

Commingled Four Quadrant Property Funds: Creating an Investment Framework

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Abstract

In broad terms, the structure of all property investment products can fit into four property investment quadrants – private equity, public equity, private debt and public debt. Within an investment framework, this research examines the portfolio allocation across the four quadrants. The portfolio weights are based on recognised investment styles (strategic – fixed and flexible weighting and tactical asset allocation). The styles are applied to conservative, balanced and growth funds derived from different levels of risk along a Markowitz constrained mean–variance efficient frontier model.

The results showed that higher total returns can be achieved by the funds with flexible weighting and tactical asset allocation strategies, although this was accompanied by increased volatility which lowered the key risk adjusted return readings. This was primarily due to an increased allocation to private equity and the introduction of public equity to the portfolios.

As portfolio allocation based on the four quadrant approach is still relatively new and evolving, there is a requirement for ongoing research, particularly with sourcing actual property debt performance data. In the future, commingled four quadrant property funds will offer institutional investors the opportunity to better manage and successfully execute property investment strategies.

Key words: commercial property, portfolio analysis, property investment allocation

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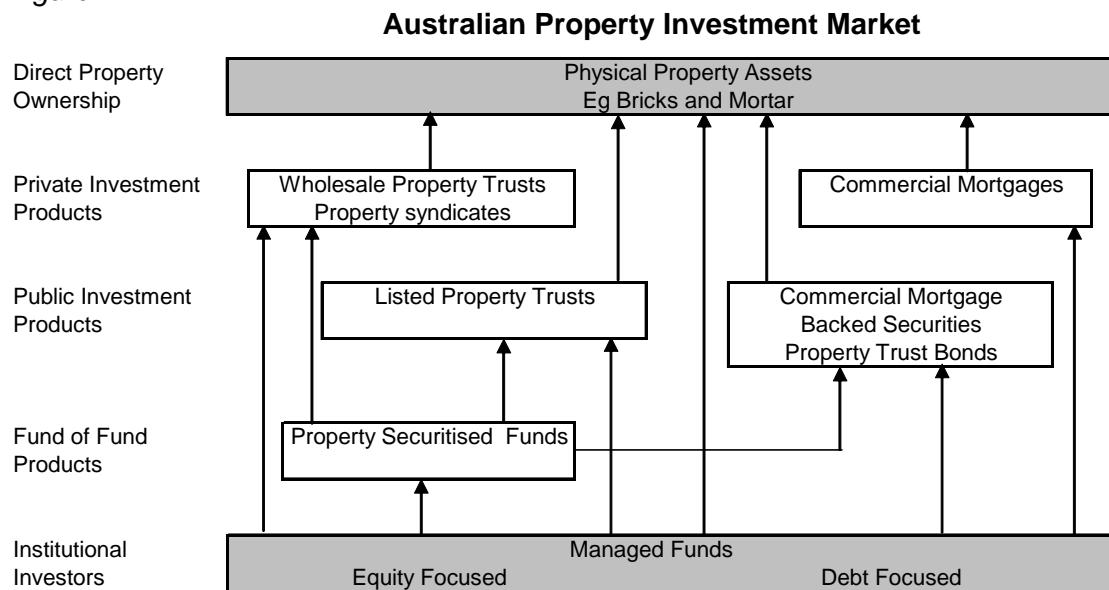
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1. Introduction

As global commercial property markets expand in size and sophistication, institutional investors can select from a diverse range of property assets, sourced locally and from overseas building stock. In identifying the physical property opportunities, there are also property investment products which even though linked long term to the security of the underlying property assets, can exhibit distinctively separate structures and investment attributes. For Australia, Figure 1 shows the various property investment options for institutional investors.

Figure 1



Source: Higgins 2007b

Figure 1 illustrates the structure of the Australian property investment market, linking the underlying property assets at the top with the options for the institutional investors along the bottom. See Higgins (2007b) for a detailed explanation of the property investment choices.

The property investment products, can be divided into four capital market categories according to whether they are traded on the public or private markets and either equity or debt assets. This ability to separate the debt and equity components can provide institutional investors with the opportunity to better manage their property allocation, as the benefits of stability versus liquidity can be gained by investing in private and public property investment markets.

Institutional investors can achieve a mixed property asset portfolio in a commingled fund with exposure to the different property investment sectors via the defined four property investment quadrants. The optimal four quadrant property allocation will depend on an institutional investor's return requirements and risk tolerance levels.

The strategy in binding the property investment quadrants together work best for institutional investors in partnership with leading property fund managers that can offer exposure and in-depth knowledge of the complete property investment market. This approach can present institutional investors with a tailored structured platform, which on their own they will be struggling to match both in access to property investment opportunities and expertise across the property equity and debt market.

For this research, allocation across the four property investment quadrants is based on the Markowitz mean–variance constrained model. The allocation is along the efficient frontier at three distinct levels of risk. This will demonstrate the risk return performance for various mixed property asset portfolios. The funds based on the efficient frontier model are as follows:

- (i) **Conservative Property Fund:** offering a low risk investment strategy based on the 1st quartile (25th percentile) risk allocation.
- (ii) **Balanced Property Fund:** presenting a medium risk investment strategy. The 2nd quartile (50th percentile) being equal to the mean of the efficient frontier data set.
- (iii) **Growth Property Fund:** represents a high risk investment strategy. The returns are based on the 3rd quartile (75th percentile) risk allocation on the efficient frontier.

