

RESEARCH PAPER

PRODUCTS
(GETTING REAL)

Global listed property in a balanced portfolio

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Traditionally, investors have gained exposure to listed property via the Australian listed property trust market. However, the changing Australian property investment environment, combined with greater investment in global property assets, has resulted in the emergence of global property securities as a credible investment choice. Where and how does global listed property fit in a diversified portfolio? The natural step has been to split the allocation with Australian listed property, but there are other alternatives such as substituting a portion of international shares. This paper explores these issues, taking an ex-ante and ex-post approach to the analysis.

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Traditionally, balanced portfolios in Australia have invested heavily in Australian shares, international shares and Australian listed property trusts¹. This paper analyses the risk and return benefits of including global listed property in a typical balanced portfolio. The aim is to show that an exposure to global property securities offers the potential to enhance performance and reduce risk in a typical diversified portfolio.

Why invest in global listed property?

Attractive yield-based returns – Global property securities tend to offer relatively high yields. In a world where capital growth from shares is expected to be constrained by relatively high price to earnings multiples, and bond returns are expected to be held back by relatively low bond yields, high yielding investments are attractive. In particular, they require only modest capital gains to give a decent return, provide greater certainty of return, and are likely to be in demand by aging baby boomers, a market segment increasingly focused on capital preservation.

Diversification benefits – It is in the area of diversification that global property securities can

provide the greatest strategic benefit. With local listed property trusts becoming concentrated in the hands of just a few stocks and increasingly investing in global property, returns are likely to become more volatile over time. In contrast, global property securities offer a diversified portfolio of global property without the risk of having an excessive exposure to just one or two stocks. The diversification of listed property markets is evident in regional correlation statistics (Figure 1).

Favourable risk and return characteristics – Global listed property outperformed all other major indices over the 10 years ending 30 June 2006 with lower risk than international shares (Figure 2).

Low correlations with shares and bonds – Figure 3 shows global listed property has significantly low correlations to fixed interest and shares. From a diversification view, this supports investing in global listed property as well as shares and fixed interest.

Global listed property in balanced portfolios

To further understand the nature of global listed property, the effect on portfolio returns of substituting global listed property was observed in a hypothetical

Figure 1: Global listed property regional correlations – two years ending 30 June 2006

	GLOBAL	HONG KONG	JAPAN	SINGAPORE	AUSTRALIA	CONT EUROPE	UK	NORTH AMERICA
GLOBAL	1.00							
HONG KONG	0.53	1.00						
JAPAN	0.35	0.02	1.00					
SINGAPORE	0.55	0.50	0.14	1.00				
AUSTRALIA	0.51	0.37	0.19	-0.08	1.00			
CONT EUROPE	0.72	0.34	0.34	0.63	0.43	1.00		
UK	0.68	0.44	0.35	0.23	0.60	0.60	1.00	
NTH AMERICA	0.96	0.47	0.26	0.55	0.36	0.57	0.49	1.00

Source: UBS Global Real Estate Investor Indices.

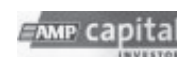


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balanced growth fund. The analysis is divided in two parts. The first involves portfolio optimisations using historical data (September 1992 to June 2006, prior to which there was no global data available from the UBSW Global Real Estate Investor Total Return Index (Hedged in \$A), noting that from 1992 to 2002, only estimated data is available for this index). Secondly, the portfolio optimisations are performed using medium-term forecasts. Historical and forecast analysis is based on three scenarios.

Scenario 1 – Substituting up to 10% global listed property into a typical balanced portfolio one asset class at a time, holding other asset classes constant. This includes Australian property (direct and listed), Australian and international shares, and Australian and international bonds.

Scenario 2 – An optimised portfolio, allocating up to 10% global listed property, holding defensive assets constant. This includes Australian property and international shares, holding Australian shares and defensive sector weights constant.

Scenario 3 – An optimised portfolio, allocating up to 10% global listed property from growth and defensive assets, including Australian property, international

shares, and Australian and international bonds, holding Australian shares constant.

