

THE FUTURE OF OLD AGE INCOME SECURITY

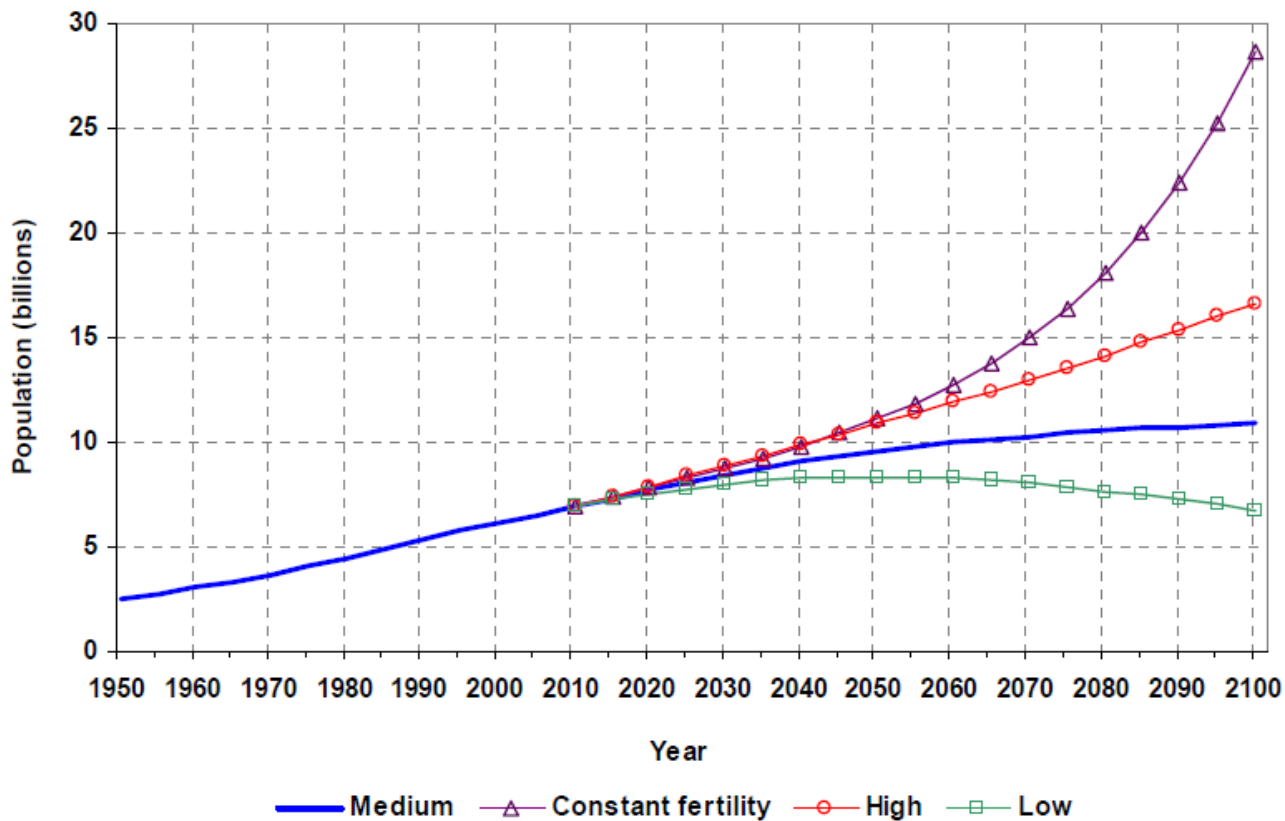
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WORLD POPULATION PROJECTIONS, UN 2012 REVISION (FIGURE 1)

Figure 1. Population of the world, 1950-2100, according to different projections and variants



Range of uncertainty is about 10 billion by the end of this century

GLOBAL POPULATION PROJECTIONS, UN 2012 REVISION

- The population of the world is estimated to be about **7.2** billion by mid-2013, and is projected to increase to **8.1** billion by **2025**, **9.6** billion by **2050** and to **10.9** billion by **2100** (*Medium variant projection*)
- The high variant projection for the world population for the year **2100** is **16.6 billion** and the low variant projection is **6.8 billion**. There is considerable variation in the projected population size by variant chosen. As Figure 1 shows, in 2100, the difference between low and high population variant is about 10 billion.
- Current and future estimates of fertility rates, and 'life expectancy at birth' are among the most important determinants of population projections.

