

ASSET ALLOCATION OF PENSION FUNDS AROUND THE WORLD

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CONTENTS

1.	Introduction	
2.	The countries selected for comparison	2
3.	The available data • OECD	
	Melbourne Mercer Global Pension Index	
	Mercer Asset Allocation Survey in Europe	
	Additional data	
	A summary of the global scene	12
4.	Benchmarking Australia	14
	Data for Australia	
	Factors affecting asset allocation in other countries	
	Factors affecting asset allocation in Australia	16
	Conclusions	17
Glo	ossary	18

1

Introduction

The asset allocation of private pension plans varies greatly around the world. For example, a recent OECD publication¹ showed that for OECD countries the investment in equities ranged from less than 10 per cent of pension fund assets in several countries (including Germany and Japan) to more than 45 per cent in Australia and the USA. This difference represents only one of several key differences of pension fund asset allocation between countries.

This report will survey the data available and comment on some of the causes of these differences. It will also compare the Australian position and briefly discuss some of the reasons for the asset allocation within the Australian superannuation sector.

This report has been prepared for the Financial Services Council (FSC) and may be used by the FSC as part of its submission to the Financial System Inquiry and in other public submissions, providing the report is used in its entirety.

This report does not represent investment, taxation or legal advice.

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¹ OECD (2013), Pension Markets in Focus, Figure 8.

2

The countries selected for comparison

Before reviewing the actual data, it is appropriate to consider the countries that have been chosen for the comparison in this report. We have selected the following 12 countries:

- Australia
- Canada
- Chile
- China (mainland)
- Denmark
- Hong Kong
- Japan
- Korea (South)
- Netherlands
- Switzerland
- United Kingdom (UK)
- United States of America (USA)

The choice of a restricted number but diverse set of countries enables us to concentrate on the reasons for the different results whilst also ensuring that the report does not become excessively long or complex.

The reasons for the selection of these countries include:

- In terms of pension fund assets held within OECD countries, the seven most important countries (in order of asset values) are the USA, the UK, Japan, Australia, the Netherlands, Canada and Switzerland. These countries represent more than 90 per cent of all pension fund assets in OECD countries.²
- Denmark was the top country in the 2013 Melbourne Mercer Global Pension Index thereby indicating the strength of its retirement income system.³
- Chile has been included as it has a well-developed defined contribution system based on its significant reforms in the 1980s.
- Mainland China and South Korea have been included as developing economies within the Asian region with emerging pension systems.

² OECD (2013), Pension Markets in Focus, Figure 4.

³ Mercer (2013), Melbourne Mercer Global Pension Index, Australian Centre for Financial Studies.

• Finally Hong Kong, as distinct from mainland China, has been added as it has well-developed financial markets as well as a mandatory defined contribution system, which was broadly based on the Australian system.

This selection also provides us with a geographical spread with five countries from Europe, three from the Americas, three from Asia as well as Australia.

3

The available data

Before we consider the data that is available, it needs to be recognised that comprehensive data in many countries is simply not available in respect of the total pension industry. Hence, in some cases, surveys or estimates will be used. Nevertheless, given that we are interested in a high level perspective or overall trends, such an approach is appropriate for the purpose of this work.

The other point to note is that the classification of asset classes can vary considerably. For example, while some countries may consider property to be a key asset class, others include it in other assets. Similarly the definition of alternative assets varies.

Another limitation is that in some countries insurance contracts, mutual funds and other managed products represent an important part of the pension industry so that a detailed analysis of all the assets is not possible.

OECD

The OECD gathers considerable information in respect of pension funds from both OECD and non-OECD countries. Table 1 shows the pension fund asset allocation in 2012 for selected investment categories in 11 of the 12 nominated countries with mainland China missing. Unfortunately many countries have considerable investments in mutual funds which represent a range of asset classes. Similarly several countries have a significant portion of the investments classified as Other.

