Pension Markets in Focus

2016

OECD

This annual report reviews trends in the financial performance of pension funds, including investment returns and asset allocation. Underlying data for the tables and graphs, plus a statistical annex, can be found in Excel format at www.oecd.org/daf/pensions/pensionmarkets.

The data complements information gathered at the pension fund level through the Survey of Large Pension Funds and Public Pension Reserve Funds. The survey is part of the OECD project on Institutional Investors and Long-term Investment. More information can be found at www.oecd.org/fin/lti.

More information about pensions-related work is available at www.oecd.org/pensions and www.iopsweb.org.

The report was prepared by Romain Despalins and Pablo Antolín, with valuable inputs from the OECD Private Pensions Unit. André Laboul and Pierre Poret of the Directorate for Financial and Enterprise Affairs provided useful advice and feedback. The report was made possible by close co-operation between the OECD, the IOPS, the World Bank and the various national bodies which provided data and comments. For further information, please contact Romain Despalins (romain.despalins@oecd.org).

FOREWORD

Most countries allow or encourage individuals to save in funded private pension plans to complement their old-age pensions. Individuals can top up their future pensions through occupational retirement saving vehicles directly sponsored by their employers, or personal vehicles they have chosen directly from a pension provider. These vehicles can be pension funds, pension insurance contracts, or products offered by banks or investment companies. The number of pension funds and types of plans available vary across countries.

Development of funded private pension systems is uneven across countries.. In some countries, private pensions are almost non-existent or still at a nascent stage and the number of pension funds and their administrators is limited. A low number of market players may lead to economies of scale, but can also potentially create an oligopoly with higher costs or lower returns for members.

The 2016 edition of *Pension Markets in Focus* describes the latest trends in funded pension systems in OECD and some non-OECD countries. For data availability reasons, the core analysis focuses on a single type of vehicle -- pension funds -- and compares the importance of the different types of plan these funds can manage (occupational/personal, defined benefit/defined contribution). While investments by pension funds have, in the main, been growing and their investment rates of return have, on average, been positive over the last ten years, the number of pension funds is falling in some countries as a result of mergers to reduce costs and create scale advantages, or as a consequence of competition.

A special feature examines whether there is a relationship between the number of pension funds and real investment rates of return net of investment expenses. Covering 20 countries, including some of the largest pension markets, an analysis of the period 2005-15 finds that countries with relatively few pension funds are more likely to have higher real net returns than countries with more pension funds. Results of this econometric analysis seem to indicate that a reduction in the number of pension funds could lead to higher returns.

This report includes pension statistics for OECD countries, selected International Organisation of Pension Supervisors (IOPS) countries and, for the first time, selected World Bank countries that are not members of either the OECD or IOPS.

TABLE OF CONTENTS

Figures

Tables

HIGHLIGHTS

>> **Private pension assets are worth more than USD 38 trillion and are mainly managed by pension funds**

Private pension assets topped USD 38 trillion worldwide in 2015. Assets invested through all pension vehicles in financial markets reached USD 36.9 trillion in the 35 OECD countries in 2015, and amounted to USD 1.3 trillion in a sample of 45 non-OECD countries. Pension funds were the main investors of these assets worldwide (USD 26 trillion, 68% of the total), followed by banks and investment companies (USD 7.7 trillion, 20.2%), insurance companies (USD 4.3 trillion, 11.3%) and employers through their book reserves (USD 0.2 trillion, 0.5%).

>> **The importance of private pension systems across countries is uneven**

The size of investments through pension vehicles varies across countries. The largest values of invested assets in USD values are located in North America (United States, Canada), Western Europe (United Kingdom, Netherlands, Switzerland), Australia and Japan. Private pension invested assets are also high when compared to the size of the domestic economy in other countries, such as Chile, Denmark and South Africa, where they accounted for 70%, 206% and 97% of GDP in 2015, respectively. Private pension assets, however, still represented around, or less than, 20% of GDP in more than 50 countries in and outside the OECD area in 2015.

>> **Pension fund assets have increased, real returns net of investment expenses have been positive, and at the same time the number of pension funds has declined, especially in Europe**

Pension fund investments have been increasing over recent years. Despite the fall in 2008 as a result of the financial crisis, pension fund investments in 2015 exceeded those ten years earlier and neared USD 25 trillion in the OECD area. This increase is partly due to positive real investment rates of return net of investment expenses, averaged over the last 10 years. Returns in 2015 were positive in most countries, but lower than in 2014. Despite the growth of assets and positive net real returns, the number of pension funds has declined in several European countries such as the Netherlands, Switzerland and the United Kingdom, probably as a result of the current competitive environment.

>> **Countries with relatively few pension funds seem to have performed better than those with a greater number of pension funds over the period 2005-2015**

An analysis of the potential relationship between the number of pension funds and the real rate of return net of investment expenses was conducted on 20 countries, including some of the largest pension markets such as the United Kingdom and United States. This analysis suggests that countries with 30 to 149 pensions funds were more likely to experience higher real net rates of return than those with more than 150 pension funds, after controlling for the real growth rate of GDP, the size of the pension market, the asset allocation of pension funds and the developments in stock markets.

PENSION MARKETS IN FOCUS

Latest trends in funded pension systems

This section first looks at the overall funded pension systems in OECD countries and a selection of IOPS and World Bank members. Analysis focuses on the investment, rather than the liability, side of funded private pensions and shows the total size of invested assets. Different providers may offer these vehicles and be responsible for collecting and investing contributions of plan members and their employers. For data availability and completeness reasons, the rest of the section focuses on a single type of vehicle – pension funds – and presents some key features, such as the amount of their assets under management, their performance and their asset allocation. The last part of this section documents the decline in the number of pension funds that has occurred in some countries.

The OECD Global Pension Statistics data collection exercise collects data on total investment. The amount of assets can be estimated by using the amount of investments through all pension vehicles as a proxy. However some caveats apply as highlighted in Box 1.

Box 1. Total investment and total assets

One of the key indicators to measure the importance of funded pension systems is the amount of assets in all pension vehicles. However, the OECD Global Pension Statistics exercise currently does not compile this information directly. This statistical exercise only gathers the total investment by pension vehicles and its breakdown by asset classes.

As in previous issues of *Pension Markets in Focus*, this report uses the amount of investment as proxy for total assets in pension vehicles. This proxy may provide a low estimate of the amount of assets. Accounts payable or receivable and intangible assets may be considered as an asset of the provider but not as an investment. Private pension assets may also include claims on defined benefit (DB) plan sponsors. In the case of DB plans that are underfunded, pension funds may require employers to contribute more so that retirees receive the amount they were promised. In that case, this amount to be paid by employers is considered to be an asset of the plan, but is not an investment.

While the difference between investment and assets may generally be minor, there are some cases, such as the United States, where the difference can be more substantial as the table below shows. In the case of the United States, the difference comes mainly from claims on plan sponsors. These claims amounted to USD 4 trillion in 2015, according to the Federal Reserve Board's (FRB) *Financial Accounts of the United States*.

Total investment versus total assets of pension funds in a selection of countries, 2015

In millions of national currency

	Total investment	Total assets
Australia (1)	1,912,376	1,967,100
Spain	103,955	105,469
United States (2)	14,249,746	18,216,701

Notes: (1) The value of total assets is extracted from APRA Superannuation Bulletin, June 2015. (2) Source: FRB. Data for total assets only refer to financial assets. Source: OECD Global Pension Statistics, and national authorities.

Private pension assets are worth more than USD 38 trillion and are mainly managed by pension funds

Employers, on behalf of their employees, or individuals themselves may be able to contribute to their retirement savings through different vehicles. They can save through a pension fund that may be

offered by a pension entity (e.g. a pension fund management company or another financial institution), through a pension insurance contract offered by a life or pension insurance company, or through any other retirement products offered by a bank or an investment company. These pension providers are responsible for investing the assets in financial markets. Employers can also put money aside for their employees' retirement in their books, called book reserves (e.g. Germany).

Investments that were made through all pension vehicles in financial markets reached USD 38 trillion worldwide and USD 36.9 trillion in the 35 OECD countries in 2015 (Figure 1). The amount invested by pension providers of a sample of 45 non-OECD countries, including BRICS countries, amounted to USD 1.3 trillion.[1]

Figure 1 also shows that pension funds are the main vehicle for retirement savings both in the OECD area and selected jurisdictions outside the OECD. In the OECD area, pension funds or their management companies were the largest investors among pension providers with USD 24.8 trillion of investment, 67.2% of the total, followed by banks and investment companies (USD 7.7 trillion, 21.0%), insurance companies (USD 4.2 trillion, 11.3%) and employers through their book reserves (USD 0.2 trillion, 0.5%).[2] Outside the OECD, pension funds invested USD 1.2 trillion, and the pension-related portfolio of insurance companies amounted to USD 0.2 trillion. Book reserves and other financing vehicles are less common.

Figure 1. Private pension investment by type of financing vehicle and geographical area, 2015
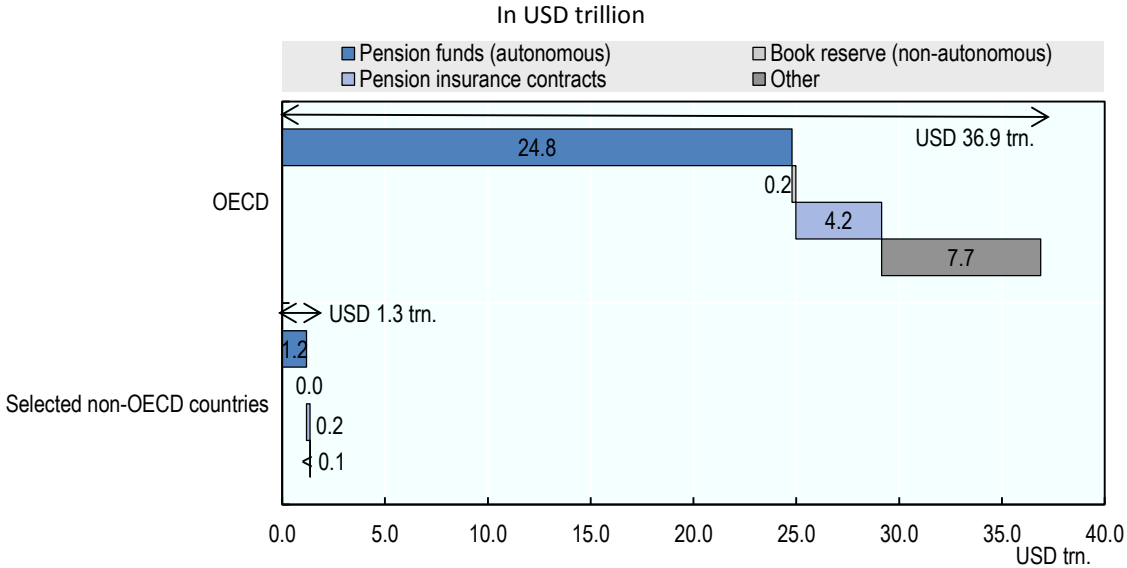
Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

---

[1] BRICS = Brazil, the Russian Federation, India, China (People's Republic of) and South Africa. The list of non-OECD jurisdictions in the sample is available in the Methodological notes section under notes for Figure 1.
[2] These numbers only refer to pension-related investments and do not include investments related to other businesses of these providers.

The size of the private pension sector is uneven across countries

The size of pension providers' investments varies across countries. These investments are larger in USD terms and relative to GDP in North America, Western Europe and some other countries (Figure 2).[3]

The largest values in USD terms are located in North America (United States, Canada), in Western Europe (the United Kingdom, the Netherlands, Switzerland), in Australia and in Japan (Panel A). The amount of private pension assets in USD terms is lower in Latin America and Africa. Brazil and Chile have the largest amount of private pension assets in Latin America, as does South Africa among the reporting African countries.

Comparing the amount of private pension assets to the size of the economy, measured by the GDP, gives a better picture of the relative importance of the funded pension system domestically. Panel B in Figure 2 shows that private pension investments are also high relative to GDP, not only in the United States, but also in Canada, several European countries (e.g. Denmark, Iceland, Sweden), Latin America (e.g. Brazil and Chile), some African countries (e.g. Botswana, Namibia and South Africa), some Asian countries (e.g. Hong Kong (China), Japan and Korea) and in Australia.

For the OECD area, Figure 3 shows that the ratio of private pension investment to GDP ranges from 0.6% in Greece to 205.9% in Denmark, with a simple and weighted average of 49.5% and 123.6% respectively.[4] Five OECD countries are above this weighted average: Denmark (205.9%), the Netherlands (178.4%), Iceland (157.7%), Canada (156.9%) and the United States (132.9%).[5] Australia and Switzerland are slightly below the OECD weighted average, but investments through private pension vehicles exceed GDP in both countries. At the other extreme, 19 OECD countries have a ratio below 20% and of these, 13 have a ratio below 10%. In some of these 13 countries (e.g. France, Italy or Greece), the private pension sector has a limited presence in the domestic economy.

The average amount of assets invested through pension vehicles compared to the size of the economy is lower in the sample of non-OECD jurisdictions than in OECD countries. The simple and weighted averages in the non-OECD area were equal to 16.8% and 36.3% respectively. As in the OECD area, large disparities in private pension systems size are visible in the non-OECD area. The ratio of invested assets to GDP varies from 0.1% in Albania and Pakistan (although Pakistan's coverage of the system is incomplete) to 96.8% in South Africa. This ratio remains lower than 20% of the GDP in 31 out of the 45 reporting non-OECD jurisdictions.

---

[3] Available data do not cover the whole funded pension system in some countries. The methodological notes section at the end of this document indicates the exact coverage represented in Figure 2.
[4] The weights are based on the values of private pension investments in USD terms in 2015.
[5] The actual size of the private pension systems in the Netherlands is even bigger as the reported value does not take into account occupational plans administered by life insurance companies.

Figure 2. Size of private pension investments worldwide, 2015

A. In USD terms

B. As a percentage of GDP
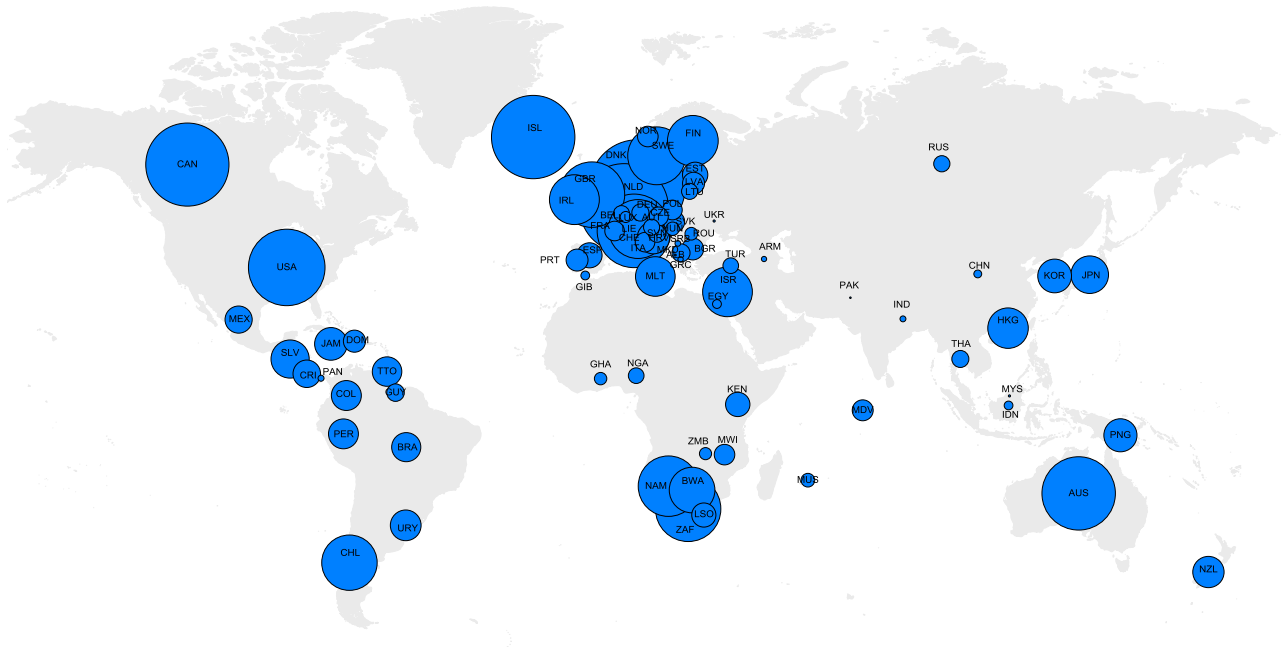
Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

Figure 3. Importance of private pension investment compared to the size of the economy, by type of financing vehicle, in the OECD and selected non-OECD countries, 2015

As a percentage of GDP

	Pension funds (autonomous)		Book reserve (non-autonomous)
	Pension insurance contracts		Other

A. OECD countries

Country	Value
Denmark	205.9
Netherlands (1)	178.4
Iceland	157.7
Canada	156.9
United States	132.9
Weighted average (2)	123.6
Switzerland (1)	123.0
Australia	122.2
United Kingdom (1)	97.4
Sweden	76.0
Chile	69.6
Finland (1)	58.4
Ireland (1)	56.4
Israel (3)	56.0
Simple average (2)	49.5
Japan	32.0
Korea	25.8
New Zealand	22.2
Mexico	16.7
Estonia	14.5
Spain	14.3
Latvia	11.0
Portugal (1)	10.9
Slovak Republic	10.3
Norway (1)	9.6
Poland	8.8
France (4)	8.7
Italy	8.7
Czech Republic	8.3
Slovenia	7.0
Germany (1)	6.6
Austria (1,5)	5.8
Belgium (1)	5.8
Turkey	5.5
Hungary (1)	4.1
Luxembourg (1)	2.8
Greece (1)	0.6

B. Selected non-OECD countries

Country	Value
South Africa (4)	96.8
Namibia (4)	83.1
Liechtenstein (4)	78.8
Botswana (5)	47.2
Hong Kong, China	37.2
Weighted average (2)	36.3
Malta (1)	35.6
El Salvador	33.0
Papua New Guinea (5)	24.8
Jamaica	24.2
Croatia	23.6
Uruguay	21.4
Kosovo	20.7
Colombia	20.4
Peru	20.3
Trinidad and Tobago (6)	19.7
Brazil (4)	19.2
Costa Rica	17.2
Simple average (2)	16.8
Kenya	13.5
Lesotho (6)	13.2
Dominican Republic	11.1
Bulgaria	10.9
Maldives	9.9
Malawi	9.6
FYR of Macedonia	7.4
Guyana	7.0
Thailand (1)	6.6
Russia	6.0
Lithuania	5.9
Nigeria	5.6
Mauritius (1)	4.2
Romania	3.7
Ghana	3.5
Zambia (1)	3.3
Egypt	1.8
Indonesia (1)	1.7
Gibraltar (1,5)	1.7
China (People's Republic of)	1.4
Panama	0.8
India (1)	0.8
Serbia	0.7
Armenia (1)	0.6
Ukraine (1,7)	0.1
Malaysia (1)	0.1
Albania	0.1
Pakistan (1)	0.1

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

Pension funds manage the biggest share of private pension assets in most countries. Figure 3 above shows that pension funds have more assets than all other financing vehicles combined in 30 OECD countries and in all non-OECD jurisdictions in the sample.[6]

Insurance companies offer pension insurance contracts in five countries with the largest ratio of pension-related assets to GDP: Canada, Denmark, Iceland, the Netherlands and the United States. In Denmark, specialised life insurance companies hold the largest amount of pension-related assets (67% of all assets of all pension vehicles in 2015).

---

[6] For some countries, the incomplete coverage of the data is generally due to a lack of information on these other vehicles. However, the general assertion that pension funds are the vehicles that manage the biggest share of assets in most countries remains accurate.

In the United States, assets invested by administrators, other than pension funds and insurance companies, are worth 38% of the American economy. Self-directed IRAs (spell out) are managed by other types of administrators and not by pension funds or insurance companies.

Pension funds can manage different types of plans

The remainder of this report focuses on pension funds as this is the vehicle for which disaggregate data are available and the most complete for the largest number of countries. Pension entities managing pension funds often manage only one type of plan (occupational or personal, sometimes only defined benefit (DB) or defined contribution (DC)).

In most countries, pension funds manage only one type of plan, either occupational or personal. OECD taxonomy defines occupational plans as plans where access is linked to an employment or professional relationship between the plan member and the entity that establishes the plan (OECD, 2005). Otherwise, the plan is considered as personal. Figure 4 shows that pension funds manage only occupational pension plans in 19 reporting jurisdictions (13 in the OECD and 6 outside the OECD area). Pension funds manage only personal plans in 12 jurisdictions (5 in the OECD, 7 outside).

Figure 4. Split of pension fund investment between occupational and personal plans in selected OECD and non-OECD countries, 2015
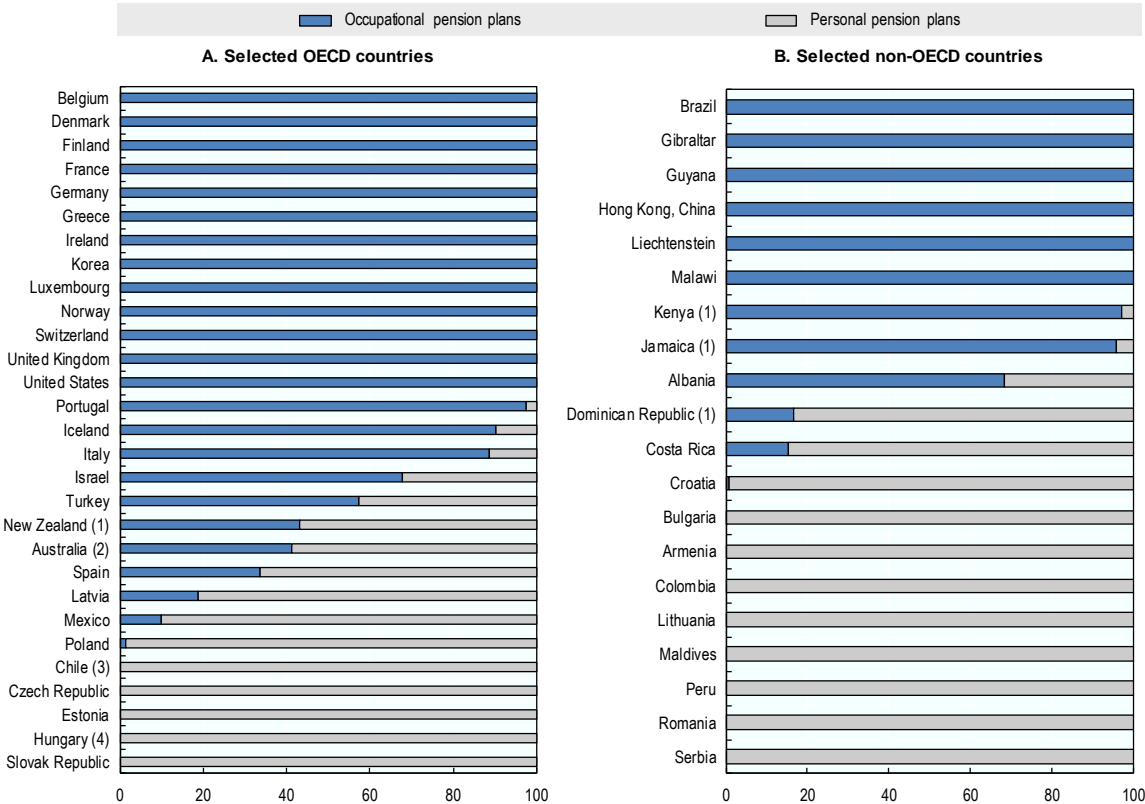
As a percentage of total investment

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

Pension funds are primarily in charge of personal plans in Latin American (e.g. Chile, Colombia, Peru) and Central and Eastern European countries (e.g. the Czech Republic, Hungary, Romania, Serbia, the Slovak Republic). Employees are obliged to join a pension fund administrator, for example, in Chile, Colombia, Peru and Romania, but can choose the administrator and, to some extent, the funds and underlying investment strategies for their contributions.

When pension fund activities are limited to a specific segment such as occupational plans, other types of providers usually service the other segments, such as personal plans, especially in the OECD area. For instance, pension funds may manage the assets coming from occupational plans of public and private-sector workers only, while life insurance companies and banks offer individual retirement savings vehicles to the whole population (e.g. Belgium and Switzerland).

