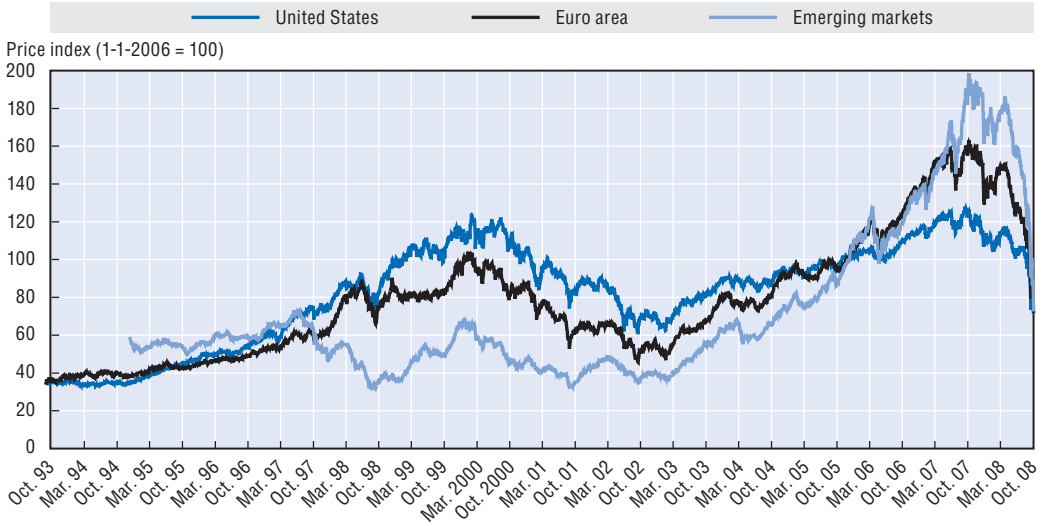
Special Feature: Private Pensions and the 2008 Turmoil in Financial Markets

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 (see Figure S.1). The crash in equity markets has hit private pension systems, leading to large investment losses and weaker funding levels.

Figure S.1. **Major stock market performance**



Source: Thomson Financial Datastream.

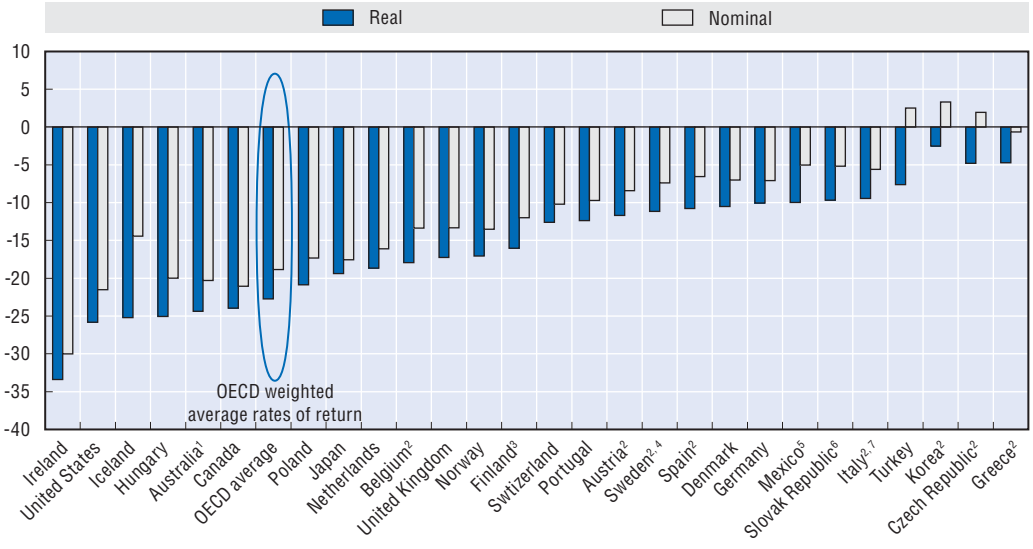
StatLink http://dx.doi.org/10.1787/514582014352

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 (individual retirement accounts – IRAs) and in other countries, brings the loss to about USD 5 trillion.