Notwithstanding the shortcomings of this data, several comments are worth noting:

- The exposure to bills and bonds (ignoring cash) varies from less than 10% in Australia and Korea to more than 65% in Denmark.
- There is also considerable diversity as to whether the bills and bonds are primarily
 issued by public administration or the private sector. Only Australia and Chile have a
 majority issued by the private sector, possibly indicating the lower level of government
 debt in these countries.
- Considering cash and deposits only, the variety is considerable, ranging from almost zero in several countries to 18% in Australia and 57% in Korea. The relatively high figure for Australia is likely to be caused by the need for some liquidity in a market offering fund choice as well as the asset allocation of self-managed super funds.
- The exposure to shares also varies considerably ranging from less than 10% in Korea and Japan to 46% in Australia and 57% in Hong Kong.

Table 1: Pension fund asset allocation for selected investment categories in certain countries

Country	Cash & Deposits	Bills and bonds (public)	Bills and bonds (private)	Loans	Shares	Land and buildings	Mutual funds	Other
Australia	18.4	1.3	8.3	1.0	46.0	7.4	0.0	17.6 ¹
Canada	2.7	19.5	8.1	0.3	24.6	5.5	34.6	4.7
Chile	0.5	21.4	24.1	1.1	12.5	0.0	40.3	0.1
Denmark	0.4	49.3	16.8	0.1	13.0	1.0	2.3	17.1
Hong Kong	13.3	24.8		0.0	57.4	0.0	0.0	4.5
Japan	5.1	3	6.3	2.8	9.7	0.0	0.0	46.1 ²
Korea (South)	57.8	1.1	0.5	0.0	0.0	0.0	5.9	34.7 ³
Netherlands	1.3	17.0	7.0	3.8	11.6	0.9	51.9	6.5
Switzerland	7.3	1	9.9	3.3	13.0	9.7	42.8	4.0
UK⁴	2.9	12.6	9.3	1.2	29.6	2.8	23.3	18.3 ⁵
USA	0.9	9.4	6.9	0.3	38.2	1.7	22.0	20.7

Notes

- 1 Most of the Other for Australia is pension life office reserves.
- 2 Almost half of Japan's investments are classified as Other which represent accounts payable and receivable as well as outward investments in securities.
- 3 Most of the Other for Korea represents unallocated insurance contracts.
- There is no data available for the UK for 2012 so the data shown is for 2007. Shares are shown at market value whereas other assets are at book value.
- 5 More than half the Other for the UK is unallocated insurance contracts.

Source: OECD (2013), Pension Markets in Focus, Table A8

It is clear that some developed economies (such as Denmark) have a stronger focus on fixed interest investments whereas other countries (such as Australia and Hong Kong) have a stronger focus on growth assets, including shares.

Melbourne Mercer Global Pension Index

One of the indicators used in the 2013 Melbourne Mercer Global Pension Index is the proportion of pension assets invested in growth assets. The reason for the inclusion of this indicator is that investment performance over the long term represents a key input into the provision of adequate retirement income. As will be discussed later, there are many factors that should be taken into account in determining the appropriate mix of growth and defensive assets within any pension fund. It is also noted that even the terms of growth and defensive assets are somewhat simplistic as some investments, particularly some alternative assets, are difficult to classify into one category.

Nevertheless, Table 2 shows for all the nominated countries (except Hong Kong, which is not included in the index) an estimate of the proportion of pension fund assets invested in growth assets, based on information provided by Mercer colleagues in each country.

Table 2: The proportion of pension fund assets invested in growth assets

Country	Proportion invested in growth assets
Australia	68%
Canada	57%
Chile	43%
China	20%
Denmark	20%
Japan	39%
Korea (South)	6%
Netherlands	24%
Switzerland	51%
UK	53%
USA	53%

As indicated by the OECD data, the Korean funds are heavily invested in cash and insurance contracts, thereby providing the lowest percentage. However the relatively low proportion invested in growth assets in Denmark and the Netherlands, both of which have well regarded pension systems, is noteworthy. It should also be added that both these systems have a strong focus on the provision of pensions which often requires more conservative investments, especially after pensions have commenced payment.