Choosing the scenarios

In Scenario 1, a basic exploratory approach is taken to see what happens to the portfolio by substituting global listed property for one asset class at a time, while holding the rest constant. Scenario 2 is the next step in complexity. The optimiser is applied to growth assets only (international or property related), leaving defensive assets constant – the reasoning being that taking Australian shares out of the picture would fundamentally change the nature of the portfolio. The belief is that most investors would not look at replacing Australian shares with a global property asset. The third scenario also uses the optimiser and is based on relaxing the total growth and defensive mix to see what happens without the constraints of typical balanced portfolio benchmark allocations.

Benchmark weightings and indices

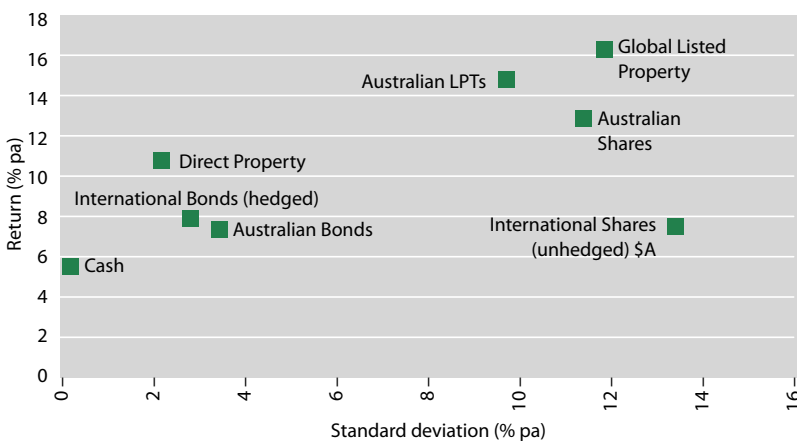
As a starting point for the analysis, a benchmark asset allocation is applied, determined by the average manager allocation in the Mercer Pooled Fund Universe (Balanced) over the 10 years to May 2006. For simplicity, international shares are unhedged and indexed bonds are included in cash. The allocations and sector indices are shown in Figure 4. These sector indices are chosen as they represent long and reliable data series. All indices commence in September 1992 except the UBSW Global Real Estate Investor Total Return Index (Hedged in \$A) for which index values prior to September 2002 are estimates.

Use of forecast and historical returns

When returns are shown in marketing literature, they are almost always based on historical analysis. It is difficult to include forecast returns without a huge disclaimer, or avoid possible legal action if actual returns differ. Past returns provide the benefit of hindsight but in reality, investors must invest their money in an *ex ante* environment. Historical returns are often a poor guide to the future. To show both perspectives, the same analysis is undertaken under *ex post* and *ex ante* conditions. Accordingly, the results provide a good representation of the upper and lower boundaries for investors using an optimisation strategy.

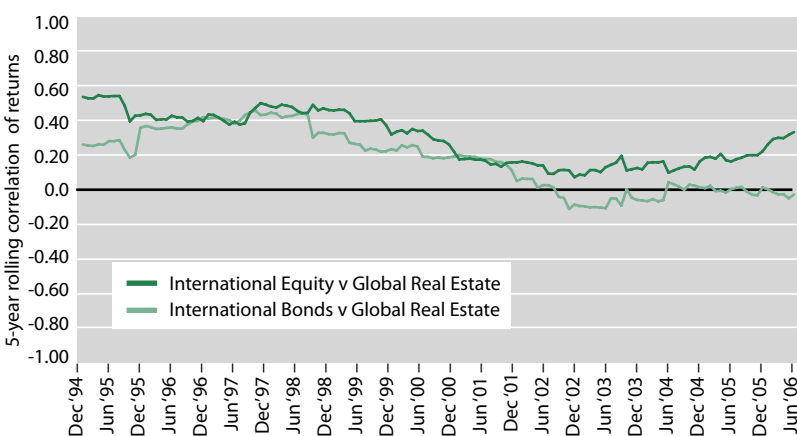
Figure 5 shows the medium-term (five to 10 years) return projections before fees and tax for each asset class. The projections take current gross yields (dividend yields, rental yields, bond yields, etc) and assume no change in market valuations or yields going forward. For shares, capital growth is in line with nominal GDP growth (as a proxy for earnings growth), and rental growth (or inflation) for property assets. For global property securities, the return projections allow a 1% ongoing yield boost from forward points and capital growth is a little stronger than Australian listed property, partly reflecting an allowance for the move to real estate investment trust structures in the UK and Europe.