Pension funds experienced a negative return of nearly 20% in nominal terms on average (22% in real terms) over January to October 2008 (see Figure S.2).[1] Most of this USD 3.3 trillion loss is accounted for by the 2.2 trillion lost by pension funds in the United States. The US funds 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

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

In per cent



Note: OECD average is an asset-weighted average.
Some data draw on official data received from Delegates to the OECD Working Party on Private Pensions (Australia, Austria, Belgium, Czech Republic, Denmark, Finland, Greece, Hungary, Ireland, Italy, Korea, Mexico, Poland, Portugal, Slovak Republic, Spain, Switzerland, and Turkey).

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 voluntrary pension systems.
6. Data refer to balance funds.
7. Data refer to new pension funds (contractual and open) instituted after 1993 legislation.

Source: Various sources or OECD estimates.

StatLink http://dx.doi.org/10.1787/514583284066

negative pension fund returns greater than 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.

The impact of the crisis on investment returns has been greatest among pension funds in the 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 assets – those that

cannot be turned into cash quickly – such as real estate or so-called structured products (which 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.

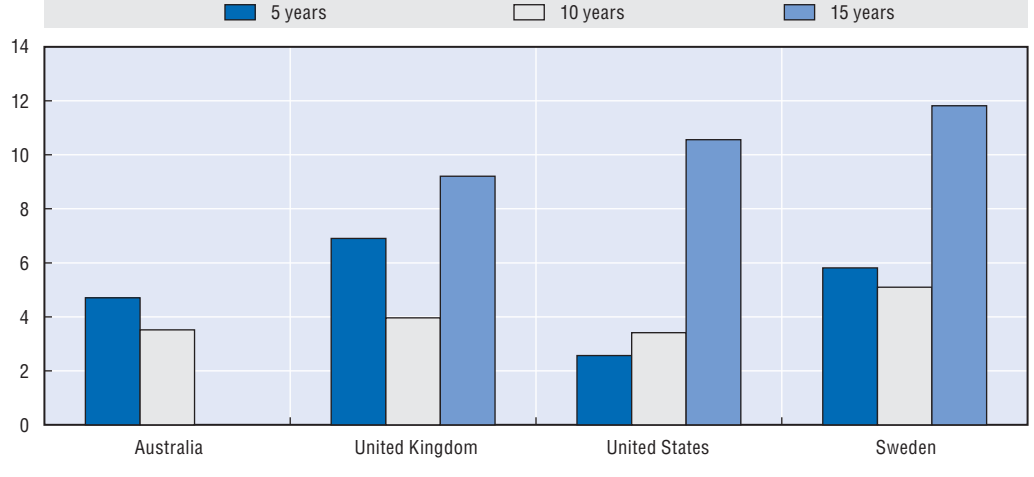
Although the short-term impact is evidently negative, pension funds, by their very nature, have to work with a long time horizon and their performance should also be evaluated on this basis.

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 fund performance has been positive over the last ten years and rather healthy over the last fifteen years (see Figure S.3). For example, the average, annual nominal rate of return of pension funds over the last 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.

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

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



Source: Various sources and OECD estimates.

StatLink http://dx.doi.org/10.1787/514627072105

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 lower at least temporarily.

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.

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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 as 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 uppermost in 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 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 lead 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 2001-02 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 has 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

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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 2000-02 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

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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.

Note

1. This is an OECD average calculated on the basis of official data and estimates. Eighteen countries provided the OECD Secretariat with preliminary data for the period January to October 2008 (*i.e.* Australia, Austria, Belgium, the Czech Republic, Denmark, Finland, Greece, Hungary, Ireland, Italy, Korea, Mexico, Poland, Portugal, the Slovak Republic, Spain, Switzerland and Turkey). For countries for which investment returns were not available, the OECD Secretariat made estimates. Estimated figures were obtained by applying the variation of an index of cash, equities and bonds during 2008 to the asset allocations of pension funds at the end of 2007.

