TECHNICAL PAPER

August 2015

LESSONS LEARNT FROM AUSTRALIA

THE RETURN OF THE FINANCIAL ENGINEERING – DON'T REPEAT THE SINS OF THE LAST CYCLE

BRIEF OVERVIEW

The past 6-9 months has seen a significant change in Australia's real estate debt markets and, once again, financial engineering on paper looks a tantalising proposition to enhance returns. The purpose of this paper is to highlight the impact of various gearing scenarios on our Australian market forecasts, highlight external risks to the investment environment which could influence the sustainability of gearing, and review recent academic research on the subject. The aim is to provide guidance to the best "risk adjusted" strategy for leverage this cycle and the implications for portfolio construction in Australia.

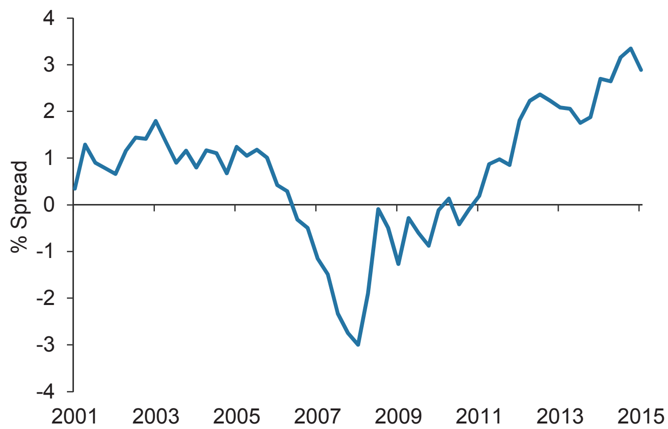
DEBT SPREAD HIGHLY ACCRETIVE

The chase for yield and the thawing of risk aversion has seen a noticeable improvement in the availability of commercial real estate debt from both traditional banks and capital market sources in recent months in Australia. The increase in competition has seen margins fall which when coupled with the general fall in interest rates has contributed to very low borrowing costs for property investors and developers.

In Australia, as at June 2015, the all in cost of debt for well rated listed and unlisted funds now sits incredibly at around 4%, having fallen almost 100bps in 12 months. Second tier borrowers and developers are also seeing much easier conditions and debt averaging around the 5-6% mark.

While the interest rate curve has risen in the past month, the dramatic fall over the past year has opened up a very accretive spread to property income yields, highlighted in the chart below.

FIGURE 1 – AUSTRALIA: ALL IN COST OF DEBT VERSUS PROPERTY INCOME YIELD*



Source: IPD/Bloomberg/AMP Capital Debt Advisory
* *all property in IPD*

The spread is now over 275bps to the positive. Rental income can well and truly cover interest repayments and there would appear to be a substantial "buffer" to counterbalance a rise in interest rates or deterioration in occupancy rates if the economy stalls. The spread is well greater than the last cycle.

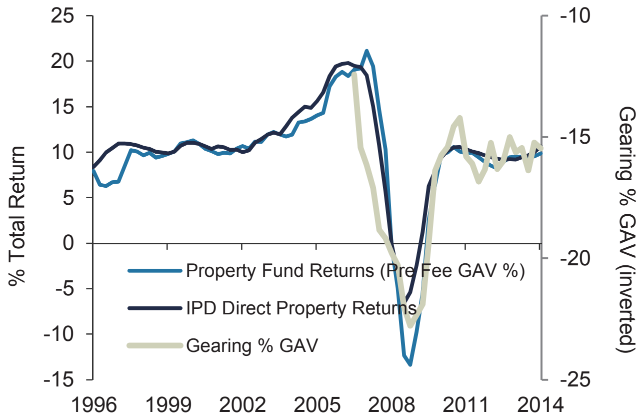
Given this fact, there is discussion in the industry about increasing leverage once again, particularly in light of the fact that interest rates will likely stay lower for longer this cycle, which is also AMP Capital's house view.

The purpose of this paper is to stress test this hypothesis using our house view economic and property market forecasts in Australia and provide guidance to the best "risk adjusted" strategy for leverage for the operating environment ahead.

ENHANCED RETURNS IN THE SHORT TERM.

Gearing typically amplifies property returns at both the asset and fund level, highlighted in the chart below. The chart tracks the level of gearing of the IPD unlisted property fund index (the series inverted for illustrative reasons) against returns of the fund index and overall direct property market.

FIGURE 2 – DIRECT PROPERTY, FUND RETURNS AND GEARING



Source: IPD/AMP Capital

With such a wide spread, conditions are conducive for positive enhancement to returns in the short term at the fund level, but also it is going to allow investors to bid higher for assets in an ultra-competitive, undersupplied investment market.