Figure 2: Favourable risk and return characteristics of global property



Notes: 10 years to 30 June 2006. Returns are before tax and fees and assume dividends are reinvested. Source: AMP Capital Investors

Figure 3: Global listed property – rolling 5-year correlation of returns



Notes: Returns shown are before tax and fees and assume dividends reinvested. Source: AMP Capital Investors

Scenario 1 – historical

Using historical data, Scenario 1 involves substituting up to 10% of global listed property in a typical balanced portfolio, one asset class at a time while holding the rest constant. Figure 6 shows that substituting Australian property with global listed property causes only a 38 basis point increase in return with a 26 basis point increase in total risk. Substitution for Australian shares results in a smaller increase in return but a greater risk reduction. Not surprisingly, replacing international and Australian bonds with global listed property causes an 83 basis point increase in return but a 59 basis point increase in risk. As international and Australian bonds are considered lower risk defensive assets, risk and return spike up dramatically. The substitution for international shares is the most favourable outcome with a 78 basis points increase in return and 17 basis points risk reduction. This is also evident in Figure 7 where the best outcome is to increase return and reduce risk. This area in the chart is more to the north-east when taken from the starting point of the typical balanced fund.

Scenario 2 – historical

Using historical analysis, Scenario 2 involves an optimised portfolio from growth assets only (excluding Australian shares), holding defensive assets constant, and including up to 10% global listed property. Figure 8 shows the optimisation between global listed property and the growth assets gives a 55 basis points increase in return and a three basis point reduction in total risk. Meanwhile, the Sharpe ratio improves from 0.6776 to 0.7610. This shows a fairly significant improvement in return without a corresponding increase in risk. The results are highlighted in Figure 9 where the position of the typical balanced fund is compared to the location of the efficient frontier. Figure 9 also reveals that replacing Australian property (direct plus listed) completely with global listed property increases portfolio risk. This is because these two asset classes have had lower risks historically compared to global listed property. Replacing international shares, however, gives a higher return and lower risk than the typical balanced fund.

Scenario 3 – historical

Scenario 3, the historical optimisation between global listed property and growth and defensive assets, shows a significant 81 basis point increase in return and 15

Figure 4: Benchmark asset allocation and sector indices

ASSET CLASS	INDEX	ALLOCATION ² (%)
AU SHARES	S&P/ASX 200 Accumulation Index	37.5%
AU LISTED PROPERTY	S&P/ASX 200 Property Accumulation Index	7.0%
INT'L SHARES	MSCI World ex Australia Accumulation Index (Unhedged in \$A)	21.5%
AU FIXED INT	UBSWA Composite All Maturities	17.0%
INT'L FIXED INT	Salomon Smith Barney World Gov't Bond Index	5.0%
AU DIRECT PROP	De-smoothed Mercer Property Index	2.5%
GLOBAL LISTED PROPERTY SECURITIES	UBSW Global Property Investors Total Return Index (Hedged in \$A)	0.0%
CASH	90 Day Bank Bill Rate	9.5%

Notes: Returns shown are before tax and fees and assume dividends reinvested.

Source: AMP Capital Investors

Figure 5: Medium-term forecast asset class returns

ASSET CLASS	DIVIDEND YIELD	+ GROWTH = NOMINAL GDP	+ VALUATION CHANGE	= RETURN (%PA)
GLOBAL SHARES (\$A HEDGED)	2.3	5.9	0.0	8.2
AUSTRALIAN SHARES	3.9	6.0	0.0	9.9
DIRECT PROPERTY	6.3	2.5	0.0	8.8
AU LISTED PROPERTY	6.3	2.5	0.0	8.8
GLOBAL PROPERTY SECS	5.5	3.3	0.0	8.8
AUSTRALIAN BONDS	5.8	0.0	0.0	5.8
AUSTRALIAN CASH	5.5	0.0	0.0	5.5

Source: AMP Capital Investors

basis points increase in risk. As indicated by Figure 10, the Sharpe ratio also improves from 0.6776 to 0.7782. Portfolio returns are significantly enhanced with little increase in risk owing to international shares and Australian fixed interest. Australian fixed interest was a higher risk investment compared to international fixed interest during this period, mainly due to market volatility in the early 1990s. As a result, the inclusion of global listed property is able to take some of the Australian fixed interest allocation without creating too much additional risk for the portfolio. Figure 11 shows

