



# Global Pension Assets Study 2014

Towers Watson

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# Global Pension Assets Study 2014

## Executive summary

# Global Pension Assets Study 2014

## Survey coverage

- The study covers 13 major pension markets, which total USD 31,980 bn in pension assets and account for 83.4% of the GDP of these economies. We use the shorthand 'P13' to denote them.
- We perform a deeper analysis for seven of these markets, excluding the six smallest markets (Brazil, France, Germany, Ireland, Hong Kong and South Africa) and use the shorthand 'P7' to denote them. P7 assets are around 95.5% of the P13.
- The analysis is organised in four sections:
  - Asset size, including growth statistics, comparison of asset size with GDP and liabilities (P13)
  - Asset allocation (P7)
  - DB and DC share of pension assets (P7)
  - Public and Private sector share of pension assets (P7)

P13



Australia



Brazil



Canada



France



Germany



HK



Ireland



Japan



Netherlands



South Africa



Switzerland



UK



US

P7



Australia



Canada



Japan



Netherlands



Switzerland



UK



US

# Global Pension Assets Study 2014

## Key findings

### P13 pension assets at the end of 2013

- At the end of 2013 pension assets for the 13 markets in the study were estimated at USD 31,980 bn, representing a 9.5% rise compared to the 2012 year-end value.
- Pension assets relative to GDP reached 83.4% in 2013, which represents a 7.8% increase from 2012 ratio of 75.6%.
- The largest pension markets are the US, UK and Japan with 59.0%, 10.2% and 10.1% of total pension assets in the study, respectively.
- In USD terms, the pension assets growth rate of these three largest markets in 2013 was 12.0%, 13.3% and 2.2% respectively.
- It is important to caveat the impact of the currency exchange rates when measuring the growth of pension assets in USD, as in many cases the results vary significantly with those in local currency terms.

# Global Pension Asset Study 2014

## Key findings

### P7 (excluding Switzerland<sup>1</sup>) DB/DC allocation at the end of 2013

- During the last 10 years DC assets have grown at a rate of 8.8% pa while DB assets have grown at a slower pace of 5.0% pa.
- Currently DC assets represent 47% of total pension assets, in line with the established trend towards the growing dominance of DC pensions.
- DC is dominant in Australia and the US. Netherland, Japan and Canada, both historically only DB, are now showing signs of a shift to DC.

<sup>1</sup> DC assets in Switzerland are cash balance plans and are excluded from this analysis.

### P7 Asset allocation at the end of 2013

- At the end of 2013 the average global asset allocation of the seven largest markets was 52% equities, 28% bonds, 1% cash and 18% other assets (including property and other alternatives).
- The asset allocation pattern has changed somewhat compared to the end of 2012. Allocations to equities increased while allocations to bonds and other investments fell. Allocations to cash remained somewhat the same.
- The US, Australia and the UK have higher allocations to equities than the rest of the P7 markets. More conservative investment strategies – more bonds and less equities – occur in the Netherlands, Japan and Switzerland.

# Global Pension Assets Study 2014

## Key findings - figures

	Total Assets 2013 (USD billion)	% GDP in bn USD*
<b>Australia</b>	<b>1,565</b>	<b>105%</b>
<b>Brazil<sup>1</sup></b>	<b>284</b>	<b>13%</b>
<b>Canada</b>	<b>1,451</b>	<b>80%</b>
<b>France</b>	<b>169</b>	<b>6%</b>
<b>Germany<sup>2</sup></b>	<b>509</b>	<b>14%</b>
<b>Hong Kong</b>	<b>114</b>	<b>41%</b>
<b>Ireland</b>	<b>130</b>	<b>59%</b>
<b>Japan<sup>3</sup></b>	<b>3,236</b>	<b>65%</b>
<b>Netherlands</b>	<b>1,359</b>	<b>170%</b>
<b>South Africa</b>	<b>236</b>	<b>67%</b>
<b>Switzerland<sup>4</sup></b>	<b>786</b>	<b>122%</b>
<b>UK</b>	<b>3,263</b>	<b>131%</b>
<b>US<sup>5</sup></b>	<b>18,878</b>	<b>113%</b>
<b>Total</b>	<b>31,980</b>	<b>83%</b>

Source: Towers Watson and secondary sources

\*Assets/GDP ratio for the world is calculated in USD and assets were estimated as of 31 Dec 2013

[towerswatson.com](http://towerswatson.com)

<sup>1</sup> Brazil Pension Assets only include those from closed entities

<sup>2</sup> Only collect pension assets for company pension schemes

<sup>3</sup> Do not contain the unfunded benefit obligation of Corporate pensions (account receivables)

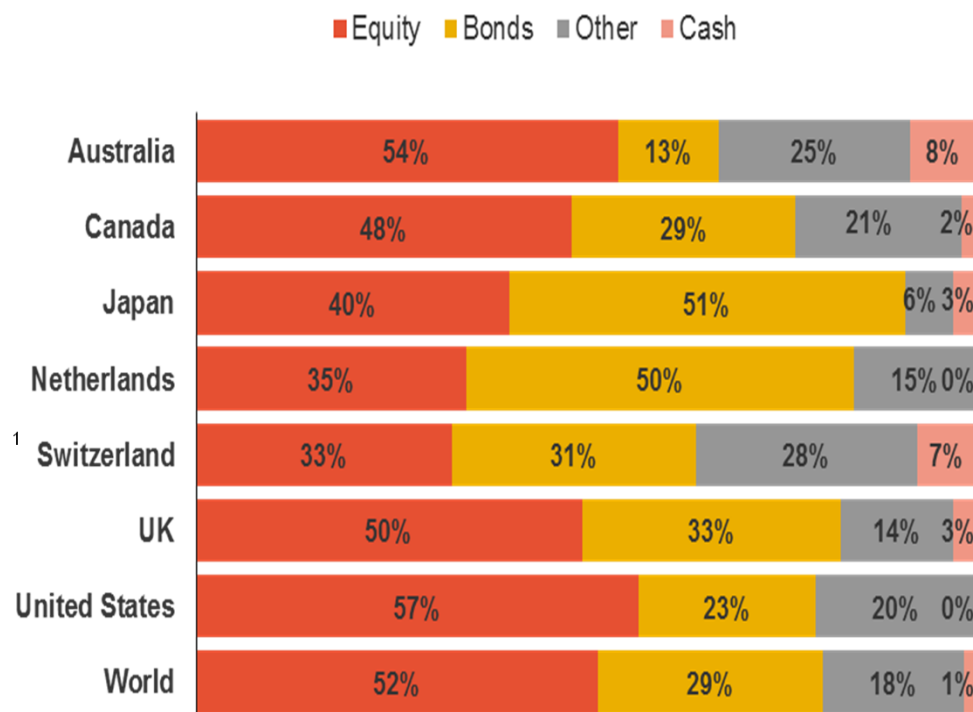
<sup>4</sup> Only includes total of autonomous pension funds. Do not consider insurance companies Assets.