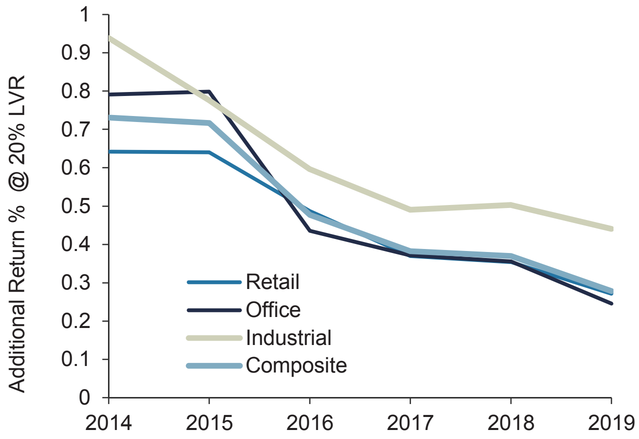
Historically buyers have used leverage to meet client benchmarks when it has positively contributed to that goal but over time this starts to create market imbalances as the marginal buyer effectively is pricing assets on a levered IRR basis. The levered buyer is more exposed to the interest rate curve and refinancing risk over time. This then introduces additional interest rate volatility into asset pricing over and above property market, capital market and asset specific risks. Gearing at a fund level then amplifies the trend. Overtime this imbalance becomes obvious when equity IRRs start moving 150-200bps apart from equity discount rates like we saw in 2007.

Thus in this paper we have focused more on the impact on direct market performance to illustrate the risk/return trade-off of various gearing levels as a proxy.

We have completed sensitivities on our property house view forecasts to illustrate the impact of various levels of debt on market pricing and returns. These are based on the spread between passing yields and cost of debt by individual market, the outlook for property fundamentals in each of those markets, and the outlook for interest rates.

Our pricing models suggest market returns could be enhanced on average by c50bps p.a over the next three years (with the accretion reducing each year) with low to moderate gearing (up to 20% LTV) being applied. This is highlighted in the chart below.

FIGURE 3 – ENHANCED RETURNS FROM CONSERVATIVE GEARING



Source: AMP Capital Investment Strategy/AMP Capital Debt Advisory

The pricing models suggest slightly stronger cap rate compression is likely moving forward (c25-50bps) at these levels of gearing across all property sectors.

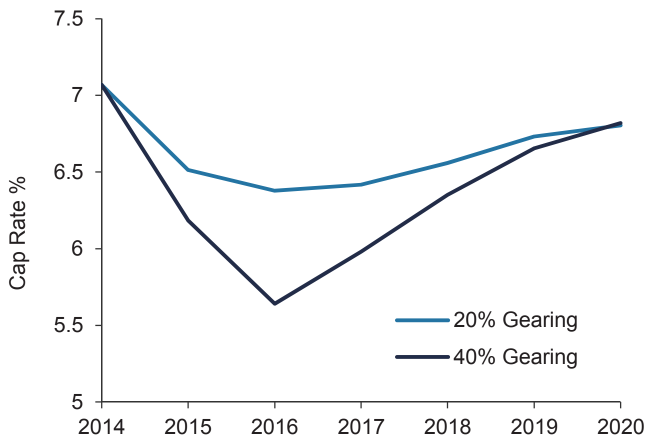
The spread slowly narrows over time as cap rates fall and interest rates rise but there appears to be meaningful excess returns in the next 12-18 months from using low to moderate levels of debt. This is also being reflected in the table following where the low to moderate gearing is producing a slightly higher risk adjusted return against ungeared market returns over the next 5 years.

HIGHER GEARING AMPLIFIES THE CYCLE BUT STARTS TO DETRACT FROM RETURNS IN THE MEDIUM TERM

However this "benefit" starts to wane as gearing rates rise and the market moves through the cycle.

The data below (and findings of similar international academic research detailed later in the report) clearly conclude that high gearing delivers poor risk adjusted returns for long term investors as volatility amplifies substantially the higher the gearing rates used. This is clearly borne out by the much weaker risk return ratio in the Figure 4 for higher geared portfolios. The chart below highlights the excess volatility in market cap rates under a high leverage scenario (40-50% LTV), compared to a lower geared scenario.

FIGURE 4 – IMPACT ON MARKET PRICING AS GEARING RISES



Source: AMP Capital Property Investment Strategy

While the high leverage is adding some attractive additional returns initially, this reverses quite quickly as cap rates start falling (the 5 year average return from this strategy falls quite alarmingly in the year ahead).

Under this scenario illustrated in Figure 4, the market cap rates could compress up to 100bps in the next year or so compared to 25-50bps on the more conservative scenario as leveraged IRRs are increasingly adopted when acquiring assets.

