

## PENSION MARKETS IN FOCUS

NEWSLETTER, December 2005, Issue 2

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The first issue of Pension Markets in Focus has been welcomed by national and international stakeholders in pension research and policymaking. Users' feedback confirms that the newsletter fills a gap in the availability of comparable cross-country information on pension systems.

In order to comply with the quality standards of OECD data, particular attention will continue to be given to the refinement of existing statistical data and indicators, as well as to the development of flexible tools for measurement of funded pension activities. High priority will also continue to be given to the compilation, improvement of timeliness, completeness, as well as the international comparability of these unique datasets in order to provide up-to-date and meaningful indicators which meet the evolving requirements of policy makers. The Secretariat will make further efforts to extend the coverage and the content of the Global Pension Statistics exercise.

The development of this set of funded pension indicators will support the analytical and policy work of the Working Party on Private Pensions and will make the OECD indicators more accessible and 'user-friendly' for the public. This work is currently resourced through voluntary contributions from public and private sector entities. It should be stressed that further support is needed to match the increasing need for pension statistics and indicators.

This second edition provides an overview of recent trends in longterm and retirement savings. In particular, it examines trends in funded pensions in OECD countries with a focus on asset allocation. Thanks to efforts made by all Delegations to the Working Party on Private Pensions and to the Task Force on Pension Statistics, this edition introduces new indicators on revenues and expenditure. The reader will also note that the geographical coverage of the Global Pension Statistics exercise has been further extended and a special feature concerning pension fund assets in selected non-OECD countries is included.

I would like to thank the many readers who commented on the first newsletter. We have endeavoured to take on board these useful comments and suggestions.

> André Laboul Head of the Financial Affairs Division, Directorate of Financial and Enterprise Affairs, OECD

## OVERVIEW OF THE FINANCIAL WEALTH ACCUMULATED UNDER FUNDED PENSION ARRANGEMENTS

A useful proxy for the total assets accumulated in longterm savings and retirement systems is the sum of investments of pension funds and life insurance companies<sup>1</sup>. This proxy covers the vast majority of occupational and personal pension arrangements for both the public and private sectors that rely on funding. In 2004, the total assets held by pension funds and life insurance companies grew by over USD 3.3 trillion or 1.5 percentage points of GDP. (See Table 1)

The main type of privately managed pension plans excluded from this proxy are book reserve arrangements, which are still popular in some OECD countries such as Germany. The total size of households' benefit claims in occupational and personal pension systems in countries such as Germany is therefore substantially larger than the value of assets in funded arrangements.

# Asset accumulation for retirement also takes place through what are otherwise pay-as-you-go public pension arrangements.

Social security reserve funds experienced substantial growth in the few OECD countries for which information is currently available, raising the volume of assets managed by all retirement-linked institutional investors<sup>2</sup>. Amongst those countries, the United States exhibits the largest financial wealth accumulated in public and private retirement plans and life insurance policies, the combined share of GDP reaching more than 120% in 2004. Norway was ranked second, with a combined share of 93% of its GDP. Japan, Ireland and Sweden also had financial pension wealth representing close to 90% of their respective GDP. On the other hand, in Spain and New Zealand such wealth represented less than 30% of GDP. (See Figure 1)

# Focusing on the aggregate size of funded pension systems hides some important differences in design and operation across countries.

In almost all OECD countries, the main type of funded pension system remains occupational or employer-based plans that use not-for-profit entities (pension funds or mutual insurance companies) or contractual funds as financing vehicles. The main exceptions to this structure can be found in Mexico, Poland, and the Slovak Republic<sup>3</sup>. In these countries, funded pension plans are distributed to retail investors without the intermediation of employers. While occupational

arrangements also exist in these countries, their size is dwarfed by the mandatory personal plans.

With the adoption of the Korean law on occupational plans<sup>4</sup> and the Norwegian government's decision earlier this year to make the existing occupational pension plans mandatory, nearly one half of OECD member countries (fourteen out of thirty) have mandatory or quasi-mandatory funded pension systems. The quasi-mandatory systems of the Netherlands and Sweden are the result of, respectively, industry-wide and national collective bargaining that ensure high levels of labour market coverage (more than 90% of the workforce). As for the other sixteen OECD countries, where funded pension systems are voluntary, approximately one half have medium levels of coverage (between 40 and 60% of the workforce), while the other half have low levels of coverage (under 20% of the workforce). (See Table 2)

Table 1. Pension Funds and Life Insurance Assets in OECD Economies, 2003-04

	funds + Life Invest	for pension e Insurance ments 03	funds + Life	for pension e Insurance ments 04
OECD Countries	millions of USD	as a percent of GDP	millions of USD	as a percent of GDP
Australia	393,765	74.7	582,886	91.3
Austria	48,742	19.1	75,227	25.6
Belgium	92,146	30.3	126,051	35.8
Canada (1)	618,724	72.2	662,448	77.3
Czech Republic	6,446	7.1	8,561	8.0
Denmark	178,408	84.2	221,356	91.7
Finland (2)	40,392	25.0	111,806	60.1
France (3)	847,335	48.2	1,055,250	60.0
Germany	713,988	29.7	878,653	31.9
Greece	_	_	_	_
Hungary	7,447	9.0	11,150	11.1
Iceland	13,970	132.2	17,886	146.2
Ireland (4)			146,881	80.9
Italy	273,107	18.6	370,048	22.1
Japan (5)	2,093,976	48.7	2,250,987	48.2
Korea	126,005	20.8	139,164	20.5
Luxembourg				
Mexico				
Netherlands (1)	709,708	138.4	813,135	140.4
New Zealand			15,353	15.5
Norway	61,187	27.7	81,614	32.6
Poland	18,864	9.0	26,550	11.0
Portugal	30,952	21.0	36,668	21.9
Slovak Republic (1)	8,275	25.3	8,651	21.1
Spain (6)			217,187	20.9
Sweden (7)	23,457	7.8	226,689	65.4
Switzerland (1) (8)	522,283	162.3	549,486	153.2
Turkey		••	2,238	0.7
United Kingdom (1) (9)	2,121,652	118.0	2,475,540	116.2
United States (10)	12,252,046	111.9	13,432,423	115.0
Total OECD	21,202,874	107.2	24,543,888	108.7

Source: OECD, Global Pension and Insurance Statistics.

The list of administrative sources used under the OECD Global Pension Statistics project and all notes to be taken into consideration when interpreting the data can be found on pages 12 and 13, respectively.

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Life insurance company assets include both the traditional life insurance business and pension insurance contracts. The OECD is working to separate out the two forms of life insurance in the statistics.

<sup>&</sup>lt;sup>2</sup> Pension funds, life insurance companies and social security reserve funds.

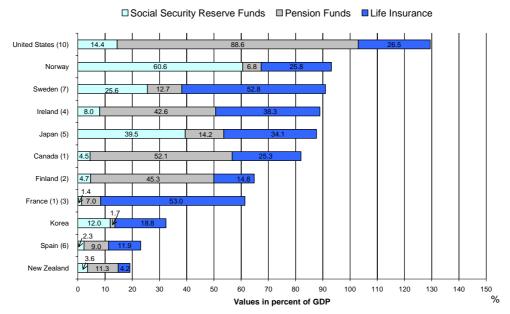
<sup>&</sup>lt;sup>3</sup> A new mandatory individual account system was introduced on January 1<sup>st</sup>, 2005.

<sup>&</sup>lt;sup>4</sup> Korea became the latest OECD country to introduce an occupational pension system with the passing of the 'Employee Retirement Income Security Act' on December 29, 2004. Implementation is set for 1 December 2005 for employers with five or more employees; smaller firms will have to comply by 2010.

# The size of assets accumulated by pension funds is to a large extent related to their maturity and the extent of labour market coverage.

Countries like Australia, Iceland, the Netherlands and Switzerland, which have had mandatory or quasi mandatory pension funds for many years, exhibit the largest pension funds in relation to the size of their respective economies. Another country with a long history in mandatory funded pensions is Denmark, but the sector is dominated by pension entities established as insurance undertakings. Finland has also had mandatory occupational pension arrangements for some time but the schemes (which are part of social security) are only partly funded. The largest voluntary pension fund systems are those in the United States, United Kingdom and Canada. (See Table 2 and Figure 2).

Figure 1. Consolidated Pension and Life Insurance Assets in Selected OECD countries, 2004
(as a percent of GDP)



Note: Pension insurance contracts are excluded from pension funds' assets. Source: OECD, Global Pension Statistics, Insurance Statistics and other administrative sources.