Acronyms, Symbols and Conventional Signs

AFP	Contractual Early Retirement Plan
AGIRC	*Association Générale des Institutions de Retraite des Cadres*
ALM	Asset Liability Management
APRA	Australian Prudential Regulation Authority
ARRCO	*Association des Régimes de Retraites Complémentaires*
ASSEP	*Association d'Épargne Pension*
AVC	Additional Voluntary Contributions
CBFA	*Commission Bancaire, Financière et des Assurances*
CEE	Central and Eastern Europe
CONSAR	National Commission for the Retirement Savings System
CPP	Canadian Pension Plan
CSSF	*Commission de Surveillance du Secteur Financier*
DB	Defined Benefit
DBO	Defined Benefit Obligation
DC	Defined Contribution
TyEL	Earnings-related provisions for private-sector workers
EEA	European Economic Area
EET	Exempt-Exempt-tax
EPI	Employee Pension Insurance
EPF	Employees' Pension Fund
FMA	Financial Market Authority
GDP	Gross Domestic Product
GPS	Global Pension Statistics
HMRC	HM Revenue and Customs
IBA	Income Base Amount
IKE	Individual Retirement Account
IRA	Individual Retirement Account
ITP	Collectively bargained pension plan for white-collar employees
KNF	Polish Financial Supervisory Authority
LDI	Liability-Driven Investment
LO	Confederation of Trade Unions
MO	Mandatory Occupational
MP	Mandatory Personal
NHO	Confederation of Norwegian Business and Industry
OFE	Open Pension Fund
PAMC	Pension Asset Management Company
PAYG	Pay-as-you-go

PEE	*Plan Épargne Entreprise*
PERCO	*Plan d'Épargne pour la Retraite Collectif*
PERP	*Plan d'Épargne Retraite Populaire*
PIP	Personal pension plan set up through life insurance contract
PPE	Employee Pension Fund
PPM	Premium Pension Authority
PPRF	Public Pension Reserve Fund
PRSA	Personal Retirement Savings Account
QMO	Quasi-Mandatory Occupational
RAC	Retirement Annuity Contract
S2P	State Second Pension
SAF	Swedish Employers' Confederation
SEPCAV	*Société d'Épargne Pension à Capital Variable*
SPS	Severance Pay System
SIMPLE	Savings Incentive Match Plan for Employees
SNA	System of National Account
SPMC	Supplementary Pension Management Company
SSRF	Social Security Reserve Fund
SWF	Sovereign Wealth Fund
TFR	*Trattamento di Fine Rapporto*
TQPP	Tax Qualified Pension Plan
UK	United Kingdom
US	United States of America
VO	Voluntary Occupational
VP	Voluntary Personal

Symbols

000s	Thousands	JPY	Yen
m	Million	KRW	South Korean won
bn	Billion	MXN	Mexican peso
AUD	Australian dollar	NZD	New Zealand dollar
EUR	Euro	NOK	Norwegian krone
USD	United States dollar	PLN	Zloty
CAD	Canadian dollar	SKK	Slovak koruna
CZK	Czech koruna	SEK	Swedish krona
DKK	Danish krone	CHF	Swiss franc
HUF	Forint	TRY	New Turkish Lira
ISK	Icelandic krona	GBP	British pound

Conventional signs

n.a.: not applicable

n.d. / ..: not available

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Country ISO code

Australia	AUS	Korea	KOR
Austria	AUT	Luxembourg	LUX
Belgium	BEL	Mexico	MEX
Canada	CAN	Netherlands	NLD
Czech Republic	CZE	New Zealand	NZL
Denmark	DNK	Norway	NOR
Finland	FIN	Poland	POL
France	FRA	Portugal	PRT
Germany	DEU	Slovak Republic	SVK
Greece	GRC	Spain	ESP
Hungary	HUN	Sweden	SWE
Iceland	ISL	Switzerland	CHE
Ireland	IRL	Turkey	TUR
Italy	ITA	United Kingdom	GBR
Japan	JPN	United States	USA

Glossary

Most of the definitions below draw on the publication *Private Pensions: OECD Classification and Glossary*. It can be downloaded at the following address: *www.oecd.org/dataoecd/0/49/38356329.pdf*.

