Improving the asset allocation of SMSF portfolios

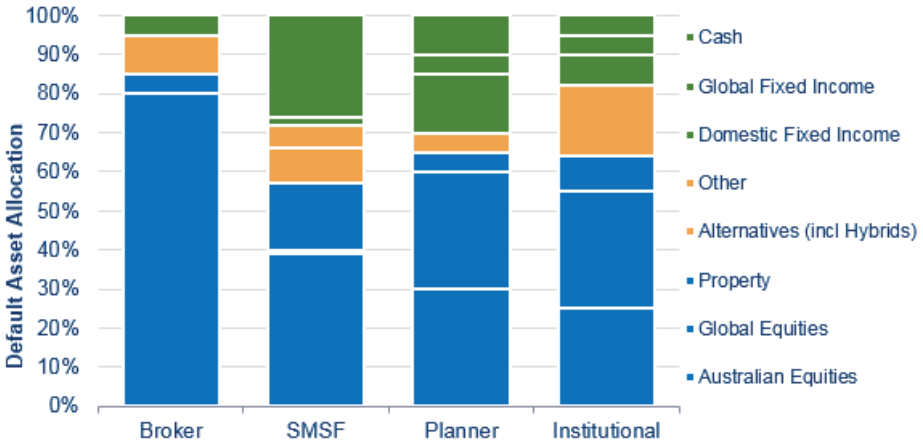
David Wanis | Schroders | 19 August 2016

Increased diversification is a worthwhile goal for self managed super funds (SMSF) but this doesn't necessarily mean lock into the strategic asset allocation model favoured by so many other investors. SMSF investors should adopt an asset allocation approach that considers both prevailing asset valuations and their own investment return and risk objectives in constructing a diversified portfolio. Current portfolios appear inefficient – creating an opportunity for investors to either increase returns for their current level of risk or reduce risk for their existing return.

INVESTOR BIAS AND STARTING PORTFOLIOS

Superannuation investors of all types are trying to achieve the same goal – ensuring their program of saving and investment will generate sufficient financial returns to fund their retirement consumption needs. In all investors' minds, it is the outcome that matters and, for most, how they get there is of much less importance. The industry segments itself into groups anchored to portfolio asset allocation rather than the overall investment objective. Whether believing in strategic asset allocation, a strong equity bias, a home country bias or a view to replicate the Ivy League endowment funds, the defining way investment groups are organised is more often around what they own rather than what they are trying to achieve (Figure 1).

Figure 1: Indicative asset allocation by investor group



Sources: ASX, Schroder Estimates (Broker), ATO (SMSF), Morningstar (Planner, Mar-2016), Chant West (Institutional Dec-2015)

Although the above figure 1 shows four investor groups' portfolios – institutional superannuation, retail planner advised, retail broker advised and SMSF – it is the later upon which this paper is focused, with caveat that the detail behind these portfolios and the individual objectives that are being considered are not available however this paper provides some thoughts on how SMSF investors can improve their portfolios in achieving their investment objective.

SMSFs are likely to be more diverse than the aggregate ATO statistics suggest, and tax, administrative costs and access to asset classes are some of the key concerns. An increase in the number of products available on the ASX (discussed below) may result in some rebalancing away from Australian equities and cash over time.

One of the greatest changes over the past 10 years has been the increased availability at low cost of asset class products. The advent of passive ETFs that provide diversified exposure to developed and emerging equity markets, domestic and global fixed income, corporate bonds and property assets has allowed client portfolios with excessive biases to particular assets due to access constraints to be changed. A more recent trend is to Exchange Quoted Managed Funds (EQMFs) which like their ETF brethren are exchange quoted and settled like an ordinary share, but the underlying portfolios are actively managed rather than constructed passively.

Although improvements on existing portfolios from a diversification and risk/return perspective are admirable and should be encouraged (particularly in the broker and SMSF segments) the static asset allocations most use to weight these investments presents a far more challenging obstacle.

DEFINING INVESTMENT OBJECTIVES

Most investors have a return and risk objective they care about far more than the method by which it's achieved. Return objectives are relatively simple to calculate and often expressed in terms of "what return do I require to achieve my investment goal x years from now?"

Risk is harder. Risk can be perceived as a test of personal tolerance to volatility. It can be loss aversion. It also takes the form of failing to meet investment objectives by generating insufficient return. Ultimately, risk is the impact of the path of portfolio returns on an investor's emotional capacity to continue with the original plan. It is at least as much behavioural as mathematical.

