of men's, it is assumed that both men and women will follow the same path towards earlier retirement. Unemployment rates are assumed to remain unchanged.

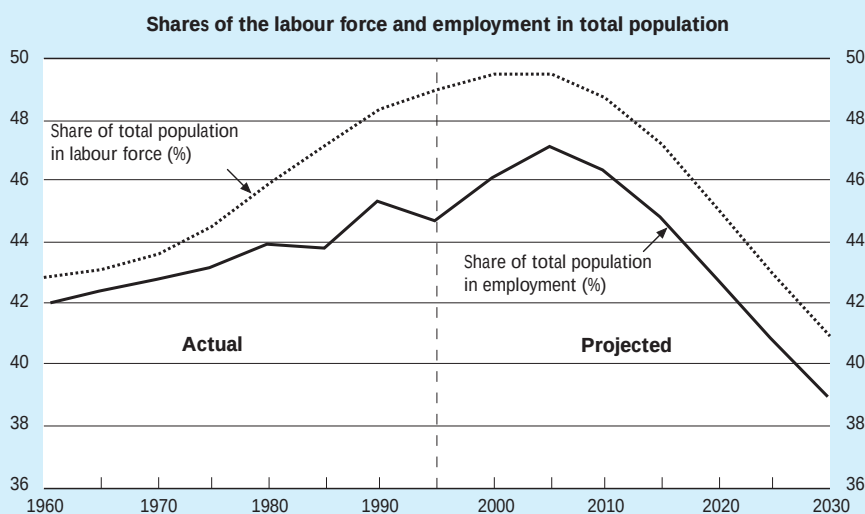
Source: OECD.

◆ Figure A3. *The time that a society devotes to employment will begin to fall*

This chart shows the combined effect of ageing and employment trends. At the level of the whole population, the trends are dominated by population ageing – the ageing of the “baby boom” generation which resulted from falling fertility rates in the post-war period.

- The baby boom generation is now of working-age, increasing the number of paid workers relative to non-workers (and helping offset the decline in the employment-population ratios for men).
- During the period 2010-2030 when the baby boom generation reaches retirement age all three phenomena – increasing life expectancy, labour force trends and population ageing – will begin to work together in reducing the amount of time that a society devotes to employment.

The chart shows the combined effect. It examines likely future directions in employment expressed as a portion of the total population. It also shows comparable data for the labour force (employed plus unemployed).



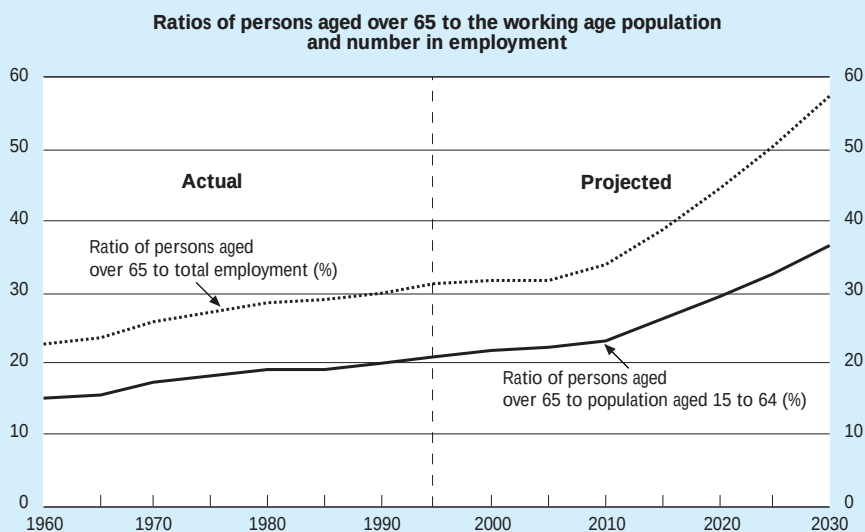
- The projected path of both the labour force/total population ratio and the employment/total population ratio assumes a continuation of existing trends in participation.
- The path of employment/total population ratio assumes that unemployment rates have fallen to 5% by 2005. If unemployment continues at present levels, the employment ratio would remain at about present levels until 2010 and then begin to fall.