Table 2. Main Funded Pension System in OECD Countries

(Mandatory and year of implementation / voluntary and estimated level of coverage)

	Mandatory		Voluntary	
Country		High Coverage	Medium Coverage	Low Coverage
Australia	1992			
Austria			<b>✓</b>	
Belgium			•	
Canada			<b>y</b>	
Czech Republic				<b>y</b>
Denmark	1964/1985			
Finland	1956/1985			
France				<b>✓</b>
Germany			¥	
Greece				<b>y</b>
Hungary	1998			
Iceland	1986			
Ireland			¥	
Italy				<b>✓</b>
Japan			y	
Korea	2005			
Luxembourg				<b>y</b>
Mexico	1997			
Netherlands		<b>,</b>		
New Zealand				<b>y</b>
Norway	2006			
Poland	1999			
Portugal				¥
Slovakia	2005			
Spain				¥
Sweden	2000	~		
Switzerland	1982			
Turkey				<b>✓</b>
United Kingdom			¥	
United States			<b>✓</b>	

Source: OECD.

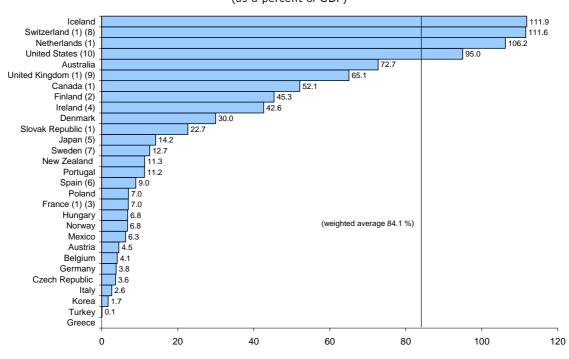
Box 1. OECD Classification of Pension Plans by Financing Vehicles

i iulis by i	mancing venicies				
FINANCING TYPES					
Pension funds (autonomous)	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.				
Book reserves (non-autonomous)	Book reserves are sums entered in the balance sheet of the plan sponsor as reserves or provisions for pension benefits. Some assets may be held in separate accounts for the purpose of financing benefits, but are not legally or contractually pension plan assets.				
Pension insurance contracts	An insurance contract that specifies pension plan 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.				
Other	Other type of financing vehicle not included in the above categories.				

Source: OECD, 'Private Pensions: OECD Classification and Glossary'.

#### **ROBUST GROWTH IN PENSION FUND ASSETS IN 2004**

Figure 2. Importance of Pension Funds in the Economy, 2004
(as a percent of GDP)



Source: OECD, Global Pension Statistics.

Pension funds in the OECD area have grown drastically in the last ten year, from USD 5.9 trillion in 1994 to USD 15.6 trillion by 2004, representing a compounded rate of growth of 10.2% per annum.

An example of the typical evolution of pension funds over the last decade is the Australian superannuation system. Its assets under management amounted to USD 465 billion at the end of 2004. Because of the mandatory structure of the occupational pension funds and the level of required contributions<sup>1</sup>, the pension market has encountered steady growth rates. In the eighties, assets growth rates reached 25% a year. In the nineties, despite the fact that Australian pension funds hold a large amount of shares in their portfolio, growth in pension assets declined to around 15% per year. Growth rates stayed at this level until 2000. During the stock market turmoil between 2001 and 2003, growth rates dropped. But in 2004, growth rates in pension assets were back to about 17%. This increase was driven by increasing contributions from both employees and employers, and from an increase in the average number of accounts per employee.

The ratio of total OECD pension fund assets to GDP increased from 81.9% to 84.1% in 2004, driven by the growth of assets in the largest market, the United States.

It should be noted that the jump in Finland's indicator in 2004 is due to the inclusion of the statutory funded pension system in the statistics. In previous years, only the voluntary system was included. Therefore, excluding

9% of employee's salaries to privately run pension funds.

Finland, the most significant increase in the ratio of pension fund assets to GDP was Australia's, which rose from 56.1% in 2003 to 72.7% in 2004. (See Table 3)

Table 3. Evolution of the Size of Pension Funds Relative to GDP, 2001-04.

		vestments of place as a percent c	pension funds f GDP)	
OECD Countries	2001	2002	2003	2004
Australia	57.7	58.1	56.1	72.7
Austria	3.9	3.9	4.2	4.5
Belgium	5.6	5.0	4.0	4.1
Canada (1)	53.3	47.8	52.1	52.1
Czech Republic	2.3	2.8	3.1	3.6
Denmark	27.2	25.6	27.6	30.0
Finland (2)	8.2	8.0	8.3	45.3
France (1) (3)	3.9	6.6	7.0	7.0
Germany	3.3	3.4	3.6	3.8
Greece	_	_	_	_
Hungary	4.0	4.6	5.4	6.8
Iceland	86.4	87.6	101.9	111.9
Ireland (4)	44.3	35.1	39.4	42.6
Italy	2.3	2.4	2.5	2.6
Japan (5)	13.9	14.1	15.3	14.2
Korea		1.5	1.6	1.7
Luxembourg				
Mexico	4.3	5.2	5.8	6.3
Netherlands (1)	107.0	89.4	106.2	106.2
New Zealand	14.8	13.1	11.4	11.3
Norway	4.0	4.0	4.6	6.8
Poland	2.5	4.0	5.5	7.0
Portugal	12.1	12.1	12.5	11.2
Slovak Republic (1)	10.7	16.6	22.7	22.7
Spain (6)	5.8	5.7	6.2	9.0
Sweden (7)	8.3	7.7	7.8	12.7
Switzerland (1) (8)	104.4	96.7	111.6	111.6
Turkey				0.1
United Kingdom (1) (9)	72.5	66.5	65.1	65.1
United States (10)	93.9	82.0	92.0	95.0
Total G10	86.5	75.3	83.9	86.4
Euro area	70.2	52.0	63.7	59.6
Total OECD	84.9	73.7	81.9	84.1

Source: OECD, Global Pension Statistics.

# Although most countries experienced a substantial increase in the ratio of pension fund assets to GDP between 2003 and 2004, some exceptions exist.

Portugal exhibited a decrease in this indicator, partly as a result of the transfer of USD 3.1 billion in assets from private pension funds that were covering liabilities of employees of some public enterprises, to the public servants social security system. This fall was softened by an increase in assets, excluding this transfer of USD 1.7 billion. (See Table 3)

In dollar terms, total investment of pension funds, increased by more than 10% on average in the OECD area. Norwegian pension funds showed the strongest expansion at 66% in dollar terms<sup>1</sup>, followed by Australia (57%), Hungary (54%), Poland (48%), Czech Republic (36%), and Iceland (31%). (See Table 4)

As in 2003, countries that have started from a relatively small base like Poland, Hungary, Slovak Republic, Spain, Czech Republic, Norway and France are experiencing fast growth in pension fund assets.

In dollar terms, pension funds in these countries had an average growth rate ranging from 31% to 54% over the period 2001-04. On the other hand, countries with more mature pension systems, like the United States, United Kingdom, Japan, the Netherlands and Canada have seen a less rapid, but still positive evolution, with growth rates ranging from 4% to 10%. In between are countries like Austria, Denmark, Ireland, Germany, Korea, Mexico, New Zealand and Portugal that have exhibited an average growth rate between 13% and 19%. (See Table 4)

In local currency, growth in Norwegian pension fund assets stood at 59%, followed by Australia, Hungary and Poland at 39%, the Czech Republic at 24%, and Iceland at 20%.