A 100% equity portfolio may in theory be the best portfolio to hold over 30 years, however if the extreme volatility results in abandonment of the plan precisely at the worst possible time (after large drawdowns and when equities are most likely cheap) then it is not practically implementable.

Most investors look to optimise three objectives in their investment strategies;
1. a realistic return objective consistent with their required investment outcome;
2. a level of return volatility that is significantly below that of equities; and,
3. management of investment drawdowns (losses) to prevent emotional interference with the strategy at the wrong time.

It should be the definition of the objectives rather than the assets a portfolio holds that anchors an investment strategy. Assets are a means to an end, not an end in themselves.

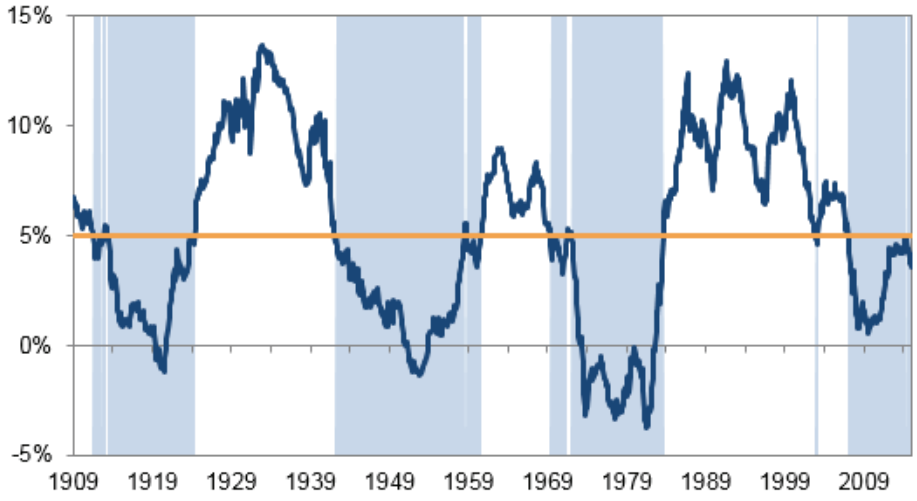
OBJECTIVE-BASED INVESTING VS STRATEGIC ASSET ALLOCATION (SAA)

Most traditional asset allocation models, as displayed above, apply three constraints to the portfolio:
1. Positive real returns of CPI +4% to 5% per annum;
2. Achieved over rolling five- to seven-year time frames; and,
3. Using a fixed SAA model (e.g. 60% equities, 40% bonds).

Long periods of history, over many global markets, have shown that there are many times (almost half of all time periods) when these three conditions cannot all be met. By fixing asset allocation, investors often have to give up on either achieving their return objective over the five- to seven-year horizon, or accept that the realistic return objective horizon may be seven to 15 years – or longer.

Figure 2 illustrates the rolling 10-year returns of a typical 60% growth / 40% defensive portfolio. It highlights many periods where a CPI + 4% or 5% objective has not be achieved.

Figure 2: Rolling 10-year real returns of a static asset allocation portfolio (1900-2014)



Source: Schroders, Global Financial Data, Balanced fund is 30% global equity, 30% Australian equity, 30% Australian bonds, 10% cash.

Because peer group relative performance pervades as a measure of success (agency risk), conventional failure is more acceptable than even a higher probability of unconventional success. As a result, most investment strategies accept these potential shortcomings.

An alternative approach is to use objective-based investing where the return and time horizon objective are preserved and prioritised, and asset allocation constraints are relaxed as a result.

The benefit (and crutch) of the SAA model is that it uses static risk and return assumptions to allow the construction of diversified portfolios along an efficient frontier. It tells investors how risk and return trade-offs can be made and investors' preferences can be mapped accordingly. The problem lies with the underlying assumptions. The returns used are very long run in nature (30+ years) and backward-looking. They may or may not be instructive as to the next 30 years and they definitely tell nothing about the five- to seven-year time horizon that many investors care about (and to which they'll react behaviourally). Additionally, the risk assumptions are expressed as volatilities which again may or may not be meaningful to an investor over a 30-year horizon and will certainly not be helpful in understanding risk on a five- to seven-year view.

One of the problems in abandoning an SAA framework is coming up with an alternative that provides the backbone of return and risk that can be used to construct portfolios.