Conclusion: the share of the population who are employed will drop between 2010 and 2030.

Source: OECD.

◆ Figure A4. *Fewer employees to support far more people in retirement*

The demographic and labour market trends greatly affect the numbers of employees who can provide support for people of pensionable age. Figure A4 provides two broad indicators of these effects for the same “typical” OECD country shown in Figure A3.



The *top line* shows estimates and projections of the ratio of those aged 65 and over to total employment. The rate of growth in this ratio gives a rough indication of the increased pension burden per employee if pensions were entirely funded through the wage bill.

- In 1960, the number of older people was about 22% of the number of employees. That is, for every older person there were over 4 employees to provide support.
- Currently, there are about 3 employees for each older person and that will continue for another decade.
- After 2010, the trend changes sharply. By 2030, the size of the older population will grow to 50%. That is, there will be only two employees for every older person.

These projections are not greatly affected by assumptions about the future state of the labour market:

- The chart assumes that unemployment has reached 5% by 2005.
- The future path has about the same shape whether one assumes that unemployment stays at current levels or that labour force participation trends persist or remain at present levels.

The bottom line shows the ratio of those aged 65 to those aged 15 to 64 – the familiar “old-age dependency ratio” used by demographers. It shows a similar pattern but does not take account of trends to earlier retirement.

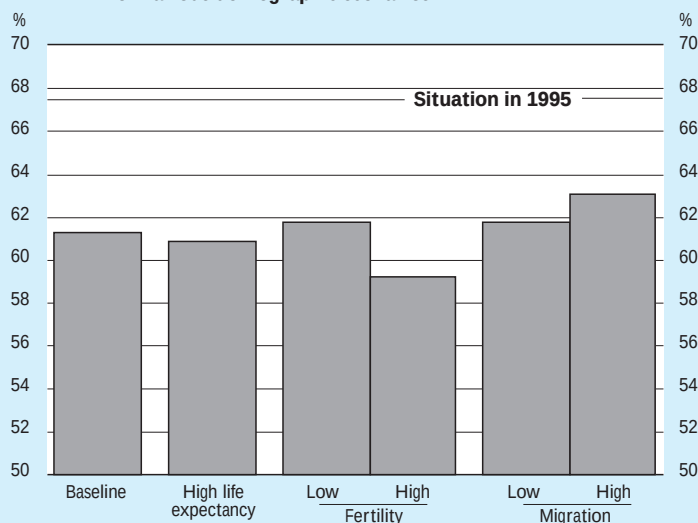
Conclusion: Demography poses an inescapable fiscal challenge in the period 2010 to 2030.

Source: OECD.

◆ Figure A5. *Different assumptions about demography make little difference*

The chart shows changes in demographic trends alone would not make a big difference in the projections. Demographic assumptions can make a big difference in the very long run, but not in the period to 2030. The per cent of people in these “working-age” years will decline under all likely demographic scenarios. High levels of net international migration produce the smallest decline (migrants tend to be of working age).

Share of adult population aged 15 to 64 as a percentage of total population in 2030, for various demographic scenarios



Fertility	1.	1.	1.	2.3	0.	1.
Life expectancy – Men	77.7	79.0	77.7	77.7	77.7	77.7
Life expectancy – Women	83.5	85.0	83.5	83.5	83.5	83.5
Migration of 1995 population per year	0.0	0.0	0.0	0.0	0.12	0.5

Conclusion: Demographic factors cannot, by themselves, solve the ageing challenge.