Table 4. Pension Fund Assets in OECD and Selected non-OECD Countries, 2001-04

	Total	investments ( (millions (		nds	Total investments of pension funds (millions of national currency)			
OECD Countries	2001	2002	2003	2004	2001	2002	2003	2004
Australia	212,860	239,290	295,670	464,577	411,964	440,607	455,788	631,468
Austria	7,555	8,099	10,869	13,299	8,436	8,594	9,621	10,704
Belgium	12,639	12,428	12,152	14,325	14,113	13,187	10,756	11,529
Canada (1)	375,565	346,341	445,761	445,761	581,527	543,770	624,225	
Czech Republic	1,404	2,053	2,852	3,884	53,377	67,206	80,223	99,803
Denmark	43,639	44,324	58,782	73,095	363,115	349,460	386,609	437,660
Finland (2)	9,991	10,606	13,406	84,271	11,157	11,254	11,866	67,826
France (1) (3)	51,388	95,395	123,255	123,255	57,381	101,220	109,697	
Germany	63,296	67,846	88,887	104,161	70,678	71,989	78,679	83,835
Greece	_	_	_	_	_	_	_	_
Hungary	2,071	2,976	4,456	6,859	593,448	766,130	999,370	1,389,740
Iceland	6,636	7,481	10,781	14,103	648,140	685,107	826,837	989,939
Ireland (4)	45,763	42,222	59,989	77,405	51,100	44,800	53,100	62,300
Italy	25,194	28,312	36,787	44,351	28,132	30,041	32,562	35,696
Japan (5)	580,519	561,645	658,255	661,063	70,523,704	70,348,819	76,315,700	76,492,920
Korea		8,438	9,884	11,516		10,556,819	11,771,111	13,188,395
Luxembourg								
Mexico	26,600	33,643	37,213	42,461	254,203	301,088	401,536	478,997
Netherlands (1)	411,460	374,875	545,239	545,239	459,446	397,767	482,623	
New Zealand	7,687	7,865	9,094	11,157	18,308	17,015	15,673	16,836
Norway	6,831	7,652	10,227	16,939	61,427	61,107	72,383	114,161
Poland	4,622	7,588	11,487	17,021	18,935	30,972	44,665	62,143
Portugal	13,278	14,657	18,396	18,868	14,826	15,552	16,284	15,186
Slovak Republic (1)	2,244	4,037	7,409	7,409	108,477	182,896	272,342	
Spain (6)	35,072	39,061	54,778	93,644	39,162	41,447	48,487	75,370
Sweden (7)	18,254	18,542	23,457	43,823	188,720	180,252		337,366
Switzerland (1) (8)	261,357	267,554	360,646	360,646	440,898	416,517	485,000	
Turkey				209				298
United Kingdom (1) (9)	1,040,472	1,040,472	1,175,335	1,175,335	722,391		719,638	
United States (10)	9,407,779	8,511,369	10,079,289	11,090,433	9,407,779	8,511,369	10,079,289	11,090,433
Regional Indicators								
Total G10	12,247,923	11,324,779	13,549,063	14,608,392				
Euro area	675,635	693,501	963,758	1,118,818				
Total OECD	12,674,175	11,804,772	14,164,356	15,565,110				
Memorandum: non-OECD	countries							
Brazil			64,444				186,140	
Bulgaria	83	 173	331	 553	183	326	513	 794
Colombia	4,939	5,472	7,315	10,965	11,365,880		20,341,995	26,447,502
Estonia	1,000	15	90	234		227	1,116	2,684
Indonesia		278.1				2,486	.,	2,00
Israel (11)	27,300	28,200	31,900	"	6,182	5,953	7,285	••
Slovenia	20	83	147	 597	5,043	18,435	27,781	105,256
South Africa			57,337	82,756		. 5, 100	380,718	465,915
Thailand		5,774	7,519	8,186		249,157	297,686	319,745
Source: OFCD	Global Pensio		.,	2,.30	•••	,	- ,3	

Source: OECD, Global Pension Statistics.

#### **ASSET ALLOCATION: TOWARDS MORE DIVERSITY WITHIN PORTFOLIOS**

The emergence of funding gaps and changes in the regulatory and accounting frameworks are driving pension funds to find better ways to manage risks. Anecdotal evidence suggests that pension funds continued to reshuffle portfolios to find better matching assets for their liabilities while striving for high absolute returns. The result has been increasing asset diversity within portfolios, with growing allocations into bonds in those countries with high equity investments and a general shift towards alternative investments.

## A move towards greater international diversification of pension fund portfolios was also observed in 2004.

This diversification occurs especially in those countries where pension funds exhibit high ratios of total pension fund investments to GDP like Switzerland, Iceland, Netherlands, United States and United Kingdom. Questions remain, however, as to the extent of home bias in investment strategies. Investment limits and currency matching requirements also account for the relatively low investment abroad in some countries, though, in a few cases, these rules are being relaxed. For example, Canada eliminated the 30% quantitative limit on foreign investment in February 2005, while in Mexico, foreign investments are now allowed up to 20% of total assets.

The allocation by investment vehicles varies widely across both OECD and non-OECD countries<sup>1</sup> (See Table 5):

- In the majority of countries, bills and bonds rank first in asset allocation ranging from 50 to 60% in Denmark, Finland, Norway, Poland, Spain, Estonia and from 72 to 97% in Austria, Czech Republic, Hungary, Korea, Mexico, Turkey, Bulgaria, Colombia, Slovenia and Singapore.
- In three countries, equities ranked first with more than one third of all investments: Netherlands, United Kingdom and United States.
- As in 2003, in Belgium and Canada, mutual fund shares are predominant in the asset structure, accounting respectively for 75.2 and 36.7% of all investments.

In most OECD countries, cash and deposits, loans, and real estate (lands and buildings) only account for relatively small amounts of assets although some exceptions exist. Real estate, for example, is a significant component of pension fund portfolios in Finland, Italy, Portugal and Switzerland (about 10% of total assets).

The impact of adverse stock market performance on pension fund assets has been felt strongly in countries like the UK and Ireland, where occupational pension plans are heavily exposed to equities. On average, pension funds in these countries targeted over 60 percent of plan assets in equities, an even greater exposure than US pension funds. This exposure, however, may be

partial in the UK with the introduction of the Pension Protection Fund, the PPF – an agency with responsibilities similar to those of the Pension Benefit Guarantee Corporation (PBGC) in the US – to help guard against insolvency of pension schemes there. The PPF will charge a risk-based levy, which among other factors, may take into account the asset allocation of the pension fund. However, the details of the risk-based levy have not been announced yet.

It is nonetheless expected that pension funds will seek to reduce their equity exposures in European countries that started implementing the International Accounting Standard 'IAS19' in 2005. Like the UK's 'FRS17' accounting standard, IAS19 requires pension fund liabilities to be measured with discount rates based on corporate bond yields. In order to minimise the volatility on their sponsors' balance sheets, pension funds are increasing their exposure to bonds and using interest swaps and other derivative instruments to better match the valuations of their assets and liabilities. This shift in portfolio strategy may partly explain the downward pressure on bond yields observed over the past year. (See Box 2)

#### Funding rules, which also aim at improving the security of pension benefits, are also likely to drive changes in asset allocation.

For example, the increased funding required for US plans over the next several years may have a noticeable impact on asset allocation. A recent PBGC report<sup>2</sup> estimated that, as of September 2005, pension underfunding in US pension plans was more than USD 450 billion. Pension funds may be taking on new risks on their investment portfolios in order to minimise the financial cost to sponsors of closing this funding gap. The recent move to increase allocations to alternative investments, including hedge funds and private equity funds, is partly driven by this need to generate exceptional returns to investments.

Some substantial variations in the figures presented in Table 5, as compared to the same table exhibited in the issue 1 of this newsletter, can be explained by the efforts of countries to reallocate the "other investments" category. This is the case for Finland, Italy and United States.

The high level of this category ('other investment') in other countries (e.g. Spain) can be explained by the inclusion of alternative investments under this category. To address this issue, as of 2006, a new investment category, 'alternative investments', will be created.

For the next edition of our newsletter, we also anticipate to present the portfolio allocation data for two consecutive years together with more information on the factors explaining the variations.

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Non-OECD countries that participate in the Global Pension Statistics' project are included in this section.

Pension Benefit Guaranty Corporation (PBGC): 'Performance and Accountability Report, Fiscal Year 2005', (November 15, 2005).

#### Box 2. Scarcity of suitable pension fund investments<sup>1</sup>

<u>Background</u>: it has been recognized for some time now that demographic developments may have an effect on financial asset prices. An example of such an effect that has recently attracted considerable attention is the demand from pension funds for long-term government bonds, which appears to have exerted downward pressure on long-term interest rates. Indeed, increasing demand from such entities has been cited fairly regularly of late as one of the "special factors" contributing to the low level of interest rates on long-term government bonds.

The fact that pension funds and other entities that invest to finance retirement incomes are important buyers of high-quality fixed-income securities is nothing new. In addition, it has been recognized for some time that demographic developments and the behaviour of baby-boom generations may have an effect on financial asset prices. What is new is that these entities have adopted a much sharper focus on the management of the interest rate risk that they face on the liability side of their balance sheets. The importance of such risk was illustrated by developments in the post-2000 episode, in which many pension funds experienced large funding gaps not only because of the stock market downturn, but, perhaps even more importantly, because of the decline in interest rates. Such lower interest rates implied large increases in the present value of pension liabilities. As a result of this experience, as well as recent regulatory and accounting changes, there may be a secular shift in strategic asset allocations towards a greater share of high-quality, long-term bonds.