Term	Definition
Active member	A pension plan member who is making contributions (and/or on behalf of whom contributions are being made) and is accumulating assets or has accrued assets in the past and is not yet retired.
Annuity	A form of financial contract mostly sold by life insurance companies that guarantees a fixed or variable payment of income benefit (monthly, quarterly, half-yearly, or yearly) for the life of a person (the annuitant) or for a specified period of time. It is different from a life insurance contract which provides income to the beneficiary after the death of the insured. An annuity may be bought through instalments or as a single lump sum. Benefits may start immediately or at a pre-defined time in the future or at a specific age.
Asset allocation	The spread of fund investments among different investment forms.
Asset manager	The individual(s) or entity(ies) endowed with the responsibility to physically invest the pension fund assets. Asset managers may also set out the investment strategy for a pension fund.
Basic state pension	A non-earning related pension paid by the State to individuals with a minimum number of service years.
Beneficiary	An individual who is entitled to a benefit (including the plan member and dependants).
Benefit	Payment made to a pension fund member (or dependants) after retirement.
Book reserved pension plans	Sums entered in the balance sheet of the plan sponsor as reserves or provisions for occupational pension plan benefits. Some assets may be held in separate accounts for the purpose of financing benefits, but are not legally or contractually pension plan assets. Most OECD countries do not allow this method of financing. Those that do usually require these plans to be insured against bankruptcy of the plan sponsor through insolvency guaranty arrangement.
Closed pension funds	Funds that support only pension plans that are limited to certain employees (*e.g.* those of an employer or group of employers).
Contribution	A payment made to a pension plan by a plan sponsor or a plan member.
Contribution rate	The amount (typically expressed as a percentage of the contribution base) that is needed to be paid into the pension fund.
Deferred member	A pension plan member that no longer contributes to or accrues benefits from the plan but has not yet begun to receive retirement benefits from that plan.
Deferred pension	A pension arrangement in which a portion of an employee's income is paid out at a date after which that income is actually earned.
Deferred retirement	A situation when an individual decides to retire later and draw the pension benefits later than their normal retirement age.
Defined benefit (DB) occupational pension plans	Occupational plans other than defined contribution plans. DB plans generally can be classified into one of three main types, "traditional", "mixed" and "hybrid" plans.
"Traditional" DB plan	A DB plan where benefits are linked through a formula to the members' wages or salaries, length of employment, or other factors.

Term	Definition
"Hybrid" DB plan	A DB plan where benefits depend on a rate of return credited to contributions, where this rate of return is either specified in the plan rules, independently of the actual return on any supporting assets (*e.g.* fixed, indexed to a market benchmark, tied to salary or profit growth, etc.), or is calculated with reference to the actual return of any supporting assets and a minimum return guarantee specified in the plan rules.
"Mixed" DB plan	A DB plan that have two separate DB and DC components but which are treated as part of the same plan.
Defined contribution (DC) occupational pension plans	Occupational pension plans under which the plan sponsor pays fixed contributions and has no legal or constructive obligation to pay further contributions to an ongoing plan in the event of unfavourable plan experience.
Dependant	An individual who is financially dependent on a (passive or active) member of a pension scheme.
Dependency ratio	Typically defined as the ratio of non-active age to those of active age in a given population.
Final average earnings	The fund member's earnings that are used to calculate the pension benefit in a defined benefit plan; it is typically the earnings of the last few years prior to retirement.
Fund member	An individual who is either an active (working or contributing, and hence actively accumulating assets) or passive (retired, and hence receiving benefits), or deferred (holding deferred benefits) participant in a pension plan.
Funded pension plans	Occupational or personal pension plans that accumulate dedicated assets to cover the plan's liabilities.
Funding	The act of accumulating assets in order to finance the pension plan.
Funding level	The relative value of a scheme's assets and liabilities, usually expressed as a percentage figure.
Funding rules	Regulation that requires the maintenance of a certain level of assets in a pension fund in relation to pension plan liabilities.
Gross rate of return	The rate of return of an asset or portfolio over a specified time period, prior to discounting any fees of commissions.
Group pension funds	Multi-employer pension funds that pool the assets of pension plans established for related employers.
Industry pension funds	Funds that pool the assets of pension plans established for unrelated employers who are involved in the same trade or business.
Mandatory contribution	The level of contribution the member (or an entity on behalf of the member) is required to pay according to scheme rules.
Mandatory occupational plans	Participation in these plans is mandatory for employers. Employers are obliged by law to participate in a pension plan. Employers must set up (and make contributions to) occupational pension plans which employees will normally be required to join. Where employers are obliged to offer an occupational pension plan, but the employees' membership is on a voluntary basis, these plans are also considered mandatory.
Mandatory personal plans	These are personal plans that individuals must join or which are eligible to receive mandatory pension contributions. Individuals may be required to make pension contributions to a pension plan of their choice normally within a certain range of choices or to a specific pension plan.
Minimum pension	The minimum level of pension benefits the plan pays out in all circumstances.
Multi-employer pension funds	Funds that pool the assets of pension plans established by various plan sponsors. There are three types of multi-employer pension funds: *a)* for related employers *i.e.* companies that are financially connected or owned by a single holding group (group pension funds); *b)* for unrelated employers who are involved in the same trade or business (industry pension funds); *c)* for unrelated employers that may be in different trades or businesses (collective pension funds).
Net rate of return	The rate of return of an asset or portfolio over a specified time period, after discounting any fees of commissions.
Normal pension age	Age from which the individual is eligible for pension benefits.
Occupational pension plans	Access to such plans is linked to an employment or professional relationship between the plan member and the entity that establishes the plan (the plan sponsor). Occupational plans may be established by employers or groups thereof (*e.g.* industry associations) and labour or professional associations, jointly or separately. The plan may be administered directly by the plan sponsor or by an independent entity (a pension fund or a financial institution acting as pension provider). In the latter case, the plan sponsor may still have oversight responsibilities over the operation of the plan.
Open pension funds	Funds that support at least one plan with no restriction on membership.