Under an objective-based approach, it is valuation that determines the likely asset returns over a time horizon similar to the investor's return objective. Therefore, it is valuation that informs as to the asset weights most likely to deliver the investment objective and it is valuation in conjunction with an asset's innate return volatility that determines investment risk.

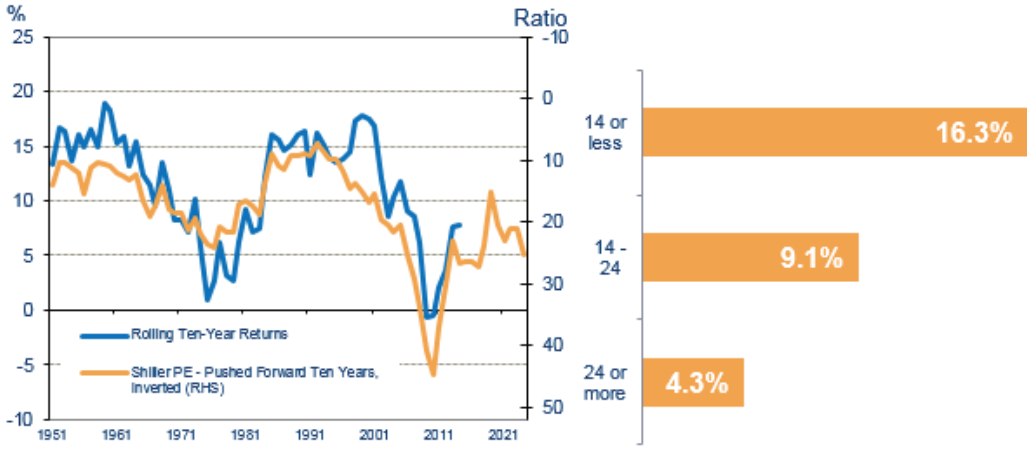
USING VALUATION RATHER THAN SAA TO DETERMINE PORTFOLIO WEIGHTS

Ironically, it is widely accepted that valuation-based active management of stocks within a portfolio is perfectly acceptable and within an SAA portfolio, manager selection within asset classes is built upon this premise. But to scale that assumption up to the valuation of the collection of those stocks (for example, the S&P/ASX 200 Index constituents) is, from an SAA view of the world, invalidated as a way of adding value to a portfolio.

Figure 3 shows, over longer periods of time, the relationship between valuation (in this case, Shiller P/E Ratio) and subsequent returns at the market level.

Figure 3: Starting Shiller P/E Ratio and subsequent 10-year returns – S&P 500 Index

(31 Jan 1970 to 31 December 2014, USD)

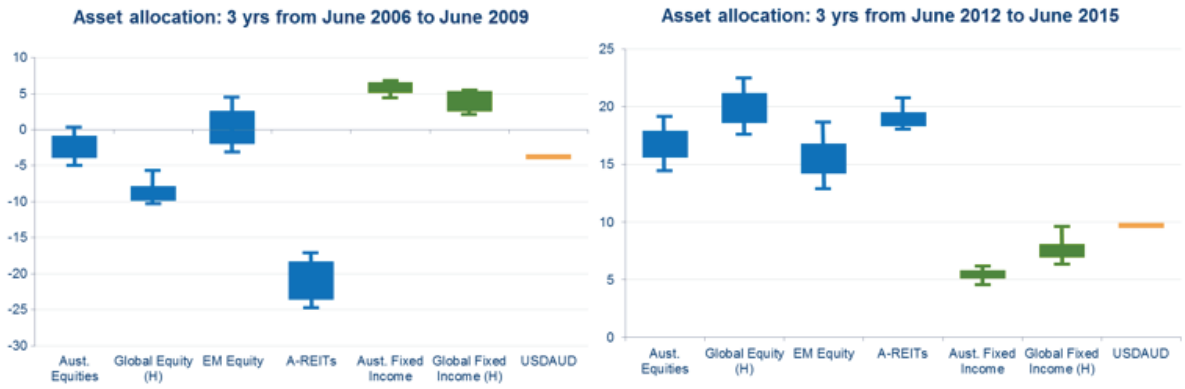


Source: GFD

Estimating returns is more difficult than using a static, historically based assumption – but it is possible at least in the approximate. Estimating risk at the intersection of valuation and volatility is even harder. There are no agreed upon standards for how this should be done. Investors can only apply common sense, economically sound principles, conservative estimates of investment merit and qualitative judgment to the problem. However, the reality is that asset allocation remains far more impactful on portfolio outcomes than security selection – yet is the least active part of most investors' portfolios.

