Introducing:

The future of real estate investing

The Four Quadrant Investment Model

3rd Quarter 2006

MIRVAC

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REAL ESTATE ADVISORS

Editorial

Greg Paramor
Managing Director
Mirvac Group

Globalisation of real estate markets is opening up new opportunities for investors. Competitive forces are stimulating the search for innovative investment vehicles and for new ways to package existing assets. Australians are pioneers in the development of real estate investment products and strategies. But much can be learned from the larger markets in North America and Europe.

In the United States, where real estate debt markets have achieved greater maturity and liquidity than in Australia, the four quadrant concept of real estate investment is well established. We expect that the real estate debt market will expand significantly in Australia over the next few years. Drawing parallels with trends in the US, the domestic market will expand to offer a range of investment opportunities similar to those already available in the US, and will experience enhanced liquidity.

Therefore we believe the time is now right to introduce the four quadrant concept to Australian investors. This is why Mirvac partnered in the formation of Quadrant Real Estate Advisors LLC, a market leader in the four quadrant relative value approach to real estate investing in the US.

Formed earlier this year, Quadrant Real Estate Advisors is owned 50 percent by Mirvac and 50 percent by former senior executives of GMAC Institutional Real Estate Advisors. The joint venture currently manages in excess of A$3.5 billion in real estate funds in both separate accounts and as commingled (wholesale) funds on behalf of leading institutional and pension fund clients in the US.

Here in Australia the four quadrant concept sits naturally with Mirvac's wide ranging skills in real estate development and management, as well as our extensive financial and funds management expertise across both the real estate equity and debt markets. Mirvac funds management division currently manages approximately A$8 billion in real estate debt and equity funds on behalf of institutional and retail investors.

Based on the four quadrant platform we look forward to partnering with Australian investors, closely tailoring investment products and strategies to their specific requirements across the full range of real estate investment opportunities, domestically as well as offshore.

Kurt Wright
CEO
Quadrant Real Estate Advisors

The US income real estate market offers enormous opportunities for investment. The overall market capitalisation of the asset class is approximately US$3 trillion, rivalling the size of the US fixed income market.

The traditional approach to accessing income properties defines investment strategy in terms of narrow categories that have historically been available, for example: real estate type, geography, position in the capital structure, public/private and debt/equity.

The main disadvantage of this type of investment process is that the investment manager is motivated to continue to invest in the narrow strategy, even though the window of opportunity may be closed.

A more powerful and strategic approach would be to set investment goals in terms of more conventional investment attributes such as:

- Risk
- Return
- Cash Flow
- Duration/time horizon
- Control
- Call protection

The four quadrant model provides investors and fund managers with a structured platform for managing exposures and for optimising performance across real estate public and private, debt and equity markets.

Given the huge opportunity set available across the entire real estate universe, more and more investors are utilising a multi-sector approach. A multi-sector model allows investors to seek alpha in the commercial market in several ways: market fundamentals, sector rotation and leverage. Binding the four quadrants together is analysis and hands-on experience in the financing and management of the underlying real estate assets.

We have observed a material increase in investor acceptance of this approach over the past few years. We expect this trend to accelerate given institutional investor acceptance of the real estate asset class, a continued drive for yield, and competitive pressures to put capital to work efficiently. Australian investors can be expected to seek exposure to the wide variety of real estate-based investment products available in the US across all four quadrants.

