

# Property and Australia's Ageing Population

## Property Viewpoint

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- Australia's growing and ageing population is expected to place increased stress on retirement savings.
- Investments will need to balance capital gain and income yields with volatility, to ensure an adequate level of savings.
- To provide the required growth, Australian investors have traditionally favoured a relatively high allocation to equities. However, the impact on some investors' retirement savings from events such as the Global Financial Crisis (GFC) may prompt a trend to more conservative allocations (i.e. an increase to fixed interest allocations) as the population ages. Yet fixed interest portfolio returns over the past decade have been relatively modest and may not provide sufficient returns to prolong savings.

We show that adding property asset classes to a less aggressive portfolio mix delivers superior risk-adjusted returns.

- Property assets continue to attract investor interest due to the appealing attributes they offer, including a relatively low volatility (unlisted), inflation-hedging qualities, and stable high-yield returns. These features have contributed to a small but steady rise in allocation to property in default options across portfolios of pension funds over the past six years.



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### Introduction

Australia's growing and ageing population is expected to place increased stress on retirement savings and raises questions about the adequacy and sustainability of retirement income. This provides a need for all pension funds to find the appropriate asset mix to best meet the ageing population's needs. This involves a balance between higher growth but more volatile assets and more stable lower growth assets.

Property is gathering investor attention as a diversifying asset, due to its relatively low volatility (unlisted), its inflation-hedging qualities, and stable high-yield returns. Features which have contributed to a small but steady rise in allocation to property in default options across portfolios of pension funds over the past six years.

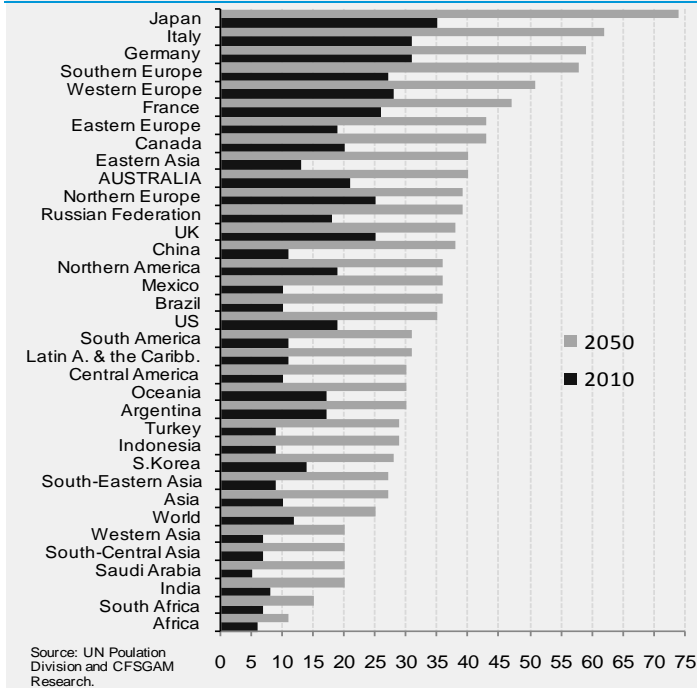
In addition to offering solid returns and reduced volatility, property also provides diversification benefits to investor. This is particularly important as the systematic risk shock, which transmitted across all asset classes during the Global Financial Crisis (GFC), has amplified the need for a genuinely diversified portfolio. The effective portfolio diversification for investors will mean a mix of less perfectly correlated asset classes. Such a situation exists between listed and unlisted property markets, so including them in a balanced portfolio (of only traditional assets) should enhance the investment proposition for the investor.

### The ageing population

The Australian population, similar to other developed countries, will go through a significant transformation in the next four decades. The key drivers ("the Drivers") of this structural change are: an ageing and growing population; constant increases in longevity; and a decline in fertility (birth) rates. The direct results of these Drivers are a growing number of people aged over 65 years, which translates into a rise in the old-age dependency ratio (the ratio of the elderly population to the working age population). Ageing dynamics vary greatly across regions and countries (refer to Figure 1). The most dramatic rise is expected in the developed and industrialised countries. For example, by 2050, Australia's elderly population is projected to reach 9 million, increasing the old-age dependency ratio to almost 40%. The old-age dependency ratio in France and Germany, the "engine" of the European Union, is projected to hit 59% and 47%,

respectively. However, the fastest increase will occur in Japan, where the old-age dependency ratio is expected to reach an astonishing 74%, from the already high current level of 35%. Interestingly, the old-age dependency ratio is expected to double or triple in Eastern and Southern European countries, as well as in South-Eastern and Eastern Asian nations. Globally, the old-age population is expected to double in the period 2010-50, and to represent 25% of the world's population.