In selecting an acceptable level of risk for the funds, an investment style will influence the overall portfolio performance. The research is based on recognised investment framework commonly adopted by the managed fund industry, namely the strategic (passive) and the tactical (active) approach (see Gitman *et al* (2004) for further information on different investment methods). For this research, three common investment styles were selected and are as follows:

Strategic Asset Allocation

- (i) **Fixed Weighting:** long term hold at a predetermined asset allocation. For this research the fixed weighted asset allocation is based on the previous three years four quadrant property market performance.
- (ii) **Flexible Weighting:** periodic adjustment to the asset allocation within defined parameters. Reviewed annually the flexible weighted asset allocation for this research is based on the previous three year performance of the four quadrant property market data.

Tactical Asset Allocation

- (iii) **Technical Analysis:** focus on regular analysis to determine the asset allocation. On a quarterly basis, the asset allocation for this research is reviewed with reference to the previous three year performance.

The three asset allocation styles applied to the three property funds with different risk profiles gives nine mixed property portfolios. The performance and asset allocation of these portfolios can be compared to the actual allocation over the complete period December 2002 to December 2006.

The investment styles are based on a moving average model. It provides the initial fixed weighing allocation, the adjustment for the flexible weighted and the tactical asset allocation strategy depending on the regularity of the analysis. Whilst it is recognised that a moving average model is backward looking, inertia (momentum) in the time series data may exist to provide accurate and reliable forecasts. This approach can provide an investment framework and future research can look at out of sample forecasting techniques for the three investment styles.

The structure of this paper is as follows. After this introduction, Section two provides a literature review on the four quadrant property investment market and constructing mixed asset property portfolios. Section three details the construction of the property data indices and the associated modern portfolio methodology. Empirical findings relating to the Markowitz efficient frontier are analysed in section four. Section five

examines the performance of the asset allocation strategy for the three property funds. The final section provides a conclusion.

2. Literature Review

Globally, the four quadrant concept is a relatively new property investment approach. It's origin as a property investment instrument is from the United States where Gordon (1997), Hudson-Wilson (2000) and Wright and Williams (2005) have documented the approach and modelled the performance of the US property quadrants.

In the Australian property investment market, the four quadrant property investment model was untested. Separately Higgins (2006a) and Rees *et al* (2006a) examined the four quadrant property investment theory, highlighting the practical benefits and opportunities that a tailored structured investment platform can offer institutional investors.

Furthermore, Higgins (2006b, 2007a) attempted to model the performance of the four property markets. Limited data on the property debt market lead to the selection of alternative corporate debt data. Rees *et al* (2006b) provided more detailed coverage of the characteristics of corporate real estate debt and presented evidence of past real estate debt yields.

Recently, Higgins (2007b) updated his Australian four quadrant property market research. The information was detailed within a comprehensive industry report depicting the structure and the size of the Australian property investment market. Table 1 details the investment opportunities in the Australian investment market and in *italics* the Australian property investment market.

Table 1

**Four Quadrant Investment Market
Australian Investment Market – AU\$6.1 Trillion as at December 2006**

	Public Markets	Private Markets
Equity Assets	Shares (AU\$1,390billion) <i>- Listed Property Trusts (AU\$136billion)</i>	Private Entities (AU\$1,156billion) <i>- Unlisted Property (AU\$69billion)</i>
Debt Assets	Traded Debt Securities(AU\$2,659billion) <i>- Commercial Mortgage Backed Securities and Property Trust Bonds (AU\$12billion)</i>	Bank Loans (AU\$904billion) <i>- Whole Commercial Property Mortgages (AU\$71billion)</i>

Source: Higgins 2007b

Table 1 illustrates the total commercial property component of AU\$288 billion and represents close to 5% of the AU\$6.1 trillion Australian investment market. In terms of allocation, the Australian property investment market reflects equity 71% and debt 29%. For a comparison, as at December 2004, the US property investment market US\$3,174 (AU\$ 4,289) split was equity 33% and debt 67% (Hudson-Wilson *et al* 2005). This contrast in the Australian and US property investment market structure can in part explain the different performance profile between countries.

In contrast to the limited four quadrant property literature, there is extensive research on the role of property in a mixed-asset portfolio using the Markowitz efficient frontier approach. The body of literature extensively covers public and private property equity returns with reference to alternative asset classes over different periods of time. For example, see Craft (2001) and Mueller and Mueller (2003).

Past research appears to be limited to the inclusion of property equity within mixed-asset portfolios. Data limitations associated with the property debt markets has restricted research, although Hudson-Wilson (2000) demonstrated the benefits of US debt returns in a mixed property portfolio with the use of proprietary data.

There are several books on investment styles for the capital markets. For example: Gitman *et al* (2004), Haugen (2001), and Reilly and Brown (2005). These text books outline the theory with examples of strategic and tactical asset allocation which can be applied to a mixed property portfolio.