TABLE 1A: SELECT INDICATORS OF THE AGED BY REGION

Country or area	Population aged 60 years or over							
	Number (thousands)		Proportion of total population (percentage)		Share of persons aged 80 years or over ¹ (percentage)		Sex ratio, 2012 (men per 100 women)	
	2012	2050	2012	2050	2012	2050	60+	80+
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
WORLD	809 743	2031 337	11	22	14	20	84	61
More developed regions ^a	279 287	418 326	22	32	20	29	75	52
Less developed regions ^b	530 455	1613 011	9	20	11	17	89	71
Least developed countries ^c	46 389	181 568	5	11	8	10	86	81

a More developed regions comprise all regions of Europe and Northern America, as well as Australia, Japan and New Zealand.

b Less developed regions comprise all regions of Africa, Asia (excluding Japan) and Latin America and the Caribbean, as well as the regions of Melanesia, Micronesia and Polynesia.

c The least developed countries, as designated by the United Nations General Assembly in 2011, comprise 48 countries including 33 in Africa, 9 in Asia, 1 in Latin America and the Caribbean and 5 in Oceania. The least developed countries are included in the less developed regions.

1 Persons aged 80 years or over (the "oldest old") as a percentage of the population aged 60 years or over.

Source: United Nations Population Division, available at

http://www.un.org/en/development/desa/population/publications/pdf/ageing/2012PopAgeingandDev_WallChart.pdf

TABLE 1A: COMMENTS I

- The UN Population projections (2012) indicate that the ageing phenomenon is global and its extent is accelerating.
- Globally, the number of individuals above 60 (henceforth the elderly) is projected to increase from 809.7 million in 2012 to 231.3 million in 2050—an increase of two and a half times in less than forty years.
- Globally, the proportion of persons above 60 will rise from 11 percent of the total in 2010 to 22 percent in 2050; while the old-old (those above 80 years) will constitute a fifth of those above 60 years by 2050. As resource needs, particularly for healthcare, increase disproportionately with age, the rise in the share of old-old is particularly significant for financing old age.
- The share of elderly in the developed regions, however, will decline from slightly above one third in 2012 to only one fifth in 2015. Thus, much of the increase will be in less and least developed regions.

TABLE 1A: COMMENTS II

- The feminization of the elderly is evident from the 2012 data on sex ratio (Men per 100 women) of 84 for those above 60 and only 61 for those above 80 years of age.
- This suggests that any financing arrangement for old age must have provision for addressing longevity, inflation and survivors' risks.

TABLE 1B: SELECT INDICATORS OF THE AGED BY REGION

Country or area	Life expectancy at age 60, 2010-2015		Proportion living independently, 60 years or over (percentage)		Old-age support ratio ⁵		Proportion in labour force, 60 years or over ⁶ (percentage)	
	Men	Women	Men	Women	2012	2050	Men	Women
	WORLD	18	22	40	39	8	4	42
More developed regions ^a	21	25	75	73	4	2	26	15
Less developed regions ^b	18	20	28	25	11	4	50	22
Least developed countries ^c	16	17	12	13	16	9	68	43

a More developed regions comprise all regions of Europe and Northern America, as well as Australia, Japan and New Zealand.

b Less developed regions comprise all regions of Africa, Asia (excluding Japan) and Latin America and the Caribbean, as well as the regions of Melanesia, Micronesia and Polynesia.

c The least developed countries, as designated by the United Nations General Assembly in 2011, comprise 48 countries including 33 in Africa, 9 in Asia, 1 in Latin America and the Caribbean and 5 in Oceania. The least developed countries are included in the less developed regions.

5 Number of persons aged 15 to 64 years per person aged 65 years or over

6 Proportion of persons aged 60 years or over who are economically active, as estimated and projected by the International Labour Organization (ILO).

