Chapter 11
Stock Market Efficiency in South Eastern Europe: Testing Return Predictability and Calendar Effects

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ABSTRACT

The purpose of this chapter is to empirically test the informational efficiency and to examine the presence of the calendar effects in 10 South Eastern European (SEE) stock markets’ daily returns during the period 2007–2014. The authors use variance ratio test for exploration of random walk hypothesis. Regarding the calendar effects, the authors focus on the day-of-the-week effect, the half-month effect, and the turn-of-the-month effect. The existence of each calendar effect is analyzed by applying regression models with dummy variables for the effects in the mean returns and GARCH (1,1) models with dummy variables for the effects in the volatility of returns. The results indicate that the day-of-the-week effects in both mean and volatility are present in nine SEE stock markets. Contrary, the half-month effect in mean returns is present only in one, while half-month effect in volatility is present in five SEE stock markets. The turn-of-the-month effect in mean returns is present in six, while the turn-of-the-month effect in volatility is present in all 10 SEE stock markets.


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INTRODUCTION

Theoretically, an informationally efficient stock market creates price system that allocate financial capital to most productive uses, and at the same time, such market reflects the underlying market structure in which intense competition for information competes away any above normal (economic) profits. One implication of an informationally efficient stock market is that subsequent changes in stock prices are unpredictable, so that no investor can earn above normal profits by using information content of historic prices. We present in our paper an analysis of the degree of unpredictability of returns for the stock markets of the South Eastern Europe by using the variance ratio methodology. The variance ratio methodology is based on the idea that when stock returns follow a random walk process their structure does not change through time and therefore, the variance for a t+k period is a linear, k-times multiplication of the variance for the t period. Hence, one cannot make superior return forecasts based on information from a long series of past return variability compared to one using only an immediate past return variability. As South Eastern European stock markets are generally considered as emerging and not completely developed markets, it can be argued that those markets generally deviate from an informationally efficient market, but also that the degree of such deviation may indicate differences in relative i.e. comparative (in)efficiency of individual markets in the region.

On the other hand, informational efficiency of the stock markets has been challenged by the evidence from some empirical finance studies suggesting that there can be detected some regular, and predictable, patterns of behavior of stock returns related to some specific points in time – the so-called calendar effects. There are various calendar effects. This paper focuses on three calendar effects: day of the week effect, half of the month effect and turn of the month effect. The day of the week effect presents an anomaly in that the stock returns on Mondays are systematically lower than returns on other days in the week. The half of the month effect presents an anomaly in that the stock returns during the first half of the month are on average higher than the returns for the rest of the month. The turn of the month effect presents an anomaly in that the stock returns tend to increase during the last few days and the first few days of each month. If these effects persist then it might be possible for some investors to earn above normal profits by trading on those time patterns of behavior of stock returns, and that would run contrary to the arguments of the so called Efficient Market Hypothesis (EMH), which argues that one cannot earn abnormal returns by trading on such time patterns of past returns. In this context we examine the existence of the selected calendar effects in the stock markets of South Eastern Europe, aiming at providing further evidence for assessing the degree of informational efficiency of those markets.
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