Property Research Paper

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Prospects for Australian office property investment yields

- **The performance of property investment has deteriorated since the onset of the global financial crisis. This has led to greater uncertainty in relation to the outlook for property valuations including the direction of investment yields.**
- **Office property investment yields depend on prevailing space market fundamentals (rental growth and vacancy rates) as well as capital market conditions.**
- **The recent period of rising yields is different from the previous market downturns of the late 1980s and the early 2000s. While the current slowdown is predominately demand driven, the late 1980s were characterised by excess supply and rising vacancy rates at a time of rising interest rates. Whereas, during the early 2000s, yields continued firming even with weak space markets as a result of favourable capital market conditions.**
- **In examining future movements in office investment yields we find that the vacancy rate and the yield curve to be key determinants. However, the relative impact of these factors varies over time and across markets.**
- **On average prime office investment yields are projected to rise in 2009, peaking in 2010 and 2011. Consequently this period represents the optimal time to acquire assets. Thereafter, office yields are expected to tighten as vacancy rates fall and the term-spread narrows. However, office investment yields are expected to still represent an attractive investment proposition relative to the 10-year bond rate during this period.**

1. Introduction

The performance of property investment has deteriorated significantly since the onset of the global financial crisis. The freezing of credit markets and the flow-on effects across broader financial markets led to a re-rating of investment risk across all asset classes. This situation, coupled with a global economic downturn, has led to a deterioration in Australian commercial property space market fundamentals.

In turn, this has led to greater uncertainty in relation to the outlook for property valuation metrics. Most important is the extent to which investment yields will soften as a result of the combined impact of deteriorating space market fundamentals and capital market conditions. This research paper aims to address these issues, focusing on the Australian CBD office sector, and outline a number of key factors pertinent to the medium-term prospects for office investment yields.

2. Trends in office investment yields

Office property investment yields are a market phenomenon; depending on both the demand and supply of investment-grade properties, the opportunity cost of investment funds, and expecations of future market conditions. The former is the outcome of space market fundamentals while the latter is more a function of capital market conditions.

Figure 1 shows historical trends in average prime investment yields for the main CBD office markets in Australia from June quarter 1986 to March quarter 2009. Note, the period of yield compression (i.e., trending down) over the past decade has reversed with recent data showing yields softening by around 150 basis points (bps) across CBD office markets - triggered by the fallout from the global credit crisis. This softening is based on appraisal assessment as a result of a lack of significant transactional sales evidence.

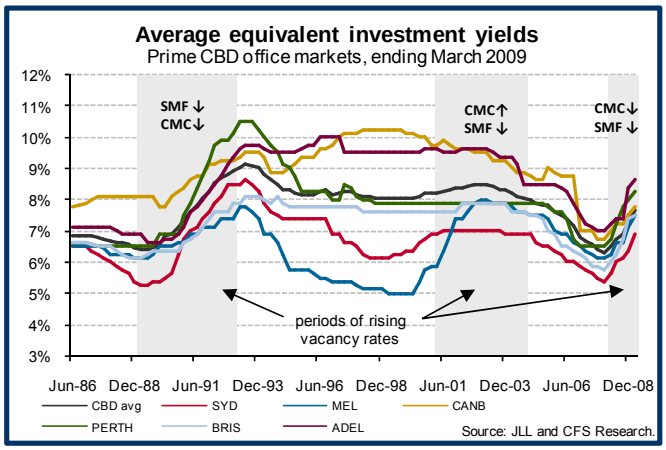
Furthermore, the spread between office investment yields across the main Australian CBD markets has (marginally) increased. As of March quarter 2009, the spread between Sydney (6.9%) and Adelaide (8.6%) was 170 bps. In December quarter 2007, the yield spread was only 160 bps.

The main reasons yields firmed as much as they did include:

- solid underlying economic conditions;
- cheap and readily available debt;
- cyclical favourable space market fundamentals (positive rental growth and falling vacancy rates); and
- strong investor demand for real estate investment.

This latter point was underpinned by both a down-rating of investment risk compared to traditional asset classes, and the weight of capital phenomena (supported by the compulsory superannuation levy).

Figure 1



The recent period of rising yields, marked by the interplay of the ongoing financial crisis and weakening economic activity, is different from the previous market downturns of the late 1980s and the early 2000s (as characterised by the shaded regions in Figure 1). While the current slowdown is predominately demand driven, the late 1980s was characterised by excess supply and rising vacancy rates at a time of increasing interest rates and contracting economic activity. In contrast, when space market conditions also deteriorated in the early 2000s as a consequence of the bursting of the tech bubble, the favourable capital market conditions generally kept yields on a downward path.