As suggested by the OECD data, Australia has the highest proportion invested in growth assets with 68%. Possible reasons for this outcome will be discussed later. Most other countries have between 40% and 60% invested in growth assets.

Mercer Asset Allocation Survey in Europe

Each year Mercer conducts a survey of European pension plans which provides a comprehensive overview of asset allocation and offers valuable insights into recent trends. The 2013 survey covered more than 1200 pension plans in 13 European countries with assets totalling more than €750 billion.

Table 3 shows the results for the four European countries covered by this report as well as France and Germany. It should be noted that these results are not in respect of the total industry but nevertheless they represent the asset allocation of major pension plans in each country.

The diversity in asset allocation between countries that we have noted previously is again evident, even when the data is restricted to major European pension plans.

For example, the total exposure to equity markets ranges from 11% in Germany to 31% in Switzerland and 39% in the UK. With the exception of France, non-domestic equity investment exceeds the level of domestic equity investments. The level of property investment also varies, ranging from 2% in France and the Netherlands to 15% in Switzerland.

The variety of fixed interest investments is also interesting with domestic government bonds dominating in Denmark, Germany and the Netherlands, non-domestic government bonds important in Switzerland whilst domestic corporate bonds are the main fixed interest investments in France. The UK is the only market where index-linked government bonds represent a significant investment.

However the more interesting results from this survey arise from the trends that are evident over several years.

There has been a significant reduction in equity exposure over several years. For example, in the UK it has reduced from 61% in 2007 to 39% in 2013. This decline reflects a combination of factors affecting defined benefit pension plans including stronger regulation, accounting standards and a maturing of the plans with an increasing importance of pensions in payment. This has led to a reduced tolerance for volatility from both fund trustees and corporate sponsors with corresponding increases in allocation to bonds which are perceived as a better way of matching the liabilities as well as reducing the variability in pension fund liabilities on corporate balance sheets.

Table 3: The asset allocation of major pension plans in Europe

Country	Domestic equity	Non- domestic equity	Domestic gov't bonds	Domestic index-linked gov't bonds	Non- domestic gov't bonds	Domestic corporate bonds	Non- domestic corporate bonds	Other matching assets (bonds)	Property	Cash	Alternatives
Denmark	3%	20%	40%	1%	2%	0%	7%	0%	8%	1%	18%
France	17%	12%	24%	3%	0%	28%	4%	0%	2%	6%	4%
Germany	4%	7%	42%	0%	3%	17%	2%	3%	10%	1%	11%
Netherlands	5%	18%	34%	1%	3%	8%	3%	18%	2%	0%	8%
Switzerland	13%	18%	9%	0%	17%	11%	9%	0%	15%	2%	6%
UK	14%	25%	7%	13%	1%	17%	2%	7%	3%	0%	11%

Source: Mercer (2013), Asset Allocation Survey European Institutional Marketplace Overview.

Similar trends, although not as dramatic, are witnessed when we consider Europe as a whole. For instance, for funds that have assets of at least €2.5 billion (which represents 70% of all assets covered by the survey), the exposure to equities has reduced from 38% in 2010 to 23% in 2013.

Naturally there is a corresponding increase in the investments in other asset classes. For example, these pension funds increased their exposure to bonds from 40% in 2010 to 55% in 2013.

In recent years we have also witnessed an increase in the importance of alternative assets including private debt, hedge funds, infrastructure and agricultural assets. Notwithstanding this increasing diversity, this survey of European pension funds highlights that the major change in recent years has been a reduction in the exposure to equities and an increase in fixed interest investments, including a growing sophistication of liability-driven investment strategies in some markets.

Additional data

The following paragraphs discuss additional data available for individual countries from a range of sources.