3. Data and Methodology

The four quadrant property market data is sourced from publicly available data where possible. If such public data is lacking, the returns are modelled. The calculations of each quadrant's returns are as follows:

- (i) **Public Equity:** there are numerous LPT indices. For the purposes of this research, the ASX LPT 300 series was selected as it represents the broader LPT market.
- (ii) **Public Debt:** the historical returns had to be modelled as this is a relatively new Australian property asset class with limited past data and consists of two investment classes, CBMS and Property Trust Bonds with a contrasting spread of AAA to BBB+ credit ratings.

To model the historical performance of Property Trust Bonds, this research utilised Reserve Bank of Australia (2007) corporate A rated bond data. The

spread for the bond data series was applied to the one month overnight indexed swap rate. The average holding period to maturity was assumed to be four years.

- (iii) **Private Equity:** the most commonly used measure of total return for private equity is the appraisal based PCA/IPD Property Investment Performance Index (composite total return series) and the Mercer Wholesale Property Trust Index. As the performance profile was similar, the PCA/IPD Property Investment Performance Index was selected as there are available of income and capital growth returns.
- (iv) **Private Debt:** while there are surveys of mortgage rates and default risk, commercial sensitivity restricts the availability of information to form a historical market return index. For the current study, a private debt model sourced data from the Property Investment Research (PIR) survey of Property Syndicates prospectuses. The PIR AU\$4.2 billion database provided 115 fixed interest property syndicate with debt transactions ranging from AU\$5 million to AU\$50 million and a loans-to-debt cover were below 65%. Quarterly interest rate charges and loan repayment amounts were calculated for the length of each loan and an index based on a weighted portfolio average calculated.

These data sources provided the historical total returns for the four quadrants of the property investment market. The quarterly property data covered eight years: 1999 to 2006 and provided 32 data points. Taking the initial 3 years out of sample data provides five years: 2002 to 2006 with 20 data points

The research adapts the common Markowitz mean-variance model of portfolio allocation without short selling. The approach is to minimise the risk of the portfolios subject to a given level of return with the constraints that the assets weights are all non-negative and add up to one. By varying the return between the maximum and minimum variance portfolio return, an efficient frontier is created along which there are different risk return profiles with associated asset allocations.

The research selects three distinct levels of risk along the efficient frontier and applies three distinct investment strategies to provide out-of-sample mixed asset property portfolios. The nine property portfolios are detailed as follows:

Table 2

Summary of Property Portfolios and Associated Investment Styles

	Investment Style	Asset Allocation Process
Conservative Fund		
Portfolio 1	Strategic asset allocation – fixed weighted	Fixed allocation
Portfolio 2	Strategic asset allocation – flexible weighted	Annually reviewed
Portfolio 3	Tactical asset allocation – technical analysis	Quarterly reviewed
Balanced Fund		
Portfolio 4	Strategic asset allocation – fixed weighted	Fixed allocation
Portfolio 5	Strategic asset allocation – flexible weighted	Annually reviewed
Portfolio 6	Tactical asset allocation – technical analysis	Quarterly reviewed
Growth Fund		
Portfolio 7	Strategic asset allocation – fixed weighted	Fixed allocation
Portfolio 8	Strategic asset allocation – flexible weighted	Annually reviewed
Portfolio 9	Tactical asset allocation – technical analysis	Quarterly reviewed

Table 2 details nine property portfolio funds which provides different risk return performance profiles with associates mixed property asset allocations.

4. Portfolio Analysis

In investigating the performance of the four property investment quadrants, a visual comparison of quarterly returns can highlight the variations in performance. This is shown in Figure 2.