The softening in yields also reflects a flight to quality which should restore the historical spread in the risk-premium across CBD markets; as such there will be greater softening in yields for secondary markets such as Adelaide and Canberra compared to prime markets such as Sydney and Melbourne.

3. Forecasting movements in office investment yields

In formulating an outlook for prime CBD office investment yields it is important to consider what future space market and capital market conditions are likely to prevail. This analysis builds on previous research which

examined determinants of Australian commercial property discount rates[1].

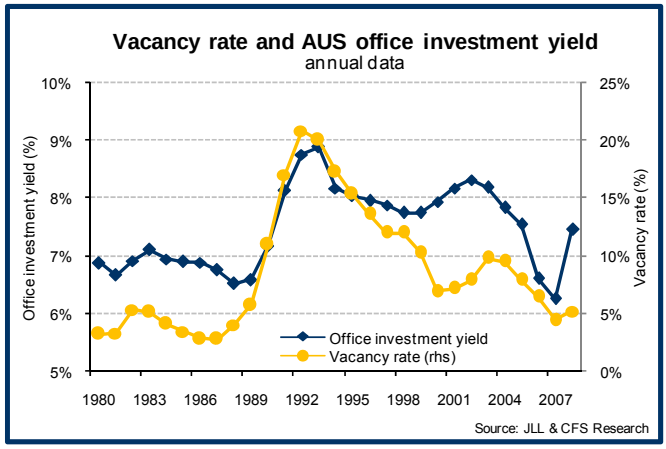
The influence of space and capital markets on investment yields

Vacancy rate and rental growth expectations

Office vacancy rates provide a summary measure of the state of space market fundamentals as it highlights the balance between supply and demand as well as potential for rental growth.

Figure 2 shows the annual average vacancy rate and office investment yield across the CBD office markets from 1980 to 2008. In periods of excess supply (such as the early 1990s) or weak demand (the current period), vacancy rates tend to rise. Rising vacancy rates put downward pressure on current and future rental income because there are fewer tenants paying property owners rent and it is harder to find other tenants to take up already relinquished space. Conversely, in periods or strong demand and/or subdued supply, vacancy rates will tend to decline (mid to late 2000s), leading to upward pressure on current and future rental income. Consequently, increasing (decreasing) vacancy rates generally leads to softening (tightening) office investment yields. This positive relationship is shown in Figure 2 and highlighted by the scatter diagram in Figure A1 in the Technical appendix.

Figure 2



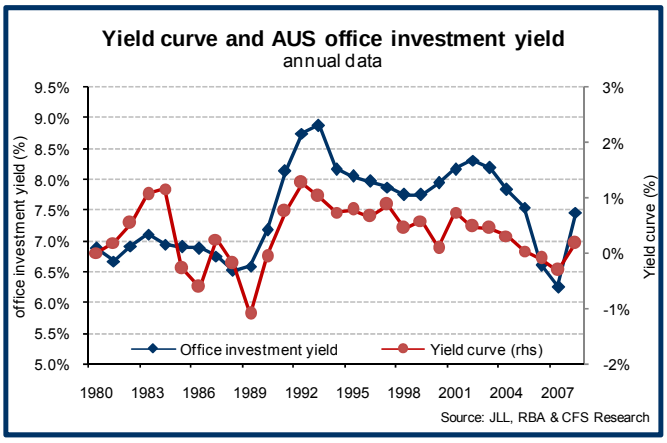
Capital market considerations

In gauging the status of capital markets it is useful to examine the yield curve. This illustrates the relationship between the interest rate (cost of borrowing) and the time to maturity of debt outstanding for a given borrower in a given currency. There are three main forms of the yield curve: normal, inverted, and flat/humped. Each form of the yield curve provides a snap-shot of the prevailing mood of the market in relation to expectations about the future regarding risky assets.

- A **normal** yield curve means that yields rise as maturity increases. It reflects expectations for increasing inflation in the future. This creates a need for a risk premium associated with the uncertainty about the future rate of inflation and the risk this poses to the future value of cash flows.
- An **inverted** yield curve occurs when long-term yields fall below short-term yields. It can imply expectations that inflation will remain low in the future. Additional factors such as a flight to quality or global economic or currency crisis may also lead to an increase in the demand for bonds on the long end of the curve, causing long-term rates to fall.
- A **flat** yield curve is observed when all maturities have similar yields, whereas a humped curve results when short-term and long-term are lower than those across the medium-term. A flat curve signals that interest rates are expected to remain stable.

