# Pension Markets Focus

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#### **Pension Markets in Focus**

This annual publication reviews trends in the financial performance of pension funds, including investment returns and asset allocation, and reports on trends in public pension reserve funds.

# Pension fund assets climb back to pre-crisis levels but full recovery still uncertain

Having weathered the financial crisis, pension fund asset levels in most countries continue to show strong growth and are on the way to returning to pre-crisis levels. During 2010, both economic and financial indicators showed signs of further recovery. However, the outlook for future economic growth in developed economies remains uncertain and sluggish.

A sustained period of low long-term interest rates is an important medium term risk for pension funds, which typically have long-term obligations to pension members. These future obligations become more expensive in today's terms when low interest rates increase the value of their liabilities. Their financial position worsens, even though an increase in the value of invested assets may mitigate this effect.

Against this backdrop, pension funds face other challenges and risks, such as recent accounting and regulatory changes. While bringing further transparency, the adoption of the new rules within IAS19 over the coming years which eliminate the smoothing option will increase volatility in sponsoring companies' financial statements. As a result, there will be added pressure to reduce risk in pension funds' asset holding in order to mitigate volatility and to keep funding ratios more stable than in the past. Pension funds may also transfer risk to financial markets via insurance or by greater use of derivatives for hedging purposes. The trend away from "pure" defined-benefit plans, 'pure' (final-salary) DB schemes, which guarantee a certain replacement rate and specify pension benefits according to the employee's final pay, length of service and other factors, towards defined contribution arrangements is also likely to intensify.

Regulatory changes are most likely in the European Union, as a result of the review of the pension funds directive (known as Institutions for Occupational Retirement Provision). The review includes a new look at funding and solvency regulations. Some other OECD countries have already reformed their funding rules. Canada stands out by having introduced a mechanism to ensure a high degree of counter-cyclicality by raising funding requirements in good times and allowing relatively long recovery periods.

by André Laboul, Head of the Financial Affairs Division



# KEY FINDINGS

## >> AVERAGE PENSION FUND PERFORMANCE IMPROVES

Pension funds experienced on average a positive net return on investment of 3.5% in real terms (5.4% in nominal terms) in 2010. The best performing pension funds amongst OECD countries were in the Netherlands (18.6%), New Zealand (10.3%), Chile (10.0%), Finland (8.9%), Canada (8.5%) and Poland (7.7%). On the other hand, in countries like Portugal and Greece, pension funds experienced, on average, a negative rate of investment returns (respectively, -2.4% and -7.4%). Until December 2010, pension funds in OECD countries had recovered USD 3.0 trillion from the USD 3.4 trillion in market value that they lost in 2008.

#### >> ASSET LEVELS CLIMB IN MOST COUNTRIES

Pension fund assets in most OECD countries (in local currency terms) have climbed back above the level managed at the end of 2007. Some countries however have not recovered completely from the 2008 losses. This was the case for Belgium (assets at the end of 2010 were 10% below the December 2007 level), Ireland (13%), Japan (8%), Portugal (12%), Spain (3%) and the United States (3%).

#### >> BONDS ARE DOMINANT ASSETS

In most of the OECD countries for which we received data, bonds – not equity – remain by far the dominant asset class, accounting for 50% of total assets on average, suggesting an overall conservative stance. Countries like the United States, Australia, Finland and Chile showed significant portfolio allocations to equities, in the range of 40% to 50%. In Austria, Finland, Poland and the Netherlands, the weight of equities in portfolios increased substantially from 2009 to 2010 (in the range 6 to 7 percentage points), while bond allocation fell by a similar amount.

### >> ASSET-TO-GDP RATIOS INCREASE

The OECD weighted average asset-to-GDP ratio for pension funds increased from 68.0% of GDP in 2009 to 71.6% of GDP in 2010. The United States saw an increase of 5 percentage points in the value of its asset-to-GDP ratio in 2010, equivalent to a gain of USD 1 trillion in assets, from USD 9.6 trillion to USD 10.6 trillion.

# >> PUBLIC PENSION RESERVE FUNDS GROW

Public pension reserve funds (PPRFs) continued their steady growth throughout 2010. By the end of the year, the total amount of PPRF assets within OECD countries was equivalent to USD 4.8 trillion, compared to USD 4.6 trillion in 2009. The average growth rate compared to 2009 was 5.0% and the average asset-to-GDP ratio in 2010 was 19.6%.

#### >> PUBLIC PENSION RESERVE FUNDS STILL PERFORM WELL BUT AT A SLOWER PACE

Although most PPRFs performed positively in 2010, investment returns were lower than in 2009. PPRFs in countries who submitted data continued to regain the ground lost during the 2008 financial crisis, with positive investment returns over the 2008-2010 period reaching 2.5% in real terms (4.4% in nominal terms) on average. The funds with conservative investment portfolios are still ahead in terms of performance for that period.

# PERFORMANCE OF PENSION FUNDS IN SELECTED OECD AND NON-OECD COUNTRIES

Pension funds in OECD countries experienced positive net investment returns in 2010, as in 2009. The annual, real rate of investment returns (in local currency terms and after investment management expenses) was 3.5% on average, with a broad range of 18.6% for the best performer (the Netherlands) and -7.4% for the worst (Greece). By the end of 2010, pension funds in OECD countries had recovered USD 3.0 trillion from the USD 3.4 trillion in market value that they lost in 2008.

Pension funds in OECD countries experienced on average positive net investment returns of 3.5% in real terms up to the end of 2010 (5.4% in nominal terms). Figure 1 shows pension fund investment performance in 2010 in the 5-15% range in most OECD countries. The best performing pension funds amongst OECD countries in 2010 were in the Netherlands (18.6%), New Zealand (10.3%), Chile (10.0%), Finland (8.9%), Canada (8.5%) and Poland (7.7%). On the other hand, in

countries like Portugal and Greece, pension funds experienced, on average, negative investment returns (respectively, -2.4% and -7.4%). The negative figure for Greece was due to the collapse of the Athens Stock Exchange Market, as well as the drop in price of Greek bonds. Adverse capital market performance in the domestic markets also explains the negative investment performance of Portuguese pension funds.

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2009 2010 Netherlands (p) New Zealand (1) Chile (2) Finland Canada Poland Denmark Mexico (3) Germany (4) Australia (1) Norway Belgium Estonia Austria Simple average Hungary Slovenia Weighted average Italy Turkey **United States** Slovak Republic United Kingdom Switzerland n.d Luxembourg Czech Republic Spain Iceland

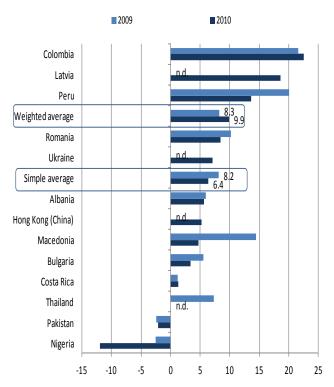
Figure 1. Pension funds' real net rate of investment returns in selected OECD countries, 2009-2010 (%)

Note: See page 20 for a description of how OECD calculates the rate of investment returns.

Source: OECD Global Pension Statistics.

Portugal Greece

Figure 2. Pension funds' real net rate of investment returns in selected non-OECD countries, 2009-2010 (%)



Source: OECD Global Pension Statistics.

Pension fund assets in most OECD countries (in local currency terms) have climbed back above the level managed at the end of 2007. Some countries however have not recovered completely from 2008 losses. This is the case for Belgium (assets at the end of 2010 were 10% below the December 2007 level), Ireland (13%), Japan (8%), Portugal (12%), Spain (3%) and the United States (3%). In some countries, such as Spain, the increase of volatility in financial markets, especially in bills and bonds issued by the public administration, the decrease of contributions to personal pension plans and the movements of members from pension plans to pension insurance contracts, and in other kinds of similar products, such as insured pension plans which are insurance contracts with a guaranteed rate of investment returns, explain the decrease of pension fund assets during 2010. In Portugal, during the 4th quarter of 2010 two pension funds (Fundo de Pensões do Pessoal da Portugal Telecom, S. A. and Fundo de

Pensões Regulamentares da Companhia Portuguesa Rádio Marconi, S. A.) were transferred to the Caixa Geral de Aposentações which runs the main (PAYG-financed) social security regime. This further reduced the amount of assets in the private pension system, which also suffered from the negative investment performance in Portuguese capital markets in 2010.