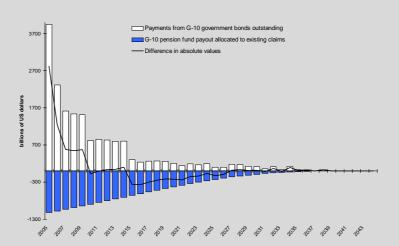
<u>The issue of possible 'scarcity'</u>: already for some time now, numerous studies focusing on pension fund investment strategies have drawn attention to the issue of "scarcity" of suitable fixed-income long-term pension fund investments. Specifically, it has been pointed out that attempts by pension funds to shift all their assets into high-quality fixed-income instruments may not be feasible given the limited supply of such instruments. An article forthcoming in the next OECD Financial Market Trends presents a simple empirical measure of the potential "scarcity" of long-term high-quality bonds.

A measure of potential 'scarcity': The measure is obtained by comparing pension fund assets (as an admittedly imperfect proxy of pension fund liabilities) with the outstanding amount of government bonds in G-10 countries. The Figure below provides a measure of the potential excess demand for high-quality fixed-income instruments from pension funds, using the (admittedly somewhat extreme) assumption that these entities attempt to achieve full cash-flow matching of their assets and liabilities. The calculations show that, given the existing structure of government bonds, attempts by pension funds to immunise their liabilities against interest rate risk using such a strategy would result in a significant excess demand for long-term government bonds with maturities of ten years or longer. This measure of "scarcity" varies across maturity segments, as shown in the figure, as well as across currency segments. It suggests that G-10 pension funds would find it relatively more difficult to match (in terms of cash-flow matching) their payment promises for the period after 2015, given the current supply of G-10 government bonds, compared to the next few years. This simple exercise does not say anything, however, about the question whether pension funds may or may not be able to 'fund' their payment promises.

#### Chart. Cash Flows from Investments in Government Bonds and Estimated Pension Fund Payment Promises

(aggregated over all G-10 countries)

Matching cash flows



**Notes:** Cash flows from outstanding G-10 government bonds on the positive axis (as of June 2005). On the negative axis are estimates of payments by pension funds to beneficiaries, assuming that payments are due only to existing "passive" plan members. Passive plan members are defined as people 65 years of age or older in 2005. The payment estimates are obtained as follows: Pension fund assets as of end-2003 serve as a proxy for total pension fund liabilities, as data on liabilities is not available at this level of aggregation. These liabilities are distributed over time using a hypothetical age structure and mortality dynamics of beneficiaries, assuming that each beneficiary receives an equal annual real payment in each year of his remaining life time (i.e. similar to an inflation-indexed life annuity). Estimates of G-10 age structures are obtained from the United Nations population projections and mortality dynamics are assumed to follow those projected for the German population. Annual real payments are calculated using a GDP-weighted long-term inflation forecast for the G-10 countries from Consensus Forecasts (April 2005).

<sup>&</sup>lt;sup>1</sup> This box was prepared by Sebastian Schich and draws on: Schich, S. and M. Weth (2006, forthcoming), "Potential pension fund demand for high-quality long-term bonds: Quantifying "scarcity" of suitable investments", OECD Financial Market Trends Vol. 2006/1, No. 90.

Table 5. Pension Fund Portfolio Allocation, 2004

(as a percent of total)

OECD Countries	Cash and Deposits	Bills and bonds issued by public administration	Corporate bonds	Loans	Shares	Land and Buildings	Mutual funds (CIS)	Unallocated insurance contracts	Other investments
Austria	1.2	71.6	n.a.	0.8	19.4	1.0	n.a.	n.a.	6.1
Belgium	3.3	2.7	1.7	0.3	9.4	1.4	75.2	2.7	3.4
Canada (1)	5.0	18.7	5.4		23.6	3.5	36.7		7.2
Czech Republic	9.6	51.9	31.1	0.0	5.5	0.3	0.3	n.a.	1.3
Denmark	0.3	24.7	29.0	7.2	19.8	2.1	16.9	n.a.	0.0
Finland	0.9	50.1	0.0	8.5	30.4	9.6	0.0	0.0	0.5
Germany	2.6	2.5	26.6	28.1	32.2	3.8			4.2
Hungary	1.3	74.9	2.0	n.a.	5.2	0.2	7.5	n.a.	8.9
Iceland	2.4	33.0	15.3	10.4	33.7	0.1	3.7	n.a.	1.4
Italy	5.9	34.8		n.a.	8.4	9.2	10.3	24.5	7.1
Korea	7.4	24.3	56.4	9.9	0.2	0.0	0.5	n.a.	1.4
Mexico	0.0	85.2	11.7	n.a.	n.a.	n.a.	n.a.	n.a.	3.1
Netherlands (1)	2.2	25.5	13.8	5.3	44.6	5.0	••		3.5
Norway	4.7	27.6	32.5	2.7	24.8	4.2			3.5
Poland	5.8	58.9	1.4	0.0	33.4	n.a.	0.0	n.a.	0.5
Portugal *	8.2	24.4	18.4	0.0	22.1	10.8	22.4	0.0	-6.4
Spain	4.9	20.3	36.4	0.0	17.5	0.2	7.5		13.3
Switzerland (2)	9.9	29.3		5.0	19.1	12.3	17.5		6.9
Turkey	0.0	72.6	0.0	0.0	13.2	0.0	0.0	0.0	14.2
United Kingdom (1)	2.5	14.7	6.8	0.5	43.4	4.3	15.4	6.0	6.3
United States	8.3	6.4	5.0	0.1	35.5	0.6	30.7	9.4	4.0
Selected non-OECD	countries								
Brazil (2)	44.2	14.9	2.2	3.9	15.9	6.7	11.6	0.0	0.6
Bulgaria	19.9	55.2	18.6	n.a.	3.3	1.7	n.a.	n.a.	1.4
Colombia	0.8	48.5	30.1	0.0	6.2	0.0	2.2	0.0	12.2
Estonia	4.4	33.9	23.3	0.0	35.1	1.0	6.2	0.0	0.8
Slovenia	13.3	46.3	32.4	n.a.	7.7	n.a.	0.3	n.a.	n.a.
Indonesia (2)	70.9	0.1	11.9	0.7	4.1	6.0	1.3	0.0	6.9
Singapore (2)	2.7	96.4	0.0	0.0	0.0	0.2	0.0	0.0	0.7
Thailand	41.4	23.9	18.2	n.a.	13.7	n.a.	1.8	n.a.	1.0

<sup>(\*)</sup> For Portugal, the values registered on variable "Other investments" include short term payable accounts to the fund managers (commissions), payable loans and the amount relative to the partial transfer of one pension fund, transferred to social security, worth about 1 billion Euros.

Total may not add up due to rounding or to negligible value.

Source: OECD, Global Pension Statistics.

#### **REVENUES AND EXPENDITURE: CASH FLOWS RECOVERED IN 2003-04**

#### Pension fund cash flows, or the difference between revenues and expenditures can experience major fluctuations over time.

In the pension fund industry, revenue is primarily composed of contributions, profits on the sale of investments and dividends and interest. Pension fund expenditures consist primarily of pension payments and losses on the sale of investments. The more mature a pension fund system is, the more likely it will incur negative cash flows. Periods of adverse market performance such as those experienced during 2001-02 also led to large negative cash flows.

Cash flow varies considerably from year to year, partially due to accounting practices, but primarily because of profits or losses from the buying and selling of stocks. Most pension funds' positive cash flow came from contributions and other forms of investment income, such as interest and dividends. (See Table 6)

Table 6. Pension Funds' Cash Flow<sup>1</sup> for Selected OECD countries, 2001-04 (millions of USD)

	2001	2002	2003	2004
Belgium			0	44
Canada	3,330	-1,007	15,785	
Germany			5,133	7,450
Iceland	306	345	1,892	2,354
Korea		1,022	935	1,253
Netherlands	12,256	-2,087	13,802	
Norway	1,122	1,032	2,420	3,327
Portugal	-1,127	-1,438	2,142	2,549
Spain	3,793	1,217	6,645	6,954

Source: OECD, Global Pension Statistics.