**Figure 1: Old-age dependency ratio selected regions and countries, period 2010 to 2050**



The rising old-age dependency ratio simply means less working age people to support the elderly population, resulting in a disparity between retirement income's generation and consumption. This could also have an adverse impact on economic growth. In the period from 2010 to 2050, the number of working people per one elderly person in Australia is expected to decline from 5 to 2.7.

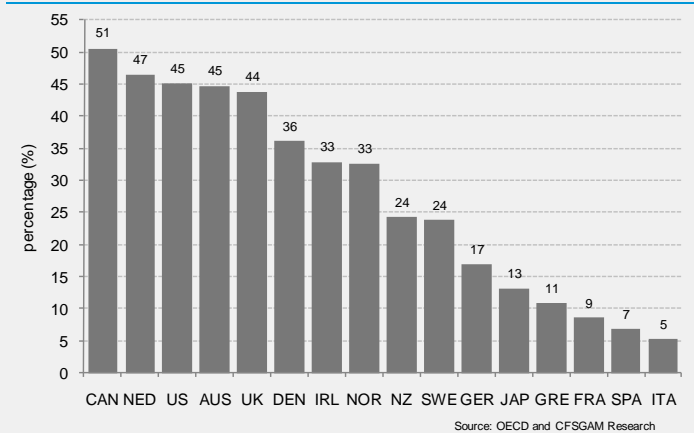
An ageing population and a rising life expectancy emphasise the significance of retirement reserves. People need to keep their retirement incomes at sufficient levels to correctly manage: i) financial obligations in retirement, and ii) the various risks associated with extended life expectancy, retirement savings investment, inflation, and rising health care costs. Simply, people have to manage these risks to be able to maintain their pre-retirement standard of living once they retire. These trends also highlight the importance of the appropriate investment strategy used by the depository institutions of retirement funds i.e. the right mix of asset classes that will provide a satisfactory return to retirees.

**Superannuation funds in Australia**

Pension funds in Australia, like in other countries, have been created to provide retirement benefits for people. However, the importance of private pension funds in retirement-income plans greatly varies across countries. In Australia, super funds play an important role, as around 45% of retirement income comes from private savings (Figure 2) while the

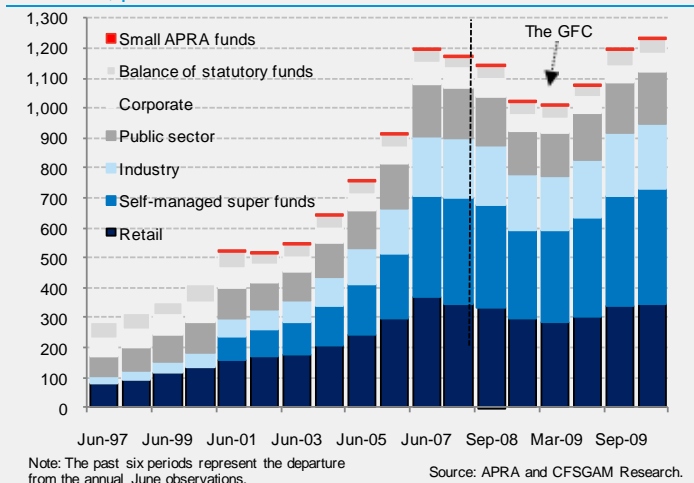
remaining 55% comprises the age pension and other public benefits.

**Figure 2: Private retirement savings across countries selected OECD countries**



The introduction of the superannuation guarantee<sup>1</sup> (the 'SG') in 1992 underpinned a rapid rise of pension funds. In the 1997-2009 period Australia's total superannuation assets increased by 15% on average p.a. to A\$1.23 trillion (tr) (Figure 3A), making them one of the largest group of institutional investors. Pension assets are forecast to reach A\$4tr by 2030. To comprehend the growing significance of this sector, we can compare it to the relative size of the economy. For example, consider that in 1999 the sector's size was 46% of the economy, while in 2009 it stood at over 100% of annual GDP. Importantly, apart from their significance in terms of asset size, Australia's super-funds are also amongst the fastest (third after Brazil and Hong Kong) growing internationally (Figure 3B).