Pension fund performance in the non-OECD countries monitored improved with a higher weighted-average of investment returns of 9.9% in real terms (local currency) in 2010, more than twice the OECD average (Figure 2). By the end of 2010, total assets (measured in local currency) were above their December 2007 level in all selected non-OECD countries.

Table 1. Pension fund nominal and real 3-year average<sup>1</sup> annual returns in selected OECD countries over 2008-2010 (%)

Country	3-year average return			
Country	Nominal	Real		
Turkey	16.5	7.5		
Denmark	6.8	4.3		
Mexico	6.8	1.8		
Germany	4.7	3.3		
Netherlands	4.4	2.7		
Norway	3.5	0.7		
Chile	2.9	-0.8		
Slovenia	2.4	-0.3		
Korea	2.3	-1.1		
Italy	2.0	0.2		
Poland	2.0	-1.5		
Hungary	1.7	-3.2		
Greece	1.3	-1.9		
Finland	1.2	-0.5		
Canada	1.2	-0.2		
Czech Republic	1.2	-1.7		
New Zealand	0.9	-1.8		
Iceland	0.8	-8.4		
Austria	0.0	-1.8		
United States	-0.1	-1.7		
Slovak Republic	-0.8	-3.1		
Belgium	-0.8	-2.9		
Portugal	-1.1	-2.2		
Spain	-2.0	-3.8		
Australia	-2.8	-5.6		
Estonia	-3.7	-7.7		
Simple average	2.0	-1.1		
Weighted average	0.4	-1.4		

Note: 1. Definition of Geometric average. Source: OECD Global Pension Statistics. The relatively better aggregated performance of pension funds in Colombia, Latvia, Ukraine, Peru and Romania in comparison to OECD countries is because their systems are still in their infancy with investments increasing at a fast pace in a low market price environment and with fairly good investment returns since acquisition.

Annual average net investment returns (in local currency terms) over the last three years (2008-10) were highest in Turkey (16.5% in nominal terms, 7.5% in real terms), followed by Denmark (6.8% nominal, 4.3% real), Mexico (6.8% nominal, 1.8% real), and Germany (4.7% nominal, 3.3% real) (Table 1). All other countries experienced nominal returns below 5% on average over 2008-10 and real returns below 3%. Pension funds in twenty out of the twenty-six OECD countries that report net investment income experienced a negative real rate of return over the period. The worst performance was observed in Spain (-2.0% nominal, -3.8% real), Australia (-2.8% nominal, -5.6% real), and Estonia (-3.7% nominal, -7.7% real). The average, yearly net return over the period was 0.4% in nominal terms and -1.4% in real terms.

Non-OECD countries generally experienced better investment performances over 2008-10 (Table 2). Colombia's pension fund industry was the best performer with an 18.6% nominal rate of return (13.5% in real terms), while Bulgaria's was the worst (-4.4% in nominal terms, -9.6% in real terms).

Table 2. Pension fund nominal and real 3-year average annual returns in selected non-OECD countries over 2008-2010 (%)

Country	3-year average return			
Country	Nominal	Real		
Colombia	18.6	13.5		
Romania	17.0	9.8		
Albania	8.3	5.1		
Nigeria	5.9	-5.7		
Costa Rica	5.7	-2.9		
Pakistan	3.9	-10.3		
Macedonia	3.0	0.0		
Peru	0.4	-2.9		
Bulgaria	-4.4	-9.6		

Source: OECD Global Pension Statistics.

#### PENSION FUND INVESTMENT STRATEGIES

The proportions of equities and bonds in pension fund portfolios remained relatively stable in most countries, the main exception being some countries where portfolios have been substantially rebalanced towards other asset classes, primarily domestic bonds.

Equity holdings in investment portfolios were a key channel through which the financial turmoil affected institutional investors and banks, causing a fall in the value of their portfolio holdings. However, this transmission channel appears to have generally been mitigated for pension funds in more than half of OECD countries where equity holdings do not make up more than 30% of overall investment portfolios.

In most OECD countries for which we received data, bonds – not equity – remain by far the dominant asset class, accounting on average for 50% of total assets, suggesting an overall conservative stance (Figure 3). Countries like the United States, Australia, Finland and Chile still showed significant portfolio allocations to equities, in the range of 40% to 50%.

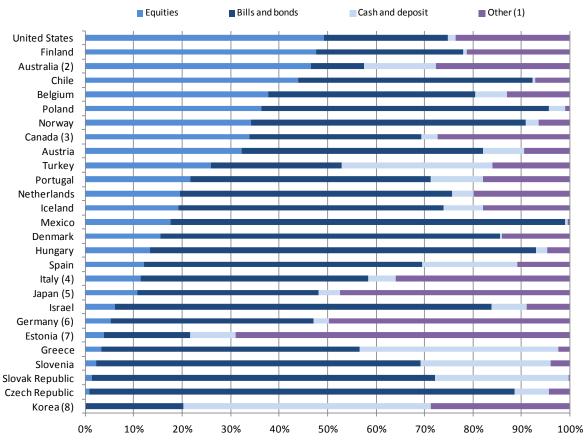
In Austria, Finland, Poland and the Netherlands, the weight of equities in portfolios increased substantially from 2009 to 2010 (in the range 6 to 7 percentage points), while the bond allocation fell by a similar amount. This shift is largely due to differences in performance between the two asset classes which were not compensated by rebalancing policies. Pension funds in Germany, Estonia and Korea, on the other hand, reduced their bills and bonds allocations, while increasing other asset classes but not equities.

Another major change in investment strategies took place in Greece. In 2010 there was a sharp rise of 12 percentage points in the proportion of cash and similar assets (e.g. money market instruments) held by pension funds, while their allocation to equities fell by a similar percentage.

Most large pension funds use a rebalancing strategy. In a period of falling equity prices, funds will buy more equities to keep the percentage of equities in the investment portfolio at the targeted level. Conversely, funds sell equities if prices have risen. At macro-level, this strategy tempers both upward and downward movements in the equity market which is beneficial to financial stability.

Figure 3. Pension fund asset allocation for selected investment categories in selected OECD countries, 2010

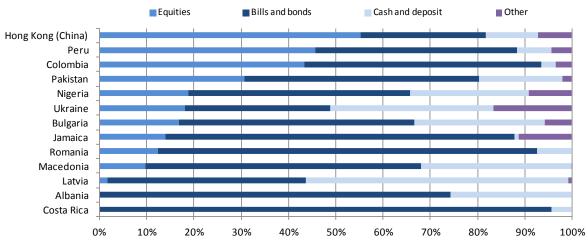
As a % of total investment



Source: OECD Global Pension Statistics.

Figure 4. Pension fund asset allocation for selected investment categories in selected non-OECD countries, 2010

As a % of total investment



Despite the recovery in financial markets, asset allocation remains challenging as pension funds and sponsoring companies need to take complex strategic decisions on the asset allocation mix in the context of highly changeable market conditions.

Bonds also remain the dominant asset class in most non-OECD countries monitored, accounting on average for 55% of total assets. Non-OECD countries with significant portfolio allocations to equities (in the range of 40% to 55%) include Hong Kong (China), Peru and Colombia. Cash and deposits also represent a large share of total assets in Latvia, Ukraine and Macedonia (in the range of 30% to 55%).

# IMPORTANCE OF PENSION FUNDS RELATIVE TO THE SIZE OF THE ECONOMY

The OECD weighted average asset-to-GDP ratio for pension funds increased from 68.0% of GDP in 2009 to 71.6% of GDP in 2010. The United States saw an increase of 5 percentage points in the value of its asset-to-GDP ratio in 2010, equivalent to a gain of USD 1 trillion in assets, from USD 9.6 trillion to USD 10.6 trillion.

By December 2010, OECD pension fund assets in relation to national economies amounted to 71.6% of GDP on average, still down from 78.2% in 2007, but

As a % of GDP Netherlands 134.9 Iceland 123.9 Australia 90.9 United Kingdom (1) 86.6 Finland 82.1 **United States** 72.6 Weighted average 71.6 67.0 Chile Canada 60.9 Denmark Ireland (2) 49.0 Israel 48.9 Simple average 25.2 Japan (3) Poland 15.8 Hungary 14.6 New Zealand 13.8 Mexico 12.6 Portugal 11.4 Spain 7.9 Norway 7.8 Slovak Republic 7.4 Estonia (4) 7.4 Czech Republic 6.3 Austria 5.3 Germany 5.2 Italy 4.6 Korea 4.0 Belgium 3.8 2.5 Slovenia Turkev 2.3 France (5) 0.2 Greece 0.0 100 120 140

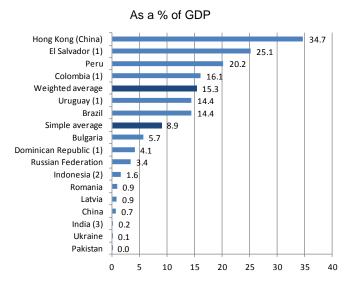
Figure 5. Importance of pension funds relative to the size of the economy in selected OECD countries, 2010

substantially higher than the equivalent figure in 2008 of 60.3%. The Netherlands has still the largest proportion of pension assets to GDP (134.9%), followed by Iceland (123.9%) and Australia (90.9%).