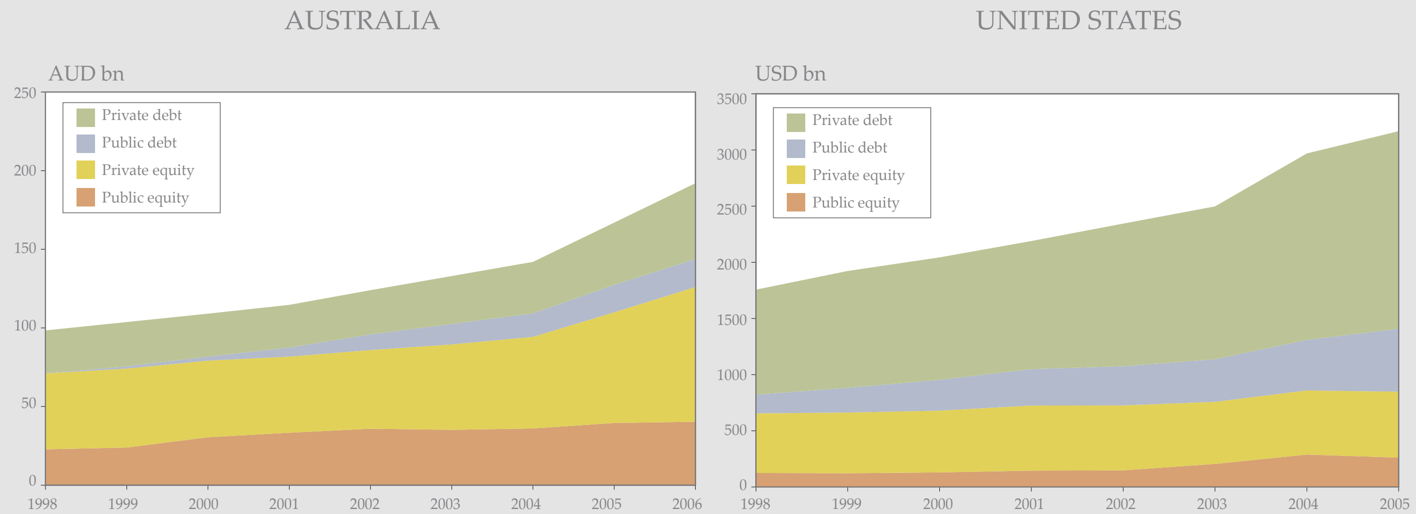
David Rees
Director of Research

The expanding range of investment alternatives offers new opportunities and challenges to real estate investors and managers.

Based on our reading of domestic and international trends, the public debt market in Australia will expand significantly over the next few years.

The four quadrant investment model provides a coherent platform to construct and manage portfolios across all real estate-related financial markets: public and private, debt and equity.

The evolution of the markets



Source: PIR, AFMA, Deutsche Bank, Capmark

Figure 1

Markets in real estate assets are growing steadily in both Australia and the US. Figure 1 shows the evolution of debt and equity real estate markets for income producing real estate in Australia and the US, excluding residential real estate.

A comparison of these two charts shows broad similarities. However, the public and private debt categories are proportionately smaller in Australia, reflecting different historical circumstances as well as the greater maturity and liquidity of these market sectors in the US. Noticeably, too, the growth of the public equity sector has slowed in recent years in Australia. The slowdown reflects the combined impact of a trend towards investment in unlisted funds by domestic investors and the strong growth in offshore investment by Australian publicly listed trusts.

Based on the US experience and our reading of trends in the domestic market, the public debt market can be expected to expand significantly in Australia over the next few years. Driving this trend will be investor demand for high yield, low volatility assets as the population ages and investors position themselves for retirement.

Over time, real estate-related debt instruments will occupy a portion of the portfolio space previously dominated by externally managed LPTs. LPTs, previously located at the low-volatility end of the risk curve, are increasingly involved in development and other activities, gearing ratios are rising and offshore expansion implies exposure to exchange rate fluctuations.