Figure 4 highlights two very different three-year periods of market returns, from June 2006 to June 2009 and June 2012 to June 2015. It shows the range of absolute returns realised across a range of asset classes – from the 10th to the 90th percentile (the whiskers) and in the middle, range of outcomes between the 25th and 75th percentile (the box). This shows – and indeed, it holds for most periods across time – that while picking the right active manager within an asset class is an important consideration (or picking the right securities, if an SMSF is constructing the portfolio directly), it is not as important for the overall portfolio as picking the right asset class. That is not to say it is easy and always possible to get right. However, if some of the effort put into security selection was applied to asset allocation, investors may have portfolios that are less fixed than observed under an SAA framework. It is the reason why some objective-based investors vary asset allocation based on forward-looking asset class views.

Figure 4: Asset allocation vs security selection – 10th to 90th percentile manager performance



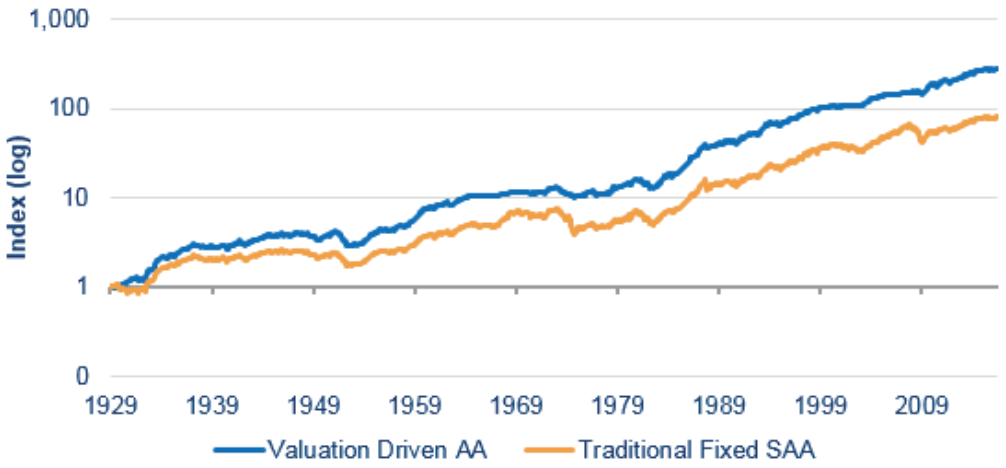
Source: Mercer, Schroders. Box shows 25th – 75th percentile. Whiskers show 90th to 10th percentile active manager returns.

For the purpose of providing an alternative method by which SMSF investors may construct their portfolios, this analysis updates a 2015 study that used cyclically-adjusted PE ratios, 10-year bond yields and the term spread (difference in yield between the 10-year bond and the 3-month rate) to determine approximate asset class valuations (cheap, fair value or expensive) and allocate towards or away from five assets accordingly. The five asset classes are domestic Australian equity, global equity, domestic fixed income, global fixed income and cash. Although that is fewer assets than investors would typically employ in a portfolio, the simplified model is used to test for the effectiveness of using valuation as an asset allocation guide, as an alternative to strategic asset allocation.

The original analysis covered the period 1929 to 2014 using the valuation approach to portfolio construction as an alternative to fixed SAA. It demonstrated that using valuation information improved the overall investment performance (return objective) but, as importantly, reduced both portfolio volatility and the incidence and magnitude of portfolio drawdowns. The size of the asset allocation movement away from a 70/30 growth portfolio (the comparator in this study) shows periods when the equity allocation is close to zero (1929, 1966, 2000, 2007) and periods when the equity allocation is over 80% of the portfolio (1945 to 1960, late 1970s, mid 1980s, and mid 1990s).

The updated results, shown in Figure 5, highlight that anchoring a portfolio to valuations, rather than traditional asset allocation ranges, improves both the return and risk outcomes and achieves a result closer to investors' underlying investment objectives. The results of this valuation-based asset allocation study and updated performance to June 2016 are compared to SMSF and SAA portfolios.