Figure 2

Four Quadrant Property Investment Returns - Quarterly Data: 2002-2006

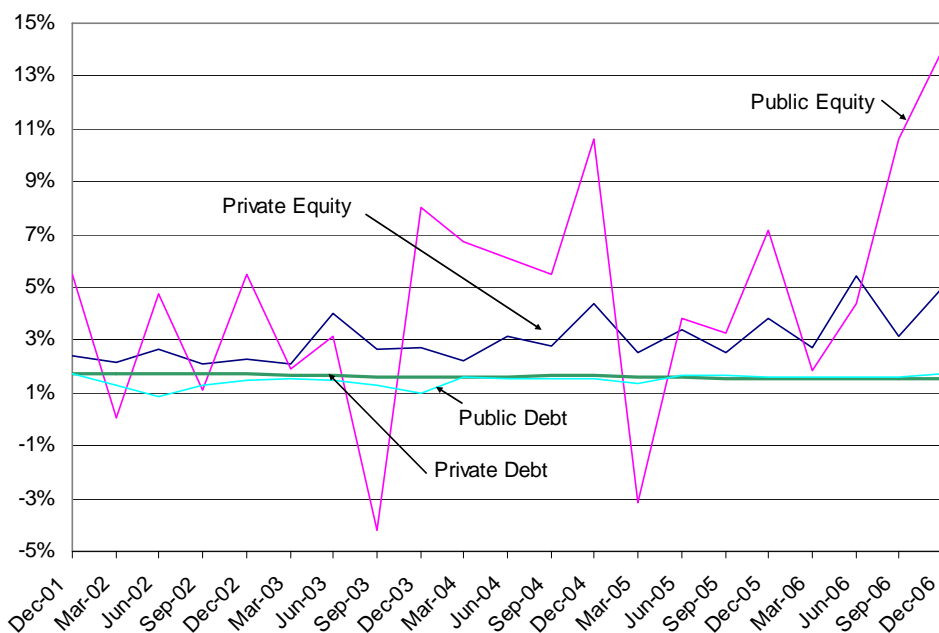


Figure 2 visually details the differences in quarterly total returns. The graph principally shows short-term volatility in the data, with the sharp fluctuations in public equity, compared to the relatively smooth private debt returns. This can be further illustrated by examining both descriptive and key fund performance measures as shown in Table 3.

Table 3

**Descriptive Statistics and Financial Comparisons
Quarterly Data: 2002-2006**

	Private Equity	Public Equity	Private Debt	Public Debt
Descriptive Statistics				
Return	3.08%	4.56%	1.62%	1.47%
Risk	0.95%	4.33%	0.06%	0.22%
Median	2.73%	4.72%	1.63%	1.57%
Kurtosis	0.53	0.51	-1.04	2.51
Skewness	1.16	-0.08	-0.03	-1.71
Range	3.37%	18.22%	0.18%	0.84%
Minimum	2.08%	-4.22%	1.53%	0.89%
Maximum	5.45%	14.00%	1.71%	1.73%
Financial Comparisons				
Risk/Return Ratio	0.31	0.95	0.04	0.15
Sharpe Index	7.78	2.65	5.48	0.80

Table 3 highlights the structural differences in the four quadrant property investment data. Specifically these can be detailed as follows:

Descriptive Statistics

- (i) The return and risk data illustrates that increased returns lead to higher risk. Although the level of risk is substantially higher in public equity 4.33% as compared to the next quadrant level of risk, private equity at 0.95%.
- (ii) The four quadrant property investment data series are broadly distributed around the mean, with low Kurtosis readings below 0.53 to the standard 3.00 bell curve reading. The exception is Public Debt with a 2.51 Kurtosis reading.
- (iii) The contrast in the data is highlighted when comparing the low private debt range of 0.18% to the public equity span of 18.22%. The high public equity spread was the only quadrant to provide negative returns, with two negative quarterly returns over the five years of data.

Fund Performance Measures

The stability benefits from the low volatility in the private markets are highlighted in the risk adjusted performance measures.

- (iv) The risk/return ratio illustrated the advantage of a private debt with an exceedingly low 0.04 reading. This compared to the relatively high 0.95 public equity reading.
- (v) The Sharpe Index recorded a range of readings, with high 5.48 private debt and 7.78 private equity readings. This compares to the next best reading being public equity 2.65. The spread is more related to the low private market risk measures than the relative returns.

The diverse movements in the four property investment markets can be further examined by correlation analysis as shown in Table 4.

Table 4

Correlation Matrix: Quarterly Data: 2002-2006

	Private Equity	Public Equity	Private Debt	Public Debt
Private Equity	1.00			
Public Equity	0.51	1.00		
Private Debt	-0.58	-0.36	1.00	
Public Debt	0.39	-0.08	-0.62	1.00

Table 4 illustrates a wide quarterly correlation range, 0.51 to -0.62 between the four quadrants of the property investment market. This shows the ability of property quadrants to diversify each other. This unrelated behaviour is most noticeable between the debt and equity markets and makes a strong case for both to be included in a mixed-asset property portfolio.

In recording that the property investment quadrants moved independently, a portfolio of the four property asset sectors was constructed relative to acceptable levels of risk and returns. The Markowitz mean-variance constrained model provided the basis for this analysis.

The composition of the portfolio asset allocation changes along the efficient frontier with the level of risk and return is detailed in Table 5.

Table 5

**Four Quadrant Property Asset Allocation
Quarterly Data: 2002-2006**

	Property Investment Strategy									
	<<< Low Returns					High Returns >>>				
	1	2	3	4	5	6	7	8	9	10
Performance										
Return	1.70%	1.92%	2.14%	2.36%	2.58%	2.80%	3.02%	3.24%	3.46%	3.68%
Risk	0.05%	0.16%	0.31%	0.46%	0.61%	0.77%	1.24%	2.20%	3.26%	4.34%
Compounded Annual Return	6.96%	7.89%	8.82%	9.76%	10.71%	11.66%	12.62%	13.59%	14.56%	15.54%
Allocation										
Private Equity	3.90%	21.56%	39.53%	57.50%	75.47%	93.43%	82.53%	55.03%	27.51%	0%
Public Equity	0%	0%	0%	0%	0%	0%	17%	44.97%	72.49%	100%
Private Debt	93.14%	78.44%	60.47%	42.50%	24.53%	6.57%	0.00%	0%	0%	0%
Public Debt	2.96%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Table 5 shows the allocation to the property investment quadrants relative to the degree of risk and return. The evidence suggests that along the efficient frontier, there were three distinct levels with associated combinations of property assets.