Measuring the Australian real estate investment market

AUSTRALIA: THE FOUR QUADRANTS - 2006

	Equity	$ bn	Debt	$ bn	
Private	Unlisted wholesale funds	41	Bank lending	17	
	Unlisted retail funds	10	Mortgage trusts	26	
	Property securities funds	39	Mezzanine funds	2	
	Total	**90**	**Total**	**45**	135
Public	Listed Property Trusts (LPTs)	40	Commercial Mortgaged Backed Securities (CMBS)	11	
			Corporate Bonds	7	
	Total	**40**	**Total**	**18**	58
		130		63	193

Source: Property Investment Research, Deutsche Bank, AFMA, Standard & Poor's, Mirvac
Note: Excludes offshore investments held in Australian LPTs and adjusts for the corporate component of stapled LPTs

Figure 2

Conceptually the commercial real estate market can be divided into four distinct categories:

Public equity

The public equity market is the most liquid, transparent and heavily researched sector of the Australian commercial real estate market. Listed property trusts (LPTs) have been traded since the first listing in the early 1970s. The market capitalisation of the LPT sector has grown from less than $5 billion in the early 1990s to more than $90 billion currently. However, a high proportion of the recent growth is accounted for by offshore investment, principally in the US and Europe. We have deducted this component from our calculation in order to reflect purely Australian real estate exposures. In addition, many LPTs are now stapled entities, including corporate divisions engaged in activities such as real estate development, land banking and funds management. Adjusting for these factors, we assess the size of the public equity commercial real estate market at around $40 billion.

Private equity

Private equity investment has grown rapidly in recent years, as investors, both institutional and retail, have directed capital towards real estate syndicates and unlisted funds. Syndicates represent a relatively small commitment of capital overall, though these vehicles have attracted a strong following among investors seeking higher, tax-effective returns supported by relative high levels of debt and, often, high yielding secondary grade real estate.

Unlisted wholesale and retail funds are attractive because performance and capital values are insulated from day-to-day sharemarket fluctuations. Typically these funds carry low levels of debt, in contrast to syndicates. The size of the private equity market is highly elastic, depending on one's chosen definition of the commercial real estate market.

Limiting the definition of the commercial real estate market to institutional investors only, excluding corporate real estate (CRE), private equity is estimated to be around $90 billion. Broadening the definition of real estate to include all commercial real estate, including CRE, private equity expands to around $170 billion.

Binding the four quadrants together is exposure to tangible real estate assets. Careful and continuous assessment of the direct real estate markets is a prerequisite for successful investment in the financial instruments that are derived from these assets.

Subject to analysis of the underlying real estate markets, and assessment of the individual assets, investors in the commercial real estate sector must then choose from an array of alternative investment vehicles. This requires an assessment of relative values and a clear understanding of the risks associated with these vehicles. As markets become more liquid, yields tighter and the flow of funds increases, so pricing becomes finer and the necessity for specialised portfolio management increases.

COMMERCIAL REAL ESTATE EXPOSURES OF THE BANKING SECTOR IN AUSTRALIA

	Office	Retail	Industrial	Tourism	Other	Total
Exposure ($ bn)	23.1	18.0	9.5	3.7	37.2	91.5
Percentage	25.2%	19.7%	10.4%	4.0%	40.7%	100.0%

Source: AFMA, March 2006

Figure 3

Public debt

Public debt comprises Commercial Mortgage Backed Securities (CMBS) and corporate bonds, usually issued by rated entities. Currently the real estate-related sector accounts for around 4 percent of issuance in the domestic corporate bond market. Both the CMBS and corporate bond markets are growing rapidly, albeit from a low base. Access to these two markets is limited almost exclusively to wholesale investors. Liquidity is relatively low. We assess the real estate-related public debt market at $18 billion, broken down into $11 billion (CMBS) and $7 billion (corporate bonds).

Private debt

Private debt comprises mortgage trusts and loans by banks, typically secured against real estate assets. According to the Australian Financial Markets Association (AFMA) bank loans secured against real estate account for around $91.5 billion.

An estimated $17 billion of this is secured against real estate held in the institutional investment sector of the Australian market. In addition to direct bank lending, mezzanine finance accounts for a small, but rapidly-growing component of the private debt market. We estimate the level of mezzanine debt lending for construction alone at around $1.5 to $2 billion for the past twelve months, which is equivalent to some 5% of the total construction lending market in Australia. This compares with 10% to 15% estimated in the United States. The level of mezzanine debt used in conventional investment real estate is also growing and whilst no data are available, we estimate that the dollar value of this market may match that of construction.