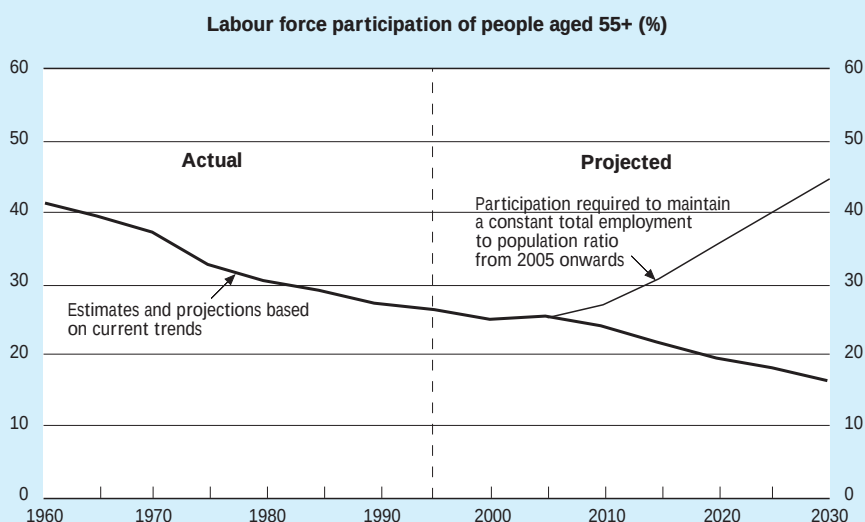
Source: OECD.

◆ Figure A6. **Solutions must involve reversing trends to early retirement**

This chart shows what would have to happen in order to keep employment-to-total population ratios constant after the year 2005, on the assumption that unemployment has reached 5% by then.

More employment among people under 54 years would help but is of limited scope.

- Given the priority on human resource investment, young people under 20 are likely to be staying longer in school, with no increase in employment likely.
- Higher participation rates by women could help in some countries. However, if that were the only factor at play in keeping employment/population ratios constant after 2005, it would involve impossibly fast increases and, indeed, female participation rates would reach 100% during the projection period.



- International migration could play a mitigating role, but the numbers involved would be exceedingly large. Taking the most extreme assumption that all the migrants were aged 20 to 54, the stock of workers from other countries would have to increase at the rate of 0.5% of the population every year throughout this period – if migration were to be relied on entirely to keep employment levels up.

More employment among older people:

The chart shows how much the participation of people aged 55 and over (both sexes) would have to grow to keep employment a constant percentage of the population.

- As before the heavy line shows data based on actual history and project based on a continuation of recent trends.
- The thin line shows that the needed increase in participation would indeed be large, but would still only result in participation rates for older workers that are only a little higher than they were in 1960.
- The main solution can only lie here since the number of workers is simultaneously increasing while the number of retirees is decreasing. However, the rate of increase would be too large in some countries for this to be the only response.

Conclusion: any successful strategy to the ageing challenge will have to result in people working longer in life, although other changes will also likely be needed.

Source: OECD.

Annex 2

GLOSSARY*

Accrual rate (Pension, financial market term)	The rate at which pension benefit builds up as pensionable service is completed in a defined-benefit scheme .
Accrual-basis accounting (Public management term)	Refers here to government accounts that recognise expenses when they are incurred (not when they are paid) and that include a valuation of some recognised assets and liabilities.
Accrued benefits (Pension, financial market term)	The benefits for service up to a given point in time, whether vested rights or not. They may be calculated in relation to current earnings or projected earnings.
Active ageing (Social policy, demographic term)	The capacity of people to make flexible choices in the way they spend time over life – in learning, in work, in leisure and in care-giving. Active ageing reforms are those that remove undesirable constraints on life-course flexibility and that strengthen support to citizens in making life-time choices.
Active investment management (Pension, financial market term)	A style of managing a portfolio which is designed to achieve, over a period of time, performance which is superior to index-based performance benchmarks.

* This glossary was in part drawn from the Pension Management Institute, reproduced in D. Blake (1995), *Pension Schemes and Pension funds in the United Kingdom*, Oxford University Press; E. P. Davis (1995), *Pension Funds, Retirement-Income Security and Capital Markets: An International Perspective*, Oxford University Press; World Bank, *Averting the Old Age Crisis*, 1994; *Issues in Pension Economics*, edited by Bodie, Shoven, and Wise (Chicago: University of Chicago Press, 1987; and Lawrence Thompson, *Predictability of Individual Pensions*. However, a number of the definitions have been adjusted.

Actuarial neutrality

(Pension, financial market term)

Used here to indicate pension arrangements which neither penalise nor unduly benefit those who retire earlier or later than the standard retirement age.

Actuarial assumptions

(Social policy, demographic term)

The set of assumptions as to rates of return, inflation, increase in earnings, mortality etc., used by the actuary in an **actuarial valuation** or other actuarial calculations.