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Term	Definition
Overfunding	The situation when the value of a plan's assets are more than its liabilities, thereby having an actuarial surplus.
Pension assets	All forms of investment with a value associated to a pension plan.
Pension funds	The pool of assets forming an independent legal entity that are bought with the contributions to a pension plan for the exclusive purpose of financing pension plan benefits. The plan/fund members have a legal or beneficial right or some other contractual claim against the assets of the pension fund. Pension funds take the form of either a special purpose entity with legal personality (such as a trust, foundation, or corporate entity) or a legally separated fund without legal personality managed by a dedicated provider (pension fund management company) or other financial institution on behalf of the plan/fund members.
Pension insurance contracts	Insurance contracts that specify pension plans contributions to an insurance undertaking in exchange for which the pension plan benefits will be paid when the members reach a specified retirement age or on earlier exit of members from the plan. Most countries limit the integration of pension plans only into pension funds, as the financial vehicle of the pension plan. Other countries also consider the pension insurance contract as the financial vehicle for pension plans.
Pension plan	A legally binding contract having an explicit retirement objective (or in order to satisfy tax related conditions or contract provisions the benefits cannot be paid at all or without a significant penalty unless the beneficiary is older than a legally defined retirement age). This contract may be part of a broader employment contract, it may be set forth in the plan rules or documents, or it may be required by law. In addition to having an explicit retirement objective, pension plans may offer additional benefits, such as disability, sickness, and survivors' benefits.
Pension plan sponsor	An institution (*e.g.* company, industry/ employment association) that designs, negotiates, and normally helps to administer an occupational pension plan for its employees or members.
Personal pension plans	Access to these plans does not have to be linked to an employment relationship. The plans are established and administered directly by a pension fund or a financial institution acting as pension provider without any intervention of employers. Individuals independently purchase and select material aspects of the arrangements. The employer may nonetheless make contributions to personal pension plans. Some personal plans may have restricted membership.
Private pension funds	A pension fund that is regulated under private sector law.
Private pension plans	A pension plan administered by an institution other than general government. Private pension plans may be administered directly by a private sector employer acting as the plan sponsor, a private pension fund or a private sector provider. Private pension plans may complement or substitute for public pension plans. In some countries, these may include plans for public sector workers.
Projected Benefit Obligation (PBO)	The actuarial present value of vested and non-vested benefits attributed to the plan through the pension benefit formula for service rendered to that date based on employees' future salary levels.
Protected pension plan	A plan (personal pension plan or occupational defined contribution pension plan) other than an unprotected pension plan. The guarantees or promises may be offered by the pension plan/fund itself or the plan provider (*e.g.* deferred annuity, guaranteed rate of return).
Public pension funds	Pension funds that are regulated under public sector law.
Public pension plans	Social security and similar statutory programmes administered by the general government (that is central, state, and local governments, as well as other public sector bodies such as social security institutions). Public pension plans have been traditionally PAYG financed, but some OECD countries have partial funding of public pension liabilities or have replaced these plans by private pension plans.
Rate of return	The income earned by holding an asset over a specified period.
Replacement rate	The ratio of an individual's (or a given population's) (average) pension in a given time period and the (average) income in a given time period.
Separate accounts	A pension fund that is legally segregated from both the plan sponsor and a financial institution that acts as the manager of the fund on behalf of the plan member.
Single employer pension funds	Funds that pool the assets of pension plans established by a single sponsor.
Trust	A legal scheme, whereby named people (termed trustees) hold property on behalf of other people (termed beneficiaries).
Trustee	A person or a company appointed to carry out the tasks of the trust.
Underfunding	The situation when the value of a plan's assets are less than its liabilities, thereby having an actuarial deficiency.