Source: United Nations Population Division, *available at*

http://www.un.org/en/development/desa/population/publications/pdf/ageing/2012PopAgeingandDev_WallChart.pdf

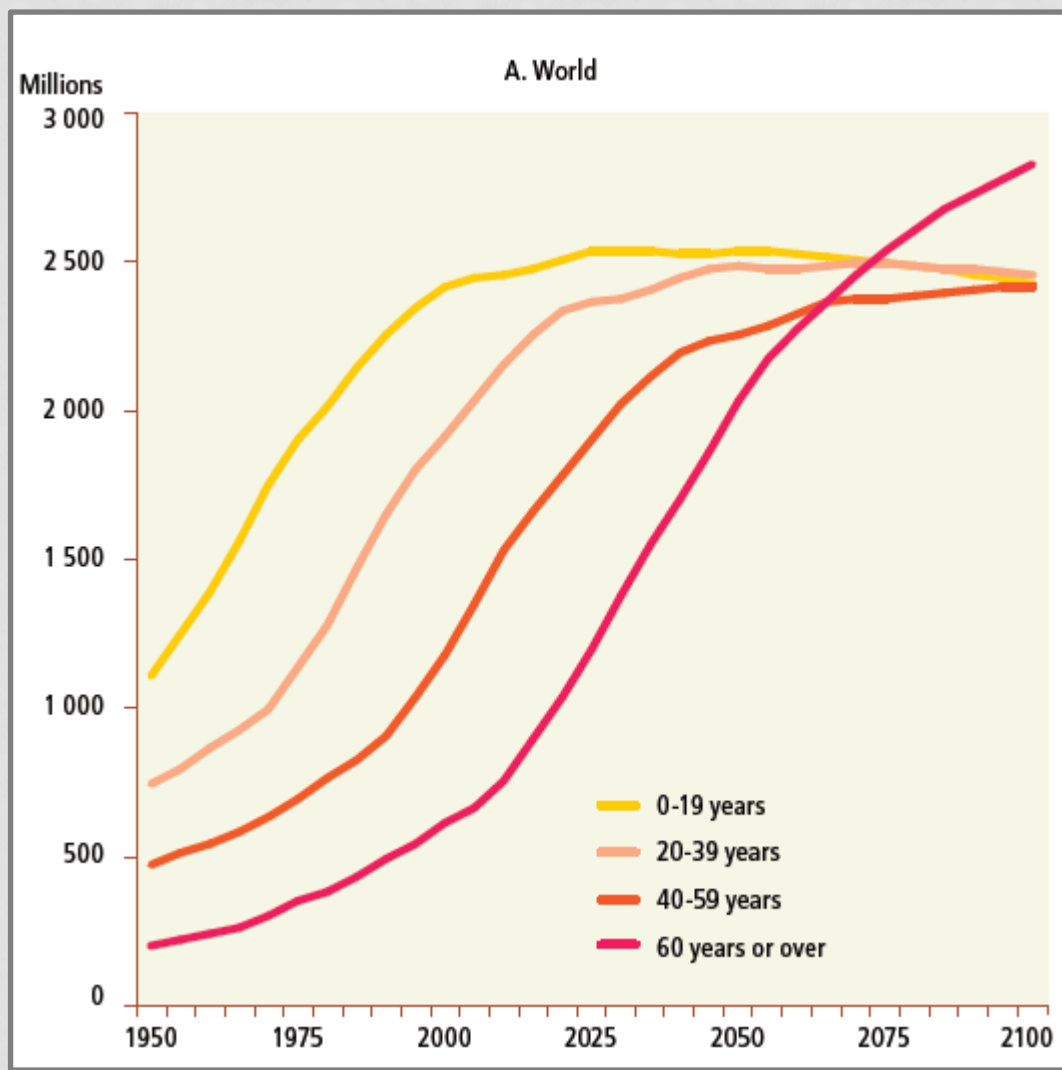
TABLE 1B: COMMENTS

- For analyzing financing old age, it is 'life-expectancy at age 60' that is relevant.
- For 2010-2015, this is projected globally to be 18 years for men and 22 years for women. The differences in life expectancy are positively correlated with income levels. As the current low and middle income countries progress towards higher income levels, the differential may however narrow among regions, but widen among men and women.
- There is a tendency of the elderly for living independently, with globally about two-fifths of men and women exhibiting this tendency. However, this tendency is also positively correlated with income.

TABLE 1B: COMMENTS

- Higher proportion of elderly living independently imposes not just financial challenges but also challenges related to delivering public services to them.
- Globally, only about two-fifths of men and one-fifth of women above 60 are participating in the labor force. This ratio however declines with rising incomes. Nevertheless, obtaining at least a portion of income in retirement from labor market activities will be essential, requiring not just changes in the labor market but also attitudinal changes by all stakeholders. This was eloquently emphasized in Professor Butler's scholarship.

