



PENSION MARKETS IN FOCUS

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The ongoing financial crisis has dealt a heavy blow to private pension systems. Between January and October this year, private pensions in the OECD area have registered losses of nearly 20% of their assets (equivalent to USD 5 trillion).

This fifth issue of Pension Markets in Focus takes a close look at the impact of the crisis and discusses possible policy interventions, both immediate and longer term. Some of the material contained will be further developed in the forthcoming edition of the Private Pensions Outlook, a new OECD publication.

Both defined benefit and defined contribution plans have been hit hard by the crisis. Funding levels in defined benefit plans are down by more than 10% on average, creating a funding gap at the end of October as high as USD 2 trillion. As the rate of company insolvency increases, benefits may be cut. Older members of defined contribution plans have also experienced large losses and risk having much lower income at retirement. Younger workers, on the other hand, may benefit in the long term as future pension contributions will be invested at much lower prices, hence raising the potential rate of return on investments and future benefits.

This second major crisis in less than ten years highlights the key role played by policymakers, regulators and supervisors in promoting prudent management of people's retirement savings. The OECD has contributed through the last few years with much new thinking on how best to address pension risks in both defined benefit and defined contribution systems.

While private pension regulation has evolved, there are still some unresolved issues, such as the appropriate design of default investment and pay-out options in defined contribution plans or the application of risk-based funding regulations to defined benefit plans. The OECD will be devoting much time in 2009 to examine these policy issues.

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HIGHLIGHTS

The financial turmoil which started with the subprime crisis in the United States in mid-2007 has dealt a heavy blow to private pension arrangements.

- By October 2008, the total assets of all pension funds in the OECD had declined by about USD 3.3 trillion, or 20% relative to December 2007. Including other private pension assets, such as those held in Individual Retirement Accounts (IRAs) in the United States and similar personal pension plans in other countries, the loss increases to about USD 5 trillion.
- Although the short-term impact is evidently negative, pension funds, by their very nature, have to work with a long time horizon and their performance should also be evaluated on this basis. If one looks at returns over the last fifteen years – up to October 2008 - a positive picture still emerges. For example, the average, annual real rate of return of pension funds was 8.5% in Sweden, and 6.1% in the United-States and the United Kingdom over this period.

What are the main implications of the financial crisis for people's retirement savings?

- For people paying into defined contribution pension funds, the impact of the crisis depends critically on the fund's asset allocation and the member's age. Older workers with high equity exposures are the most affected. Younger workers, on the other hand, may benefit from the higher potential investment returns on future contributions.
- In defined benefit pension funds, benefits are linked to individual wages, so the main policy concern is worsening funding levels. Members of these plans risk having their pension benefits cut, which is most likely if the sponsoring company goes bankrupt.

What are the possible policy reactions to the financial turmoil?

- To keep up with their pension funding requirements after disappointing investment returns, many companies may be forced to increase their contributions to defined benefit pension funds, which were already quite high as a result of recovery plans implemented after the 2000-02 stock market declines. Some regulators are considering giving pension funds and their sponsoring employers more time to allow funding levels to return to target levels in order to avoid further strain on employers when the general economic situation is deteriorating.
- For defined contribution plans, there is going to be greater policy focus on appropriate default mechanisms and the design of "autopilot" funds (such as target-date or lifestyle funds) that shift towards lower risk investments as retirement date approaches without the member having to intervene.
- Finally, in the context of the financial crisis and the rapid growth of defined contribution plans, effective financial education programmes and information disclosure have become more important to the well-functioning of the private pension system.

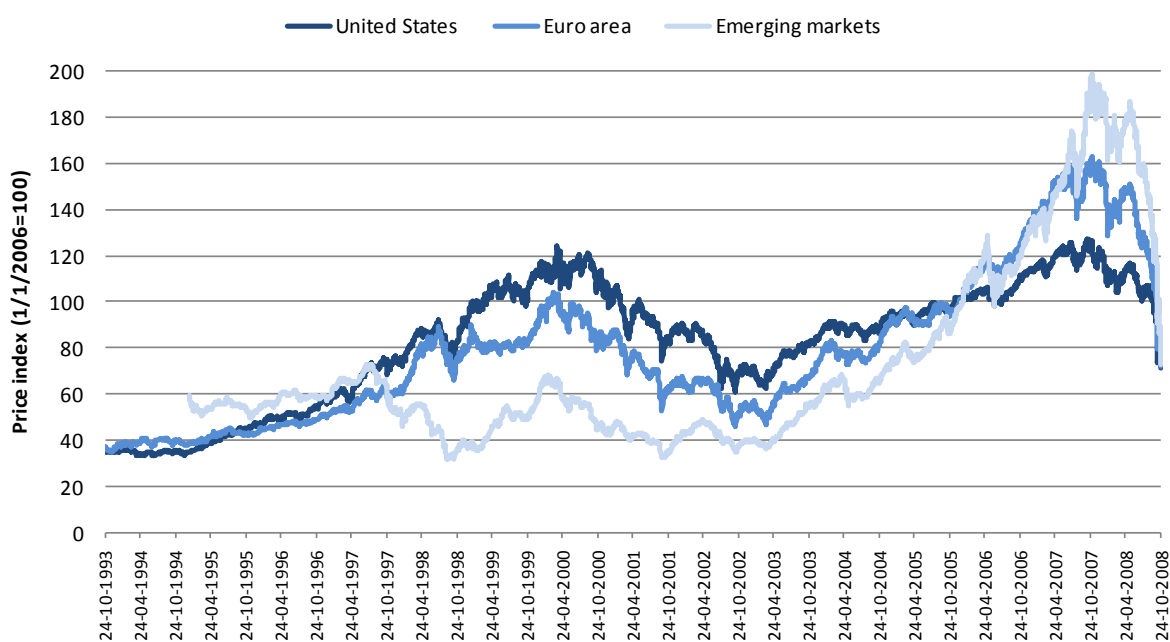
SPECIAL FEATURE: PRIVATE PENSIONS AND THE 2008 TURMOIL IN FINANCIAL MARKETS

The financial turmoil which started with the subprime crisis in the United States in mid-2007 has affected many aspects of the economy, including private pension arrangements.

Stock markets have fallen by nearly half from the start of the year to October 2008. The crash in equity markets (see Figure 1) has hit private

pension systems, leading to large investment losses and weaker funding levels.

Figure 1. Major stock market performance



Source: Thomson Financial Datastream.

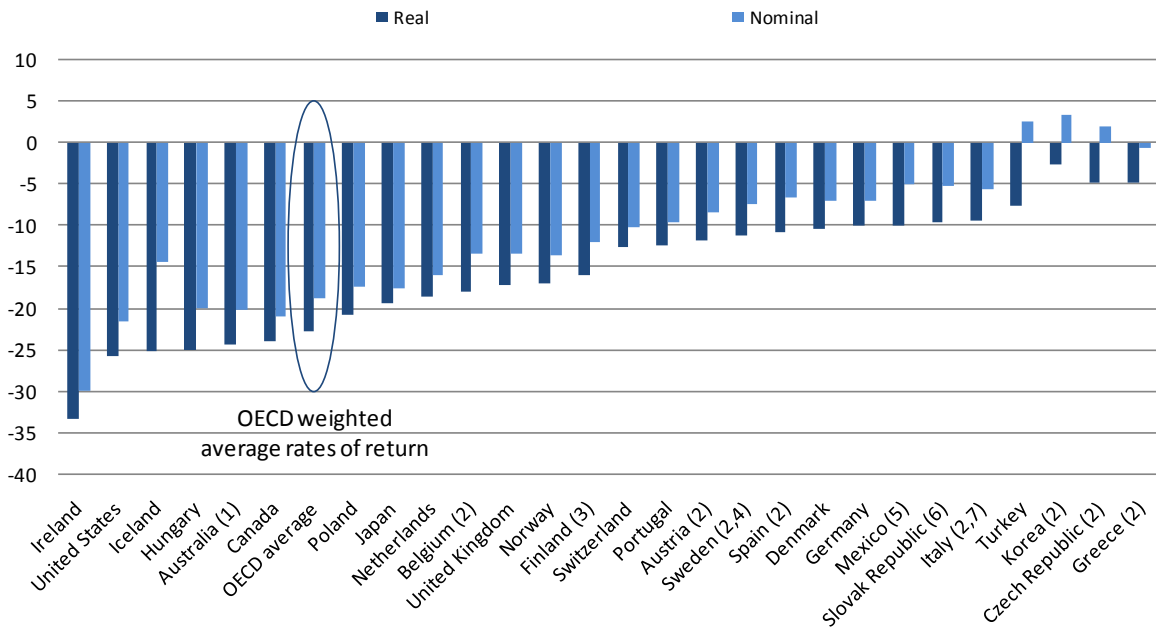
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By October 2008, the total assets of all pension funds in the OECD had declined by about USD 3.3 trillion, or nearly 20% relative to December 2007. Including other private pension assets, such as those held under personal plans in the United States (i.e. IRAs) and in other countries, the loss increases to about USD 5 trillion.