<sup>5</sup> Includes IRAs

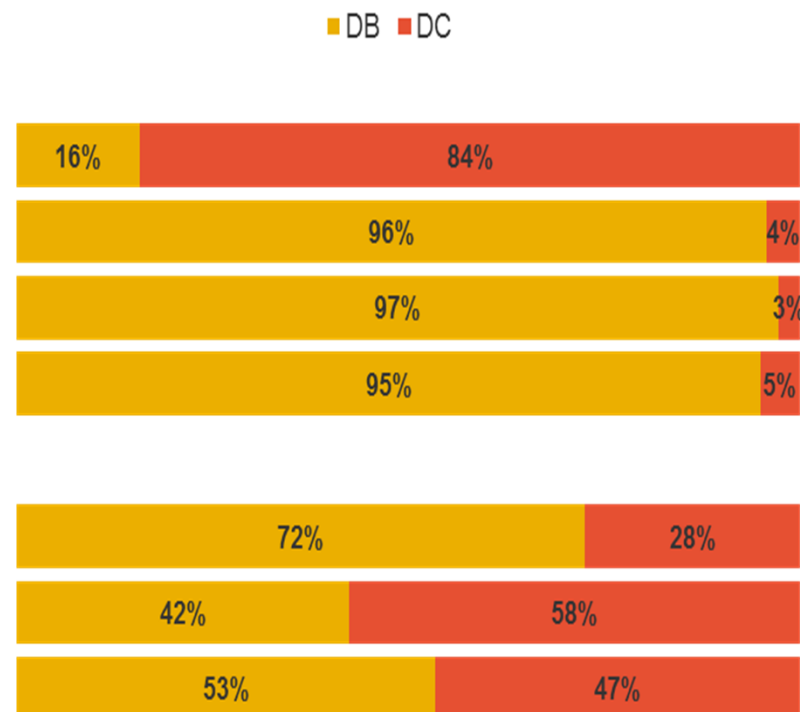
# Global Pension Assets Study 2014

Key findings - figures

## Asset allocation 2013



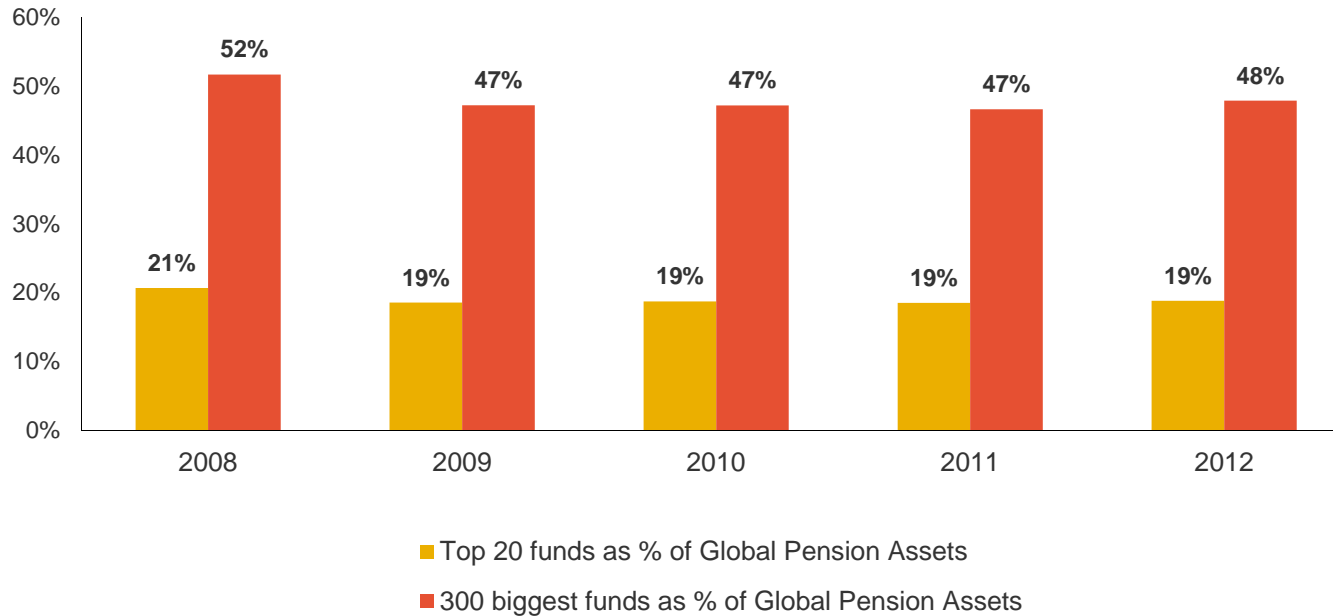
## DB/DC Split 2013



Source: Towers Watson and secondary sources

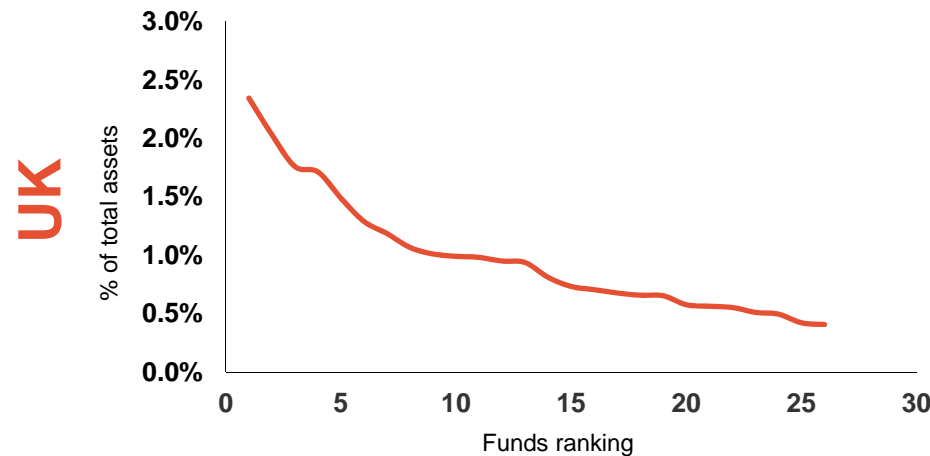
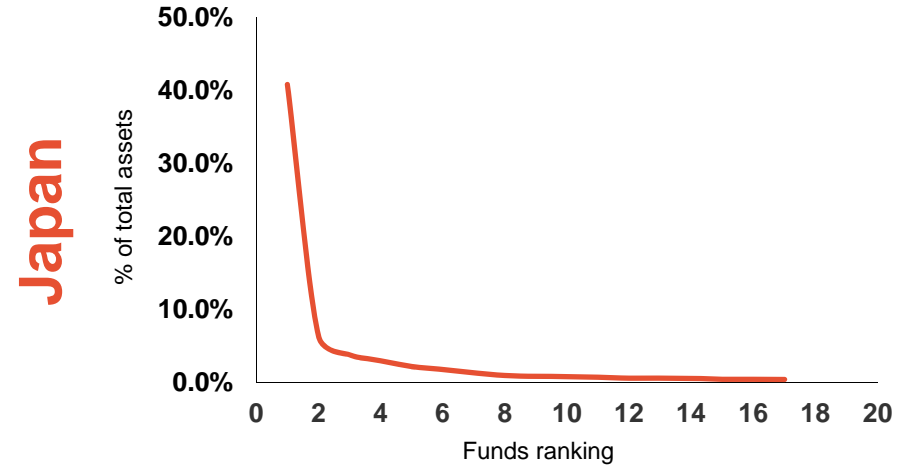
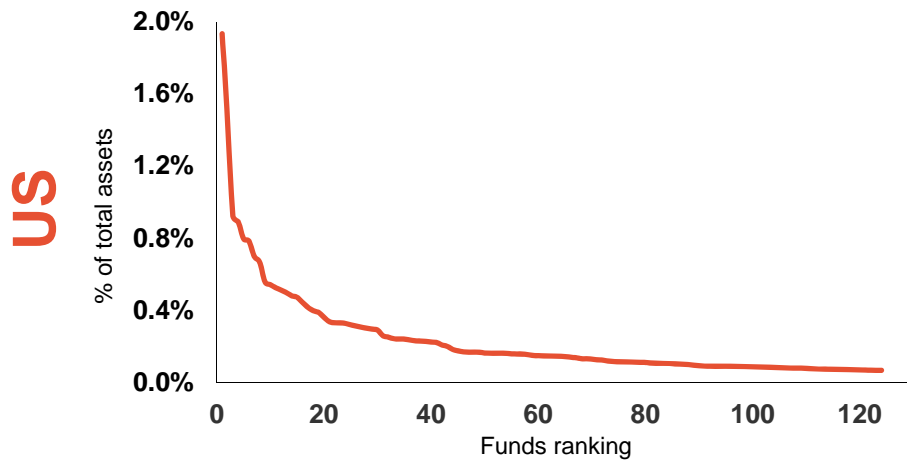
<sup>1</sup> DC assets in Switzerland are cash balance plans and are excluded from this analysis.

## Relative proportion of top 300 pension funds



- The TW/P&I 300 ranking is carried out every year in conjunction with Pensions & Investment (P&I) and ranks the world's largest 300 pension funds in terms of assets under management.
- Assets under management of top 300 pension funds represented 48% of the total global pension assets in 2012.
- The top 20 pension funds accounted for 19% of total pension assets globally.

# Relative proportion of top 300 pension funds by market



- While US' top 10 pension funds represent 9.3% of the market's total assets under management, the top 10 Japanese funds account for 61.5% of Japan's pension assets. This is largely explained by the Government Pension Investment fund that represents 40.8% of Japan's pension assets.
- In the UK, the top 10 pension funds represent 14.9% of the total UK pension assets. Among them, 10.6% are private pension funds and the remaining 4.3% are state-sponsored pension funds.

Source: Towers Watson and secondary sources



# Global Pension Assets Study 2014

## 1. Asset size

**Asset size and growth statistics**  
**Comparison of asset size with GDP and liabilities**

# Global pension assets

Evolution 2003-2013 – USD billion

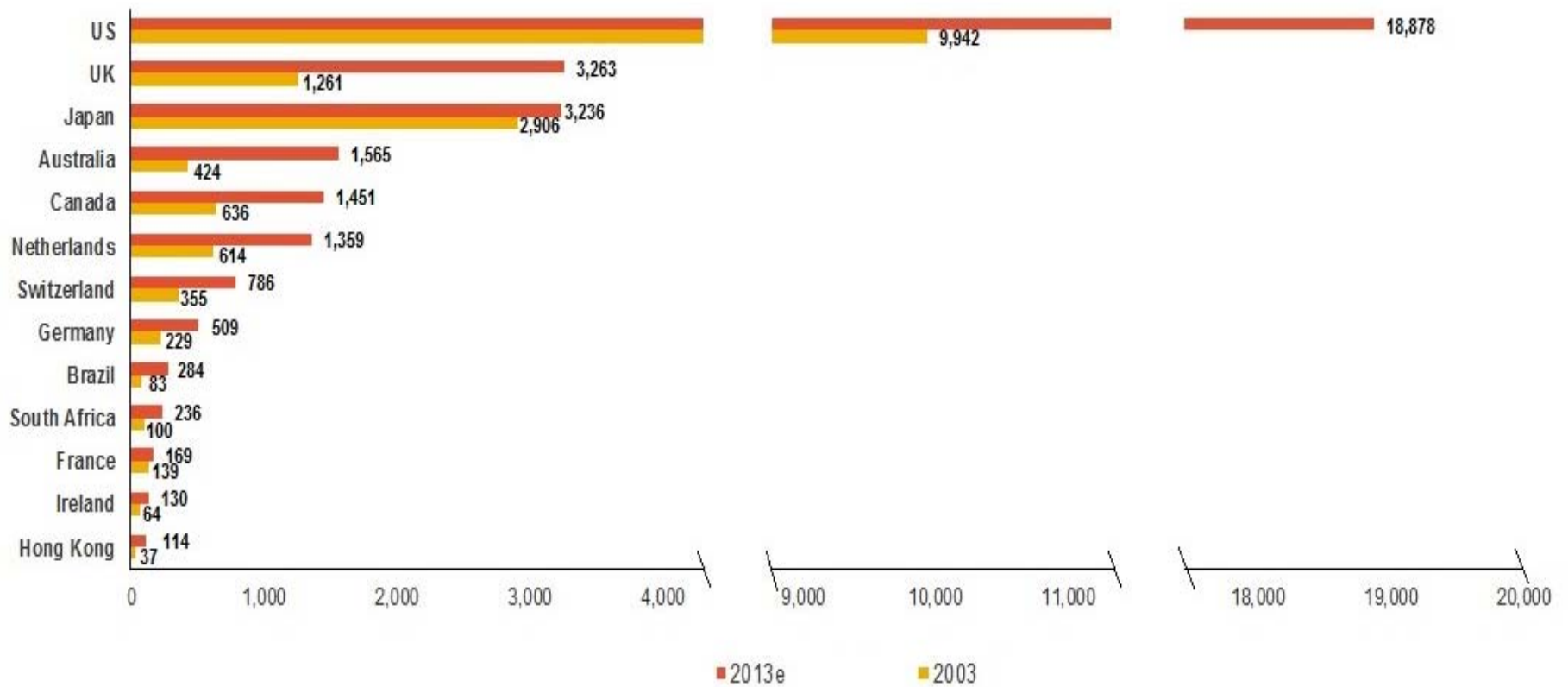
- Global pension assets in 2013 are estimated to have reached USD 31,980 bn, an increase of 9.5% since the end of 2012.
- The US continues to be the largest market in terms of pension assets, then followed, at significant distance, by UK and Japan. Together they account for over 79.4% of total assets.
- The smallest markets are, in descending order, France, Ireland and Hong Kong.

Market	Total Assets (USD billion)	Total Assets (USD billion)	Growth rate (USD)
	Year end 2003	Year end 2013e	10-year CAGR
Australia	424	1,565	14.0%
Brazil	83	284	13.1%
Canada	636	1,451	8.6%
France	139	169	2.0%
Germany	229	509	8.3%
Hong Kong	37	114	12.1%
Ireland	64	130	7.4%
Japan	2,906	3,236	1.1%
Netherlands	614	1,359	8.3%
South Africa	100	236	9.0%
Switzerland	355	786	8.3%
UK	1,261	3,263	10.0%
US	9,942	18,878	6.6%
<b>Total (USD)</b>	<b>16,787</b>	<b>31,980</b>	<b>6.7%</b>

Source: Towers Watson and secondary sources

# Global pension assets













Evolution 2003-2013 – USD billion



# Global pension assets

## Relative weights of each market

- Over the past decade the weights of France, Japan and the US have declined relative to the other markets in the study.

Market	Relative weights of each market	
	End 2003	End 2013e
Australia	2.5%	 4.9%
Brazil	0.5%	 0.9%
Canada	3.8%	 4.5%
France	0.8%	 0.5%
Germany	1.4%	 1.6%
Hong Kong	0.2%	 0.4%
Ireland	0.4%	0.4%
Japan	17.3%	 10.1%
Netherlands	3.7%	 4.2%
South Africa	0.6%	 0.7%
Switzerland	2.1%	 2.5%
UK	7.5%	 10.2%
US	59.2%	 59.0%
P13	100.0%	100.0%

Source: Towers Watson and secondary sources

<sup>1</sup> For France and Canada, there was a methodology change in 2008/2009. For UK it was in 2012.