Figure 3 plots the yield curve (10-year government bond rate less three-year government bond rate) against the average office property investment yield for Australia using historical data from 1980 to 2008, while Figure A2 in the technical appendix presents this using a scatter diagram. As can be seen, there is also a positive relationship between office investment yields and the yield curve.

Figure 3



Note the variability in the curve throughout the 1980s period. During this time price inflation (as well as the current account deficit) was a significant issue for Australia and this is reflected in the steep rise in the yield curve towards the end of the 1980s, in line with the rapid increase in the official cash rate, peaking in

[1] CFS Research, 13 May 2005, "In search of the Discount Rate for the Property Investment Markets – II"

1992. From 1992 to 2007 Australia had an inverted yield curve, due to two overarching phenomena. Firstly, the significant contraction in economic activity which took place in the early 1990s dramatically reduced inflationary expectations. Following this was the formalisation of the Reserve Bank of Australia's (RBA) mandate to target inflation explicitly in 1996. The latter point helped to anchor investors' expectations for inflation; thereby reducing some of the uncertainties in relation to future cash flows.

Investment yield projections for Australian office markets

To forecast office investment yields we use the established relationships between movements in vacancy rates and the yield curve. This relationship can be formalised using regression analysis[2]. The outcome of this is a model which can be used to forecast office investment yields using projections of vacancy rates and changes in the yield curve.

Vacancy rate

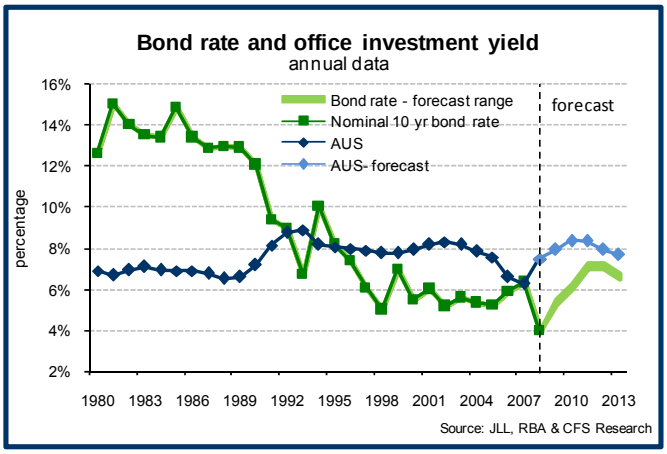
Further weakness in space markets is expected with vacancy rates across the country forecast to rise to approximately 8% by the end of 2009, before peaking at 10% in 2010 and 2011. Following this, with the effects of the GFC subsiding and economic growth improving, space market fundaments are anticipated to turn relatively more favourable. These forecasts are derived from our internal 'house view' process.

Yield curve

Volatility in capital markets intensified dramatically in September 2008 with the collapse of Lehman Brothers investment bank. This prompted the RBA to aggressively slash its cash rate to mitigate the flow-on effects to the real economy. However, all this did was to lower the short-end of the curve, while leaving the long-end relatively unaffected. Furthermore, given a number on non-conventional policy decisions by some larger central banks around the world (i.e., quantitative easing); there are growing concerns about future inflation. This, combined with a significant amount of bond issuance by governments (including Australia), is also putting upward pressure on the long-end of the yield curve. The overall result of this is expected[3] to be a pronounced steepening of the curve during the next three years. After which, the spread between the short and long end of the curve is anticipated to narrow as inflationary pressures subside and governments act to return to surplus fiscal positions.

Figure 4A presents the forecasts of office investments yields from 2009 to 2013 for Australia along with projections for the (nominal) 10-year bond rate (with a 25 bps spread). Additionally, Figure 4B illustrates the Australian office yield forecast as well as giving a range for investment yields using projections for Sydney and Adelaide as the upper and lower end of the range respectively.

