Price Discovery & Efficiency In American & British Property Markets

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"Price discovery" refers to the process by which asset prices are formed and impound available relevant information about the value of the assets. When assets with fundamentally or financially linked values are traded simultaneously in two different market structures, price discovery will occur in the more informationally efficient of the two markets. This price information then is transmitted to the less efficient market, as evidenced empirically by positive lagged correlation in the returns across the two market structures.

The present study looks at the question of price discovery in securitized and unsecuritized markets for commercial property in the US and Britain. We use REIT and Property Company share price indices to represent securitized property returns. We use appraisal-based indices of institutional commercial property holdings to represent unsecuritized property returns. In addition to the international comparison, some of the major features of the data used in this study which distinguish it from previous studies are noted below.

> Appraisal-based returns are corrected for smoothing,
> <u>without pre-supposing the true returns are efficient (uncorrelated</u>).
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> Securitized returns are corrected for leverage in the traded shares.
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> We use annual returns rather than quarterly or monthly, thereby avoiding some sources of "noise" and/or smoothing in the data.
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> We use longer time series (18 years for the US, 22 years for Britain).

The unlevered and unsmoothed property market values in the securitized and unsecuritized markets are shown in two graphs. US securitized property values (REITs) appear to noticeably lead the unsecuritized market values (CREFs) by about a year. While REIT values are more "noisy" (display short-run volatility), the two series are essentially parallel over nearly 2 decades. Significantly, securitized property values seem to have "hit bottom" in 1990, while unsecuritized market values were still falling in 1992.

In England the securitized and unsecuritized property values move more tightly together in almost a "lock-step" at the annual frequency. The prices in the two market structures appear to be more closely linked than they are in the US. However, there is also evidence that securitized property prices lead and predict unsecuritized property prices in England as well as in the US, which are illustrated in two bar charts.

The bars to the right of the center bar in these figures depict correlation between securitized returns and unsecuritized returns lagged one to three years behind the securitized returns. The clear asymmetry in the figures suggests strongly that price discovery occurs in the securitized market structure in both countries, with the price information not fully transmitting to the unsecuritized markets for as much as a year or more. Such a length of delay in the transmittal of price information would not appear to be consistent with the efficient market hypothesis within the unsecuritized commercial property markets. Thus, the major empirical findings of this study are summarized below.

> Price discovery occurs in the securitized market structure in both countries.
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> The unsecuritized property markets appear not to be informationally efficient, having some degree of predictability by the securitized returns.
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> The price link between the securitized and unsecuritized markets appears to be stronger and more immediate in England than in America.

These findings have an important implication for capital market theory. The fact that price discovery occurs in the securitized market structure, even though many more properties are traded in the unsecuritized markets, suggests that the trading density, liquidity, and micro-structure advantages of the securities markets outweigh the market breadth and possibly participant sophistication advantages of the unsecuritized private markets in commercial real estate, at least as far as the information aggregation function of the market is concerned.

The above findings also contain some important practical implications. If the unsecuritized property markets are inefficient, then the timing of investment decisions may be as important (or more important) than the classical portfolio optimization and cross-sectional diversification issues which currently dominate the research agendas of many institutional investors. If property security returns can predict, albeit imperfectly, subsequent returns in the private markets, then investors ought to attempt to use this predictability to their advantage.

Another interesting implication arises from the finding that the British property market is more closely linked to its securitized counterpart. This may be a result of greater geographic homogeneity in the British markets. If so, this suggests that the efficiency of the US commercial property market could perhaps be improved by greater development of specialized REITs or "regional REITs," as has been suggested by some brokers and REIT analysts.