New strategies for expanding markets

The menu of real estate investment choices is lengthening rapidly. A new generation of securitised products is accommodating the diverse objectives of yield, risk mitigation and capital growth from both equity and bond fund managers. Increasing market size and liquidity have facilitated new ways of packaging and securitising conventional real estate financial instruments.

The expanding range of investment products is a response to the sharp increase in the volume of funds directed towards the real estate sector in recent years. Re-rating of real estate assets and the compression of yields across the risk and duration spectrums has provided a further stimulus to financial innovation.

Tighter spreads and a flat yield curve are an incentive to innovation in financial packaging and fine tuning of portfolio management strategies. These trends are clearly evident in the domestic Australian market. But they are part of a bigger, global, picture.

The expanding range of real estate investment opportunities benefits all real estate market participants. However, the process is not without costs: investors now face greater information and analytical demands. For example, investors and portfolio managers now need to consider exchange rate volatility and interest rate hedging strategies, as well as the diverse business practices, laws, taxes and regulations that apply in different countries to real estate and related financial products.

As real estate financial markets expand in size and sophistication, a growing range of products and strategies bridges the increasingly permeable frontier between vanilla debt and equity products, offering greater flexibility to financiers, owners and developers. Investors can now choose from a wide range of products that better match their risk/return targets and liquidity criteria.

More than ever, successful real estate investment requires a broad range of specialist skills, from top-down strategic perspectives to detailed product analysis.

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Debt markets, in particular, are growing rapidly in size and sophistication, opening a new range of opportunities to investors seeking enhanced yield and management of risk. However, successful investment in these markets requires expertise in credit assessment and financial structuring.

Easily overlooked, but no less important to the investment process, are hands-on real estate knowledge and day-to-day exposure to transactions in the securitised as well as the direct real estate markets. Globalisation of portfolios certainly offers diversification benefits, but investors ignore the traditional considerations of location, asset type and tenant covenant at their peril.

Real estate investors therefore face a trade-off. On the one hand, the range of investment opportunities is expanding rapidly, both domestically and globally. At the same time, real estate investors are challenged to commit additional specialist resources to research, analysis and portfolio management.

Comparing investment models

Traditional model

The traditional approach to real estate investment is based on the accounting model of the firm. Typically, credit and equity analysts independently analyze claims arising from the same underlying real estate assets. Credit analysts and equity analysts may use quite different models and valuation metrics for the same underlying assets. Investment recommendations for debt products are typically based on relative value considerations across the credit spectrum only. Criteria that influence credit rating, such as leverage and diversity of income, assume over-riding importance.

Equity analysis tends to be similarly focused, with a strong emphasis on quantifying rental income, and some recognition of income quality. Each group of analysts tends to take the valuation of the other party as a "given". The resulting valuations are not necessarily constrained by an internally consistent model of the real estate portfolio itself, nor by a consistent analysis of the underlying macro-economic and market factors.

