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The Existence of an Anomaly in the City Indices in Borsa Istanbul

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ABSTRACT

The aim of the study is to reveal the existence of an abnormal return in the city indices in Borsa Istanbul. Three important calculations were made for the detection of an abnormal return. The first was the calculation of adjusted returns. The second was the calculation of beta coefficients for city indices. The third was the determination of the relationship of each city index to the market. According to the findings obtained, there was an abnormal return in the city indices. In other words, each of the city indices made a profit on market returns. However, these returns were almost equal to market returns. When the beta coefficients were analyzed, it was seen that the coefficients were equal to the theoretically-expressed average market beta coefficient. Thus, the city indices and the market are moving in the same direction, and the results are statistically significant.

KEYWORDS

Anomalies, Capital Assets Pricing Model, Efficient Market Hypothesis, Fama (1970), Finance Theory, Keim (1983), Stock Markets, Systematic Risk

INTRODUCTION

Determining the performance of financial assets and the factors affecting these performances is one of the most important issues examined by the financial literature. According to finance theory, the return of a risky asset is equal to the sum of the risk-free return of an asset and the risk premium. The parameter affecting the risk premium is the beta parameter used as a systematic risk criterion (β). Beta criteria can take various numbers. For example, if beta is equal to one, the return on the asset is the market return. If the beta is larger than one, the return on the asset is above the market return. If the beta is less than one, the return on the asset is below the market return. Sometimes it can be seen that the beta is negative although this is rare; this is interpreted as a situation where both the return on assets and market returns are deemed to be reversed.

Beta is a criterion in which one hypothetically assumes that systematic risk is composed of various risk factors that cannot be eliminated by diversification. However, whether systematic risk elements can be represented as a single criterion is controversial in the financial literature because the systematic risk criterion has more than one, component and the power of these components to affect financial assets is different from each other. Furthermore, what a risk-free asset means is also controversial. For example, one risk-free asset may be called a treasury bill, but there is no risk of non-reimbursement and liquidity of the treasury bill. A treasury bill is reserved for all other sorts of risks, interest rate risks and reinvestment risks, for example. Another issue often discussed is that

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of the risk-free asset. Will it be short term? Is it long-term? However, all these discussions and new claims do not adversely affect the explanation power of the capital assets pricing model (CAPM).

Whether investors are able to trade and earn abnormal returns (earnings) is another important issue investigated in the finance literature. According to the efficient market hypothesis (EPH), which remained valid until the late 1950s and 1960s, financial markets operate under the assumption of full and exact information. According to this assumption, the market price of the financial asset reflects all the information that may affect the price of that asset. In other words, the law of one applies. If the equilibrium price in the market deteriorates for a temporary reason, the arbitrage mechanism will step in and bring the market back to balance automatically. The theorem made this assertion under the assumption that future price movements cannot be predicted by taking advantage of past price movements, so asset prices are realized by chance. Two important claims had been put forward. First, it is not easy for the investor to provide abnormal returns. Second, technical analysis will not be able to determine the direction of change in asset prices.

On the other hand, Fama (1970) mentioned some signs (oddities) that do not support the efficient hypothesis while findings supporting the efficient market hypothesis were included in the article. Some of these signs are in the literature such as the small firm effect, the January effect, market overreaction, excessive volatility, reversal of average return, and the assertion that new information will not always be immediately reflected on stock prices. In this case, contrary to the efficient market hypothesis, abnormal returns (anomalies) may be experienced.

The goal of this study is to determine the existence of abnormal returns in the city indices in Borsa Istanbul. In this context, the existence of possible abnormal returns in City Indices was determined as a result of calculations based on the information described above.

LITERATURE

In the literature review, studies conducted specifically on city indices were not found; therefore, pioneering studies on stock market indexes, index returns, and stock returns were summarized from a wide scope perspective. Accordingly, in the case that any risk factor or a piece of information affected the stock markets, and this effect was determined as a gain above the market return, and if this effect occurred continuously in certain periods or moments, existence of an abnormal return was mentioned.

In his study, Shleifer (1986) identified an abnormal return for each stock that was announced as included in the Standard & Poor's 500 index since September 1976. After this abnormal return was reflected in the indices, he found that this price movement continued for 10 days. This abnormal return incident causes all index funds to move upwards. On the other hand, he could not find a relationship between the emergence of abnormal returns and the disclosure of bond ratings.

Pesaran & Timmermann (1995) identified excessive returns in American capital markets for a certain period in their studies. In determining this, they argued that interest rates, monetary expansion, industry growth index, and profit share earnings are the internal factors that explain this excessive return. In another finding, they found that stock returns are related to the business cycle of the company. However, they claimed that stock returns were not only the result of this factor but also external shocks, such as the oil shock in 1974.

In their study, Barber & Lyon (1997) investigated the existence of abnormal returns in stock certificate returns over the long run. For this, the authors developed a new criterion for the calculation of abnormal returns. There is a reference portfolio in the criteria they developed, and the authors compared the returns of the reference portfolio with the return on investment (capital) for other companies available in the sample.

Keim (1983) examined the existence of abnormal return. He found that the returns in January were much higher than in other months. He also found that there is a negative relationship between the size of the company and the abnormal return, and the majority of the return on January premium is realized on the first day and during the first week.