Pension funds have experienced a negative return of nearly 20% in nominal terms (22% in real terms) on average since the beginning of the year (see Figure 2). Most of the loss is accounted for by pension funds in the United States (USD 2.2 trillion out of the total OECD loss of 3.3 trillion) as they account for more than half of all OECD countries' pension fund assets and had the second worst investment performance. Only four other OECD countries saw pension fund returns worse than minus 20% in nominal terms. In absolute terms, the second largest loss was the United Kingdom's (USD 0.3 trillion), followed by Australia's (USD 0.2 trillion).

Investment losses on all OECD private pension plans (including individual retirement accounts and pension insurance contracts) are estimated at USD 5 trillion, 3.3 trillion of which in the United States alone. These losses, though substantial, are smaller than the decline in equity values. Pension funds have benefited from having diversified investment portfolios, often with a large proportion invested in bonds, whose rates of return are lower but more stable than those of equities. In December 2007, in 13 out of 22 OECD countries for which information was available, over 50% of assets were invested in bonds, and around 60% of these investments were in government bonds.

Figure 2. Nominal and real pension fund returns in selected OECD countries January-October 2008



Source: Various sources and OECD estimates.

The impact of the crisis on investment returns has been greatest among pension funds in countries where equities represent over a third of total assets invested, with Ireland the worst hit at -30% in nominal terms. Irish pension funds were the most exposed to equities, at 66% of total assets on average, followed by the United States, the United Kingdom, and Australia.

The full impact on investment returns, however, will only be revealed when the annual reports for 2008 are submitted by pension funds to their supervisory authorities. In particular, there is a lack of clarity over the valuation of some illiquid

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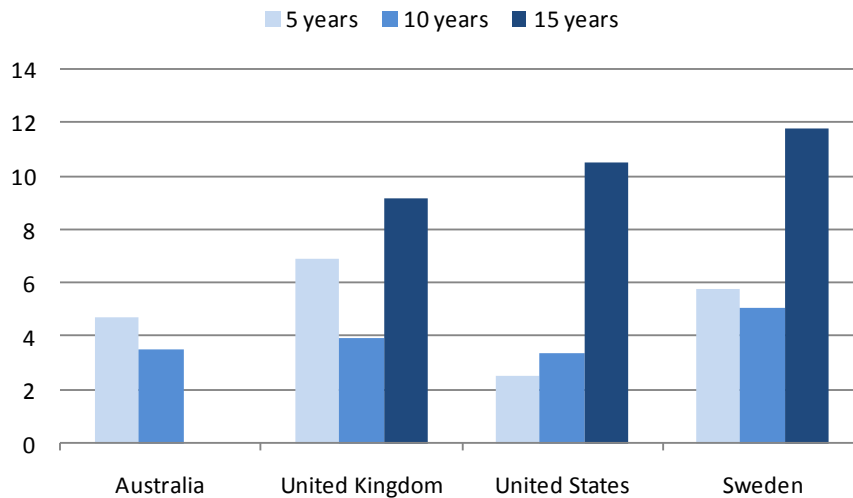
assets – those that cannot be turned into cash quickly – such as real estate or so-called structured products (that combine a periodic payment at a predetermined rate and another component, often the option to buy or sell an asset at some time in the future). Direct exposure to the “toxic” part of structured products and asset-backed securities may be as high as 3% of assets under management for the pension fund industry as a whole. However, allocations differ across countries and between funds, with some likely to face much greater losses than others.

Although the short-term impact is evidently negative, pension funds, by their very nature, have to work with a long time horizon and their performance should also be evaluated on this basis.

Previous experience of similar situations may be helpful in this regard. The decline in equity returns over 2000-02 was just as serious as in 2008, though the latest one has been much faster. Despite the severity and proximity of these two market downturns pension funds have had a positive performance over the last ten years and a rather healthy one over the last fifteen years, up to October 2008 (see Figure 3). For example, the average, annual nominal rate of return of pension funds over the least fifteen years was 11.8% in Sweden (8.5% in real terms), 10.6% in the United-States (6.1% in real terms) and 9.2% in the United Kingdom (6.1% in real terms). Focusing on a single year's return gives a misleading picture of the ability of pension funds to deliver adequate pensions

in old-age. Pension funds also have very small liquidity needs in relation to their total assets under management. This means that they do not need to sell assets at current low prices to meet benefit payments and other expenditures as they can rely on the regular flow of contributions and investment income, even if the latter is reduced. The main exception is defined benefit plans with frozen accruals. These plans rely largely on running down their assets to meet benefit payouts, so when asset values decline sharply, they cannot wait until the market recovers to sell and may have to sell at a loss. This is the case of many plans in the United Kingdom and increasingly in the United States.

Figure 3. Nominal average annual pension fund returns in selected OECD countries over the last 5, 10 and 15 years



Source: Various sources and OECD estimates.

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The longer-term outlook depends of course on what happens in the markets. Optimists could argue that the much faster drop in values compared to 2000-02 is a result of closer links in the financial system and that recovery could be rapid. Pessimists could point out that the previous crash was not followed by a major credit crunch and a deep recession across the developed economies as is the case today.

Whatever happens, if poor financial market performance continues, pension funds' ability to meet future obligations could be harmed. The effect could be important if, over several years, the real rate of return on a fund's investments remained significantly below the funds' long-term targets.

Implications of the financial crisis for retirement savings

For people paying into defined contribution pension funds, the impact of the crisis depends critically on the fund's asset allocation and the member's age.

In defined contribution systems, pensions depend directly on the market value of the assets held in individual accounts. A major drop in asset values may not matter much to younger workers who can expect the markets to recover overall in the long term. For workers close to retirement, on the other hand, large declines in asset values can mean permanent income losses if the money saved in the pension accounts must be used to purchase annuities at retirement. This is the case in many Latin American and Eastern European countries where defined contribution systems are mandatory.

However, many of these systems are relatively young, so the number of older workers affected is small. Moreover, in many of these countries, older workers are restricted in the type of investment portfolio they can choose. Default options, for those who do not make an active choice of investment, also tend to be conservatively invested.

The situation is different in other countries. For example, in the defined contribution systems of Australia and the United States the purchase of annuities at retirement is not mandatory. But the default investment option for older workers may often have as much as 50 to 60% of assets invested in equities. Even if these people maintain their savings in equities in the expectation of a recovery, retirement income will be at least temporarily lower.

In defined benefit pension plans, benefits are linked to individual wages, so the main policy concern is worsening funding levels.

The retirement income provided by defined benefit pension plans is in principle unaffected by changes in investment returns. However, lower asset prices worsen their financial solvency. Some OECD countries with large defined benefit systems such as Canada, Ireland, the Netherlands, Switzerland, the United Kingdom and the United States are reporting lower funding levels and in some cases large funding gaps (pension liabilities greater than assets).

It can be difficult to know the real situation of funds because of the accounting practices used by the pensions industry. The price of pension liabilities in company balance sheets is calculated using corporate bond yields which have a risk premium (or return) above government bonds. The calculation is based on the return on high-quality corporate bonds where normally there is little risk, so the premium is small. However, if these bonds are seen as more risky, as happened in 2008 when even large, well-established firms got into trouble, the risk premium increases. In some instances – e.g. the United Kingdom – this effect has largely countered the decline in asset values, on paper at least. However, if one looks at the funding levels reported by supervisory authorities – which are often based on more stable government bond yields – declines in solvency are substantial.