**Figure 3A: Trend of Australia's total superannuation A\$ billion, period June 1997 to December 2009**



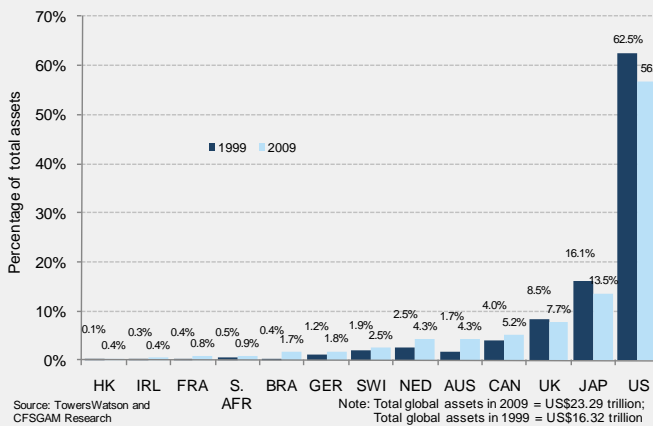
Australia wide, there are five key types of super funds, with the size of their total assets as at December 2009 (Figure 3A):

- Industry funds – provide benefits for employees working in the same industry (A\$218.9bn).

<sup>1</sup> A compulsory contribution introduced in 1992 which obliges employers to contribute a minimum of 9% (12% announced recently) of employees' salaries to a private pension fund. Employees can choose a pension fund (from 2005) for the contributions and the allocation of the funds across numerous investment options.

- Corporate funds – provide benefits for staff of a particular firm or a group of related companies (A\$59.9bn).
- Public sector funds – provide benefits for Government workers (A\$172.6bn).
- Retail funds - offer pension products to the public (A\$345.7bn).
- Self-managed funds (SMSF) (A\$384.3bn).

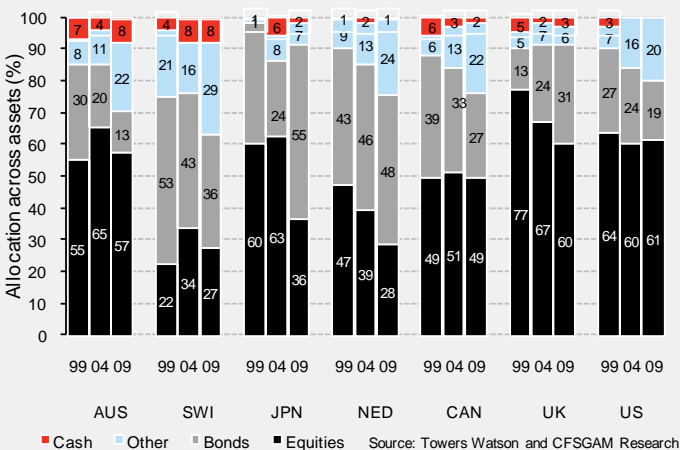
**Figure 3B: Trend in global pension assets selected countries, percentage of total assets, 1999 to 2009**



**Investment strategy**

Australian pension funds are one of the most aggressive globally, as they historically have a relatively high weighting to shares (Figure 4). However, more recently, the allocation of capital across asset classes has changed, with a strong rise in investment into property and other asset classes. The top 50 (big allocators) superannuation funds (by asset value) increased their average allocation to property from 8.9% to 10.5% in the 2004-09 period.