# Global pension assets growth rates

Compound annual growth rates – local currency – 2013e

- The estimated 5-year growth rates ranged from 2.3% pa in France to 14.9% pa in the UK.
- During the past 10 years, all the markets considered in this analysis experienced an increase in their pension assets. South Africa has seen the fastest growth rate, followed by Australia, Hong Kong, the UK and Brazil.

Market	Growth rates to 2013e (Local Currency)	
	5-year (31/12/08- 31/12/13) CAGR	10-year (31/12/03- 31/12/13) CAGR
Australia	11.4%	12.0%
Brazil	8.6%	10.8%
Canada <sup>1</sup>	8.4%	6.5%
France <sup>1</sup>	2.3%	1.1%
Germany	6.4%	7.3%
Hong Kong	10.6%	12.0%
Ireland	8.0%	6.4%
Japan	4.4%	0.9%
Netherlands	10.1%	7.3%
South Africa	13.3%	14.1%
Switzerland	5.5%	4.7%
UK	14.9%	10.8%
US	9.9%	6.6%
<b>Average</b>	<b>8.8%</b>	<b>7.7%</b>

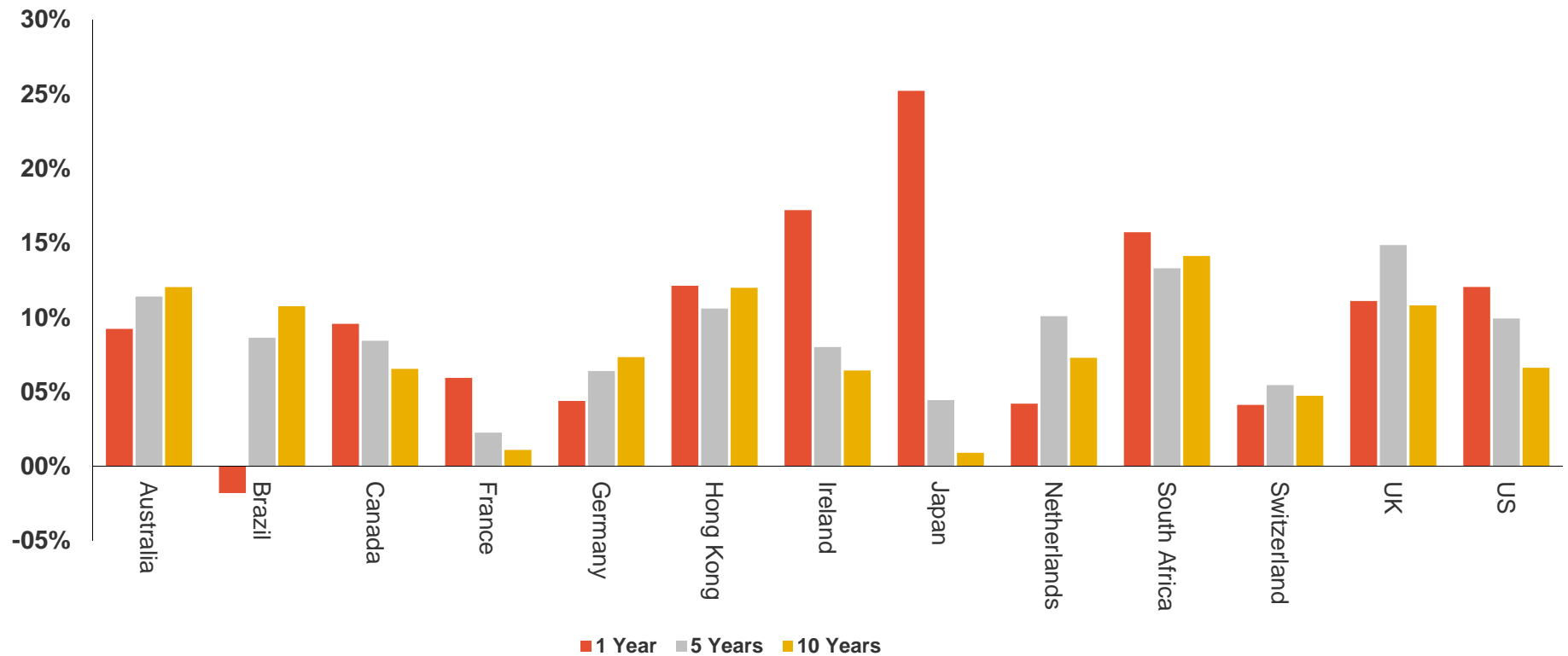
<sup>1</sup> For France and Canada, there was a methodology change in 2008/2009. For UK it was in 2012.

Source: Towers Watson and secondary sources

# Global pension assets growth rates

Compound annual growth rates – local currency

## 2013e CAGR – Local Currency



Source: Tower Watson and secondary sources

# Global pension assets growth rates

## Compound annual growth rates – USD

- In 2013 global pension assets are estimated to have increased by 9.5%, compared to a 6.9% increase seen in 2012, measured in US dollar terms.
- During the last 10 years, the most rapidly growing pension markets have been Australia<sup>3</sup> (14.0%), Brazil (13.1%) and Hong Kong (12.1%) when measured in US dollar terms.
- On the other hand, Japan and France showed the slowest rates of growth in US dollar terms since 2003 (1.1% and 2.0% respectively).

<sup>1</sup> For France and Canada, change in methodology in 2008/2009. For UK it was in 2012.

<sup>2</sup> 1-year growth does not capture net contributions in markets

<sup>3</sup> In the case of Australia, the existing contribution rates as well as the fact that retirees can cash in all their benefits (i.e. no compulsion to lock in or annuities), can have a significant impact on expected asset growth.

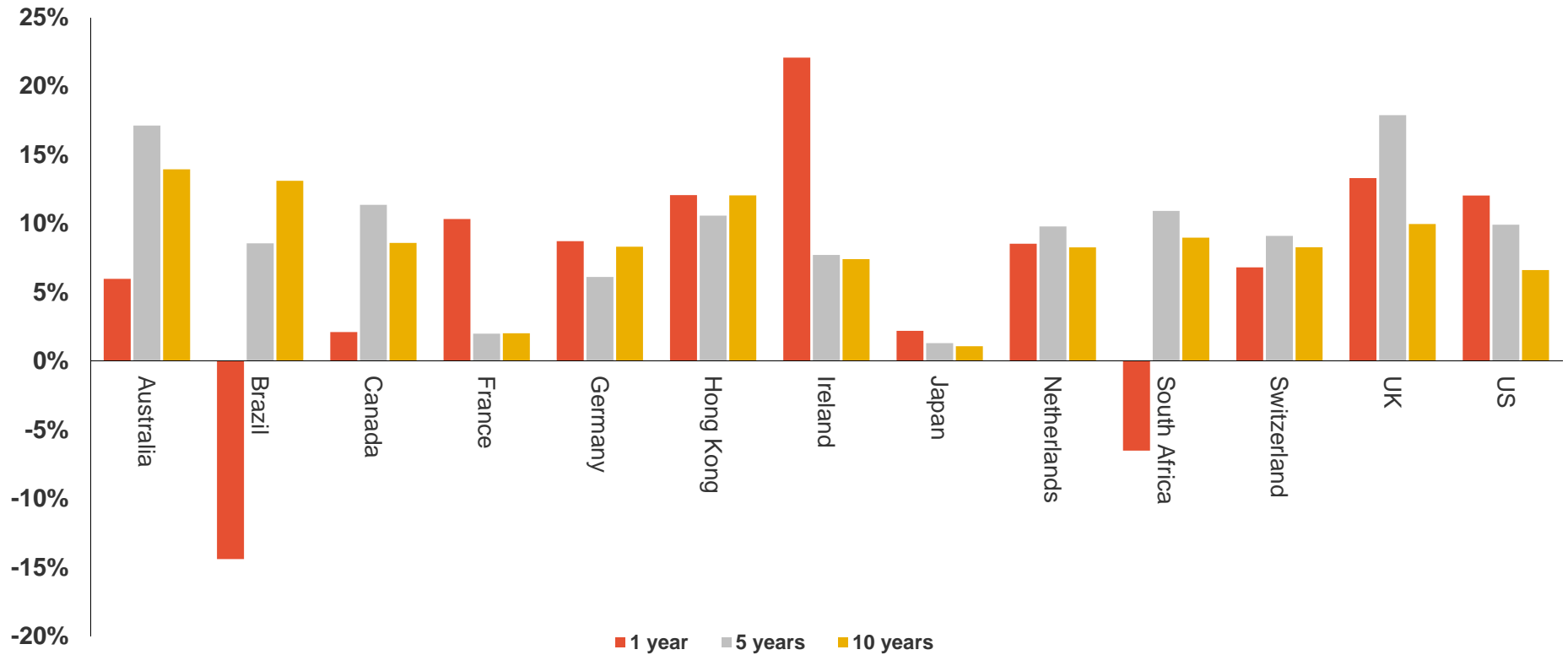
Market	1-year (31/12/11- 31/12/12) Actual	Growth rates to 2013e (USD)		
		1-year (31/12/12- 31/12/13) CAGR <sup>2</sup>	5-year (31/12/08- 31/12/13) CAGR	10-year (31/12/03- 31/12/13) CAGR
Australia	4.4%	6.0%	17.1%	14.0%
Brazil	2.6%	-14.4%	8.6%	13.1%
Canada <sup>1</sup>	5.7%	2.1%	11.4%	8.6%
France <sup>1</sup>	9.3%	10.3%	2.0%	2.0%
Germany	4.7%	8.7%	6.1%	8.3%
Hong Kong	12.7%	12.1%	10.6%	12.1%
Ireland	13.6%	22.1%	7.7%	7.4%
Japan	-14.5%	2.2%	1.3%	1.1%
Netherlands	16.3%	8.5%	9.8%	8.3%
South Africa	15.1%	-6.5%	10.9%	9.0%
Switzerland	10.5%	6.8%	9.1%	8.3%
UK <sup>1</sup>	15.7%	13.3%	17.9%	10.0%
US	10.0%	12.0%	9.9%	6.6%
<b>World</b>	<b>6.9%</b>	<b>9.5%</b>	<b>9.7%</b>	<b>6.7%</b>