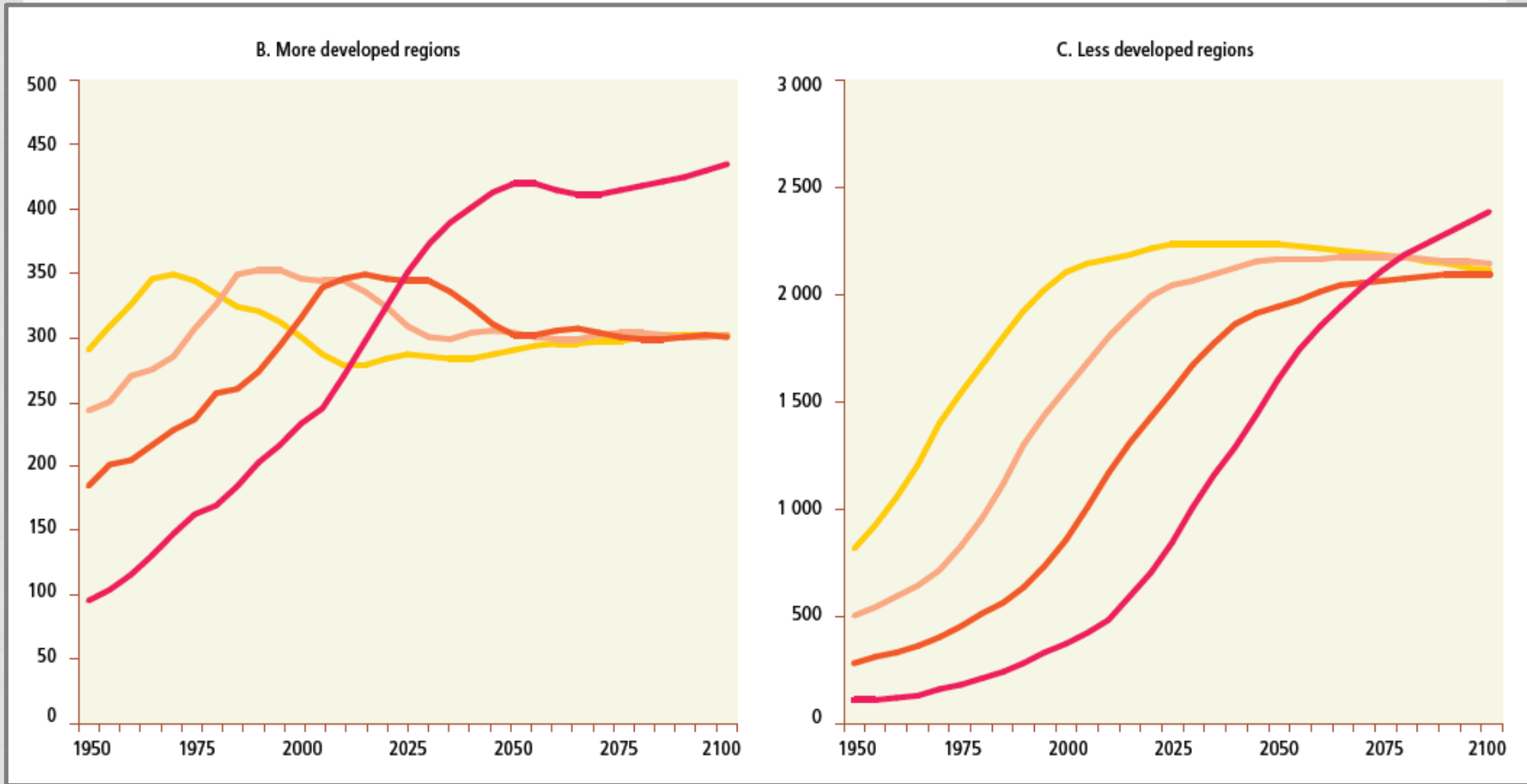
Figure 1A: Population by broad age group (world)



Source: United Nations Population Division, available at

http://www.un.org/en/development/desa/population/publications/pdf/ageing/2012PopAgeingandDev_WallChart.pdf

Figure 1B: Population by broad age group(millions) More developed regions, less developed regions