Canada

Statistics Canada publishes the market value of assets for trusteed pension funds every quarter, broken down by asset type. For the second quarter in 2013, the major assets are bonds (35.1%), stocks (31.1%) and real estate (8.2%). In addition, 19.7% of assets are classified as other. This data confirms that, after allowing for a portion of the other assets, more than half of Canada's pension fund assets are invested in stocks and other non-fixed income assets.

Chile

Based on information available from the five AFPs who administer private pension plans, we have estimated the overall asset allocation as follows:

Asset class	Percentage
Domestic equities	17.5%
International equities	25%
Domestic fixed interest	17.5%
International fixed interest	20%
Property	10%
Cash and deposits	5%
Other assets (including	5%
infrastructure)	5%

This data confirms that at least half of the assets in the Chilean defined contribution arrangements are invested in growth assets, namely equities and property.

China

Most of the Chinese investment is in fixed interest assets. Multi-asset enterprise annuities are permitted to invest a maximum of 30% in equities. It is expected that this limit may be gradually relaxed in the future.

Hong Kong

The Mandatory Provident Fund Schemes Authority in Hong Kong publishes a regular Statistical Digest providing details of the asset allocation of approved constituent funds by fund types, asset class and geography. As at 30 June 2013, the asset allocation can be summarised as follows:

Asset class	Percentage
Local equities	35%
International equities	30%
Local fixed interest	9%
International fixed interest	10%
Cash and deposits	16%

This information highlights that about two-thirds of the assets held by the mandatory provident funds are invested in equities.

Japan

The Pension Fund Association in Japan lists the asset allocation for Japanese corporate pension funds in 2013 as follows:

Asset class	Percentage
Domestic bonds	28.5%
Foreign bonds	12.2%
Domestic equity	15.8%
Foreign equity	16.0%
Hedge funds	5.3%
Short-term assets (e.g. cash	4.6%
and deposit)	
Other assets	4.3%
General accounts	13.3%

The General Accounts are offered by life insurance companies where there is a guaranteed return of 1.25% plus a dividend determined by the life insurance company each year. Most of the assets in these accounts are invested in Japanese bonds and loans.

This data confirms that Japanese pension funds have 35-40% of their assets in equities and other non-fixed income assets.

Korea (South)

Data from the Korea Financial Supervisory Service show that 54% of the assets are in time deposits with a further 31% invested in guaranteed interest contract products. Only 6% is invested in performance based products with the majority invested in domestic fixed income

products. These figures highlight that the Korean pension funds invest almost solely in fixed interest assets.

UK

An important source of data for pension schemes in the UK is the Purple Book, jointly published by the Pensions Regulator and the Pension Protection Fund. It gives the most comprehensive picture of the risks faced by private defined benefit pension funds. The 2013 publication confirms the decline in equity allocation discussed earlier with 35.1% of assets invested in equities compared to 44.8% invested in government bonds and fixed interest. Investments in hedge funds and property represent 5.2% and 4.7% respectively of these schemes' assets.

Most of the data available in respect of UK pension plans are in respect of defined benefit pension plans where, for reasons outlined earlier, there has been a steady reduction in equity exposure as sponsors and trustees gradually de-risk due to a range of influences. However the UK is gradually moving from defined benefit (DB) schemes to defined contribution (DC) arrangements.

Although the assets in DC plans are much less than the DB assets, the asset allocation may be quite different. For example, one survey⁴ notes that 78% of DC assets are invested in UK and international equities which is very high on an international comparison. However, it should be noted that with the recent closure of many DB plans to new members, many DC members will be under age 40. This younger membership and the popular adoption of lifecycle glide paths mean that a relatively high exposure to equities in these DC plans is not surprising.

USA

The asset allocation for retirement plans at the S&P 1500 companies is available from Mercer's annual survey. The 2012 survey showed that on a weighted by assets basis, the average equity allocation was 46% with the average fixed interest allocation being 42%. The remaining 12% of assets were invested in a range of investments including real estate. It is interesting to note that from 2009 to 2012 the average equity exposure dropped by just 4% with a corresponding increase in the fixed interest exposure.

