

**How far can yields move out?**

Mid-2007 looks likely to be the nadir of a 15 year compression of UK yields (575bps). The second half of 2007 has at least seen a 50bps outward yield shift with no sector immune. With the great property party now over, how much further could yields rise? Some recent econometric analysis by Grosvenor may shed light on this question. Our general framework for understanding yields is simple: property required return (say, bond yields plus 3% risk premium) less expected rental value growth equals yield. Econometric estimation of this relationship is very difficult since broader macro economic influences are also at play in a very complex and often shifting way. These affect the risk premium and expectations of rental value growth.

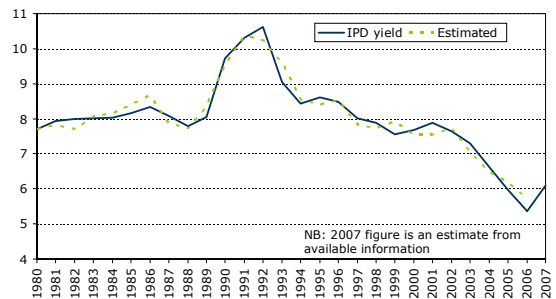
We have estimated three plausible but very different equations. Equation 1 explains yields using bond rates, rental value growth, inflation, equity returns and savings and explains 95% of long term yield shift. Equation 2 is based on formal quantification of certain trends and cycles found in long term yield data. It explains 80% of yield movements. In Equation 3, which explains 62% of the variation in short term movements, yields are modelled using rental value growth, bond yields and growth of money supply.

Chart 1 shows the IPD all property equivalent yields since 1980 and our forecast series based on equation 1. The closeness of the two lines shows how effective the model is at predicting yields. The most important variable in equation 1 is the long term bond rate which has fallen since about 1992 bringing yields down with it. The other explanatory variables, though less important, also contribute to yield shift: a rise in inflation reduces yields, a rise in rental value growth also reduces yields, an increase in returns from equities increases yields. One surprise in these findings is how weak their impact is on yields, relative to that of bond yields. The stability of the relationships in equation 1, which was estimated over 26 years, should be noted. Interestingly, 2001 to 2005 is the longest period of consecutive yield falls: the key to the short- and medium-term outlook for yields is probably contained here.

Chart 2 shows the 'residuals' from all of our equations. These are the gap between our yield predictions and the actual yield. If the residual is negative, the actual yield is below that predicted by our equation; if positive the model is under-predicting. The residuals show the element of yields unexplained by the equation. Generally, the unexplained part should be random – otherwise it could be explained – and over the 1990s each of the three methods behaves in this manner. After 2000 however, the unexplained parts of equations 2 and 3 enter negative territory and remain there, with equation 1 doing the same in '05 and '06. This is telling us that around 2001, previously long standing relationships between yields and key macro-economic variables broke down, at least in part. It is not easy to say what factors caused this overshoot of yields, although the 'herd behaviour' of property investors is a prime candidate.

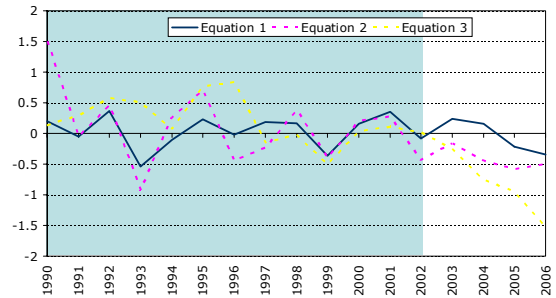
What of the future? Forecasts created from each equation are shown in Chart 3 and are based on an estimated 2007 yield outturn of 6.1% (up from 5.3%

Chart 1: IPD all property yield



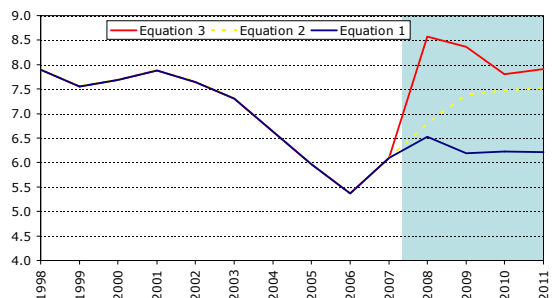
Source: IPD, Grosvenor

Chart 2: The unexplained



Source: Grosvenor

Chart 3: Forecasts



Source: IPD, Grosvenor

in 2006). The assumptions underlying the forecasts are: much reduced growth in money supply in 2008 with some pick up later; bond rates remaining around 5%; inflation hovering around 2%; savings averaging 3% p.a.; returns on equities at 6% p.a. and no rental growth in 2008 and then modest thereafter. Pushed by tightening liquidity, equation 3 shows a large unwinding, with yields shooting up to 8.5% in 2008. With equation 1 the unwinding is more modest, to 6.5% in 2008. Equation 2, the time series approach, shows yields shifting out to 6.8% in 2008, with outward moves continuing until 2011.

Equation 1 is historically better at explaining yield movements so perhaps, the greatest emphasis should be placed on this forecast. This would give a total yield shift of 120 basis points. Painful certainly, but not deeply damaging except, maybe, to certain groups of overzealous investors. However, the other models strongly suggest yields are going to move out further, in particular equation 3. Equation 3 contains money supply growth or, put another way, credit supply growth. If the credit crunch gathers momentum the property market is in for a really hard landing. We should all hope that the Bank of England is successful in its attempts to restore inter-bank liquidity. Finally, to add to the gloom we have the issue of 'herd' behaviour. It is entirely possible that our models move into a period of under prediction as sentiment drives investors into other assets. Put another way, we could be moving into a period where yields surprise on the upside.