8

Cash Flow = [Total contributions + Net investments income + Other income] – [Benefits + Operational expenses + Other expenses]

## Benefit payments have been increasing slowly and irregularly over the last few years.

They should increase at a more rapid rate over the next few years when members of the baby boom generation start to retire in large numbers. In relation to GDP, benefit payments were highest in Finland (5.13%) and Iceland (3.5%), followed by all other countries for which benefit payments account for less that 1% of GDP. (See Table 7)

Table 7. Pension Funds' Benefits for Selected OECD countries, 2001-04

(millions of USD)

	2001	2002	2003	2004
Austria	341	338	394	491
Belgium		1,008	1,047	1,219
Canada	4,588	6,168	18,608	
Denmark	895	1,100	1,332	1,599
Finland	934	1,069	1,302	9,536
Germany			3,273	3,757
Hungary	43	61	74	147
Iceland	229	282	374	444
Italy	1,887	1,657	3,160	2,946
Korea		114	131	170
Mexico	105	127		
Netherlands	11,963	13,543	17,285	
Portugal	880	981	1,073	1,262
Slovakia	179	448		
Spain	2,553	3,620	2,783	3,020
United Kingdom	41,843		52,703	

Source: OECD, Global Pension Statistics.

## Most selected OECD countries exhibited positive average growth rates in pension contributions.

However, growth rates vary significantly across countries, ranging from – 18% to 130% over 2001-04. Pension contributions are expected to rise further across all types of schemes, most particularly defined benefit ones as increases in contributions are required to help reduce plan deficits. Substantial growth in contributions should also come from the establishment of new defined contribution plans. (See Table 8)

**Table 8. Total Contributions, 2001-04** (millions of USD)

	2001	2002	2003	2004
Belgium		1,320	988	1,298
Canada	3,475	3,732	18,403	
Denmark		1,840	2,264	1,229
Hungary	602	731	1,073	1,466
Iceland	642	703	960	1,031
Italy	3,031	3,415	4,411	5,054
Korea		750	677	1,049
Netherlands	11,270	16,025	23,486	
Norway	605	687	623	1,280
Portugal			1,584	2,071
Spain	6,729	7,892	7,327	8,546

Source: OECD, Global Pension Statistics.

There are also wide differences across OECD countries in the split between employer and employee contributions. Countries in which employees make the largest part of contributions include Hungary (83% of total), Spain (76% of total), and Italy (62% of total). This contrasts with countries like Portugal and Norway where, respectively, only 5% and 9% of contributions are paid by employees. There is also a trend towards a smaller share of employee contributions in recent years, driven in part by employers' efforts to reduce funding gaps in defined benefit plans. (See Table 9)

Table 9. Employers vs. Employees' Contributions, 2001-04

(as a percent of total contributions)

		Employers	' share		Er	nployee	s' share	9
	2001	2002	2003	2004	2001	2002	2003	2004
Belgium		92	87	89		8	13	11
Canada	69	69	71		31	31	29	
Denmark		32	32	63		68	68	37
Hungary		28	19	17		72	81	83
Iceland	73	71	74	72	27	29	26	28
Italy	39	39	36	35	61	61	64	65
Korea		67	60	65		33	40	35
Netherlands	76	79	78		24	21	22	
Norway	94	98	98	91	6	2	2	9
Portugal			87	95			13	5
Spain	42	43	23	24	58	57	77	76
0 0 0 0		-						

Source: OECD, Global Pension Statistics.

#### **BUOYANT PENSION FUND PERFORMANCE**

Building on the information provided by Delegates to the Task Force on Pension Statistics during the second semester 2005, 2004 trends in return on assets for selected OECD countries were as follows:

- In Australia, the return on assets for funded pension entities (excluding self-managed funds) was 11.3% for the year to June 2004. Industry funds had the highest overall return on assets at 12.5%, followed by public sector funds (12.4%), corporate funds (12.2%) and retail funds (10.0%).
- The pension funds in Belgium have benefited in 2003 from the recovery of the financial markets and obtained a positive return on their assets of 8.6%, this opposed to the negative returns in 2001 and 2002. The pension funds keep on profiting from the recovery of the stock markets and obtained in 2004 a positive return on their assets of 8.9%.
- In Bulgaria, in 2004, the achieved rate of return in 2004 on a yearly basis for the last 24-months period

for the universal pension funds was 11.4%, varying among the eight universal funds from 9.3% to 12.0%.

- In Hungary, pension funds achieved returns around 3.2-3.4% in 2003 and 16-17% in 2004.
- In Mexico, the pension fund industry's average nominal return for 2003 was 10.4%, for 2004 it was 6.7% and for the first semester of 2005 it was 8.2%.
- In Slovenia, the return on pension company assets was 0.55% for the first quarter of 2004, which is almost 2 percentage points less than in 2003, when the return reached 2.5%. In second quarter of 2005 return on pension companies' assets was 0.21%. That is 0.1 percentage points more than in the first quarter of 2005.

It should be noted that the way in which investment returns are measured varies from country to country. For example, in Hungary, rates of return are calculated as simple averages of the funds, not asset- weighted. The yearly rate of return of pension funds is calculated as the quarterly chain-product of the four quarterly rate of return. In Mexico, the rate of return on assets of Siefores is the variation (as an annual percentage) of the portfolio's price. Investment returns are calculated using Hardy's formula in Norway. In the Czech Republic and Poland, the weighted average rate of return is used, but each country uses different weights to calculate it.

The Task Force on Pension Statistics agreed in 2004 on the importance of an accurate assessment of such measures and indicators. With a view to improve the current indicator on performance, the OECD would build on the work already done in 2004-05 and develop further its understanding of the calculation methods and underlying methodologies used to calculate asset returns. (See Box 3)

#### Box 3. The need for a single standard in calculating and reporting pension fund performance

Preliminary work initiated by the OECD Task Force on Pension Statistics shows that a vast amount of thinking and data gathering, work and research has gone into understanding the various methodologies applied by OECD countries to calculate the investment performance of pension schemes. While the individual efforts that have gone into creating methodologies for individual countries have borne fruit in their national context, it is still extremely difficult to compare the performance of one country's pension funds to those of another, due to the different algorithms used by different countries. Preliminary work, undertaken by the OECD Task Force on Pension Statistics, suggests that there is no single method that is demonstrably better than the rest. When different groups examine the same questions with a view to creating and endorsing a methodology for evaluating complex sets of financial instruments, it comes as no surprise that they may come up with different recommendations.

Exactly the same problem has been confronted in the world of fund management, which, of course, is closely related to the topic of pension funds. Over a number of years market experts from every part of the market and representing 17 different countries met in a sub-committee. As a result of their work, a set of standards was created. The standards were called Investment Performance Standards (GIPS). Part of the GIPS "vision statement" explains why this standard would be extremely relevant to this discussion: "A global investment performance standard leads to readily accepted presentations of investment performance that present performance results that are readily comparable among investment management firms to geographic location". GIPS provide the investment community with a set of standards for investment management firms to follow when presenting their performance results to potential clients. It would therefore be relevant to examine how official pension authorities could draw on this standard, thus allowing potential improvement not only for national performance to be comparable and analyzable over time, but also internationally across nations.

Prior to further examination of existing standards and harmonization in performance measurement, the OECD work is critical for a better understanding of concepts. Therefore, the follow-up of this work undertaken by the OECD is welcome in order to get an in-depth knowledge of methodologies and calculation methods used in OECD countries.

Source: Chris Golden, Chairman of EFFAS-EBC.

#### STABILITY IN SOCIAL SECURITY RESERVE FUNDS

Social security reserve funds experienced low to stable growth in 2003-4, barely sufficient to keep up with the GDP growth rate. The only exception to this general experience was Norway's petroleum fund which saw its assets under management jump to over 60 percent of GDP, from 52 percent at the end of 2003. As a share of GDP, total assets under management in 2004 grew by 6.5 percentage points in Norway, 2.1 in Sweden, 1.5 in New Zealand, 1.4 in Canada, 1.1 in Ireland and Spain, 0.7 in Finland and 0.5 in United States. In Japan, on the other hand, social security reserve funds decreased by half a percentage point.

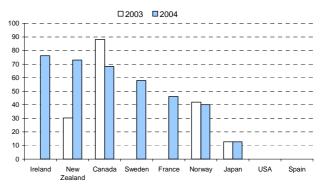
Figure 3. Social Security Reserves for Selected OECD countries, 2001-04 (as a percent of GDP)

Source: OECD, Global Pension Statistics.

There were also some important portfolio reallocations. The recently established New Zealand reserve fund increased its allocation to equities to over 70 percent of total assets as investments in Treasury Bills and cash were cut back drastically. On the other hand, the Canadian reserve fund (CPP) reduced its allocation to equities from about 90 percent to less than 70 percent.

Figure 4. Social Security Reserve Fund Equity Investment for Selected OECD countries, 2003-04

(as a percent of Total Assets)



Source: OECD, Global Pension Statistics.