In Switzerland and the United States, the funding position of defined benefit plans has deteriorated by more than 10%, with rising bond yields partly offsetting the decline in asset values. Pension funds in the Netherlands have also experienced sharp falls in asset values, especially as they have an important exposure to the US markets in their equity portfolios. As the market discount rates used – which are

based on swap rates – have declined, the rise in the market value of liabilities has worsened the solvency situation further. Aggregate funding levels in the Netherlands had already fallen by nearly 10% between December 2007 and June 2008. Since then, the funding level has deteriorated further.

Members of defined benefit plans may experience benefit cuts, especially if the sponsoring company goes bankrupt.

The emergence of funding gaps is forcing pension funds and their sponsoring employers to establish a recovery plan to reduce the deficit. In most instances, the plan will involve additional employer contributions but in some cases benefits may be reduced. For example, in the Netherlands, where conditional indexation of benefits is widespread, pension funds will most likely react to lower funding levels by stopping the indexation of benefits to wage inflation until funding levels recover. Hence, pensioners' income will fall in real terms, while the real value of accrued benefits will be lowered in an equal manner. When funding recovers to a sufficiently high level, pension funds will make up for the lost indexation with higher benefits.

Participants may also suffer benefit losses if they lose their jobs before they complete the vesting period or if deferred benefits are not protected against inflation. Participants are also exposed to the risk that the employer goes bankrupt when the plan is underfunded. Some OECD countries, including Germany, Sweden, the United Kingdom and the United States, have guarantee funds that insure benefits (usually up to a certain level) against this. However, there are also increasing concerns about the ability of these funds to meet the possible large claims that could arise with a growing number of corporate failures. Governments may well be forced to bail out these guarantee funds.

Reactions to the financial turmoil

Backlash against private pension systems

One possible consequence of the financial crisis is that policymakers in some countries may seize the opportunity to shrink private components of the pension system (as the Argentine government did in October 2008), nationalising pension funds and bringing contributions and assets back into the public pension system. In some Eastern European countries there is also talk of allowing participants to go back to the public pension system, something which the Argentine

government did before seizing the private pension assets. Such decisions, taken in a rush, only contribute to the perception of panic and fail to acknowledge the achievements of private pension systems over the lifetime of participants.

Some governments may also point to the temporary weakness of private pensions to justify delaying necessary reforms to the public pension system. Such opportunistic messages should be countered with a long-term outlook, based on independent financial projections for both the public and private systems. The best

approach to pension provision is to use a mixture of sources of retirement income, including both public and private, as well the two main forms of financing (pay-as-you-go and funded pensions). Relying solely or largely on one source may be imprudent, as all systems face major risks of different sorts. The financial crisis means that investment risk is at the forefront of the minds of both the public and policymakers. However, public pension systems are under tremendous stress stemming from demographic ageing, and in some cases also by falling labour force participation rates. The financial crisis is also causing public debt to soar in many countries, making it more difficult for governments to finance public pension deficits.

Shifts in asset allocation

Pension funds can have a role as "market stabilisers", smoothing out fluctuations in prices by selling when markets are high and buying when they are low. However, in this latest crisis, some pension funds have sold part of their equity portfolios. In some countries, pension funds have reacted to the crisis by allocating new pension contributions to bank deposits and other instruments with government guarantees until the situation in capital markets stabilises.

A flight from equities is already happening in defined contribution plans in some countries where participants can choose portfolios. In countries with mandatory systems, investment returns are reported monthly or quarterly, which has led many participants to switch to lower-risk portfolios. Such behaviour, while seemingly rational from a short-term perspective, ultimately leads to lower pensions than if participants had stuck to their previous asset allocation into the long term. Participants risk missing out on the equity recovery and may only increase their equity allocations once the market becomes overvalued again.

In defined benefit plans, a shift in investments away from equities is also likely, though perhaps less pronounced than in defined contribution plans. One important driving factor is the implementation of standards and rules governing how funds value assets and liabilities and what they have to do to bring the ratio between the two into line. If the estimated value of assets is too low to meet legal requirements and the required funding level rises with the pension fund's exposure to equities, the funds may be forced to sell part of their equity holdings, even at a loss, during a downturn. This happened in Denmark in 2001-2 and again in 2008, before the regulator stepped in and relaxed the valuation standard.

Finland has also introduced temporary changes in the calculation of pension fund liabilities and solvency margins in order to reduce pressures on pension funds to sell equities. On the other hand, in the Netherlands, which also introduced risk-based funding regulations recently, pension funds appear to have so far retained their stabilising role, becoming net buyers of equities during the sell-off. However, as the funding level approaches the minimum solvency requirement of 105% (of liabilities), pension funds may decide to reduce their equity holdings.

The crisis may also lead pension funds to reconsider their alternative investments (hedge funds, private equity, commodities, etc) and strengthen their governance and risk controls. Many pension funds have been embracing alternative investments in a herd-like way, seeking the higher returns promised by these assets without fully understanding the underlying risks involved.

Some pension funds are also starting to move into the market for loans that fund indebted companies and buy-outs. This market is a potential boost to the lending system dominated by banks and a few investment funds. Some pension funds have been pursuing a strategy to diversify into credit for a number of years and consider the turmoil as a good buying opportunity. Sometimes, however, the bets have not paid off. For example, ABP, the large Dutch pension fund may have suffered major losses from an investment in Lehman Brothers made just before its insolvency.

Changes in risk management and security lending

The liabilities of defined benefit schemes are exposed to various risks (investment, interest rates, inflation, longevity), and to cover these, many pension funds have adopted strategies based on liability-driven investment (LDI) – investing assets in a way that takes into account the nature of their liabilities. Derivatives are increasingly used by pension funds to manage risk. The types of derivatives most used by pension funds are financial instruments that derive their value from interest rates (e.g. swaps) and are traded directly between two parties, without passing through a regulated exchange. There is evidence that the implementation of LDI using derivatives is slowing because of the credit crisis and in particular the possibility that the other parties to the agreement cannot honour it (counterparty risk).

The freezing of the credit and capital markets and their slow unravelling is complicating risk management by pension funds. And apart

from investment risk, defined benefit pension funds also have to deal with a longer-term risk, longevity. People are living longer and thus receiving payouts for a longer time, but there is much uncertainty over the future path of longevity. One way of dealing with this risk may be "longevity swaps": the pension fund pays the swap's counterparty an agreed revenue stream and receives an income that rises if longevity is higher than expected. However, this idea is not likely to prove very attractive in situations of great uncertainty and concerns over counterparty risk.

Financial market regulators have restricted short-selling of stocks. Short-selling is the practice whereby sellers sell a security they don't actually own yet, in the hope that they can buy it later at a lower price before having to deliver it.

Some pension funds participated in this type of transaction by lending stocks to speculators in exchange for a fee. Hedge funds often borrow stocks to implement popular strategies based on expected price differences of the stocks. Many pension funds have now stopped their stock lending practices since the fees did not justify the risk that they would not recover the value of the stock loaned. They also fear that they may have contributed to the financial crisis through these lending practices.

Forbearance over pension funding requirements

To keep up with their pension funding requirements after disappointing investment returns, many companies may be forced to increase their contributions to pension funds, which were already quite high as a result of recovery plans implemented after the 2000-2 stock market declines.

Policymakers seek to protect pension fund participants by setting funding levels sufficiently high. Employers may then have to make up the shortfall caused by lower asset values. Canada recently decided to give pension funds and their sponsoring employers more time to allow funding levels to return to their targets levels in order to avoid putting further strain on employers when the general economic situation is deteriorating. Pension funds in Ireland and the Netherlands have been given more time to prepare their recovery plans.

A lowering in the funding level targets is less likely as this would lower benefit security over the long term. On the other hand, there could be much debate on the suitability of statutory investment performance requirements on pension funds and the valuation standards for assets and liabilities. In Switzerland, for example, the government is considering a reduction in the minimum return that pension funds must guarantee, from 2.75% in 2008 to 2% in 2009. Questions are also being raised about the suitability of mark-to-market valuation for pension funds (an accounting practice that values assets and liabilities at current market prices rather than their book value, which is the original cost minus depreciation).

Towards a new regulatory agenda

Even before the 2008 crisis, there had been warnings about the need to reform private pensions. The OECD has been calling for stronger pension fund governance since the publication of a set of guidelines in 2001, which are currently being revised. The guidelines stress the need for effective monitoring of investment risks and performance and of the relationship between pension funds' assets and liabilities. Greater expertise and knowledge are required on pension fund boards, including the appointment of independent experts.