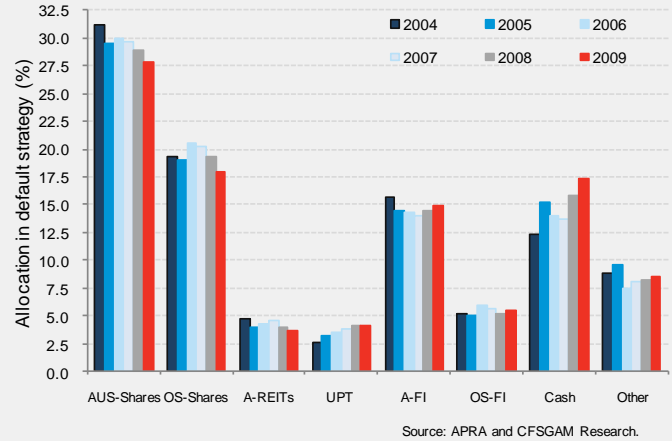
**Figure 4: Asset allocation of pension funds selected countries, as at end of 2009**



Despite the introduction of investor choice and a consequent rise in the number of investment options offered by super-funds, on average around 61% (68% excluding retail funds) of all superannuation assets remain invested in the default investment strategy, according to Australian Prudential Regulation Authority (APRA). This is usually an asset allocation with a balanced risk-return profile, with the dominance of equity allocations (Figure 5). Given the significance of total asset allocation in default investment options, it is important to analyse the prominence of property

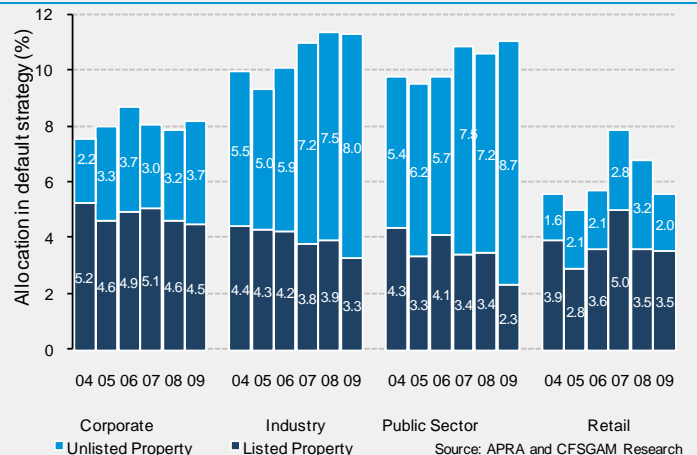
asset classes within these strategies. Figure 5 highlights the increase in average super fund allocations to property and other asset classes in the default option in recent times.

**Figure 5: Australian super-funds asset allocation average allocation in default strategy, period 2004-2009**



When looking across super fund types, different property asset allocation strategies have been utilised. Industry funds and Public Sector funds tend to have a higher and increasing allocation to unlisted property assets, which have performed relatively well up until 2009. In contrast Retail and Corporate have higher allocations to liquid property assets (Figure 6). This is possibly the result of the environment in which the funds developed. For example, prior to investor choice, industry funds had a less volatility in contributions and membership than retail funds, and hence were able to invest in the less liquid unlisted assets, benefiting from their lower volatility and higher returns. In contrast, in the early 1990s many retail funds suffered from high levels of redemptions, on the back of the fall in property asset values at the time, resulting in a preference for the more liquid listed property asset class.

**Figure 6: Property asset allocation of pension funds average allocation in the default strategy, period 2004-2009**



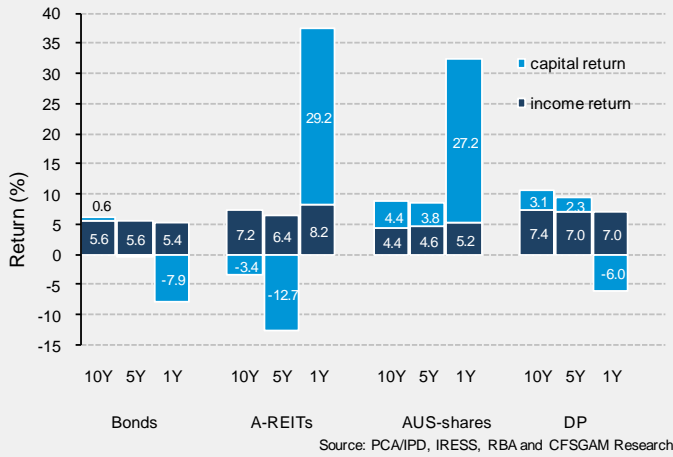
**Features of Property**

*Absolute return performance*

Since the mid 1990s and until the late 2008, investments in both unlisted property (direct property-DP-is used as a proxy for unlisted property) and listed property (A-REITs) have delivered solid total returns (Figure 7). However, returns were impacted by the GFC, when all property asset classes

were impacted. After a spectacular fall during the GFC; from March 2009 A-REITs profited from the share markets' sharp recovery while DPs are still lagging behind due to their less frequent valuation methodology. Over the year ending April 2010, A-REITs have delivered annual returns of 37% while DPs were modestly impacted recording annual return of 1.0%. However, from a long-term perspective, unlisted property compares favourably with average annual total returns of 8% (5 year) and 10% (10 year).