Pension funds manage both occupational and personal plans in 11 OECD countries and seven non-OECD countries. However, institutions administering pension funds may not be the same in countries where this financing vehicle is used for saving both in occupational and personal plans. In Italy, contractual pension funds and pre-existing autonomous pension funds can offer occupational plans only, while open pension funds can offer occupational and personal plans. Some funds may be established to manage occupational plans only, like closed pension funds in Latvia and Portugal, and access to these funds may be limited to a certain type of employee (e.g. public-sector funds in Iceland or state and local government employee retirement funds in the United States).

Companies that enter the private pension market may have to meet different operating requirements depending on the type of plan they offer and manage. Licensing requirements for pension funds or pension fund management companies vary according to whether they offer DB plans or DC plans. Additional licensing requirements such as a funding policy statement may be required when managing DB plans (Yermo and Tinga, 2007).

DC plans are widespread both in and outside of the OECD zone. Assets in these plans represent more than half of pension fund assets in 17 OECD countries and 21 non-OECD jurisdictions (Figure 5). The OECD taxonomy considers plans as DB if the plan sponsor (e.g. the employer) has to pay additional contributions in case of plan underfunding. Otherwise the plan is considered as a DC plan. By definition, personal pension plans are DC as employers do not sponsor these plans.

Although DC plans are present in most countries, the share of pension fund assets in DB plans is still significant in large pension markets, such as Canada, Switzerland and the United States. In Canada and the United States, respectively 97.5% and 56.0% of occupational plans that are managed by pension funds are of DB type (traditional or hybrid-mixed). Cash balance plans in the United States are considered as DB hybrid plans.[7]

---

[7] Cash balance plans are not considered as traditional DB plans as benefit payments are not based on a formula depending on the wage of plan members and the length of employment. Benefits of cash balance plans depend on a fixed contribution rate and a guaranteed rate of return. In this sense, they look similar to DC plans with

**Figure 5. Split of pension fund investment between DB and DC plans
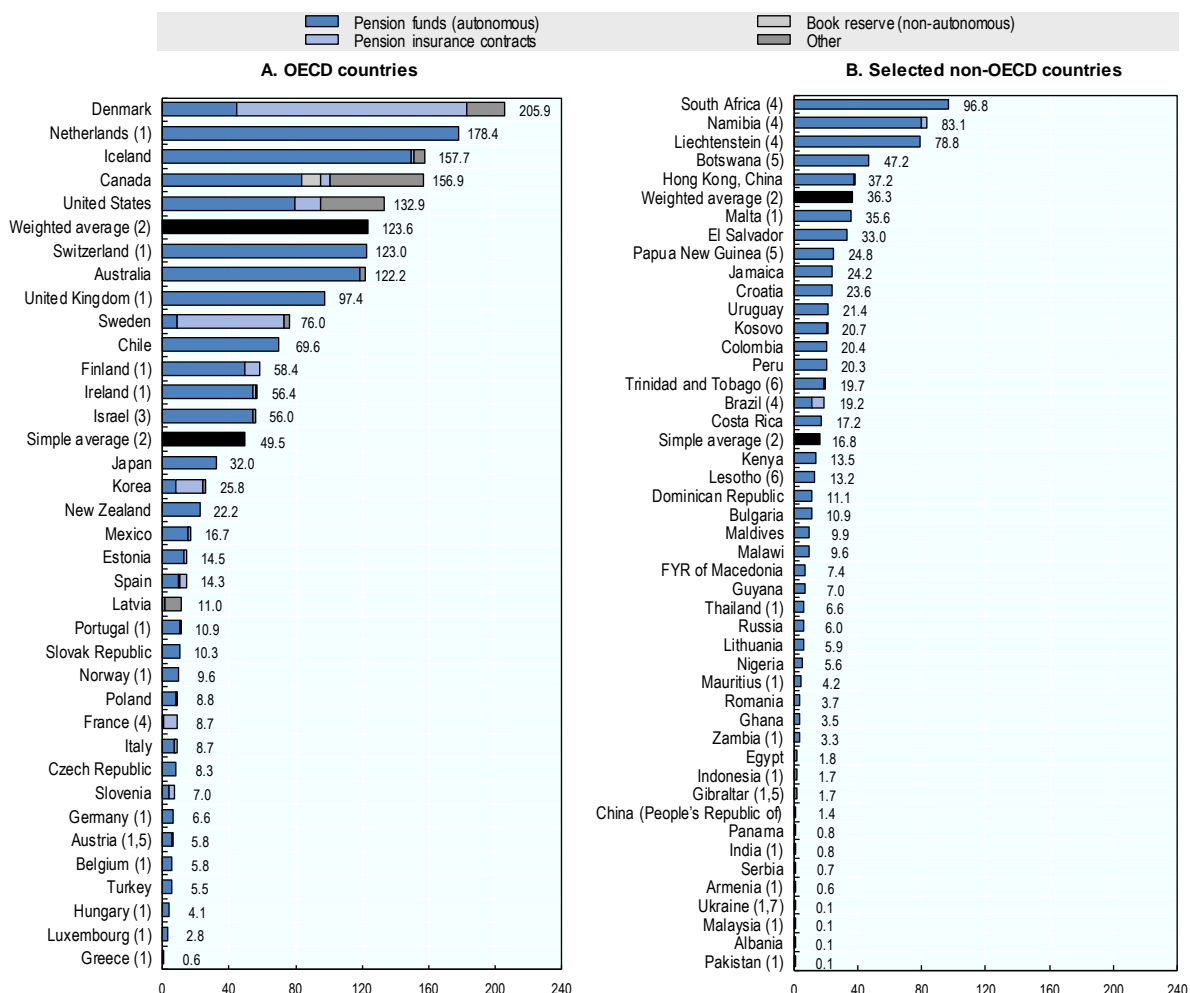in selected OECD and non-OECD countries, 2015**
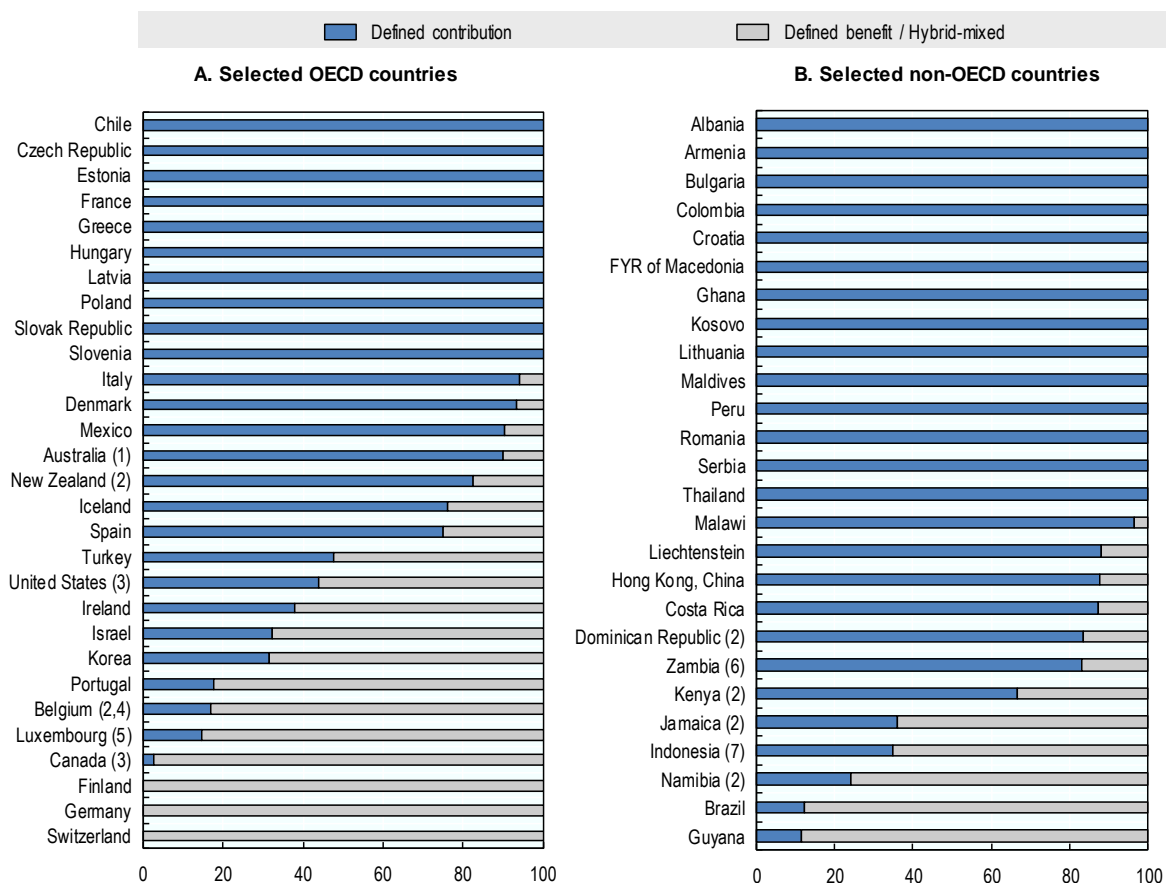
As a percentage of total investment

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

Expanding assets of pension funds

Pension funds have experienced an increase in their investments over the last ten years in the OECD area, independently of whether they manage occupational or personal, DB or DC, mandatory or voluntary plans.

Pension fund investments amounted to USD 25 trillion in 2015 and exceeded those of 2005, despite the fall in 2008 resulting from the financial crisis (Figure 6). They grew on average by 4.3% over the 5-year period Dec 2010-Dec 2015 and 4.4% over the 10-year period Dec 2005-Dec 2015.

guarantees (or protected benefits). As the employer is responsible for providing this guarantee, the OECD taxonomy considers this type of plan as DB.

Figure 6. Pension fund investment in the OECD area, broken down by country, 2005-2015

In USD trillion

Source: OECD Global Pension Statistics.

The United States, United Kingdom, Australia, Japan and the Netherlands represented most of pension fund total investment (in USD terms) in the OECD in 2015. Altogether, these five countries accounted for 85% of OECD pension fund investments in 2015.

The slight decline of OECD pension fund investments in 2015 compared to 2014 was partly due to the stagnation of pension fund investments in the United States in 2015 which did not offset the slight fall, in USD terms, in Australia, Canada and the United Kingdom. Pension fund investments, expressed in USD, fell in Australia (from USD 1.6 trillion in 2014 to USD 1.5 trillion in 2015), Canada (from USD 1.3 trillion to USD 1.2 trillion) and the United Kingdom (from USD 2.8 trillion to USD 2.7 trillion), while they increased slightly in the Netherlands and in Japan.

Pension fund investments in national currency increased between 2014 and 2015 in all OECD countries, except Denmark, Finland, Luxembourg and Poland. Australian pension fund investments increased by 10.2% between 2014 and 2015 (from AUD 1.7 trillion to AUD 1.9 trillion). The fluctuation of exchange rates between the Australian and US dollar during 2014-2015 led to a reduction of Australian pension fund investments by 10.2% in USD terms between 2014 and 2015 (Figure 7). Likewise, pension fund investments increased in national currency while they decreased when expressed in USD terms in 2012, 2013 and 2014 in Japan, and in 2014 and 2015 in the United Kingdom. Statistical annexes A.1 to A.3 report the evolution of pension fund investments in millions of national currency, millions of USD, and as % of GDP in OECD and non-OECD countries between 2005 and 2015.

14

Figure 7. Annual growth rates of pension fund total investment expressed in national currency and in USD in selected OECD countries, 2005-2015

(%)

A. Australia

- ◆ Annual growth rate of investment in AUD values
- ☐ Annual growth rate of investment in USD values

B. Japan

- ◆ Annual growth rate of investment in JPY values
- ☐ Annual growth rate of investment in USD values

C. The United Kingdom

- ◆ Annual growth rate of investment in GBP values
- ☐ Annual growth rate of investment in USD values
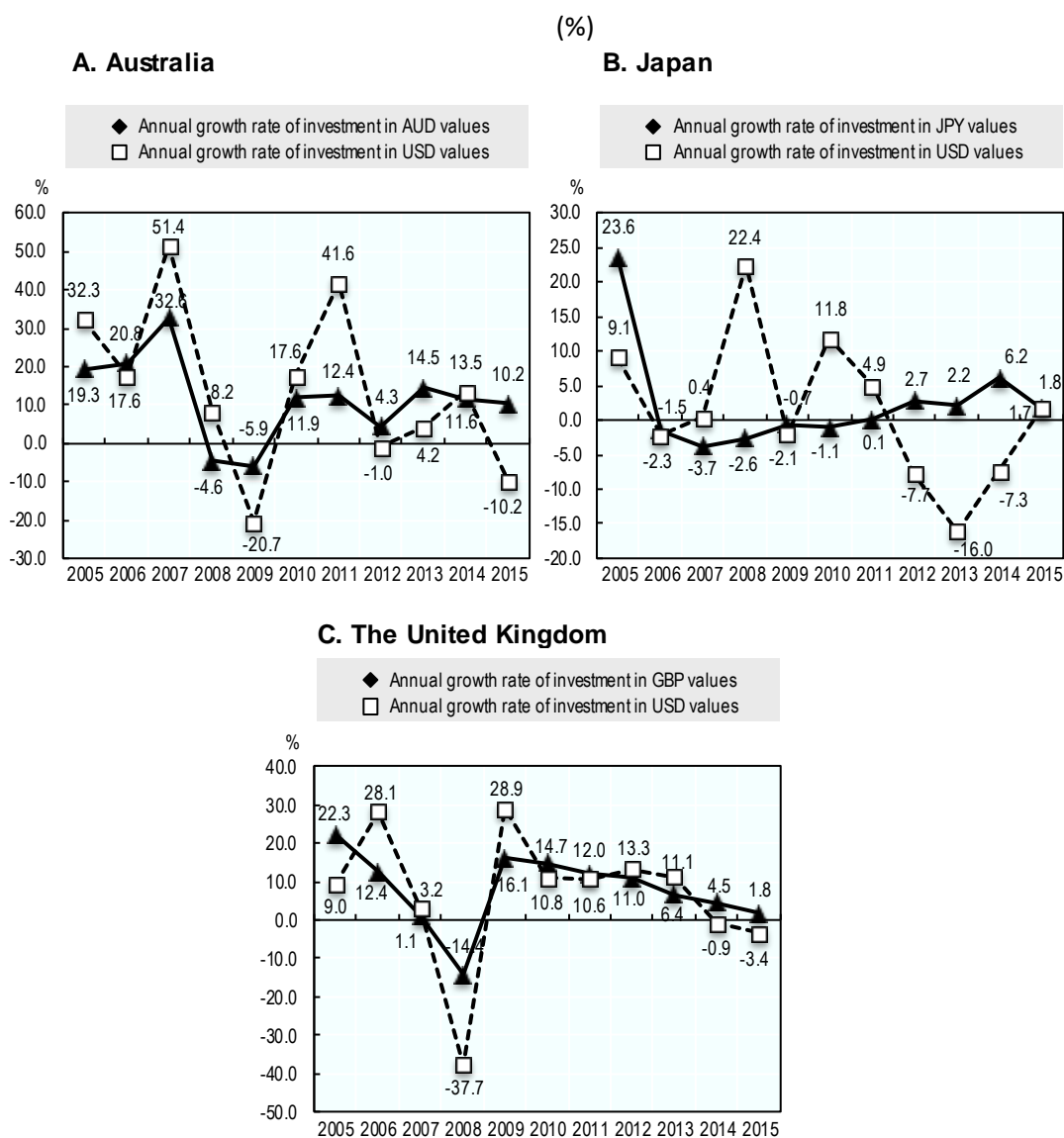
Source: OECD Global Pension Statistics; Bank of Japan.

On average, real net investment rates of return are positive in most countries in 2015 and also over the last 5 and 10-year periods

The performance of pension fund investments, measured by the real investment rate of return net of investment expenses, was positive in most reporting OECD and non-OECD countries in 2015 and over the last 5 and 10-year periods.

However, real net returns in 2015 were lower than in 2014 in all reporting OECD countries except Iceland (Figure 8). Pension funds' real investment rates of return averaged 2.1% in 2015, compared to 6.8% in 2014 among the same sample of reporting OECD countries. Real returns in 2015 ranged

from -6.1% in Poland to 7.4% in Iceland. Twenty-seven OECD countries recorded positive real net returns in 2015, with only four countries experiencing negative real net returns: Mexico (-0.8%), the United States (-1.1%), Turkey (-5.9%) and Poland (-6.1%). The negative real net return in the United States brings the OECD weighted average close to 0 because of the large weight of the United States in total pension fund investments.

The simple and weighted average real net investment rates of return were also lower in 2015 than in 2014 outside the OECD area. The weighted average in 2015 was even negative (-2.4%). Real returns were below 0% in ten jurisdictions, including three of the largest outside the OECD in terms of assets, namely Russia (-2.0%), Brazil (-4.9%) and Hong Kong, China (-5.8%). The lowest return in 2015 was recorded in Malawi (-7.8%). By contrast, pension funds in 21 out of 31 reporting non-OECD countries achieved positive real returns in 2015, peaking at 13.5% in Serbia.

Figure 8. Pension funds' real net rate of investment returns in selected OECD and non-OECD countries, Dec 2013 - Dec 2014 and Dec 2014 - Dec 2015
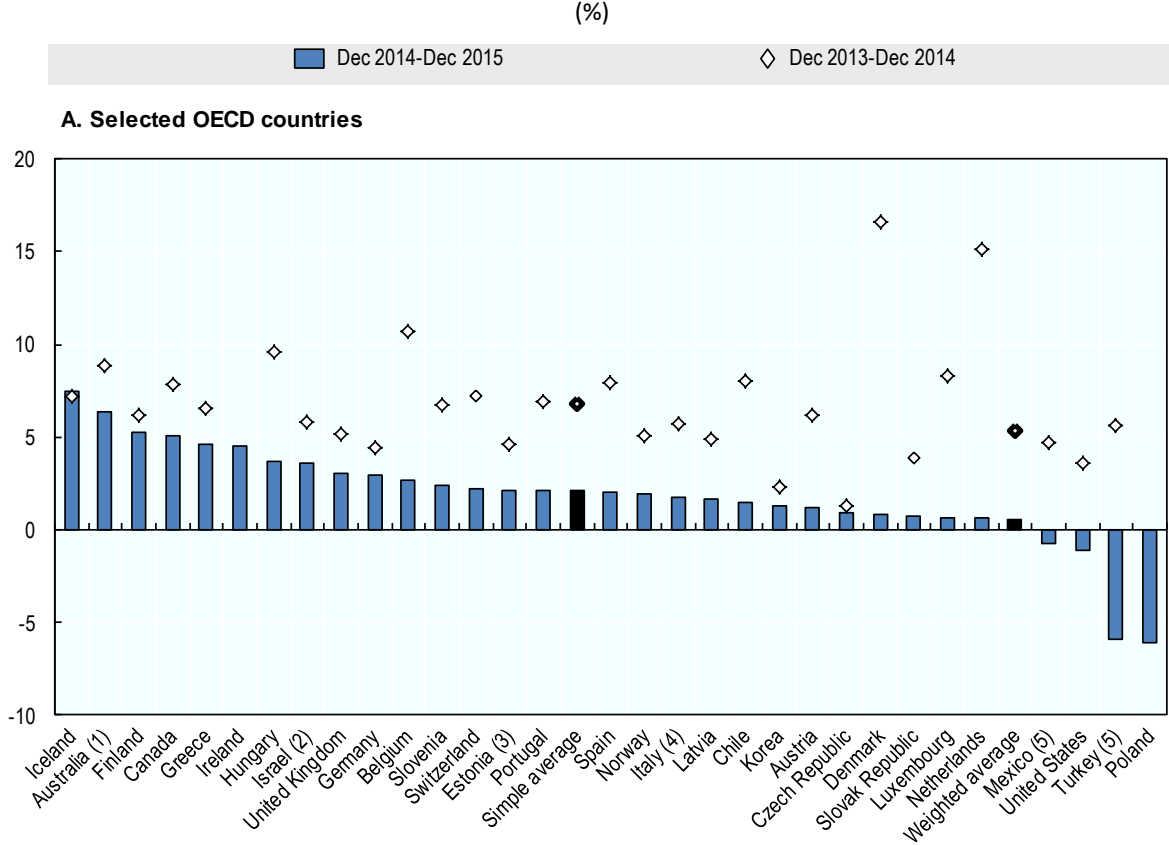
(%)

B. Selected non-OECD countries
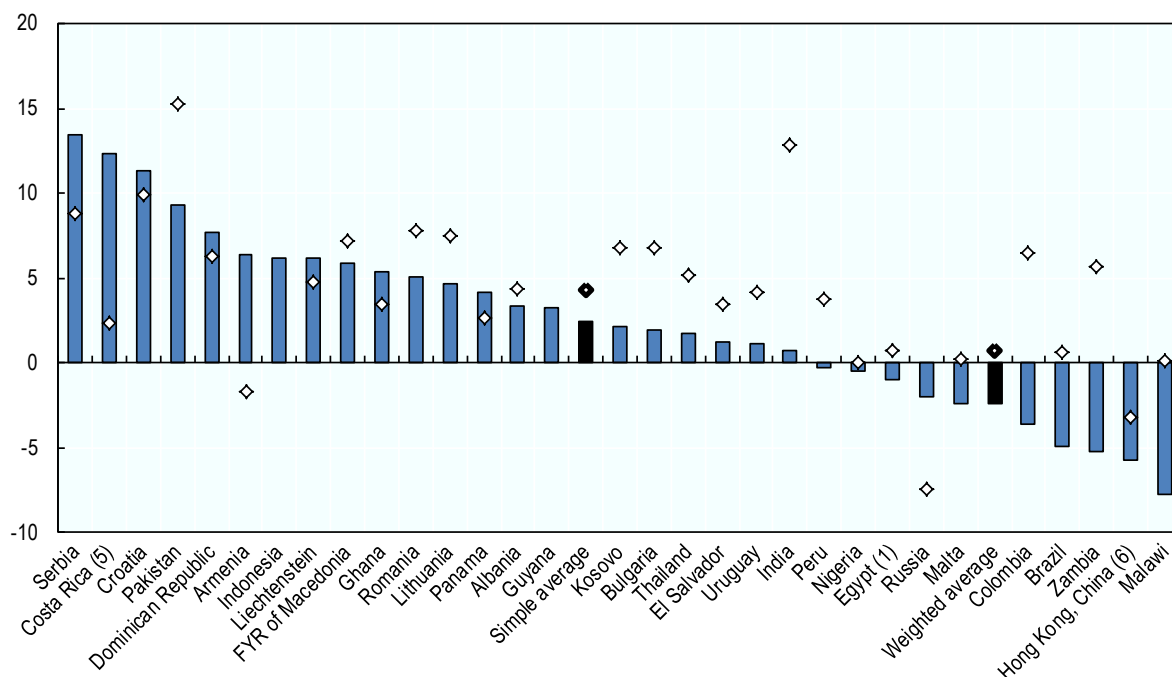
Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

Over a longer time period, the average 5-year investment rates of returns were positive in all reporting countries in nominal terms and remained positive in most of them even after adjusting for inflation (Table 1). Average annual 5-year real net returns, calculated over Dec 2010-Dec 2015, were positive in all reporting OECD countries except Turkey (-2.0%). The highest average annual real net returns observed were in Canada (6.4%), Australia (6.2%) and the United Kingdom (6.1%). Five-year average real net returns were higher than 5% in six countries (Australia, Canada, Denmark, Iceland, the Netherlands and the United Kingdom) and were above 2% in 12 further countries, including Chile, Mexico and the United States. Outside the OECD, the 5-year average annual real net returns ranged from -3.1% in Hong Kong, China to 8.7% in Pakistan. Average real net returns were positive in all reporting non-OECD jurisdictions except Nigeria (-0.5%), Peru (-1.1%), Malta (-1.3%) and Hong Kong, China (-3.1%).