Only two countries registered asset-to-GDP ratios lower in 2010 than in 2009 - Portugal (-2 percentage points) and Japan (-1.4 percentage points). Finland, the United Kingdom and the United States exceeded the OECD weighted average asset-to-GDP ratio of 71.6%, with figures in the range 70 to 90%.

Outside the OECD, Hong Kong's pension fund industry was the first ever to surpass the OECD (simple) average, with asset to GDP ratio of 34.7% in December 2010. In most other non-OECD countries the ratios remain below 20% (Figure 6).

Figure 6. Importance of pension funds relative to the size of the economy in selected non-OECD countries, 2010



Source: OECD Global Pension Statistics.

#### **GEOGRAPHICAL DISTRIBUTION**

In absolute terms, the United States has the largest pension fund market within OECD countries, with assets worth USD 10.6 trillion. In relative terms, however, the United States' share of OECD pension fund assets shrank from a level of 67% in 2001 to 55% in 2010.

Other OECD countries with large pension fund systems include the United Kingdom with assets worth USD 1.9 trillion and a 10% share of the OECD pension fund market; Japan, USD 1.4 trillion and 7%; the Netherlands and Australia, USD 1.1 trillion and 6%; Canada, USD 1 trillion and 5%; and Switzerland, USD 0.55 trillion and 3%. For the remaining 27 countries, total pension fund assets in 2010 were valued at approximately USD 1.5 trillion, accounting for 8% of the OECD total (Figure 7).

When both OECD and non-OECD economies are combined, the world pension fund total at the end of 2010 was equivalent to USD 19.3 trillion, of which 96% or USD 18.6 trillion were accounted for by OECD countries and 4% or USD 0.7 trillion by non-OECD economies (Table 3).

Figure 7. Geographical distribution of pension fund assets in OECD countries, 2010

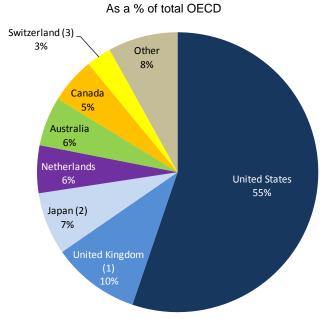


Table 3. Total investment of pension funds in OECD and selected non-OECD countries, 2007-2010

In millions of USD and national currency

		USD m				National current		
OECD countries	2007	2008	2009	2010	2007	2008	2009	2010
Australia	964 365	916 789	811 719	1 089 723	1 152 641	1 097 855	1 040 770	1 187 994
Austria	18 014	18 343	19 532	19 751	13 150	12 546	14 063	14 912
Belgium	20 262	16 677	19 165	17 627	14 792	11 407	13 799	13 308
Canada	888 645	772 383	806 350	1 017 672	954 620	824 563	920 352	1 048 446
Chile	105 602	89 482	106 596	136 254	55 173 152	46 750 887	59 785 337	69 523 453
Czech Republic	8 241	11 225	11 332	12 182	167 197	191 705	215 871	232 422
Denmark	100 864	161 649	133 980	154 380	548 978	824 240	718 055	867 884
Estonia (1)	970	1 076	1 323	1 419	11 087	11 506	14 898	16 753
Finland	173 973	164 826	184 821	196 101	127 000	112 737	133 071	148 056
France (2)	1 921	2 718	4 167	4 570	1 402	1 859	3 000	3 450
Germany	154 470	172 351	175 501	171 352	112 763	117 884	126 361	129 371
Greece	34	49	63	70	25	34	45	53
Hungary	15 068	14 886	16 886	19 082	2 766 268	2 567 247	3 412 000	3 964 528
Iceland	26 749	18 987	14 351	15 606 100 000	1 713 955	1 670 875	1 774 719	1 907 678
Ireland (3)	118 633	92 867	100 278		86 602	63 519	72 200	75 500
Israel	54 394	85 400	90 656	106 376	223 454	306 418	356 459	397 740
Italy	68 686	78 498	86 818	93 788	50 140	53 691	62 509	70 810
Japan (4)	1 122 878	1 120 049	1 351 190	1 388 329	132 228 600	115 799 900	126 433 000	121 840 700
Korea	29 786	27 790	29 632	40 146	27 684 625	30 593 454	37 779 083	46 386 464
Luxembourg	512	569	1 172		374	390	844	
Mexico	103 031	110 216	104 254	130 362	1 125 979	1 229 261	1 407 867	1 646 712
Netherlands	1 058 153	979 925	997 922	1 056 769	772 452	670 244	718 504	797 860
New Zealand	14 535	13 601	13 755	19 572	19 781	19 388	22 008	27 158
Norway	27 385	27 186	27 852	32 123	160 435	153 541	175 191	194 170
Poland	51 115	57 927	58 143	73 980	141 348	139 609	181 354	223 013
Portugal	30 625	29 653	30 441	26 125	22 356	20 282	21 918	19 725
Slovak Republic	3 132	4 640	5 508	6 466	2 286	3 174	3 966	4 882
Slovenia	860	1 041	1 266	1 437	628	712	911	1 085
Spain	118 465	114 230	118 159	111 122	86 479	78 130	85 074	83 897
Sweden	39 452	35 307	33 435		266 606	232 922	255 868	
Switzerland	504 601	496 957	551 450		605 459	538 524	598 930	
Turkey	7 920	10 934	14 017	17 318	10 296	14 200	21 682	25 845
United Kingdom (5)	2 186 472	1 698 841	1 753 016	1 943 110	1 092 671	927 723	1 124 262	1 258 106
United States	10 939 952	8 223 882	9 591 549	10 587 679	10 939 952	8 223 882	9 591 549	10 587 679
Selected non-OECD econ		1	2	0	45	00	454	202
Albania	0	•	2	2	45	93	154	203
Argentina (6)	31 198	32 881			96 714	103 247		
Brazil	224 218	224 950	242 909	301 496	436 565	412 506	485 678	530 400
Bolivia (6)	2 559	3 428	4 246	5 042	20 088	24 822	29 809	35 398
Bulgaria	1 629	1 723	2 256	2 700	2 328	2 303	3 173	3 996
China	19 980		37 081	41 492	152 000		253 300	280 900
Colombia	31 212	35 079	30 928	46 304	64 867 218	69 025 803	67 015 269	87 911 524
Costa Rica	1 631	2 130	2 336	2 764	842 379	1 120 971	1 339 188	1 453 484
Dominican Republic (6)	797	1 142	1 602	2 122	26 504	39 531	57 730	78 264
Egypt		4 022				21 847		
El Salvador (6)	3 656	4 256	4 763	5 335	31 990	37 243	41 675	46 684
Hong Kong (China)	64 404	60 042	67 397	78 113	502 445	467 535	522 448	606 941
India (5)				3 280				150 000
Indonesia (5)	9 617			11 489	87 904 869			104 437 000
Jamaica	2 522	2 698	2 530		173 912	196 410	222 402	259 067
Kenya		3 936				272 284		
Latvia	4 000	0.004	182	206	0.005	0.000	92	109
Liechtenstein	1 862	2 091	2 512		2 235	2 266	2 728	40.45
Macedonia	70	116	198	269	3 125	5 037	8 751	12 494
Nigeria	4 70 1	0.451	0.005	40 540		4 000 000		
_ 1	1 791	2 454	9 285	13 513	858 580	1 098 980	1 382 500	2 031 001
Pakistan	1 791 11	2 454 10	9 285 12	16		1 098 980 735	1 382 500	1 375
Panama (6)	11 	10	12 	16 144 531	858 580 648 	735 	1 008	1 375 144 531
Panama (6) Peru	11  19 591	10  17 350	12  23 337	16 144 531 31 086	858 580 648  61 280	735  50 740	1 008  70 279	1 375 144 531 87 974
Panama (6) Peru Romania	11  19 591 6	10  17 350 371	12  23 337 811	16 144 531 31 086 1 466	858 580 648  61 280 14	735  50 740 934	1 008  70 279 2 473	1 375 144 531 87 974 4 663
Panama (6) Peru Romania Russian Federation (7)	11  19 591 6 34 195	10  17 350 371 34 228	12  23 337 811 35 822	16 144 531 31 086	858 580 648  61 280 14 874 728	735  50 740 934 850 662	1 008  70 279 2 473 1 137 002	1 375 144 531
Panama (6) Peru Romania Russian Federation (7) Serbia	11  19 591 6 34 195 52	10  17 350 371	12  23 337 811	16 144 531 31 086 1 466	858 580 648  61 280 14 874 728 3 051	735  50 740 934	1 008  70 279 2 473	1 375 144 531 87 974 4 663
Panama (6) Peru Romania Russian Federation (7) Serbia South Africa	11  19 591 6 34 195 52 165 630	10  17 350 371 34 228 	12  23 337 811 35 822 107	16 144 531 31 086 1 466	858 580 648  61 280 14 874 728 3 051 1 166 923	735  50 740 934 850 662 	1 008  70 279 2 473 1 137 002 7 222 	1 375 144 531 87 974 4 663
Panama (6) Peru Romania Russian Federation (7) Serbia South Africa Thailand	11  19 591 6 34 195 52 165 630 12 796	10  17 350 371 34 228  	12  23 337 811 35 822	16 144 531 31 086 1 466	858 580 648  61 280 14 874 728 3 051 1 166 923 441 710	735  50 740 934 850 662	1 008  70 279 2 473 1 137 002	1 375 144 531 87 974 4 663
Panama (6) Peru Romania Russian Federation (7) Serbia South Africa Thailand Trinidad and Tobago	11  19 591 6 34 195 52 165 630	10  17 350 371 34 228   13 967	12  23 337 811 35 822 107  15 069	16 144 531 31 086 1 466 51 306 	858 580 648  61 280 14 874 728 3 051 1 166 923	735  50 740 934 850 662  465 297	1 008  70 279 2 473 1 137 002 7 222 	1 375 144 531 87 974 4 663 1 558 066 
Panama (6) Peru Romania Russian Federation (7) Serbia South Africa Thailand Trinidad and Tobago Ukraine	11  19 591 6 34 195 52 165 630 12 796 3 698 	10  17 350 371 34 228   13 967 	12  23 337 811 35 822 107  15 069	16 144 531 31 086 1 466 51 306 	858 580 648  61 280 14 874 728 3 051 1 166 923 441 710 23 400 	735  50 740 934 850 662   465 297	1 008 70 279 2 473 1 137 002 7 222 516 651	1 375 144 531 87 974 4 663 1 558 066  
Panama (6) Peru Romania Russian Federation (7) Serbia South Africa Thailand Trinidad and Tobago Ukraine Uruguay (6)	11  19 591 6 34 195 52 165 630 12 796	10  17 350 371 34 228   13 967	12  23 337 811 35 822 107  15 069	16 144 531 31 086 1 466 51 306 	858 580 648  61 280 14 874 728 3 051 1 166 923 441 710 23 400  68 371	735  50 740 934 850 662   465 297  612 83 275	1 008  70 279 2 473 1 137 002 7 222  516 651  86 239	1 375 144 531 87 974 4 663 1 558 066 
Panama (6) Peru Romania Russian Federation (7) Serbia South Africa Thailand Trinidad and Tobago Ukraine Uruguay (6) Regional indicators	11  19 591 6 34 195 52 165 630 12 796 3 698  2 913	10  17 350 371 34 228   13 967  116 3 975	12  23 337 811 35 822 107  15 069  3 821	16 144 531 31 086 1 466 51 306    144 5 814	858 580 648  61 280 14 874 728 3 051 1 166 923 441 710 23 400  68 371	735  50 740 934 850 662  465 297  612 83 275 verage growth ra	1 008 70 279 2 473 1 137 002 7 222 516 651 86 239	1 375 144 531 87 974 4 663 1 558 066  
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#### PENSION FUND INDUSTRY STRUCTURE