The OECD has also recently highlighted the interplay between scale and governance. Small pension funds are more prone to weak governance (and they are much more expensive to manage and supervise), so there

is a strong case to consolidate the pension fund sector through mergers in some countries.

Regulatory reform of both defined benefit and defined contribution systems should also be on the policy agenda. Some regulations intended to protect participants of defined benefit plans may actually make things worse by reinforcing the downward spiral in asset values. Even in a severe crisis, investors do not lose anything on an investment until they sell it at a less than they paid for it originally (or the company goes out of business). Yet in some countries, the rules do not allow funds to sit out a crisis and wait for values to rise again. They have to sell to maintain asset to liability ratios, and given the major role pension funds play in some markets, this drives prices down even further.

Mark-to-market accounting valuation and, in particular, the practice of linking minimum funding levels to investment risk may have reinforced this effect. Such risk-based funding regulations deserve close scrutiny. Further debate is also needed on the balance between funding flexibility and benefit security and on ways in which funding regulations could be made more countercyclical.

The crisis will lead to further closures of defined benefit plans as funding gaps widen and contribution requirements increase. Insolvency guarantee funds will also be active over the next couple of years bailing out the pension funds sponsored by bankrupt companies. As the defined benefit pension sector shrinks further over the coming years, policymakers should question the possible role of regulations in reinforcing this trend and consider ways to promote benefit security via hybrid pension arrangements and risk sharing,

For defined contribution plans, there is going to be greater policy focus on appropriate default mechanisms and the design of "autopilot" funds (such as target-date or lifestyle funds) that shift towards lower risk investments as retirement date approaches without the beneficiary having to intervene. Policymakers may need to provide guidance on the design of these defaults as is common practice in some mandatory defined contribution systems of Latin America, where default funds have a maximum allocation to equities that declines as the person approaches retirement. A key goal of this regulation is to reduce the "timing risk" of transforming an accumulated balance into a regular benefit stream (an annuity).

Policymakers should also give further consideration to the suitability of different investment strategies as default options, taking into account the extent of choice in the payout stage, the generosity of the public pension system and the level of contributions,

among other factors. Default investment strategies should be evaluated from the perspective of retirement income adequacy and predictability.

Better policy design is also needed for the pension pay-out phase of defined contribution systems. Some of the mandatory and default arrangements in place are far from safe and fail to integrate the accumulation and retirement stage in a coherent manner. In particular, making the purchase of annuities mandatory makes most sense in countries where public pension benefits are low. However, forcing individuals to purchase annuities goes against principles of free choice and may impose heavy costs on individuals when annuity rates are low or account balances have dropped as a result of adverse market conditions.

A more flexible approach that could be introduced as a default option for the pension pay-out phase is to combine 'phased withdrawals', where a defined part of the fund balance can be withdrawn each year, with deferred annuities that start paying benefits after a certain age, such as 85. Such deferred annuities could be bought at the time of retirement with a small part of the accumulated balance.

Finally, in the context of the financial crisis and the rapid growth of defined contribution plans in many countries, effective financial education programmes and information disclosure are becoming increasingly important to the well-functioning of the private pension system. Policy initiatives in this area should complement the regulations on investment choice and default options that already exist in some countries. As workers take more responsibility for saving for their own retirement, the role of policymakers changes but it remains of paramount importance to promote the adequacy and security of old-age income.

MAIN PRIVATE PENSION TRENDS OVER 2001-2007

Over the past two decades, there has been a marked shift towards funding and private sector management in pension systems, driven largely by the introduction of mandatory private pensions.

Funding has also become increasingly important within publicly managed pension systems. Many countries have established public pension reserve funds (PPRFs) to provide financing support to otherwise pay-as-you-go systems.

Private pension assets in OECD countries grew by 14.5% relative to GDP on average between

2001 and 2007. However, the expansion of private pensions has been uneven. The slow asset growth rate in some private pension systems raises concerns over retirement income adequacy. As public pensions have been cut back, policies to further develop private pension systems are urgently needed in some OECD countries.

In 2007 nearly USD 28 trillion assets were accumulated in private pension systems in the OECD area, of which more than 60% was held by the US private pension system (USD 17 trillion). The importance of private pension systems can also be gauged by looking at the market value of assets accumulated relative to the size of the economy. In relation to the national economy, the largest private pension system was Switzerland's with a ratio of private pension plan assets to GDP of 152%. The OECD-weighted average ratio of private pension assets to the area's GDP reached 111% in 2007.

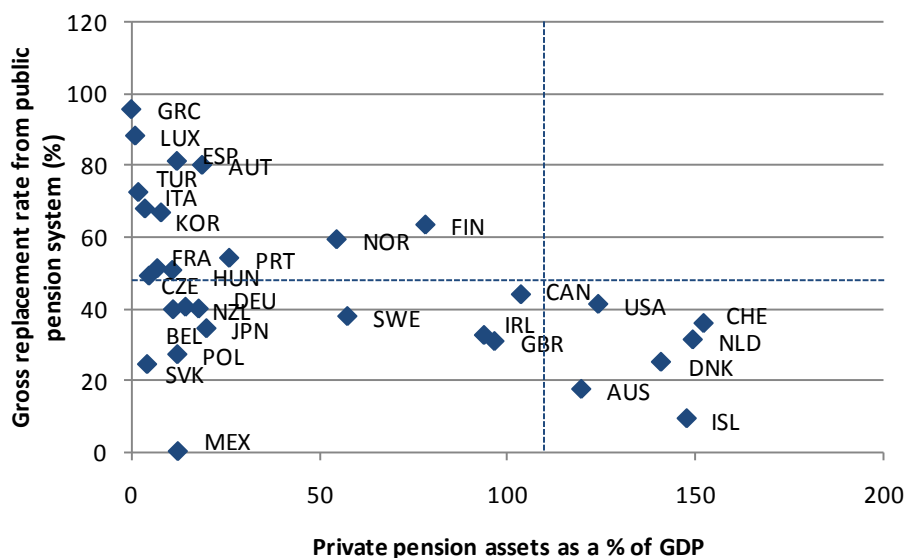
Figure 4 below compares the importance of private pension assets in the economy with the benefits that the public (pay-as-you-go) pension system is expected to pay to a worker entering the labour force in 2005 and earning the average wage. Benefits are shown as gross (before taxes) replacement rates – average workers' public pension benefits calculated as percentages of their final salaries before retirement, assuming a full career. The horizontal line in the middle of the graph shows the OECD-average gross replacement rate of the public pension system, while the vertical line shows the OECD-average ratio of private pension assets to GDP.

Figure 4 shows a group of countries, such as Australia, Denmark, Iceland, Netherlands, the

United States, and Switzerland, with large private pension asset pools that have correspondingly low public pension replacement rates (bottom right-hand quadrant). Most countries are, however, on the left-hand side of the graph, with small pools of asset, and either low (e.g. Mexico, Poland, and Slovak Republic) or high (e.g. Greece, Luxembourg, Turkey, Spain) replacement rates.

Some countries – those in the lower left quadrant in Figure 4 such as Mexico, New Zealand, Poland, the Slovak Republic, and Sweden – have recently reformed their pension systems, introducing mandatory private plans, and will therefore experience fast growth in private pension assets in the years to come. However, in another group of countries, including Belgium, Germany, and Japan, private pensions are voluntary. The combination of low public pension replacement rates and low ratios of private pension assets to GDP could be a sign of retirement income inadequacy. However, a more precise picture can only be obtained taking into account the level of ageing, the labour force coverage of the private pension system and access to other means of savings for retirement.

Figure 4. Private pension assets compared with the public pension system's gross replacement rate, 2007



Source: OECD Global Pension Statistics, Pensions at a Glance (2007).

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Although all the main types of institutional investors contribute to the financing of pension benefits, pension funds are losing some importance among the “traditional” classes of institutional investors.

Between 2006 and 2007, institutional investors' total assets increased by 11%. However, pension funds' assets rose only by more than 7%, while those of insurance companies and investment funds both grew by almost 13%. Growth of insurance assets was mainly driven by steady growth in retirement and other wealth accumulation products. The growing role of insurance companies and especially mutual funds may be also explained by the shift towards defined contribution arrangements in the United States, which has by far the largest institutional investor sector in the world.