Among countries for which it was possible to calculate a 10-year average annual real net return over Dec 2005-Dec 2015, average net returns were positive everywhere except in Estonia, Latvia and Bulgaria. Three countries had 10-year average annual real net returns above 5%: Uruguay (5.6%),

Colombia (5.9%) and the Dominican Republic (6.2%). The 10-year average of pension fund real net investment rates of return was close to 5% in the United Kingdom.[8]

Table 1. Pension fund nominal and real 5-year and 10-year geometric average annual returns in selected OECD and non-OECD countries

(%)

A. Selected OECD countries

Country	5-year average		10-year average	
	Nominal	Real	Nominal	Real
Iceland	9.1	5.7	6.9	1.2
Australia (1)	8.7	6.2	6.2	3.4
United Kingdom	8.2	6.1	7.3	4.7
Canada	8.0	6.4	5.9	4.2
Netherlands	7.9	6.1	5.5	3.8
Denmark	7.1	5.8	5.8	4.0
Belgium	6.2	4.6	5.1	3.2
Mexico (2)	6.2	2.6	6.5	2.4
Chile	6.0	2.3	6.8	3.0
Turkey (2)	6.0	-2.0	10.7	2.3
Norway	5.8	4.1	5.5	3.4
Israel (3)	5.1	4.2	5.6	3.7
Spain	4.7	3.8	..	..
United States	4.4	2.9	2.2	0.4
Luxembourg	4.4	2.8	3.0	1.1
Austria	3.9	1.9	2.6	0.6
Slovenia	3.9	2.8	..	..
Italy (4)	3.8	2.5	3.2	1.6
Korea	3.7	1.9	3.8	1.3
Portugal	3.5	2.4	3.2	1.8
Greece	3.3	3.5	..	..
Latvia	3.1	1.9	3.0	-0.7
Estonia (5)	2.3	0.9	1.0	-2.2
Slovak Republic	1.9	0.4	..	..
Czech Republic	1.9	0.6	2.1	0.1

B. Selected non-OECD countries

Country	5-year average		10-year average	
	Nominal	Real	Nominal	Real
Pakistan	16.2	8.7	..	..
Uruguay	14.6	5.6	14.0	5.6
Dominican Republic	11.6	7.4	11.5	6.2
Serbia	10.8	5.7	..	..
Costa Rica (2)	10.1	6.4	9.9	3.6
Nigeria	9.0	-0.5	..	..
India	8.2	0.6	..	..
Romania	7.3	5.3	..	..
Colombia	5.9	2.1	10.3	5.9
FYR of Macedonia	5.9	4.3	..	..
Panama	5.3	2.1	..	..
Albania	5.3	3.5	..	..
Lithuania	4.4	3.1	..	..
Thailand	3.8	2.1	..	..
Bulgaria	3.7	2.9	2.6	-0.8
El Salvador	3.3	1.7	4.2	1.7
Liechtenstein	2.7	2.7	..	..
Peru	2.5	-1.1	7.1	3.8
Hong Kong, China (6)	0.9	-3.1	..	..
Malta	0.1	-1.3	..	..

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

Returns probably driven by movements in equity and bond markets

The investment performance of pension funds was probably driven by developments in the equity and bond markets as pension funds usually directed most of their investments towards these two asset classes. Investments in these two asset classes accounted for more than 75% of pension fund portfolios in 20 OECD countries and 24 non-OECD jurisdictions in 2015 (Figure 9).

---

[8] Annex tables A.4 and A.5 give the complete time series of pension fund nominal and real rates of return between 2005 and 2015. Annex table A.6 provides the variation of consumer price indices over the same period.

Figure 9. Pension fund asset allocation for selected investment categories in selected OECD and non-OECD countries, 2015
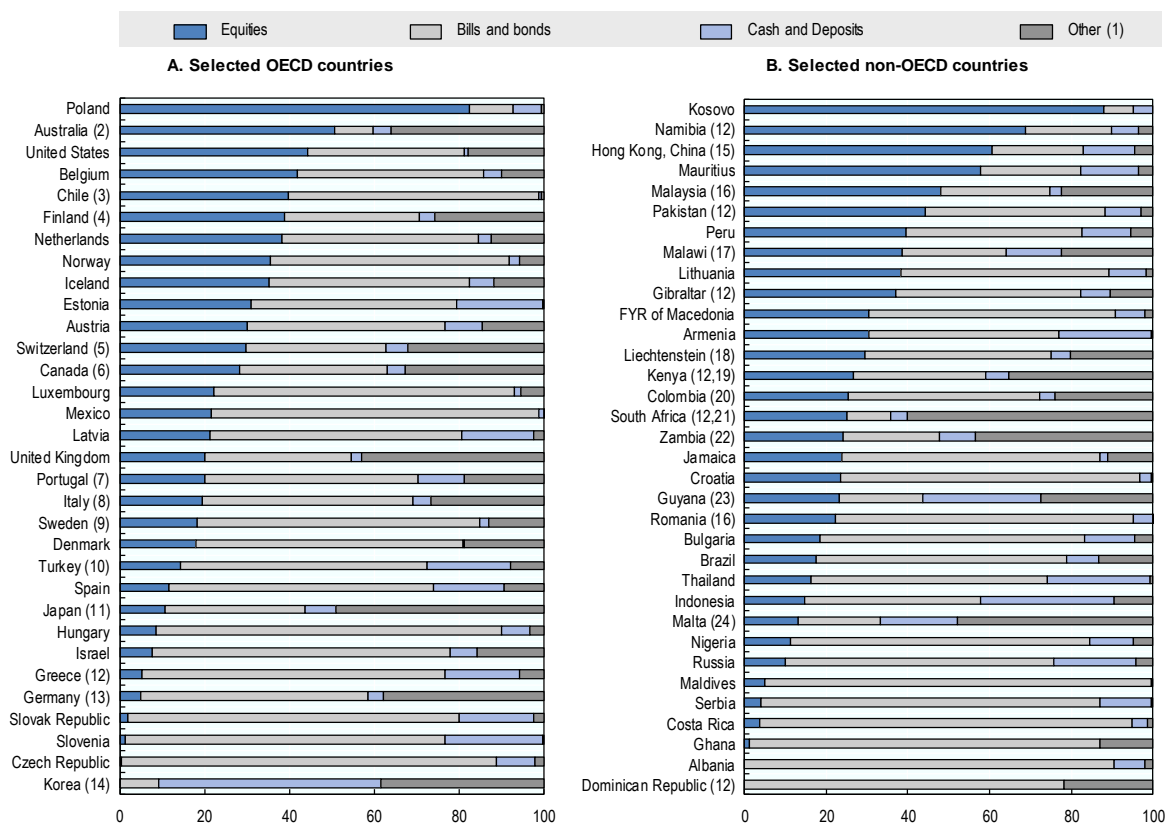
As a percentage of total investment

Note: Please see the section on methodological notes at the end of the report.
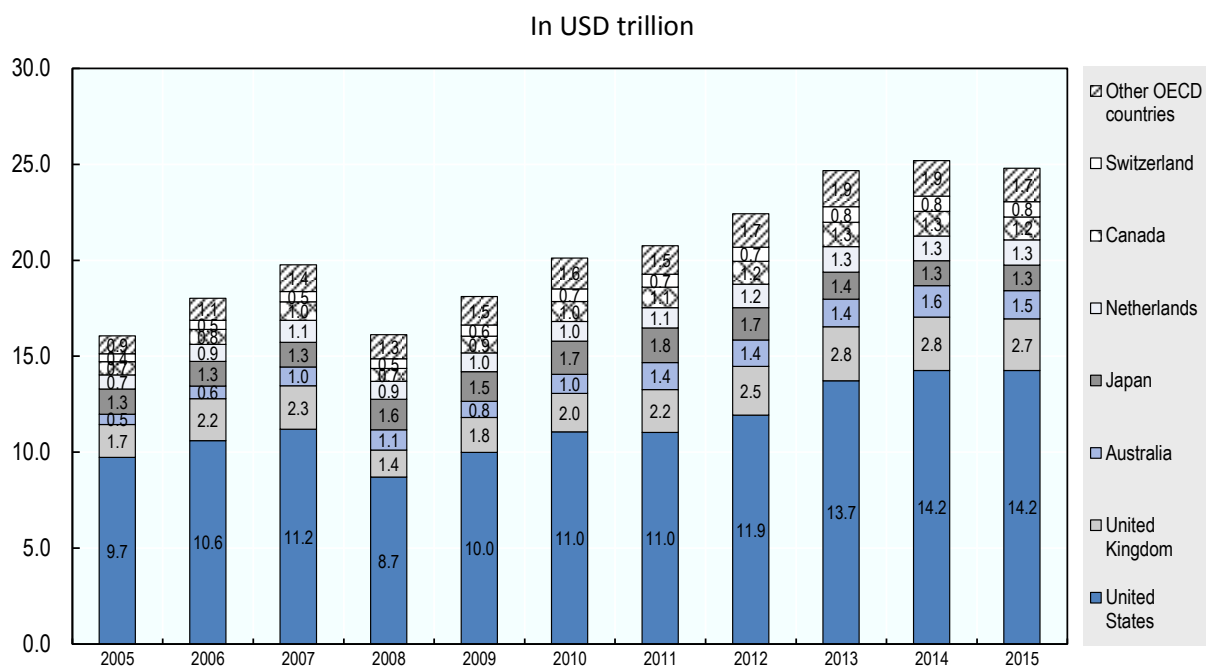
Source: OECD Global Pension Statistics.

Equities dominated pension fund portfolios in six reporting jurisdictions: Australia; Hong Kong, China; Kosovo; Mauritius; Namibia and Poland. In these six countries, pension funds invested more than 50% of their assets in equities directly or indirectly through collective investment schemes. Pension funds in Belgium, Malaysia, Pakistan and the United States invested between 40% and 50% of their portfolio in equities.

Pension funds in some Asian markets such as Hong Kong, China, experienced negative real returns in 2015, because of negative developments in Asian stock markets.

The number of pension funds has declined in a significant number of countries

The number of pension funds in each country varies from a few to thousands. While the numbers of pension funds are low in Central and Eastern Europe, as well as in Latin America, there are many more pension funds operating in Anglo-Saxon countries. In Ireland and the United Kingdom, the number of trust-based schemes is between 40 000 and 70 000 according to the latest data available (Table 2). In Australia, the number of pension funds (mostly self-managed superannuation funds)

exceeds 500 000. The highest number of pension funds was observed in the United States where the number of private pension plans that require completion of a Form 5500 was around 685 000 in 2014. By contrast, in some countries where the funded pension system is still quite recent (e.g. Albania, the Former Yugoslav Republic of Macedonia), the number of pension funds is below 10.[9]

Table 2. Number of pension funds in 2015, compared to 2005, in selected OECD and non-OECD countries

A. Selected OECD countries

Evolution of the number of funds since 2005 (or first year available)	Country	Number of funds in 2015 (or latest year available)	Change compared to 2005 (or first year available)	
			% change	Absolute difference
Increase	United States (1,2)	685,203	0.9	6,108
	Australia	559,547	82.5	252,994
	Canada (2)	8,876	100.5	4,450
	Spain	1,688	34.5	433
	Turkey (3)	223	145.1	132
	Mexico (3)	55	71.9	23
	Poland (4)	25	25.0	5
	Estonia (5)	20	33.3	5
	Luxembourg	17	6.3	1
	Latvia (6)	15	15.4	2
	Greece (2,7)	11	266.7	8
	Slovenia (8)	9	28.6	2
Stable	Chile (9)	30	0.0	0
Decrease	Ireland (10)	67,840	-19.4	-16,306
	United Kingdom (11)	43,690	-52.3	-47,984
	Switzerland (2)	1,866	-32.6	-904
	Netherlands (12)	320	-60.1	-482
	Italy	283	-37.7	-171
	Portugal	217	-2.7	-6
	Belgium (4)	196	-24.0	-62
	Germany	171	-3.9	-7
	Norway	87	-26.9	-32
	Hungary	48	-46.7	-42
	Slovak Republic (4)	37	-5.1	-2
	Israel	29	-3.3	-1
	Iceland	26	-43.5	-20
	Denmark	20	-60.0	-30
	Austria	13	-35.0	-7

B. Selected non-OECD countries

Evolution of the number of funds since 2005 (or first year available)	Country	Number of funds in 2015 (or latest year available)	Change compared to 2005 (or first year available)	
			% change	Absolute difference
Increase	Hong Kong, China (13)	38	-17.4	-8
	Bulgaria	28	16.7	4
	Pakistan (7,14)	13	116.7	7
	FYR of Macedonia (7)	4	100.0	2
Stable	Albania (7)	3	0.0	0
Decrease	Thailand (7)	412	-19.7	-101
	Brazil (14,15)	317	-14.6	-54
	Indonesia	255	-18.3	-57
	Nigeria (7,16)	28	-9.7	-3
	Liechtenstein	23	-43.9	-18
	Romania (15)	17	-26.1	-6
	Peru	12	-20.0	-3
	Colombia (4,17)	4	-33.3	-2
	Serbia (7)	4	-42.9	-3

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

The number of pension funds has decreased in 15 OECD and 9 non-OECD countries compared to 2005. Fourteen of the fifteen countries within the OECD that saw a reduction in the number of pension funds are European, with either a high number of pension funds (such as Ireland and the United Kingdom) or with fewer pension funds (such as Austria). The biggest change, compared to 2005, occurred in the Netherlands (-60.1%), Denmark (-60.0%) and the United Kingdom (-52.3%). The largest decrease in the total number of pension funds in absolute terms occurred in the United

---

[9] The complete time series of the number of funds between 2005 and 2015 is available in Annex table A.7.

Kingdom (47 984 funds fewer in 2015 than in 2005) and Ireland (16 306 funds fewer in 2015 than in 2005).

By contrast, the number of pension funds was higher in 12 OECD and 4 non-OECD countries in 2015 than in 2005. The United States, for which data is only available until 2014, had 6 108 (0.9%) more private pension schemes in 2014 than in 2005 and counted 685 203 schemes in 2014. However, Annex table A.7 shows that the number of schemes peaked at 717 532 in 2008 and has been declining every year since then (except between 2012 and 2013, and 2013 and 2014).

The reduction in the number of pension funds may have been the result of mergers, closures or acquisitions. Mergers between pension funds may result in economies of scale and potentially help pension funds to become more competitive. Managing and running a scheme may require collecting contributions from plan members and sometimes from employers, investing and managing assets, complying with regulations, having appropriate governance structures, and paying benefits to retirees, among others. Merging pension plans or funds may generate economies of scale. The consolidation in the pension sector in the Netherlands may be attributed to the search for economies of scale and cost reductions. Spain reported merger activities among managing entities and a reduction in the total number of funds between 2014 and 2015, although the total number of funds was higher in 2015 than in 2005.

Pension scheme closures may result from difficulties in delivering the terms of contracts or meeting funding requirements in case of DB plans. The 2008 financial crisis and falling interest rates caused the funding position of DB plans to deteriorate. Difficulties in meeting funding requirements may have led underperforming funds to wind up. The Pension Authority (2015) reports that 40% of the DB schemes subject to the funding standard (and not in wind-up) in Ireland were not in compliance with the standard at the end of 2015. Forty-four schemes were in wind-up at the end of 2015 in Ireland.

Some European countries encouraged a reduction in the number of funds (especially those where this number is high). In 2015, the United Kingdom considered pooling the assets of the 89 local government pension funds into six wealth funds to limit management costs and fees.

The amount of assets invested per pension fund has increased between 2005 and 2015 in almost all countries for which data were available. The average size of a pension fund is higher in 2015 than in 2005 in 26 reporting OECD countries and all the 11 non-OECD jurisdictions reporting data for both years (Figure 10). Pension fund assets have been growing while the number of funds was shrinking (e.g. in Denmark, the Netherlands) or increasing at a slower pace (e.g. in Mexico). Only three reporting countries experienced a diminution of the average size of pension funds: Canada, Poland and Portugal. In two countries, a portion of the assets of pension funds was transferred to the pay-as-you-go system (Portugal in 2011 and Poland in 2014).

Consolidation of the pension sector may benefit individuals if, for example, fees charged become lower or real net investment rates of return become higher. The next section of this report examines whether there is a link between the number of pension funds and the real net of investment expenses rate of return across countries and over time.

Figure 10. Average size of pension fund (ratio of investment to the number of funds) in selected OECD and non-OECD countries, 2005 and 2015
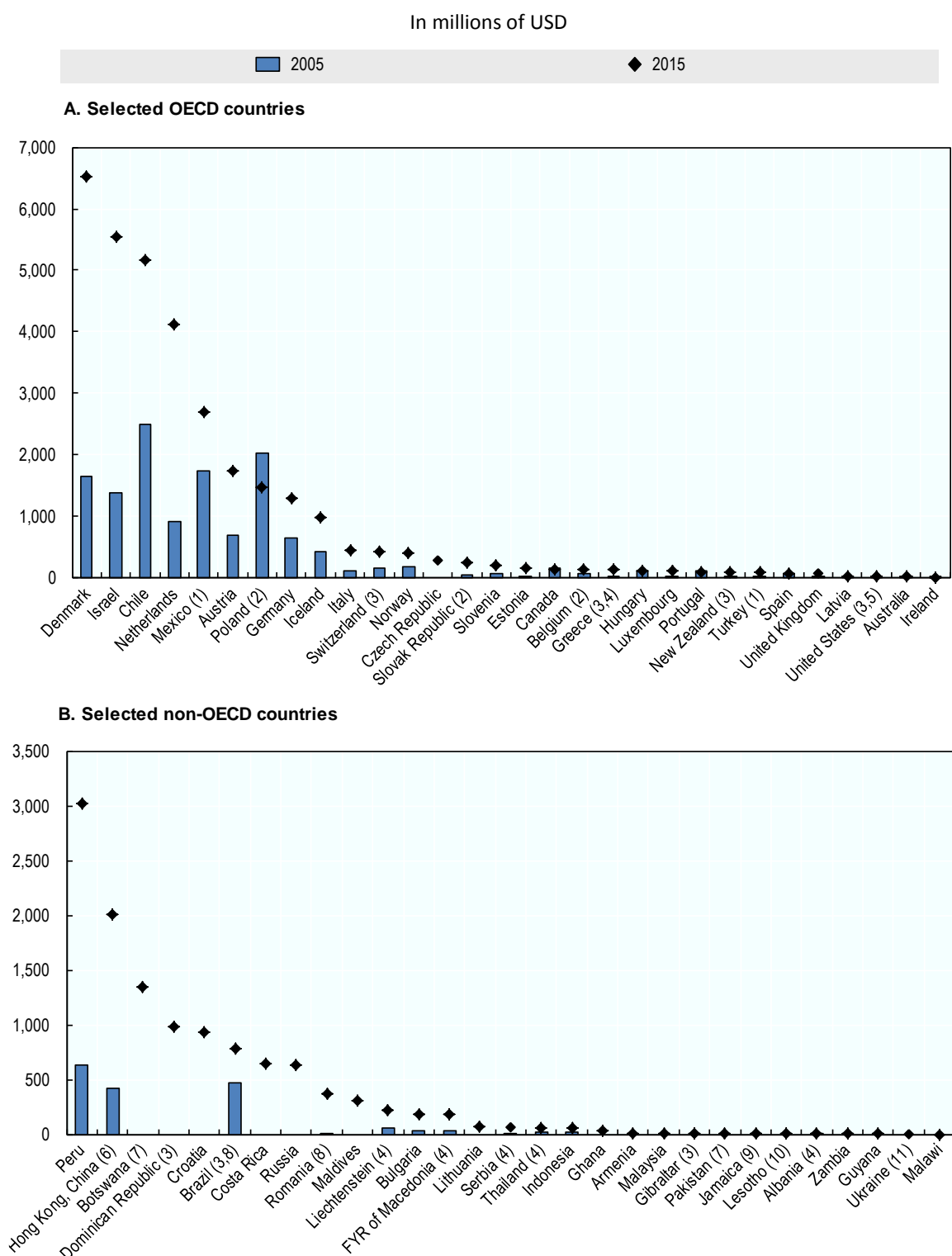
In millions of USD

A. Selected OECD countries

B. Selected non-OECD countries

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

## Special feature: Is there a link between the number of funds and overall investment performance?

Pension systems, especially in Europe, are consolidating in an attempt to seek economies of scale, or closing because of underfunding issues or difficulties in meeting funding requirements. A lower number of pension funds may lead to higher returns as larger pension funds may achieve lower management costs. Countries with a declining number of pension funds may experience higher net returns if underperforming funds exit the market. Alternatively, a low number of pension funds may lead to a situation of oligopoly with a potentially lower level of competition than in countries with more funds. Competition between providers is supposed to lower costs and yield higher returns.

This special feature examines available data to see if there is a link between the number of pension funds and the real net of investment expenses rate of return. The analysis is conducted on a sample of 20 countries, including some of the largest pension markets (e.g. Australia, Canada, the Netherlands, Switzerland, United Kingdom, United States), beginning with 2015, and then over the period 2005-2015.

The analysis shows that there is no relationship between the number of pension funds and the real net rates of return in 2015. A panel data analysis over previous years finds that countries with relatively fewer pension funds were more likely to have experienced higher real net returns in the period between 2005 and 2015 than countries with more pension funds.

Real net returns and the number of pension funds do not show a linear correlation in 2015

The analysis first examines the potential link between the number of pension funds and the real net returns in 2015. This analysis is conducted on 20 countries, namely: Australia, Austria, Bulgaria, Canada, Chile, Denmark, Estonia, Germany, Iceland, Israel, Italy, Mexico, Netherlands, Norway, Peru, Portugal, Switzerland, Turkey, United Kingdom and United States.[10] Assets that are invested by pension funds in these 20 countries represent more than 65% of total pension assets worldwide.

The correlation coefficient between real net returns and the number of pension funds is almost zero (0.08) in 2015. Figure 11 shows that the highest return was observed in Iceland which has less than 30 funds. Turkey, with 223 pension mutual funds, experienced the lowest return. Australia and Canada, which are among the countries with the biggest number of funds, had the highest returns in 2015 after Iceland.

Figure 11. Pension fund real rate of return and number of funds in selected countries, 2015

---

[10] The analysis only considers pension funds managing personal pension plans in Mexico and Turkey, and private pension funds in the United States.
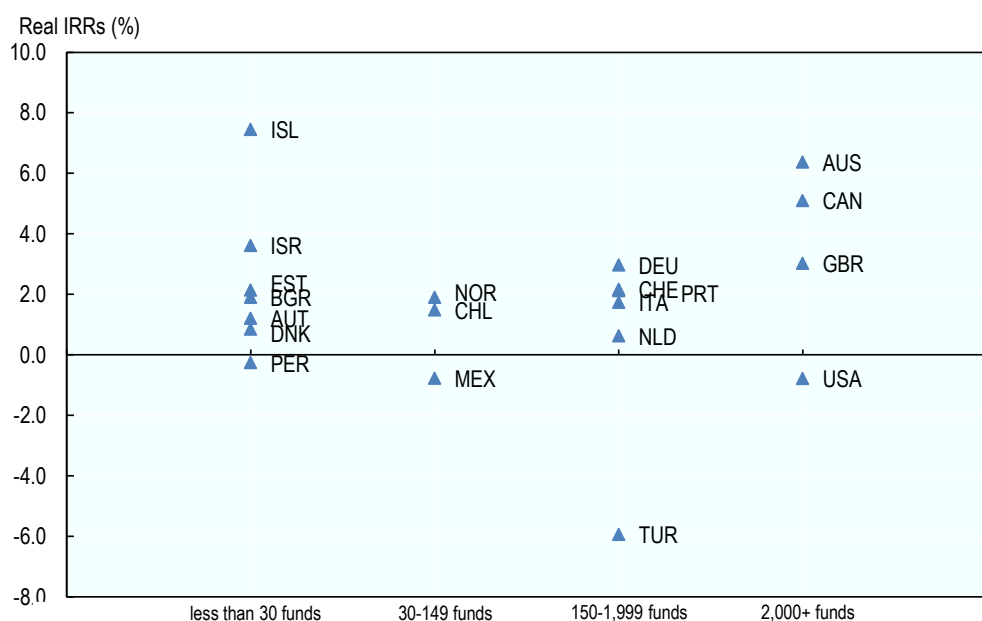
Source: OECD Global Pension Statistics.