- (i) **Conservative:** along the lower half of the efficient frontier the portfolio is based predominantly on private debt with a 7% to 9% annual return range.
- (ii) **Balanced:** just before the halfway point of the efficient frontier, the portfolio focus switched to private equity weighting with a 9% to 12% annual return range.
- (iii) **Growth:** allocation along the higher ranges of the efficient frontier is mainly to private equity with public equity gradually increasing to form a high-risk single asset strategy with a 12% to 15% annual return range.

As can be seen in Table 5, there are three property investment quadrants that primarily form the asset allocation on the efficient frontier. Public debt is absent, as it does not form part of the efficient frontier distribution. This can be explained as to the similarity with private debt performance.

Table 6 and 7 details both the performance over the complete dataset for the three property funds and the associated four quadrant asset allocation.

Table 6

**Four Quadrant Property Performance
Quarterly Data: 2002-2006**

	Return	Risk	Risk Return Ratio	Sharp Index	Compounded Annual Returns
Conservative Fund	2.19%	0.34%	0.16	2.57	9.06%
Balanced Fund	2.69%	0.69%	0.26	2.00	11.19%
Growth Fund	3.18%	1.96%	0.62	0.96	13.36%

Table 7

**Four Quadrant Property Asset Allocation
Quarterly Data: 2002-2006**

	Equity		Debt	
	Private	Public	Private	Public
Conservative Fund	44%	0%	56%	0%
Balanced Fund	84%	0%	16%	0%
Growth Fund	62%	38%	0%	0%

Table 6 and 7 shows the performance for three funds with defined levels of risk and their associated asset allocation. For the period 2002 - 2006, private equity was most evident in the three funds. Those with exposure to private equity and private debt gave the best fund performance readings.

In identifying the performance and portfolio allocation for the 2002 - 2006 period the asset allocation strategy can be examined relative to the explained three out of sample investment styles.

5. Asset Allocation Strategy

Over the 2002 - 2006 period, the performance of the four property markets varied. Figure 2 details the quarterly variations of the property markets. These diverse movements can be further examined by applying a three year correlation matrix to the data as shown in Table 8.

Table 8

**3 -Year Rolling Correlation Matrix
Quarterly Data: 2002-2006**

	Private Equity	Public Equity	Private Debt	Public Debt
Private Equity	1			
Public Equity	0.05 to 0.44	1		
Private Debt	-0.53 to 0.59	-0.13 to 0.63	1	
Public Debt	-0.10 to 0.19	-0.16 to 0.17	-0.15 to 0.59	1

Table 8 illustrates how the relationship between the property assets varied considerably overtime. Significant changes are evident primarily between the public and private markets. The movements will impact on the asset allocation for Portfolio 2, 5 and 8 (flexible weighting) and Portfolio 3, 6 and 9 (tactical asset allocation). Table 9 illustrates the allocation range for the different portfolios.

Table 9

**Property Funds Asset Allocation Range
Quarterly Data: 2002-2006**

	Equity		Debt	
	Private	Public	Private	Public
Conservative Fund				
Portfolio 1	15%	0%	85%	0%
Portfolio 2	15% - 57%	0% - 1%	43% - 85%	0%
Portfolio 3	15% - 59%	0% - 4%	41% - 85%	0%
Balanced Fund				
Portfolio 4	30%	0%	70%	0%
Portfolio 5	30% - 89%	0% - 13%	0% - 70%	0%
Portfolio 6	30% - 99%	0% - 16%	0% - 70%	0%
Growth Fund				
Portfolio 7	45%	0%	55%	0%
Portfolio 8	44% - 80%	0% - 56%	0% - 55%	0%
Portfolio 9	43% - 93%	0% - 57%	0% - 55%	0%

Table 9 shows the different property allocations. Portfolios 1, 4 and 7, the fixed weighted allocation remains constant over the duration, with the allocation based on the performance for the three years prior to the start date (1999 - 2001). The allocation range for portfolio 2, 5 and 8 (Flexible weighting – every December) and Portfolio 3, 6 and 9 (Tactical asset allocation – every quarter) were similar due to the regularity of the analysis and the similar applied methodology.

The change to the asset allocation was most evident in the balanced funds, with the allocation to private equity and private debt. The introduction of public equity was most evident in the growth fund portfolios. These changes can be best seen by graphing the four quadrant property allocations overtime. This is shown in the appendix for all property fund portfolios.

The risk adjusted performance measures including the Sharpe index and the risk-adjusted return (Modigliani and Modigliani 1997) measures are shown in Table 10

Table 10

**Property Funds Performance
Quarterly Data: 2002-2006**

	Mean	Risk	Risk Return Ratio	Sharpe Index	Risk Adjusted Return	Risk Adjusted Rank	Compounded Annual Returns
Conservative Fund							
Portfolio 1	1.84%	0.12%	0.07	4.39	2.81	1	7.58%
Portfolio 2	2.26%	0.45%	0.35	1.53	2.03	2	9.35%
Portfolio 3	2.32%	0.54%	0.23	1.86	1.95	3	9.60%
Balanced Fund							
Portfolio 4	2.06%	0.27%	0.13	2.82	3.23	1	8.49%
Portfolio 5	2.80%	0.98%	0.35	1.53	2.36	2	11.68%
Portfolio 6	2.98%	1.20%	0.40	1.40	2.27	3	12.48%
Growth Fund							
Portfolio 7	2.27%	0.41%	0.18	2.33	5.90	1	9.41%
Portfolio 8	3.32%	2.28%	0.69	0.88	3.04	3	13.96%
Portfolio 9	3.49%	2.46%	0.70	0.89	3.05	2	14.72%