On aggregate, the largest investors are investment funds, followed by insurance companies and pension funds. Public pension reserve funds, sovereign wealth funds, private

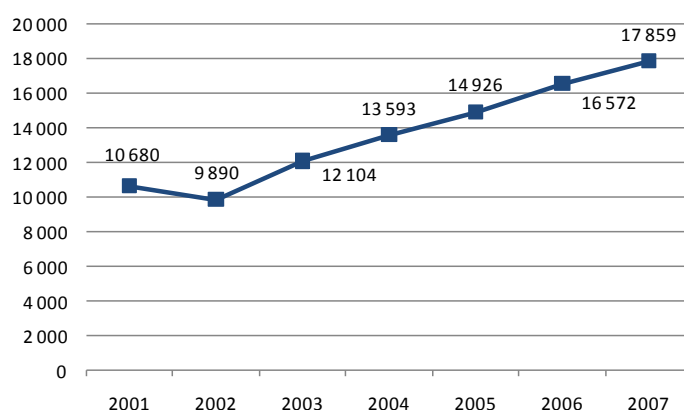
equity funds, and hedge funds still represent only a small fraction of the assets accumulated by these “traditional” institutional investors. Moreover, a large share of the assets held by private equity and hedge funds is the property of pension funds and insurance companies, giving these investors great clout in global capital markets. Insurance companies are also major players in the private pension systems of many countries, while investment funds are used by both pension funds and insurance companies as vehicles to channel their investments. Consequently, the financial assets held by investors are heavily pension-oriented. As much as 60% of the total volume of assets held by institutional investors worldwide has as its main purpose the financing of retirement benefits.

The aggregate OECD pension fund market is large, but the size of domestic markets varies considerably across countries.

OECD pension fund assets reached USD 17.9 trillion in 2007, which represents about 64% of the total assets in private pension arrangements. In absolute terms, the United States has the largest pension fund market, with

assets worth USD 10.2 trillion. However, its share of the OECD total pension fund assets has shrunk by 10% since 2001 as a result of faster growth among pension funds in other OECD countries.

Figure 5. Trends in total OECD pension funds assets, 2001-2007 (USD billion)



Source: OECD Global Pension Statistics.

StatLink  <http://dx.doi.org/10.1787/514834040536>

Total pension fund assets in the OECD area grew by 67% between 2001-2007, or 9% annually. Growth was relatively stable over the years, apart from the drop in 2001-2 caused by negative equity performance (see Figure 5).

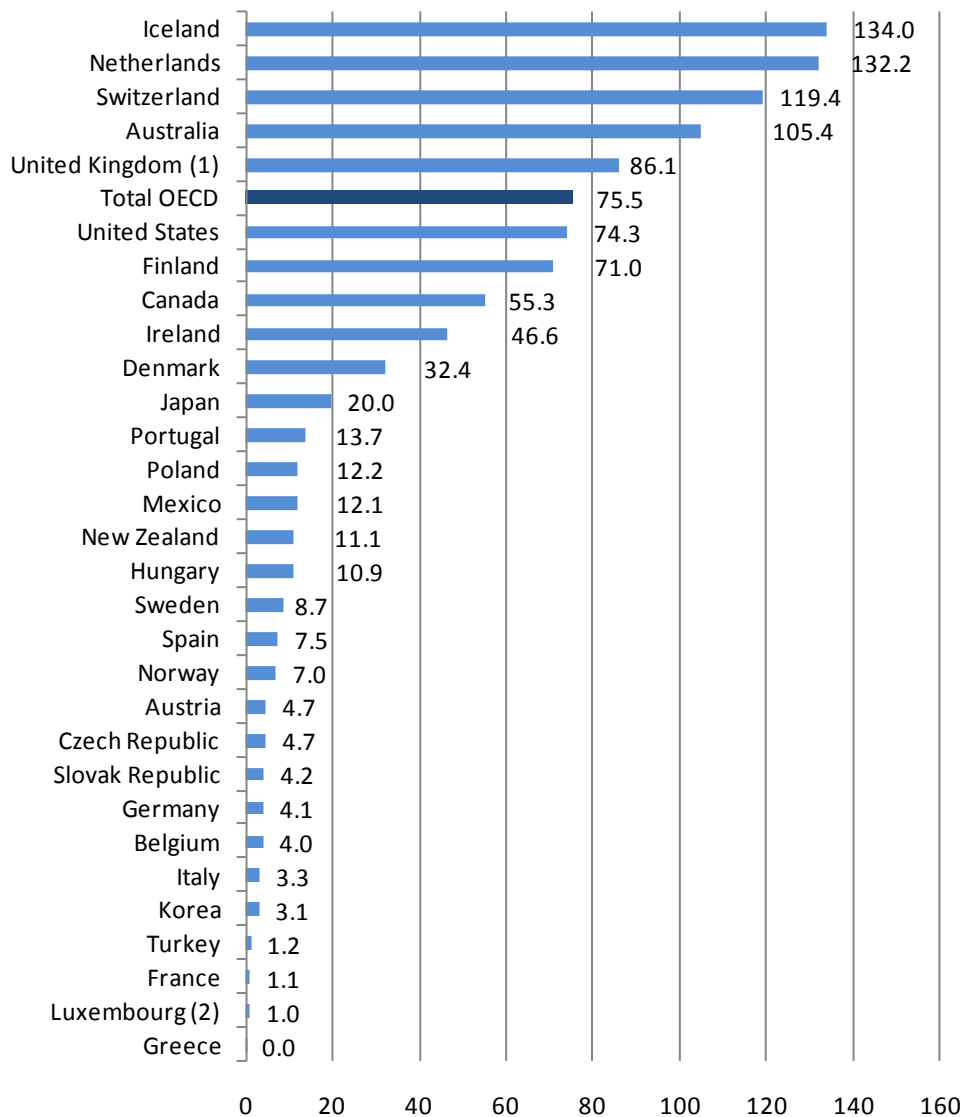
The OECD weighted average asset-to-GDP ratio for pension funds increased from 67.3% of GDP in 2001 to 75.5% of GDP in 2007, with

Iceland achieving the largest ratio in 2007, at 134%. As Figure 6 shows, in 2007, only four OECD countries achieved asset-to-GDP ratios higher than 100% – Iceland (134%), the Netherlands (132%), Switzerland (119%) and Australia (105%). In addition to these countries, the United Kingdom exceeded the OECD weighted average asset-to-GDP ratio of 75.5%. Pension fund assets were of varying

importance relative to GDP in the other countries. Only eleven out of thirty countries had assets-to-GDP ratios above 20%, which is considered the minimum for meeting the

OECD's definition of a "mature" pension fund market.

Figure 6. Importance of pension funds relative to the size of the economy in OECD countries, 2007
(As a percentage of GDP)



Source: OECD Global Pension Statistics.

StatLink  <http://dx.doi.org/10.1787/515072627583>

Pension fund investments: bonds and equities remain dominant in pension fund portfolios and investment regulations constrain pension fund investment portfolios in only a few OECD countries.

In most OECD countries bonds and equities remain the two most important asset classes, accounting for over 80% of total portfolios in 2007. Proportions of equities and bonds vary considerably across countries. Although there is, in general, a greater preference for bonds,

the reverse is true in some OECD countries, namely Belgium, where equities outweigh bonds by 48% to 21.5%; Canada by 50% to 34.4%; Germany by 31.3% to 28.8%; and the United States by 59.2% to 22.4%. A rise in the proportion of cash and similar assets (e.g.

money market instruments) was observed in 2006-7. Between 2001 and 2007 investment in equities in the OECD area decreased by 2.1%, while investment in bonds increased slightly by 0.3%.

In some OECD countries, on the other hand, pension funds either reduced their equity allocations (e.g. Denmark, the Netherlands, and Switzerland), or increased them only marginally (e.g. Spain and Sweden), while increasing their bond allocations substantially, as shown in Figures 7 and 8. Given the strong performance of equities over bonds in all these countries, pension funds in these countries engaged in a major rebalancing of their

portfolio from equities to bonds. A bigger and broader shift towards bonds and cash is expected in 2008.

Pension funds have also increased their diversification in foreign markets in recent years. Over 2001-2007, pension funds based in the euro area benefited from the elimination of currency risks, leading to greater international diversification in pension fund portfolios. Of the OECD sample surveyed, the Netherlands has the most internationally diversified pension fund portfolio, with 82% of total assets issued by entities located overseas and nearly 40% in currencies other than the euro.