#### FOCUS ON PENSION FUNDS IN SELECTED NON-OECD COUNTRIES

Chile 64.6 Singapore 62.6 33.9 South Africa (1) Israel (2) 29.0 Hong Kong 23.6 Kenya 23.0 Bolivia 19.5 El Salvador 13.6 Uruguay 12.7 Argentina Г12.0 Brazil (2) 12.0 Peru 11.4 Colombia 10.4 India 5.3 Thailand 5.0 Croatia 3.0 (weighted average 31.8 %) Costa Rica 2.6 Bulgaria 2.1 Estonia 1.9 Slovenia 1.7 Russia 1.0 Latvia 1.0 Dominican Rep. 1.0 Taiwan 0.9 China 0.5 Lithuania 0.2 Indonesia (3) 0.1 Ukraine 0 10 20 30 40 50 60 70 0 Source: See footnotes

Figure 5. Pension Fund Assets in Selected non-OECD countries, 2004
(as a percent of GDP)

Source: OECD compilation (see notes, page 13).

Pension fund growth also continued unabated in Latin America and Asia, two regions where mandatory funded pension systems are common.

Few countries in these two regions are OECD members but their experience in pension reform is worth examining. Another region with a rapidly growing pension fund sector is Eastern Europe. Many non-OECD countries in this region have introduced pension funds during the last five years, including Bulgaria, Croatia, Estonia, Latvia, Lithuania, Russia, Slovenia, and Ukraine. Macedonia will join this group in January 2006 when the new pension fund system is expected to start operating. The funded pension system is mandatory for new entrants to the labour force in all these countries except Lithuania. While assets under management in non-OECD Eastern European countries represented less than 3% of GDP in 2004, it is expected that they will grow rapidly over the coming years as a result of the mandate to save. Outside these three regions (Asia, Latin America and Eastern Europe), only a few countries such as Kenya (23% of GDP), South Africa (33.9% of GDP) and Israel (29% of GDP) have large pension fund systems. (See Figure 5)

### Low pensions coverage is a key concern in Asian countries

Asian countries, where 60% of the world population live, face the most impressive demographic changes in the world. The average old-age dependency ratio is expected to triple in Asia from 10% today to 24% by 2050, with some countries facing dependency ratios of nearly 70%.

With a view to addressing the impending problem that will occur from population ageing, most countries in the region have started to implement measures to increase pension coverage and to provide adequate replacement rates. However, countries are at different stages of pension reform and demographic developments vary.

These countries range from highly industrialised to those resembling more a developing country than an emerging market. These variations in development are reflected by huge differences in their pension systems. Whereas more developed economies, like Singapore, have almost universal coverage of the population, other countries like China and India still reach only a minority of the population.

Despite the differences in coverage, most Asian countries share one feature in common: they rely to an increasing extent on funded pensions in order to help securing retirement income for the elderly. In particular, both China and India will experience rapid growth in defined contribution pension arrangements now that the legislation for these plans has been put in place.

### Portfolio choice arrives to Latin American individual account pension systems

As a first laboratory in structural pension reform, Latin America has accumulated a large pool of pension fund savings. Total assets under management by Latin American pension funds amounted to USD 146.5 billion in 2004, only 0.9% of the OECD total, but 32.1% of the region's GDP.

All major countries in the region, except Brazil, have mandatory or substitutive fully-funded individual accounts held at pension funds. In Brazil, pension funds are largely employment based though open pension funds (similar to those in other Latin American countries) have been growing rapidly in recent years.

The region has recently experienced a second-wave of reforms of individual account systems, involving the introduction of member choice of portfolio (known as "multifunds" in the region). Chile introduced a five-portfolio model in 2002, while Peru did so earlier this year. The Chilean system has been the most successful, as nearly 30% of all affiliates had selected a portfolio by December 2004. On the other hand, the recently introduced three-portfolio arrangement in Peru has met little popularity. Fewer than one percent of members had made an active choice by October 2005.

### Portfolios remain relatively conservative in most Asian and Latin American countries

As in 2003, pension fund portfolios in non-OECD countries (those that participated in the official OECD data collection exercise, see Table 5) were much more conservative than those in the OECD area, cash and deposits being a major asset class in Brazil, Thailand and Indonesia (respectively accounting for 44.2, 70.9 and 41.4% of total assets). Investment in equities also tends to be much lower than in OECD countries.

Pension fund asset allocation in Latin America is largely concentrated in domestic government securities and bank instruments. There are some exceptions however. Peruvian pension funds had over 45% of their assets invested in the corporate sector, while nearly 30% of Chilean pension fund assets were invested abroad. (See Table 10)

Table 10. Asset Allocation of Selected non-OECD Countries, 2004

Latin American countries	State Sector	Corporate Sector	Financial Sector	Foreign Sector	Other Assets
Argentina	62.3	14.7	11.1	10.3	1.6
Bolivia	67.5	24.4	5.6	1.4	1.1
Chile	18.7	24.4	29.5	27.3	0.1
Costa Rica	77.2	11.3	11.5	n.a	
El Salvador	83.5	0.3	10.5	5.5	
Peru	24.5	45.2	20.0	10.2	0.1
Dominican Republic	n.a	n.a	100.0	n.a	n.a
Uruguay	79.0	5.2	7.5	n.a	8.3
Other countries					
Kazakhstan	50.6	30.4	9.0	7.2	2.8

Total may not add up due to rounding or to negligible value

Source: International Federation of Pension Fund Administrators.

## LIST OF ADMINISTRATIVE SOURCES USED UNDER THE OECD GPS PROJECT

OECD countries  Australia Australian Prudential Regulation Authority Belgium Commission Bancaire, Financiere et des Assurances Canada Czech Republic Ministry of Finance Denmark Danish Financial Supervisory Authority Finland Insurance Supervision Authority Firance Ministry of Finance Germany Federal Financial Supervisory Authority Hungary Hungarian Financial Supervisory Authority Finance Supervisory Authority Hungary Hungarian Financial Supervisory Authority Financial Supervisory Authority Commissione vigilanza fondi pensione (COVIP) Japan Ministry of Foreign Affairs
Austria FMA Financial Market Authority Belgium Commission Bancaire, Financière et des Assurances Canada Statistics Canada Czech Republic Ministry of Finance Denmark Danish Financial Supervisory Authority Finland Insurance Supervision Authority France Ministry of Finance Germany Federal Financial Supervisory Authority Hungary Hungarian Financial Supervisory Authority Iceland Financial Supervisory Authority Italy Commissione vigilanza fondi pensione (COVIP) Japan Ministry of Foreign Affairs
Belgium Commission Bancaire, Financière et des Assurances Canada Statistics Canada Czech Republic Denmark Danish Financial Supervisory Authority Finland Insurance Supervision Authority France Ministry of Finance Germany Federal Financial Supervisory Authority Hungary Hungarian Financial Supervisory Authority Iceland Financial Supervisory Authority Italy Commissione vigilanza fondi pensione (COVIP) Japan Ministry of Foreign Affairs
Canada Statistics Canada Czech Republic Ministry of Finance Denmark Danish Financial Supervisory Authority Finland Insurance Supervision Authority France Ministry of Finance Germany Federal Financial Supervisory Authority Hungary Hungarian Financial Supervisory Authority Iceland Financial Supervisory Authority Italy Commissione vigilanza fondi pensione (COVIP) Japan Ministry of Foreign Affairs
Czech Republic Ministry of Finance Denmark Danish Financial Supervisory Authority Finland Insurance Supervision Authority France Ministry of Finance Germany Federal Financial Supervisory Authority Hungary Hungarian Financial Supervisory Authority Iceland Financial Supervisory Authority Italy Commissione vigilanza fondi pensione (COVIP) Japan Ministry of Foreign Affairs
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Finland Insurance Supervision Authority France Ministry of Finance Germany Federal Financial Supervisory Authority Hungary Hungarian Financial Supervisory Authority Iceland Financial Supervisory Authority Italy Commissione vigilanza fondi pensione (COVIP) Japan Ministry of Foreign Affairs
France Ministry of Finance Germany Federal Financial Supervisory Authority Hungary Hungarian Financial Supervisory Authority Iceland Financial Supervisory Authority Italy Commissione vigilanza fondi pensione (COVIP) Japan Ministry of Foreign Affairs
Germany Federal Financial Supervisory Authority Hungary Hungarian Financial Supervisory Authority Islam Financial Supervisory Authority Islam Commissione vigilanza fondi pensione (COVIP) Japan Ministry of Foreign Affairs
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Italy Commissione vigilanza fondi pensione (COVIP) Japan Ministry of Foreign Affairs
IZ
Korea Life Insurance Association
Mexico CONSAR
Netherlands Statistics Netherlands
New Zealand Ministry of Economic Development
Norway Kredittilsynet
Poland Insurance and Pension Funds Supervisory Commission of Poland
Portugal Instituto de Seguros de Portugal
Spain Banco de Espana
Spain (1) Ministry of Economy
Slovak Republic Ministry of Finance of the Slovak Republic
Switzerland Office fédéral de la statistique
Sweden Finansinspektionen (the Swedish Financial Supervisory Authority)
Turkey Directorate general of Insurance, Department for Private Pensions
United Kingdom National Statistical Office (ONS)
United States Department of Treasury
United States Federal Reserve
United States Department of Labor
Non-OECD countries
Argentina International Federation of Pension Funds Administrators
Bolivia International Federation of Pension Funds Administrators
Brazil Ministry of Finance - SUSEP (Open-funds)
Brazil Ministry of Social Security (Closed-funds)
Bulgaria Financial Supervision Commission
Chile International Federation of Pension Funds Administrators
Colombia Superintendencia Bancaria de Colombia
Costa Rica International Federation of Pension Funds Administrators
El Salvador International Federation of Pension Funds Administrators
Estonia Financial Supervision Authority
Hong Kong Mandatory Provident Fund Schemes Authority
Indonesia Ministry of Finance of the Republic of Indonesia
Kazakhstan International Federation of Pension Funds Administrators
Peru International Federation of Pension Funds Administrators
Singapore Monetary Authority of Singapore
Slovenia Slovene Insurance Supervision Agency
Slovenia Slovene Security Market Agency
South Africa Financial Services Board
Thailand Securities and Exchange Commission
Uruguay International Federation of Pension Funds Administrators