Figure 4A



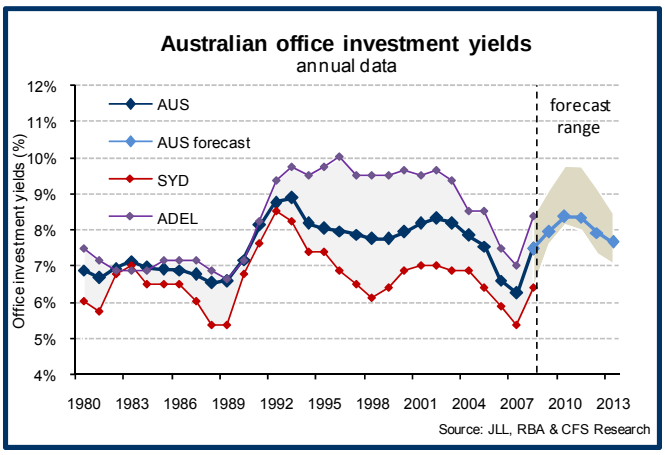
With increasing vacancy rates and a rising yield curve, office investment yields are projected to soften dramatically in 2009, peaking in 2010 and 2011 at around 8.4% for Australia on average. This two-year window would be the optimal time to purchase office assets. Thereafter, investment yields are forecast to tighten as vacancy rates fall and the yield curve inverts.

Nevertheless, office investment yields are expected to remain above 7.5% nationally during the forecast period from 2009 to 2013. However, relative to the nominal bond rate, office investment yields will still represent an attractive investment proposition. Nevertheless, to take advantage of these pricing movements requires timing the market with relation to acquiring and disposing of assets.

At the individual market level, the yield spread is anticipated to blow out to a peak of 180 bps during the forecast period. Primary markets, such as Sydney, will be below the Australian average, reflecting their better investment fundaments. Office yields in Sydney are forecast to reach around 8% in 2010 and 2011, before tightening to 7% by the end of the forecast horizon. Secondary markets, such as Adelaide, are likely to be above the Australian average, due to relatively less favourable investment fundamentals. Office yields in Adelaide are projected to soften to 9.8% in 2010, after which yields are expected to tighten to 8.5% by 2013.

[2] Please refer to the technical appendix for a discussion of the estimation methodology employed.
[3] Sourced from internal CFS GAM forecasts.

Figure 4B



4. Summary

CBD office investment yields are a function of space-market fundamentals and capital market conditions; during 2008 the GFC triggered a deterioration in both, leading to a softening of office investment yields. Using the positive relationship between office vacancy (space market fundamentals) and the yield curve (capital market conditions); we can forecast average office investment yields across the CBD markets in Australia. It is anticipated that investment yields will soften further in 2009 before reaching their peak in 2010 and 2011. This two-year period represents the best time to acquire assets, taking advantage of weaker pricing. Following this, office yields are expected to improve in 2012 and beyond. However, this will be dependent on the individual office market as the historic spread across office market yields re-emerges.

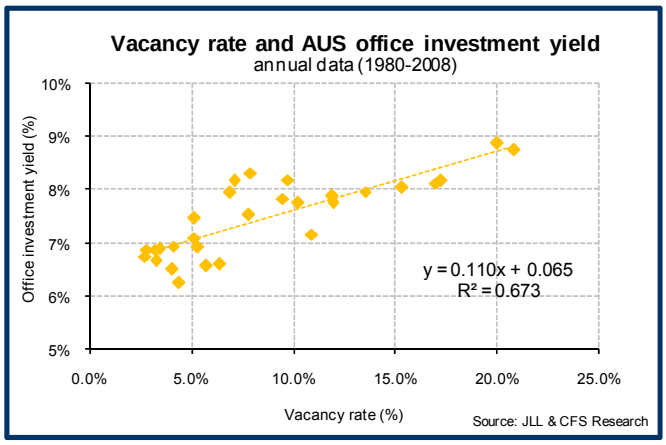
5. Technical appendix

CBD office investment yield modelling

Figures A1 and A2 illustrate the strong positive relationship which office investment yields have with office vacancy rates and the yield curve.