**Figure 7: Australian asset class performance**  
nominal total returns on monthly rests to Mar 2010

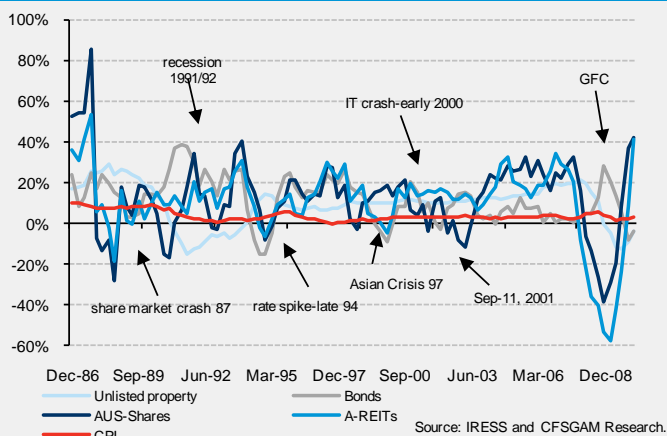


**Inflation hedge**

While inflation in developed countries has been relatively low in the past few decades, potential inflation expectation concerns have recently resurfaced, highlighting the importance of inflation-protection for long term investors such as pension funds. Property asset classes are appealing for investors because they offer inflation protection as rents usually rise with inflation. Also, both property classes delivered historically high and stable (above inflation) income-yields (Figure 7), which is particularly attractive to pension funds in matching their long-term cash flow needs and managing risks.

To analyse the inflation-hedge feature of property assets, investors usually benchmark return performance against price inflation (gauged by growth in the Consumer Price Index - CPI). Since 1999, both property asset classes have outpaced inflation which averaged 2.9% annually in the past 10 years (Figure 8).

**Figure 8: Australian asset class performance**  
nominal total returns on quarterly rests to Mar 2010

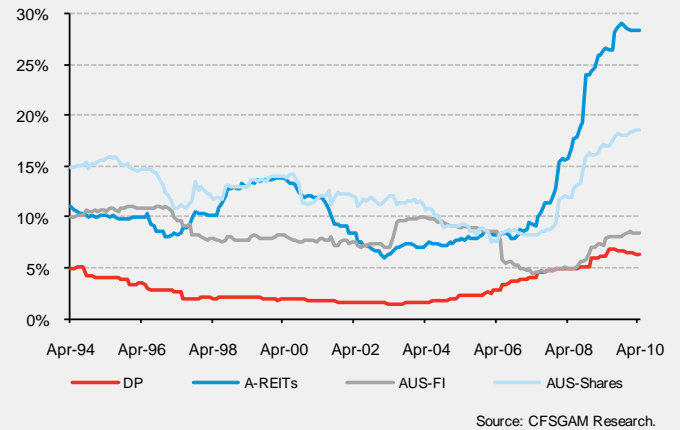


Notably, as shown in Figure 8, return profiles for listed and unlisted property are distinctly different, making them attractive for investors. While in the recent past A-REITs have been highly correlated with the wider equity market, their returns are anticipated to mirror the performance of the underlying assets in the long run.