Figure 6: Scenario 1 – substituting up to 10% of a typical balanced portfolio with individual asset classes – Sep 1992 to Jun 2006

ACTUAL	PORT RISK (%PA)	PORT RETURN (%PA)	AU EQ	INTL EQ	AU LPT	GLOBAL L PROP	DIR PROP	AU FI	INTL BONDS	CASH	SHARPE RATIO
AU PROPERTY (LPTS & DIRECT)	7.15	10.80	37.5	21.5	0.0	9.5	0.0	17.0	5.0	9.5	0.7070
AUSTRALIAN SHARES	6.47	10.68	27.5	21.5	7.0	10.0	2.5	17.0	5.0	9.5	0.7627
BONDS (AU + INT'L)	7.48	11.25	37.5	21.5	7.0	10.0	2.5	12.0	0.0	9.5	0.7359
INT'L SHARES	6.72	11.20	37.5	11.5	7.0	10.0	2.5	17.0	5.0	9.5	0.8113
WITHOUT GLOBAL PROPERTY SECURITIES	6.89	10.42	37.5	21.5	7.0	0.0	2.5	17.0	5.0	9.5	0.6776

Notes: Returns shown are before tax and fees and assume dividends reinvested.

Source: AMP Capital Investors

that once again, substitution for international shares is the most favourable outcome – indicated by its location in the north-east part of the graph in comparison to the starting point of the typical balanced fund.

Scenario 1 – forecast

The *ex ante* analysis for Scenario 1 involves substituting Australian property with global listed property. As shown in Figure 12, the result is a one basis point reduction in performance and a nine basis points drop in risk for the portfolio. Substituting Australian shares for global listed property causes a 10 basis points drop in performance but a significant 64 basis points reduction

in risk. This is primarily due to low correlations between Australian shares and global listed property. By substituting Australian and international bonds, returns increase by 37 basis points with a corresponding 51 basis point increase in portfolio risk. Substitution for Australian shares results in a smaller increase in return but a reduction in risk. Similar to Scenario 1 historical, international shares shows a superior result but this time with a 9 basis points increase in return and 31 basis points reduction in risk.

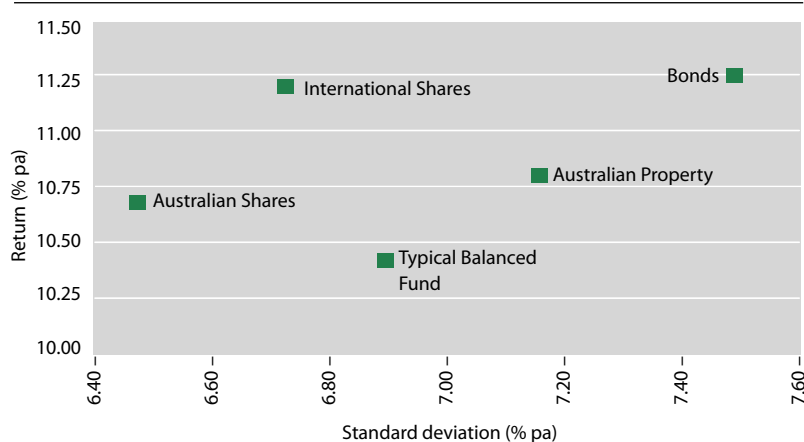
Scenario 2 – forecast

Scenario 2, optimisation based on *ex ante* analysis between global listed property and growth assets while keeping defensive assets constant, displays a minor four basis point increase in return but a significant 24 basis point drop in risk. Meanwhile, the Sharpe ratio improves from 0.3176 to 0.3331. Figure 13 shows that all results are superior to the position of the typical balanced fund with the substitution of growth assets providing better outcomes in either risk or return.

Scenario 3 – forecast

The *ex ante* Scenario 3 optimisation between global listed property and growth and defensive assets reveals a 22 basis points increase in return and a minor six basis point increase in portfolio risk. The Sharpe ratio improves from 0.3176 to 0.3447. Figure 14 shows the efficient frontier positioned more towards the top right-hand corner as defensive assets are added. This is expected given global listed property is a higher-risk asset compared to Australian and international bonds.