Source: Towers Watson and secondary sources

# Global pension assets growth rates

Compound annual growth rates – USD

## 2013e CAGR - USD



Source: Towers Watson and secondary sources

# Global pension assets growth rates

## Currency impact

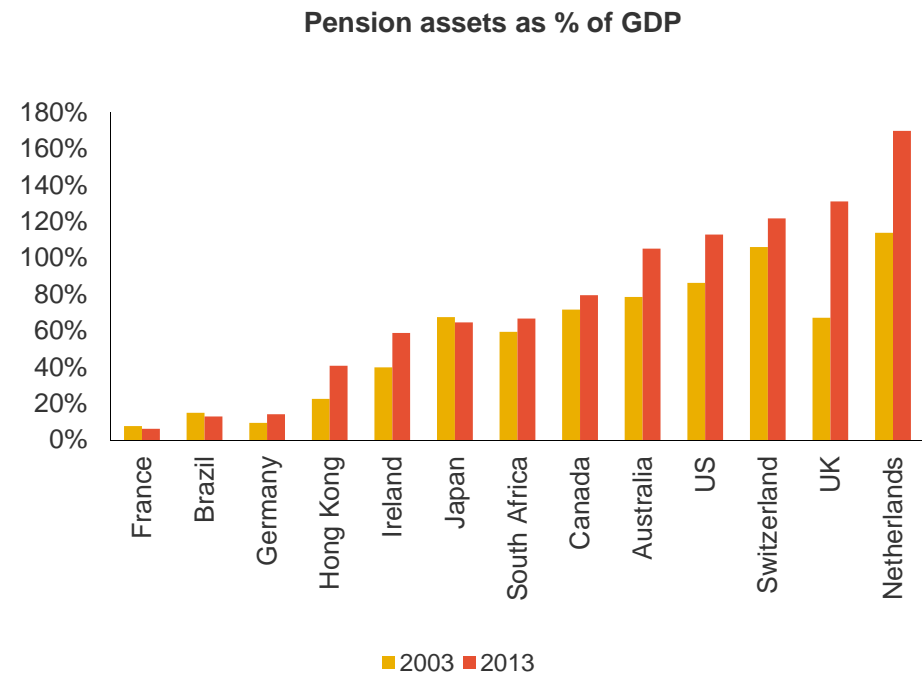
- During 2013, the Euro, Swiss Franc and British Pound were the currencies that appreciated the most against the US Dollar, 4.2%, 2.6% and 2.0% respectively.
- In last year the currencies that depreciated the most against the USD were South African Rand (-19.2%), Japanese Yen (-18.4%) and Brazilian Real (-12.8%). Therefore, growth rates in USD for these markets appeared much lower.
- During the last 10 years the Swiss Franc saw the biggest appreciation (3.4% pa), followed by the Brazilian Real (2.1% pa), while over the last 5 years the Australian Dollar appreciated the most (5.1% pa).
- Over longer periods there has been a trend of depreciation of the USD relative to other major currencies.

Market	Variation in FX rates against USD		
	1-year (31/12/12- 30/12/13)	5-year (31/12/08- 30/12/13) CAGR	10-year (31/12/03- 30/12/13) CAGR
<b>Australia</b>	-3.0%	5.1%	1.7%
<b>Brazil</b>	-12.8%	-0.1%	2.1%
<b>Canada</b>	-6.8%	2.7%	1.9%
<b>France</b>	4.2%	-0.3%	0.9%
<b>Germany</b>	4.2%	-0.3%	0.9%
<b>Hong Kong</b>	0.0%	0.0%	0.1%
<b>Ireland</b>	4.2%	-0.3%	0.9%
<b>Japan</b>	-18.4%	-3.0%	0.2%
<b>Netherlands</b>	4.2%	-0.3%	0.9%
<b>South Africa</b>	-19.2%	-2.1%	-4.5%
<b>Switzerland</b>	2.6%	3.5%	3.4%
<b>UK</b>	2.0%	2.6%	-0.7%

Source: Towers Watson and secondary sources

## Global pension assets vs. GDP in local currency

Market	Pension assets as % of GDP		
	2003	2013e	Change <sup>1</sup>
Australia	79%	105%	27%
Brazil	15%	13%	-2%
Canada	72%	80%	8%
France	8%	6%	-2%
Germany	9%	14%	5%
Hong Kong	23%	41%	18%
Ireland	40%	59%	19%
Japan	68%	65%	-3%
Netherlands	114%	170%	56%
South Africa	59%	67%	7%
Switzerland	106%	122%	16%
UK	67%	131%	64%
US	86%	113%	27%



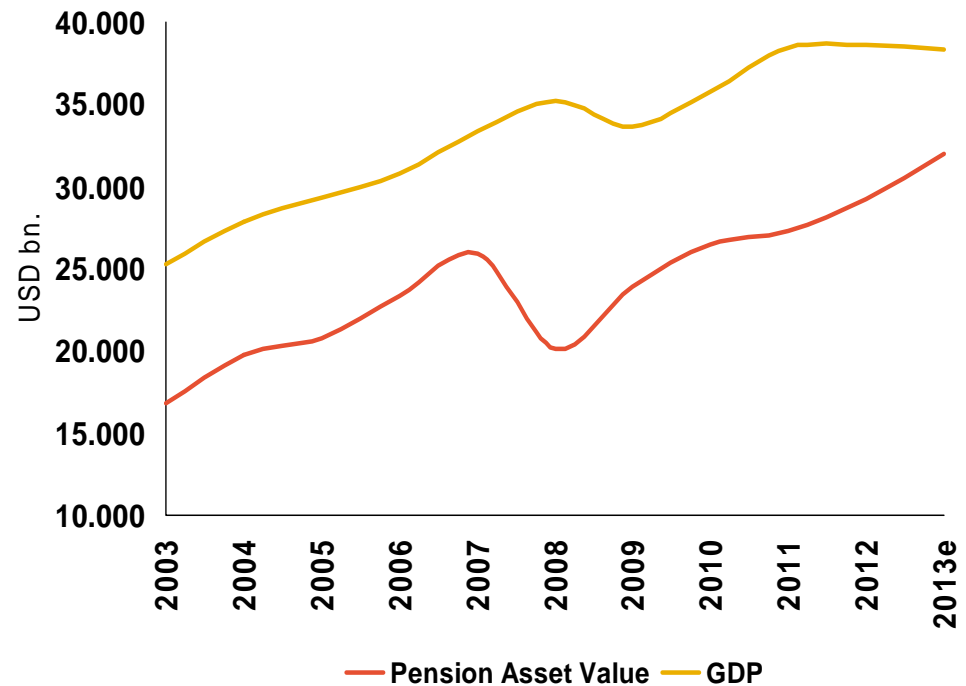
Source: Towers Watson and secondary sources/ GDP values in Local Currency from IMF

<sup>1</sup> In percentage points

# Global pension assets vs. GDP

## In USD

- Global pension assets to GDP ratio (P13) increased from 75.6% at the end of 2012 to 83.4% at the end of 2013.
- The Netherlands has the highest ratio of pension assets to GDP (170%) followed by the UK (131%), Switzerland (122%) and the US (113%) .
- During the last 10 years, the pension assets to GDP ratio grew the most in the UK and the Netherlands (64 and 56 percentage points respectively). It declined in France, Brazil and Japan during the same period.



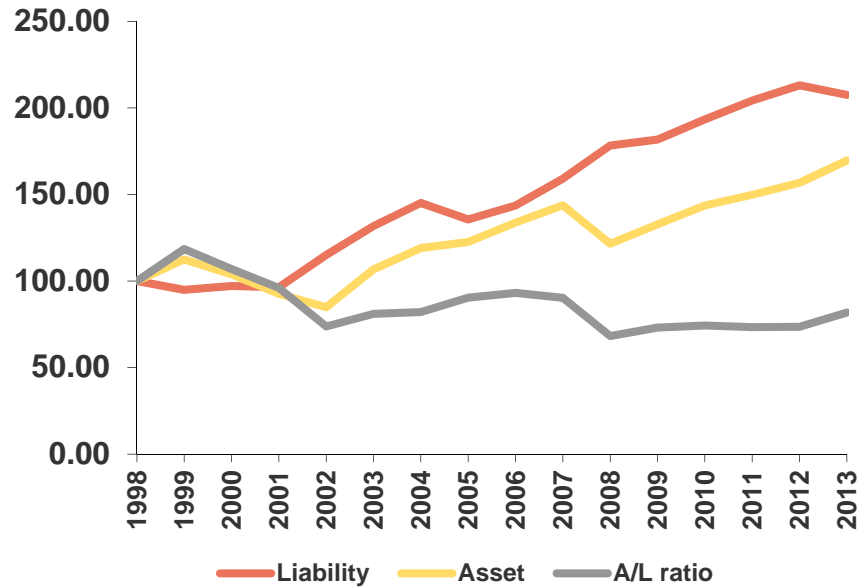
Source: Towers Watson, the IMF and secondary sources

World GDP measured in USD and market GDP in Local Currency **20**

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# DB asset/liability indicator – global basis

Index change from 31 December 1998



Year end	Liability increases relative to end 1998	Asset increases relative to end 1998	Asset liability indicator - cumulative change relative to end 1998	Asset liability indicator - change in year
2003	31.7%	6.7%	-19.0%	9.9%
2004	45.0%	19.0%	-18.0%	1.3%
2005	35.6%	22.5%	-9.6%	10.2%
2006	43.6%	33.7%	-6.9%	3.0%
2007	59.1%	43.7%	-9.7%	-3.0%
2008	78.2%	21.5%	-31.8%	-24.5%
2009	81.6%	32.7%	-27.0%	7.1%
2010	93.3%	43.6%	-25.7%	1.7%
2011	104.2%	49.8%	-26.6%	-1.2%
2012	113.0%	56.7%	-26.4%	0.3%
2013	107.5%	69.6%	-18.3%	11.1%

Source: Towers Watson and secondary sources

DB assets only within asset totals

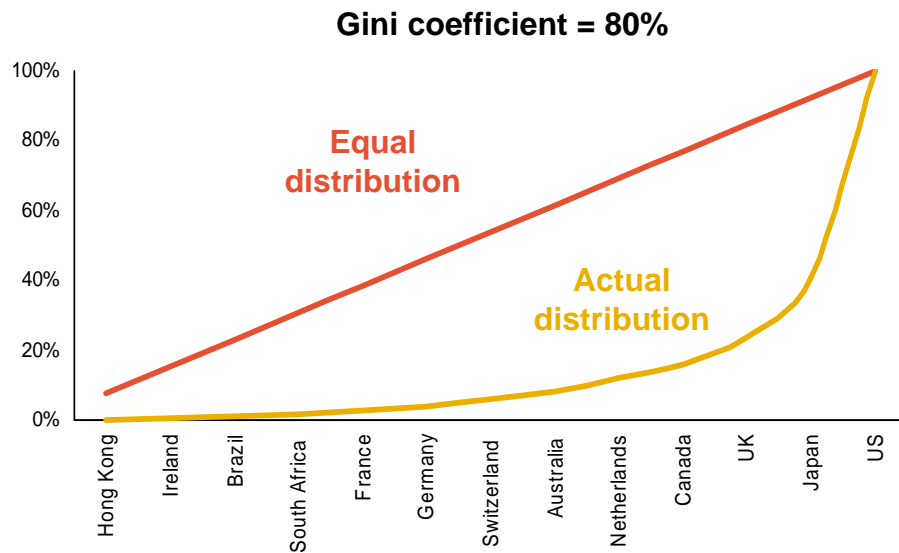
Brazil and South Africa are not considered in the analysis

Mortality changes are not incorporated in these figures

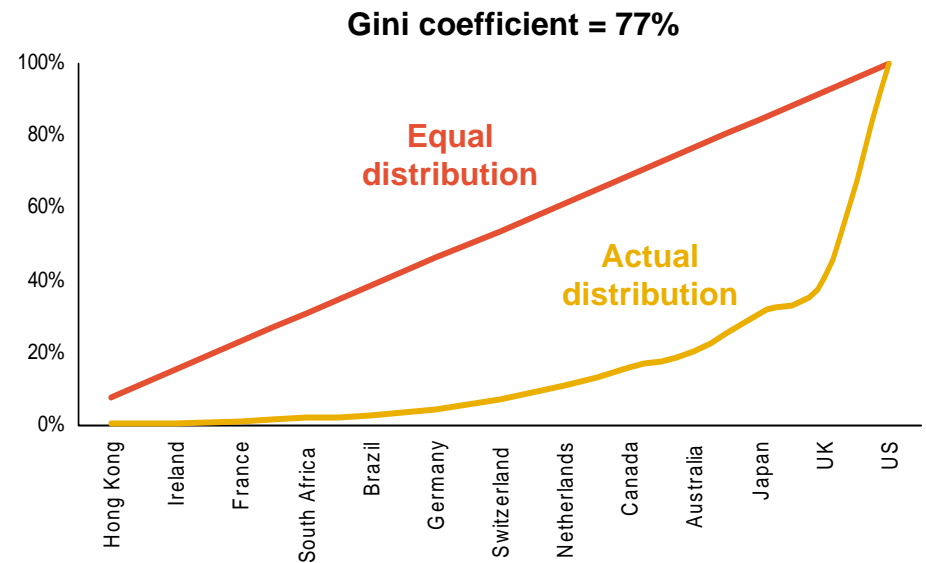
- Global pension fund balance sheets are estimated to have improved in 2013, gaining 11.1% in our asset/liability indicator.