Term	Definition
Unfunded pension plans	Plans that are financed directly from contributions from the plan sponsor or provider and/or the plan participant. Unfunded pension plans are said to be paid on a current disbursement method (also known as the pay as you go, PAYG, method). Unfunded plans may still have associated reserves to cover immediate expenses or smooth contributions within given time periods. Most OECD countries do not allow unfunded private pension plans.
Unprotected pension plan	A plan (personal pension plan or occupational defined contribution pension plan) where the pension plan/fund itself or the pension provider does not offer any investment return or benefit guarantees or promises covering the whole plan fund.
Voluntary contribution	An extra contribution paid in addition to the mandatory contribution a member can pay to the pension fund in order to increase the future pension benefits.
Voluntary occupational pension plans	The establishment of these plans is voluntary for employers (including those in which there is automatic enrolment as part of an employment contract or where the law requires employees to join plans set up on a voluntary basis by their employers). In some countries, employers can, on a voluntary basis, establish occupational plans that provide benefits that replace at least partly those of the social security system. These plans are classified as voluntary, even though employers must continue sponsoring these plans in order to be exempted (at least partly) from social security contributions.
Voluntary personal pension plans	Participation in these plans is voluntary for individuals. By law individuals are not obliged to participate in a pension plan. They are not required to make pension contributions to a pension plan. Voluntary personal plans include those plans that individuals must join if they choose to replace part of their social security benefits with those from personal pension plans.

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OECD Private Pensions Outlook 2008

As the role of private pension systems grows in importance, there is a need to monitor their development and review their performance in an international context, especially following the crisis in the financial markets in 2008. This is the first edition of *Private Pensions Outlook,* a new OECD publication that guides readers through the changing landscape of retirement income provision.

This edition presents a special feature on the implications of the financial crisis for private pensions, as well as in-depth, international analyses of private pension arrangements across OECD and selected non-OECD countries. The publication focuses on the role of pension funds, and also provides evidence on public pension reserve funds which complement the financing of social security systems.

In addition to essential data on assets, investments, membership, and industry structure based on the latest official statistics, this volume presents a framework for evaluating the trends shaping the pensions industry, based on the role of the private pensions in relation to the public pension system.

The *Outlook* provides comprehensive country profiles, describing private pension arrangements in individual OECD countries. The *Outlook* can also be used in cross-country comparisons of key facets of retirement systems across OECD and non-OECD countries, using data acquired as part of the OECD Global Pension Statistics project.

The performance of private pension systems can be evaluated according to key policy criteria using readily accessible information on the coverage of private pension systems, the adequacy of benefits, solvency, investment performance and administrative efficiency.

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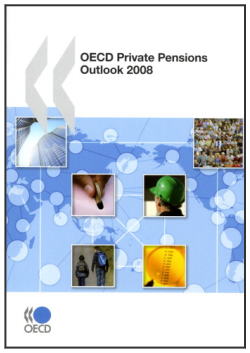

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