A panel data analysis of the link between real net returns and the number of pension funds suggests that over the period 2005-2015 sample countries with 30 to 149 pension funds were likely to experience higher net returns than countries with more pension funds

Performing an initial panel estimation of the relationship between the real net rate of return and the number of pension funds over the period 2005-2015 for 20 countries, with country fixed effects and time fixed effects, suggests again that there is not a linear link between these two variables. The coefficient associated with the number of pension funds is close to 0 and the p-value is much higher than 0.05 (0.826), which indicates the coefficient's value is statistically insignificant.

The analysis above did not find any linear relationship between real net returns and the number of pension funds. However, one cannot rule out other types of relationship, e.g. the non-linear ones. To assess whether there is a non-linear link between these two variables one could categorise the explanatory variable of interest and run a panel data analysis again with the new categorical variable. Furthermore, introducing additional explanatory variables may disentangle the link between real net returns and the number of pension funds.

The analysis breaks down the number of funds into four categories. These categories broadly follow the quartiles of the distribution of the number of funds (Table 3). They are the following: i) countries with less than 30 funds; ii) countries with 30 to 149 funds; iii) countries with 150 to 1 999 funds; iv) and countries with 2 000 or more funds. Each category has approximately the same number of countries each year (Table 4).

Table 3. Distribution of the number of pension funds in the sample

	all years
Min	12
1st quartile	30
Mean	59,765
Median	109
3rd quartile	1,294
Max	717,532

Source: OECD Global Pension Statistics.

Table 4. Number of funds in the sample broken down by categories, 2005-2015

Number of countries with:	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Less than 30 funds	4	4	4	4	4	4	4	5	6	6	7	52
30-149 funds	7	7	7	7	7	7	6	5	4	4	3	64
150-1,999 funds	4	4	4	4	4	4	5	5	6	6	6	52
2,000+ funds	5	5	5	5	5	5	5	5	4	4	4	52
Total	20	20	20	20	20	20	20	20	20	20	20	220

Source: OECD Global Pension Statistics.

The additional explanatory variables following the empirical literature (Boon et al., 2013; Musalem and Pasquini, 2012), used in the panel data analysis to assess the relationship between the real net rate of return and the new categorical variable of the number of pension funds ("NBFUND_CAT") are:[11]

- the real growth rate of GDP ("RGROWTH_GDP") to control for macroeconomic factors,
- the amount of pension fund investment relative to GDP ("INV_GDP") to control for the size of pension market,
- the share of pension fund portfolio allocated to bills and bonds ("SHARE_BOND") or to equities ("SHARE_EQ") to control for different pension fund investment strategies, [12]
- the growth rate of the country-specific MSCI Index ("DEV_EQMARKET") to control for developments in stock markets.[13]

The analysis assessed the correlations between explanatory variables to check for possible multicollinearity. The results of these correlations (Table 5) indicate that the highest correlation between explanatory variables observed is between the share of pension fund portfolio in equities and the share in bills and bonds (-0.69). As this correlation is above the absolute 0.68 threshold defined by Taylor (1990), the variables related to the share of pension fund allocation to equities and to the share to bills and bonds should not be introduced together as explanatory variables. Investigating each of them separately suggested that the share of bills and bonds in the portfolio has a stronger explanatory statistical significance than the share of equities. Therefore, the results presented and discussed below have the share of bills and bonds as an explanatory variable.

---

[11] Given the size of the sample, the number of controlling variables that are considered for this analysis is limited to avoid increasing variance of estimated coefficients.

[12] Shares of pension fund portfolios allocated to equities and to bills and bonds between 2005 and 2015 are shown in Annex table A.8 and Annex table A.9 respectively.

[13] For Iceland the analysis uses the growth rate of the Share Price Index Iceland (ICEX-15).

Table 5. Correlations between selected explanatory quantitative variables between 2005 and 2015

	RGROWTH_GDP	INV_GDP	SHARE_BOND	SHARE_EQ	DEV_EQMARKET
RGROWTH_GDP	1.0000				
INV_GDP	-0.0427	1.0000			
SHARE_BOND	0.0815	-0.4419	1.0000		
SHARE_EQ	0.1643	0.3708	-0.6891	1.0000	
DEV_EQMARKET	0.0581	0.0208	0.0502	0.1111	1.0000

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics and Thomson Reuters Datastream.

Table 6 reports results for two models. The first model has the number of pension funds broken down into categories as the only explanatory variable (as well as country and time fixed effects).[14] The second model adds the additional explanatory variables discussed above.to the first model.

Table 6. Outcomes of the econometric models to assess the effect of the number of funds on investment returns

	Model 1	Model 2
NBFUND_CAT_1	1.330	-1.490
	(1.99)	(1.82)
NBFUND_CAT_3	-12.021***	-11.294***
	(3.56)	(3.29)
NBFUND_CAT_4	-12.963**	-9.435**
	(5.24)	(4.76)
RGROWTH_GDP	-	0.152
		(0.13)
INV_GDP	-	0.172***
		(0.06)
SHARE_BOND	-	-0.202**
		(0.09)
DEV_EQMARKET	-	0.121***
		(0.02)
Constant	14.574***	13.727**
	(2.29)	(5.65)

Notes: This table shows the results of estimating two models with country and time fixed effects. These models assess the effect of the number of funds (with four categories) on performance, with and without controlling variables. NBFUND_CAT_1 refers to the first category (less than 30 funds), NBFUND_CAT_3 to the third category (between 150 and 1,999 funds) and NBFUND_CAT_4 to the last category (more than 2,000 funds). The reference category of the variable about the number of funds is the second category (between 30 and 149 funds). Values in brackets represent the standard error of the estimate. * Indicate statistical significance at the 10% level. ** Indicate statistical significance at the 5% level. *** Indicate statistical significance at the 1% level.

Source: OECD.

The second category (i.e. number of pension funds between 30 and 149) is taken as a reference in the two models presented in Table 6. Therefore, the results enable examination of how pension

---

[14] An F-test reveals the presence of time fixed effects with a 90% confidence level (p-value < 0.1). Adding country fixed effects allows controlling for unobserved missing variables in the model that vary across countries but do not vary over time. The inclusion of time fixed effects in the model controls for special events that can affect the outcome variable.

funds in countries with less than 30 pension funds or more than 150 pension funds performed over time relative to countries with 30 to 149 pension funds .

Results show that sample countries with 30 to 149 pension funds experienced higher real net returns than countries with more pension funds over the period 2005-2015 (Table 6). Real net returns in countries with 150 to 1 999 funds and countries with 2 000 or more funds would be lower than those in countries with 30 to 149 funds over the period 2005-2015 with a 95% (and sometimes even a 99%) confidence level. Outcomes of the models do not suggest any significant difference (with a 95% confidence level) between the real net returns of pension funds in countries with 30 to 149 funds and countries with less than 30 funds. Real net returns were also positively linked with the size of the pension markets and the developments in stock markets, and negatively linked with the allocation in bills and bonds.

Statistical Annexes

Table A.1. Total investment of pension funds in the OECD and selected non-OECD countries, in millions of national currency, 2005-2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
OECD countries											
Australia	719,032	868,921	1,152,316	1,099,497	1,034,354	1,157,854	1,301,256	1,357,527	1,554,534	1,735,475	1,912,376
Austria	11,726	12,743	13,150	12,546	14,063	15,217	14,764	16,306	18,253	19,171	20,569
Belgium	13,316	13,365	14,792	11,407	13,799	13,308	15,631	17,245	19,732	22,701	23,841
Canada	799,649	916,310	954,620	824,563	920,352	1,048,446	1,094,569	1,193,445	1,340,807	1,505,239	1,654,843
Chile	38,312,676	47,186,675	55,173,152	46,750,900	59,785,152	69,523,450	70,377,419	77,543,241	85,366,585	100,479,815	109,433,421
Czech Republic	123,417	145,948	167,197	191,705	215,871	232,422	247,509	273,198	297,428	339,175	373,066
Denmark	521,852	532,314	548,978	824,241	718,055	867,884	887,898	913,143	794,041	932,586	890,583
Estonia	298	480	709	735	952	1,071	1,134	1,481	1,771	2,204	2,613
Finland (1)	107,951	119,149	127,000	112,737	133,071	148,056	83,419	90,648	98,362	104,148	103,343
France	329	761	1,402	1,859	3,000	4,000	5,000	6,700	8,600	10,373	12,200
Germany	95,172	100,728	115,733	119,016	130,458	140,158	149,094	167,585	171,802	194,551	200,673
Greece (2)	..	..	25	34	45	53	73	86	979	1,089	1,135
Hungary (3)	1,863,200	2,309,891	2,766,268	2,567,247	3,412,000	3,964,528	1,060,484	1,111,079	1,187,403	1,306,716	1,381,292
Iceland	1,201,497	1,494,141	1,682,102	1,673,263	1,829,209	1,971,032	2,148,253	2,421,504	2,680,354	2,916,818	3,275,703
Ireland	77,933	87,744	86,602	63,519	72,200	75,500	72,300	80,500	91,500	107,800	115,800
Israel	188,424	201,125	223,454	306,418	356,459	397,740	429,721	483,765	529,948	597,144	627,569
Italy	39,845	44,594	50,140	53,691	62,509	70,810	76,853	87,643	95,837	107,617	112,496
Japan	155,216,300	152,964,100	147,253,900	143,430,300	142,470,100	140,929,300	141,059,600	144,938,300	148,058,800	157,171,400	159,879,300
Korea	15,007,017	25,341,376	27,684,625	30,593,454	37,779,083	46,386,464	55,080,899	68,134,772	86,072,668	108,593,027	127,653,234
Latvia	52	73	92	106	131	155	161	198	236	282	331
Luxembourg (4)	320	354	374	390	844	799	832	902	959	1,484	1,444
Mexico (5)	832,071	1,051,817	1,125,979	1,229,261	1,407,867	1,665,112	1,852,060	2,193,025	2,370,177	2,676,924	2,821,237
Netherlands	619,550	671,880	772,452	670,244	679,856	760,115	815,868	931,525	968,089	1,055,934	1,210,321
New Zealand	17,683	20,231	19,781	19,388	22,008	27,158	31,374	34,756	40,426	45,923	53,235
Norway	130,541	146,739	160,435	153,541	175,191	194,170	201,427	219,759	248,723	277,737	301,388
Poland (6)	85,745	117,803	141,348	139,609	181,354	223,013	229,022	274,204	302,897	151,251	142,810
Portugal (7)	18,982	21,185	22,356	20,282	21,918	19,725	13,237	14,471	15,158	17,506	18,164
Slovak Republic (8)	240	1,323	2,286	3,174	3,966	4,882	5,798	6,817	7,198	7,944	8,037
Slovenia	363	491	628	712	911	1,085	1,198	1,309	1,417	1,575	1,641
Spain	65,618	73,744	86,479	78,130	85,074	83,988	83,659	86,576	92,435	100,144	103,955
Sweden (9)	248,169	268,355	266,606	232,922	255,868	316,205	321,753	373,398	345,391	363,897	368,849
Switzerland	542,629	583,267	605,459	538,524	598,930	621,234	625,295	672,785	720,237	777,340	786,935
Turkey	4,349	5,670	10,296	14,200	21,682	25,845	53,555	53,813	75,927	95,435	108,249
United Kingdom	995,100	1,118,254	1,131,112	968,752	1,124,262	1,289,071	1,444,019	1,603,292	1,706,682	1,784,104	1,815,375
United States	9,711,211	10,587,466	11,185,041	8,691,269	9,975,118	11,041,475	11,021,671	11,926,687	13,712,784	14,240,069	14,249,746
Selected non-OECD countries											
Albania (10)	..	..	45	93	154	203	155	284	436	632	930
Argentina (11)	66,429	87,919	91,626	0	0	0	0	0	0	0	0
Armenia	..	..	..	..	..	..	..	..	..	12,145	31,540
Bolivia	16,278	18,003	21,912	26,255	31,278	37,657		..	..	..	..
Botswana	..	..	..	..	..	..	..	..	58,700	..	..
Brazil		423,775	436,565	412,506	485,678	539,093	573,018	645,527	644,860	665,301	681,966
Bulgaria	1,117	1,522	2,328	2,303	3,173	3,996	4,598	5,709	6,821	8,185	9,394
China (People's Republic of)	68,000	91,000	152,000	191,100	253,300	280,900	357,000	482,100	603,500	768,900	952,600
Colombia	38,872,137	43,338,555	64,867,218	69,025,803	67,015,269	87,911,524	104,916,828	120,856,919	128,639,830	152,499,223	163,672,394
Costa Rica (12)	551,293	774,952	842,379	1,120,971	1,339,188	1,453,484	1,795,276	2,213,151	2,734,179	3,153,594	4,854,558
Croatia	11,668	16,377	21,814	23,539	30,628	38,088	43,036	53,563	60,940	70,312	78,941
Dominican Republic	13,053	21,667	32,900	49,076	69,031	91,321	118,508	154,572	194,688	305,905	336,457
Egypt	..	..	..	21,847	..	..	..	..	35,274	39,659	43,035
El Salvador	25,393	29,331	34,634	39,119	43,877	47,894	53,311	59,805	64,060	69,939	74,499
FYR of Macedonia			3,125	5,037	8,751	12,494	16,141	21,336	27,137	33,582	40,802
Ghana	..	..	..	..	..	..	..	..	..	2,582	4,672
Gibraltar (13)	..	..	..	..	..	..	22	25	26	7	..
Guyana	..	..	..	..	..	..	..	..	..	..	45,435
Hong Kong, China	342,604	409,693	502,445	467,535	522,448	606,941	617,087	700,104	797,614	853,518	891,902
India						150,000	151,966	298,540	422,047	726,098	1,078,020
Indonesia	60,900,000	74,960,000	87,904,869	86,550,000	108,060,000	125,720,000	136,543,778	153,750,000	157,600,000	186,140,000	200,104,742
Jamaica	..	131,916	173,912	196,410	222,402	259,067	282,981	290,388	303,740	338,415	395,127
Kenya	171,176	224,007	..	272,284	305,814	431,727	460,988	548,700	696,680	755,163	814,100
Kosovo	..	..	..	..	..	..	..	713	914	1,088	1,180
Lesotho	..	..	..	..	..	..	2,216	2,617			
Liechtenstein	..	..	2,235	2,266	2,728	3,472	3,527	3,597	3,953	4,228	4,934
Lithuania	..	..	..	..	..	1,134	1,209	1,430	1,611	1,919	2,182
Malawi	..	..	..	..	..	..	..	..	177,981	246,980	306,663
Malaysia	..	..	..	..	..	..	..	..	..	..	1,190
Maldives	..	..	..	..	..	..	817	1,656	2,543	..	4,795
Malta (14)	..	..	..	..	..	..	35	575	1,227	2,141	3,146
Mauritius	..	..	..	..	..	..	..	6,924	7,975	..	17,281
Namibia	..	..	..	..	..	60,648	66,231	82,209	95,774	112,712	..
Nigeria	..	..	815,193	1,098,990	1,517,020	2,021,590	2,442,840	3,153,110	4,057,440	4,611,630	5,301,780
Pakistan	..	..	648	735	1,008	1,375	1,842	3,232	6,089	10,199	15,294
Panama	..	..	..	108	..	161	216	142	333	384	427
Papua New Guinea	..	..	..	..	..	..	..	..	8,593	..	..
Peru	32,574	46,050	61,051	49,881	69,287	87,296	81,881	96,853	102,077	114,503	124,093
Romania	..	..	14	934	2,473	4,663	6,857	10,242	14,689	20,172	25,940
Russia	..	..	..	..	..	..	..	..	3,835,186	3,985,916	4,793,277
Serbia	..	226	3,057	4,662	7,222	9,912	12,493	16,366	19,747	23,654	28,954
South Africa	1,283,921	1,620,900	1,938,600	1,972,346	1,874,100	2,198,384	2,429,800	2,749,145	3,211,017	3,677,244	..
Suriname	641	721	..	..	..	..	..	..	..	..	..
Thailand	345,896	390,928	441,710	465,297	516,651	577,865	619,007	699,850	753,580	841,514	890,200
Trinidad and Tobago	..	21,164	23,400	25,843	30,180	34,521	27,525	30,722	..	..	..
Ukraine	..	..	..	..	612	..	1,144	1,387	..	..	..
Uruguay	51,889	63,096	72,757	69,941	100,183	134,505	154,517	196,813	224,752	266,614	317,041
Zambia	1,209	..	..	..	..	..	..	..	..	5,601	6,380

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

Table A.2. Total investment of pension funds in the OECD and selected non-OECD countries, in millions of USD, 2005-2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
OECD countries											
Australia	549,125	645,869	977,970	1,058,376	839,275	986,839	1,397,418	1,383,456	1,440,898	1,634,818	1,468,704
Austria	13,833	16,783	19,359	17,460	20,259	20,333	19,103	21,514	25,173	23,276	22,393
Belgium	15,708	17,601	21,775	15,875	19,879	17,783	20,225	22,753	27,213	27,561	25,956
Canada	686,689	786,329	966,116	673,333	879,373	1,047,504	1,072,056	1,199,201	1,260,157	1,297,732	1,195,696
Chile	74,508	88,293	111,277	74,313	118,052	148,437	134,962	162,021	162,988	165,432	154,711
Czech Republic	5,019	6,991	9,249	9,909	11,753	12,395	12,413	14,337	14,951	14,854	15,028
Denmark	82,518	94,025	108,167	155,961	138,351	154,612	154,535	161,358	146,700	152,349	130,393
Estonia	351	632	1,043	1,023	1,372	1,431	1,467	1,953	2,443	2,676	2,844
Finland (1)	127,350	156,919	186,957	156,896	191,702	197,832	107,936	119,601	135,651	126,446	112,509
France	388	1,002	2,064	2,587	4,322	5,345	6,470	8,840	11,860	12,594	13,282
Germany	112,275	132,659	170,371	165,634	187,938	187,280	192,912	221,112	236,932	236,204	218,473
Greece (2)	..	..	36	47	65	71	95	113	1,350	1,322	1,236
Hungary (3)	8,724	12,055	16,026	13,662	18,142	19,001	4,406	5,029	5,506	5,043	4,819
Iceland	19,077	20,850	27,196	13,877	14,645	17,132	17,507	18,773	23,196	22,985	25,277
Ireland	91,937	115,559	127,487	88,399	104,011	100,883	93,549	106,212	126,188	130,880	126,071
Israel	40,935	47,603	58,100	80,594	94,426	112,071	112,463	129,591	152,679	153,547	160,833
Italy	47,005	58,730	73,812	74,722	90,050	94,617	99,441	115,637	132,168	130,658	122,474
Japan	1,315,727	1,285,953	1,291,701	1,580,499	1,547,579	1,730,255	1,814,972	1,674,619	1,406,066	1,302,813	1,326,799
Korea	14,835	27,255	29,574	24,290	32,442	40,876	47,822	63,642	81,555	98,784	108,873
Latvia	61	96	135	147	189	208	209	261	325	342	361
Luxembourg (4)	378	467	550	542	1,215	1,067	1,076	1,190	1,323	1,801	1,572
Mexico (5)	77,203	96,665	103,622	90,799	107,811	134,749	132,381	168,563	181,255	181,881	163,963
Netherlands	730,883	884,866	1,137,127	932,779	979,401	1,015,666	1,055,652	1,229,054	1,335,092	1,282,009	1,317,676
New Zealand	12,532	12,406	14,100	15,384	12,371	19,275	23,929	28,406	33,831	39,788	39,873
Norway	19,282	23,441	29,655	21,934	30,310	33,135	33,627	39,454	40,908	37,380	34,210
Poland (6)	26,292	40,475	58,048	47,137	63,626	75,238	67,017	88,464	100,563	43,126	36,608
Portugal (7)	22,393	27,901	32,910	28,226	31,575	26,356	17,127	19,093	20,904	21,254	19,775
Slovak Republic (8)	283	1,743	3,366	4,417	5,713	6,523	7,503	8,994	9,926	9,645	8,750
Slovenia	429	647	924	991	1,313	1,450	1,550	1,727	1,954	1,912	1,786
Spain	77,410	97,121	127,306	108,734	122,558	112,225	108,247	114,228	127,478	121,585	113,175
Sweden (9)	31,183	39,094	41,569	29,821	35,954	47,127	46,714	57,406	53,767	47,036	43,698
Switzerland	412,865	477,970	537,946	506,274	581,203	661,168	664,571	734,001	807,893	785,906	793,201
Turkey	3,233	4,024	8,794	9,309	14,543	16,769	28,284	30,200	35,543	41,119	37,196
United Kingdom	1,713,463	2,195,133	2,266,070	1,412,247	1,820,742	2,018,041	2,232,598	2,529,995	2,810,564	2,784,630	2,690,204
United States	9,711,211	10,587,466	11,185,041	8,691,269	9,975,118	11,041,475	11,021,671	11,926,687	13,712,784	14,240,069	14,249,746
Selected non-OECD countries											
Albania (10)	..	..	1	1	2	2	1	3	4	5	7
Argentina (11)	22,055	28,902	29,283	0	0	0	0	0	0	0	0
Armenia	..	..	..	..	..	..	..	..	..	26	65
Bolivia	2,025	2,256	2,876	3,740	4,456	5,387	..	..	..	..	..
Botswana	..	..	..	..	..	..	..	..	6,731	..	..
Brazil	..	198,285	246,577	176,571	279,061	319,785	308,273	315,153	273,965	250,471	174,675
Bulgaria	674	1,025	1,749	1,660	2,326	2,714	3,042	3,848	4,807	5,089	5,248
China (People's Republic of)	8,426	11,654	20,809	27,961	37,096	42,413	56,659	76,650	98,896	125,658	146,746
Colombia	17,018	19,474	32,633	31,403	32,783	44,179	54,006	68,221	66,911	63,742	51,968
Costa Rica (12)	1,110	1,496	1,691	2,018	2,369	2,833	3,507	4,355	5,453	5,846	9,017
Croatia	1,872	2,936	4,375	4,566	6,018	6,840	7,395	9,353	10,982	11,157	11,291
Dominican Republic	374	646	966	1,371	1,897	2,408	3,055	3,829	4,543	6,892	7,369
Egypt	..	..	..	4,104	..	..	..	..	5,031	5,550	5,658
El Salvador	2,902	3,352	3,958	4,471	5,015	5,474	6,093	6,835	7,321	7,993	8,514
FYR of Macedonia	..	..	75	116	205	270	340	457	608	664	724
Ghana	..	..	..	..	..	..	..	..	..	807	1,231
Gibraltar (13)	..	..	..	..	..	..	35	39	42	11	..
Guyana	..	..	..	..	..	..	..	..	..	..	220
Hong Kong, China	44,193	52,697	64,404	60,323	67,365	78,068	79,465	90,330	102,871	110,053	115,077
India	..	..	..	..	..	3,347	2,848	5,450	6,819	11,465	16,253
Indonesia	6,195	8,310	9,333	7,904	11,496	13,983	15,058	15,900	12,930	14,963	14,506
Jamaica	..	1,968	2,470	2,448	2,490	3,026	3,276	2,864	2,958	3,292	..
Kenya	2,365	3,228	..	3,504	4,033	5,346	5,419	6,380	8,072	8,344	7,957
Kosovo	..	..	..	..	..	..	..	940	1,260	1,321	1,285
Lesotho	..	..	..	..	..	..	272	308	..	..	..
Liechtenstein	..	..	1,986	2,131	2,647	3,696	3,748	3,925	4,434	4,275	4,974
Lithuania	..	..	..	..	..	1,515	1,564	1,887	2,221	2,330	2,376
Malawi	..	..	..	..	..	..	..	..	409	525	675
Malaysia	..	..	..	..	..	..	..	..	..	..	277
Maldives	..	..	..	..	..	..	53	108	165	..	311
Malta (14)	..	..	..	..	..	..	45	759	1,692	2,599	3,425
Mauritius	..	..	..	..	..	..	..	227	265	..	482
Namibia	..	..	..	..	..	9,145	8,134	9,670	9,130	9,733	..
Nigeria	..	..	6,910	8,290	10,142	13,418	15,435	20,042	25,801	27,178	26,913
Pakistan	..	..	11	9	12	16	20	33	58	102	146
Panama	..	..	..	108	..	161	216	142	333	384	427
Papua New Guinea	..	..	..	..	..	..	..	..	3,549	..	..
Peru	9,497	14,411	20,377	15,888	23,979	31,083	30,371	37,982	36,521	38,360	36,386
Romania	..	..	6	330	842	1,455	2,053	3,051	4,513	5,471	6,254
Russia	..	..	..	..	..	..	..	..	117,179	70,850	65,767
Serbia	..	4	57	74	108	125	154	190	238	238	260
South Africa	202,991	232,554	284,670	211,966	253,943	331,501	298,395	323,385	306,107	317,525	..
Suriname	234	263	..	..	..	..	..	..	..	..	..
Thailand	8,430	10,845	13,100	13,333	15,506	19,165	19,532	22,847	22,965	25,529	24,667
Trinidad and Tobago	..	3,353	3,690	4,103	4,735	5,374	4,290	4,776	..	..	..
Ukraine	..	..	..	..	80	144	174	..	..	..	..
Uruguay	2,153	2,586	3,384	2,872	5,104	6,694	7,765	10,146	10,508	10,957	10,613
Zambia	344	..	..	..	..	..	..	..	..	876	581
Regional indicators											
Total OECD	16,045,104	18,004,623	19,745,444	16,107,469	18,097,279	20,105,166	20,751,905	22,407,485	24,667,782	25,179,455	24,788,168
Total selected non-OECD	332,859	600,245	755,389	591,345	773,631	959,570	940,695	1,050,357	1,166,199	1,149,946	765,635
Total G20 (15)	14,470,820	16,300,790	17,665,807	14,207,467	16,080,789	18,014,778	18,727,256	20,058,489	22,125,677	22,752,232	22,013,359
Euro area (16)	1,240,684	1,512,725	1,905,222	1,598,480	1,761,561	1,790,583	1,734,169	1,994,926	2,199,892	2,135,094	2,114,135
BRICS	211,418	442,492	552,056	416,498	570,100	697,047	666,175	720,638	802,966	775,969	403,441
Latin America and the Caribbean	209,078	461,951	562,804	410,105	587,752	709,591	688,197	785,160	752,653	734,915	621,155
Asia (17)	1,438,741	1,444,318	1,487,032	1,794,914	1,805,922	2,040,196	2,148,892	2,079,171	1,885,003	1,842,914	1,914,487
Total World	16,377,963	18,604,868	20,500,833	16,698,814	18,870,909	21,064,736	21,692,600	23,457,842	25,833,981	26,329,401	25,553,803