## Gini coefficient - global pension assets 2003 vs 2013

Lorenz curve for pension assets in 2003



Lorenz curve for pension assets in 2013



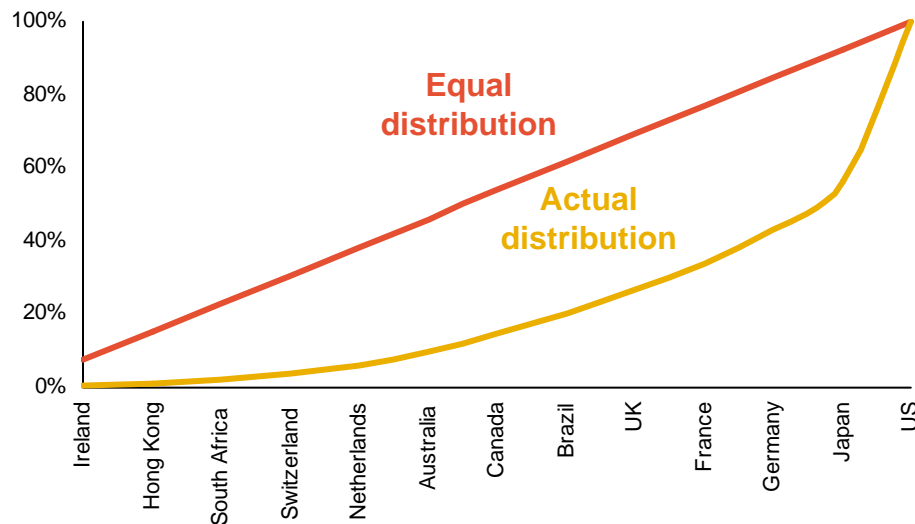
- The Gini coefficient of global pension assets in 2013 was 77% which indicates the P13 pension assets are still concentrated in relatively few markets.
- The global pension market has become less concentrated during the last 10 years, revealed by a higher Gini coefficient (80%) at 2003.

## Gini coefficient - pension assets vs GDP

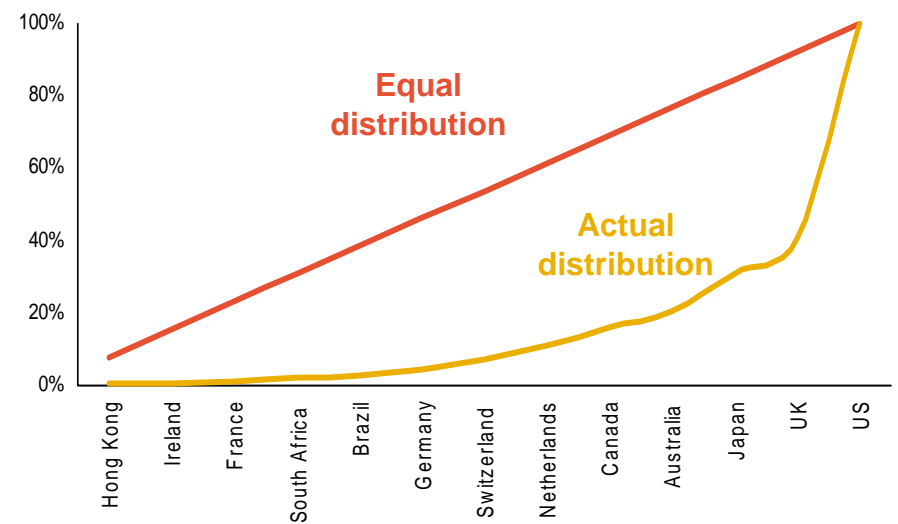
Lorenz curve for GDP in 2013

Lorenz curve for pension assets in 2013

Gini coefficient = 63%



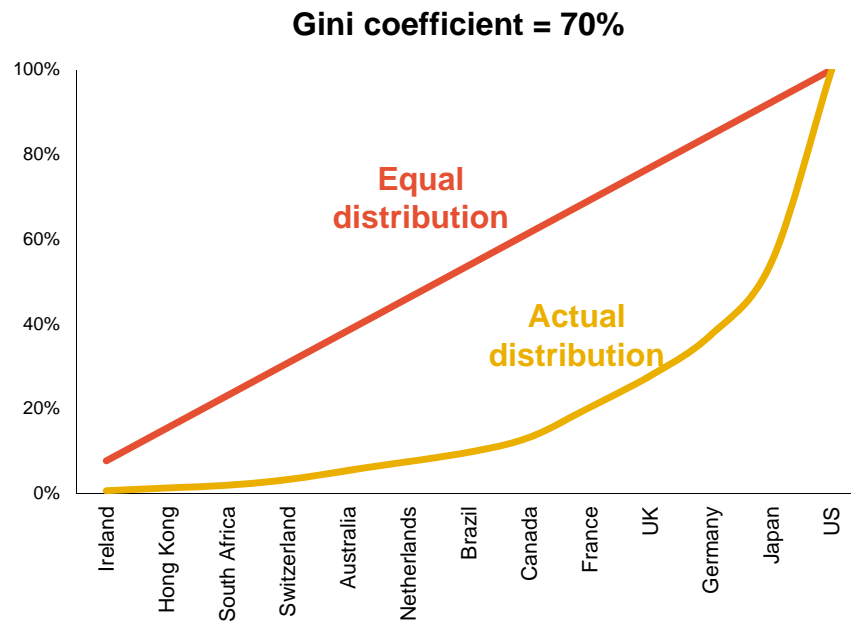
Gini coefficient = 77%



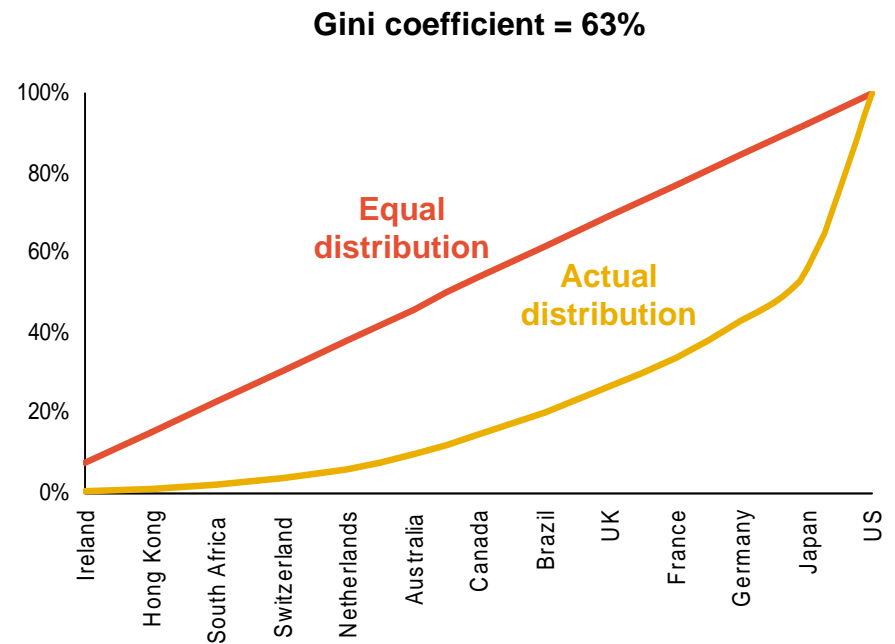
- The lower Gini coefficient for GDP (63%) relative to pension market size (77%) suggests that the global pension asset pool is more concentrated than what would be suggested by their GDP levels. This could be explained by a number of factors including but not limited to a more developed capital market and a more mature pension system within the leading markets.

# Gini coefficient - GDP 2003 vs. 2013

Lorenz curve for GDP in 2003



Lorenz curve for GDP in 2013



- The Gini coefficient for GDP has dropped over the last 10 years, from 70% in 2003 to 63% in 2013, showing a less concentrated GDP for the markets included in this analysis.

# Methodology

## Asset estimation

- In this analysis we seek to provide estimates of pension fund assets (i.e. assets whose official primary purpose is to provide pension income). This data is comprised of:
  - Hard data typically as of year-end 2012 (except for Australia which is from June 2013 and the UK for which part of the data was available as of December 2010) collected by Towers Watson and from various secondary sources.
  - Estimates as at year-end 2013 based on index movements.
- Before 2006 we focused only on 'institutional pension fund assets', primarily 2nd pillar assets (occupational pensions). Since 2006, the analysis has been slightly widened, incorporating DC assets (IRAs) within US's total pension assets. The objective was to better capture retirement assets around the globe and expand the analysis into the 3rd pillar (individual savings) universe, which is primarily being used for pensions purposes in many markets. Furthermore, this innovation enables us to estimate the global split between DB and DC assets.
- UK's methodology changed as of 2012. The source of data has been changed to be based on information published by Office for National Statistics and other secondary sources.

## Comparison with GDP

- This section compares total pension fund assets within each market to GDP sourced from the IMF

## Comparison with liabilities

- This section compares the evolution of *defined benefit* assets to the evolution of liabilities within each market
- Defined benefit assets are updated to the latest date for which we can obtain hard data for assets (typically year-end 2012). From that date onwards, defined benefit assets are simply updated for asset movements obtained using index estimates.
- We do not use hard figures for liabilities for any period and simply account for the change in liabilities that would result from changes in the corresponding government bond yields
- The asset/liability indicator for each market may change from year to year as our estimated values are updated when hard data becomes available.