Figure 5: Cumulative portfolio performance
(Dec 1928 – Jun 2016)



Source: Schroders. Valuation driven AA: Cyclically-adjusted PE ratios, 10-year bond yields and term spread (difference in yield between the 10-year bond and the 3-month rate) determines approximate asset class valuations (cheap, fair value or expensive) and allocations to five assets (domestic Australian equity, global equity, Australian fixed income, global fixed income and cash).

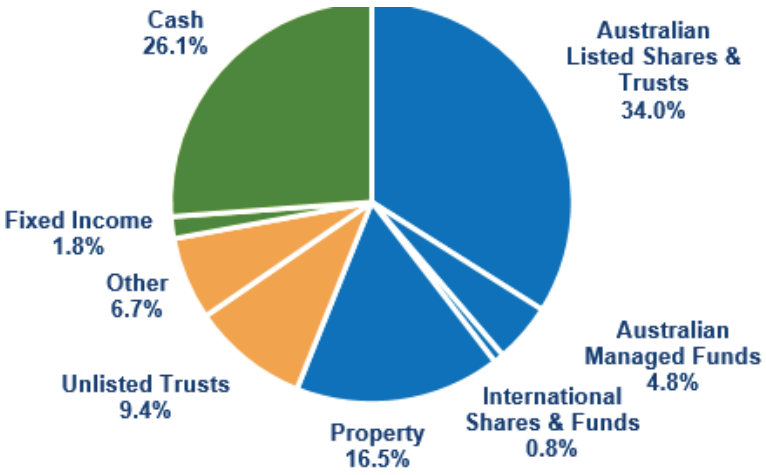
ANALYSIS OF SELF MANAGED SUPER FUND (SMSF) PORTFOLIOS

SMSFs are required to report investment allocations to the Australian Taxation Office (ATO) on a quarterly basis. As an average across over 500,000 funds, there are likely far more variations than observed in more peer sensitive groups (e.g. institutional superannuation funds or financial planner advisory groups) but it is the only data available. With that caveat, the following analysis is based on what is reported.

As a group, SMSFs have a number of clear biases in their portfolio construction relative to other groups, likely driven by investment objective, access or tax reasons. Figure 6 shows the latest available filing data (December 2015), SMSFs have:

- a preference for holding Australian equities directly (34%) rather than via managed funds (5%);
- a preference for Australian equities (39%) vs global equities (1%);
- a high allocation to property, including both commercial and residential (a property class not found in other portfolios); and,
- a strong preference for cash over fixed income assets.

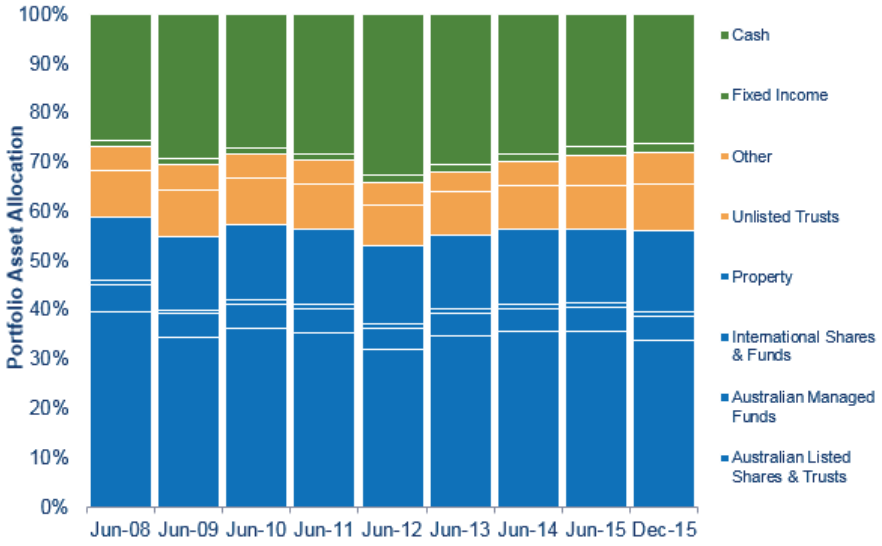
Figure 6: Latest available SMSF asset allocation
(December 2015)



Source: Australian Taxation Office

Figure 7 shows that these are more likely to be structural biases – one shared with peers – with allocations to these asset classes remaining relatively static over the past seven years. One assumption is that these biases may be tax driven (property, unlisted trusts) but a number look to be behavioural, based upon what is familiar and accessible (direct Australian equities, cash) rather than what may make most sense for the investment objectives (global equities, fixed income, credit).

