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Effects of monetary policy on the REIT returns: Evidence from the United Kingdom

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ABSTRACT

In this paper, we analyze whether a monetary policy based on three main variables (inflation, money supply, and output gap) has a nonlinear impact on real estate investment trust (REIT) markets. In addition, we extend our analysis to examine whether these monetary policy components impact the possibility of boom and bust regimes occurring in the market. Empirically, we propose different Markov-switching model variants to determine the nonlinear time-varying impact of monetary policy on the REIT market. Our results show the monetary policy environment is supposed to affect, on one hand, the REIT returns and, on the other hand, the possibility of boom and bust markets. We prove that expansionary monetary policy has an impact only in the case of boom market. However, an increase in the inflation rate decreases the probability of remaining in the bust regime. As a consequence, we have already outlined several monetary transmission mechanisms that show house prices to have important effects on aggregate demand. Our results confirm that REIT markets are not efficient.

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1. Introduction

The behaviour of financial assets, such as stock and housing assets, has attracted the attention of academics, policy makers, and economic agents at large, especially during the periods of financial turmoil in the 1990s and 2000s, on account of its important role in monetary policy transmission processes. In particular, numerous studies on the real estate market have discussed the impact of monetary policy on the real estate investment trust (REIT) market in order to understand the impact of monetary policy on the real economic system. The magnitude of economic instability caused by the real estate sector highlighted the need to study the relationship between REIT and monetary policy so as to identify the shocks that drive recessions. This issue is a major concern for central banks, especially owing to the role of housing as collateral. Since the 1990s, the central banks have succeeded in their objective of price stability by means of inflation targeting policy, but they failed to prevent asset price bubbles and negative real effects. Therefore, the recent emergence of boom–bust cycles in house prices, followed by a significant contraction in the real economy is a matter of concern for policy makers (Iacoviello and Neri, 2010; Reinhart and Rogoff, 2008). From a policy perspective, the experiences around booms and busts explain why policy makers aim to improve the tools to detect them at an early stage and to identify the main monetary factors that have an impact.

The REIT market is a unique market; on one hand, it shares the characteristics of the broad real estate market, and on the other hand it possesses characteristics of the public stock market. In fact, Chen et al. (1998), p. 270 note and the financial literature indicates that when compared to ordinary common stocks, *'REITs may possess distinct risk return characteristics'*. In addition, Chandrashekaran (1999), p. 111 concludes that *'REIT stocks may have an important role to play in dynamic asset allocation strategies'*. Furthermore, the rationale behind examining the REIT market can be explained by the fast growth of its market capitalization in recent decades. For example, in the case of the United States, the total market capitalization of the equity REIT sector was *USD 8785 million in 1991*, according to the National Association of Real Estate Investment Trusts (NAREIT). By the end of 2005, this increased to over *300 billion*, while the number of equity REITs increased from 86 to 152 billion. Furthermore, this can be explained by their unique structure in comparison with mainstream equities. For example in the case United States, the requirement that at least 75% of REIT assets be invested in real estate and 90% of their taxable earnings be paid as dividends may lead to differences in REIT and equity price responses to changes in monetary policy.

One of the most important characteristics of REITs is their quick reaction to news. According to Rigobon and Sack (2004) and Bernanke and Kuttner (2005), asset prices, and in particular REITs react quickly to monetary policy announcements. These reactions are considered a source of not only disturbance but also shock transmission (Mishkin, 2007). Three channels model the impact of monetary policy on the general equity market. First, the impact on expected dividend level of firms. Second, any associated change in the real interest rate used to discount these dividends. Third, change in equity risk premium. Given the REIT characteristics and the underlying private real estate market, a number of aspects of these linkages may take on additional importance in the context of the traded real estate sector. Therefore, changes in monetary policy impacts the general economic activities that lead to occupational demand in the underlying real estate market. This, in turn, impacts the rents obtainable by REITs from the underlying property portfolio and hence directly affects the dividend payments of firms. Consequently, a monetary policy change also influences the value of the underlying portfolio. It affects the cap rates on the value of the underlying portfolio, and this impact is in addition to the impact of change in rental impact on property values, given the linkages between space and capital markets (Fisher, 1992). These effects mean that REITs are far more heavily tied to their underlying asset base than equities and other forms of real estate securities, implying that the response of REITs to changes in monetary policy may differ from the general evidence regarding the stock market.

Therefore, it is crucial for central banks to analyze thoroughly the effects of monetary policy on asset prices and in particular on REIT dynamics. However, the existing literature has evaluated this effect principally in two ways. In the first, the literature studied the impact of monetary policy on REITs through the effect of interest rate only. In the second, the literature assessed the impact of monetary policy on REITs via the relationship between REITs and inflation. The interest in this relationship is partly because the perceived inflation-hedging ability of real estate is often used to justify