Figure 7. Variations in bills and bonds allocations between 2001 and 2007 in selected OECD countries
(In percentage points)

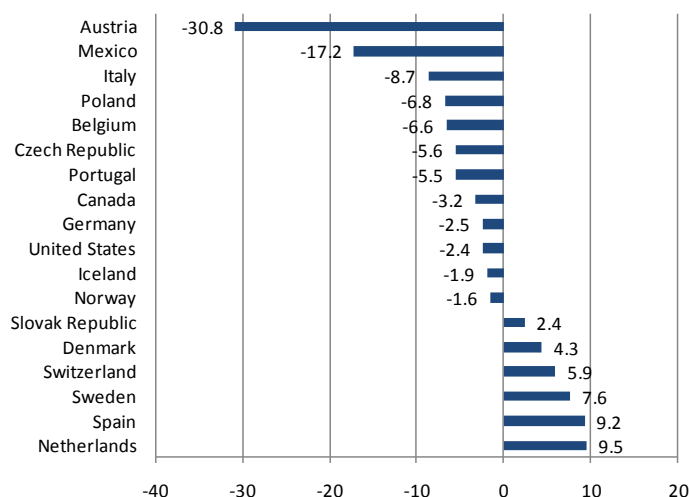
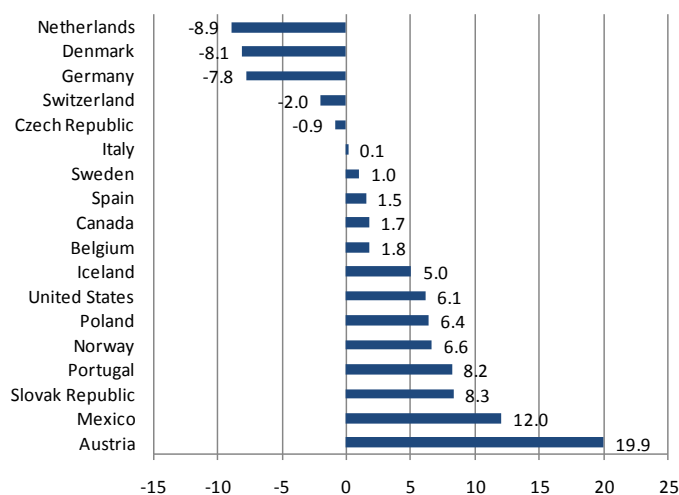


Figure 8. Variations in equities allocations between 2001 and 2007 in selected OECD countries
(In percentage points)



Source: OECD Global Pension Statistics.

StatLink  <http://dx.doi.org/10.1787/515304343452>

Net pension fund income had already turned negative in two OECD countries in 2007

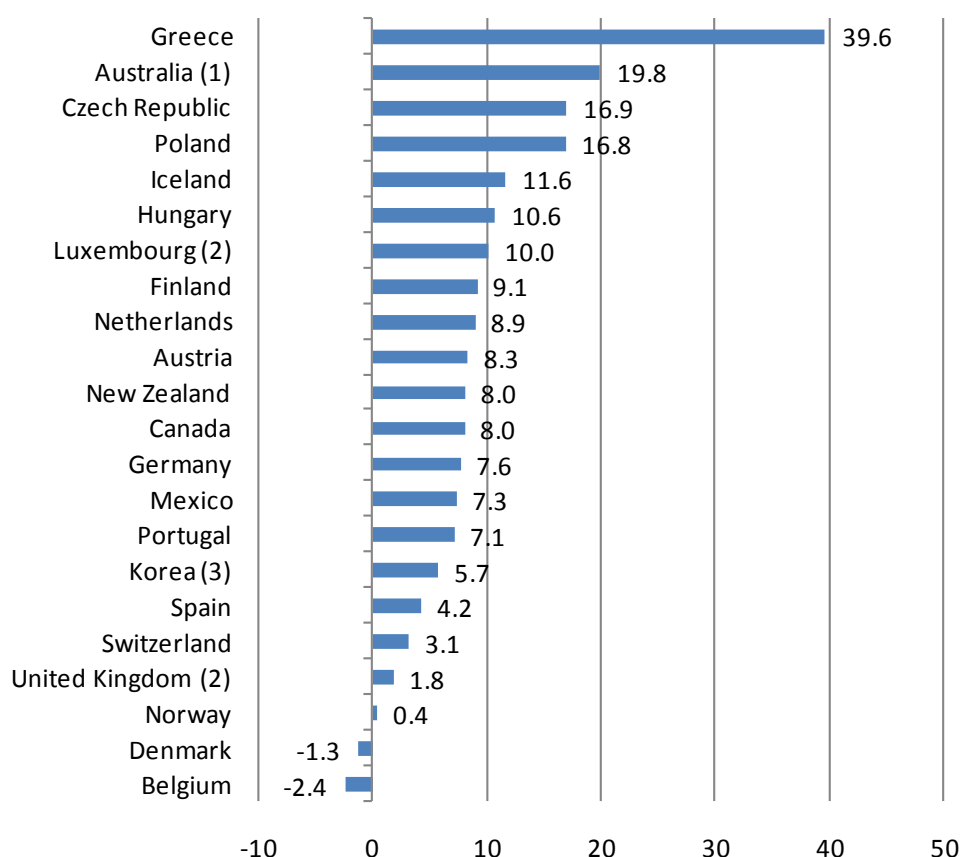
All OECD countries for which data were available, except for Belgium and Denmark, showed positive net income flows in 2007, mainly thanks to contributions and other forms of investment income, such as interest and dividends and increases in asset values (see Figure 9). 2007 was nevertheless substantially worse than the previous year, as net income was positive in all countries in 2006 and was generally higher. The negative income in Belgium and especially Denmark may have been exacerbated by equity sales. As equity markets crashed in 2008, many more countries are expected to have negative pension fund income.

In most OECD countries benefit payments have increased slowly but steadily over the last few years. In some countries however, benefit

payments increased more rapidly in 2007. This was the case for Australia, Denmark, and Hungary, for instance. Benefits should increase at a more rapid rate over the next few years as the baby boom generation starts to retire in large numbers.

Countries that experienced substantial increases in contributions included those with large defined benefit systems (e.g. Canada, Netherlands, Switzerland, and the United Kingdom). Contributions to such pension plans rose after 2001 as part of an effort to reduce plan deficits. The establishment of new defined contribution plans should also prompt substantial growth in contributions.

Figure 9. Pension funds' net income for selected OECD countries, 2007
(As a percentage of total assets)



Source: OECD Global Pension Statistics.

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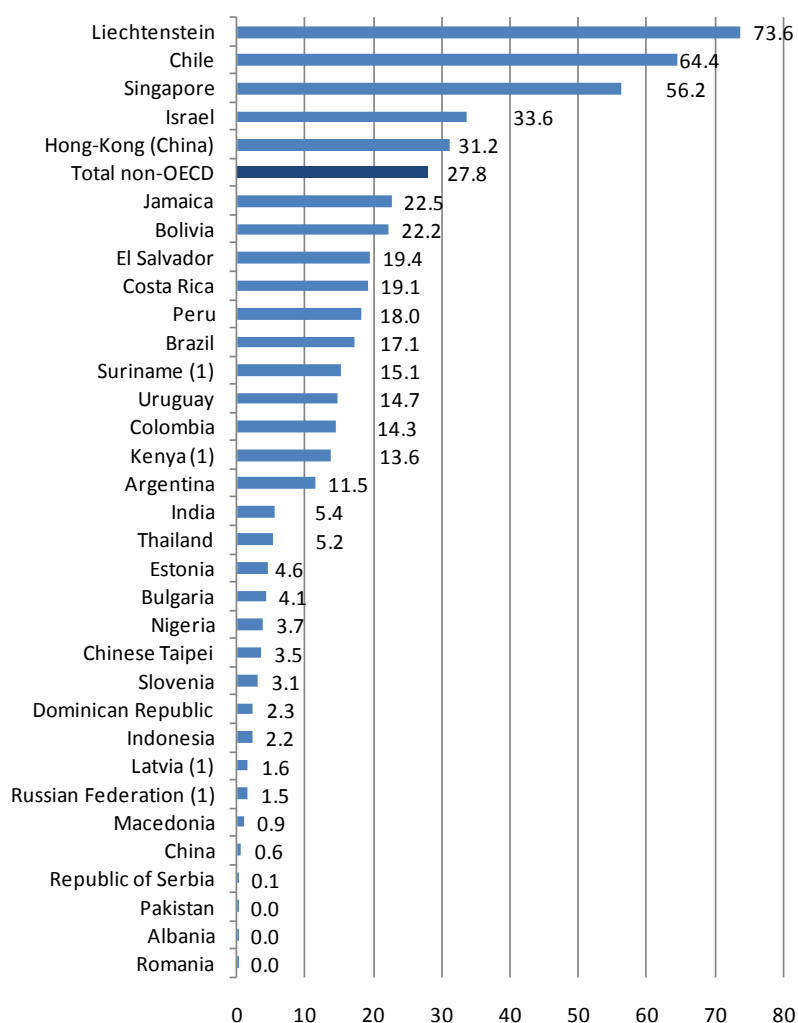
Large pension fund asset pools have been accumulated in non-OECD economies, although they remain smaller than in the OECD area