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

Table A.3. Total investment of pension funds in the OECD and selected non-OECD countries, as a % of GDP, 2005-2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
OECD countries											
Australia	78.0	87.1	106.1	93.3	82.2	89.3	92.3	91.0	102.0	109.5	118.7
Austria	4.6	4.8	4.7	4.3	4.9	5.2	4.8	5.1	5.7	5.8	6.1
Belgium	4.3	4.1	4.3	3.2	4.0	3.6	4.1	4.5	5.0	5.7	5.8
Canada	56.4	61.4	60.7	49.9	58.7	63.1	61.8	65.5	70.9	76.3	83.4
Chile	55.6	57.5	61.0	49.8	62.0	62.6	58.0	60.1	62.2	68.1	69.6
Czech Republic	3.8	4.2	4.4	4.8	5.5	5.9	6.2	6.8	7.3	8.0	8.3
Denmark	32.9	31.6	31.6	45.9	41.9	48.3	48.4	48.5	41.7	48.0	44.9
Estonia	2.6	3.5	4.4	4.5	6.7	7.3	6.8	8.2	9.3	11.0	12.8
Finland (1)	65.7	69.0	68.1	58.2	73.5	79.1	42.4	45.4	48.4	50.7	49.4
France	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.5	0.6
Germany	4.1	4.2	4.6	4.6	5.3	5.4	5.5	6.1	6.1	6.7	6.6
Greece (2)	..	..	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.6
Hungary (3)	8.3	9.6	10.8	9.5	13.0	14.7	3.8	3.9	3.9	4.1	4.1
Iceland	113.9	124.9	123.3	108.5	115.1	121.8	126.3	136.4	142.7	146.6	149.6
Ireland	45.8	47.4	43.9	33.9	42.6	45.4	41.6	46.0	51.0	57.0	54.0
Israel	29.4	29.2	30.3	39.4	43.6	45.4	45.9	48.3	50.2	54.6	54.5
Italy	2.7	2.9	3.1	3.3	4.0	4.4	4.7	5.4	6.0	6.7	6.9
Japan	30.8	30.2	28.7	28.6	30.2	29.2	29.9	30.5	30.9	32.3	32.0
Korea	1.6	2.6	2.7	2.8	3.3	3.7	4.1	4.9	6.0	7.3	8.2
Latvia	0.4	0.4	0.4	0.4	0.7	0.9	0.8	0.9	1.0	1.2	1.4
Luxembourg (4)	1.1	1.1	1.0	1.0	2.3	2.0	2.0	2.1	2.1	3.0	2.8
Mexico (5)	8.8	10.0	9.9	10.0	11.7	12.6	12.7	14.1	14.7	15.6	15.6
Netherlands	113.6	116.0	126.0	104.9	110.1	120.4	126.9	144.4	148.7	159.3	178.4
New Zealand	11.4	12.4	11.5	10.4	11.6	14.0	15.4	16.3	18.5	19.9	22.2
Norway	6.6	6.6	6.8	5.9	7.2	7.5	7.2	7.4	8.1	8.8	9.6
Poland (6)	8.7	11.1	11.9	10.9	13.3	15.4	14.6	16.8	18.3	8.8	8.0
Portugal (7)	12.0	12.7	12.7	11.3	12.5	11.0	7.5	8.6	8.9	10.1	10.1
Slovak Republic (8)	0.5	2.4	3.6	4.6	6.2	7.2	8.2	9.4	9.7	10.5	10.3
Slovenia	1.2	1.6	1.8	1.9	2.5	3.0	3.2	3.6	3.9	4.2	4.3
Spain	7.1	7.3	8.0	7.0	7.9	7.8	7.8	8.3	9.0	9.6	9.6
Sweden (9)	8.5	8.7	8.1	6.9	7.8	9.0	8.8	10.1	9.2	9.3	8.9
Switzerland	106.9	108.4	105.6	90.1	102.0	102.5	101.1	107.8	113.4	121.0	123.0
Turkey	0.7	0.7	1.2	1.5	2.3	2.4	4.1	3.8	4.8	5.5	5.5
United Kingdom	74.8	79.5	76.2	63.8	75.7	82.9	89.2	96.3	98.4	98.2	97.4
United States	74.2	76.4	77.3	59.0	69.2	73.8	71.0	73.8	82.3	82.1	79.4
Selected non-OECD countries											
Albania (10)	..	..	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Argentina (11)	10.3	10.9	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Armenia	..	..	..	..	..	..	..	..	..	0.3	0.6
Bolivia	21.1	19.6	21.3	21.8	25.7	27.3	..	..	..	..	..
Botswana	..	..	..	..	..	..	..	..	47.2	..	..
Brazil	..	17.6	16.0	13.3	14.6	13.9	13.1	13.4	12.1	11.7	11.6
Bulgaria	2.4	2.8	3.6	3.2	4.4	5.4	5.7	7.0	8.3	9.8	10.9
China (People's Republic of)	0.4	0.4	0.6	0.6	0.7	0.7	0.7	0.9	1.0	1.2	1.4
Colombia	11.4	11.3	15.0	14.4	13.3	16.1	16.9	18.2	18.1	20.2	20.4
Costa Rica (12)	5.6	6.6	6.0	7.0	7.7	7.4	8.4	9.5	11.0	11.8	17.2
Croatia	4.3	5.6	6.8	6.8	9.3	11.6	12.9	16.2	18.5	21.4	23.6
Dominican Republic	1.2	1.7	2.3	3.0	4.0	4.6	5.3	6.5	7.6	11.0	11.1
Egypt	..	..	..	2.3	..	..	..	..	1.9	1.9	1.8
El Salvador	17.0	18.1	19.7	20.9	24.3	25.6	26.3	28.7	30.1	31.8	33.0
FYR of Macedonia	..	..	0.8	1.2	2.1	2.9	3.5	4.6	5.4	6.4	7.4
Ghana	..	..	..	..	..	..	..	..	..	2.3	3.5
Gibraltar (13)	..	..	..	..	..	..	1.9	1.9	1.7	0.4	..
Guyana	..	..	..	..	..	..	..	..	..	..	7.0
Hong Kong, China	24.3	27.3	30.4	27.4	31.5	34.2	31.9	34.4	37.3	37.8	37.1
India	..	..	..	..	..	0.2	0.2	0.3	0.4	0.6	0.8
Indonesia	2.0	2.1	2.0	1.6	1.8	1.8	1.7	1.8	1.7	1.8	1.7
Jamaica	..	16.8	19.6	19.7	20.9	22.5	22.8	22.1	21.2	21.9	24.2
Kenya	10.8	12.0	..	11.0	10.7	13.6	12.4	12.9	14.7	14.1	13.5
Kosovo	..	..	..	..	..	..	..	14.1	17.2	19.5	20.6
Lesotho	..	..	..	..	..	..	12.0	13.2	..	..	..
Liechtenstein	..	..	40.5	41.2	55.7	65.5	69.2	70.3	74.6	78.8	..
Lithuania	..	..	..	..	..	4.0	3.9	4.3	4.6	5.3	5.9
Malawi	..	..	..	..	..	..	..	..	8.8	9.6	9.6
Malaysia	..	..	..	..	..	..	..	..	..	..	0.1
Maldives	..	..	..	..	..	..	2.3	4.3	5.9	..	9.9
Malta (14)	..	..	..	..	..	..	0.5	8.0	16.0	26.4	35.6
Mauritius	..	..	..	..	..	..	..	2.0	2.2	..	4.2
Namibia	..	..	..	..	..	73.4	73.5	76.9	77.8	79.9	..
Nigeria	..	..	2.6	2.9	3.8	3.6	3.8	4.3	5.0	5.1	5.6
Pakistan	..	..	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Panama	..	..	..	0.4	..	0.6	0.6	0.4	0.7	0.8	0.8
Papua New Guinea	..	..	..	..	..	..	..	..	24.8	..	..
Peru	13.2	16.0	19.1	14.0	19.0	20.8	17.4	19.1	18.7	19.9	20.3
Romania	..	..	0.0	0.2	0.5	0.9	1.2	1.7	2.3	3.0	3.7
Russia	..	..	..	..	..	..	..	..	5.4	5.1	6.0
Serbia	..	0.0	0.1	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.7
South Africa	78.3	88.1	91.9	83.3	74.7	80.0	80.3	84.3	90.9	96.8	..
Suriname	10.5	10.0	..	..	..	..	..	..	..	..	..
Thailand	4.5	4.7	4.9	4.8	5.4	5.3	5.5	5.7	5.8	6.4	6.6
Trinidad and Tobago	..	18.3	17.1	14.7	24.9	24.5	16.9	18.6	..	..	..
Ukraine	..	..	..	0.1	..	0.1	0.1	..	..	..	..
Uruguay	12.2	13.4	13.2	11.0	14.0	16.6	16.7	18.9	19.1	20.0	21.4
Zambia	3.2	..	..	..	..	..	..	..	..	3.4	3.3

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

Table A.4. Pension funds' nominal net rate of investment returns in selected OECD and non-OECD countries (%), 2005-2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Selected OECD countries											
Australia (1)	12.8	13.3	15.3	-7.5	-8.9	8.9	9.0	1.9	12.9	12.2	8.0
Austria	10.5	5.3	1.8	-13.3	8.4	6.1	-3.0	8.4	4.9	7.3	2.2
Belgium	13.5	12.2	11.0	-20.2	13.7	7.7	-1.3	11.7	6.8	10.3	4.2
Canada	13.0	12.6	3.4	-15.9	11.8	10.1	4.2	8.8	11.1	9.4	6.8
Chile	8.8	17.3	12.6	-18.7	20.3	11.5	-1.8	6.6	6.7	13.1	5.9
Czech Republic	5.0	3.1	3.3	2.1	0.4	3.0	3.0	2.6	1.6	1.3	1.0
Denmark	17.3	3.2	-1.0	7.6	2.7	10.2	15.0	7.5	-3.8	17.1	1.3
Estonia (2)	11.0	7.4	3.7	-27.7	12.9	8.0	-4.6	8.9	2.3	4.1	1.2
Finland (3)	..	..	..	..	..	..	..	7.7	7.7	6.7	5.0
Germany	4.9	4.6	4.2	1.6	4.8	4.9	3.0	4.8	4.3	4.6	3.3
Greece	..	..	..	4.4	2.9	-3.1	-3.3	5.9	5.8	3.8	4.5
Hungary (4)	11.2	7.8	3.2	-19.0	19.1	9.0	..	13.2	7.4	8.6	4.6
Iceland	16.6	16.7	6.3	-9.3	8.4	3.7	7.5	11.4	9.1	8.0	9.6
Ireland	..	..	-3.0	-35.0	..	..	..	..	..	..	4.6
Israel (5)	9.7	5.6	7.0	-13.1	24.8	9.8	-2.2	9.6	10.4	5.6	2.6
Italy (6)	6.9	4.0	2.9	-3.2	6.4	3.1	0.4	6.4	4.5	5.7	1.8
Korea	3.2	8.2	4.2	1.3	0.5	5.2	4.2	4.8	3.8	3.2	2.6
Latvia	8.7	4.8	3.9	-11.0	10.9	8.0	-2.8	8.7	2.8	5.1	2.0
Luxembourg	..	7.3	0.8	-10.4	8.4	3.5	0.9	8.5	3.3	7.7	1.7
Mexico (7)	8.3	9.8	3.6	-1.8	11.4	11.2	5.0	13.6	2.5	8.9	1.3
Netherlands	13.2	7.8	2.4	-15.7	12.8	11.0	6.8	12.7	3.3	15.9	1.3
New Zealand (8)	7.2	12.4	7.7	-2.3	-6.8	12.8	7.7	3.2	10.5	8.9	..
Norway	11.2	9.8	6.0	-8.7	12.0	8.4	0.0	7.5	10.1	7.2	4.3
Poland (9)	13.9	14.9	5.4	-14.7	13.0	10.5	-4.9	4.0	3.4	..	-6.7
Portugal	9.8	9.8	8.3	-12.5	11.5	-0.5	-3.9	7.8	5.1	6.6	2.5
Slovak Republic	..	..	3.3	-5.0	1.5	1.3	0.5	3.7	1.5	3.7	0.3
Slovenia	..	..	4.6	-3.4	6.1	3.7	0.2	7.3	3.2	6.9	1.9
Spain	..	..	..	-8.6	7.7	0.7	0.1	6.6	8.2	6.8	2.0
Sweden	..	..	..	..	..	..	1.3	7.8	6.8	..	..
Switzerland	10.3	6.0	2.2	-13.2	10.2	3.3	-0.1	7.1	6.0	6.9	0.8
Turkey (7)	31.5	11.2	22.7	11.1	25.3	8.4	-1.0	16.4	-0.8	14.2	2.3
United Kingdom	22.1	13.6	3.0	-13.3	16.7	15.3	12.9	11.8	7.5	5.7	3.2
United States	5.1	8.4	2.8	-25.2	12.2	7.4	-1.0	7.0	12.9	4.4	-0.4
Selected non-OECD countries											
Albania	..	..	..	7.0	8.4	9.5	4.6	5.7	5.6	5.0	5.3
Armenia	..	..	..	..	..	..	..	..	..	2.8	6.2
Bolivia	8.6	7.9	8.5	9.7	10.0	8.1	..	..	..	..	..
Brazil	..	..	..	..	..	..	..	..	3.3	7.0	5.3
Bulgaria	8.5	8.3	15.1	-23.9	8.5	5.0	-0.3	7.3	4.6	5.8	1.5
Colombia	19.8	9.1	9.8	5.0	26.8	25.4	-0.1	17.9	-0.3	10.4	2.9
Costa Rica (7)	18.8	20.8	10.0	2.4	9.1	7.0	9.1	10.5	11.8	7.5	11.4
Croatia	..	..	..	..	..	..	..	..	..	9.4	10.6
Dominican Republic	17.1	11.5	8.5	12.1	14.0	10.8	12.5	14.3	13.2	7.9	10.2
Egypt	..	..	..	..	..	..	..	..	..	9.0	10.3
El Salvador	5.8	6.1	6.3	3.1	5.4	4.6	2.8	5.2	2.3	3.9	2.3
FYR of Macedonia	..	..	..	-10.6	14.2	7.0	1.8	7.9	7.9	6.6	5.5
Ghana	..	..	..	..	..	..	..	..	..	21.0	24.0
Gibraltar	..	..	..	..	..	..	..	2.1	2.5	0.9	..
Guyana	..	..	..	..	..	..	..	..	..	..	1.4
Hong Kong, China (10)	..	..	..	..	26.6	7.8	-11.3	12.4	7.4	1.5	-3.6
India	..	..	..	..	..	..	3.7	11.2	2.8	17.7	6.4
Indonesia	..	..	..	..	..	..	5.4	..	..	..	9.8
Kenya	..	..	..	..	6.4	17.5	-9.9	..	17.6	13.1	..
Kosovo	..	..	..	..	..	..	..	..	8.1	6.4	2.0
Liechtenstein	..	..	..	-7.8	9.8	3.3	-2.0	-2.0	6.8	4.7	6.2
Lithuania	..	..	..	..	..	..	-3.5	10.2	3.9	7.3	4.5
Malawi	..	..	..	..	..	..	..	..	36.0	24.2	15.2
Maldives	..	..	..	..	..	..	..	..	14.4	..	..
Malta	..	..	..	..	..	..	-0.2	0.6	0.8	0.4	-1.3
Mauritius	..	..	..	..	..	..	..	..	..	0.1	..
Namibia	..	..	..	..	..	..	13.1	14.8	16.2	9.8	..
Nigeria	..	..	..	..	..	10.8	3.4	11.9	12.8	8.0	9.1
Pakistan	..	..	..	-9.3	10.9	11.5	8.5	18.5	21.4	20.2	12.8
Panama	..	..	..	..	..	..	6.7	6.0	5.8	3.7	4.5
Peru	12.3	26.9	21.2	-25.2	27.1	19.8	-10.0	12.0	0.5	7.1	4.2
Romania	..	..	..	19.5	16.4	15.1	2.9	10.4	10.6	8.7	4.1
Russia	..	..	..	..	..	..	..	..	6.2	3.1	10.6
Serbia	..	..	5.8	-6.3	13.9	7.4	5.6	11.6	11.0	10.7	15.2
South Africa (11)	4.8	21.9	16.5	3.8	3.6	12.4	9.0	11.1	15.6	14.7	..
Thailand	..	..	..	..	6.4	2.1	2.8	7.9	1.9	5.8	0.9
Trinidad and Tobago	..	..	8.2	..	7.2	..	7.9	10.8	..	..	..
Ukraine	..	..	..	..	..	17.2	10.4	..	..	..	..
Uruguay	9.7	16.5	9.0	-14.3	37.7	25.2	17.4	20.3	11.9	12.7	10.7
Zambia	..	..	..	..	..	..	..	..	..	14.0	14.7

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

Table A.5. Pension funds' real net rate of investment returns in selected OECD and non-OECD countries (%), 2005-2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Selected OECD countries											
Australia (1)	10.1	8.9	12.9	-11.4	-10.2	5.6	5.3	0.6	10.3	8.9	6.4
Austria	9.0	3.8	-1.8	-14.4	7.3	3.7	-6.0	5.5	2.9	6.2	1.2
Belgium	10.3	10.3	7.7	-22.3	13.4	4.4	-4.6	9.2	5.8	10.7	2.6
Canada	10.7	10.8	1.0	-16.9	10.3	7.6	1.8	7.9	9.8	7.8	5.1
Chile	5.0	14.4	4.4	-24.1	22.0	8.3	-6.0	5.1	3.5	8.1	1.5
Czech Republic	2.7	1.3	-2.0	-1.5	-0.6	0.7	0.5	0.2	0.2	1.2	0.9
Denmark	14.7	1.4	-3.3	5.1	1.2	7.1	12.2	5.3	-4.5	16.6	0.8
Estonia (2)	7.2	2.2	-5.4	-32.4	14.8	2.1	-8.0	5.2	0.9	4.7	2.1
Finland (3)	..	..	..	..	..	..	..	5.2	6.0	6.2	5.3
Germany	3.4	3.2	1.0	0.5	3.9	3.6	1.0	2.7	2.8	4.4	3.0
Greece	..	..	..	2.3	0.3	-7.8	-5.6	5.0	7.7	6.5	4.6
Hungary (4)	7.6	1.2	-3.9	-21.7	12.8	4.2	..	7.8	7.0	9.6	3.7
Iceland	12.0	9.0	0.5	-23.2	0.8	1.2	2.1	6.9	4.8	7.1	7.4
Ireland	..	..	-7.4	-35.7	..	..	..	..	..	..	4.5
Israel (5)	7.2	5.7	3.5	-16.3	20.2	6.9	-4.3	7.9	8.3	5.8	3.6
Italy (6)	4.8	2.1	0.3	-5.3	5.3	1.2	-2.8	4.0	3.9	5.7	1.7
Korea	0.6	6.0	0.6	-2.7	-2.2	2.1	0.0	3.3	2.6	2.3	1.3
Latvia	1.7	-1.9	-8.9	-19.5	12.2	5.3	-6.5	7.0	3.2	4.9	1.6
Luxembourg	..	4.9	-2.5	-11.4	6.5	0.7	-2.3	6.0	1.7	8.3	0.6
Mexico (7)	4.8	5.6	-0.1	-7.8	7.5	6.6	1.2	9.7	-1.5	4.7	-0.8
Netherlands	10.9	6.8	0.6	-17.3	11.5	8.9	4.3	9.5	1.6	15.1	0.6
New Zealand (8)	4.3	8.8	5.0	-5.5	-9.5	10.5	3.1	1.6	9.5	7.2	..
Norway	9.2	7.4	3.1	-10.6	9.8	5.5	-0.1	6.1	7.9	5.1	1.9
Poland (9)	12.9	13.4	1.5	-17.3	8.9	7.2	-9.1	1.6	2.7	..	-6.1
Portugal	7.1	7.1	5.5	-13.2	11.6	-3.0	-7.3	5.8	4.9	6.9	2.1
Slovak Republic	..	..	-0.1	-8.9	1.0	0.0	-3.8	0.4	1.1	3.9	0.8
Slovenia	..	..	-1.0	-5.4	4.2	1.8	-1.8	4.5	2.5	6.7	2.4
Spain	..	..	..	-9.9	6.9	-2.2	-2.3	3.7	7.9	8.0	2.0
Sweden	..	..	..	..	..	..	-1.0	7.9	6.7	..	..
Switzerland	9.2	5.3	0.2	-13.8	9.9	2.8	0.6	7.5	5.9	7.2	2.2
Turkey (7)	22.1	1.4	13.2	0.9	17.6	1.9	-10.4	9.6	-7.6	5.6	-5.9
United Kingdom	19.8	10.3	0.9	-15.9	13.4	11.2	8.3	9.0	5.4	5.2	3.0
United States	1.6	5.7	-1.2	-25.3	9.3	5.8	-3.9	5.2	11.2	3.6	-1.1
Selected non-OECD countries											
Albania	..	..	..	4.7	4.5	5.9	2.8	3.2	3.7	4.3	3.3
Armenia	..	..	..	..	..	..	..	..	..	-1.7	6.4
Bolivia	3.5	2.8	-2.9	-1.9	9.7	0.8	..	..	..	..	..
Brazil	..	..	..	..	..	..	..	..	-2.5	0.6	-4.9
Bulgaria	1.9	1.7	2.4	-29.4	7.9	0.5	-3.0	2.9	6.3	6.8	1.9
Colombia	14.2	4.4	3.9	-2.5	24.3	21.5	-3.7	15.1	-2.2	6.5	-3.7
Costa Rica (7)	4.1	10.3	-0.7	-10.1	4.9	1.1	4.1	5.7	7.8	2.3	12.3
Croatia	..	..	..	..	..	..	..	..	..	9.9	11.3
Dominican Republic	9.0	6.2	-0.4	7.2	7.8	4.3	4.4	10.0	9.0	6.3	7.7
Egypt	..	..	..	..	..	..	..	..	..	0.7	-1.0
El Salvador	1.5	1.2	1.4	-2.2	5.6	2.4	-2.1	4.4	1.5	3.4	1.3
FYR of Macedonia	..	..	..	-15.0	16.1	3.9	-1.0	3.0	6.5	7.2	5.8
Ghana	..	..	..	..	..	..	..	..	..	3.4	5.4
Gibraltar	..	..	..	..	..	..	..	-0.6	0.4	-0.9	..
Guyana	..	..	..	..	..	..	..	..	..	..	3.3
Hong Kong, China (10)	..	..	..	..	24.6	4.8	-16.1	8.4	3.0	-3.3	-5.8
India	..	..	..	..	..	..	-2.6	0.0	-6.8	12.8	0.7
Indonesia	..	..	..	..	..	..	1.5	..	..	..	6.2
Kenya	..	..	..	..	1.0	12.4	-24.2	..	9.8	6.6	..
Kosovo	..	..	..	..	..	..	..	..	7.6	6.8	2.2
Liechtenstein	..	..	..	-7.8	9.8	3.3	-2.0	-2.0	6.8	4.7	6.2
Lithuania	..	..	..	..	..	..	-6.6	7.2	3.5	7.5	4.6
Malawi	..	..	..	..	..	..	..	..	13.3	0.1	-7.8
Maldives	..	..	..	..	..	..	..	..	10.8	..	..
Malta	..	..	..	..	..	..	-2.3	-2.1	-0.2	0.3	-2.4
Mauritius	..	..	..	..	..	..	..	..	-3.8	..	..
Namibia	..	..	..	..	..	..	5.3	7.9	10.8	4.9	..
Nigeria	..	..	..	..	..	-0.8	-6.3	0.0	4.5	0.0	-0.5
Pakistan	..	..	..	-26.4	0.3	-3.2	-1.2	9.8	11.2	15.3	9.3
Panama	..	..	..	..	..	..	0.3	1.3	2.0	2.7	4.2
Peru	10.7	25.5	16.6	-29.8	26.8	17.3	-14.1	9.1	-2.3	3.7	-0.3
Romania	..	..	..	12.4	11.1	6.6	-0.3	5.2	8.9	7.8	5.0
Russia	..	..	..	..	..	..	..	..	-0.3	-7.4	-2.0
Serbia	..	..	-4.9	-13.7	6.8	-2.6	-1.3	-0.5	8.6	8.8	13.5
South Africa (11)	1.2	15.2	6.9	-5.7	-2.6	8.6	2.8	5.1	9.7	9.0	..
Thailand	..	..	..	..	2.8	-0.9	-0.7	4.2	0.2	5.2	1.7
Trinidad and Tobago	..	..	0.6	..	5.8	..	2.5	3.4	..	..	..
Ukraine	..	..	..	..	..	7.4	5.6	..	..	..	..
Uruguay	4.6	9.5	0.5	-21.4	29.8	17.0	8.1	11.9	3.1	4.1	1.2
Zambia	..	..	..	..	..	..	..	..	..	5.7	-5.3