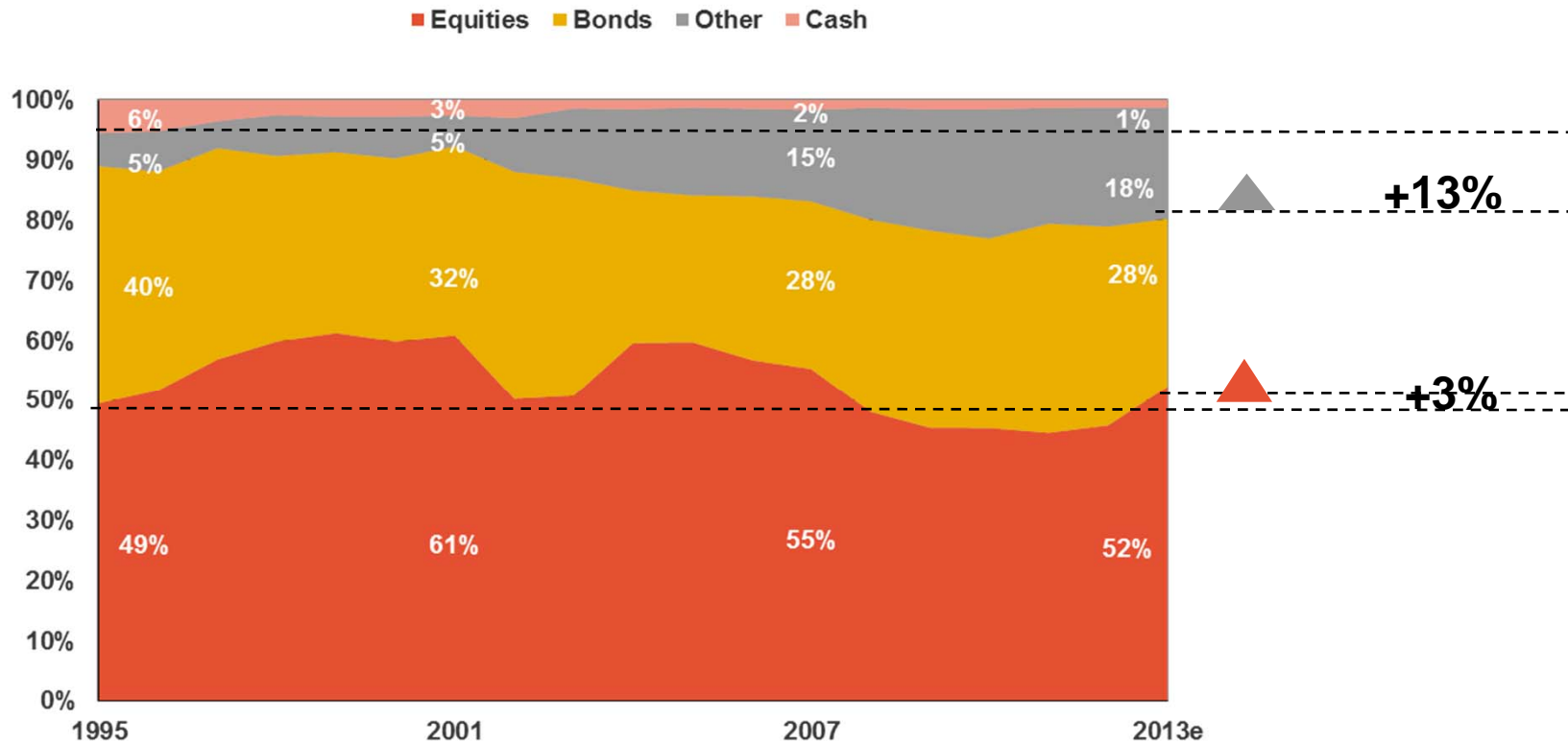


# Global Pension Assets Study 2014

## 2. Asset allocation (P7)

# Pension asset allocation

Aggregate P7 asset allocation from 1995 to 2013

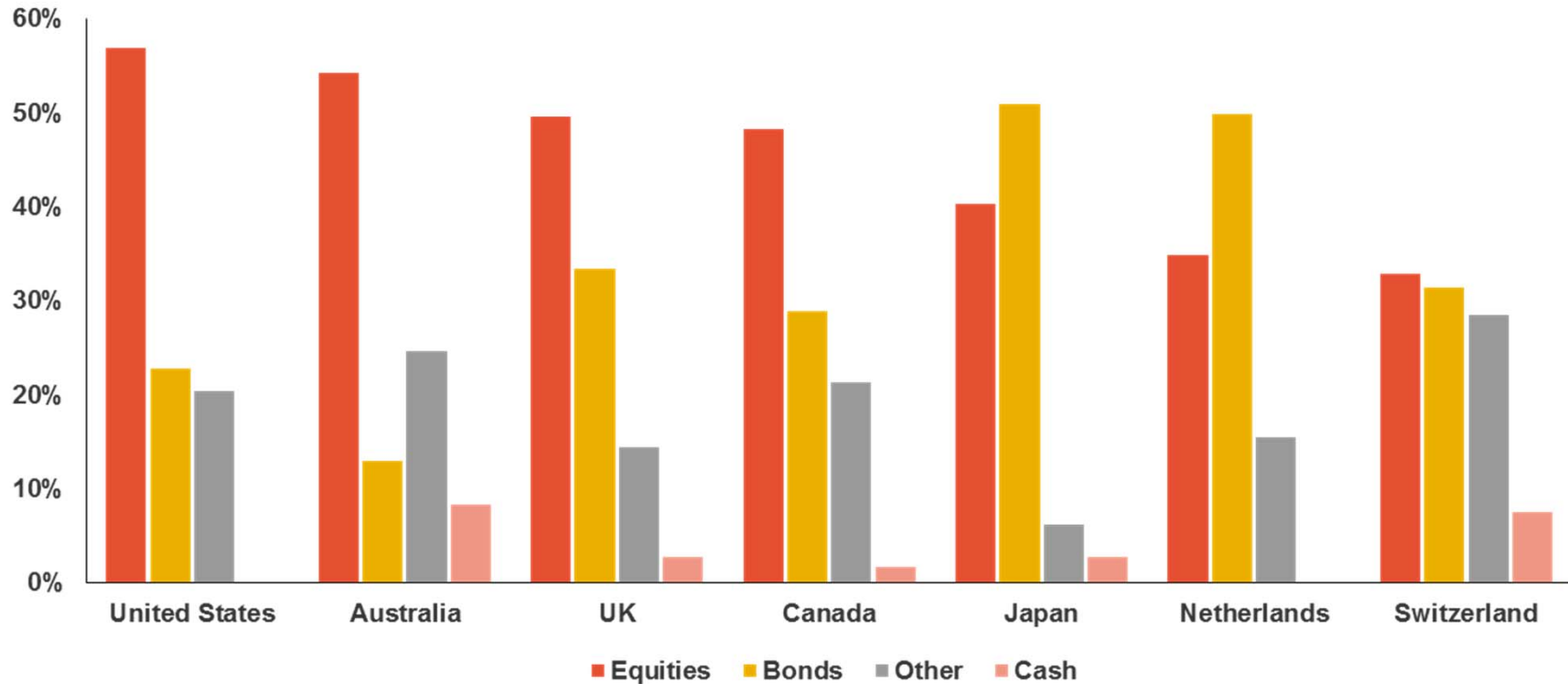


- Since 1995 bonds and cash allocations have been reduced to a varying degree while equity allocation and assets in alternative areas have increased from 49% to 52% and from 5% to 18% respectively.

Source: Towers Watson and secondary sources

# Pension asset allocation

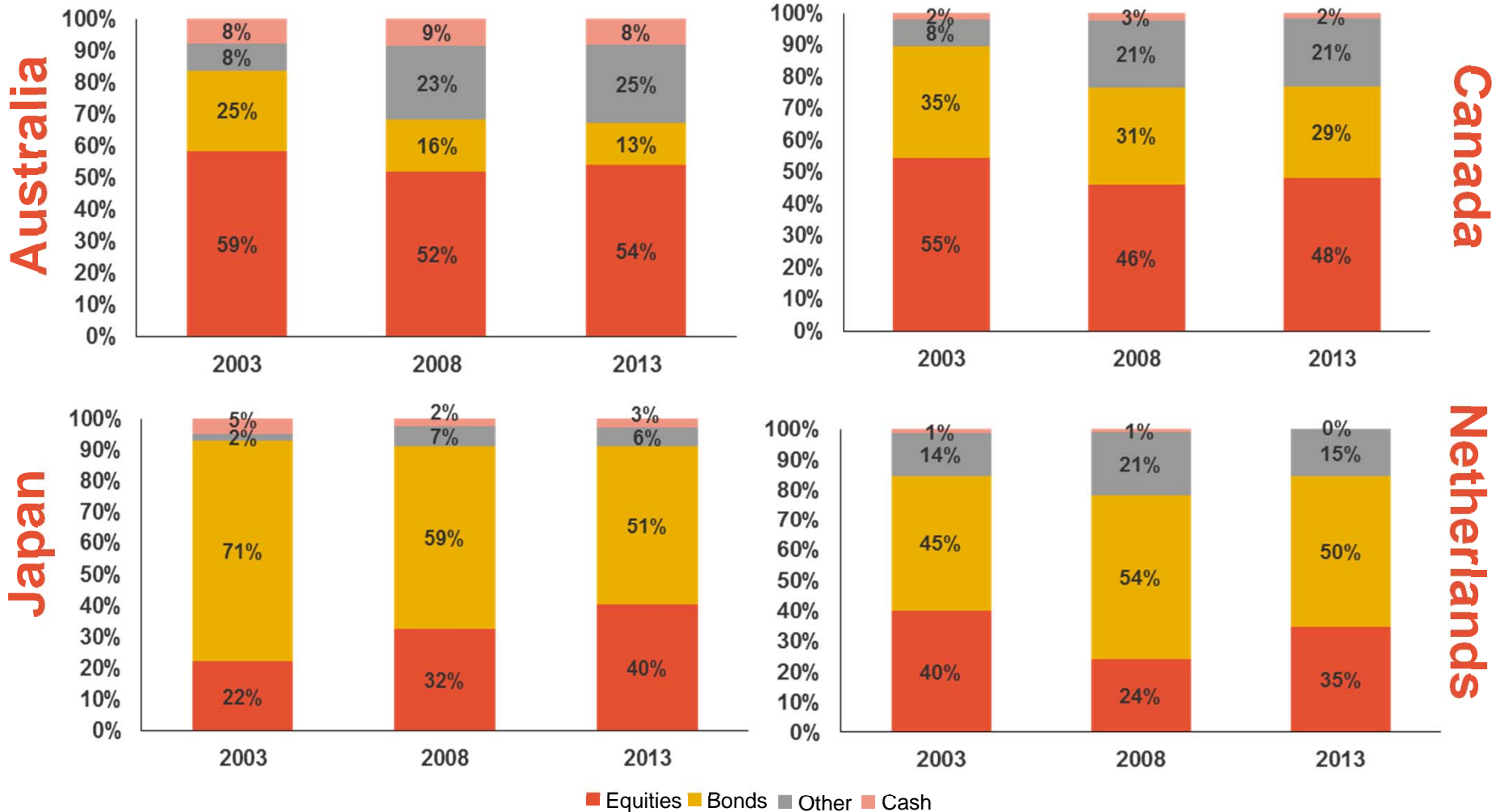
P7 in 2013



- In 2013, the US, Australia, and the UK continued to have above average equity allocations, while Canada retained an equity allocation in line with the average.
- The Netherlands and Japan are the markets with higher than average exposure to bonds, while Switzerland is the most diversified, with similar investments in equities, bonds and other assets.