(1) Data coming from a secondary source was used to estimate investments by mutual pension entities.

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## NOTES TO BE TAKEN INTO CONSIDERATION WHEN INTERPRETING THE DATA

Data includes pension funds per the OECD taxonomy<sup>1</sup>. All types of plans are included (occupational and personal, mandatory and voluntary). Pension funds include also some personal pension arrangement like the Individual Retirement Accounts (IRA) in the United States as well as funds for government workers. (See Box 1, page 3)

Assets pertaining to reserve funds in social security systems are excluded.

#### **General notes**

- G10 includes Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States.
- Euro Area includes 12 countries: Austria, Belgium, Germany, Greece, Finland, France, Italy, Ireland, Luxembourg, Netherlands, Portugal, and Spain.
- OECD countries exchange rates to Euro used: 1.12 in 2001; 1.06 in 2002, 0.89 in 2003, and 0.80 in 2004.
- All OECD countries exchange rates from OECD, Main Economic Indicators.
- Non-OECD countries' exchange rates and GDP data from the International Financial Statistics Yearbook, IMF
- Data for Luxembourg are confidential.
- Data for Greece are close to zero.
- Conventional signs: 'n.a', not applicable; '..', not available.

### Common notes to Table 1, Figure 1, Figure 2, Table 3 and Table 4

- (1) 2003 data used for 2004;
- (2) Includes mandatory pension plans for 2004, but not for previous years.
- (3) OECD staff calculation; total assets for pension funds based on total liabilities.
- (4) Source: Irish Association of Pension Funds (IAPF).
- (5) Data does not include Mutual Aid Associations; 2004 data includes Personal Pension Plans and 2003 data on Occupational Pension Plans.
- (6) Includes Mutual Pension Entities for 2004.
- (7) Includes assets from the Premium Pension System for 2004.
- (8) 2003 data are preliminary estimates.
- (9) 2002 data are 2001.

- (10) Includes State and Local Government Retirement Funds as well as Federal Government Retirement Funds.
- (11) Source: Bank of Israel, Annual report, 2003.

#### **Specific notes**

#### Figure 1 and Table 1:

- Life Insurance data from OECD Insurance Statistics Yearbook, 2005 edition; 2002 and 2003 data used for 2003 and 2004 figures, respectively.
- Weighted average for total as a percent of GDP using pension fund assets as weights.

#### Table 3 and Figure 2:

- GDP (at current prices) is from OECD Main Economic Indicators.
- Weighted average for totals as a percent of GDP using pension fund assets as weights.

#### Table 5:

- (1) 2003 data.
- (2) 2002 data.

#### Figure 3:

- The data for Korea is related to 31 June 2003.
- The data for Japan is related to the end of the fiscal year, 31 March. The data includes the Mutual Aid Associations.
- In the chart, data point at 'zero' means data is not available for France and Korea but not applicable in the case of New Zealand.
- The data for Sweden includes AP1, AP2, AP3, AP4, AP6 as well as two temporary funds.

#### Figure 4:

- The data for Japan is related to the end of the fiscal year, 31 March 2004. In the case of the asset allocation for National Pension and Employees' Pension Insurance, 2003 data is used.
- In the chart, data point at 'zero' means data is not applicable in the case of USA and Spain.
- The data for Sweden includes AP1, AP2, AP3, AP4, AP6 and two temporary funds.

#### Figure 5:

- Source for Latin American countries: International Federation of Pension Fund Administrators
- Source for Asian countries: Allianz Global Investors.
- Source for Bulgaria, Colombia, Estonia, Mexico, Slovenia, South Africa, and Thailand: OECD Global Pension Fund Statistics.
- Various sources used for other non-OECD countries.
- (1) 2004 data are preliminary estimates.
- (2), (3) 2003 data.

Private Pensions: OECD Classification and Glossary'. The Glossary is available at http://www.oecd.org/daf/pensions/.

## GLOBAL PENSION STATISTICS<sup>1</sup>: AVENUES FOR FUTURE DEVELOPMENT OF THE PROJECT

In order to judge the usefulness of pension statistics, users need to be able to know about the content (meaning) of the statistical data related to funded pension.

'Maintaining quality data in the face of heavy demands is an enormous challenge. This include defining and gathering the statistics; ensuring relevance, veracity and comparability; providing the right metadata<sup>2</sup> such as definitions, sources and caveats; and then disseminating and updating, all in a fast-moving technological environment.'<sup>3</sup>

In this respect, the inventory of country pension statistics metadata was identified as a prerequisite of the project. Developing metadata can prevent data from being inappropriately used. It is a precondition for developing good quality and a robust dataset. Furthermore, it assists users in understanding the data's exact coverage. Thus, they can judge the relevance of the data with regard to their question or problem. It may also encourage countries to adopt 'good practices' in the reporting of pension statistics.

With a view to improving international data comparisons and to be able to assess comparability across countries, the development of metadata at various levels has been initiated in 2004. The results of the pilot were circulated to the OECD Working Party on Private Pensions and Task Force on Pension Statistics at the occasion of the July 2004 meetings.

Since then, questionnaires were sent in 2005, inviting OECD Delegations;

- to check the categories of pension plans by funding vehicles and by types,
- to check the information included and revise it when necessary,
- to check the information concerning the data availability and to confirm if the data are available or not applicable.

This project is currently financially supported by voluntary contributions both from the public and private sectors, namely Allianz Global Investors, ABI (American Benefits Institute), COVIP, EFFAS-EBC, ING Group, Pioneer Investments and the Portuguese Pension Supervisory Authority.

The term metadata refers to all the information used to document data and statistical activities. A distinction should be made between metadata made available to users and metadata for internal use (which can be very detailed).

See, OECD Observer, "Quality data: The new OECD statistical information system" by Lee Samuelson, OECD Information Technology and Network Services, and Lars Thygesen, OECD, Statistics Directorate, http://www.oecdobserver.org/news/fullstory.php/aid/1522/Q uality\_data.html

Building on the responses that reached the Secretariat, and thanks to the responses we got from Delegations, significant improvements have been achieved in our knowledge of the descriptions of pension plans. We should be in a position to disseminate selected indicators together with the metadata in 2006.

The OECD in cooperation with the EU Commission is developing a tool to monitor workers' coverage and benefits from employer provided occupational plans:

A first micro data collection round was launched in 2005. Quantitative information was collected from about 200 pension funds in 15 selected OECD countries. The objective of this joint project is to build statistical indicators relating to coverage, benefits and contributions. With a view to enable further analysis, the sample should be enlarged in 2006 and may be extended also to personal pension plans. We would also apply techniques of sample rectification to improve a posteriori the results of the survey.