In recent years, occupational pension plan sponsors in many countries have shown an increasing interest in defined contribution (DC) plans, as demonstrated by the number of employers that have closed defined benefit (DB) plans to new entrants and encouraged employees to join DC plans.

DB plans, however, still play an important role, largely due to their historical prominence, as the favoured structure for workplace pensions in many countries. In DC plans, participants bear most of the risks, while employers assume the risks in traditional DB plans sponsoring. So called "Hybrid and mixed" DB plans can also be found in some countries (e.g., Canada, Iceland, Portugal), which involve some degree of risk sharing between employers and employees. In a post-crisis context, improvements in effective design and management of default strategies in accordance with member needs and risk tolerances, will improve clarity around responsibility and should ultimately result in furthering governance of DC plans.

Assets accumulated in defined benefit (DB) and defined contribution (DC) plans were almost equal across the OECD area as a whole (Figure 8). However, national markets vary considerably. For example, in Chile, Czech Republic, Greece, Poland and the Slovak Republic, all pension funds are DC, while DB dominates in Finland, Norway and Germany. In other OECD countries, there is a combination of both DC and DB arrangements. As compared to 2009, the share of traditional DB assets in total pension funds' assets decreased significantly in Korea (-7.1 pp), Turkey (-4.5 pp), New Zealand (-4.0 pp), Israel (-2.6 pp) and Mexico (-2.3 pp) to the profit of DC pension plans and hybrid/mixed DB plans. The introduction of automatic enrolment in many OECD countries in future years may also further contribute to fuel this trend.

In DC plans, the transfer of a number of risks may challenge individuals to face complex investment choices, which bring to the fore the need for improving transparency in information to members and their financial education.

Figure 8. Relative shares of DB, DC and hybrid/mixed pension fund assets in selected OECD countries, 2010



As a % of total assets

Pension funds ■ Book reserve Pension insurance contracts Other Denmark (552)Iceland (17 Canada (2019)**United States** (17371)Australia (1124)Finland (217)Sweden (1) (280) Israel (107)Korea (159)Portugal Spain France (2) Italy (3) Slovenia 20 40 60 ጸበ 100 120 140 160 180 200 Source: OECD Global Pension Statistics.

Figure 9. Private pension assets by type of financing vehicle in selected OECD countries, 2010

As a % of GDP and in absolute terms (USD billion)

#### TYPES OF FINANCING VEHICLES

Pension assets also grew in vehicles other than pension funds. Pension insurance contracts, in particular, account for almost two thirds of the total assets of funded pension arrangements in Denmark and Korea and represent 105% and 10% of their GDP, respectively. On the other hand, pension funds are the only financing vehicle for private pension plans in countries such as the Czech Republic, Hungary, New Zealand, Poland, the Slovak Republic and Switzerland.

Based on the OECD classification, there are three main types of funded private pension plans: pension funds (autonomous), book reserves (non-autonomous) and pension insurance contracts. There is also a residual category, "Other", which includes pension plans managed by other financial institutions such as banks or investment companies and any private pension arrangements not included above. The distinction between these plans is the financing vehicle (see "Private Pensions: OECD Classification and Glossary" <a href="https://www.oecd.org/daf/pensions/gps">www.oecd.org/daf/pensions/gps</a> for definitions). Information on these other arrangements, however, is not readily available for all OECD countries, especially for products sold in the retail market (personal pension

plans). Information on the specific size of the proportion of life insurance investments that correspond to pension plans is available for a few OECD countries. Following the OECD classification, these plans are referred to as pension insurance contracts.

#### PRIVATE PENSION OPERATING COSTS

In general, countries with defined-contribution systems and those with large numbers of small funds appear to have higher operating costs than countries with only a few funds offering defined-benefit, hybrid, or collective defined-contribution pension arrangements.

One way to judge the efficiency of private pension systems is to look at the total operating costs in relation to assets managed. The total operating costs of private pension systems include all costs of administration and investment management involved in the process of transforming pension contributions into retirement benefits. Operating costs include marketing the plan to potential participants, collecting contributions, sending contributions to investment fund managers, keeping records of accounts, sending reports to participants, investing the assets, converting account balances to annuities, and paying annuities.