Non-OECD pension fund markets, although small in comparison to the OECD area (USD 0.8 trillion vs. USD 17.9 trillion), have grown rapidly in recent years. The Chilean pension market, for example, grew from USD 55.6 billion in 2004 to USD 105.6 billion in 2007, while pension fund assets in Slovenia increased from USD 0.5 billion in 2004 to USD 1.4 billion in 2007. As shown in Figure 10, pension fund markets in most non-OECD economies also remain underdeveloped in relation to the size of their respective economies. Only six countries of those shown in Figure 10 (Liechtenstein, Chile, Singapore, Israel, Jamaica and Bolivia) plus Hong Kong (China) had “mature” pension fund systems, with asset-to-GDP ratios above 20%. On the other hand, pension fund assets in the BRIC

countries were all relatively low in relation to GDP (17% in Brazil, 2% in the Russian Federation, 5% in India, and 1% in China).

Bonds and equities are the main asset classes in which pension funds in non-OECD economies invest, with bonds traditionally playing a bigger role. In most countries, bonds and bank deposits accounted for more than one-half of total assets in 2007. The highest equity exposures, above 40% of total assets, were observed in Hong Kong (China) and Peru. As in OECD countries, allocations to equities are expected to decline dramatically in 2008. The effect is likely to be most pronounced in countries such as Chile with large defined contribution systems where investors can switch to lower risk portfolios.

Figure 10. Importance of pension funds relative to the size of the economy in selected non-OECD countries, 2007 (As a percentage of GDP)



Source: OECD Global Pension Statistics.

StatLink  <http://dx.doi.org/10.1787/515651226876>

Assets accumulated in Public Pension Reserve Funds had grown rapidly until 2007 and portfolios had become increasingly diversified

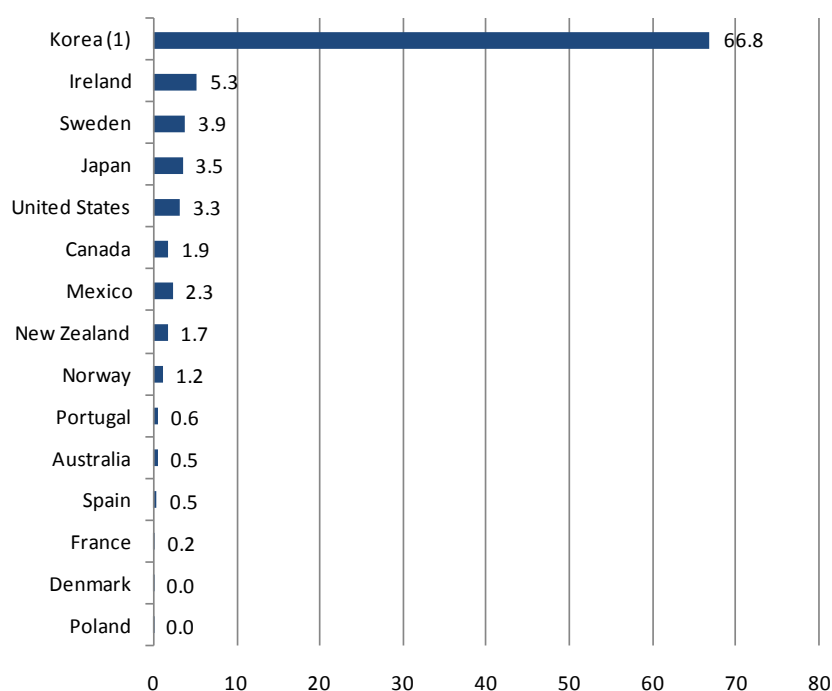
During the period 2001-2007 public pension reserve funds (PPRFs) continued their steady growth. By the end of 2007 the total amount of PPRF assets within the countries covered in this publication was equivalent to USD 4.3 trillion, compared to USD 2.6 trillion in 2001. The average growth rate of global PPRFs over the period 2001-2007 was 8.4%. The average asset-to-GDP ratio in 2007 was 13.1%, up from 12.6% in 2001. PPRFs are expected to play a major role in the future financing of public pension systems, alleviating the impact of population ageing on the public purse. Asset growth rates also show substantial variation across countries. In terms of total assets relative to the national economy, on average, PPRF assets accounted for 14.5% of GDP in the OECD area in 2007, compared to 4.5% in non-OECD countries.

PPRFs increased their equity allocation over the period 2001-2007. The trend of increased investment in equities might be due to reserve funds' search for high long-term returns and the ability to withstand short-term volatility. Bond allocations dropped during the same period in some countries and rose in others. Some PPRFs also started shifting some assets to alternative investments and foreign assets, brought about

by a pressure to increase returns and seek diversification benefits.

The importance of prefunding for the sustainability of public pension benefits can be gauged by comparing pools of assets in PPRFs with the annual value of public pension benefits. The larger this ratio is, the less likely that there will be a need to raise contributions or cut benefits to meet the swelling costs of population ageing. The government or social security institution can draw on the PPRFs' assets to pay part of the public pension system's rising costs. Figure 11 shows that in 2007 Korea's PPRF assets could cover more than 66 times its annual expenditure on public pensions. The Korean public pension system's level of prefunding is by far the highest and, would therefore seem the most sustainable of any OECD country. However, this high ratio is explained largely by the recent and gradual introduction of the public pension system. Currently, only a small percentage of the above-65 population receives public pension benefits. As the system matures and coverage of the elderly expands, this indicator of the extent of prefunding is expected to fall rapidly.

Figure 11. Ratio of public pension reserve funds' assets and public pension expenditure for selected OECD countries, 2006



Source: OECD, various national sources for public pension reserve funds' assets, and OECD estimates for public pension expenditures.

StatLink  <http://dx.doi.org/10.1787/514758301033>

Figure 11 also shows other countries where the ratio of PPRF assets to benefits is high. Interestingly, the second highest ratio is not in Japan, which has the largest PPRF in the world, but Ireland. Although Ireland only set up its PPRF recently, assets already cover more than five times the annual public pension expenditure. Norway features quite low down the list, but this is because the OECD only classifies the Government Pension Fund – Norway (formerly the Social Security Reserve Fund) as a PPRF. The much larger Government

Pension Fund – Global (formerly, the Norwegian Petroleum Fund) is classified as a sovereign wealth fund (SWF) by the OECD because by law its assets may be used for purposes other than financing the social security system. The degree of sustainability of public pension promises is likely to be substantially strengthened in countries like Ireland, where governments are setting aside large parts of their fiscal revenues in PPRFs.

ACKNOWLEDGEMENTS

The production of *Pension Markets in Focus* was made possible by the contributions of Delegates to the OECD Working Party on Private Pensions and its Task Force on Pension Statistics. The OECD gratefully acknowledges their effort to supply qualitative information contained in this publication as well as data compiled within the framework of the OECD Global Pension Statistics project.

Representatives from non-OECD countries provided input to the report through the OECD cooperation with the IOPS (International Organisation of Pension Supervisors).

This publication also benefits greatly from the comments and insights of Ambrogio Rinaldi from Covip (Italy) and Chairman of the OECD Working Party on Private Pensions (WPPP), Ross Jones from APRA (Australia) and Deputy Chairman of the WPPP, William Bortz from the US Treasury and member of the WPPP Bureau, and José Pavao Nunes from the Portuguese Pension Supervisory Authority and chairman of the OECD Taskforce on Pension Statistics.