Source: United Nations Population Division, available at

http://www.un.org/en/development/desa/population/publications/pdf/ageing/2012PopAgeingandDev_WallChart.pdf

SELECT DEMOGRAPHIC INDICATORS OF FIVE MOST POPULOUS COUNTRIES: TABLE 2

Country	2013			2025			2050		
	Total Population*	60+	80+	Total Population	60+	80+	Total Population	60+	80+
China	1385.6	192.6 (13.9)	22.2 (1.6)	1449.0	289.3 (20.0)	29.3 (2.0)	1385.0	454.4 (32.8)	90.4 (6.5)
India	1252.1	103.9 (8.3)	10.0 (0.8)	1418.7	156.6 (11.0)	14.4 (1.0)	1620.1	296.5 (18.3)	37.2 (2.3)
USA	320.1	63.2 (19.7)	11.8 (3.7)	350.6	86.4 (24.6)	2.7 (1.0)	400.9	108.2 (27.0)	9.6 (3.0)
Indonesia	249.9	20.2 (8.1)	2.0 (0.8)	282.0	33.9 (12.0)	15.2 (4.3)	321.4	67.7 (21.1)	31.7 (7.9)
Brazil	200.4	22.4 (11.2)	3.2 (1.6)	217.5	35.7 (16.4)	5.2 (2.4)	231.1	66.9 (28.9)	15.8 (6.8)

*Population figures are in millions

Note: Numbers in parentheses denote the percentage of total population over 60/80 years in a given year

Source: [United Nations Department of Economic and Social Affairs/Population Division, World Population Prospects: The 2012 Revision, Key Findings and Advance Tables](#)

TABLE 2 : COMMENTS

- By 2050, China will have around 450 million people over 60 years of age and India will have nearly 300 million people over 60 years of age.
- The number of elderly in United States will be over 100 million by 2050, and will be close to 70 million in Indonesia and Brazil.
- Above figures suggest that the world will face challenges in financing old age and facilitating productive ageing in these countries.

GLOBAL PENSION ASSETS STUDY(GPAS), 2013
TOWERS WATSON

Available at: <http://www.towerswatson.com/en-ZA/Insights/IC-Types/Survey-Research-Results/2013/01/Global-Pensions-Asset-Study-2013>

GPAS: TABLE 1

	Total Assets 2012 (USD billion)	% GDP (Local currency)
Australia	1,555	101%
Brazil ¹	340	14%
Canada	1,483	84%
France	168	7%
Germany ²	498	15%
Hong Kong	104	40%
Ireland	113	55%
Japan	3,721	62%
Netherlands	1,199	156%
South Africa	252	64%
Switzerland ³	732	118%
UK	2,736	112%
US	16,851	108%
Total	29,754	78%*

¹ Brazil Pension Assets only include those from closed entities

² Only collect pension assets for company pension schemes

³ Only includes total of autonomous pension funds

* Assets/GDP ratio for the world is calculated in USD and assets were estimated as of 31 Dec 2012

Source: Global Pension Assets Study, 2013, Towers Watson, available at <http://www.towerswatson.com/en-ZA/Insights/IC-Types/Survey-Research-Results/2013/01/Global-Pensions-Asset-Study-2013>