Actuarial valuation

(Pension, financial market term)

An investigation by an actuary into the ability of a pension scheme to meet its liabilities. This is usually to assess the **funding level** and a recommended contribution rate based on comparing the **actuarial value of assets** and the actuarial liability.

Actuarial value of assets

(Pension, financial market term)

The value placed on the assets by the actuary. This may be market value, **present value** of estimated income and proceeds of sales or redemption, or some other value.

Advance-funding

(pre-funding, or funding)

The provision in advance for future liabilities by the accumulation of assets, normally external to the employer's business. Many company plans are advance-funded as are individual retirement accounts. Public pay-as-you-go pensions may be partly pre-funded when the government raises the contribution rate above that necessary to finance current benefits, in order to accumulate a fund to help pay future benefits.

Ageism

(Social policy, demographic term)

Discriminatory treatment of people based on their age, parallel to concepts of racism or sexism.

Annuity

(Pension, financial market term)

A series of payments, which may be subject to increases, made at stated intervals until a particular event occurs. This event is most commonly the end of a specified period or the death of the person receiving the annuity.

Annuity option

(Pension, financial market term)

The right to apply the proceeds of an insurance policy to buy an annuity in various pre-specified ways.

Asset allocation strategy (Pension, financial market term)	The long term apportionment of pension scheme assets between the various investment classes such as equities, fixed interest and cash.
Assets (Pension, financial market term))	The items such as investments, debtors, and cash to which the trustees of a pension scheme have title.
Baby-boom generation (Pension, financial market term)	Long-term fertility trends are downward. However following the second world war, there was a temporary (10 to 20 year) increase in births that, in some countries, resulted in a bulge in the age profile of the population – the baby boom. People in this baby-boom generation will reach retirement ages after about 2010 or so in most countries.
Basic pension (Pension, financial market term)	The single person's flat rate state pension paid to all who have met the minimum national-insurance contribution requirements. A widow, widower or in some cases a married woman may also claim a basic state pension on the contribution record of his or her spouse.
Beneficiary (Pension, financial market term)	A person entitled to benefit under a pension scheme or who will become entitled on the happening of a specified event.
Case management (Social policy, demographic term)	A co-ordinated means of delivering services (often a mix of services provided by different agencies) based on an assessment of the needs of the individual who is receiving the services.
Co-payment (Social policy, demographic term)	An arrangement where individuals who receive a service such as health care contribute to its financing
Company plans (Pension, financial market term)	See pension schemes
Consolidation (Fiscal, macroeconomic term)	A fiscal policy that aims to reduce public-sector deficits, or increase public-sector surpluses, by increasing taxes or reducing public-sector expenditure, or both. Usually employed in circumstances when deficits have already been reduced, and it is desired to reduce them further in the medium term.

**Current account
(balance, surplus or deficit)**
(Fiscal, macroeconomic term)

The current account balance is the difference between the value of exports of goods and services (including income from foreign investments) and the value of imports of goods and services (including income paid to foreign owners of domestic factors of production). Because of the national accounts identities, it is also equal to the difference between domestic saving and investment.

Deferred annuity
(Pension, financial market term)

An annuity which commences from a future date.

Defined-benefit plan
(Pension, financial market term)

A pension plan where benefits are prescribed by a formula. It is in distinction to a **defined-contribution plan**.

Defined-contribution plan
(Pension, financial market term)

A pension plan in which a periodic contribution is prescribed and the benefit depends on the contribution plus the investment return.

Dependency ratio
(Social policy, demographic term)

The number of people who are not of working age as a proportion of those of working age – usually defined as people under the age of 15 and over the age of 64 as a percentage of those aged 15 to 64.

Disability-free life expectancy
(Social policy, demographic term)

Also known as health expectancy. Refers to the number of years of expected life that are spent without functional limitations on daily living. Often the data take account only of severe disabilities that require institutional or other major interventions. Other data can include moderate disabilities that do not severely restrict activity.

Employment-population ratio
(Social policy, demographic term)

The percent of the total population (of all ages) who are employed. This in contrast to the “employment rate” used in the analysis of current employment and unemployment data; this latter refers employment as a percent of the working-age population (or other group being examined).