These results included all forms of retirement plans, including DB and DC arrangements. It's also interesting to consider DC or 401(k) plans only. Recent statistics⁵ showed that these 64,619 plans with total assets of \$1.5 trillion in 2012 had the following asset allocation:

Asset class	Percentage
Equity funds	39%
Company stock	7%
Balanced funds	22%
Bond funds	12%
Guaranteed investment contracts and other stable value funds	10%
Money funds	4%
Other funds	6%

 $\underline{http://www.napf.co.uk/PensionsConnection/DefinedContribution/\sim/media/Membership\%20Documents/PensionsConnection/Even}\\ \underline{ts/DC/2012/DCH160512.ashx}$

11

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⁵ Tabulations from the EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.

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This suggests that, if we allow for 50% equity exposure for the balanced funds and zero in other funds, the exposure to equities amongst DC members is about 57%, much higher than for the industry as whole which was 46%. Possible explanations of this outcome include that DB sponsors and fiduciaries have been de-risking their asset allocation and that the 401(k) members are, on average, younger than their DB counterparts. This result is also in the same direction as that found in the UK.

A summary of the global scene

It is apparent from this survey that there is considerable diversity in respect of the asset allocation of pension funds around the world. In considering the well-established pension industries, we generally observe higher exposure to equity investments in the Anglo-Saxon markets such as Australia, the UK, the USA and Canada but less exposure to equities in some European countries such as Denmark and the Netherlands. However even this pattern is not uniform with Switzerland having a similar exposure to equities as the UK. The importance of equity investments for Japanese and Chilean pension funds is between these two groups of developed economies.

The developing pension markets also have range of outcomes. In mainland China and Korea we see a heavy dependence on fixed interest investments while in Hong Kong we observe the highest exposure to equities of any of the specified countries.

The exposure to property investments also varies, ranging from zero in many countries to approaching 10% in Australia, Canada, Chile and Switzerland.

The reasons for this diversity are many and include the following:

- The risk appetite of the relevant stakeholders. For example, we have observed the reducing level of equity investment amongst DB plans in the UK and other markets as corporate sponsors and trustees introduce a range of de-risking processes.
- The level of guarantees or promises made to the members. In some countries, there are guarantees made through insurance and other contracts which mean that the providers need to match assets and thereby reduce the volatility of the underlying investments. This is particularly true in respect of annuities or pensions in payment.
- The relative importance of DB and DC schemes. For example, the US and UK data suggest that the current investment strategy for DC schemes may be more aggressive than for DB schemes, many of which are reducing their exposure to potentially volatile assets.
- The age profile of the members. With DC plans growing in popularity around the world, individuals are taking on greater responsibilities and risks. This often leads to a derisking strategy as members approach retirement with target date funds being one example of this development.
- The legislative and cultural background. In some countries there are regulations limiting the investments in certain asset classes. In other cases, there are cultural expectations relating to the volatility of benefits or investment returns.
- The state of the local financial markets. Several countries have well-developed financial
 markets, which encourage innovation and a broader range of products and investment
 opportunities. These alternatives tend not to occur where the capital markets are less
 developed.

Table 4 summarises the asset allocation for each of the countries into equities, fixed interest securities and property/other from the sources mentioned above. These figures are based on an analysis of the different data sources and applying some judgement, where necessary. Due to the inconsistencies between the data sources, we have rounded each percentage to the nearest 5%. Notwithstanding these shortcomings, the table highlights the differences around the world with, for example, the investment in equities ranging from less than 5% in Korea to 65% in Hong Kong.