Table 10 illustrates key performance measurements for the different property funds. As expected those portfolios with a strategic fixed weighting (portfolio's 1, 4 and 7) delivered the lowest return, although with a substantial exposure to Private Debt they also had the lowest risk profile. This contributed to relatively high risk adjusted return readings (Risk return ratio, Sharpe index and Risk adjusted return tests).

The tactical asset allocation (portfolio's 3, 6 and 9) allowed additional opportunities to regularly adjust the portfolios, and although they provided superior returns the increased volatility impacted on the risk adjusted return readings. For the balanced and growth funds this can be explained by the allocation to public equity which improved the returns at the expense of increased volatility.

Comparing the nine property funds (Table 9 and Table 10) with the performance and allocation for the complete dataset (Table 6 and Table 7) illustrated key differences:

- (i) Portfolios 2, 5 and 8 (Flexible weighting – every December) and portfolio 3, 6 and 9 (Tactical asset allocation – every quarter) provided superior returns, although there was associated risk which contributed to poor risk adjusted return readings.
- (ii) Although similar quadrants appeared across the portfolios, the complete period funds (Table 7) had a relatively high exposure to the private equity market. This may be due to the initial December 2001 allocations.
- (iii) Initially growth funds had a zero allocation to public equity. The allocation for both flexible weighting (portfolio 8) and tactical asset (portfolio 9) increased to over 50% within 18 months. This enhanced the returns, although compared to Table 6 growth fund allocation, the risk increased substantially and therefore lower the risk adjusted return readings.
- (iv) In the balanced and growth property funds the private debt asset weighting dropped from above 50% to zero in the flexible weighting (portfolio's 5 and 8) and tactical asset (portfolio's 6 and 9) portfolios. This indicated solid private equity performance with a close correlation to the performance of private debt.

Even using the same methodology (moving average application) for the different investment styles, the performance of the funds showed a range of different returns compared to the record allocation for the complete period. The results could be enhanced with further investigation into advanced forecasting techniques for the individual datasets. In acknowledging this, the study provides a framework for a four quadrant investment strategy and gives a platform for further research.

5. Conclusion

The commercial property market has evolved to provide institutional investors with a wide range of property investment options. In broad terms, these can fit into the four established investment quadrants of the capital market – private equity, public equity, private debt and public debt. By modelling, this research examines the performance of the four Australian property investment markets and provides a framework for an optimal mixed property portfolio strategy.

On applying the Markowitz mean-variance model to five years of quarterly data, there is evidence of three distinct combinations of property investment markets along the efficient frontier. For a low risk strategy, a portfolio based on private debt is the favoured option. Just before the halfway point on the efficient frontier, the focus switches to a private equity weighting. This changes again at the higher ranges of the efficient frontier, as public equity allocation gradually increases to form a high return single asset strategy.

For the three distinct risk levels, three investment styles (strategic – fixed and flexible weighting and tactical analysis) were applied to the data. The investment styles were based on a moving average model with different regularity of analysis. The results showed that higher returns can be achieved by the flexible weighting and tactical models although this was accompanied by increased volatility which lowered the fund performance measures.

The application of an efficient frontier model can demonstrate the attractiveness of a four quadrants property investment approach to institutional investors. It can offer a single account diversified property investment portfolio, with superior risk adjusted returns and the efficient deployment of capital.

As the four quadrants property investment approach is relatively new, more knowledge on defined performance measures of the individual property markets is required. This and research on applied forecasting techniques to the four quadrants data sets will lead to commingled four quadrant property funds as a viable option for institutional investors interested in executing a successful property portfolio investment strategy.