Employee Retirement Income Security Act of 1974 (or ERISA)
(Pension, financial market term)

Comprehensive US legislation regulating several key features of corporate pension plans and including the “prudent man” statutes and rules.

Final pensionable earnings/pay/salary
(Pension, financial market term)

The pensionable earnings, at or near retirement or leaving service, on which the pension is calculated in a final salary scheme. The earnings may be based on the average over a number of consecutive years prior to retirement.

Flat-rate benefits
(Pension, financial market term)

These are benefits, such as pension benefits, that related only to age and citizenship, not prior earnings. These usually have an anti-poverty objectives and are sometimes not “flat” in the sense of equal; i.e., they are sometimes means-tested or partially recaptured through the tax system.

Funding
(Pension, financial market term)

Same as advance-funding

Funding level
(Pension, financial market term)

The relationship at a specified date between the **actuarial value of assets** and the actuarial liability.

Funding plan
(Pension, financial market term)

The arrangement of the incidence over time of payments with the aim of meeting the future cost of a given set of benefits. *Possible objectives of a funding plan might be that, if the **actuarial assumptions** are borne out by events: a) a specified **funding level** should be reached by a given date and b) the level of contributions should remain constant, or should after a planned period be the standard contribution rate required by the **valuation method** used in the actuarial valuation.*

Gross debt; gross financial liabilities
(Fiscal, macroeconomic term)

The sum of outstanding government financial liabilities, but without subtracting the value of assets. Note that holdings of government debt by components of the public sector itself (e.g. social security fund holdings of government debt) are included.

Global agency

See Sectoral department

Guaranteed annuity option
(Pension, financial market term)

The right to apply the proceeds of an insurance policy to buy an annuity at a rate guaranteed in the policy.

Hybrid pension plan

(Pension, financial market term)

Plan that combines some features of the defined-benefit approach and some aspects of the defined-contribution method.

Indexation

(Pension, financial market term)

1. A system whereby pensions in payment and/or preserved benefits are automatically increased at regular intervals by reference to a specified index of prices or earnings.

2. It is also in common use as a method of investment management where the objective is to produce a return equal or close to that of a chosen stock market index.

Individualised advance-funded accounts

(Pension, financial market term)

See **Pension schemes**

Inflation proofing

(Pension, financial market term)

A term commonly used to describe **indexation**.

Insured benefit plan

(Pension, financial market term)

Plan whose defined-benefits the sponsor insures through an annuity policy with a life insurance company.

Intergenerational transfers

(Social policy, demographic term)

Usually refers to tax and transfers from one generation to another, *i.e.*, the government-operated distribution of funds among generations governments. Usually the even larger transfers of money and services that take place in family settings are excluded. This is distinct from *intragenerational* transfers which involve the distribution of funds among people of the same generations, *e.g.*, from richer people to poorer people.

Investment management agreement

(Pension, financial market term)

The document in which an investment manager sets out the basis upon which it will manage a portfolio. The document is normally countersigned on behalf of the pension fund trustees and forms the legal and regulatory framework for the relationship between the trustees and the investment manager.

Investment manager

(Pension, financial market term)

An individual or body to which the investment of the whole or part of the assets is delegated by the trust-

<i>term)</i>	ees in accordance with the provisions of the scheme documentation.
Investment performance measurement (Pension, financial market term)	The comparison of the rate of return of a given pension fund over a period with one or more of: <i>a)</i> the notional return of a model fund; <i>b)</i> the actual rates of return of other funds; or the movement in financial market indices over the same period.
Liabilities (Pension, financial market term)	Amounts which a pension scheme has an obligation to pay now or in the future. The amounts may not be immediately ascertainable and some liabilities may be dependent on the occurrence of future events.
Life-course trends or patterns	Life-course patterns refer to the way that time is allocated over the course of peoples lives to activities such as education and adult learning, paid and unpaid work, leisure, care-giving and receiving. These patterns are undergoing deep change with, for example, more time spent in school and far more time spent in leisure, especially in retirement.
Managed fund (Pension, financial market term)	An investment contract by means of which an insurance company offers participation in one or more pooled funds. Also used to denote an arrangement where the scheme assets are invested on similar lines to unit trusts by an external investment manager.
Matching (Pension, financial market term)	1. The policy of selecting investments of a nature, incidence or currency similar to that of the expected outgoings. 2. An accounting term, meaning that revenue and costs are matched with one another or “hedged” so far as their relationship can be established or justifiably assumed.
Multiple pillars (or tiers or elements) of retirement income (Pension, financial market term)	As used in the paper, refers to a recognition in policy-making of the wide variety of sources of income in retirement – pension and non-pension – each of which can be substituted for by individuals and all of which are influenced, to a greater or lesser extent, by public policy. It also recognises specific pension arrangements themselves vary widely from country to country and cannot be readily compared using tradi-