Useful comments were also received from Edward Whitehouse, from the OECD Directorate of Employment, Labour and Social Affairs and Robert Ley, André Laboul, Pablo Antolín and Clara Severinson from the OECD Directorate of Financial and Enterprise Affairs. Support to the publication process was provided by Patrick Love.

NOTES TO BE TAKEN INTO CONSIDERATION WHEN INTERPRETING THE DATA

Within the framework of the OECD Global Pension Statistics' project the original data sources are official administrative sources (1). Data includes pension funds as per the OECD classification (Private Pensions: OECD Classification and Glossary, available at www.oecd.org/dataoecd/0/49/38356329.pdf). All types of plans are included (occupational and personal, mandatory and voluntary) covering both public and private sector workers.

Specific notes

Figure 2:

- (1) Official data up to June 2008 then complemented by OECD estimate up to October.
- (2) 2008 data refer to 30 September 2008.
- (3) Data refer to statutory earnings-related pension plans.
- (4) Data refer to occupational pension plans only.
- (5) Data refer to the mandatory and voluntary pension systems.
- (6) Data refer to balance funds.
- (7) Data refer to new pension funds (contractual and open) instituted after 1993 legislation.
 - Some data draw on official data received from OECD Working Party on Private Pensions Delegates (Australia, Austria, Belgium, Czech Republic, Denmark, Finland, Greece, Hungary, Ireland, Italy, Korea, Mexico, Poland, Portugal, Slovak Republic, Spain, Switzerland, and Turkey).
 - OECD average is an asset-weighted average.
 - For countries for which October 2008 investment returns were not available, the OECD Secretariat made a rough estimate.

Figure 4:

- Public pension system refers to pay-as-you-go financed (PAYG) pension plans.
- Data for Luxembourg refer to the year 2006.

Figure 6:

- (1) Pension fund asset data in 2007 are an OECD estimate.
- (2) Data for Luxembourg refer to the year 2006.

Figures 7 and 8:

- Equity investments in Germany are probably overstated, and therefore bond investments understated, due to the inclusion of investments in mutual funds that should be broken down and reallocated both to equity and to bond investments.

Figure 9:

- Net income = [Total contributions + Net investment income + Other income] - [Total benefits + Insurance premiums payable for allocated insurance contracts + Operational expenses + Other expenses].
- (1) Data for "Other income" and "Insurance premiums payable for allocated insurance contracts" are not available for self-managed superannuation funds.
 - (2) Data refer to the year 2006.
 - (3) Data do not include employer-sponsored defined benefit and defined contribution pension plans.

Figure 10:

- Total non-OECD represents non-OECD average assets as a percentage of GDP, weighted by total assets.
- (1) Data refer to the year 2006.

Figure 11:

- (1) If the ratio is recalculated by supposing that all people over 65 years old in Korea get the average replacement rate, the ratio would drop to 1.8

Through the last couple of years, the OECD Global Pension Statistics' project has been receiving financial supports by voluntary contributions from both the public and private sectors, namely the IOPS, the European Commission, Allianz Global Investors, ABI (American Benefits Institute), COVIP, EFFAS-EBC, ING Group, Pioneer Investments and the Portuguese Pension Supervisory Authority.

OECD seeking additional partners

In the framework of the OECD Global Pension Statistics' project, the OECD Financial Affairs Division is seeking additional partners from both the public and the private sector. Should your organisation be interested or should you require more information, please contact:

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“OECD PRIVATE PENSIONS OUTLOOK”, FORTHCOMING IN JANUARY 2009

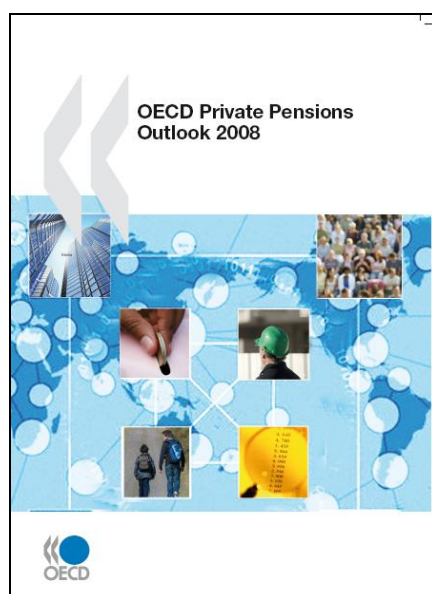


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NEWS IN BRIEF

2008 OECD WORKING PAPERS ON PRIVATE PENSIONS

The OECD Private Pension Unit posted new Working Papers are available on the OECD website: <http://www.oecd.org/daf/fin/wp>

- WP27: Fees in Individual Account Pension Systems: A Cross-Country Comparison
- WP26: Forms of Benefit Payment at Retirement
- WP25: Policy options for the payout phase
- WP24: National Annuity Markets: Features and Implications
- WP23: Accounting for Defined Benefit Plans: An International Comparison of Exchange-Listed Companies
- WP22: Description of Private Pension Systems
- WP21: Comparing aggregate investment returns in Privately Managed Pension Funds: an initial assessment
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- WP15: Governance and Investment of Public Pension Reserve Funds in Selected OECD Countries
- WP14: Sovereign Wealth and Pension Fund Issues

RECENT OECD MEETINGS ON PRIVATE PENSIONS

OECD Seminar on the Payout Phase of Pensions, Annuities and Financial Markets: 12 November 2008, Paris, France

Representatives from OECD governments, academia and private sector met during a seminar on "the payout phase of pensions, annuities and financial markets" to discuss proposals to support private pension systems, and in particular improve the management of risks in the retirement stage of individual account (defined contribution, DC) pension systems. The seminar discussed the impact of the financial crisis, as well as longer term issues affecting the sector such as increasing life expectancy.

Both defined benefit and defined contribution systems have been badly affected. In DC pension systems, negative returns translate directly into a smaller pension pot. While young workers have a long period to make up these losses, for individuals close to retirement who expect or are required to buy an annuity with their savings these declines in asset values can represent an irremediable decline in living standards in old age. In DB systems, the main worry is the decline in funding levels (5-15 percentage point decline, depending on the discount rate used), with worse data likely to be reported at year end.

From a financial stability standpoint, one major concern is that pension funds in some countries are reacting by selling part of their equity portfolios, putting further downward pressure on equity prices. Fair valuation methods and quantitative risk-based valuation seem to be partly responsible for this pro-cyclical behaviour.

http://www.oecd.org/document/55/0,3343,en_2649_34853_41668791_1_1_1_1,00.html

OECD/IOPS Global Forum on Private Pensions: Mombasa, Kenya, 30-31 October 2008

At the occasion of the International Organisation of Pension Supervisors (IOPS) Annual General Meeting - held on 30th October in Mombasa Kenya – the Membership approved a set of 'Guidelines for the Assessment of Pension Funds by Supervisory Authorities', providing good practices for members in relation to their regular monitoring and in-depth inspection work. Also at the AGM, Ms. Solange Bernstein, Supervisor of Pension Funds in Chile, was appointed as Chair of the Organisation's Technical Committee (replacing Aerdt Houben from De Nederlandsche Bank), with Mr. Will Price of the UK's Pensions Regulator appointed as Vice Chair. Mr. Edward Odundo, Chief Executive of the Retirement Benefits Authority of Kenya, takes over as Vice President of the IOPS.

The IOPS Technical Committee also met in Mombasa, discussing the impact of the current financial crisis on pension funds around the world and the subsequent response of supervisory authorities. The Committee continues to work on a range of topics, with a work on a major project to develop a 'Toolkit' for the risk-based supervision of pension funds continuing into 2009.

The IOPS meetings were followed by a joint OECD/ IOPS Global Forum on Private Pensions, which focused on the African region. Papers on the Kenyan pension systems and providing an overview of the pension systems in Africa were presented, with other sessions discussing key challenges for the region – namely financial education, informal sector pension coverage and pension fund investment in infrastructure. The papers and presentations from the meeting are available on the OECD and IOPS websites

http://www.oecd.org/document/9/0,3343,en_2649_34853_41005769_1_1_1_1,00.html

<http://www.iopsweb.org>