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

Table A.6. Variation of end-of-year consumer price index in selected OECD and non-OECD countries (%), 2005-2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Selected OECD countries											
Australia	2.5	4.0	2.1	4.4	1.4	3.1	3.5	1.2	2.4	3.0	1.5
Austria	1.4	1.5	3.6	1.3	1.0	2.3	3.2	2.8	1.9	1.0	1.0
Belgium	2.9	1.6	3.1	2.6	0.3	3.1	3.5	2.2	1.0	-0.4	1.5
Canada	2.1	1.7	2.4	1.2	1.3	2.4	2.3	0.8	1.2	1.5	1.6
Chile	3.7	2.6	7.8	7.1	-1.4	3.0	4.4	1.5	3.0	4.6	4.4
Czech Republic	2.2	1.7	5.5	3.6	1.0	2.3	2.4	2.4	1.4	0.1	0.1
Denmark	2.3	1.8	2.3	2.4	1.4	2.8	2.4	2.1	0.7	0.4	0.4
Estonia	3.5	5.1	9.6	6.9	-1.7	5.7	3.7	3.4	1.4	-0.5	-0.9
Finland	0.6	2.2	2.6	3.4	-0.6	2.9	2.9	2.4	1.6	0.5	-0.2
Germany	1.4	1.4	3.2	1.1	0.8	1.3	2.0	2.0	1.4	0.2	0.3
Greece	3.6	2.9	3.9	2.0	2.6	5.2	2.4	0.8	-1.7	-2.6	-0.2
Hungary	3.4	6.5	7.4	3.4	5.6	4.7	4.1	5.0	0.4	-0.9	0.9
Iceland	4.1	7.0	5.8	18.1	7.5	2.5	5.2	4.2	4.2	0.8	2.0
Ireland	2.5	4.9	4.7	1.1	-5.0	1.3	2.5	1.2	0.2	-0.3	0.1
Israel	2.3	-0.1	3.4	3.9	3.8	2.7	2.2	1.5	1.9	-0.2	-1.0
Italy	2.0	1.9	2.6	2.2	1.0	1.9	3.3	2.3	0.7	0.0	0.1
Korea	2.6	2.1	3.6	4.1	2.8	3.0	4.2	1.4	1.1	0.8	1.3
Latvia	7.0	6.8	14.1	10.5	-1.2	2.5	4.0	1.6	-0.4	0.2	0.3
Luxembourg	2.5	2.3	3.4	1.1	1.8	2.8	3.2	2.3	1.5	-0.6	1.1
Mexico	3.3	4.1	3.8	6.5	3.6	4.4	3.8	3.6	4.0	4.1	2.1
Netherlands	2.1	1.0	1.9	1.9	1.1	1.9	2.4	2.9	1.7	0.7	0.7
New Zealand	2.8	3.3	2.5	3.4	3.0	2.0	4.5	1.6	0.9	1.5	0.3
Norway	1.8	2.2	2.8	2.1	2.0	2.8	0.2	1.4	2.0	2.1	2.3
Poland	0.9	1.4	3.9	3.2	3.7	3.1	4.6	2.3	0.7	-0.9	-0.7
Portugal	2.6	2.5	2.7	0.8	0.0	2.5	3.6	1.9	0.2	-0.4	0.4
Slovak Republic	3.7	4.2	3.4	4.4	0.5	1.3	4.4	3.2	0.4	-0.1	-0.5
Slovenia	2.3	2.8	5.6	2.1	1.8	1.9	2.0	2.7	0.7	0.2	-0.5
Spain	3.7	2.7	4.2	1.4	0.8	3.0	2.4	2.9	0.3	-1.0	0.0
Sweden	0.9	1.6	3.5	0.9	0.6	2.3	2.3	-0.1	0.1	-0.3	0.1
Switzerland	1.0	0.6	2.0	0.7	0.3	0.5	-0.7	-0.4	0.1	-0.3	-1.3
Turkey	7.7	9.7	8.4	10.1	6.5	6.4	10.4	6.2	7.4	8.2	8.8
United Kingdom	1.9	3.0	2.1	3.0	2.9	3.6	4.3	2.6	2.0	0.5	0.2
United States	3.4	2.5	4.1	0.1	2.7	1.5	3.0	1.7	1.5	0.8	0.7
Selected non-OECD countries											
Albania	2.1	2.5	3.0	2.2	3.7	3.4	1.7	2.4	1.9	0.7	1.9
Armenia	-0.2	5.2	6.6	5.2	6.5	9.5	4.7	3.2	5.6	4.6	-0.1
Bolivia	4.9	4.9	11.7	11.8	0.3	7.2	6.1	5.3	6.5	5.2	3.0
Brazil	5.7	3.1	4.4	5.9	4.3	5.9	6.5	5.8	5.9	6.4	10.7
Bulgaria	6.5	6.5	12.5	7.8	0.6	4.5	2.8	4.2	-1.6	-0.9	-0.4
Colombia	4.9	4.5	5.7	7.7	2.0	3.1	3.8	2.4	2.0	3.7	6.8
Costa Rica	14.1	9.4	10.8	13.9	4.0	5.8	4.8	4.5	3.7	5.1	-0.8
Croatia	3.6	2.1	5.8	2.9	1.9	1.8	2.1	4.6	0.3	-0.5	-0.6
Dominican Republic	7.4	5.0	8.9	4.5	5.8	6.2	7.8	3.9	3.9	1.6	2.3
Egypt	4.7	7.3	8.4	20.2	10.0	10.2	11.8	7.2	9.8	8.2	11.4
El Salvador	4.3	4.9	4.9	5.5	-0.2	2.1	5.1	0.8	0.8	0.5	1.0
FYR of Macedonia	1.2	3.0	5.7	5.2	-1.6	3.0	2.8	4.8	1.4	-0.6	-0.3
Ghana	14.8	11.7	12.7	18.1	16.0	8.6	8.6	8.8	15.3	17.0	17.7
Gibraltar	..	..	..	..	..	..	3.7	2.7	2.1	1.8	..
Guyana	8.3	3.6	14.6	6.4	2.0	4.5	3.2	3.5	0.9	1.2	-1.8
Hong Kong, China	1.2	2.3	3.8	2.0	1.6	2.8	5.7	3.7	4.3	4.9	2.3
India	5.6	6.9	5.5	9.7	15.0	9.5	6.5	11.2	10.3	4.3	5.6
Indonesia	17.1	6.6	5.8	11.1	2.8	7.0	3.8	4.0	8.1	8.4	3.4
Kenya	7.6	15.6	12.0	26.8	5.3	4.5	18.9	3.2	7.2	6.0	8.0
Kosovo	0.7	1.1	10.5	0.5	0.1	6.6	3.6	3.7	0.5	-0.4	-0.2
Liechtenstein	..	..	..	..	..	..	..	..	..	..	..
Lithuania	3.0	4.4	8.1	8.5	1.2	3.9	3.3	2.8	0.4	-0.3	-0.1
Malawi	16.5	10.1	7.5	9.9	7.6	6.3	9.8	34.6	20.0	24.1	24.9
Maldives	..	3.1	10.3	9.1	4.0	5.1	23.0	3.5	3.3	0.5	0.9
Malta	3.6	0.8	3.3	4.9	-0.6	3.2	2.1	2.8	1.0	0.2	1.0
Mauritius	3.9	11.9	8.7	6.7	1.5	6.1	4.8	3.2	4.0	0.2	1.3
Namibia	3.6	6.0	5.5	11.2	7.9	3.1	7.4	6.4	4.9	4.6	3.7
Nigeria	11.6	8.6	6.6	15.1	12.9	11.7	10.3	12.0	7.9	7.9	9.6
Pakistan	8.5	8.9	8.8	23.3	10.5	15.2	9.7	7.9	9.2	4.3	3.2
Panama	3.8	1.8	6.4	6.8	1.9	4.9	6.3	4.6	3.7	1.0	0.3
Peru	1.5	1.1	4.0	6.6	0.2	2.1	4.7	2.6	2.9	3.2	4.4
Romania	8.6	4.9	6.6	6.3	4.7	8.0	3.1	4.9	1.6	0.8	-0.9
Russia	10.9	9.0	11.9	13.3	8.8	8.8	6.1	6.5	6.5	11.4	12.9
Serbia	17.1	6.0	11.2	8.6	6.6	10.2	7.0	12.2	2.2	1.8	1.6
South Africa	3.6	5.8	9.0	10.1	6.3	3.5	6.1	5.7	5.4	5.3	5.2
Thailand	5.8	3.5	3.2	0.4	3.5	3.1	3.5	3.6	1.7	0.6	-0.9
Trinidad and Tobago	7.2	9.1	7.6	14.5	1.3	13.4	5.3	7.2	5.6	8.5	1.5
Ukraine	10.3	11.6	16.6	22.3	12.3	9.1	4.5	-0.2	0.5	25.0	43.3
Uruguay	4.9	6.4	8.5	9.0	6.1	6.9	8.6	7.5	8.5	8.3	9.4
Zambia	15.9	8.2	8.9	16.6	9.9	6.8	5.9	7.3	7.1	7.9	21.1

Source: OECD Main Economic Indicators database; IMF International Financial Statistics database; Statistics Office of Gibraltar, Abstract of Statistics 2014; Bank of Guyana.

Table A.7. Number of pension funds in selected OECD and non-OECD countries, 2005-2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Selected OECD countries											
Australia	306,553	324,789	363,687	389,813	406,781	417,272	446,983	479,443	506,696	528,990	559,547
Austria	20	21	20	19	19	17	17	17	16	14	13
Belgium	..	258	258	251	232	172	224	217	201	..	196
Canada (1)	4,426	5,036	6,114	7,192	7,531	7,870	8,373	8,875	8,876	8,876	8,876
Chile (2)	30	30	30	25	25	30	30	30	30	30	30
Czech Republic (3)	..	..	..	..	..	..	..	..	68	60	55
Denmark	50	47	39	40	39	33	32	29	25	21	20
Estonia (4)	15	15	15	19	22	23	23	23	23	20	20
Germany	178	175	178	180	182	183	179	177	178	172	171
Greece (5)	..	..	3	3	3	8	6	6	11	11	..
Hungary	90	88	87	86	82	78	70	63	57	51	48
Iceland	46	41	38	37	37	33	33	32	27	27	26
Ireland (6)	84,146	93,307	99,927	91,775	84,151	76,196	66,763	61,125	62,013	62,087	67,840
Israel	30	32	32	34	33	32	33	33	32	32	29
Italy	454	433	418	396	371	353	343	332	310	299	283
Korea	138	..	..	..	..	..	..	..	..	..	..
Latvia (7)	13	15	16	19	19	21	21	19	19	18	15
Luxembourg (8)	16	18	17	18	19	19	19	18	18	19	17
Mexico (9)	32	42	42	95	80	75	70	52	48	44	55
Netherlands (10)	802	769	714	531	484	455	393	385	379	365	320
Norway	119	122	109	108	105	100	95	85	84	85	87
Poland	..	20	20	19	..	19	19	28	28	26	25
Portugal	223	227	224	230	236	237	229	228	224	224	217
Slovak Republic (11)	24	39	33	33	33	34	32	39	37	35	37
Slovenia (12)	7	7	7	7	7	7	7	7	7	10	9
Spain	1,255	1,340	1,353	1,374	1,420	1,504	1,570	1,681	1,761	1,777	1,688
Switzerland	2,770	2,667	2,543	2,435	2,351	2,265	2,191	2,073	1,957	1,866	..
Turkey (13)	91	96	102	120	128	133	153	173	206	215	223
United Kingdom (14)	91,674	84,389	78,932	63,523	62,304	55,591	52,250	47,680	46,620	45,330	43,690
United States (15)	679,095	694,550	707,787	717,532	706,667	701,012	683,647	676,622	681,154	685,203	..
Selected non-OECD countries											
Albania	..	..	3	3	3	3	3	3	3	3	3
Armenia (16)	..	..	..	..	..	..	..	..	..	6	6
Botswana	..	..	..	..	..	..	..	..	5	..	..
Brazil	..	..	..	371	369	368	..	..	321	317	..
Bulgaria	24	24	27	31	31	28	28	28	28	28	28
Colombia (17)	..	6	6	6	6	6	6	5	4	4	4
Costa Rica	..	..	..	..	..	..	..	..	..	..	14
Croatia	..	..	..	..	..	..	..	..	..	12	12
Dominican Republic	..	..	..	..	..	..	..	..	..	7	..
Egypt	..	..	..	593	..	..	..	..	..	..	..
FYR of Macedonia	..	..	2	2	4	4	4	4	4	4	4
Ghana	..	..	..	..	..	..	..	..	..	..	42
Gibraltar	..	..	..	..	..	..	2	2	2	2	..
Guyana (18)	..	..	..	..	..	..	..	..	..	..	96
Hong Kong, China (19)	46	40	38	38	38	41	41	41	41	38	38
Indonesia	312	297	288	..	..	..	271	..	..	..	255
Jamaica	..	530	..	..	..	720	..	..	..	..	..
Kenya	..	..	..	1,330	..	..	..	..	..	..	..
Lesotho	..	..	..	..	..	..	102	102	..	..	..
Liechtenstein	41	40	36	34	33	33	29	29	24	24	23
Lithuania	..	..	..	..	..	38	39	39	38	38	33
Malawi	..	..	..	..	..	..	..	..	..	..	2,020
Malaysia (20)	..	..	..	..	..	..	..	..	..	..	50
Maldives (21)	..	..	..	..	..	..	1	1	1	..	1
Namibia (22)	..	..	..	..	..	..	..	..	..	..	245
Nigeria (23)	..	..	31	33	33	31	31	27	27	28	28
Pakistan	..	..	6	7	7	9	11	11	13	..	..
Peru	15	12	12	12	12	12	12	12	12	12	12
Romania	..	..	..	23	25	22	20	20	18	18	17
Russia	..	..	..	..	..	..	..	..	..	..	103
Serbia	..	..	7	..	10	8	9	8	6	6	4
South Africa	13,390	..	..	..	..	..	..	..	..	..	..
Suriname	30	30	..	..	..	..	..	..	..	..	..
Thailand	..	..	513	511	503	469	453	441	426	418	412
Ukraine	..	..	..	110	..	101	96	..	..	..	..
Zambia	..	..	..	..	..	..	..	..	..	238	239

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

Table A.8. Share of pension fund portfolio in equities in selected OECD and non-OECD countries, 2005-2015

As a percentage of total investment

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Selected OECD countries											
Australia (1)	48.7	50.6	51.6	50.4	47.1	49.0	50.6	47.1	49.1	50.3	50.6
Austria	37.0	36.1	35.1	21.2	26.1	31.6	26.0	29.6	34.4	32.6	30.1
Belgium	36.3	41.5	42.4	32.8	34.5	37.7	34.8	37.3	39.0	42.3	41.8
Canada	39.7	39.6	36.6	31.8	33.9	33.8	30.9	31.2	31.7	30.1	28.3
Chile (2)	40.0	44.7	45.8	36.6	41.5	48.2	40.4	41.6	42.1	40.3	39.6
Czech Republic	6.1	6.8	6.1	3.1	1.7	0.9	0.4	0.2	0.3	0.2	0.3
Denmark	29.2	33.5	34.8	12.3	15.6	15.5	12.8	13.3	15.3	15.9	17.8
Estonia	37.4	39.4	39.6	29.6	32.0	38.6	32.6	33.7	33.8	34.5	31.0
Finland	..	..	..	..	..	..	31.8	34.5	38.2	38.8	38.8
Germany	12.0	14.9	11.9	5.6	5.8	4.7	3.2	3.6	4.4	4.5	5.0
Greece	..	..	5.4	5.2	15.4	3.3	0.5	2.8	4.3	5.3	..
Hungary	8.6	10.8	16.6	15.7	14.8	13.4	8.9	7.5	6.2	6.8	8.5
Iceland	35.2	40.1	35.0	18.0	21.7	18.5	18.6	21.8	27.1	31.6	35.2
Israel	4.2	5.2	6.4	3.0	5.3	6.1	5.0	5.7	6.3	6.8	7.6
Italy (3)	15.7	16.4	14.6	12.7	14.4	15.3	15.3	17.0	19.2	19.7	19.5
Japan (4)	24.4	21.1	17.9	12.9	14.0	13.4	10.9	11.4	12.7	10.7	10.8
Korea	..	..	..	..	..	..	0.0	0.0	0.0	0.0	0.0
Latvia	..	..	..	..	..	..	..	..	..	25.1	21.1
Luxembourg	..	..	..	..	..	14.3	13.4	17.4	21.5	22.5	22.1
Mexico	11.2	13.8	13.1	13.0	16.2	17.0	17.6	20.9	23.6	23.3	21.5
Netherlands	46.2	46.9	40.3	33.4	32.1	35.5	34.6	34.0	37.0	38.8	38.2
Norway	28.9	32.8	32.5	22.4	30.9	34.2	29.0	32.3	35.5	36.0	35.4
Poland (5)	32.0	34.1	34.8	21.6	30.2	36.3	30.7	34.8	41.4	81.9	82.3
Portugal	26.6	38.1	33.3	18.0	22.1	21.7	20.0	17.1	20.2	18.8	20.0
Slovak Republic	..	8.6	9.1	2.8	0.2	1.4	1.3	0.2	1.3	1.7	1.8
Slovenia	3.2	4.8	7.9	5.2	3.1	2.2	1.5	1.4	1.2	1.6	1.2
Spain	21.4	22.0	19.0	9.7	11.9	12.1	9.9	10.0	10.4	10.7	11.4
Sweden (6)	34.4	33.7	32.6	16.4	17.1	18.3	11.4	12.8	15.4	18.0	18.3
Switzerland	24.6	25.1	23.3	21.5	26.6	27.6	26.0	27.8	29.2	29.5	29.8
Turkey (7)	11.1	8.7	11.6	8.0	9.6	12.0	..	16.0	14.0	13.5	14.2
United Kingdom	47.7	44.6	36.9	31.6	32.7	30.9	24.5	24.1	22.8	21.3	20.2
United States	54.5	49.6	49.4	39.0	43.1	44.7	42.2	43.5	46.2	46.1	44.2
Selected non-OECD countries											
Albania	..	..	..	..	..	..	0.0	0.0	0.0	0.0	0.0
Armenia	..	..	..	..	..	..	..	..	..	11.5	30.3
Botswana	..	..	..	..	..	..	..	..	51.0	..	..
Brazil	..	34.0	47.4	27.2	31.9	32.6	29.8	..	27.9	25.6	17.5
Bulgaria	6.4	16.7	23.8	11.0	12.7	16.8	12.7	11.9	14.3	18.7	18.6
Colombia	..	..	22.8	24.0	40.3	43.4	33.1	35.1	31.5	27.6	25.4
Costa Rica	..	..	0.3	0.0	0.0	0.0	0.0	0.0	0.3	1.8	3.7
Croatia	..	..	..	..	..	..	..	..	..	22.7	23.7
Dominican Republic	..	..	..	..	..	..	..	..	..	0.0	..
Egypt	..	..	..	2.1	..	..	..	..	..	..	..
FYR of Macedonia	..	..	21.6	9.2	6.3	9.7	18.8	18.9	25.2	29.2	30.4
Ghana	..	..	..	..	..	..	..	..	..	2.2	1.2
Gibraltar	..	..	..	..	..	..	51.6	33.9	42.9	37.2	..
Guyana	..	..	..	..	..	..	..	..	..	..	23.3
Hong Kong, China (8)	..	..	53.8	45.5	50.7	55.2	55.0	57.4	60.5	61.1	60.6
India	..	..	..	..	..	..	0.0	7.2	..	..	..
Indonesia	..	..	..	..	..	..	17.4	..	..	..	14.7
Jamaica	..	..	20.9	14.3	12.7	14.0	16.0	14.7	15.4	15.7	24.0
Kenya	..	..	..	32.7	20.8	21.2	23.5	24.3	26.0	26.6	..
Kosovo	..	..	..	..	..	..	..	..	..	92.5	88.1
Liechtenstein	..	..	22.2	16.6	19.1	26.0	24.9	24.9	26.3	29.4	29.6
Lithuania	..	..	..	..	..	38.9	30.0	34.8	36.3	38.9	38.2
Malawi	..	..	..	..	..	..	..	..	..	49.8	38.8
Malaysia	..	..	..	..	..	..	..	..	..	..	48.1
Maldives	..	..	..	..	..	..	12.2	6.0	3.9	..	5.1
Malta	..	..	..	..	..	..	..	..	13.1	13.8	13.1
Mauritius	..	..	..	..	..	..	..	..	..	..	57.8
Namibia	..	..	..	..	..	65.5	59.5	56.5	70.4	68.9	..
Nigeria	..	..	30.0	20.4	14.8	19.0	14.5	12.9	16.0	13.1	11.1
Pakistan	..	..	30.4	14.3	29.1	30.7	28.7	32.2	37.3	44.3	..
Papua New Guinea	..	..	..	..	..	..	..	..	48.7	..	..
Peru	43.0	43.9	49.8	30.9	46.0	46.7	43.6	43.4	42.7	44.7	39.6
Romania	..	..	..	2.0	9.2	12.4	11.9	12.4	16.5	20.4	22.1
Russia	..	..	..	..	..	..	..	..	8.7	8.7	9.9
Serbia	..	..	..	..	7.2	11.4	5.4	2.9	2.8	3.9	4.1
South Africa (9)	29.6	25.3	26.8	17.8	23.3	25.4	24.3	23.0	25.0	25.2	..
Suriname	11.0	13.0	..	..	..	..	..	..	..	..	..
Thailand	..	..	11.8	7.6	10.5	13.8	11.8	15.0	14.2	16.7	16.3
Trinidad and Tobago	..	48.1	43.9	..	26.1	..	28.8	34.3	..	..	..
Ukraine	..	..	..	9.0	..	18.1	18.4	..	..	..	..
Zambia	..	..	..	..	..	..	..	..	..	23.2	24.2