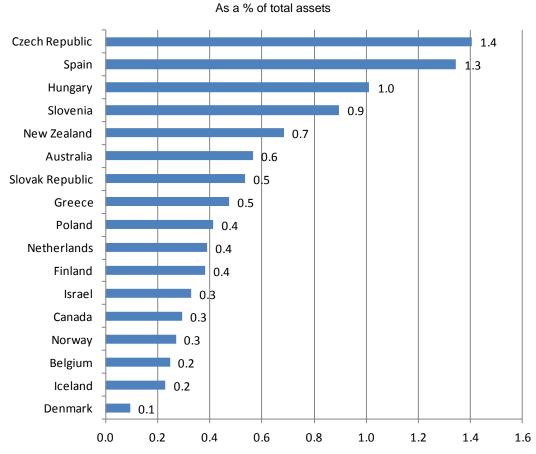


Figure 10. Operating costs in selected OECD countries, 2010

Source: OECD Global Pension Statistics.

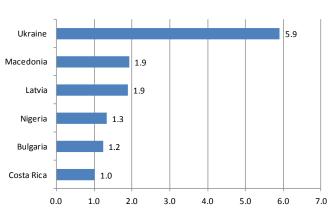
Figure 10 shows operating costs in selected OECD countries expressed as a percentage of total assets in 2010. The Czech Republic, Spain and Hungary exhibited the highest operating costs of all OECD countries monitored, at respectively, 1.4%, 1.3% and 1.0%. Operating costs in Slovenia, New Zealand and Australia were in the range 0.5% to 0.9%.

On the other hand, operating costs accounted for less than 0.3% of total assets in Canada (0.29%), Norway (0.27%), Belgium (0.25%), Iceland (0.23%), and Denmark (0.09%).

Operating costs in selected non-OECD countries tend to be higher than in OECD countries, in particular in Ukraine where operating costs represent 5.9% of assets under management (Figure 11).

Figure 11. Operating costs in selected non-OECD countries, 2010

As a % of total assets



Source: OECD Global Pension Statistics.

12

# CONCENTRATION OF ASSETS AND MEMBERSHIP

Figure 12 illustrates the degree of concentration across countries measured by total assets and members of the three largest pension funds in 2010. It shows a group of countries, such as Austria, Bulgaria, Chile, Colombia, Estonia, Poland and Greece, with a high concentration in terms of assets and membership. On the left-hand

side of the figure, countries with a more fragmented market can be found. This is the case in Australia, Finland, Italy, New Zealand, Norway, Mexico, Slovak Republic and Spain.

The large concentration in certain countries, such as Greece, can be attributed to a limited number of funds dominated by one or two major market player as well as to the fact, that some of the funds are newly established.

100 Macedonia Fotal assets of the 3 largest funds as a % of total 90 Latvia ₽eru (3) 80 €olombi Chile y = 1.041x - 0.9792Slovenia (1)Austrjá 70 Bulgaria Romania Estonia Pøland 60 Czech Republic Pakistar 50 Finland <u>Mexico</u> 40 Slovak Republic Norway 30 Italy Germany (2) 20 New Zealand 10 Australia Spain 0 0 20 40 60 80 100

Total membership of the 3 largest funds as a % of total

Figure 12. Concentration of total assets compared to the membership of the three largest pension funds in selected countries, 2010

#### PERFORMANCE OF PUBLIC PENSION RESERVE FUNDS

Public pension reserve fund (PPRF) assets continue to grow throughout 2010 but at a slower pace. By the end of the year, the total amount of PPRF assets, within OECD countries for which such data was available, was equivalent to USD 4.8 trillion, compared to USD 4.6 trillion in 2009. The average growth rate in comparison to 2009 was 5.0% and the average asset-to-GDP ratio in 2010 was 19.6%.

Table 4. Size of public pension reserve fund markets in selected OECD countries and other major economies, 2010

Country	Name of the fund or institution	Founded in	Assets			
Country Indine of the fund of institution		rounded in	USD billions	% of GDP	% increase	
Selected OECD	countries					
United States	Social Security Trust Fund	1940	2 609.0	17.9	2.7	
Japan (1)	Government Pension Investment Fund	2006	1 312.8	25.9	n.d.	
Korea	National Pension Fund	1988	280.4	27.6	16.7	
Canada	Canadian Pension Plan	1997	136.0	8.6	13.0	
Sweden	National Pension Funds (AP1-AP4 and AP6)	2000	124.7	27.2	8.1	
Spain	Social Security Reserve Fund	1997	85.3	6.1	7.3	
France (1)	AGIRC-ARRCO	n.d.	71.7	2.7	n.d.	
Australia	Future Fund	2006	65.8	5.5	8.4	
France	Pension Reserve Fund	1999	49.0	1.9	11.1	
Ireland	National Pensions Reserve Fund	2000	32.3	15.9	9.3	
Belgium	Zilverfonds	2001	23.3	5.0	4.3	
Norway	Government Pension Fund - Norway	2006	23.1	5.6	16.9	
Portugal	Social Security Financial Stabilisation Fund	1989	12.8	5.6	2.5	
New Zealand (2)	New Zealand Superannuation Fund	2001	11.2	7.9	17.1	
Chile	Pension Reserve Fund	2006	3.8	1.9	12.2	
Mexico	IMSS Reserve	n.d.	3.6	0.3	-6.7	
Poland	Demographic Reserve Fund	2002	3.4	0.7	39.1	
Total selected OECD countries (3)			4 848.1	19.6	5.0	
Other major eco	nomies					
Saudi Arabia	General Organisation for Social Insurance (1,4)	1969	400.0	106.4	n.d.	
China	National Social Security Fund	2001	126.5	2.2	10.3	
Argentina	Sustainability Guarantee Fund	2007	45.7	12.3	26.4	
Total other major	Total other major economies (3)		572.2	75.9	14.6	
Memo item: Sove	Memo item: Sovereign Wealth Funds with a pension focus (5)					
Norway	Government Pension Fund - Global	1990	509.1	122.8	16.6	
Russian Federatio	n National Wealth Fund	2008	88.4	5.9	-2.7	

Source: OECD Global Pension Statistics.

Total amounts of public pension reserve fund (PPRF) assets were equivalent to USD 4.8 trillion by the end of 2010 within the OECD countries for which we received data (Table 4). The largest reserve is held by the US social security trust fund at USD 2.6 trillion, while Japan's government pension investment fund is second at USD 1.3 trillion. Canada, Korea and Sweden also accumulated large reserves. (see Pension Markets in Focus, Issue 4, for definitions of the types of sovereign and public pension reserve funds).

Table 4 also shows PPRFs in three major non-OECD countries that are G20 members: Argentina, China and Saudi Arabia. Reserves accumulated in Saudi Arabia's general organisation for social security are estimated to have reached over USD 400 billion at the end of 2009,

making them the third largest PPRF in the world, after the US and Japan. China's national social security funds reached USD 126.5 billion at the end of 2010, an amount similar to the AP funds in Sweden.

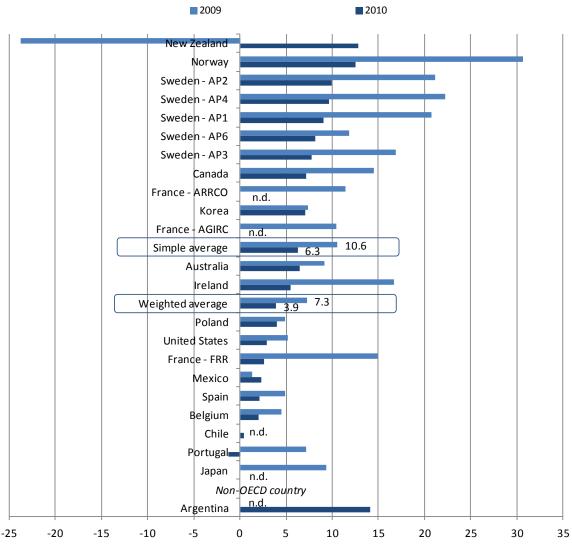
The reserves put aside by the PPRFs for which we received data increased by 5.5% on average between 2009 and 2010. The largest increase was observed for Poland's demographic reserve fund, with 39.1% (see last column of Table 4). PPRFs in Argentina, New Zealand, Norway and Korea also experienced high increases, larger than 15%. In most countries however, the increase was lower in 2010 than in 2009 (7.3% on average for OECD countries between 2008 and 2009, in comparison to 5.0% between 2009 and 2010).