# Pension asset allocation

Aggregate – end 2003 versus end 2008 versus end 2013

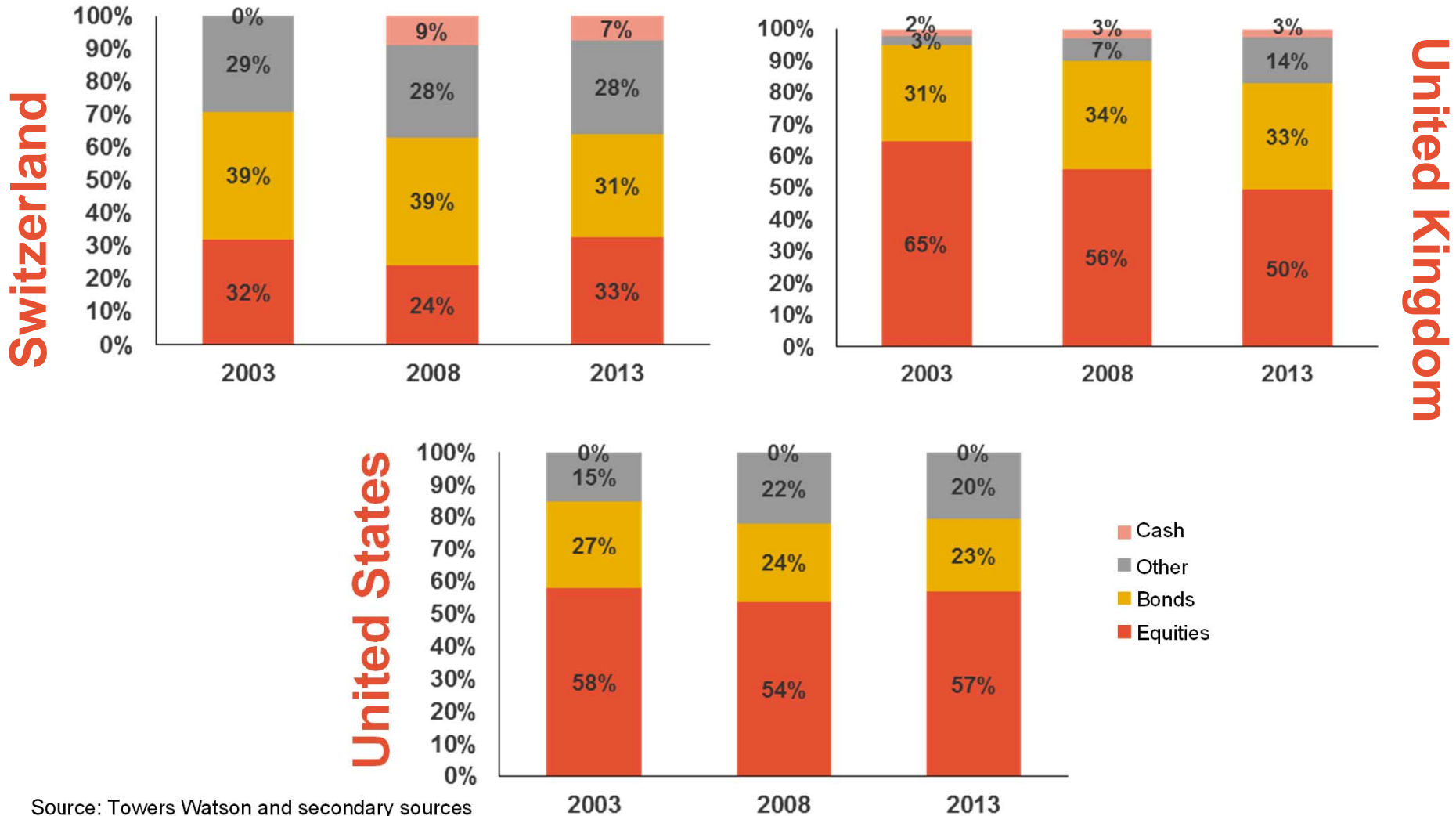


Source: Towers Watson and secondary sources

[towerswatson.com](http://towerswatson.com)

# Pension asset allocation

Aggregate – end 2003 versus end 2008 versus end 2013

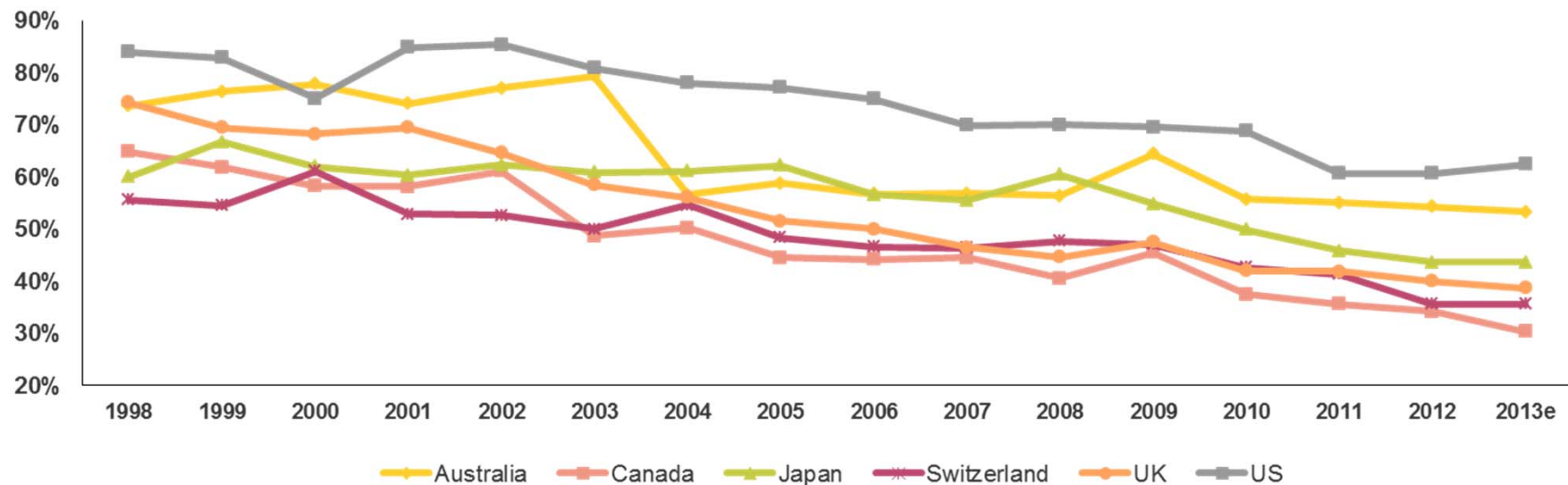


Source: Towers Watson and secondary sources

# Pension asset allocation

## Domestic equity exposure

### Domestic equity over total equity exposure



- There is a clear sign of reduced home bias in equities, as the weight of domestic equities in pension assets portfolios has fell, on average, from 64.7% in 1998 to 44.1% in 2013.
- The US pension market remains the most dependent market on domestic equities while Canada has been the least dependent market on domestic equities over the last 10 years.

Source: Towers Watson and secondary sources

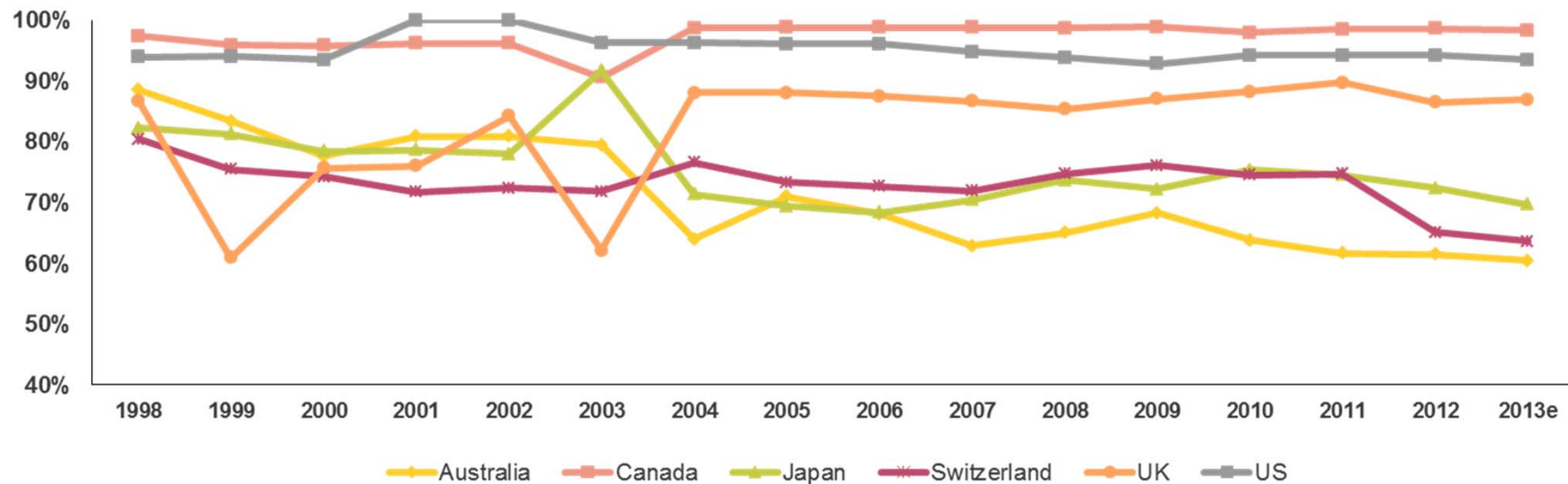
Note: The Netherlands is not considered

[towerswatson.com](http://towerswatson.com)

# Pension asset allocation

## Domestic bonds exposure

### Domestic bonds over total bond exposure



- Regarding fixed income investment, the relationship between domestic and foreign bonds has remained high. On average, the allocation to domestic bonds as a percentage of total bonds was 88.2% in 1998 and 79.8% in 2013.
- Canada and the US have most of their fixed income investments in domestic bonds, while Australia is the market with more foreign fixed income exposure than the rest of the markets in the P7.