But it's on the downside where this model fails. This scenario has higher sensitivity to interest rate movements and pricing risk because the gap between the leveraged and equity value widens the further through the property cycle you go. This pretty much ensures that cap rates and pricing have to adjust back once the spread starts to narrow, again in a more amplified way that you would normally expect.

Thus higher leverage is producing poorer market risk return ratios than lower gearing.

TABLE 1 – IMPACT ON MARKET RETURNS OF VARIOUS GEARING RATIOS

	Total Return % p.a (2015-2019)	Total Return % p.a (2016-2020)	Risk Return Ratio
Minimal Gearing	7.7%	7.2%	4.3x
15-20% Gearing	8.4%	7.9%	4.7x
40-50% Gearing	8.6%	6.7%	1.2x

Source: AMP Capital

The key conclusion from this analysis is that in moderation, debt can be a positive for returns as long as it is not too excessive to the point that asset pricing becomes clearly unstable from an equity perspective.

OTHER FACTORS SUPPORTING CONSERVATIVE GEARING

1. **Economic momentum is fragile in Australia.**

   The risk here is that the sluggishness in the economy continues and the spread that looks healthy on paper is much narrower in reality (or eroded) because of vacancies.

   Sub markets/assets to watch for negative impact on occupancy rates in a protracted slowdown are the resource states, secondary assets, suburban office assets, sub regional malls, secondary industrial, and any markets which are seeing higher levels of construction activity. These are most at risk from a leasing/tenant retention perspective in a world of ongoing sluggish economic momentum.

   What might work well on paper today could become unsustainable in three years' time when income security diminishes.

2. **Interest rates could rise quicker than the Central bank cash rate movements in the short term.**

   At the moment the outlook for growth and inflation is tepid and AMP Capital's fair value indicator, as shown below, suggests interest rates will rise slowly, only 75-100bps over the long cycle.

   AMP Capital's investment strategy team has developed a "fair value" indicator for Australian 10 year bonds.

   As highlighted in the chart below, the fair value estimate has a strong directional relationship with actual pricing giving confidence of accuracy of trend. It is an amalgam of real policy interest rates (ie the Cash rate less the RBA CPI target), real GDP growth, and implied inflation expectations. The underlying assumptions are highlighted below.

TABLE 2 – AUSTRALIAN 10 YEAR BOND FAIR VALUE INDEX ASSUMPTIONS

	Fair Value 10 Year Bond Yield	Real Policy Interest Rate (Cash rate less CPI target)	Australia Potential Real GDP Growth	Average RBA statistical CPI measure plus inflation expectations
2015	3.8	-0.5	2.9	2.0
2016	4.0	0	2.8	2.2
2017	4.1	0.5	2.7	2.4
2018	4.3	1.0	2.7	2.5
2019	4.5	1.5	2.7	2.5
2020	4.5	1.5	2.7	2.5

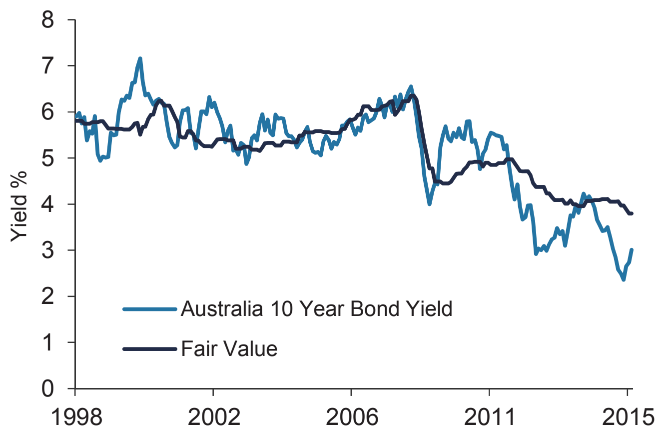
Source: AMP Capital

While the model is clearly suggesting rates will stay lower for longer, there are two key risks on the upside to the fixed interest/interest rate curve which could narrow the spread (and reduce the accretion) more quickly than expected.

Firstly, current pricing is not at the fair value estimate, as it is shown in Figure 5, it is in fact 80bps below! Thus as we saw in 2013/14, signs of inflation and growth returning in international markets could see the yield curve rise over the course of the next 12-18 months. In fact over the last few weeks there are early signs of this starting to occur.

Secondly, the lower for longer outlook for rates is based on economic growth trudging along in the 2.7-2.8% p.a range over the next 4-5 years. If say the global economy picks up more quickly in 2017/18, the interest rate curve will also lift.

FIGURE 5 – ACTUAL AUSTRALIAN 10 YEAR BOND YIELD VS FAIR VALUE



Source: Bloomberg/ABS/RBA/AMP Capital

3. **Likely to be bouts of excess volatility in investment markets potentially causing capital surges or crunches for real estate.**

   At the moment real estate is benefiting from the good side of this volatility in the "chase for yield". But this could easily reverse if something happens in equity or bond markets. This could create an illiquidity event for real estate, on either the equity or debt side (or both), again exposing a high debt strategy.