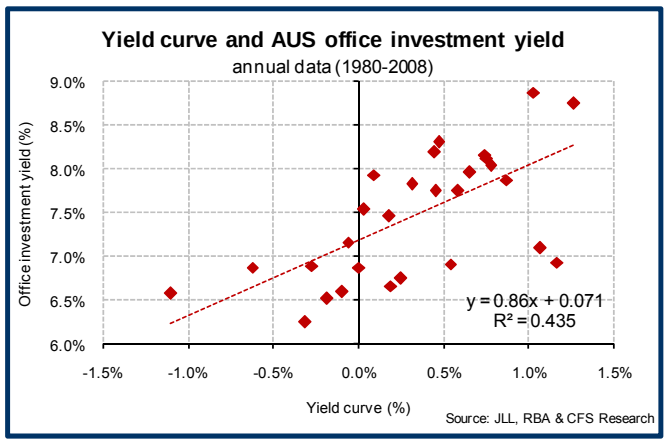
Space markets and office investment yields

Figure A1



Capital markets and office investment yields

Figure A2



Office investment yield regression model

Our regression model is based on the hypothesis that movements in office investment yields can be explained (in a statistical sense) but movements in both vacancy rates and the yield curve. This is formalised in equation A1:

$$OIY_{i,t} = \beta_0 + \beta_1(VR_{i,t}) + \beta_2(YC_t) + \varepsilon_{i,t} \quad \ldots(A1)$$

Where, $\varepsilon_{i,t} \sim N(0, \sigma_i^2)$ and the β_i's are coefficients that require estimation. $OIY_{i,t}$ is the average prime office investment yield for market i (AUS, SYD, ADEL) at time t. $VR_{i,t}$ is the vacancy rate for market i (AUS, SYD, ADEL[4]) at time t, and YC_t is the prevailing yield curve at time t. We define the yield curve as the difference between the average annual yield on the ten and three year Commonwealth government bonds.

Model A1 was estimated for Australia as well as Sydney and Adelaide office markets. Summary estimation results are presented in Table A1. All coefficients are significant at the 10% significance level. As expected, the estimated coefficient values are positive, indicating that increases (decreases) in vacancy rates and the yield curve correspond to increases (decreases) in office investment yields

Table A1

Regression model results

office investment yields

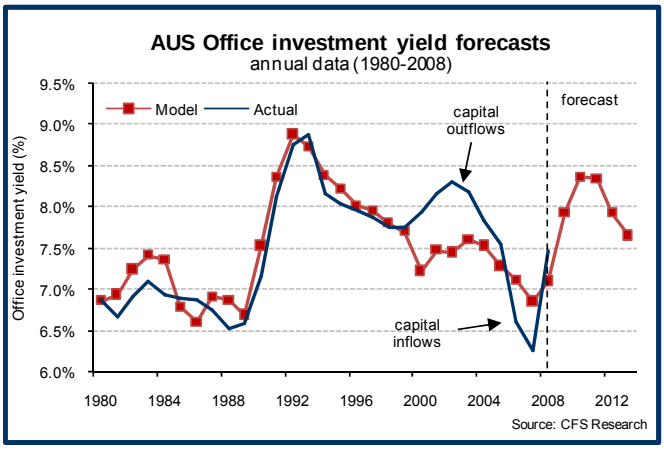
Variable	coefficient	AUS	SYD	ADEL
Constant	β_0	0.0658	0.0582	0.0709
	(t)	(39.47)	(41.44)	(17.07)
VR*	β_1	0.0891	0.0763	0.0969
	(t)	(5.25)	(7.25)	(3.34)
YC	β_2	0.3563	0.6103	1.0063
	(t)	(1.86)	(3.24)	(3.42)
R-squared		0.7225	0.7448	0.7609
log likelihood		121.12	120.57	80.32

* = one period lag of vacancy is used for ADEL Source: CFS Research

In-sample model performance

In gauging the performance of model A1, Figure A3 shows clearly that the model is able to explain the observed movements in the Australian CBD office cap rate relatively well, with an R-squared of 0.72.

Figure A3



However, there are two periods where the model fails to explain the observed investment yield adequately. These include: the period of softening between 2002 and 2005, and the tightening phase from 2005 to 2007. This was likely a result of changing investment flows into listed/direct property by super funds.

Analysis by UBS[5] shows that institutional investors down-weighted direct real estate and up-weighted listed real estate exposure between the late1990s and mid 2000s. During this time, superannuation funds viewed listed property as a proxy for direct property while providing the added advantage of liquidity, as a result, investment yields softened by more than can be explained by the model. In contrast, the past three years were characterised by a stabilisation of listed property capital inflows and an increase in direct real estate investment. This came as many Australian real estate investment trusts (AREITs) began increasing their exposure to non-rental and off-shore earnings. The consequence of this inflow of capital into direct property was to drive cap rate tighter than the model would otherwise predict.

[4] Note a one year lag of vacancy is used for ADEL.

[5] UBS Global Investment Research, June 2nd 2009, "Fund flows and short interest, were now?"

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