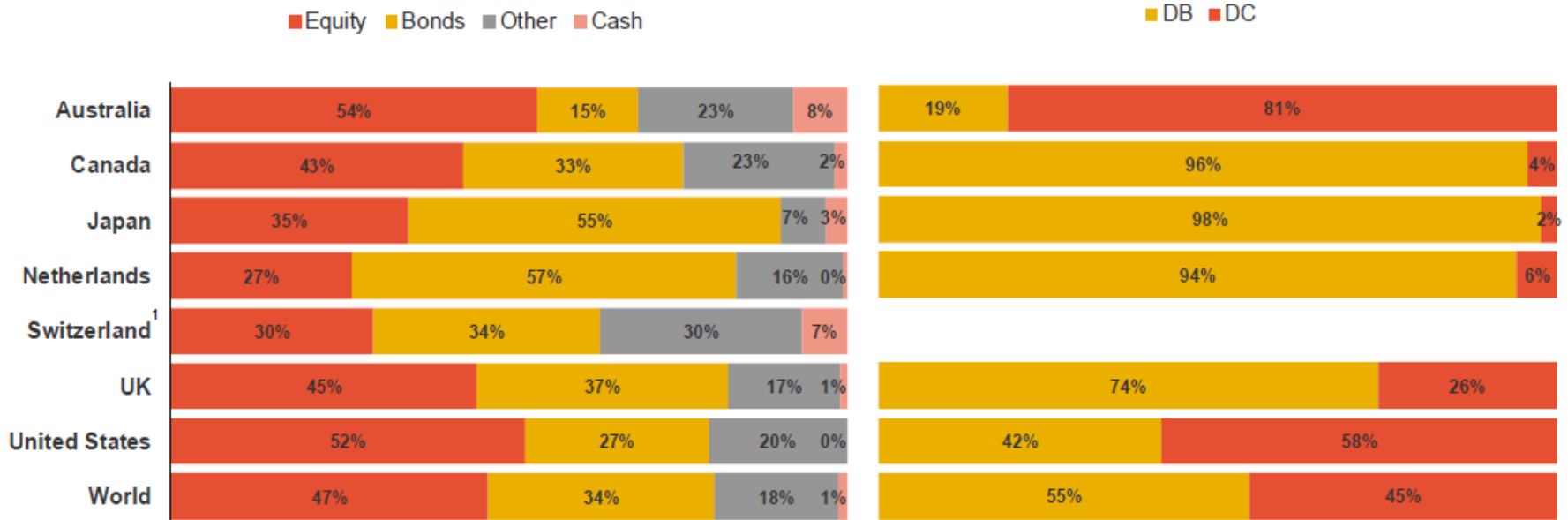
GPAS: TABLE 1: COMMENTS

- The study covers 13 major pension markets with total assets of USD 29,754 billion, accounting for 78% of GDP of these countries (Table 1)
- The ten year compound annual growth rate in USD terms in total assets was 7.3%
- The US alone accounted for 57% of total assets in 2012, a marginal decline from about 60% in 2002. The US, UK, and Japan together accounted for nearly four-fifths of the total pension assets in 2012.
- Among Asian economies, only Japan and Honk Kong are included in the study.

GPAS: TABLE 2

Asset Allocation 2012

DB/DC Split 2012



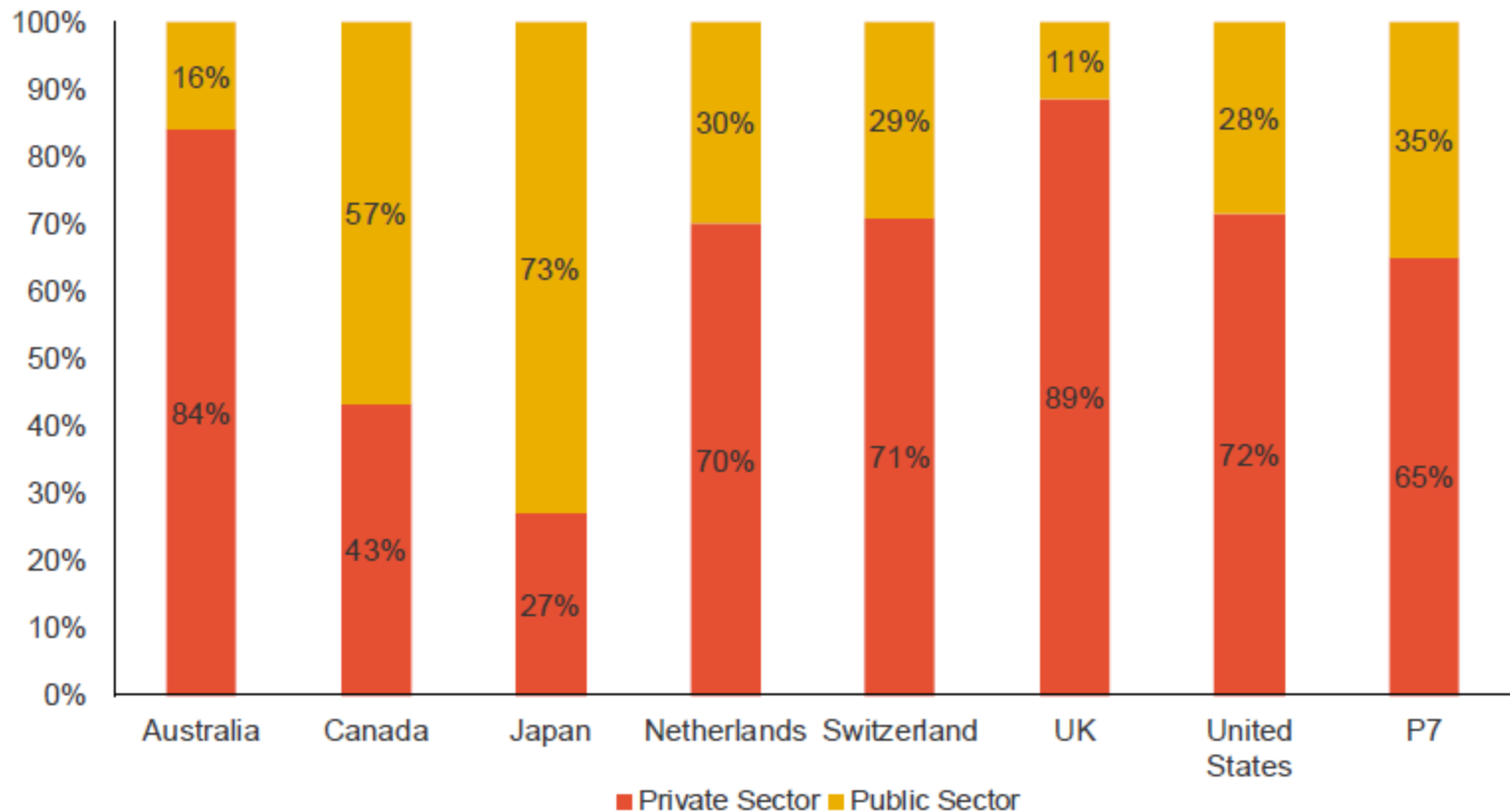
¹ DC assets in Switzerland are cash balance plans and are excluded from this analysis