Table 4: A summary of pension fund asset allocation around the world

Country	Equities	Fixed interest	Property and other
Australia	50%	25%	25%
Canada	35%	40%	25%
Chile	40%	45%	15%
China	20%	80%	-
Denmark	20%	65%	15%
Hong Kong	65%	35%	-
Japan	30%	50%	20%
Korea (South)	5%	95%	-
Netherlands	20%	70%	10%
Switzerland	35%	45%	20%
UK	40%	45%	15%
USA	45%	40%	15%

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Benchmarking Australia

Data for Australia

There is no comprehensive data available in respect of asset allocation for the whole Australian superannuation industry. However for default superannuation funds, Table 5 shows the asset allocation of the default investment strategy for the last five years. The table also shows the proportion that these assets represent of all pooled superannuation funds, which excludes small funds and life office statutory funds. The data shows that the default investment strategies have consistently had about half of the assets invested in equities with about 10% invested in property. The Other assets are likely to include a wide range of alternative assets including private equity, hedge funds and infrastructure.

Table 5: Asset allocation for default investment strategies⁶

2009 2010 2011 2012

Asset class	2009	2010	2011	2012	2013
Australian shares	27.8%	29.0%	28.8%	27.5%	26.5%
International shares	22.2%	23.1%	23.5%	23.2%	24.9%
Property	10.4%	9.9%	9.5%	10.1%	9.5%
Australian fixed interest	7.8%	10.1%	10.0%	8.6%	8.5%
International fixed interest	5.7%	5.7%	6.2%	5.4%	5.9%
Cash	12.0%	8.9%	8.4%	8.9%	8.2%
Other	14.2%	13.2%	13.5%	16.3%	16.5%
% of all assets in entities with more than four members	45.5%	45.8%	42.3%	42.9%	43.7%

An important sector of the Australian superannuation industry is the self-managed superannuation funds (SMSFs) which represent about one third of all superannuation assets. This type of funds is uniquely Australian where all the members of each fund must also be the trustees and therefore bear full responsibility of managing the fund for themselves. Table 6 shows the asset allocation of these funds for the last five years, as reported by the Australian Taxation Office.

It is apparent that the asset allocation of SMSFs is quite different from the default strategies shown earlier with a much higher investment in cash and term deposits. One of the reasons for this outcome is likely to be that these members are older, with many in the pension drawdown phase. The other assets include loans and debt securities offset by some borrowings.

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⁶ APRA, Annual Superannuation Bulletins, Table 18.

Notwithstanding the high allocation to cash and term deposits, SMSFs have an allocation to growth assets (such as equities and property) of at least 55%, if one assumes that at least half of the trusts and managed investments are invested in these types of assets.

Asset class 2009 2010 2011 2012 2013 **Shares** 30.9% 33.4% 33.3% 30.4% 32.8% Cash and term 33.0% 30.6% 29.7% 27.5% 28.9% deposits Trusts and managed 20.2% 19.9% 18.7% 17.0% 17.6% investments Property 15.1% 15.6% 15.7% 16.5% 16.1% Other 4.2% 3.6% 3.4% 3.2% 2.9%

Table 6: Asset allocation for the SMSFs

This Australian data suggests that our superannuation industry has about two-thirds of its assets invested in areas that may be broadly defined as "growth" assets, where the actual returns are related to economic performance and therefore may be volatile. On a global comparison, this result is likely to be higher than any of the countries discussed in this report, except for Hong Kong. However it should be noted that the Australian growth assets are more diverse than in Hong Kong where they are restricted to equities.

The obvious question to ask is whether this relatively high exposure to growth assets places an unreasonable risk on the provision of adequate and sustainable retirement incomes for Australians over the long term.