Figure 7: Substituting up to 10% global listed property – indiv asset classes



Notes: September 1992 to June 2006. Returns are before tax and fees and assume dividends are reinvested. Source: AMP Capital Investors

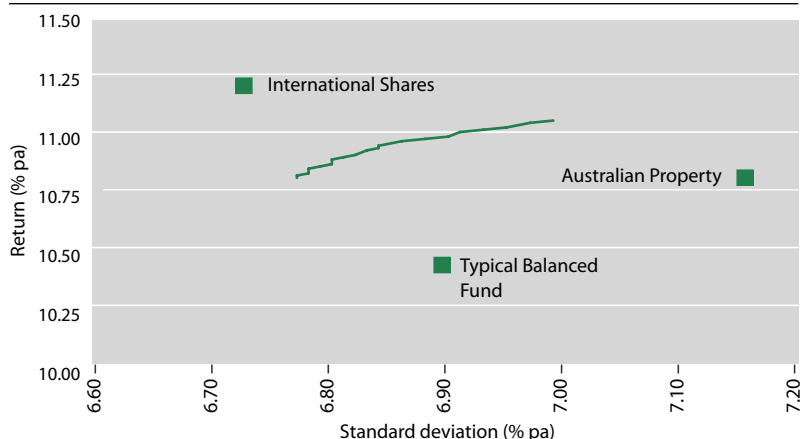
Figure 8: Scenario 2 – optimised portfolio from growth assets only with up to 10% global listed property

ACTUAL	PORT RISK (%PA)	PORT RETURN (%PA)	AU EQ	INTL EQ	AU LPT	GLOBAL L PROP	DIR PROP	AU FI	INTL BONDS	CASH	SHARPE RATIO
SCENARIO 2	6.86	10.97	37.5	16.5	2.3	10.0	2.2	17.0	5.0	9.5	0.7610
WITHOUT GLOBAL PROPERTY SECURITIES	6.89	10.42	37.5	21.5	7.0	0.0	2.5	17.0	5.0	9.5	0.6778

Notes: Returns shown are before tax and fees and assume dividends reinvested.

Source: AMP Capital Investors

Figure 9: Substituting up to 10% global listed property – growth assets only



Notes: September 1992 to June 2006. Returns are before tax and fees and assume dividends are reinvested. Source: AMP Capital Investors

Conclusion

From September 1992 to June 2006, the best results could have been achieved by allocating up to 10% of global listed property at the expense of growth assets, excluding Australian shares (Scenario 2 historical). The most notable outcome is the replacement of international shares (Figure 9). By substituting a portion of international shares with global listed property, the typical balanced fund moves to a higher return and lower risk position, while retaining its balanced profile.

Not everyone has the skills or systems to optimise portfolios, so a direct substitution of international shares for 10% global listed property provides the next best outcome (Scenario 1 historical, international shares). Although the optimised portfolio replacing global listed property across growth and defensive assets (Scenario 3 historical) is superior in terms of absolute

Figure 10: Scenario 3 – optimised portfolio from growth and defensive assets with up to 10% global listed property

ACTUAL	PORT RISK (%PA)	PORT RETURN (%PA)	AU EQ	INTL EQ	AU LPT	GLOBAL L PROP	DIR PROP	AU FI	INTL BONDS	CASH	SHARPE RATIO
SCENARIO 3	7.04	11.23	37.5	16.5	6.8	10.0	2.5	12.2	5.0	9.5	0.7782
WITHOUT GLOBAL PROPERTY SECURITIES	6.89	10.42	37.5	21.5	7.0	0.0	2.5	17.0	5.0	9.5	0.6778

