

Commercial Real Estate and Inflation During Periods of High and Low Vacancy Rates

David J. Hartzell and R. Brian Webb

The ability of real estate to provide a hedge against inflation has been one of the primary arguments for including the asset class in portfolios of financial assets. However, over building in many sectors of the real estate market has been argued to alter the ability of owners of real property to pass through inflation to tenants, hence restricting the ability of the asset to earn returns which compensate investors for an inflation premium. Previous research on the question of the inflation-hedging ability of real estate has generally found that when markets are in "equilibrium," the lack of space rental alternatives provides negotiating power for the landlord, who can write contracts with tenants which generate rents which either increase with inflation, or which pass through increases in operating expenses to tenants. By contrast, when markets exhibit high vacancy rates, and when tenants have numerous space rental options, the negotiating power switches to the tenant, who will move rather than accept a contract which exhibits escalation provisions tied to an inflation rate. In these latter periods, real estate as an asset class has been shown not to provide a hedge against inflation. This study updates and extends this previous stream of research by including quarterly data through the fourth quarter of 1992, and by utilizing information on real estate performance for different property types within metropolitan statistical areas (MSAs).

The methodology employed to complete these tests is similar to that which has been used in the finance literature, as well as in the few studies in the real estate area that have looked at inflation-hedging issues. A straightforward regression analysis is performed, with estimated coefficients indicating the magnitude and direction of the relationship between real estate returns and measures of inflation and vacancy rates. We test the relationship between total returns and the income and appreciation components of total returns, and expected inflation, unexpected inflation, and overall vacancy rates within the MSAs in our sample.

The results of our study are generally consistent with previous studies, even though we use a richer data set to test these relationships. The regressions are tested using the full 1980-1992 sample, and for two sub-periods: 1980-1985 and 1986-1992. For the full period, our results suggest that investors are compensated for the inflation which they expect when they price the real estate assets in their portfolios. For the most part, total returns and the appreciation component of total return both exhibit strong and positive relationships with expected inflation, and very little relationship with unexpected inflation. As expected, the return vacancy relationship is generally negative and significant.

When the sample is segmented into the early and late periods, somewhat different results arise. In the earlier period, when vacancy rates were generally low, we find that real estate returns exhibit a strong positive relationship with expected inflation, and little relationship with unexpected inflation. The only difference from this finding is for retail properties. Our results show that retail properties in the early period provided a strong hedge against both components of inflation. The only significant relationship with vacancy rates is exhibited by office returns, with a negative coefficient for both total return and the appreciation component of return. These results are consistent with our hypothesis that in periods of low vacancies, returns tend to exhibit stronger relationships with inflation and its components.

A corollary to this hypothesis is that when markets are out of balance, the vacancy rate plays a far greater role than inflation in influencing real estate returns. This hypothesis also holds up, as vacancy rates exhibit a strong negative relationship with total returns and both components of return for the all property portfolio, for the industrial property portfolio, and for office properties. Returns on retail properties do not exhibit any significant relationships with the inflation components.

One anomalous relationship exists for the total period, as well as the sub-periods. The income component of retail return exhibits a non-intuitive positive and significant relationship with vacancy rates in all of the periods tested. For all other property types, and for the all property portfolio, the relationship is negative as expected. This anomalous result for retail properties clearly needs further study.

The conclusions drawn from this paper are similar to those drawn by Wurtzebach, Mueller and Machi (1991). In periods when real estate markets are in balance, real estate tends to provide a hedge against the expected component of inflation, but there is little relationship between returns and unexpected inflation. When markets are out of balance, vacancy rates dominate the influence of inflation on real estate returns. These results robustly hold up when allowing, as we do in this paper, for MSA level property returns and vacancy rates.