GPAS: TABLE 2: COMMENTS

- The asset allocation varies significantly across countries with Australia, Canada, UK and United States exhibiting greater preference towards investment in equities than other markets.
- Investment in assets other than equities and bonds is also significant
- The defined benefit (DB) and defined contribution (DC) also varies markedly across countries. Thus, in Australia, 81% of the assets are in DC, but the corresponding share in Canada, Japan, and Netherlands is only 4 per cent, 2 per cent, and 6 per cent respectively.

GPAS: TABLE 3

Public vs. Private Sector (By markets, estimated value at 2011)



GPAS: TABLE 3 : COMMENTS

- Only in Japan and Canada are the majority of pension assets owned in the public sector
- An overwhelming proportion of the pension assets are in the private sector in Australia, Netherlands, Switzerland, UK and the US.

GLOBAL PENSION ASSETS STUDY, 2013

TOWERS WATSON

Commentary on current issues		Watch out in 2013 for...	Long-term trend
Pension tension	Increased awareness of intergenerational fairness and associated societal pressure	Continuing tension between state- vs self-provision; public vs corporate	Attention to longer-term sustainability issues in pension provision
DB	Attention to managing a volatile balance sheet; sponsor challenges	Ongoing attention to managing liabilities and deficits	Reduction in equities with focus on alternative assets and de-risking strategies
DC	Improvement to DC arrangements and communication with members required	Evaluating the impact of regulation changes Focus on risk management and governance of DC arrangements	Increased competition extends DC product range and reduces costs Improved technology delivering effective planning tools
Value for money	Development towards a more effective 'food chain' where expense on various activities has a better value proposition	Greater scrutiny of the value proposition; more attention given to smart beta	More effective food chain with better alignment between asset owners and their external agents
Regulation	More regulation and legal challenges for pension funds	Impact on the industry of the possibility of Solvency II and transaction taxes; sponsor-fiduciary tension	Pressure on the industry from the costs of compliance and unintended consequences of new regulation
Governance	Improved recognition of return on governance driving increased focus on risk management	Growth in fiduciary management appointments Increased attention to risk and risk management	Further change in organisational design – non-executive boards, delegated executives, fiduciary management
Sustainability in investment	Growing interest from institutional investors to consider longer-term sustainability factors	Difficulties with balancing long-term sustainable investment and short-term targets in current market conditions	Better tools and models to cope with the transformation anticipated