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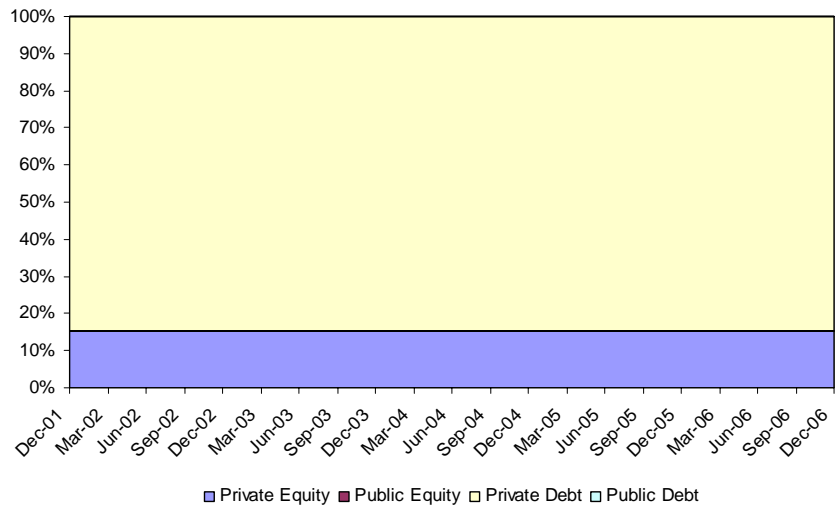
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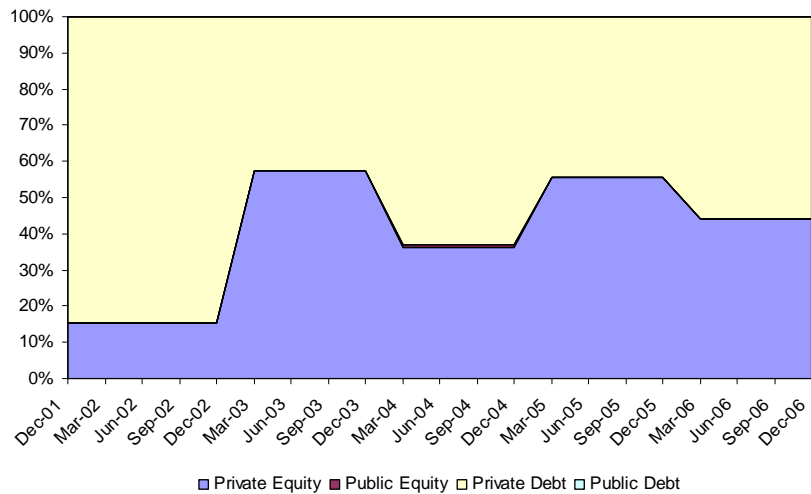
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Appendix

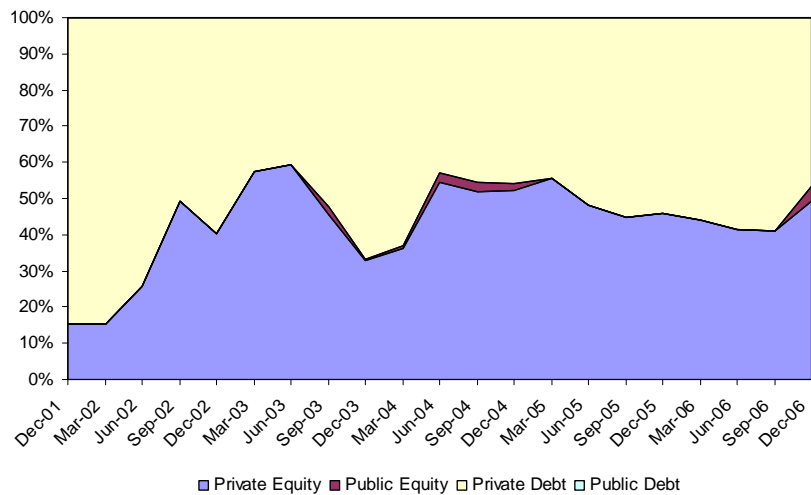
Conservative Property Fund Portfolio 1 - Strategic Fixed Weighting 2002 - 2006



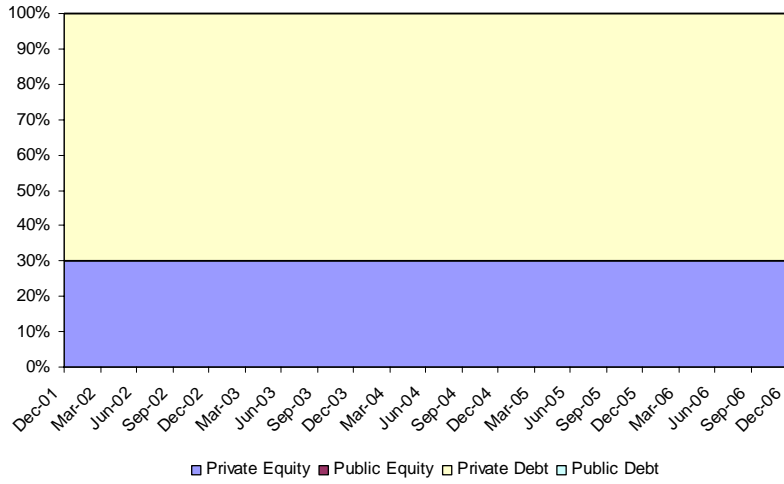
Conservative Property Fund Portfolio 2 - Strategic Flexible Weighting 2002 - 2006



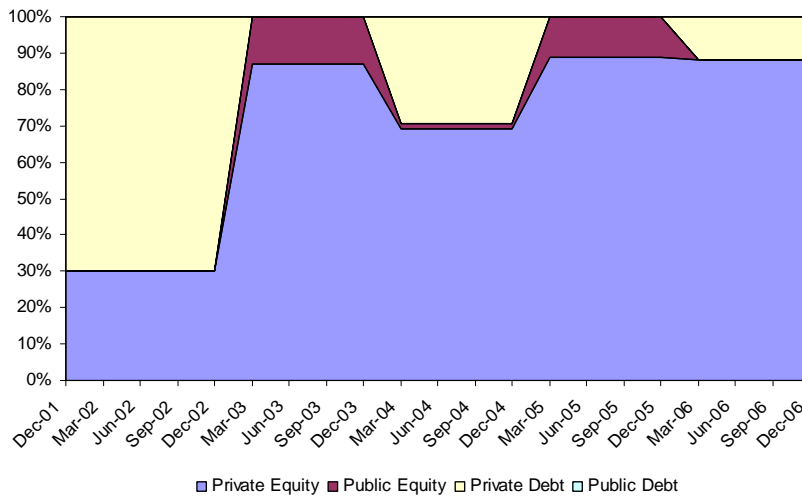
Conservative Property Fund Portfolio 3 - Tactical Asset Allocation 2002 - 2006