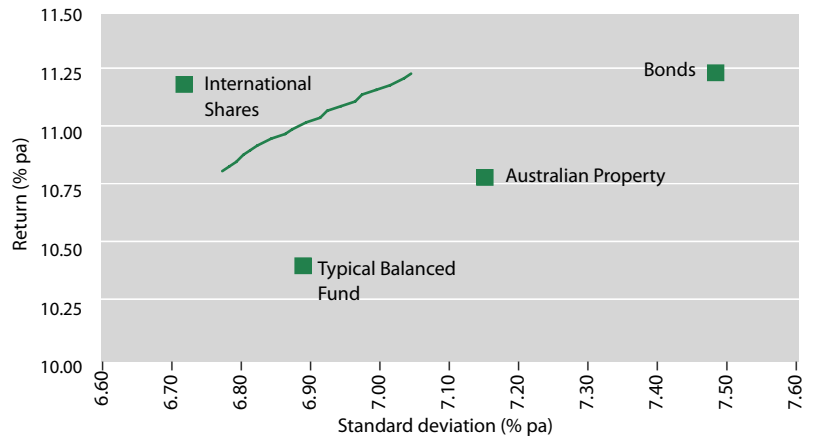
Notes: Returns shown are before tax and fees and assume dividends reinvested.

Source: AMP Capital Investors

and risk-adjusted returns, moving a portfolio away from a traditional growth/defensive approach may not be practical as the market in general has not adopted this approach. This may become valid as markets evolve.

These results are all very well in hindsight but are perhaps of limited value going forward. The last 15 years or so has seen excellent returns with low risk from global listed property relative to international shares. This may not apply going forward. The analysis using medium-term forecasts again shows that substituting 10% of global listed property for other growth assets (Scenario 2 forecast) gives the best results, particularly if international shares are replaced. The result also provides a better risk-adjusted return than other results in that category, as shown in Figure 15. Similar to the historical analysis, from a pure return perspective, substituting global listed property across growth and defensive assets (Scenario 3 forecast) gives the best returns. However,

Figure 11: Up to 10% global listed property – growth and defensive assets



Notes: September 1992 to June 2006. Returns are before tax and fees and assume dividends are reinvested.

Source: AMP Capital Investors

Figure 12: Scenario 1 – Substituting up to 10% of a typical balanced portfolio with selected sectors

ACTUAL	PORT RISK (%PA)	PORT RETURN (%PA)	AU EQ	INTL EQ	AU LPT	GLOBAL L PROP	DIR PROP	AU FI	INTL BONDS	CASH	SHARPE RATIO
AU PROPERTY (LPTS & DIRECT)	7.67	7.96	37.5	21.5	0.0	9.5	0.0	17.0	5.0	9.5	0.3206
AUSTRALIAN SHARES	7.12	7.87	27.5	21.5	7.0	10.0	2.5	17.0	5.0	9.5	0.3320
BONDS (AU + INT'L)	8.27	8.34	37.5	21.5	7.0	10.0	2.5	12.0	0.0	9.5	0.3438
INT'L SHARES	7.45	8.06	37.5	11.5	7.0	10.0	2.5	27.0	5.0	9.5	0.3431
WITHOUT GLOBAL PROPERTY SECURITIES	7.76	7.97	37.5	21.5	7.0	0.0	2.5	17.0	5.0	9.5	0.3176

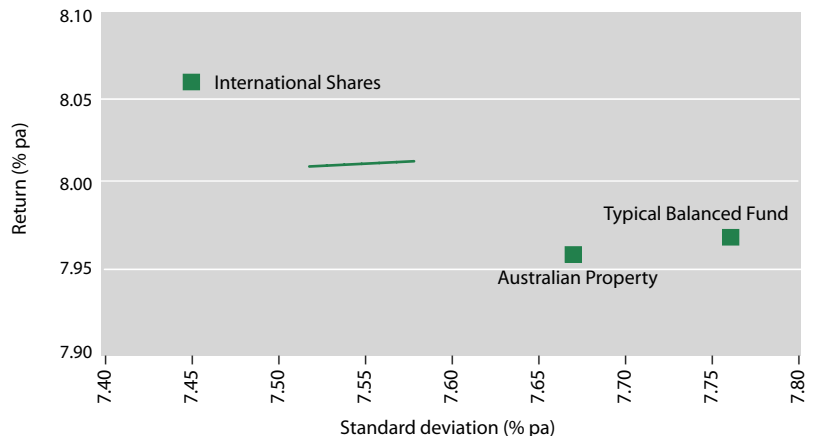
Notes: Returns shown are before tax and fees and assume dividends reinvested.

Source: AMP Capital Investors

the diversification benefits fall dramatically (shown by the higher risk profile in Figure 14) due to the reduction in defensive assets. Again, practicality rules – most investors may not want to move away from traditional growth and defensive diversified portfolios.

