Diversification benefit and return performance of REITs using CAPM and Fama-French: Evidence from Turkey

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Received 27 December 2016; revised 9 August 2017; accepted 11 August 2017

Abstract

This paper analyzes return enhancement patterns of Turkish REITs (T-REITs) from various perspectives over the period of July 2008 and March 2015. We find that T-REITs portfolio provides a slightly lower level of risk diversification benefit than investment trusts, but higher than the banks. The evidence suggests that portfolio managers and investors may not only be able to utilize knowledge deriving from the CAPM, but also utilize information retrieved from Fama-French model due to its relatively better performance on capturing the variation in T-REITs returns. Results also disclose that T-REITs show a degree of diversity in property focus, and reveal mainly defensive, small and financially distressed characteristics. Finally, based on the multiple observations, a case can be made for a possible linkage between property focus and yield improvement/risk taking structure of T-REITs. This study provides implications for the capacity of T-REITs and improve return enhancement capacity in an efficient portfolio management.

Keywords: REIT; CAPM; Fama-French model; Turkish REITs; Borsa Istanbul

1. Introduction

In recent years, the link between real estate and finance has received increasing attention in the property literature, due to the growing importance of property as a significant asset class in direct/indirect investments. This study focused on the positive externalities of REIT investment, which may be important in inducing both macroeconomic variables for short-term economic growth and also added value to the socio-economic importance of real estate. Therefore, despite its inherent risks, and the recent failures during the global financial crisis, real estate economy has become the key area of focus for supply/demand side actors, from industry (developers, contractors, investors, bankers, etc.) to governments and households. In the past decade, the real estate economy has also become a major priority for macroeconomic policy in Turkey. As a result of intensive state and private sector activities, real estate industry has made positive contributions to the macroeconomic variables such as GDP, employment, and mortgage credit volume, despite weak linkage between the real estate and finance industries. In this respect, it has been observable that compared with international banking counterparts, the volume of housing credit to GDP ratio is relatively low in Turkish banking, at about 6.1 percent as of 2015 (Hypostat, 2016). More importantly, the Turkish secondary mortgage market and mortgage-related insurance market have remained significantly underdeveloped. Understandably, this picture raises concerns over the effectiveness and sustainability of the benefits of the real
estate economy. In this respect, the role of REITs is critical to improving real estate-finance linkage in Turkey. Making a major combination to the booming real estate economy in the last decade, T-REITs industry is the example of a rapidly growing market with unique regulatory support through tax benefits and dividend payout exemption in Turkey (see Appendix 1).

The theoretical background of the paper relies on two well-known and well established methodologies commonly studied in the literature: Mainly CAPM and Fama-French three factor models. As a single factor model, CAPM explains the expected return of an asset relative to market risk. Fama-French model expands CAPM by spreading the risk sources through adding size and value variables. Along with the classical factors, additional influential factors may be employed to capture the variations in asset returns in emerging economies. The two most important countable ones are currency risk, which has a high impact on asset prices (Ajayi & Mougoué, 1996; Ma & Kao, 1990), and political risk, which is mostly triggered by various factors such as elections or changes in regulations (Cashman, Harrison, & Seiler, 2016; Günay, 2016; Kaya, Güngör, & Özçomak, 2014; Yapraklı and Güngör, 2007). Therefore, these risk factors employed as the additional variables represent an innovation in this study. Moreover, we also add the impact of global financial crisis into the equation as the global risk variable.

The primary goals of this paper are to analyze return enhancement quality and return variability of T-REITs from various perspectives over the period of July 2008 and March 2015. To accomplish these objectives, the study opens up four election periods, and global financial crisis as the specifically critical components in emerging economies. Therefore, the research consists of an investigation of the return variability of REITs adopting CAPM and Fama-French three factor models into T-REITs, followed by a comparison of both models to illustrate their relative efficiency. Third, we attempt to expand Fama-French model by employing foreign exchange rates, election periods, and global financial crisis as the specifically critical components in emerging economies. Therefore, the study introduces new variables beyond the classical Fama-French settings to reflect the impacts of additional local/global risk factors. Finally, we also define for the first time specialty (property focus), management structure, size, the financial state of T-REITs, and additionally analyze the connection between specialty and risk taking/yield improvement structure of T-REITs.

As a result of these innovations, the paper allows for a greater understanding of the time series properties of REIT returns from several innovative perspectives, and provides a critical input to asset allocation decision-making in BIST and T-REITs market in particular. The implications of the Turkish experience extend beyond local analysis framework, providing the REITs analysis with internationally usable strategies, since empirical analyses on the covered subjects are still at an embryonic stage, particularly in emerging economies. The analyses have also another international dimension due to the high percentage of foreign portfolio investments in BIST and some T-REIT stocks.

The remainder of the paper is organized as follows. Section 2 documents the stylized facts on the REITs industry in selected emerging markets, and in the case of Turkey, provides additional analysis for the connection between real estate subsectors and REITs. Section 3 reviews the literature. Section 4 lists the preliminaries on the methods utilized. The application of the proposed research on the data is in Section 5. The final section is reserved for the conclusion and comments. Appendix 1 also presents comparative advantages and critical aspects of REITs regulations in Turkey.

2. REITs in emerging markets and Turkey

2.1. Emerging market REIT indices and T-REITs

The importance of REIT market in the global financial system has been determined using global REIT indices. In this respect, the MSCI Emerging Markets IMI Core REIT Index covers large, mid and small-cap stocks. As of March 2016, the index covers 28 REITs with a 28 billion USD market cap. The leading countries in terms of their weights are South Africa (52%), Mexico (33%), Malaysia (8.3%), China (3.8%) and Turkey (1.8%). According to the sub-industry classification, the major REIT types in the MSCI index were as follows: diversified (62.2%), retail (24.54%), industrial (9.95%), hotel and resort (2.14%) and office (1.17%) (MSCI, 2016).

According to FTSE EPRA/NAREIT Emerging Index (the Index), as of May 2015, the number of leading REITs and their net market caps were 153 and 165.5 billion USD, respectively. March 2016 Index results provides several interesting facts. For example, REIT market in the emerging countries has shown a downturn and the number of REITs and their net market cap have fallen to 149 and 142 billion USD, respectively. China was the leading country, with 54 REITs with 65.7 billion USD net market cap, and 46.3% weight in the Index, followed by South Africa, Philippines, and Mexico with market weights of 11.3%, 8.1%, and 6.6%, respectively. Turkey had 1.7% weight in the Index, with 2.4 billion USD net market cap as of March 2016 (Table 1). The property sector breakdown showed that diversified REITs had 83.9 billion USD net market cap with the 59.1% industry weight. Residential and retail REITs ranked as the second and third largest REIT classes in the Index, with 35 billion USD (24.7% industry weight) and 13.7 billion USD (9.7% industry weight) net market caps, respectively (FTSE, 2016).

MSCI Emerging Markets IMI Core REIT Index provides 8.59% gross annualized return during November 1994 and March 2016 (MSCI, 2016). The year-on-year performance of

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1 It should be noted that publicly held real estate investment firms are officially named as Real Estate Investment Companies (REICs) instead of REITs in Turkey. Taking into account that the regulatory definition and activities of REICs are close to those of REITs (see Appendix 1), we use internationally accepted term of REITs in the study.
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