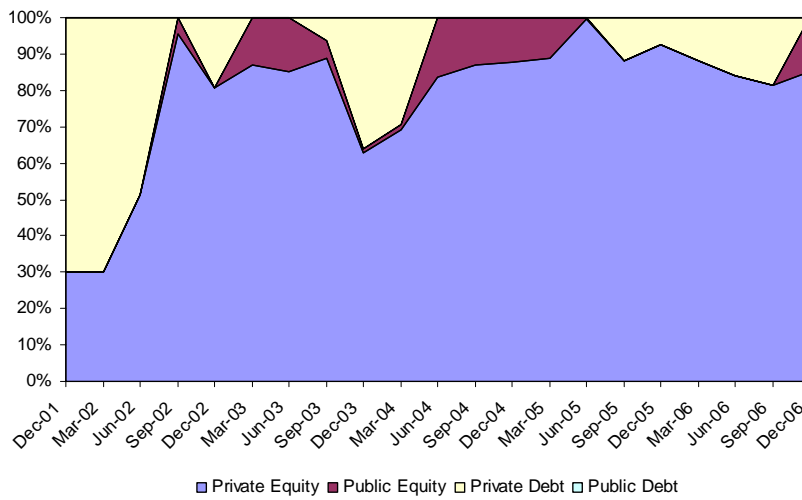
**Balanced Property Fund
Portfolio 4 - Strategic Fixed Weighting 2002 - 2006**



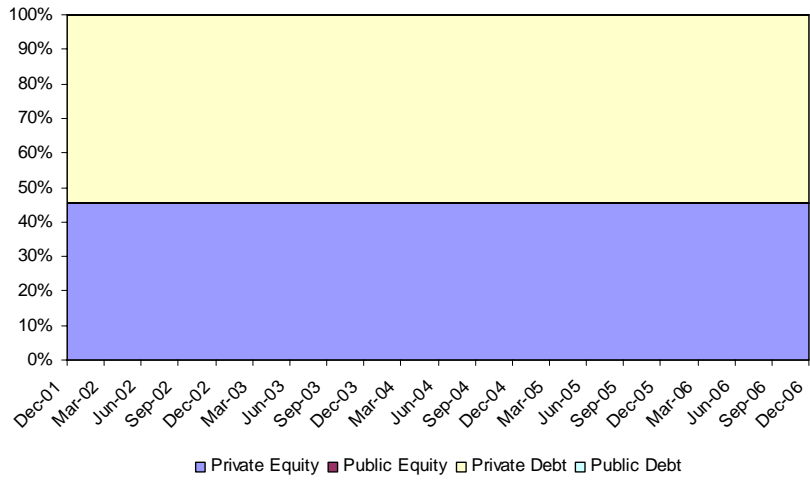
**Balanced Property Fund
Portfolio 5 - Strategic Flexible Weighting 2002 - 2006**



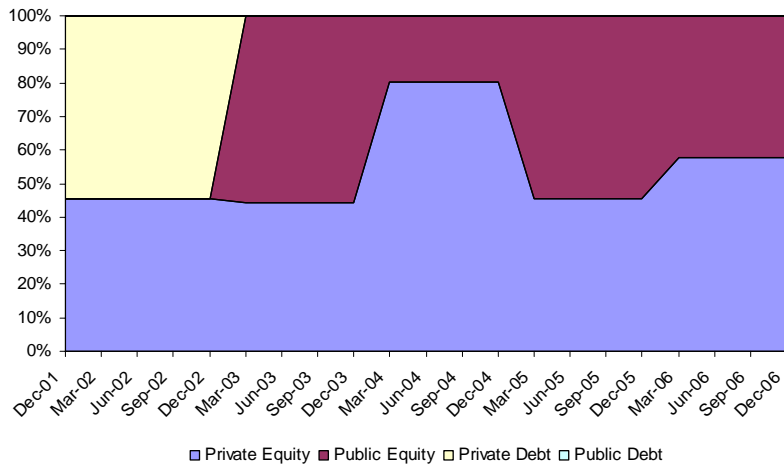
**Balanced Property Fund
Portfolio 6 - Tactical Asset Allocation 2002 - 2006**



**Growth Property Fund
Portfolio 7 - Strategic Fixed Weighting 2002 - 2006**



**Growth Property Fund
Portfolio 8 - Strategic Flexible Weighting 2002 - 2006**



**Growth Property Fund
Portfolio 9 - Tactical Asset Allocation 2002 - 2006**