Whether using historical or projected returns, an allocation of up to 10% global listed property in a typical balanced fund can significantly improve its risk/return profile. The evidence points to global listed property being a valid inclusion in a balanced portfolio, offering the prospect of enhanced returns and reduced risk.

Figure 13: Up to 10% global listed property – growth assets only – outlook



Notes: Medium-term forecast. Returns are before tax and fees and assume dividends are reinvested.

Source: AMP Capital Investors

ENDNOTES

1. Mercer IC Asset Allocation Survey. Australian equities, international equities, and Australian LPTs formed

69.5% of the asset-weighted average of balanced portfolios in Australia at 30 June 2006.

- The maximum allocation to global listed property is 10% with the exception of Scenario 1, where the average allocation to Australian LPTs and Australian direct property is only 7% and 2.5% respectively.

All data and analysis are based on primary research by Shane Oliver, Wing Hei Chan and Natasha Moldrich of AMP Capital Investors, unless indicated otherwise.

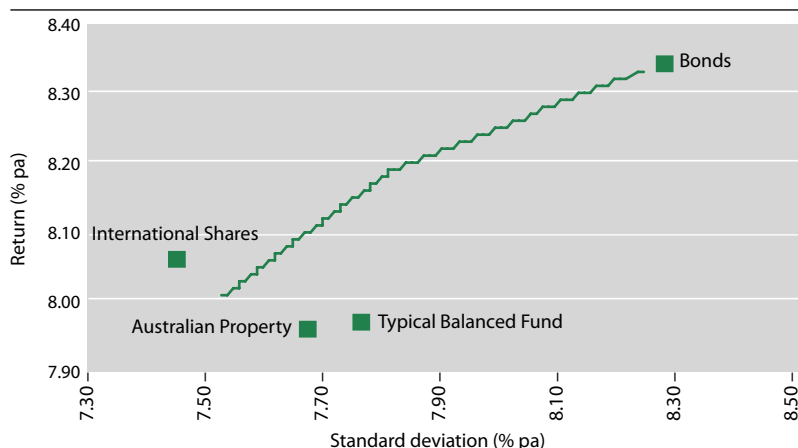
ABOUT THE AUTHOR



Dr Shane Oliver play plays a major role in determining AMP Capital Investors' investment strategy and asset allocation. He is responsible for formulating investment policy for AMP Capital Investors' diversified investment funds, and is also responsible for providing economic forecasts and analysis of key variables and issues affecting, or likely to affect, all asset markets. As Chief Economist, he is a regular media commentator on major economic and investment issues. He has extensive experience analysing the relative return outlook between key asset classes including fixed interest, property and equities, and their relationship to the investment cycle.

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Figure 14: Up to 10% global list prop – growth & defensive assets – outlook



Notes: Medium-term forecast. Returns are before tax and fees and assume dividends are reinvested. Source: AMP Capital Investors

Figure 15: Summary of outcomes for the historical and forecast global listed property optimisation

HISTORICAL (SEPTEMBER 1992 TO JUNE 2006)	PORTFOLIO RISK (%PA)	PORTFOLIO RETURN (%PA)	SHARPE RATIO
SCENARIO 1			
Australian listed property (LPTs + Direct Property)	7.15	10.80	0.7070
Australian shares	6.47	10.68	0.7627
Bonds (Australian + International)	7.48	11.25	0.7359
International shares	6.72	11.20	0.8113
SCENARIO 2	6.86	10.97	0.7610
SCENARIO 3	7.04	11.23	0.7782
WITHOUT GLOBAL LISTED PROPERTY	6.89	10.42	0.6776
MEDIUM-TERM FORECAST			
SCENARIO 1			
Australian listed property (LPTs + Direct Property)	7.67	7.96	0.3206
Australian shares	7.12	8.34	0.3320
Bonds (Australian + International)	8.27	7.87	0.3438
International shares	7.45	8.06	0.3431
SCENARIO 2	7.52	8.01	0.3331
SCENARIO 3	7.82	8.19	0.3447
WITHOUT GLOBAL LISTED PROPERTY	7.76	7.97	0.3176

Source: AMP Capital Investors