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

Table A.9. Share of pension fund portfolio in bills and bonds in selected OECD and non-OECD countries, 2005-2015

As a percentage of total investment

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Selected OECD countries											
Australia (1)	9.3	8.9	8.0	8.4	8.7	8.9	7.3	8.2	8.5	8.7	9.1
Austria	53.2	50.8	44.4	48.9	53.3	48.9	52.0	52.2	48.1	47.8	46.4
Belgium	25.2	28.9	38.2	42.3	40.8	42.8	46.0	45.9	42.0	45.0	43.9
Canada	33.4	32.3	34.1	37.4	35.2	35.5	38.8	37.1	34.6	35.6	34.8
Chile (2)	53.4	50.2	49.4	58.7	47.5	48.8	57.7	56.7	56.7	58.7	59.2
Czech Republic	81.5	82.0	78.8	81.5	83.1	87.7	86.7	85.4	86.5	89.1	88.6
Denmark	56.5	57.7	57.5	57.9	72.7	70.0	66.6	67.7	66.4	60.2	63.1
Estonia	54.6	53.6	47.1	55.0	51.9	47.8	50.2	49.6	48.6	48.4	48.5
Finland	..	..	..	..	..	..	31.7	31.2	31.1	31.0	32.0
Germany	45.7	47.4	42.9	47.1	48.2	46.3	48.7	51.4	51.5	53.4	53.5
Greece	..	..	37.2	63.2	52.2	53.3	57.2	42.4	54.1	71.5	..
Hungary	83.0	80.1	79.5	79.7	78.2	79.5	85.5	84.2	83.1	83.4	81.6
Iceland	44.7	42.0	43.5	48.9	50.0	54.9	55.3	53.5	51.2	49.2	47.4
Israel	89.1	85.3	82.3	85.5	80.2	77.7	80.4	78.7	73.7	71.7	70.4
Italy (3)	40.8	40.0	40.6	43.3	45.6	46.1	47.5	48.0	47.9	48.7	49.7
Japan (4)	28.6	29.5	29.8	38.6	37.1	37.5	39.2	37.1	35.0	33.8	32.8
Korea	..	..	..	..	..	..	5.3	1.7	9.0	9.4	9.2
Latvia	..	..	..	..	..	..	..	..	..	59.3	59.5
Luxembourg	..	..	..	..	..	66.5	69.5	69.2	68.7	66.5	71.0
Mexico	87.2	84.3	82.5	81.2	82.7	81.6	81.6	78.0	75.1	75.8	77.4
Netherlands	40.8	39.8	35.0	41.9	43.2	41.9	44.4	43.6	43.4	42.5	46.5
Norway	55.4	53.3	55.2	65.7	58.9	56.8	62.3	59.0	57.2	56.7	56.5
Poland (5)	63.4	62.4	61.3	75.3	66.5	59.4	62.4	55.8	51.7	9.5	10.4
Portugal	50.7	44.0	48.1	51.5	56.0	49.3	43.3	44.2	44.0	44.3	50.3
Slovak Republic	..	44.3	50.3	67.9	68.9	70.8	69.7	74.3	74.8	78.2	78.4
Slovenia	82.6	69.9	73.4	66.5	69.8	66.9	61.2	68.5	78.1	65.9	75.6
Spain	63.6	71.3	65.1	55.2	60.0	57.6	62.0	61.6	63.3	64.0	62.4
Sweden (6)	57.7	60.0	57.0	69.5	73.7	71.5	75.9	79.3	75.2	68.9	66.7
Switzerland	37.2	37.0	36.2	40.8	37.8	36.5	37.3	35.2	33.6	34.1	32.9
Turkey (7)	81.1	73.1	65.2	70.1	70.0	58.6	..	58.1	69.0	63.3	58.4
United Kingdom	22.7	23.6	27.3	29.7	29.9	28.5	29.6	30.7	31.0	32.4	34.4
United States	31.6	31.7	31.4	40.0	35.8	35.1	36.9	36.5	35.2	35.4	37.0
Selected non-OECD countries											
Albania	..	..	..	..	..	..	96.8	97.1	96.7	92.0	90.6
Armenia	..	..	..	..	..	..	..	..	..	35.2	46.6
Botswana	..	..	..	..	..	..	..	..	34.5	..	..
Brazil	..	55.3	41.0	58.2	54.5	52.8	53.5	..	53.2	54.9	61.5
Bulgaria	70.9	54.7	50.4	58.0	50.6	49.9	56.1	62.5	60.4	64.9	64.8
Colombia	..	..	65.2	65.9	55.1	50.0	51.3	52.2	52.6	48.5	46.8
Costa Rica	..	..	86.3	86.2	94.1	95.7	100.0	100.0	99.7	98.2	91.2
Croatia	..	..	..	..	..	..	..	..	..	72.5	73.2
Dominican Republic	..	..	..	..	..	..	..	..	..	78.2	..
Egypt	..	..	..	68.1	..	..	..	..	..	..	..
FYR of Macedonia	..	..	59.9	47.9	57.4	58.4	62.0	66.0	62.0	58.5	60.3
Ghana	..	..	..	..	..	..	..	..	..	95.1	85.9
Gibraltar	..	..	..	..	..	..	28.4	21.4	28.8	45.1	..
Guyana	..	..	..	..	..	..	..	..	..	..	20.5
Hong Kong, China (8)	..	..	26.1	28.9	27.2	26.5	25.6	24.8	22.7	21.7	22.4
India	..	..	..	..	..	..	37.0	34.7	..	..	..
Indonesia	..	..	..	..	..	..	49.7	..	..	..	43.1
Jamaica	..	..	54.9	70.8	56.3	73.8	69.1	71.6	70.4	71.3	63.2
Kenya	..	..	..	35.6	27.3	26.2	35.3	39.5	38.1	32.5	..
Kosovo	..	..	..	..	..	..	..	..	..	6.3	7.3
Liechtenstein	..	..	39.3	39.2	37.0	42.1	45.3	45.3	43.7	43.0	45.7
Lithuania	..	..	..	..	..	53.6	61.9	59.4	58.4	53.3	51.0
Malawi	..	..	..	..	..	..	..	..	..	23.7	25.2
Malaysia	..	..	..	..	..	..	..	..	..	..	26.7
Maldives	..	..	..	..	..	..	66.8	79.8	86.1	..	94.6
Malta	..	..	..	..	..	..	..	..	32.1	26.4	20.1
Mauritius	..	..	..	..	..	..	..	..	..	..	24.7
Namibia	..	..	..	..	..	21.9	24.6	22.0	21.6	20.9	..
Nigeria	..	..	34.5	33.6	40.1	47.2	63.7	64.1	66.4	69.7	73.3
Pakistan	..	..	24.1	35.4	41.9	49.7	58.8	52.8	39.5	44.0	..
Papua New Guinea	..	..	..	..	..	..	..	..	23.6	..	..
Peru	50.1	50.0	46.7	58.0	47.2	42.9	47.3	48.2	39.5	43.8	43.2
Romania	..	..	..	84.8	83.0	80.3	76.1	82.3	74.8	75.6	73.1
Russia	..	..	..	..	..	..	..	..	62.0	64.0	65.7
Serbia	..	..	..	..	71.8	65.9	75.7	70.7	85.1	86.8	82.8
South Africa (9)	2.5	9.3	8.0	8.8	8.6	8.7	8.8	9.5	9.5	10.6	..
Suriname	34.0	37.0									
Thailand	..	..	78.0	79.2	78.6	74.8	75.1	63.1	57.2	52.1	57.8
Trinidad and Tobago	..	23.6	21.7	..	49.7	..	48.6	45.9	..	..	..
Ukraine	..	..	..	27.3	..	30.7	40.1	..	..	..	..
Zambia	..	..	..	..	..	..	..	..	..	41.1	23.6

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

Table A.10. Share of pension fund portfolio in cash and deposits in selected OECD and non-OECD countries, 2005-2015

As a percentage of total investment

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Selected OECD countries											
Australia (1)	9.8	10.0	12.2	12.7	15.8	14.3	15.4	3.8	4.0	3.9	4.3
Austria	3.5	4.2	10.5	15.1	9.5	8.3	11.7	9.2	12.8	8.3	9.0
Belgium	9.7	10.9	4.7	8.5	6.2	6.5	5.2	4.9	3.9	3.9	4.4
Canada	4.6	3.3	3.8	3.8	3.9	3.3	3.4	3.5	3.5	3.8	4.1
Chile (2)	0.4	0.3	0.4	0.9	0.6	0.3	0.3	0.5	0.3	0.3	0.6
Czech Republic	8.3	6.6	10.0	8.3	10.5	7.0	8.1	9.9	10.6	8.4	9.2
Denmark	0.8	0.5	0.4	0.7	0.5	0.5	0.4	0.5	0.5	0.3	0.3
Estonia	6.0	6.0	12.7	14.1	15.3	9.4	16.4	16.4	17.4	17.0	20.2
Finland	..	..	..	..	..	..	7.1	5.5	4.0	3.6	3.7
Germany	3.8	3.8	3.8	4.7	2.9	2.5	3.6	3.0	3.7	3.5	3.8
Greece	..	..	51.9	27.5	28.8	40.9	40.4	53.0	35.6	17.4	..
Hungary	1.5	2.9	1.4	3.9	3.4	2.4	5.5	4.9	8.0	7.5	6.6
Iceland	3.0	1.3	3.4	10.7	9.1	8.2	7.6	7.4	6.6	5.1	5.6
Israel	1.4	4.6	4.1	3.7	6.9	7.2	4.8	5.6	5.0	5.3	6.3
Italy (3)	4.7	6.7	7.4	7.5	5.7	5.1	4.4	4.2	3.6	3.2	4.1
Japan (4)	5.1	5.7	6.9	7.2	6.2	5.4	6.4	6.2	6.4	6.4	7.2
Korea	..	..	..	..	..	..	59.0	61.4	56.5	53.8	52.6
Latvia	..	..	..	..	..	..	..	..	..	13.6	17.1
Luxembourg	..	..	..	..	..	9.4	4.8	4.7	5.0	3.6	1.7
Mexico	0.0	0.0	0.0	0.0	1.0	0.5	0.3	0.6	0.9	0.8	1.0
Netherlands	2.3	4.3	3.9	4.0	2.2	2.4	2.0	3.0	2.7	2.7	2.8
Norway	4.9	4.6	3.2	4.4	3.9	2.5	2.7	2.7	2.3	2.7	2.4
Poland (5)	4.1	2.9	3.4	2.5	2.3	3.5	5.7	8.3	6.0	7.2	6.9
Portugal	12.5	6.1	6.6	13.4	5.8	10.8	9.6	13.6	12.0	16.8	11.0
Slovak Republic	..	43.1	35.0	25.0	29.4	27.5	28.8	24.6	23.1	19.2	17.4
Slovenia	14.1	17.7	17.6	24.0	21.5	26.8	31.6	26.5	17.2	32.3	23.1
Spain	5.0	6.0	6.1	24.2	17.5	19.3	16.0	16.2	15.0	14.8	16.7
Sweden (6)	1.4	2.0	2.0	3.6	2.6	3.4	3.2	3.2	3.6	4.5	2.2
Switzerland	11.5	11.0	12.0	8.7	8.1	7.0	7.4	7.7	8.1	7.3	5.3
Turkey (7)	0.0	0.0	5.3	6.3	5.4	13.0	..	8.9	16.5	18.3	19.6
United Kingdom	2.6	3.0	3.7	3.3	4.3	3.7	3.4	3.3	3.5	3.1	2.4
United States	1.3	0.9	1.0	1.1	1.0	1.0	1.1	0.9	0.9	0.9	1.0
Selected non-OECD countries											
Albania	..	..	..	..	..	..	2.9	2.4	1.9	6.3	7.4
Armenia	..	..	..	..	..	..	..	..	..	52.3	22.8
Botswana	..	..	..	..	..	..	..	..	13.2	..	..
Brazil	..	0.1	0.2	0.0	0.0	0.0	0.1	..	0.1	0.1	7.9
Bulgaria	19.3	25.6	19.4	25.3	31.6	27.5	24.9	21.1	21.3	12.1	12.1
Colombia	..	..	1.8	1.3	2.0	3.2	1.8	2.3	2.8	3.1	3.9
Costa Rica	..	..	0.0	11.5	3.2	4.3	0.0	0.0	0.0	0.0	3.8
Croatia	..	..	..	..	..	..	..	..	..	4.4	2.8
Dominican Republic	..	..	..	..	..	..	..	..	..	0.0	..
Egypt	..	..	..	26.8	..	..	..	..	..	..	..
FYR of Macedonia	..	..	18.5	42.4	35.9	31.9	19.1	14.1	12.6	11.3	7.4
Ghana	..	..	..	..	..	..	..	..	..	0.0	0.0
Gibraltar	..	..	..	..	..	..	5.3	29.0	6.2	7.3	..
Guyana	..	..	..	..	..	..	..	..	..	..	28.7
Hong Kong, China (8)	..	..	12.4	14.7	14.3	11.0	13.3	13.3	12.9	13.1	12.6
India	..	..	..	..	..	..	5.7	3.1	..	..	..
Indonesia	..	..	..	..	..	..	25.5	..	..	..	32.7
Jamaica	..	..	0.3	2.4	2.2	0.9	0.8	1.4	2.0	1.6	1.6
Kenya	..	..	..	6.9	7.8	4.2	5.3	7.3	6.2	5.5	..
Kosovo	..	..	..	..	..	..	..	..	..	1.1	4.6
Liechtenstein	..	..	4.2	6.4	9.2	8.6	7.0	7.0	7.6	6.3	4.7
Lithuania	..	..	..	..	..	4.7	6.5	3.9	3.2	6.4	9.3
Malawi	..	..	..	..	..	..	..	..	..	11.7	13.6
Malaysia	..	..	..	..	..	..	..	..	..	..	2.8
Maldives	..	..	..	..	..	..	20.9	14.2	9.9	..	0.4
Malta	..	..	..	..	..	..	..	..	23.2	19.3	19.0
Mauritius	..	..	..	..	..	..	..	..	..	..	13.9
Namibia	..	..	..	..	..	6.8	7.4	12.0	5.4	6.7	..
Nigeria	..	..	22.9	32.1	34.1	24.7	12.9	15.7	11.7	11.7	10.7
Pakistan	..	..	40.8	47.1	27.0	17.6	10.6	14.1	19.2	8.7	..
Papua New Guinea	..	..	..	..	..	..	..	..	11.2	..	..
Peru	6.7	5.0	2.5	8.4	3.3	6.9	5.0	4.1	13.1	6.9	11.7
Romania	..	..	..	13.2	7.8	7.3	12.0	4.9	8.6	4.0	4.8
Russia	..	..	..	..	..	..	..	..	25.1	22.2	20.1
Serbia	..	..	..	..	19.9	21.5	18.2	20.2	11.7	8.8	12.8
South Africa (9)	5.8	5.4	7.1	8.4	7.0	7.3	6.5	5.8	4.4	4.2	..
Suriname	15.0	18.0	..	..	..	..	..	..	..	..	..
Thailand	..	..	9.7	13.0	10.6	10.6	12.6	21.3	27.8	30.3	25.3
Trinidad and Tobago	..	8.8	11.2	..	8.6	..	6.2	6.6	..	..	..
Ukraine	..	..	..	56.3	..	34.7	32.2	..	..	..	..
Zambia	..	..	..	..	..	..	..	..	..	11.7	8.7

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

Table A.11. Share of pension fund portfolio in the "other" category in selected OECD and non-OECD countries, 2005-2015

As a percentage of total investment

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Selected OECD countries											
Australia (1)	32.2	30.6	28.2	28.4	28.4	27.8	26.7	40.9	38.4	37.1	36.1
Austria	6.3	8.9	10.0	14.8	11.1	11.2	10.4	8.9	4.7	11.3	14.4
Belgium	28.8	18.7	14.7	16.4	18.4	13.0	14.1	11.9	15.1	8.8	9.9
Canada	22.4	24.8	25.6	26.9	27.0	27.3	26.9	28.1	30.1	30.4	32.8
Chile (2)	6.3	4.8	4.4	3.8	10.4	2.8	1.5	1.3	0.9	0.7	0.5
Czech Republic	4.1	4.5	5.0	7.1	4.7	4.4	4.9	4.4	2.6	2.3	2.0
Denmark	13.5	8.2	7.4	29.1	11.1	14.0	20.1	18.6	17.8	23.7	18.7
Estonia	2.0	1.1	0.6	1.3	0.8	4.1	0.8	0.3	0.1	0.1	0.3
Finland	..	..	..	..	..	..	29.4	28.8	26.7	26.6	25.6
Germany	38.5	33.8	41.4	42.6	43.2	46.5	44.6	42.0	40.4	38.5	37.8
Greece	..	..	5.4	4.2	3.5	2.4	1.9	1.8	5.9	5.8	..
Hungary	6.9	6.3	2.5	0.7	3.6	4.7	0.0	3.5	2.6	2.3	3.3
Iceland	17.1	16.6	18.1	22.4	19.2	18.4	18.6	17.3	15.1	14.1	11.8
Israel	5.2	4.9	7.2	7.8	7.5	9.0	9.8	10.1	15.0	16.2	15.7
Italy (3)	38.9	36.8	37.4	36.5	34.4	33.5	32.8	30.8	29.3	28.4	26.7
Japan (4)	41.9	43.7	45.3	41.3	42.8	43.6	43.4	45.3	46.0	49.0	49.1
Korea	..	..	..	..	..	..	35.6	36.9	34.6	36.8	38.3
Latvia	..	..	..	..	..	..	..	..	..	2.0	2.2
Luxembourg	..	..	..	..	..	9.7	12.4	8.7	4.8	7.5	5.3
Mexico	1.6	1.8	4.4	5.8	0.0	0.9	0.6	0.4	0.3	0.1	0.1
Netherlands	10.7	9.0	20.8	20.6	22.6	20.2	19.0	19.4	16.9	15.9	12.5
Norway	10.9	9.2	9.1	7.6	6.4	6.5	6.0	6.1	4.9	4.6	5.7
Poland (5)	0.4	0.6	0.5	0.7	0.9	0.9	1.2	1.1	0.9	1.4	0.5
Portugal	10.2	11.7	12.0	17.0	16.1	18.2	27.1	25.0	23.7	20.1	18.8
Slovak Republic	..	4.0	5.7	4.3	1.5	0.3	0.2	0.9	0.8	0.9	2.4
Slovenia	0.1	7.6	1.1	4.2	5.6	4.0	5.6	3.7	3.5	0.1	0.1
Spain	10.0	0.7	9.7	10.9	10.6	11.0	12.0	12.2	11.3	10.5	9.4
Sweden (6)	6.5	4.2	8.3	10.5	6.5	6.8	9.5	4.6	5.8	8.7	12.8
Switzerland	26.7	26.9	28.5	28.9	27.5	28.8	29.3	29.3	29.1	29.1	32.0
Turkey (7)	7.8	18.3	18.0	15.6	15.0	16.4	..	17.1	0.5	4.9	7.9
United Kingdom	27.0	28.8	32.2	35.4	33.2	37.0	42.5	41.9	42.7	43.2	43.0
United States	12.7	17.7	18.2	20.0	20.1	19.2	19.8	19.0	17.7	17.6	17.9
Selected non-OECD countries											
Albania	..	..	..	..	..	..	0.3	0.5	1.4	1.7	2.0
Armenia	..	..	..	..	..	..	..	..	..	1.1	0.3
Botswana	..	..	..	..	..	..	..	..	1.4	..	..
Brazil	..	10.6	11.4	14.5	13.5	14.6	16.5	..	18.8	19.4	13.1
Bulgaria	3.4	3.1	6.4	5.7	5.1	5.8	6.4	4.4	4.0	4.3	4.5
Colombia	..	..	10.1	8.8	2.6	3.4	13.8	10.3	13.0	20.8	23.9
Costa Rica	..	..	13.4	2.2	2.7	0.0	0.0	0.0	0.0	0.0	1.3
Croatia	..	..	..	..	..	..	..	..	..	0.4	0.4
Dominican Republic	..	..	..	..	..	..	..	..	..	21.8	..
Egypt	..	..	..	3.0	..	..	..	..	..	..	..
FYR of Macedonia	..	..	0.0	0.5	0.4	0.0	0.1	1.0	0.2	1.1	1.8
Ghana	..	..	..	..	..	..	..	..	..	2.7	12.9
Gibraltar	..	..	..	..	..	..	14.7	15.7	22.1	10.5	..
Guyana	..	..	..	..	..	..	..	..	..	..	27.5
Hong Kong, China (8)	..	..	7.7	10.9	7.7	7.3	6.0	4.5	4.0	4.1	4.4
India	..	..	..	..	..	..	57.3	55.0	..	..	..
Indonesia	..	..	..	..	..	..	..	7.4	..	..	9.4
Jamaica	..	..	23.9	12.5	28.8	11.4	14.1	12.4	12.3	11.5	11.2
Kenya	..	..	..	24.8	44.1	48.4	35.9	28.8	29.7	35.3	..
Kosovo	..	..	..	..	..	..	..	..	..	0.0	0.0
Liechtenstein	..	..	34.2	37.8	34.8	23.2	22.9	22.9	22.4	21.4	20.0
Lithuania	..	..	..	..	..	2.8	1.6	2.0	2.1	1.5	1.6
Malawi	..	..	..	..	..	..	..	..	..	14.8	22.4
Malaysia	..	..	..	..	..	..	..	..	..	..	22.4
Maldives	..	..	..	..	..	..	0.0	0.0	0.0	..	0.0
Malta	..	..	..	..	..	..	..	..	31.6	40.5	47.8
Mauritius	..	..	..	..	..	..	..	..	..	..	3.6
Namibia	..	..	..	..	..	5.9	8.4	9.4	2.6	3.6	..
Nigeria	..	..	12.5	13.9	11.0	9.2	9.0	7.4	5.9	5.4	4.8
Pakistan	..	..	4.7	3.2	2.0	2.0	1.9	0.8	3.9	3.0	..
Papua New Guinea	..	..	..	..	..	..	..	..	16.5	..	..
Peru	0.3	1.1	1.0	2.8	3.6	3.5	4.1	4.2	4.8	4.6	5.5
Romania	..	..	..	0.0	0.0	0.0	0.1	0.3	0.1	0.0	0.0
Russia	..	..	..	..	..	..	..	..	4.2	5.1	4.3
Serbia	..	..	..	..	1.1	1.2	0.7	6.1	0.4	0.4	0.3
South Africa (9)	62.1	59.9	58.0	65.0	61.2	58.6	60.5	61.7	61.1	60.0	..
Suriname	40.0	32.0	..	..	..	..	..	..	..	..	..
Thailand	..	..	0.6	0.1	0.3	0.8	0.6	0.6	0.7	0.9	0.6
Trinidad and Tobago	..	19.4	23.3	..	15.7	..	16.4	13.2	..	..	..
Ukraine	..	..	..	7.4	..	16.6	9.4	..	..	..	..
Zambia	..	..	..	..	..	..	..	..	..	24.0	43.6

Note: Please see the section on methodological notes at the end of the report.

Source: OECD Global Pension Statistics.

Methodological notes

The primary source material for this report is provided by national pension authorities as part of the OECD Global Pension Statistics' framework (GPS). Within this project, the data are sourced from official national administrative sources and revised on an on-going basis so as to better reflect the most recent figures for every past year. Given possible divergences in national reporting standards and different methods for compiling certain data for the Global Pension Statistics exercise, cautioun should be exercised when interpreting some statistics. For this reason, countries are regularly requested to provide methodological information relevant for developing a thorough understanding of their submission under the GPS framework. The general and specific methodological notes below provide some explanations in this respect.

General notes

- Conventional signs: "n.d.", "..": not available; "n.a.": not applicable.

- The GPS exercise covers all pension plans (occupational and personal, mandatory and voluntary) irrespective of the pension provider and manager, as long as these plans are funded. Plans can cover public and private sector workers. The definitions of pension plans by the OECD's Working Party on Private Pensions are available in the publication *Private Pensions: OECD Classification and Glossary*, available at www.oecd.org/daf/pensions.