Net equivalent income

(Social policy, demographic term)

tional concepts such as three pension tiers (see **pension schemes**).

For some analytic purposes involving comparisons of individual incomes, it is useful to recognise family circumstances. That is, a family of four does not require twice the income of a family of two to maintain equivalent living standards, nor does a couple require twice the income of a single person living alone. Net equivalent income data makes an arbitrary adjustment to take household size into account.

Notional accounts

A centrally-managed, pay-as-you-go, notional contribution plan. In this model, each worker has an account in the central pension system institution which is credited with the contributions made by or on behalf of the worker. Account balances are also credited with the analogue of interest payments, but typically at a rate tied to the growth of wages – either the rate of increase in the average wage or the rate of increase in total wages. At retirement, the balance in the account is converted into a life annuity based on estimates of the cohort's expected life-span. The promises under notional accounts are similar to those under the defined-contribution model.

Occupational pension scheme

(Pension, financial market term)

An arrangement organised by an employer or on behalf of a group of employers to provide pensions and/or other benefits for, or in respect of, one or more employees on leaving service or on death or retirement.

Old age dependency ratio (elderly dependency ratio)

(Social policy, demographic term)

The population aged 65 and over expressed as a percentage of the working age population, usually defined as aged 15 to 64. This is a traditional measure. However, for many policy purposes, a better measure is the population aged 65 and over as percentage of total employment. This latter ratio takes account of changing labour force as well demographic trends.

Participation rate

(Social policy, demographic term)

The number of people in the labour force (unemployed plus employed) as a percent of the *population in the group in question* (such as a certain age group). It is

distinct from labour force as a percentage of the entire population.

Pay-as-you-go (PAYG)

(Pension, financial market term)

An arrangement under which benefits are paid out of revenue and no funding is made for future liabilities.

Pension Benefit Guaranty Corporation (or PBGC)

(Pension, financial market term)

The US federal agency established in 1974 by the ERISA legislation to insure the vested benefits of private pension plan participants.

Pension fund

(Pension, financial market term)

Strictly speaking the assets of a pension scheme but very often used to denote the pension scheme itself.

Pension plan

(Pension, financial market term)

A fund that is established for the payment of retirement benefits.

Pension plan sponsor

(Pension, financial market term)

The entity that establishes a pension plan for its employees, which may be a private business or a unit of state/local government. Sponsors may also be a union acting on behalf of its members or individuals acting for themselves.

Pension schemes (and the traditional three-tier pension concept)

(Pension, financial market term)

Pension schemes are the dominant form of retirement income. They are traditionally classified into the following three categories, although the variations are sufficiently large that this three-tier categorisation has not been used in this report (see **multiple pillars**):

1. Publically managed pension schemes with defined-benefits and pay-as-you-go finance, usually based on a payroll tax. They are mandatory for covered workers. In most OECD countries coverage is (near) universal. Variations involve partial advance-funding and notional individual accounts. In some countries, there are two quite different public schemes: an anti-poverty programme (often funded out of general revenues and not related to work experience); and an earnings-related programme designed to prevent major drops in living standards on retirement. The anti-poverty programme is often known as a **flat-rate pension**, even though it sometimes means-tested.

2. Occupational pensions are privately managed and offered by employers to employees. Within this category of funds there is a trend in OECD countries from defined-benefit and partially funded schemes toward defined-contribution schemes.