**Volatility**

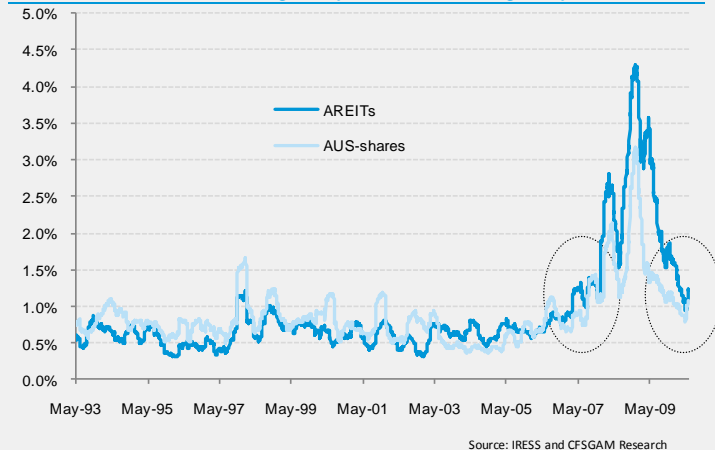
As Australia's population ages, the level of risk or volatility of superannuation fund's default asset mix becomes an area of increasing focus. Too much volatility increases the risk of reduced fund size at a time retirees seek to draw on their savings. Historically, unlisted property (UP) has demonstrated low volatility when compared to listed asset classes, shares and A-REITs (Figure 9). Moreover, since 1994 unlisted property has achieved the lowest volatility among all classes. This is partly a result of relatively low frequency appraisal-based valuation, compared to the constant fluctuations of listed securities.

**Figure 9: Asset classes volatility**  
based on 3 year rolling monthly returns ending Apr 2010



The volatility of A-REITs remained significantly below that of equities from early 1994 to mid 2007. It rose sharply during the GFC, when investors abandoned A-REITs because of their higher gearing and consequent sensitivity to interest rate movements. The problems worsened with the evaporation of credit, a lack of buyers for portfolio de-leveraging and refinancing issues. However, it is important to note that a stabilisation of A-REIT volatility levels was observed in recent times (Figure 10).

**Figure 10: Equities and A-REITs volatility**  
based on 3 month rolling daily returns ending May 2010

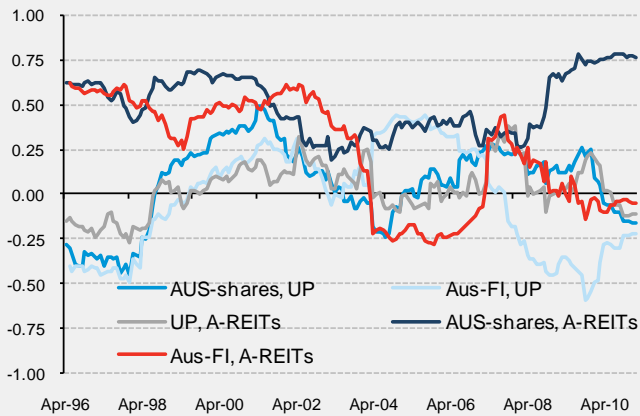


When observed on a three-month rolling daily basis, it is evident that since March 2009 the volatility of A-REITs has retracted considerably (Figure 10), in line with the share markets recovery, hovering around levels seen before the GFC. This has calmed long-term investors who fear severe volatility.

**Asset Classes Correlation**

As well as providing solid returns and reduced volatility, property also provides diversification benefits. The potential for diversification can be accessed from asset class correlations. We use rolling correlations based on a three year timeframe for selected asset classes in Australia.

**Figure 11: Correlation across selected asset classes based on 3 year rolling monthly returns ending Apr 2010**



Source: IRESS, Mercer, IPD & CFGSAM Research

The chart highlights negative or relatively low correlations between both unlisted property and A-REITs with the Australian Fixed Interest asset class. Also, in the past decade the correlation between unlisted property and Australian shares (AUS-shares) was relatively low. Importantly the correlation between unlisted property and A-REITs has been low as well. However, while A-REITs have had a low-positive correlation with Australian shares, this correlation has become quite strong recently. This partly reflects a trend in recent years for many A-REITs to adopt higher risk business models that have taken them away from the traditional A-REIT model. These have included higher gearing and a greater reliance on income streams other than property management, such as development, via stapling. However, many A-REITs are moving to more conservative models following the GFC which is likely to reduce the correlation with the broader equity market. The relatively high returns combined with reduced volatility and low correlation suggests the addition of both listed and unlisted property to a portfolio would enhance the portfolio's risk-adjusted returns profile.