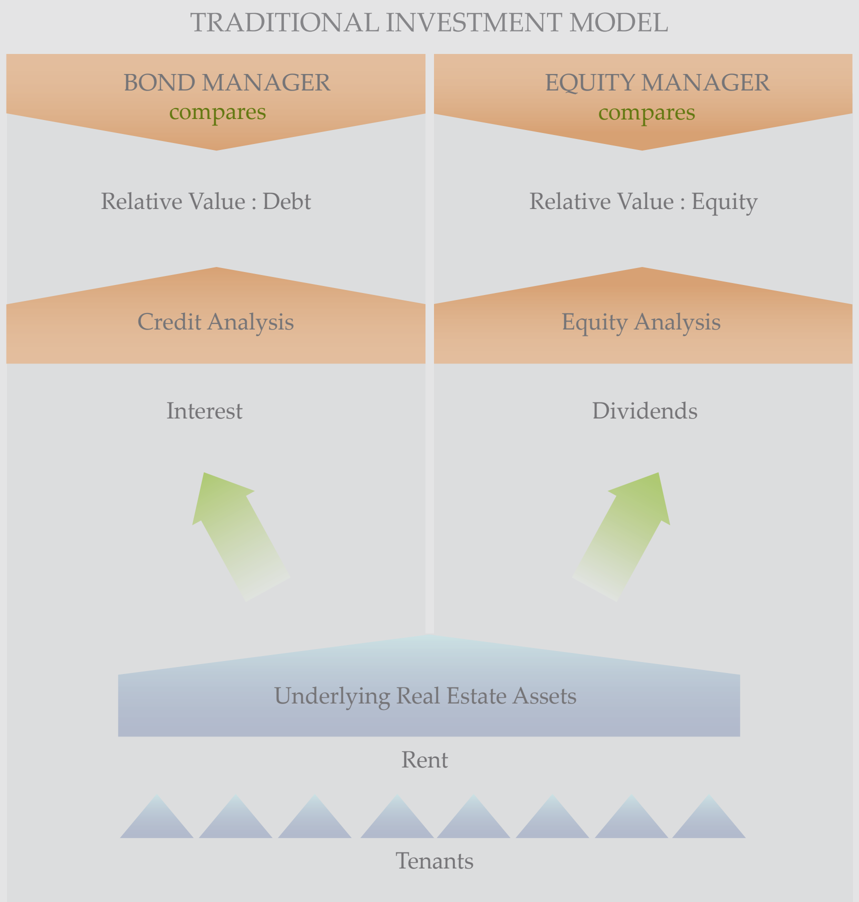

Figure 4

Four quadrant model

The four quadrant model emphasises the linkage between the full range of financial instruments and the underlying real estate assets from which these instruments derive their value. Fundamental to this analysis is explicit consideration of the underlying real estate assets and the dynamics of the markets in which these assets are located. This is the first building block of the investment process.

Consistent with the economic model of the firm, the initial focus is on the volume, timing profile and volatility of the expected cash flow thrown off by the underlying assets. Once the value of the assets is established, attention then shifts to the range of claims – across the full equity and debt spectrum – that are supported by the underlying assets. It is at this stage that relative value considerations can indicate which investments are suitable for particular mandates and how the instruments issued by a particular fund or real estate portfolio rank on a risk/return basis to competing products in the market place.