Factors affecting asset allocation in other countries

Initially let us consider some contributing factors that may drive a lower exposure to growth assets in some countries:

- 1. Some countries have a significant level of guaranteed pensions or annuities in payment, which require matching assets to these liabilities. Most of the assets suitable for matching are bonds and other fixed income investments. By contrast, Australia has a very small number of funded superannuation funds providing guaranteed pensions. There are some Government schemes paying indexed pensions but in most cases they are funded on a pay-as-you-go basis with limited assets.
- 2. Defined benefit schemes represent a significant proportion of the accrued liabilities. The introduction of stronger funding requirements from regulators together with the impact of the accounting standards on corporates has meant that many plan sponsors have adjusted their investment strategy to reduce both the volatility of asset values and the potential impact of changing discount rates on corporate balance sheets.
- 3. The investments available in the local market present attractive opportunities. It is inevitable that most markets have a home bias in respect of their investments. This means there is a stronger focus on the investments available in the local market even though it can be argued there are broader opportunities in the global markets. An example of this outcome can be seen in the UK where major pension funds have a strong investment in index-linked government bonds due to their availability. By contrast, both the Australian index-linked and corporate bond markets are restricted in size, thereby limiting the opportunity to invest in domestic fixed interest.

4. The maturity of the pension system affects the profile of the current liabilities. Superannuation and pension systems take decades to mature so that a younger system will have very few pensions in payment. By contrast, a mature system will have a much higher proportion of the liabilities for older members and therefore a need for less volatile investments. Many European pension systems have existed for decades. On the other hand, the Australian Superannuation Guarantee system commenced in 1992 and the mandatory contribution rate only reached 9% in 2002. This means that most of the liabilities and the associated assets relate to active employees in the workforce.

Factors affecting asset allocation in Australia

Whilst the previous section outlined some particular reasons affecting asset allocation in other countries, there are also contributing factors that may increase the exposure to growth assets in Australia:

- The dividend imputation system increases the relative attractiveness of Australian equities to funds as investors receive refunds relating to the level of corporate taxation paid on most dividends.
- A related outcome is for investors, such as SMSF pensioners, who are seeking regular income (i.e. not capital gains) and may perceive the dividends paid by the four AA-rated major Australian banks as an attractive investment and almost as safe as term deposits in these institutions.
- Australian households have a relatively high level of direct share ownership, partly arising from past de-mutualisations. In 2012, 34% of the adult Australian population (or 5.98 million) owned shares directly⁷. This exposure provided them with an awareness of the growth potential as well as the volatility of equity prices which provides some comfort and understanding of the potential volatility of the value of their superannuation benefit in a DC fund.
- The relatively immature Australian superannuation system means that the investment time horizon for most superannuation fund members (including many retirees) is at least 15 years. This fact increases the need to invest for capital gains and not just income.
- The limited availability of corporate bonds and index-linked bonds within the Australian market restricts the investment options available for some funds, where there may be a reluctance to invest a significant portion of the fund offshore and thereby introduce currency risk.
- Australia does not have any requirement to convert the accumulated lump sum benefit
 into an annuity or pension benefit at retirement. This means there is no need for fund
 members to de-risk their investments as they approach retirement to protect them from a
 market decline as they approach the required annuity purchase date. This "freedom"
 and the long term investment horizon also means there are good reasons to maintain a
 broad asset allocation.
- The means-tested age pension can also encourage some retirees to maintain exposure
 to the share market and the associated potential capital gains. If there is a loss in asset
 value, then their age pension may increase due to the means tests (thereby partly
 offsetting any loss) whilst if there is a gain, they perceive it as a clear benefit.
- The relative importance of defined benefit schemes has reduced steadily in Australia
 over recent years so that the assets attributed to DB members now represent less than
 11% of all superannuation assets⁸. Furthermore, there are very few funded DB schemes
 paying pensions. These features mean that the pressures to match assets with pension
 liabilities or to de-risk is largely absent from Australia.

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16

⁷ ASX (2013), Australian Share Ownership Study 2012.

 $^{^{\}rm 8}$ APRA (2014), Annual Superannuation Bulletin, Table 16.

 The long term growth and future prospects for the Australian economy mean that most fund trustees and advisors to DC schemes believe they will provide higher retirement benefits to their members if they have a stronger emphasis on long term growth assets rather than fixed income investments.