Allianz Global Investors, which already supports the OECD Global Pension Statistics' project, signs up to a one year grant for a research programme on liability driven investments and risk management:

This project will examine ways and means to appropriately meet the requirements of retirement savings. Amongst other questions, this project will examine how investment behaviour and portfolios could be designed to meet long-term liabilities; which benchmark would be appropriate to match the adequate investment universe for liability driven investments; how the pension investing process would be organised; and what influence restrictions have on the coverage of long-term pension liabilities.

#### **OECD SEEKING FOR ADDITIONAL PARTNERS**

In order to complete this project successfully, the OECD is seeking additional partners from the public or the private sector.

Should your organisation be interested in joining this unique project or should you require more information on the Global Pension Statistics Project, please contact, Jean-Marc Salou, in the Financial Affairs Division, who is managing this project (tel.: +33 1 45 24 91 10, e-mail: jean-marc.salou@oecd.org).

#### **NEWS IN BRIEF**

#### **Protection measures for pension benefits**

A key part of the OECD's research on private pensions has been to look at ways of ensuring that pension beneficiaries are suitably protected – an issue which has been given increased prominence in recent years following high profile cases in several countries where thousands of beneficiaries lost all or part of their expected retirement income when their corporate plan sponsor became insolvent whilst their pension plan was underfunded.

As outlined in the OECD's 'Guidelines on Funding and Benefit Security', the first line of security should be adequate funding rules. However, the OECD has also been looking at additional protection measures, namely insolvency guarantee schemes and priority creditor rights.

Pension benefit guarantee schemes are insurance type arrangements, with premiums paid by pension funds, which takes on outstanding pension obligations which cannot be met by the insolvent plan sponsor. Though the USA guarantee scheme, the PBGC, is well known, similar schemes also exist in Sweden, Germany, Ontario – Canada, Switzerland, Japan and now in the UK. Lessons can be learnt from all of these schemes (e.g. the UK's Pension Protect Fund is working to apply fully risk adjusted premiums, whilst the Swedish fund can take a lien on plan sponsor's assets to protect its own financial position). One of the key conclusions from the OECD's report is that, to work effectively, these schemes must have suitable independence and powers to set and collect appropriately risk-adjusted premiums.

The OECD's report on priority pension claims within bankruptcy found that pension claims, (unlike wages), do not always receive priority over other creditors. Difficulties with providing such status come from problems with changing bankruptcy laws and potential impacts on the capital markets. The OECD's report concludes that priority rights should be given to unpaid and due contributions and care should be taken that pension beneficiaries be treated at least as well as other creditors in any bankruptcy or restructuring process (e.g. ensuring their representation on creditor committees).

The final version of these reports will be included in the OECD's next publication of the Private Pensions Series.

#### Individual choice in funded pension systems

The OECD's Working Party on Private Pensions launched a new project in June 2005 to analyse individual choice in funded pension systems. The research focuses primarily on countries that have mandatory individual account systems, both within and outside the OECD area.

In addition to portfolio decisions, the project involves the collection of information on administrative costs and performance. Three main levels of choice are considered: choice of provider, choice of product and choice of portfolio. The results of the research and policy recommendations are expected in June 2006.

## **OECD Guidelines on Pension Fund Asset Management**

For the last few years, the OECD has released regulatory guidelines on private pensions. The Working Party has most recently approved a set of guidelines on pension fund asset management which are expected to be released by the OECD in January 2006. The guidelines cover various issues including the statement of investment principles, the prudent person rule, quantitative restrictions, and valuation methods.

## The International Organisation of Pension Supervisors (IOPS), recent developments

After its inauguration in 2004, the IOPS continued to build its membership base during 2005, now reaching about 40 members and observers from over 30 countries.

The IOPS held its first regional conference in Asia and successfully launched its biannual Programme of Work. Projects on risk-based supervision, education and training and the use of IT were amongst the initiatives launched during the year and will be continued through 2006. A set of Principles for Private Pension Supervision is due to be published in December 2005. Further details of the IOPS and its work can be found on www.iopsweb.org.

#### **WB-OECD-ING** partnership

OECD has signed up a research partnership with the World Bank and 'ING Groep'. The first project would focus on the performance of funded pension arrangements in selected OECD and non-OECD countries.

## FORTHCOMING OECD MEETINGS ON PRIVATE PENSIONS

 $\mbox{N.B.}$  Unless otherwise indicated attendance at OECD meetings is by invitation only.

- Expert Meeting, South Africa, February 2006
- Global Forum on Private Pensions, Jordan (March 2006, to be confirmed)
- Working Party on Private Pensions, June 2006
- Task Force on Pension Statistics and indicators, June 2006
- Private Pensions Conference, China and India, second half of 2006, (date and venue to be determined)
- OECD-IOPS Global Forum on Private Pensions, Istanbul, Turkey, December 2006 (precise date to be determined)

#### **SUBMISSION OF ARTICLES**

Articles on statistical matters and related to funded pension from readers who wish to contribute to 'Pension Markets in Focus are most welcome.

The Editors reserve the right to edit and publish manuscripts in accordance with the OECD's editorial requirements of this publication.

<u>DEADLINE FOR ARTICLES FOR THE NEXT ISSUE:</u>
31 MARCH 2006.

#### RECENT OECD PUBLICATIONS



Improving Financial Literacy: Analysis of issues and policies

Financial education has always been important for consumers in helping them budget and manage their income, save and invest efficiently, and avoid becoming victims of fraud. As financial markets become increasingly sophisticated and as households assume more of the responsibility and risk for financial decisions, financial education is increasingly necessary for individuals, not only to ensure their own financial well-being but also to ensure the smooth functioning of financial markets and the economy.

This book, the first major study of financial education at the international level, contributes to the development of consumer financial literacy by providing information to education policymakers effective financial on programmes. It is also intended to promote the exchange of views and the sharing of experience in the field of financial education. It analyses financial literacy surveys in member countries, highlights the economic, demographic and policy changes that make financial education increasingly important, and describes the different types of financial education programmes currently being offered in OECD countries. Finally, this book evaluates the effectiveness of financial education programmes and suggests actions policymakers can take to improve financial education and awareness.



Financial Market Trends,
November 2005, Supplement 1: Ageing and
Pension System Reform: Implications for
Financial Markets and Economic Policies

(A report prepared at the request of the Deputies of the Group of Ten)

The demographic transition to older societies, in the most advanced economies but also beyond, is ushering in economic and financial changes. These were reviewed by the G10 in a 1998 report, The Macroeconomic and Financial Implications of Ageing Populations, which analysed the impact of population ageing on growth and living standards, public finances, financial markets and international capital flows.

In line with some of the main recommendations of that report, pension system reforms have been undertaken since then in most G10 countries, and experience with private saving for retirement has continued to build up, with substantial and instructive differences across countries. This report examines the financial market and policy implications of the increasing importance of funded retirement saving.



**Reform and Challenges** 

#### for Private Pensions in Russia

Reforms of retirement systems are a main issue on economic policy agendas around the world. The Russian Federation has undergone a major systemic reform of the pension system which has resulted in a shift from a single, publicly managed system to one supplemented by a mandatory, privately managed occupational funded component and voluntary pension arrangements. The reform aimed to tackle a set of problems of demographic, social and economic order inherent to retirement income provision and was viewed as a way to improve old-age security of retirees in Russia through ensuring long-term financial and fiscal stability of the pension system and adequacy of pension benefits. As the reform moves forward, new challenges emerge. Most prominent among them is the need to further strengthen the pension system regulatory capacity and enforcement powers of the authorities in charge of the oversight of private pension institutions.

This publication on pension policy in Russia is part of the initiative to provide analysis of private pension policies of non-members economies and of the OECD's ongoing cooperation with the Russian Federation.

#### FORTHCOMING PUBLICATIONS

### Funding and Benefit Security in Private Pension

The security of pension benefits should be one of the key objectives of pension regulators and supervisors. Such goal, however, should not come at all costs. In particular, policymakers need to balance the different needs, obligations and objectives of plan members, sponsors, and fiduciaries. Only after such considerations can a regulatory framework be crafted that allows pension plans to develop and strengthen over time.

The next volume of the Private Pension Series addresses the complexity of policy options to promote benefit security in funded pension arrangements, focusing on plans that make benefit commitments (defined benefit and collective - or "protected", in OECD terminology - defined contribution plans). In addition to providing a detailed description of regulations across OECD countries, this volume evaluates policies in three main areas: funding rules and valuations (including accounting standards), sponsor insolvency guarantee arrangements, and priority rights for plan beneficiaries in case of bankruptcy of the plan sponsor.