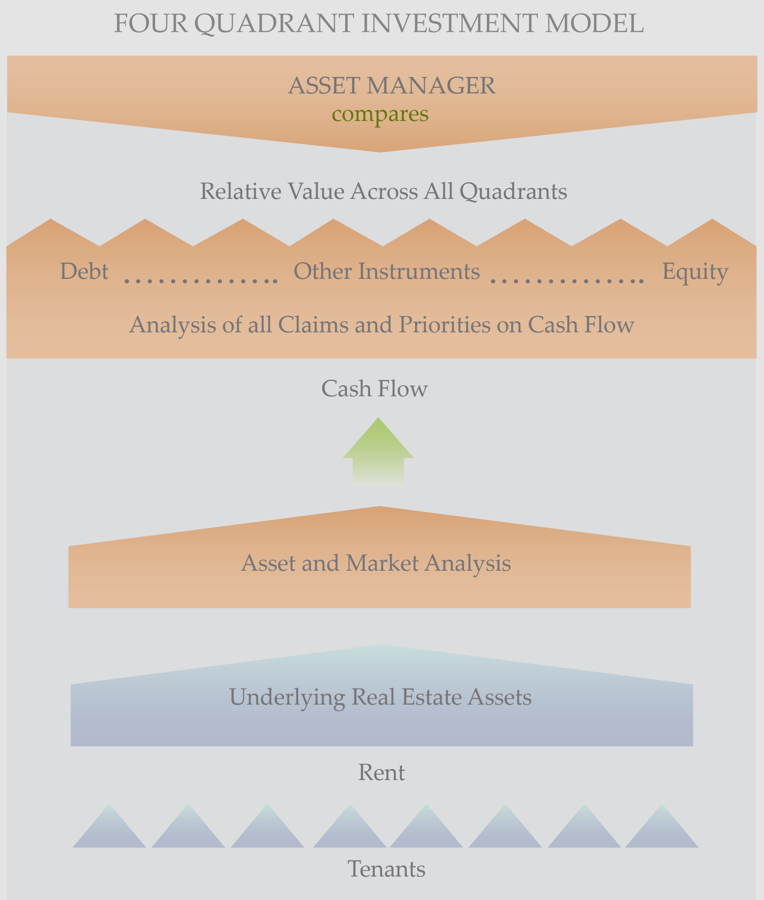

Figure 5

Comparing the models

In effect, the four quadrant model challenges the existing guilds of equity and credit analysts by allowing investors to trade across the full spectrum of real estate investment products. As real estate markets expand in size, sophistication and liquidity the capability to assess value and to trade across the full range of instruments becomes increasingly important.

In comparison with the accounting-based approach of the traditional investment model, the economic model as expressed in the four quadrant approach embodies at least three advantages:

Firstly, it avoids the duplication of effort and potential inconsistency that arises when credit and equity analysts focus independently on the same underlying assets, albeit from different perspectives. Under the four quadrant approach, an overall analysis of real state assets and their underlying markets forms a necessary preliminary stage prior to investment in any financial claims on these assets.

Secondly, the focus on the assets, and the value of the cash flow generated by the assets, is consistent with the principle that investment decisions should be independent of financing decisions. A focus on the consolidated cash flow facilitates pricing of the underlying systemic or non-diversifiable risk associated with the assets. Accurate pricing of the cash flow at the asset level is a prerequisite for the accurate pricing of the financial instruments that feed off that cash flow. The total value of the claims on the enterprise should equal the sum of the individual parts.

Thirdly, by looking through the traditional, and increasingly arbitrary, boundary that exists between credit and equity market analysis, a relative value comparison across all financial instruments is encouraged, without distracting and often arbitrary boundaries between instruments defined as "debt" and "equity". Investment managers are therefore better able to match decisions with their mandates and liabilities.

Under the four quadrant model the investor is encouraged to step away from the perspective of the conventional bond or equity fund manager. By scanning across the entire range of financial instruments, market pricing opportunities are more likely to be identified. And by considering a wider range of financial instruments the match between an investor's mandate and investment products is facilitated.

The four quadrant approach can be illustrated by comparing a one-stop-shop to a boutique. The four quadrant investor, in effect, is reading from the same menu as the target company's chief finance officer (CFO). Whereas the task of the CFO, is to evaluate all sources of debt and equity capital in order to achieve the minimum weighted average cost of capital, the four quadrant investor chooses from the same menu those items that will deliver the highest risk-adjusted return consistent with the underlying investment mandate.

Conclusion

The four quadrant model of real estate investment is attracting a growing body of adherent in the US among institutional investors with large real estate portfolios. The model can be interpreted as a mental construct that facilitates innovative thinking about real estate investment.

Appropriately applied, however, the model is a good deal more than this. By directing attention to the underlying real estate assets a measure of discipline is imposed on the investment process.

The focus on the underlying assets provides the essential building block to the valuation of the assets themselves, and forces consistency in the valuation of the financial instruments that trade off those assets. In adopting this cash-flow focused approach the four quadrant model aligns itself with the economic rather than the accounting valuation model.

Analysis of the full range of real estate assets facilitates the pricing of debt and equity instruments and relative price comparisons. Investors with a trading orientation may elect to take advantage of perceived valuation anomalies when they occur, regardless of whether they are in debt or equity investments, residing in private or public space. Long-term investors can more easily select from a broader range of products that matches their targets for investment return and the matching of assets and liabilities.

The four quadrant model is set to become a legitimate part of the Australian approach to real estate investing.

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