   Firstly, no-one really knows what will happen when quantitative easing stops in Europe and Japan and interest rates and currencies start rising. Volatility in share markets historically causes excess volatility in real estate liquidity off the back of the allocation effect.

Another risk around this thematic is a bond market rout, as fixed interest investors try and liquidate deflating investments when inflation and the yield curve starts to rise (and we are seeing early signs of this shift). This will blow back into higher costs and possibly reduced availability of debt for banks and investors. Clearly a higher leveraged real estate investor is going to be at risk of refinancing and price adjustment if this occurs.

But there are so many other risks that could create volatility for investment markets that again add risk to a high debt strategy in the "new normal" post GFC world.

4. Academic Research

There has been academic research completed since the GFC regarding the impact of debt on fund returns. Two studies were completed in 2012 by;

> Baum & Kennedy on Global Real Estate Returns[1], and
> Farrelly & Matysiak on UK Institutional Funds[2] "http://centaur.reading.ac.uk/view/creators/90002219.html"

Both of these highlighted that high leverage is detracting from risk adjusted returns over the longer term.

The Farrelly and Matysiak research clearly highlighted there was an asymmetric impact based on an analysis of UK institutional funds – the downside risks are greater because the debt accentuates tail risk events. This research highlights that return is not being compensated enough in relative terms on the positive side of the cycle to compensate for the downside risk when things turn negative.

5. Further bank and non bank regulation

Lastly, like we are seeing in the residential sector, regulators are closely watching financial stability this cycle which could cause some change in debt liquidity if things start to get out of control. Again this is a risk for refinancing that could be another potential problem for a highly leveraged investor.

CONCLUSION

Clearly the case for elevated gearing levels is weak but the research clearly indicates that returns can be enhanced with the use of "sensible" levels of debt at this point in the cycle.

There is also a higher probability of stronger cap rate compression than we were expecting 6-9 months ago because of the significant shift in debt markets in recent months, particularly in cities such as Sydney and Melbourne where property fundamentals are improving.

While there are still lots of wounds healing from the GFC and a raft of externalities which should see conservatism continue, we remain less convinced that pricing discipline will continue the longer the chase for yield and excess capital environment remains given the behaviour of markets in the past in real estate and other asset classes.

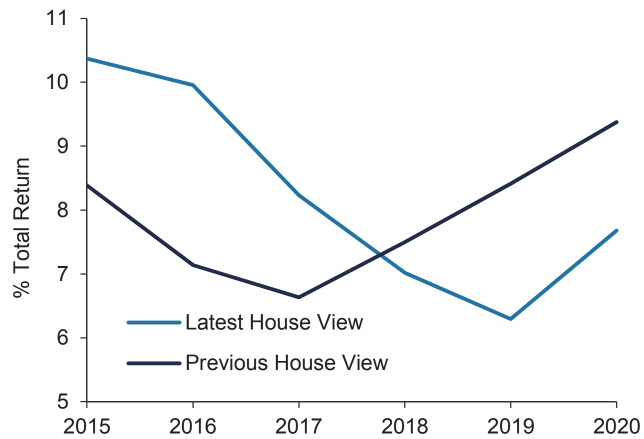
With global real estate advisory firms suggesting there is a 4:1 ratio of capital to property for sale, unless there is a slowdown in the chase for yield, the "forced buyer" will inevitably start using more debt to "win the deal" based on past experience. This then starts to transfer leverage risk into market values as IRRs start shifting to a leveraged basis.

Our view is that the market is likely to move slightly beyond the moderately conservative gearing scenario as the highly leveraged buyer starts to set "new pricing benchmarks". This then amplifies the cycle somewhat, highlighted in the chart below which compares our current outlook with the previous profile.

1. Kennedy, P and Baum, A (2012) Aligning asset allocation and real estate investment: some lessons from the last cycle, Henley Business School working paper

2. Farrelly, K. Matysiak, G., (2012) Performance drivers of UK unlisted property funds. Working Papers in Real Estate & Planning. 05/12. Working Paper. University of Reading

FIGURE 6 – TOTAL RETURN OUTLOOK 2015-2020



Source: AMP Capital

In the next couple of years moderately conservative gearing can enhance returns but watch closely for asset values rising to or above historical peaks (in the absence of a similar shift in rents), the narrowing of the spread between debt costs and property yield, and the decline in lending margins to very low levels. These are all leading indicators of instability. Maintaining a bias to high quality dominant retail assets or scarce assets will protect portfolio returns from this volatility.

Remember while gearing does add to performance in a rising market, the negative impacts are amplified on the downside.

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