- This report uses three main additional reference series: exchange rates to convert values in US dollars, GDP and the variation of the consumer price index (CPI). Exchanges rates used are end-of-period exchanges rates for all variables valued at the end of the year, and period-average for variables representing a flow during the year. They come from the IMF International Financial Statistics database. GDP values for OECD countries are extracted from the OECD Annual National Accounts. Consumer price indices for OECD countries are from the OECD Main Economic Indicators database. Reference series for non-OECD countries are from the IMF International Financial Statistics database or the IMF *World Economic Outlook* published in April 2016, except the GDP and CPI variation of Gibraltar (which are from *Abstract of Statistics 2014* by the Statistics Office of Gibraltar), the CPI variation of Guyana in 2015 (from the Bank of Guyana) and the GDP of Liechtenstein (from the National Accounts Main Aggregates Database of the United Nations).

- Data for Australia and Egypt refer to the end of June of each year.

- Data for Austria refer to Pensionskassen in the case of pension funds, and occupational pension plans provided by insurance companies (BVK) in the case of pension insurance contracts.

- Data about pension funds in Estonia refer to the mandatory funded pension system only. All voluntary pension plans are classified under pension insurance contracts, and include voluntary pension insurance and voluntary pension funds.

- The amount of pension fund investment in 2015 for France comes from the French Asset Management Association.

- Data for Germany only refer to Pensionsfonds and Pensionskassen supervised by BaFin. Data for 2015 are preliminary.

- Pension fund investments for Ireland come from the IAPF Pension Investment Survey.

- The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of International law. Data for Israel refer to old, new and general pension funds.

- Data for Japan are from the Bank of Japan. Data in Figures 2, 3, 6, 7 and in Tables A.1, A.2 and A.3 refer to total assets of pension funds.

- Data for pension funds in Latvia only refer to voluntary pension plans in open and closed pension funds.

- Data for the Netherlands are preliminary.

- Pension fund investments in the case of New Zealand represent an aggregate of assets in KiwiSaver plans (at the end of March of each year) and in employer superannuation schemes (at the end of March of each year for most of them). Data for 2015 are from the Bank Reserve of New Zealand.

- Data for pension funds in Slovenia only refer to the Slovenian mutual pension funds. All the companies that administer pension schemes under the supervision of the Slovenian Insurance Supervision Agency are classified under pension insurance contracts.

- Data for Switzerland refer to the first trend calculations for the year 2015.

- The figure of pension fund investment in the United Kingdom at the end of 2015 is an early estimate based on the 2014 level of assets and the flow of transactions in 2015. It does not take into account value changes. A 2016 final estimate will be available in January 2017.

- Data for Armenia only refer to mandatory pension funds.

- Data from Argentina, Bolivia, the Dominican Republic (up to 2013), El Salvador, Panama and Uruguay are from the International Association of Pension Funds Supervision (AIOS).

- Data for China are from the Ministry of Human Resources and Social Security (MOHRSS) and refer to enterprise annuity schemes for employees.

- Data before 2014 for Croatia are from the Croatian Financial Services Supervisory Agency (HANFA) Website.

- Data for Guyana refer to occupational pension plans.

- Data for Hong Kong, China refer to Mandatory Provident Fund (MPF) schemes and occupational retirement schemes registered under the Occupational Retirement Schemes Ordinance (ORSO registered schemes), unless specified otherwise in specific notes.

- Data for India only refer to the National Pension System (NPS) Schemes covering government employees and private sector employees.

- Data for Indonesia only refer to the voluntary funded pension system.

- Data for Malaysia only refer to the Private Retirement Scheme.

- Data for Malta in 2015 include both occupational and personal retirement schemes. Figures attributed to previous years do not include occupational schemes as these schemes have been authorised to operate since 1st January 2015.

- Data for Mauritius only refer to voluntary pension plans.

- Data for Pakistan only refer to voluntary pension funds, authorised under the Voluntary Pension System Rules.

- Data for Thailand only refer to Thai provident funds and do not include the Government Pension Fund.

- Data for Zambia only include private occupational pension schemes.

Specific notes

Figure 1:
The sample of non-OECD countries includes the following jurisdictions: Albania, Armenia, Botswana, Brazil, Bulgaria, China (People's Republic of), Colombia, Costa Rica, Croatia, Dominican Republic, Egypt, El Salvador, Former Yugoslav Republic of Macedonia, Ghana, Gibraltar, Guyana, Hong Kong (China), India, Indonesia, Jamaica, Kenya, Kosovo, Lesotho, Liechtenstein, Lithuania, Malawi, Malaysia, Maldives, Malta, Mauritius, Namibia, Nigeria, Pakistan, Panama, Papua New Guinea, Peru, Romania, Russia, Serbia, South Africa, Thailand, Trinidad and Tobago, Ukraine, Uruguay and Zambia.

Figure 2:
The maps show the size of private pension investment in 2015 in USD terms and as a percentage of GDP by country. The larger the circle, the larger the amount of private pension investment. Countries are labelled with their ISO code. ISO codes ares available on the United Nation Statistics Division internet page, 'Countries and areas, codes and abbreviations' at the following address: http://unstats.un.org/unsd/methods/m49/m49alpha.htm.

Figure 3:
(1) Data do not cover the whole private pension system. (2) Data refer to the weighted (by total investments) and simple average of the ratio of private pension investments to GDP in the respective area. (3) Data refer to old, new and general pension funds. (4) Data refer to 2014. (5) Data refer to 2013. (6) Data refer to 2012. (7) Data refer to 2011.

Figure 4:
This Figure only shows the breakdown of occupational and personal plans provided by pension funds. It does not take into account other plans provided by other entities such as insurance companies.
(1) Data refer to 2014. (2) Data refer to 2013. (3) Data about Collective Voluntary Pension Savings that are managed by the AFPs are classified together with personal plans, although these plans are occupational. (4) There is one institution for occupational retirement provision operating in Hungary. Its market share is negligible compared to voluntary privately managed pension funds and voluntary private pension funds. The last two types of funds manage personal pension plans.

Figure 5:

This Figure only shows the breakdown of DB and DC plans provided by pension funds. It does not take into account other plans provided by other entities such as insurance companies.

(1) Data refer to 2013. (2) Data refer to 2014. (3) Data refer to occupational pension plans only. (4) Source: Financial Services and Markets Authority. (5) Data refer to pension funds under the supervision of Luxembourg Financial Supervisory Authority (CSSF) only. (6) Data only refer to private occupational pension schemes, and do not include individual pension plans or public occupational pension schemes. (7) Data only refer to the voluntary funded pension system, and do not include funds managing mandatory plans.

Figure 8:
Data have been calculated using a common formula for the average nominal net investment return (ratio between the net investment income at the end of the year and the average level of assets during the year) for all the economies, except for Finland (Dec 2014-Dec 2015); Ireland; Israel; Korea; Sweden; Turkey (Dec 2013-Dec 2014) and the United States in the OECD area; Brazil; Egypt; Ghana (Dec 2013-Dec 2014); Guyana; Hong Kong, China; India (Dec 2013-Dec 2014) and Zambia (Dec 2013-Dec 2014) outside the OECD area, for which values have been provided by the economies or from national official publications. Data for El Salvador, Panama and Uruguay are from AIOS.

The average real net investment returns are calculated using the nominal rate of return (as described above) and the variation of the consumer price index over the relevant period. Returns for Liechtenstein are nominal.

Simple and weighted averages are calculated on the sample of countries for which values are available for Dec 2013-Dec 2014 (i.e. 2014) and Dec 2014-Dec 2015 (i.e. 2015). Pension fund investments of the given year in USD million are taken as weights.

(1) Returns for year N are calculated over the period end of June of year N-1 and end of June of year N. (2) Data refer to new pension funds only. (3) Data for Estonia result from OECD calculations and may differ from Estonian authorities calculations using an index called EPI. This index is based on the net asset values of all pension funds, after deduction of all costs paid by the funds. Values of this index are available at: http://www.pensionikeskus.ee/en/statistics/ii-pillar/epi-charts/. (4) Investment returns are net of taxes. (5) Data refer to personal pension plans only. (6) Data refer to MPF schemes only.

Table 1:
(1) The 5-year average and the 10-year average returns have been calculated over the period June 2010 - June 2015 and June 2005 - June 2015 respectively. (2) Data refer to personal pension plans only. (3) Data refer to new pension funds only. (4) Investment returns are net of taxes. (5) Data for Estonia result from OECD calculations and may differ from the Estonian authorities calculations using an index called EPI. This index is based on the net asset values of all pension funds, after deduction of all costs paid by the funds. Values of this index are available at: http://www.pensionikeskus.ee/en/statistics/ii-pillar/epi-charts/. (6) Data refer to MPF schemes only.

Figure 9:
The GPS database provides information about investments in Collective Investment Schemes and the look-through Collective Investment Schemes in cash and deposits, bills and bonds, equities 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, equities 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 cash and deposits, bills and bonds, equities and indirect investment through Collective Investment Schemes.

(1) The "Other" category includes loans, land and buildings, unallocated insurance contracts, hedge funds, private equity funds, structured products, other mutual funds (i.e. not invested in cash, bills and bonds, or equities) and other investments. (2) Source: Australian Bureau of Statistics (ABS). The high value for the "Other" category is driven mainly by net equity of pension funds in life office reserves (13% of total investment). (3) Market of fair values of derivatives held are negative in 2015 and are excluded from the asset allocation. (4) The high value for the "Other" category is driven mainly by land and buildings (12% of total investment). (5) The high value for the "Other" category is driven mainly by land and buildings (direct and indirect investments in this category account for 18% of total investment). (6) The high value for the "Other" category is driven mainly by other investments of collective investment schemes (18% of total investment). (7) The asset class "Other investments", which was reported as negative in the survey, is excluded from the calculations of the asset allocation. The value for the "Other" category in this Figure is driven mainly by land and buildings (direct and indirect investments in this category account for 14% of total investment). (8) The high value for the "Other" category is driven mainly by unallocated insurance contracts (22% of total investment) and by real estate (3% of total investment). (9) Pension funds are not the only retirement vehicle in Sweden. The asset mix of other retirement vehicles may be different from the one of pension funds. (10) Data refer to personal pension plans only. (11) Claims of pension funds on pension managers have been excluded from the calculation of pension fund asset allocation. The high value for the "Other" category is driven mainly by outward investments in securities (25% of the total portfolio). (12) Data refer to 2014. (13) The high value for the

"Other" category is driven mainly by loans (12% of total investment) and other investments of collective investment schemes (17% of total investment). (14) The high value for the "Other" category is driven mainly by unallocated insurance contracts (36% of total investment). (15) Data include MPF schemes and MPF exempted ORSO registered schemes. (16) The high value for the "Other" category is driven mainly by other investments of collective investment schemes (10% of total investment). (17) The high value for the "Other" category is driven mainly by private equity (8% of total investment) and land and buildings (7% of total investment). (18) The high value for the "Other" category is driven mainly by land and buildings (11% of total investment). (19) The high value for the "Other" category is driven mainly by land and buildings (19% of total investment) and unallocated insurance contracts (14% of total investment). (20) The asset class "Other investments", which was reported as negative in the survey, is excluded from the calculations of the asset allocation. The high value for the "Other" category is driven mainly by other investments of collective investment schemes (16% of total investment). (21) Data refer to funds supervised under the Pension Funds Act only. The high value for the "Other" category is driven mainly by unallocated insurance contracts (49% of total investment). (22) The high value for the "Other" category is driven mainly by land and buildings (direct and indirect investments in this category account for 22% of total investment). (23) The high value for the "Other" category is driven mainly by unallocated insurance contracts (20% of total investment). (24) The high value for the "Other" category is driven mainly by unallocated insurance contracts (31% of total investment).

Table 2:
The detailed numbers of pension funds between 2005 and 2015 are given in the statistical annexes.
(1) Source: Department of Labor. Data refer to private pension plans only. (2) The latest data available related to the number of funds refers to 2014 instead of 2015. (3) Data refer to funds managing personal plans. (4) The number of funds in 2006 has been used to examine the evolution of the number of the funds. (5) Data refer to mandatory pension funds only. In 2015, 4 management companies manage 20 mandatory pension funds. (6) Source: Financial and Capital Market Commission. The 15 funds (in Latvia called 3rd pillar pension plans) in 2015 are administered by open and closed pension funds. (7) The number of funds in 2007 has been used to examine the evolution of the number of the funds. (8) Data refer to the number of mutual pension funds. (9) In 2005 and in 2015, there were 6 pension fund administrators managing 5 funds each. (10) Source: OECD Reviews of Pension Systems - Ireland and the Irish Pensions Authority's Annual Reports. Data refer to the number of DC schemes and DB schemes subject to the Funding Requirement. (11) Source: The Pensions Regulator. Data refer to the number of occupational schemes. (12) Data for 2015 come from the website of the Dutch Central Bank. (13) Data refer to the number of MPF schemes. (14) The latest data available related to the number of funds refers to 2013 instead of 2015. (15) The number of funds in 2008 has been used to examine the evolution of the number of the funds. (16) Data refer to the number of administrators of closed pension funds and administrators of open pension funds. (17) Data refer to the number of pension fund managers. Each fund manager manages several funds.

Figure 10:
(1) Data refer to the average size of pension funds managing personal plans only. (2) Data refer to 2006 instead of 2005. (3) Data refer to 2014 instead of 2015. (4) Data refer to 2007 instead of 2005. (5) Data refer to private pension plans only. (6) Data refer to MPF schemes only. (7) Data refer to 2013 instead of 2015. (8) Data refer to 2008 instead of 2005. (9) Data refer to 2010 instead of 2015. (10) Data refer to 2012 instead of 2015. (11) Data refer to 2011 instead of 2015.

Table 5:
"RGROWTH_GDP" is the real growth rate of GDP; "INV_GDP" is the size of pension fund investment compared to GDP; "SHARE_BOND" is the share of pension fund portfolio allocated to bills and bonds; "SHARE_EQ" is the share of pension fund portfolio allocated to equities; and "DEV_EQMARKET" is the growth rate of local stock market indices.

Tables A.1 – A.3:
Slovenia adopted the euro in 2007, the Slovak Republic in 2009, Estonia in 2011, Latvia in 2014 and Lithuania in 2015. The whole time series of pension fund total investment (in millions of national currency) are expressed in millions of euro for these countries (even before their adoption of the euro).
(1) The break in series in 2011 is due to the exclusion of public buffer funds which were included before 2011. (2) There is a break in series in 2013, as four new occupational funds are included. These funds were converted in March 2013, from a public redistributing system (PAYG) into a private law capital-accumulating system. (3) The drop in pension fund investments in 2011 comes from a pension reform which suspended payments to the mandatory funded individual schemes and redirected all the contributions to pay-as-you-go public pension schemes, unless workers chose to keep these individual schemes by the end of January 2011. (4) The break in series in 2005 is due to the inclusion of the pension funds supervised by the CSSF, not included in the previous years. (5) Occupational pension plans that are registered by the National Commission for the Retirement Savings System (CONSAR) are included from 2005 onwards. (6) The drop in pension fund investments in 2014 comes from the reversal of the mandatory funded pension system that led to a transfer of domestic sovereign bonds held by open pension funds into the social security system. (7) In 2011, the investments of the

pension funds under the ISP supervision decreased by about 33%, reflecting the transfer of bank pension funds (i.e. pension funds sponsored by banks, which have as beneficiaries the employees of their banks) to the Public Retirement System. (8) The break in series in 2006 is due to the inclusion of voluntary pension plans, not included in the previous years. (9) The main part of the Swedish funded pension market is secured via insurance contacts and what is labelled pension funds only constitutes a small part of the total market for Sweden. Investments through all vehicles including insurance contracts amounted to SEK 3,158,088 million at the end of 2015. (10) The drop in investment in 2011 is due to three factors: change in legislation, withdrawals and the unavailability of data from one of the three funds, which was operating under the old framework. (11) The drop in 2008 is due to a pension reform transferring pension funds' assets to the National Social Security Administration. (12) The break in series in 2015 is due to the inclusion of all occupational plans (DB and DC), not included in the previous years. (13) Data for one DB pension scheme in 2014 are missing, which hampers the comparability of 2014 data with data for the previous years. (14) The marked increase in the value of pension fund investments in 2012 is due to an increase in the number of schemes and a substantial increase in the number of members of the schemes. (15) Excluding Saudi Arabia. (16) This includes the list of countries that are members of the Euro Area at the end of 2015. (17) This includes: Israel, Japan and Korea among OECD countries, and China, Hong Kong (China), India, Indonesia, Malaysia, Maldives, Pakistan and Thailand among selected non-OECD countries.

Tables A.4 – A.5:
Data have been calculated using a common formula for the average nominal net investment return (ratio between the net investment income at the end of the year and the average level of assets during the year) for all the economies, except for Austria (2011-2012); Finland (2015); Ireland; Israel; Korea (2010-2015); Sweden (2011-2013); Turkey (2011,2013-2014); the United States; Armenia (2014); Brazil; Egypt; Ghana (2014); Guyana; Hong Kong, China; India (2011,2013-2014); Kenya (2011); Malawi (2013); Malta (2011); Romania (2010); Russia (2013); Ukraine (2010) and Zambia (2014) for which values have been provided by the economies or are from national official publications. Data for Bolivia, Costa Rica (2005-2007), Dominican Republic (2005-2013), El Salvador, Panama and Uruguay are from AIOS.
The average real net investment returns are calculated using the nominal rate of return (as described above) and the variation of the consumer price index over the relevant period. Returns for Liechtenstein are nominal.
(1) Returns for year N are calculated over the period end of June of year N-1 and end of June of year N. (2) Data for Estonia result from OECD calculations and may differ from the ones of the Estonian authorities using an index called EPI. This index is based on the net asset values of all pension funds, after deduction of all costs paid by the funds. Values of this index are available at: http://www.pensionikeskus.ee/en/statistics/ii-pillar/epi-charts/. (3) There is a break in series in 2011 which is due to the exclusion of public buffer funds which were included before. (4) The break in series in 2011 corresponds to the pension reform leading to a decrease in the assets of mandatory pension funds in 2011. (5) Data refer to new pension funds only. (6) Investment returns are net of taxes. (7) Data refer to personal pension plans only. (8) Returns for year N are calculated over the period end of March of year N-1 and end of March of year N. (9) There is a break in series in 2014 due to the reversal of the mandatory funded pension system that led to a transfer of domestic sovereign bonds held by open pension funds into the social security system. (10) Data refer to MPF schemes only. (11) Data refer to funds supervised under the Pension Funds Act only.

Table A.7:
(1) Data are biannual and come from the Census of Trusteed Pension Funds that is conducted every two years. The number of funds in odd years is an OECD estimate and is calculated as the average of the numbers of funds in the previous even year and the following one. Data for 2015 refer to 2014. (2) There were 6 pension fund administrators (AFPs) between 2002 and 2007, 5 in 2008 and 2009, and 6 between 2010 and 2015. Each AFP manages 5 pension funds each. (3) Source: Ministry of Finance of the Czech Republic. Data refer to the sum of retirement funds, transformed funds and participating funds. These funds were managed by 10 pension management companies in 2013, 9 in 2014 and 8 in 2015. (4) In 2015, 4 management companies were managing the 20 mandatory pension funds. (5) In 2011, there were 9 occupational funds which have the license to operate: six were fully operational under DC system, two were licensed but not yet operational and the last one only provided medical care. From 2013 onwards, four new occupational funds that were converted from a public redistributing system into a private law capital-accumulating system are included. (6) Source: *OECD Reviews of Pension Systems - Ireland* and the Irish Pensions Authority's Annual Reports. Data refer to the number of DC schemes and DB schemes subject to the Funding Requirement. (7) Source: Financial and Capital Market Commission. Data refer to the number of funds (in Latvia called 3rd pillar pension plans). These are administered by open and closed pension funds. There were 6 open and closed pension funds from 2005 to 2009, 7 from 2010 to 2013, and 6 in 2014 and 2015. (8) The break in series in 2005 is due to the inclusion of pension funds supervised by the CSSF, not included in the previous years. (9) Data refer to funds managing personal plans only. (10) Data for 2014 and 2015 come from the website of the Dutch Central Bank. (11) The break in series in 2006 is due to the inclusion of voluntary pension plans, not included in the previous years. (12) Data refer to the number of mutual pension funds. (13) Data refer to pension mutual funds only. Pension companies, which offer personal private pension products, invest through these pension mutual funds. Source: the Undersecretariat of

Turkish Treasury's *Individual Pension System Progress Reports*. (14) Source: The Pensions Regulator. Data refer to the number of occupational schemes. (15) Source: Department of Labor. Data refer to private pension plans that are required to file a Form 5500 only. (16) Data refer to the number of mandatory pension funds. (17) Data refer to the number of pension fund managers. Each fund manager manages several funds. (18) Data refer to the total number of private pension schemes. These schemes are managed by various pension fund managers. There are seven pension fund managers in Guyana. (19) Data refer to the number of MPF schemes. (20) Data refer to retirement funds under the Private Retirement Scheme (PRS) industry. (21) Data refer to the Maldives Retirement Pension Scheme (which has two portfolios). (22) Source: NAMFISA. Data refer to the sum of registered active and inactive pension funds (with no contributing members). (23) Data refer to the number of administrators of closed pension funds and administrators of open pension funds.

Tables A.8 – A.11:

The GPS database provides information about investments in Collective Investment Schemes and the look-through Collective Investment Schemes in cash and deposits, bills and bonds, equities 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, equities and other was the same as pension funds' direct investments in these categories. Therefore, asset allocation data in these Tables include both direct investment in cash and deposits, bills and bonds, equities and indirect investment through Collective Investment Schemes.

When "other investments" were negative, they were excluded from the calculations of the asset allocation.

(1) Source: Australian Bureau of Statistics. (2) The breakdown of investments by collective investment schemes into cash and deposits, bills and bonds, equities and others for all the years before 2008 is supposed to be the same as in 2008 (OECD estimations). (3) The breakdown of investments by collective investment schemes into cash and deposits, bills and bonds, equities and others for all the years before 2011 is supposed to be the same as in 2011 (OECD estimations). (4) Claims of pension funds on pension managers have been excluded from the calculation of pension fund asset allocation. The "other" category includes outward investments in securities. (5) The break in series in 2014 comes from the reversal of the mandatory funded pension system that led to a transfer of domestic sovereign bonds held by open pension funds into the social security system. Since 2014, open pension funds have to invest at least 75% of their portfolios in equity, and cannot invest in treasury bonds and state-backed bonds any longer. (6) Pension funds are not the only retirement vehicle in Sweden. The asset mix of other retirement vehicles may be different from the one of pension funds. (7) Data refer to personal pension plans only. (8) Data include MPF schemes and MPF exempted ORSO registered schemes. (9) Data refer to funds supervised under the Pension Funds Act only. The high value for the "Other" category is driven mainly by unallocated insurance contracts.

Bibliography

Boon L.-N., M. Brière, C. Gresse, and B.J.M. Werker (2013), "Regulatory Environment and Pension Investment Performance".

Musalem A. R., and R. Pasquini (2012), "Private Pension Systems: Cross-Country Investment Performance", Social Protection and Labor - Discussion Paper 1214, World Bank.

OECD (2005), *Private Pensions: OECD Classification and Glossary*, OECD Publishing, Paris.

Stewart, F. and J. Yermo (2008), "Pension Fund Governance: Challenges and Potential Solutions", OECD Working Papers on Insurance and Private Pensions, No. 18, OECD publishing, © OECD.

Taylor, R. (1990), "Interpretation of Correlation Coefficient: A Basic Review", JDMS 1:35-39.

The Pension Authority (2015), *Annual Report and Accounts 2015*, Dublin.

Yermo, J. and J. Tinga (2007), "The licensing of pension entities in private pension systems".

Pension Markets
in Focus 2016

Published annually, Pension Markets in Focus reports on the role and functioning of private pension arrangements.

It identifies trends in private pension financial indicators such as asset growth, investment strategies and rates of returns. It provides accurate, comprehensive, comparable and up-to-date statistics to help policy makers, regulators and market participants measure, compare and evaluate programme developments and country experiences globally.

www.oecd.org/daf/pensions/pensionmarkets

OECD