3. Personal pension plans in the form of saving and annuity schemes. These schemes are normally voluntary and based on fully funded defined-contribution plans. Tax incentives encourage the development of these plans, although at present their share of total income in old age is relatively small but growing.

Pensionkassen

(Pension, financial market term)

German term for legally separate but actually captive and in-house companies that manage pension funds.

Personal Equity Plan (PEP)

(Pension, financial market term)

This policy of the British government encourages individuals to increase their savings for retirement through exemption from taxation of gains from dividends and price appreciation in equity accounts.

Pre-funding

(Pension, financial market term)

Same as **advance-funding**.

Primary (balances, surpluses or deficits)

(Fiscal, macroeconomic term)

The difference between public-sector revenues and expenditures, excluding interest paid on government debt.

Provident fund

(Pension, financial market term)

See **Pension schemes**

Prudent person rule or principle (also known as prudent man rule)

(Pension, financial market term)

A number of countries do not impose quantitative limits but impose guidelines such as the so-called “prudent person rule” or “prudent person principle”. Under the prudent person rule, fiduciaries, trustees, and bank trust departments are expected to behave as careful professionals in making investment decisions. In the United States **the Employment Retirement Security Act** (ERISA) stipulates that the fiduciary must be knowledgeable enough to act as a careful professional, experienced and educated in trust and financial matters. “Prudence” is a design standard,

not a performance standard. This is reflected in the two most significant elements of the rule: i) the requirement to diversify; ii) the exhortation to favour “seasoned” situations that similarly-placed institutions find appropriate.

Replacement rates

(Pension, financial market term)

1. For individuals, the value of a pension as a proportion of a worker’s previous wage (sometimes the life-time wages, but usually for a specified period of years prior to retirement).

2. For groups, the average pension as a proportion of the average wages of the group

Retirement income system

(Social policy, demographic term)

All the resources available to families after the traditional standard age of retirement, including pensions, earnings, other forms of savings, non-pension taxes and transfers, use of housing assets, in-family transfers, etc. They are a system in that individuals plan based on all the components and substitute among them and, from a government perspective, in that all can be influenced (to a greater or lesser extent) by policies.

Sectoral department

(Public management term)

A department or agency of government with programme administration responsibilities such as those that administer pensions. This is distinct from “global” agencies with co-ordinating and representational functions such as ministries with responsibilities for older people and from “central” agencies such as cabinet offices or treasuries.

Solvency test

(Pension, financial market term)

An actuarial calculation to determine whether the assets of the scheme are sufficient to meet the statutory obligations to the members under the rules of the scheme.

Unfunded scheme

(Pension, financial market term)

A pension scheme for which the employer does not set aside and accumulate assets in advance of the benefits commencing to be paid. The basis is usually **pay-as-you-go**.

Valuation method

(Pension, financial market term)

An approach used by the actuary in an actuarial valuation. The main categories of approach are described under accrued benefits valuation method and pro-

Vesting

*(Pension, financial market
term)*

spective benefits valuation method. A variety of methods can be used but the method or methods used in a particular case should be adequately described in the actuarial report.

Vesting provisions in pension plans determine the minimum time required to qualify for full benefits.

*Annex 3***AGEING WORKING PAPERS**

Following are the main analytic documents prepared by the OECD secretariat or by contractors in support of the work on ageing found in this report. Prior to being available in printed form they can be found on the OECD Internet site. Also included in the Internet series are papers prepared by the ILO in conjunction with an ILO/OECD workshop on pension reform in December 1997.

The papers can be retrieved on the Internet at www.oecd.org. Most will be available by June 1998.