In terms of total assets relative to the national economy, Korea had the highest ratio at 27.6% of GDP, followed by Sweden with 27.2% of GDP and Japan with 25.9% (Table 4). On average, PPRF assets accounted for 19.6% in the OECD area in 2010, compared to 75.9% in the non-OECD countries covered in this publication.

Large reserves are also accumulated in sovereign wealth funds that have a pension focus. The government pension fund "global" in Norway has two main goals: to facilitate government savings necessary to meet the rapid rise in public pension expenditures in the coming years, and to support a long-term management of petroleum revenues. Russia's national

wealth fund is dedicated to supporting the pension system to guarantee long-term sound functioning of the system. While they clearly have a mission linked to the future financing of pension payments, these funds are not considered to be public pension reserve funds under OECD definitions as their mandate goes beyond that mission and assets could be used for other purposes. For instance, during the 2008 financial crisis, assets of the Norwegian fund were used to finance general government consumption. The remainder of this section focuses on public pension reserve funds and therefore does not include these sovereign wealth funds.

Figure 13. Public pension reserve funds' real net investment returns in selected OECD and non-OECD countries, 2009-2010 (%)



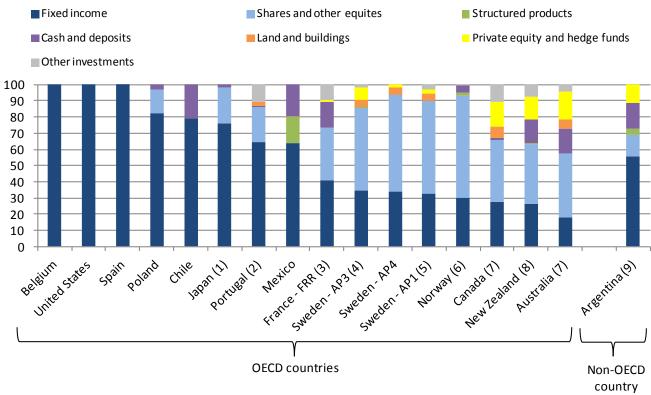


Figure 14. Asset allocation of public pension reserve funds in selected OECD and non-OECD countries, 2010

Source: OECD Global Pension Statistics.

#### **FINANCIAL PERFORMANCE**

Although most PPRFs performed positively in 2010, investment returns were lower than in 2009. PPRFs in countries that submitted data continued to regain the ground lost during the 2008 financial crisis, with positive investment returns over the 2008-2010 period reaching 2.5% in real terms (4.4% in nominal terms) on average. The funds with conservative investment portfolios are still ahead in terms of performance for that period.

In all countries, PPRFs performed less well in 2010 in comparison to 2009. On average, the funds' performance fell from 7.3% to 3.9% in real terms. The biggest drops were observed for the Norwegian government pension fund (from 30.7% to 12.6%), the French pension reserve fund (from 14.9% to 2.6%), Swedish AP funds (from around 20% to 9%) and the Portuguese stabilisation fund (from 7.1% to -1.3%).

PPRFs with conservative portfolios (Belgium, Spain, and the United States) had stable but low investment returns in 2009 and 2010. The highest investment returns in 2009 and 2010 were observed among funds in which equities represent a large part of total assets invested. The

Norwegian government pension fund was the most exposed to equities in December 2010, at 63.0% of total assets and also had the best performance in both 2009 and 2010 (Figure 14). The second best performing funds – with also a high equity allocation – were the Swedish AP funds (equity allocation was respectively 59.9%, 57.4% and 51.0% for the funds AP4, AP1 and AP3). The funds with the highest allocation to private equity and hedge funds were Australia (17.7% of total in 2010), Canada (15.1%) and New Zealand (13.9%).

The 2009 and 2010 recovery represents a major step towards healing the wounds caused by the 2008 financial crisis.

The average yearly real rate of investment returns over the last 3 years is positive for most countries, ranging from -0.8% in the Swedish AP6 fund (0.5% in nominal terms) to 1.9% in Mexico (6.8% in nominal terms) (Table 5).

However, two funds still had not recovered from the crisis at the end of 2010, with negative average yearly real rate of investment returns over 2008-2010: France's pension reserve fund (-4.9% real and -3.5% nominal) and Ireland's national pension reserve fund (-6.3% real and -6.7% nominal). In real terms, Poland's reserve fund

also performed negatively (-0.5%), although its nominal performance was positive (3.0%).

Table 5. Nominal and real average annual PPRF investment rate of returns in selected OECD countries over 2008-2010 (%)

Country	3-year average return			
Country	Nominal	Real		
Mexico	6.8	1.9		
Korea	6.7	3.1		
United States	4.9	3.1		
Norway	4.8	2.0		
Spain	4.4	2.5		
Belgium	4.4	2.1		
Australia	3.7	0.6		
Poland	3.0	-0.5		
Canada	2.4	0.9		
Sweden - AP4	2.2	0.9		
Sweden - AP1	1.2	-0.2		
Portugal	0.7	-0.3		
Sweden - AP2	0.6	-0.7		
Sweden - AP3	0.6	-0.8		
Sweden - AP6	0.5	-0.8		
France - FRR	-3.5	-4.9		
New Zealand (1)	-5.1	-7.7		
Ireland	-6.7	-6.3		
Simple average	1.8	-0.3		
Weighted average	4.4	2.5		

Source: OECD Global Pension Statistics.

#### PPRF INVESTMENT STRATEGIES

Investment strategies in most countries remained relatively stable in 2010. Most funds maintained exposures in foreign assets, while some have increased their allocation to private equity and hedge funds. Major changes in investment strategies took place in France, Ireland and Spain.

Bonds and equities represent most of PPRF portfolios, with a combined share ranging from 57.7% (Australia) to 100% (Belgium, Spain and the United States) (Figures 14 and 15). The targeted allocation in equities, as set by the investment strategy for the pension fund, including the setting of targeted asset allocation and distribution by asset class, is also still high, above 50% in Sweden, Norway and Canada. France's pension reserve fund is

the only fund that revised its target allocation downwards to shares and other equity, from 45% to 27%.

Some PPRFs increased their existing allocations to non-traditional asset classes like private equity and hedge funds. For instance, the Australian future fund allocated 17.7% of its assets in private investment funds in 2010, from 12.7% in 2009 and 4.8% in 2008. This share should remain stable as the fund's target allocation into alternative assets is set to 15%.

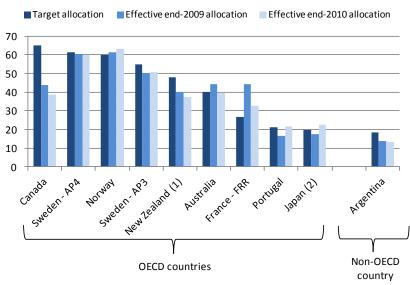
Some funds also started to invest in infrastructure, mainly through listed and unlisted equity. For instance, 6% of the Canadian Pension Plan's portfolio is invested in infrastructure assets via unlisted equity, and 9% of the Swedish AP3 fund's portfolio is invested in infrastructure assets via listed equity.

With some major exceptions, such as reserve funds in France, Ireland and Spain, most PPRFs have maintained exposures to foreign markets (Figure 16). Reserve funds in countries like Portugal, New Zealand, Sweden, Portugal, and Canada invested over 60% of their equity portfolios abroad. The Chilean pension reserve fund's fixed income portfolio is fully invested abroad. This is the opposite to funds in Belgium, Poland, Mexico and the United States that invest their fixed income portfolios in the domestic market only.

Major changes in investment strategies took place in France, Ireland and Spain. In France, the foreign equity allocation was cut from 81% to 45% of the overall equity exposure between December 2009 and December 2010, while foreign bond exposure was cut from 68% to 19% over the same period. In Ireland, the fund was required to participate in the rescue of the failed Irish banks, leaving the NPRF with a quarter of its assets invested in Irish bank stock. The parliament also changed the fund's statutes to allow investments in Irish government bonds. In Spain, the social security fund drastically changed its asset allocation. As of December 2010 it held over 87% of its assets in Spanish government bonds, compared to 55% at the end of 2008.

Figure 15. Comparison of effective allocation in shares and other equity in 2009 and 2010 with the target allocation in selected OECD and non-OECD countries

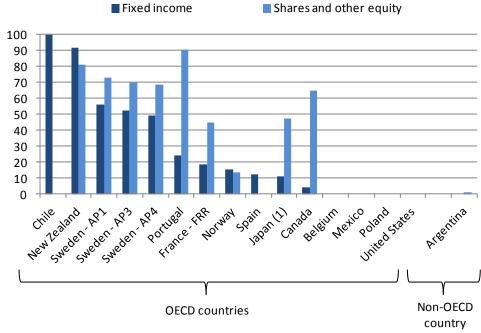
As a % of total investment



Source: OECD Global Pension Statistics.