Conclusions

There is not a single asset allocation for pension funds that is correct in all circumstances. As discussed in this report there are many factors that should influence the most appropriate asset allocation for each superannuation or pension scheme.

Diversification of assets across several investment categories (i.e. beyond just equities and bonds) should represent a fundamental feature of all pension plans. These plans should be long term investors across a range of asset categories with appropriate risk management practices and clear disclosure to plan members in place. Such an approach is likely to provide improved investment outcomes as well as providing capital for on-going economic development.

Australian superannuation funds have a relatively high exposure to equities and other growth assets when compared to many other countries. There are good reasons why this has occurred. As the superannuation system matures and there is a shift in funds towards retirees, it is likely that this exposure will gradually reduce. The current overall allocation, which provides a high level of exposure to potentially volatile assets, will become less appropriate as the baby boomers retire and begin to drawdown their funds. A broader range of assets, including corporate bonds and credit, is likely to provide a better long-term outcome for these members. Of course, for active employees the current approaches may remain valid or be replaced a lifecycle strategy which could see the allocation to growth assets increase in some cases. However the trustees of every superannuation fund have the responsibility to consider their own members and to make the most appropriate decisions.

We have also observed that some countries have a relatively low exposure to growth assets. This is likely to limit the return achieved by the pension plans over the longer term which, in turn, affects the retirement benefits provided. It is recognised that in some economies, the capital markets are still developing and it may be impractical to invest a significant proportion of the assets in growth assets at this stage. Other countries also impose restrictions in investments in equities. Whatever the current situation in each country, the goal from an industry-wide perspective should be to broaden the asset allocation over coming years in all countries.

The future asset allocation of pension funds over the next decade or two is difficult to predict but several trends are likely:

- A continued decline in the exposure to potentially volatile assets such as equities for closed defined benefit schemes as many of them move into pension payment phase with the corresponding need to more closely match assets with these liabilities
- An increase in the exposure to a broader range of assets that provide steady returns for retirees, which may include more fixed interest, property leases and private debt
- A continued broadening of the asset classes used by pension funds including hedge funds, private equity and infrastructure
- A growth in equity investments is some emerging markets as these capital markets continue to develop
- A growth in equity investments in some markets as DC funds expand in importance with the related focus on individual investors.

Glossary

Accounting standards: The international financial reporting standards require employers who offer a DB fund to their employees to show the net financial position of the DB fund on their balance sheet. This requires valuing the fund's assets at market value and the fund's liability at a market-based discount rate. The net result can be quite volatile.

Defensive assets/investments: Defensive investments are primarily income producing assets, such as cash and fixed interest securities.

Defined Benefit (DB) fund: A defined benefit fund is a type of superannuation or pension plan where the employer (sponsor) promises a specified benefit (lump sum or pension) on the member's retirement that is determined by a formula based on the employee's salary, length of service and age, rather than depending directly on investment returns.

Defined Contribution (DC) fund: A defined contribution fund is a type of superannuation plan where the employer and/or the employee make contributions on a regular basis. Individual accounts are set up for participants and benefits are based on the amounts credited to these accounts (including contributions and investment earnings) less deductions for expenses and any taxation.

De-risking: De-risking (in the context of DB funds) refers to the implementation of strategies which are designed to remove or reduce the financial risks and related volatility associated with the fund. It may include, for example, moving to a more defensive investment strategy, or purchasing products such as longevity swaps to reduce the risk associated with providing lifetime pensions.

Growth assets/investments: Growth investments are those which offer the potential for capital growth as well as income. They tend to produce higher returns than defensive assets in the longer term but have greater volatility.

Liability-driven investment strategy: A liability-driven investment strategy is an investment strategy based on the cash flows needed to fund future liabilities, such as future pension payments. It differs from a "benchmark-driven" strategy, which is based on achieving better returns than an external market index.



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