TITLE		Responsible and consultants staff*
PAPERS ON THE ECONOMICS OF AGEING		
AWP 1-1	The macroeconomics of ageing, pensions and savings: a survey	Richard Koh, Paul O'Brien, ECO
AWP 1-2	The macroeconomic implications of ageing in a global context	Dave Turner, Claude Giorno, Alain de Serres, Ann Vourc'h, Pete Richardson, ECO
AWP 1-3	Macroeconomic effects of pension reforms in the context of ageing populations: OLG simulations for seven OECD countries	Ketil Hviding, and Marcel Mérette, ECO
AWP 1-4	The retirement decision in OECD countries	Sveinbjörn Blöndal and Stefano Scarpetta, ECO
AWP 1-5	Microeconomic analysis of the retirement decision: United States	Joseph Quinn*, Richard Burkhauser*, Kevin Cahill* and Robert Weather*
AWP 1-6	Microeconomic analysis of the retirement decision: Germany	Stefano Scarpetta and Pablo Antolin*
AWP 1-7	Microeconomic analysis of the retirement decision: Italy	Raffaele Miniaci*
AWP 1-8	Microeconomic analysis of the retirement decision: United Kingdom	Raffaele Miniaci* and Elena Stancanelli*
AWP 1-9	Microeconomic analysis of the retirement decision: the Netherlands	Maarten Lindeboom*
PAPERS ON FINANCIAL MARKETS AND PENSION REGULATION		
AWP 2.1	Ageing populations and the role of the financial market systems in the provision of retirement income in the OECD area	Hans Blommestein, DAFPE
AWP 2.2	Private pensions systems: regulatory policies	André Laboul, DAFPE
PAPERS PREPARED FOR THE OECD/ILO WORKSHOP ON PENSIONS		
AWP 3.1	Adequacy and social security principles in pension reform ¹	Jean-Victor Gruat, ILO
AWP 3.2	Adequacy and poverty among the retired ¹	Richard Hauser, ILO
AWP 3.3	Incentives and disincentives to early and late retirement ² OECD-sponsored paper.	Richard Casey*, DEELSA
AWP 3.4	Retirement income systems: the reform process across OECD Countries ²	David Kalisch and Tetsuya Aman, DEELSA
AWP 3.5	Predictability of individual pensions ¹	Lawrence H. Thompson*
AWP 3.6	Comprehensive quantitative modelling for a better pension strategy ¹	Michael Cichon, Denis Latulippe, ILO
AWP 3.7	Retirement income: level, risk and substitution among income components ²	Axel Börsch-Supan*, DEELSA
AWP 3.8	Retirement income systems for different economic, demographic and political environments ¹	John Tumer, ILO

TITLE	<i>Responsible and consultants staff*</i>
PAPERS ON SOCIAL, LABOUR MARKET AND CARE-GIVING DIMENSIONS	
AWP 4.1 Work-force ageing: consequences and policy responses	Paul Swaim, Alex Grey, DEELSA
AWP 4.2 Long term care services to older people: a perspective on future needs	Stéphane Jacobzone, DEELSA
AWP 4.3 Resources on retirement	Marco Mira D'Ercole, DEELSA working with a research team consisting of Hans Baekgaard*, François Guillaumat-Taillet*, Gerome Accardo*, Anette Reil-Held*, Rosaria Marino*, Noriyuki Takayama*, Rob Alessie*, Kjell Jansson*, Jim Smith* and Axel Börsch-Supan*, under the team leadership of Richard Disney*
PAPERS COVERING THE NON-OECD WORLD	
AWP 5.1 Do funded pensions contribute to higher aggregate savings? A cross country analysis	Jeanine Baillu, Helmut Reisen, DEN
AWP 5.2 Fiscal alternatives of moving from unfunded to funded pensions	Robert Holzmann*, DEV
AWP 5.3 Liberalizing foreign investments by pension funds: positive and normative aspects	Helmut Reisen, DEV
AWP 5.4 The second-second generation pension reforms in Latin America	Monika Queisser, DEV
AWP 5.5 A model of global pension fund investment	Landis MacKellar*, Helmut Reisen, DEV
AWP 5.6 The Chilean Pension System	Joaquin Vial Ruiz-Tagle, Director of the Budget, and Francisca Castro, Counsellor, Ministry of Finance, Chile, PUMA
PAPERS ON OTHER DIMENSIONS	
AWP 6.1 The capacity for long-term decision making in seven OECD countries: the case of ageing	David Mathaisen*, PUMA
AWP 6.2 Ageing and technology	David Banta*, Elettra Ronchi, DSTI

* Consultant.

1. ILO-sponsored paper. Revised versions will be published by the ILO, forthcoming.
2. OECD-sponsored paper.

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