Figure 16. Foreign investment of public pension reserve funds by asset class in selected OECD and non-OECD countries, 2010

As a % of total fixed income investment and as a % of total shares and other equity investment



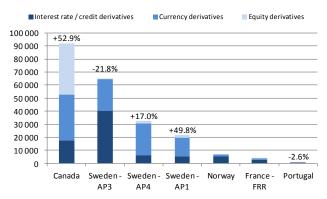
#### PPRF INVESTMENTS IN DERIVATIVES

The use of derivatives to generate value-added investment rate of returns and to control risk or alter financial exposures differs significantly across funds.

Not all PPRFs are allowed to invest in derivatives. Countries in which reserve funds are not allowed to do so include Belgium, Spain, Mexico, Poland and the United States. These countries mainly invest in domestic bonds, reducing the need for derivatives. The notional value of derivatives held represents large amounts in Canada (USD 91,849 million) and Sweden (USD 65,178 million for the AP3 fund) (Figure 17). The Canadian Pension Plan uses more equity derivatives than other funds, which mainly use interest rate, credit and currency derivatives.

Figure 17. Total notional value of derivatives held, outstanding, by type of product in selected OECD countries, 2010

In millions of USD and 2010 increase in %



Source: OECD Global Pension Statistics.

The use of derivatives increased significantly between 2009 and 2010 in Canada (+52.9%) and some of the Swedish AP funds (respectively +17.0% and +49.8% in the AP4 and AP1 funds). Between 2009 and 2010, the Swedish AP3 fund decreased its exposure to currency and equity derivatives, leading to a decrease in the total exposure of -21.8%.

The derivatives policy of most PPRFs is mainly to generate value-added investment returns and to limit

or adjust market, credit, interest rate, currency, and other financial exposures without directly purchasing or selling the underlying instrument.

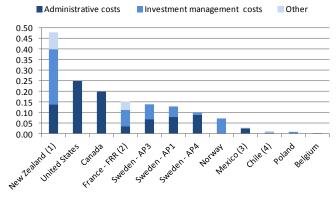
#### PPRF OPERATING COSTS

Total operating costs of PPRFs were generally low at less than 0.25% of assets under management in 2010, except in New Zealand were they reached 0.48% of assets under management. The structure of operating costs varies significantly between funds.

The efficiency of PPRFs can be judged by looking at operating costs in relation to assets managed. As shown in Figure 18, operating costs in 2010 varied greatly between funds, from 0.002% of total assets in the Belgian Zilverfonds to 0.48% in the New Zealand Superannuation Fund. There may be two reasons explaining high costs in New Zealand. First, given the fund size, less economies of scale can be achieved as compared to bigger funds. Second, the fund invests more than others in private equity and hedge funds. As a result, the proportion of assets managed internally is lower in the New Zealand Superannuation Fund than in other reserve funds. Indeed, as much as 54% of the operating costs in that fund are investment management costs.

Figure 18. Total operating costs by type in selected OECD countries, 2010

As a % of assets under management



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

Within the framework of the OECD Global Pension Statistics' project the original data sources are official administrative sources.

Data include pension funds as per the OECD classification (Private Pensions: OECD Classification and Glossary, available at <a href="https://www.oecd.org/daf/pensions/gps">www.oecd.org/daf/pensions/gps</a>). All types of plans are included (occupational and personal, mandatory and voluntary) covering both public and private sector workers.

#### Conventional sign:

"n.d." / "..": not available. / "p": provisional.

#### Figure 1:

Data have been calculated using a common formula for the average nominal net investment returns (ratio between the net investment income at the end of the year and the average level of assets during the year) for all countries, except for Austria (2010), Chile (2009), Germany (2010), Korea (2010) and the United States (2009 and 2010), for which values have been provided by the countries. The average real net investment returns have been calculated using the nominal interest rate (as described above) and the variation of the consumer price index for the relevant year.

- 1. Data refer to annual investment rate of returns at the end of June of each year.
- 2. Data are gross of investment expenses.
- 3. Data refer to personal pension plans only.
- 4. Data for 2010 are based on a sample of the seven largest German pension funds which, as an indicator, cannot be directly compared to total market figures of 2009.

**OECD-calculated average rate of investment returns** Calculation methods for the average investment returns (IRR) of pension funds vary greatly from country to country, hindering the international comparability of these statistics. With a view to increase data comparability across countries, the OECD therefore decided that it would be worth applying the same calculation method for IRR across countries, which would be calculated by the OECD, using variables already collected under the framework of the Global Pension Statistics exercise. In order to reach a consensus on the most appropriate formula for the IRR calculation, an electronic discussion group has been created, composed of selected country experts (representing Australia, Germany, the Netherlands, Portugal, and Spain).

Drawing on preliminary consultation, five formulas have been proposed by the OECD Secretariat to the electronic discussion group for comments. A consensus has been reached within the group and later on endorsed within the OECD Task Force on Pension Statistics on the following formula for the average IRR, in each year N:

$$Calculated\ average\ IRR_{\scriptscriptstyle N} = \frac{Net\ Investment\ Income_{\scriptscriptstyle N}}{(Total\ Investment_{\scriptscriptstyle N-1} + Total\ Investment_{\scriptscriptstyle N})/2} \times 100$$

Net investment income comprises income from investments, value re-adjustments on investments and income from realised and unrealised capital gains and losses. It includes rents receivable, interest income, dividends and realised and unrealised capital gains, before tax and after investment expenses.

This formula has been used to produce Figures 1 and 2. Because countries may use a different calculation method for the average IRR, it should be noted that there might be discrepancies between the OECD calculated average IRR from the ones published by these countries.

#### Figure 2:

Data have been calculated using a common formula for the average nominal net investment rate of return (ratio between the net investment income at the end of the year and the average level of assets during the year) for all countries, except for Hong Kong (2010), Latvia (2009), Romania (2010), Serbia (2009), and Ukraine (2010), for which values have been provided by the countries. The average real net investment returns have been calculated using the nominal interest rate (as described above) and the variation of the consumer price index for the relevant year.

#### Figure 3

The GPS database provides information about investments in mutual funds and the look-through mutual fund investments in cash and deposits, bills and bonds, shares and other. When the look-through was not provided by the countries, estimates were made assuming that mutual funds' investment allocation in cash and deposits, bills and bonds, shares and other was the same as pension funds' direct investments in these categories. Therefore, asset allocation data in this Figure include both direct investment in shares, bills and bonds and cash and indirect investment through mutual funds.

1. The "Other" category includes loans, land and buildings, unallocated insurance contracts, private investment funds, other mutual funds (i.e. not invested in cash, bills and bonds or shares) and other investments.

- Source: Australian Bureau of Statistics. The high value for the "Other" category is mainly driven by net equity of pension funds in life office reserves (16% of total investment).
- 3. The high value for the "Other" category is mainly driven by other mutual funds (16% of total investment).
- 4. The high value for the "Other" category is mainly driven by unallocated insurance contracts (22% of total investment).
- 5. Source: Bank of Japan. The high value for the "Other" category is mainly driven by payable and receivable accounts (24% of total investment) and outward investments in securities (19% of total investment).
- 6. The high value for the "Other" category is mainly driven by loans (29% of total investment) and other mutual funds (17% of total investment).
- 7. The high value for the "Other" category is mainly driven by private investment funds (65% of total investment).
- 8. The high value for the "Other" category is mainly driven by unallocated insurance contracts (20% of total investment).

#### Figure 4:

The GPS database provides information about investments in mutual funds and the look-through mutual fund investments in cash and deposits, bills and bonds, shares and other. When the look-through was not provided by the countries, estimates were made assuming that mutual funds' investment allocation in cash and deposits, bills and bonds, shares and other was the same as pension funds' direct investments in these categories. Therefore, asset allocation data in this Figure include both direct investment in shares, bills and bonds and cash and indirect investment through mutual funds.

#### Figure 5:

- 1. OECD estimate.
- 2. Source: IAPF Pension Investment Survey 2010.
- 3. Source: Bank of Japan.
- 4. Data refer to investment companies managed funds.
- 5. Data refer to PERCO plans as of June 2010.

