REIT Returns and Inflation: Perverse or Reverse Causality Effects?

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Abstract

Contrary to the Fisherian theory of interest, previous studies document a negative relationship between REIT (Real Estate Investment Trust) returns and inflation. In this research, we re-examine this perverse inflation behavior by testing for the causal relationships among REIT returns, real activity, monetary policy, and inflation through a vector error correction model. Our results indicate that the observations of REIT returns as perverse inflation hedges are spurious. The observed negative relationship between REIT returns and inflation is in fact a manifestation of the effects of changes in monetary policies. These findings are consistent with Darrat and Glascock’s (1989) evidence of monetary effects on REIT returns.

Key Words: Perverse inflation hedge, REITs, VECM

1. Introduction

Fisher’s (1930) theory of interest, or more well known as the Fisher Effect, is now an essential and an important element in the curriculum of courses in business finance and investment. According to Fisher’s theory, expected nominal return on an asset is equal to its expected real return plus expected rate of inflation. If real return is to be kept constant, higher inflation requires higher nominal return. In other words, if investors want to maintain the same level of real returns or purchasing power, they will demand higher nominal returns in periods of high inflation. From this perspective, inflation is a significant determinant in asset returns and it is also a key consideration in investment decisions. Since common stocks represent claims on future consumption (stockholders give up present consumption for returns in the future), intuitively, rational investors will require higher returns during periods of high inflation in order to maintain the level of real payoffs. Nevertheless, previous studies, (e.g. Jaffe and Mandelker, 1976; Bodie, 1976; Nelson, *Author for correspondence: John L. Glascock, Department of Finance, George Washington University, 2023 G Street, 540b Lisner, Washington, DC 20052, USA.
1976; and Fama and Schwert, 1977) have documented negative relationships between stock returns and inflation. Additionally, various theoretical frameworks and empirical approaches have been developed to explain this perverse inflation puzzle, e.g., Fama (1981) and Geske and Roll (1983).

Inflation hedging is a major concern of real estate investors, such as insurance companies or pension fund managers, who usually have long-term investment holding periods. In the literature, there has been a consensus that unsecuritized real estate can serve as an inflation hedge (e.g., Sirmans and Sirmans, 1987; Hoag, 1980; Brueggeman et al., 1984; Miles and McCue, 1984; Hartzell et al., 1987; Gyorko and Linneman, 1988). As the underlying assets of Real Estate Investment Trusts (REITs) are primarily real estate, REITs are expected to be inflation hedges also. However, empirical results about REITs’ abilities to hedge inflation are mixed. Generally, extant evidence tends to suggest that REIT returns have negative relationship with inflation (e.g., Gyorko and Linneman, 1988; Goegel and Kim, 1989; Titman and Warga, 1989; Park et al., 1990; Chen et al., 1990; Liu et al., 1997). The conclusion of negative relationship between REIT returns and inflation suggests two implications. Firstly, REITs behave more like common stocks as perverse inflation hedges; and secondly, REITs’ behaviors deviate from those of traditional real estate.

Because unsecuritized real estate provides good inflation hedging and REITs are securitized forms of real estate, it is counter intuitive to find that REITs are perverse inflation hedges. One possible explanation is that results from spurious regressions in previous studies reverse the causal relationships between inflation and REIT returns. Also, it is possible that REITs are more efficient in information processing. Information first occurs in the REITs market as REITs reflect future economic prospects more efficiently and instantaneously than the general real estates sector. Furthermore, the observed positive relationship between unsecuritized real estate and inflation could be due to the usage of appraisal or transaction data that contain more recent rather than future information.

The purposes of this research are to re-examine the negative relationship between REIT returns and inflation and to investigate whether fundamental economic activities, such as monetary policies and industrial production, contribute to this perverse inflation hedge observation. To accomplish these objectives, we employ a vector error correction model (VECM) to study the potential causal relationships among REIT returns, inflation, industrial production and monetary policies. In the remainder of this paper, we use the terms “real estate” and REITs to describe unsecuritized and securitized real estate, respectively.

Our overall findings show that monetary policies have important impacts on price movements of REITs. The observed negative relationship between REIT returns and inflation is merely a manifestation of the effects of changes in monetary policies. The assertion that REITs are perverse inflation hedges is thus, we believe, spurious.

The remainder of this manuscript is organized as follows. The next section discusses the phenomenon of perverse inflation hedge and asset returns. Section 3 explains the data and the hypotheses. Section 4, presents the empirical findings and discussions. Section 5, concludes the paper.