Figure 7: History of SMSF asset allocation
(2008 – 2015)



Source: Australian Taxation Office

RETURNS AND RISKS OF THE SMSF PORTFOLIO

From here, an estimated performance series for the SMSF portfolio was constructed for the period June 2008 through to June 2016, based upon the ATO performance data (2008 to 2014) and using disclosed asset allocation and the performance of proxy indices for each asset for years for which performance data from the ATO is not yet available (2015 and 2016).

The analysis provides two comparator return series to show where SMSF results sit relative to potential alternatives. The two comparators are firstly, the median multi-sector growth fund from the Morningstar survey and, secondly, the valuation conditioned portfolio (Figure 8).

The Morningstar multi-sector growth category has a similar (albeit slightly lower) level of risk to the SMSF portfolio, with allocation to growth assets over the period between 55% and 65%, albeit that most multi-sector funds diversify into fixed income as well as cash. Without monthly statistics, it is assumed that the realised volatility of the SMSF portfolio is slightly greater than this group based on asset allocation similarities but less diversifying fixed income.

The valuation conditioned portfolio has an investment objective similar to the average multi-sector growth fund but uses long run valuations to determine whether assets (Australian equity, international equity, Australian fixed income, international fixed income and cash) are cheap, expensive or fair value. The portfolio allocates to those assets that are cheap and away from those that are expensive, using Shiller PE, bond yields and term spreads as indicators of valuation as described previously.

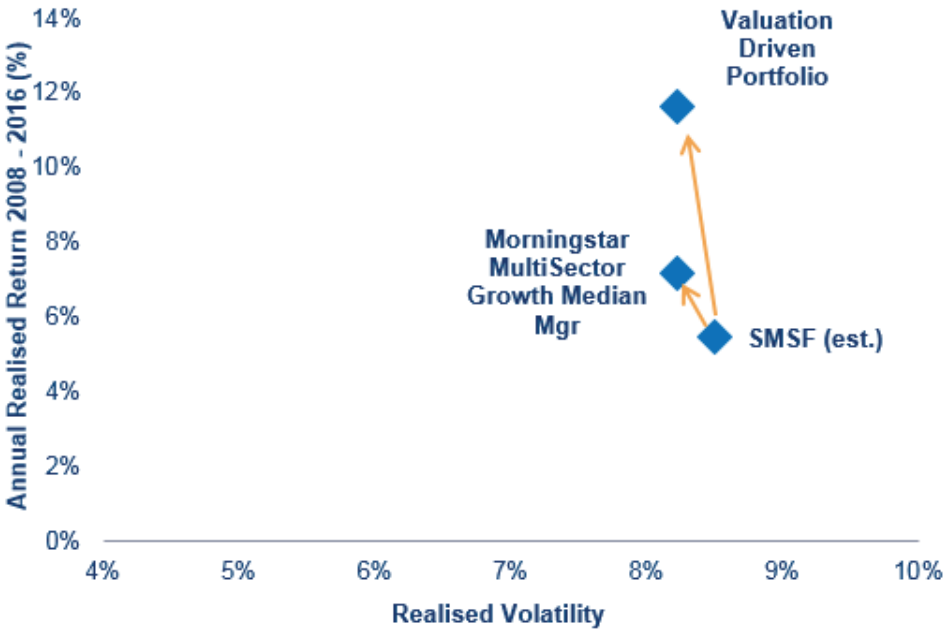
SMSFs have had a clear bias towards unlisted property and this was one of the better performing assets over the short term and reasonable over the eight years (using the +5.3% per annum performance of the Mercer/IPD Australia Monthly Property Fund Index as a proxy). This the performance of the SMSF growth allocation. Given property is now 16.5% of the average SMSF portfolio (versus less than 13% in 2008), the property allocation is assumed to be relatively fixed, due to the biases mentioned above. Hence any increased risk to property returns is going to be seen in future portfolio returns.

Other allocation biases also feature over the eight years with Australian equity allocations (returning +4.6% per annum) held at the expense of higher returning global equities (returning +8.7% per annum) and the cash allocation (+3.5% per annum) held at the expense of fixed income (+7.2% per annum).

Figure 8 shows how the results. The SMSF returns of 5.5% per annum over the period were reasonable, for a lower level of risk a traditional multi-asset growth fund (assumed to be the median Morningstar multi-sector growth fund), however the later returned 7.2% per annum, using a wider range of assets. However, the valuation-based approach to asset allocation

delivered a better return than both the SMSF and multi-sector growth portfolio, at 11.7% per annum, for similar to slightly lower levels of portfolio volatility.