#### Figure 6:

- 1. Source: AIOS. Data refer to June 2010.
- 2. Source: Investfunds (<a href="http://npf.investfunds.ru/indicators/">http://npf.investfunds.ru/indicators/</a>).
- 3. OECD estimate.

#### Figure 7:

- OFCD estimate.
- 2. Source: Bank of Japan.
- Data refer to 2009.

#### Figure 8:

1. Pension plans in Germany can actually be traditional DB plans and hybrid DB plans, but the split between the two categories is not available.

#### Figure 9:

Countries where private pension plans are only financed via autonomous pension funds include Chile, Czech Republic, Japan, and Slovak Republic.

- 1. Data refer to 2009.
- 2. Data refer to 2008.
- 3. Technical provisions were considered as a proxy for total assets of book reserve schemes.

#### Figures 10 and 11:

Operating costs include investment expenses and administrative costs.

#### Figure 12:

- 1. Data refer to pension and insurance companies.
- 2. Data refer to 2009.
- 3. Data refer to March 2011.

#### Table 3:

- 1. Data refer to investment companies managed funds.
- 2. Data refer to PERCO plans. 2010 data refer to June 2010.
- 3. Source: IAPF Pension Investment Survey 2010.
- 4. Source: Bank of Japan.
- 5. OECD estimate for 2010 data.
- 6. Source: AIOS. Data refers to June of each year.

- 7. Source: Investfunds (<a href="http://npf.investfunds.ru/indicators/">http://npf.investfunds.ru/indicators/</a>).
- 8. Excluding Saudi Arabia.

#### Table 4:

- Data refer to 2009.
- 2. Data refer to June 2010.
- 3. Weighted average for assets as a % of GDP and % increase.
- 4. OECD estimate.
- 5. Norway's Government Pension Fund Global and Russia's National Wealth Funds are sovereign wealth funds, and not public pension reserve funds, because their mandate goes beyond financing pension expenditures.

#### Figure 13:

1. Data refer to June of each year.

#### Figure 14:

- 1. Data refer to 2009.
- 2. Other investments include derivatives. Land and buildings include real estate funds.
- 3. Other investments include accounts receivables and derivatives.
- 4. Other investments include derivatives, long/short portfolios, convertibles, opportunity investments, foreign exchange portfolios, insurance-linked securities.
- 5. Other investments include opportunity investments and foreign exchange portfolios.
- 6. Other investments include foreign exchange hedging and interest rate swaps.
- 7. Other investments include infrastructure investments.
- 8. Data refer to June 2010. Other investments include derivatives and timber.
- 9. Other investments include assets in irregular situation.

#### Table 5:

1. Data refer to the period June 2007-June 2010.

#### Figure 15:

- 1. Data refer to June of each year.
- 2. Data refer respectively to 2008 and 2009.

#### Figure 16:

1. Data refer to 2009.

#### Figure 18:

- Other costs include advisor fees. Excluded are brokerage, depreciation, timber costs and forecast performance fees.
- 2. Other costs include trustee and custody fees as well as consulting costs.
- 3. Other costs include the contingent labour liabilities.
- 4. Other costs include custody fees.

The primary source of data in this report is provided by national pension authorities through the OECD Global Pension Statistics project managed by the OECD Working Party on Private Pensions and its Task Force on Pension Statistics. Data for non-OECD economies is provided by members of the International Organisation of Pension Supervisors.

The underlying data used to compile the tables and graphics in this publication can be accessed online at www.oecd.org/daf/pensions/pensionmarkets.

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#### IN BRIEF

# Funding in public sector pension plans – International evidence

Most countries have a separate pension plan for public sector employees. Governments are usually the largest employers and pension promises in the public sector tend to be relatively generous. As future payments have to be paid out directly from government revenues (pay-as-you-go) or by funded plans (pension funds) which tend to be underfunded, the future fiscal burden of these plans risks being substantial. The valuation and disclosure of these promises in some countries lacks transparency, which may be hiding potentially huge fiscal liabilities that are being passed on to future generations of workers.

This working paper examines public sector pension plans regarding the type of pension promise and quantifies the future tax burden related to these pension promises with a view to enabling a fair comparison between countries regarding the fiscal burden of their DB public sector pension plans.

# Pension fund governance and management: The 1998 reform of the Korean National Pension Fund

This working paper provides a detailed chronological account of the governance-cum-management reform of the Korean National Pension Fund, analysing its success factors and drawing lessons for other countries. The paper also measures the current governance structures of the fund against OECD guidelines and international good practice and makes suggestions for further reform.

OECD Working Papers on Finance, Insurance and Private Pensions are available online at: www.oecd.org/daf/fin/wp

# Guarantee arrangements for financial promises: How widely should the safety net be cast?

Guarantees have become the preferred instrument for addressing many financial policy objectives such as financial stability, consumer protection and credit allocations. The incidence of financial sector guarantee arrangements that address specific policy objectives, such as supporting financial stability, protecting consumers and influencing credit allocations, has increased markedly over the past decades and additional schemes are under consideration.

This report identifies considerations regarding consistency and affordability that policymakers should take into account before introducing additional guarantee arrangements. One of them is that the safety net cannot be expanded without limits. In fact, as regards the strength of the net of government-supported guarantees for financial promises, the wider that net is cast (without altering its other key parameters), the thinner it becomes.

Access this article online at www.oecd.org/daf/fmt.

#### Institutional investors and long-term investment

Long-term capital is in short supply and has become increasingly so since the 2008 financial crisis. This has profound implications for growth and financial stability, given that long-term investment has an important role to play as:

**Patient capital** allows investors to access illiquidity premia, lowers turnover, encourages less pro-cyclical investment strategies and therefore higher net investment rate of returns and greater financial stability.

**Engaged capital** encourages active voting policies, leading to better corporate governance;

**Productive capital** provides support for infrastructure development, green growth initiatives, SME finance etc., leading to sustainable growth.

An <u>OECD discussion paper</u> addresses these issues in more detail. Further work underway in this area includes projects on pension funds and green growth and pension funds and investment in infrastructure.

#### OECD Seminar on Annuities and Pensions Mexico City, Mexico – 8 June 2011

Part of the OECD's 50th anniversary celebrations, this seminar brought together policymakers, international experts and other interested stakeholders from business, labour, civil society and intergovernmental organisations in both Latin America and globally. Discussions focused on:

- Designing defined-contribution (DC) pension plans
- Linking the accumulation and payout phases
- Designing the payout phase of pension systems
- Annuities and longevity risk
- Practical examples of annuity markets

This event was hosted by the Insurance and Surety National Commission (CNSF) and National Commission for the Pension System (CONSAR) of Mexico, and with the support of the OECD Secretary-General Angel Gurría.

Access presentations online at <a href="www.oecd.org/daf/pensions">www.oecd.org/daf/pensions</a>.

#### **CALENDAR OF EVENTS**

2011 OECD/IOPS GLOBAL FORUM ON PRIVATE PENSIONS Cape Town, South Africa – 25/26 October 2011



#### How to build adequate, long-term pension savings: lessons for and from developing pension systems

Hosted by the Financial Services Board of South Africa, the 2011 OECD/IOPS Global Forum will focus on reform progress and recent pension fund industry developments in South Africa and in the Africa region, the coverage and adequacy of pension systems and how to use pension savings for long term investment and economic development.

The Forum will bring together high-level officials from regulatory and supervisory authorities, leading experts from pension fund industry and research institutes from both OECD and IOPS countries.

For further information visit <a href="https://www.oecd.org/daf/pensions">www.oecd.org/daf/pensions</a>.

#### OECD-ASIA SEMINAR ON INSURANCE STATISTICS Bangkok, Thailand – 20/21 October 2011



# Enhancing transparency and monitoring of insurance markets

This regional seminar, hosted by the Thailand Insurance Commission, will discuss how to improve the monitoring of insurance markets through the provision of sound insurance statistics and indicators. Participants will share their experiences with a view to improving the relevance, quality and timeliness of insurance statistics, both in the Asia region and globally.

Discussions will focus on recent trends in Asian insurance markets, how to enhance transparency and monitoring of the insurance industry, sharing country experiences in insurance market monitoring, research and statisticsgathering, results of an OECD stocktaking and comparative assessment of insurance statistics in selected Asian countries and methodological issues.

The seminar will bring together supervisory authorities, practitioners, statistical experts and insurance analysts.

For further information visit <a href="www.oecd.org/daf/insurance">www.oecd.org/daf/insurance</a>.