**Balanced portfolio amplified with property asset classes**

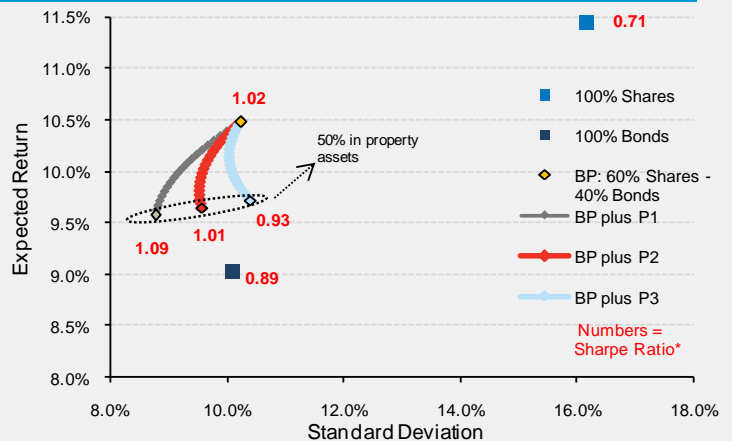
Using a simple method we now investigate the potential benefits for an investor when property assets are augmented as part of a balanced portfolio (BP) with just traditional asset classes, shares and bonds. In estimating the impact of property investments (UPs and A-REITs) on a traditional balanced portfolio, we used a naive portfolio construction for a demonstrative purpose (Figure 12). We assume that investors do not keep their entire retirement savings in either shares (due to a high risk associated) or fixed interest (an option which may not provide sufficient returns for

retirement). Hence, we presume that as people approach retirement they might adopt a less aggressive (conservative) asset allocation, which may include growth (defensive) assets such as property.

Consequently, we evaluate a series of BPs augmented by portfolios of property assets. The initial BP has 60% equities and 40% bonds allocation. Property portfolios P1, P2, and P3 maintain the ratios of allocation in UP-A-REITs as follows: 60%-40%, 50%-50% and 40%-60%. The combined property investment allocation starts at 2.5% and increases in 2.5% increments until it reaches 50% allocation in property assets. Simultaneously the BP's weighting declines (in 2.5% decrements) to 50% allocation, corresponding to 30% allocation to shares and 20% allocation to bonds. The decremented allocation in a BP is in line with our assumption regarding people's portfolio de-risking with ageing.

The frontiers, showing the historical return and risk profiles of combined portfolios (BP and property), are created using historical monthly return data over the 18-year period (since the introduction of the SG) ending April 2010. Over this period, allocating part of a BP to property assets would have delivered a superior risk-adjusted return to investor. For example, with a 50% weighting to P1 property portfolio investor would have given up just 0.9% p.a. of the return while reducing volatility by 1.5% p.a. over that period. Moreover, superior returns were on offer to investor when we use a risk-adjusted return measure based on the Shape Ratio (SR). Figure 12 clearly shows that the portfolio augmented with property provides the highest SR (1.09) when compared to either the initial portfolio (BP) with SR of 1.02 or traditional asset classes. Finally, investor can increase of decrease allocation among UP and A-REITs in order to achieve the desired return objectives according to the tolerance for risk.

**Figure 12: Portfolio frontiers based on 18-year annual returns ending Apr 2010**



Source: IRESS, Mercer and CFGSAM Research.

Note: \*based on average returns.

Overall, this naive illustration suggests that there is a value proposition in a combined investment mandate for unlisted property and A-REITs in a balanced portfolio. This value proposition arises in part through diversifying (common factor) risk, risk mitigation across the two asset classes and a delivery of superior risk-return profiles.

**Conclusion**

Australians can choose their long-term investment strategies for sustainable retirement which will enable them to achieve

the desired and stable level of income in retirement. However, despite the investment choice option available, they mainly keep their superannuation funds in default options; hoping that this option will deliver a sufficient retirement outcome. This passive behaviour places pressure on pension funds to choose an adequate asset mix (within default options) to deliver the required returns to investors. The significance of property asset classes (listed and unlisted) in super fund default options is on the rise, highlighted in an increased capital allocation into property in

recent times (particularly among the top 50 super funds in terms of asset size). Moreover, given property's appealing attributes, such as high and stable income yield, a delivery of solid risk-adjusted return and inflation-hedge quality we believe that property asset classes will continue to play an increasingly important role in future portfolios of super-funds, assisting Australians to maintain the pre-retirement standard of living once they retire.

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