Figure 8: Return and risk
(30 Jun 2008 – 30 Jun 2016)



Source: Schroders, SMSF – ATO (2008 – 2014), Schroder estimates 2015 and 2016, Morningstar. All numbers gross of fees. ATO data used for SMSF fund returns available from 2008 to 2014 and have estimated returns for 2015 and 2016. Valuation driven portfolio uses long run valuations to determine whether assets (Australian equity, international equity, Australian fixed income, international fixed income and cash) are cheap, expensive or fair value, allocating to those assets that are cheap and away from those that are expensive using Shiller PE, bond yields and term spreads as indicators of valuation as described previously.

One of the key observations as to how this result was achieved occurred when from June 2008 to mid-2009, the extreme overvaluation of both domestic and global equities saw the valuation-based portfolio heavily allocated to cash and fixed income. More complete historic analysis repeats this pattern, with protection of capital by avoiding over-valued markets one of the largest source of value added in a valuation driven portfolio construction approach.

HAS THE BOND MARKET CALLED TIME ON THE DIVERSIFICATION FREE LUNCH?

One of the conditions for diversification is that the uncorrelated assets have a positive expected return. Add an allocation (stable?) of race horses to a portfolio and their weekly

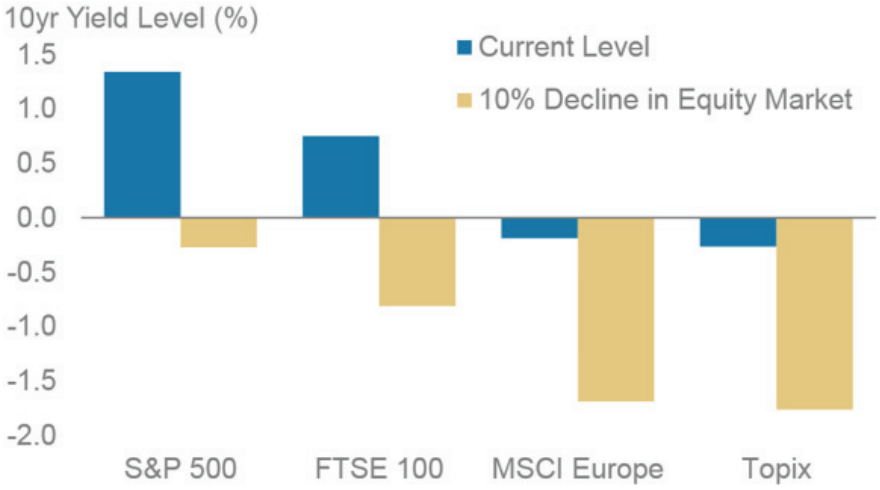
race performance and winnings are likely to have no correlation with almost anything else in the portfolio – but, they are also an asset with a negative expected return.

The current valuations of a number of assets that have been the cornerstone of many portfolio diversification programs are starting to cause investors to question their inclusion. While the main diversifier – government bonds – continue to provide diversification (tending to perform well when equities do poorly), they are offering yields that barely keep up with core inflation in some markets (Australia, US) while offering negative real returns in many others (Europe, Japan, UK).

Typically, bonds have been held in portfolios to help diversify equity risk. Structurally low yields limit the ability of bonds to perform this function, as shown in Figure 9. The exception to this is in the context of deflation, where the risk to nominal bond yields would still be to the downside.

> "Take a 60/40 portfolio constructed today from the S&P 500 and US Treasuries. To make up for a 10% decline in the equity market, Treasury yields would need to go… negative."
> – Morgan Stanley, 17 July 2016.

Figure 9: Change in bond yields required to offset a 10% decline in equity markets



Source: Morgan Stanley

For much of the last three decades, investors could have their diversification cake (or free lunch) and eat it too. They benefited from the efficiency (volatility) benefits of a widely diversified portfolio and all parts of the portfolio delivered meaningfully positive real returns.