Source: Towers Watson and secondary sources

Note: The Netherlands is not considered

[towerswatson.com](http://towerswatson.com)

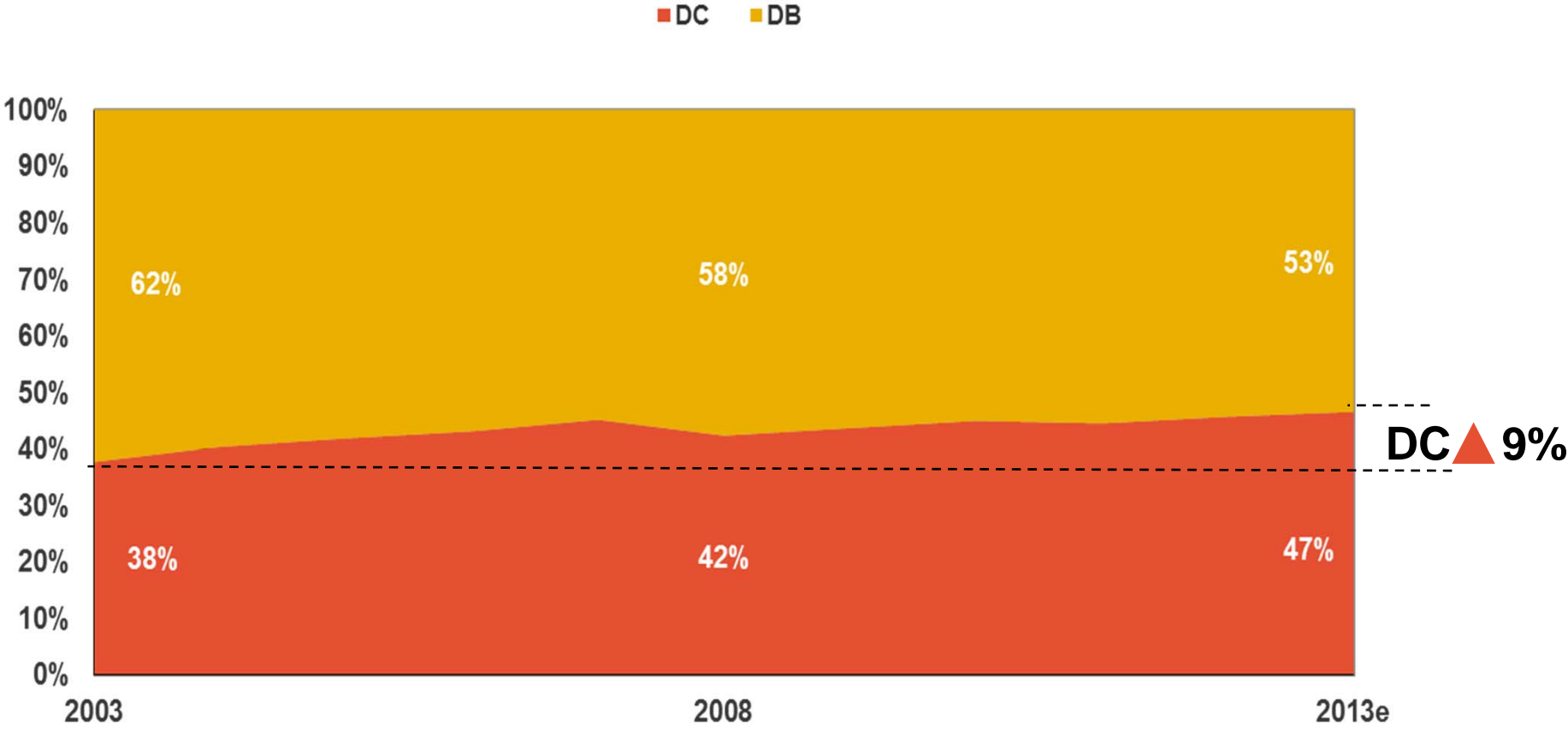


# Global Pension Assets Study 2014

## 3. DB/DC split (P7)

# DB/DC asset split

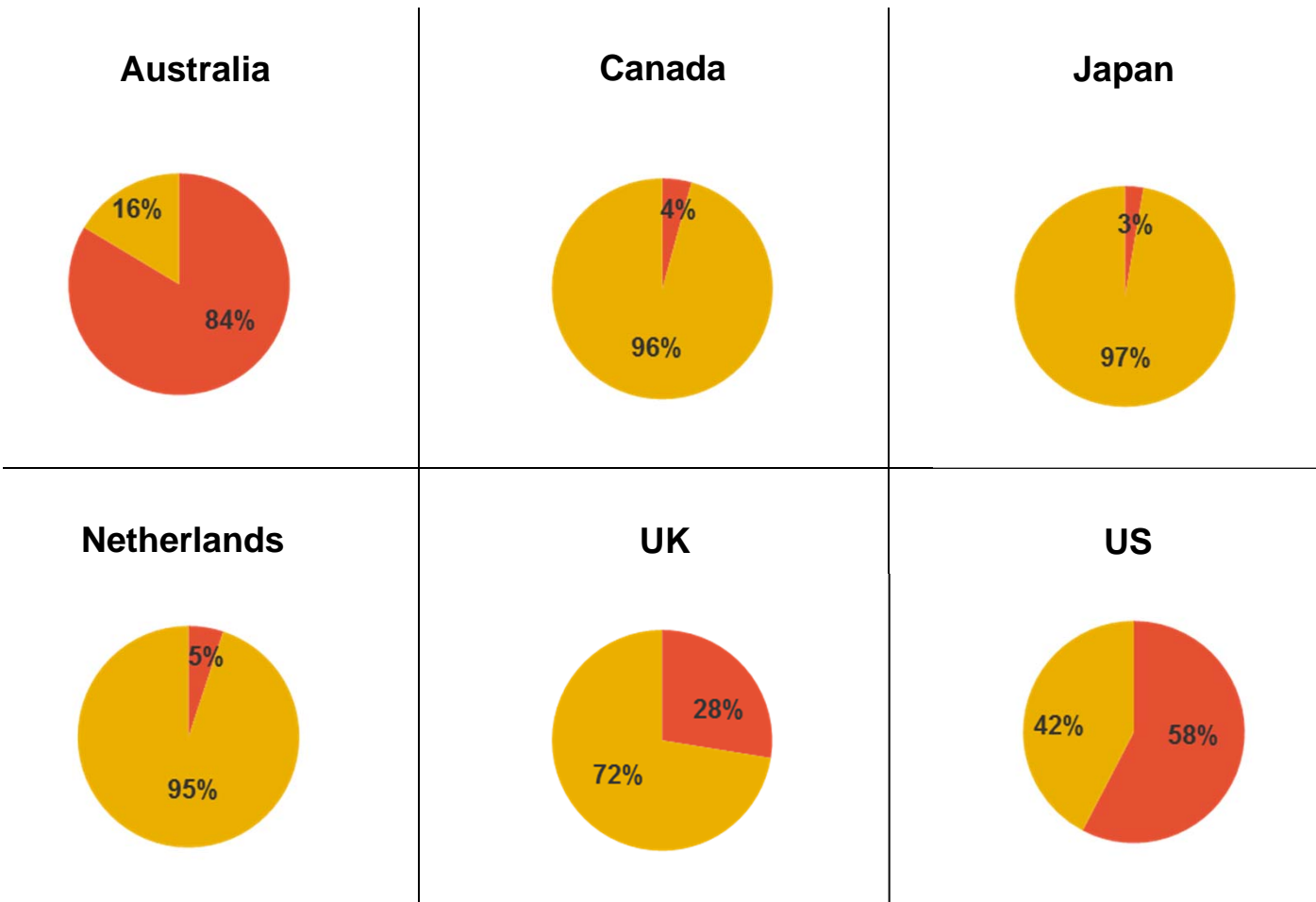
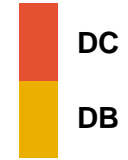
Change over the last 10 years



Source: Towers Watson and secondary sources

# DB/DC asset split per market

P7 in 2013



Note:  
In Switzerland DC stands for cash balance, where the plan sponsor shares the investment risk and all assets are pooled. There are almost no pure DC assets where members make an investment choice and receive market returns on their funds. Therefore, this year we decided to exclude Switzerland from the DB/DC assets split analysis.

Source: Towers Watson and secondary sources

[towerswatson.com](http://towerswatson.com)

## DB/DC asset split

### Change over the past years

- The markets with a bigger proportion of DC assets relative to DB in 2013 are Australia with 84% and the US with 58%.
- Japan, Canada and the Netherlands have only 2.7%, 4.3% and 5.1% respectively of DC assets in 2013.
- DC pension assets from the P7 have grown from 37.7% in 2003 to 46.6% in 2013.
- During the last 10 years DC assets have grown at a rate of 8.8% pa while DB assets have grown at a slower pace of 5.0% pa.

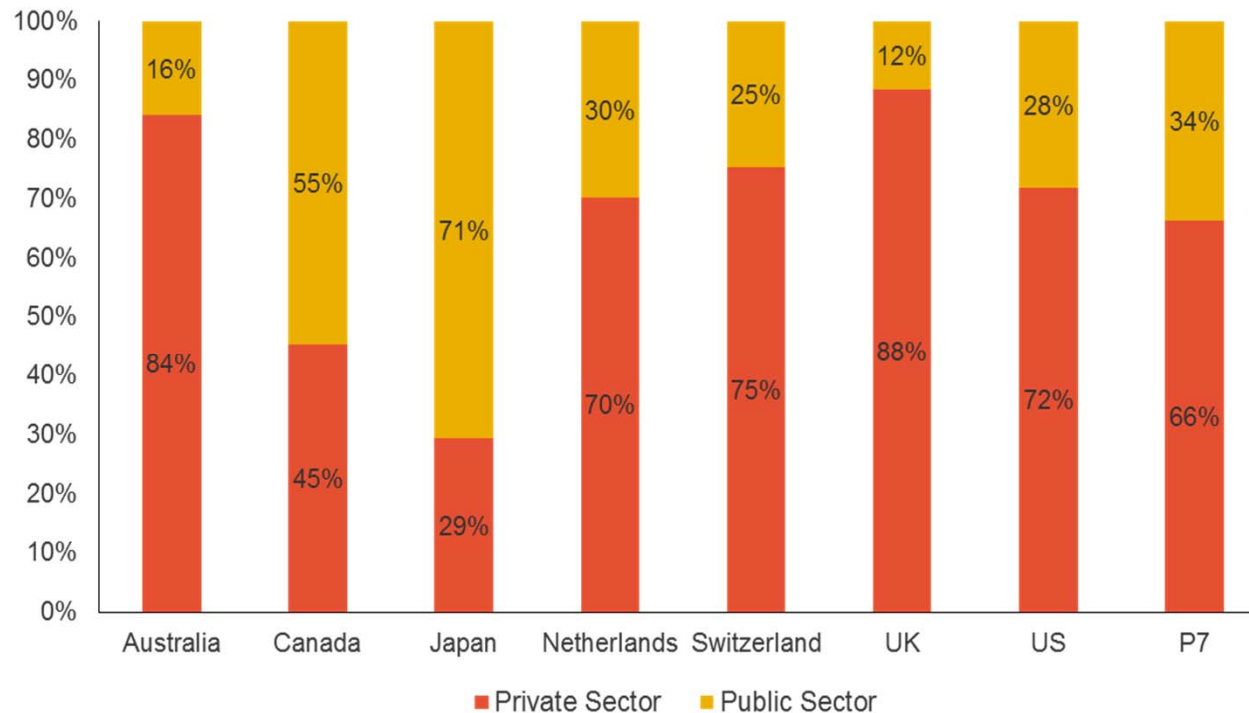


# Global Pension Assets Study 2014

## 4. Public/private sector allocations (P7)

# Public vs. private sector

By markets – estimate values at 2012



- Considering the pension assets of the P7 group, 66% of them are held by the private sector and 34% by the public sector.
- In the UK and Australia the private sector holds the biggest portion of pension assets, accounting for 89% and 84% respectively of total assets in 2012.
- Canada and Japan are the only two markets where the public sector holds more pension assets than the private sector, holding 55% and 71% of total assets respectively.

Source: Towers Watson and secondary sources

Methodology does not provide an estimate for 2013

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