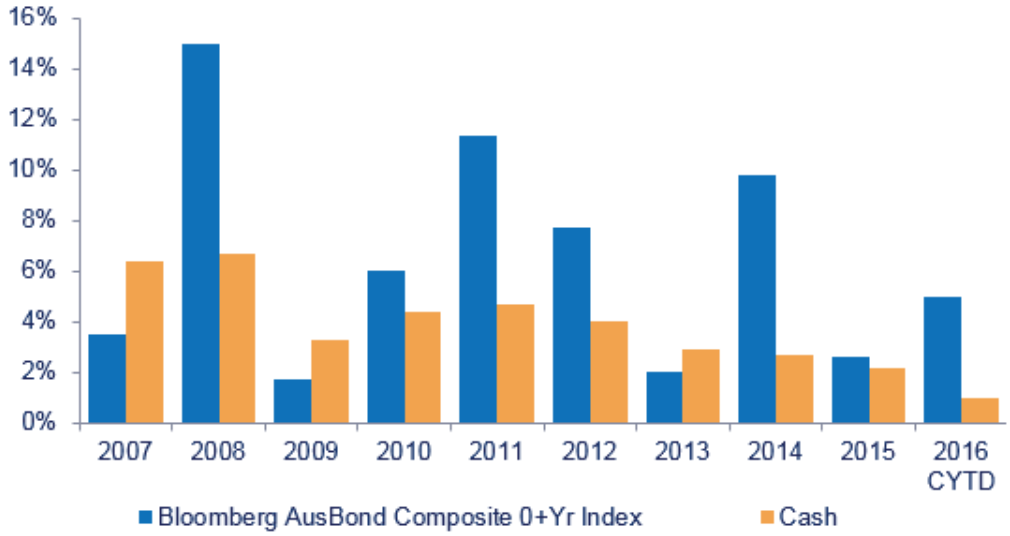
Today, an investor who believes that a value-based philosophy is important and that diversification is important has some more difficult choices to make in how those views are combined into an overall portfolio given current valuation starting points. Bond duration may

provide a specific hedge against deflation but its broader role in portfolios is becoming questionable from current starting yields.

CASH VS FIXED INCOME RETURNS

Having missed out on the significant diversification and return benefits from an allocation to the duration embedded within fixed income (Figure 10), the valuation outlook indicates that now may not be the best time for an SMSF investor to abandon all their cash holdings in favour of fixed income assets.

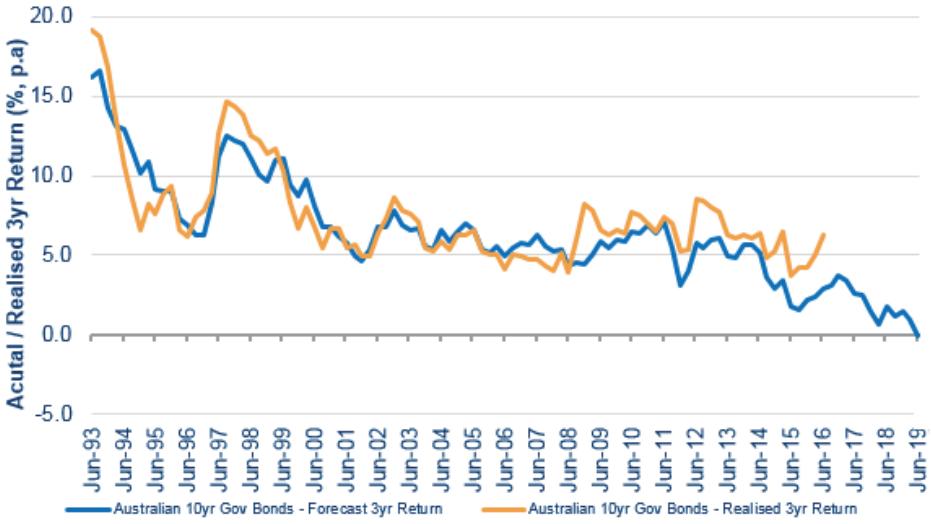
Figure 10: Fixed income vs cash returns
(2007 to 2016)



Source: Schroders, Bloomberg (Calendar year total returns to 30 June 2016).

For the first time in 25 years, the duration component of fixed income – best shown through the Australian 10-year government bond – is likely to deliver slightly negative returns over the next three years (Figure 11). The collapse in yields has continued to provide capital growth, however there will come a point where broad portfolio defensive characteristics are best served through holding cash. Other features of a fixed income allocation – such as investment grade, high yield and subordinate credit – continue to remain attractive portfolio diversifiers supported by reasonable valuations.

Figure 11: Australian 10-year government bond forecast and realised three-year returns



Source: Schroders, Datastream

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