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Effects of Inspections Done by Capital Market Board on Share Returns (2000-2018 Period Analysis)*

Sermaye Piyasası Kurulu Denetimlerinin Hisse Senedi Getirileri Üzerine Etkileri (2000-2018 Dönemi Analizi)

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Abstract

Because of the realisation of the fact that manipulations were done on financial reports of the biggest companies both in the United States (US) and in the rest of the world such as Long Term Capital Management in 1998, Enron in 2001 and Lehman Brothers in 2008, importance of independent auditing and corporate governance understanding increased. 99.9% of businesses operating in Turkey are small and middle scaled. This fact makes adoption of independent auditing and corporate governance understanding harder. Therefore, for the prevention of the use of methods that blocks competition in market, Capital Markets Board was founded. The purpose of this study is to find out the effects of auditings done by CMB throuhout 2000 to 2018 on stock returns. Another result of this research is to find out whether BIST is strong in semi-strong form or not. Data of auditing done by CMB was acquired by CMB's weekly bulletins. As a results of the analysis made using the event study method, it has been concluded that it affects the stock returns negatively. In addition, it is also possible to obtain higher returns compared to the BIST-100 index returns using this information and therefore, BIST was not effective in semi strong form.

Anahtar Kelimeler: Capital Markets Board, event study, market effective in semi-strong form, abnormal return, auditing.

Paper Type: Research

Öz

1998 yılında Long Term Capital Management, 2001'de Enron, ve 2008'de Lehman Brothers gibi hem Amerika Birleşik Devletleri (ABD)'nin ve hem de dünyanın en büyük işletmelerinin finansal raporlarında yapıldığı anlaşılan manipülasyonlar nedeniyle kurumsal yönetim ve bağımsız denetim anlayışının önemi artmıştır. Türkiye'de faaliyet gösteren işletmelerin %99,9'u Küçük ve Orta Boy İşletme (KOBİ) statüsündedir. Bu durum, Türkiye'de kurumsal yönetim ve bağımsız denetim anlayışının yerleşmesini zorlaştırmaktadır. Ancak, işletmelerin haksız rekabete yol açacak uygulamalara girişmelerinin önlenmesine yönelik olarak denetlenmeleri için Sermaye Piyasası Kurulu (SPK) oluşturulmuştur. Bu çalışmanın amacı, 2000 ile 2018 yılları arasında SPK'nun yaptığı denetimlerin, firmaların hisse senedi getirileri üzerindeki etkilerini araştırmaktır. Bu çalışmadan elde edilecek başka bir sonuç da, Borsa İstanbul (BIST)'in yarı güçlü formda etkin olup olmadığıdır. SPK tarafından gerçekleştirilmiş olan denetim verisi, SPK'nın haftalık bültenlerinden elde edilmiştir. Olay Çalışması Yöntemi kullanılarak yapılan analiz sonucunda, SPK denetimlerinin, hisse senedi getirilerini olumsuz yönde etkilediği sonucuna ulaşılmıştır. Ayrıca bu bilgi kullanılarak borsada işlem yapılması durumunda BIST endeks getirilerinden daha fazla getiri elde edilebilmesi de mümkün olacaktır. Bunun sağlayacağı bir başka sonuçta, BIST'in, yarı güçlü formda etkin olmadığıdır.

Keywords: Sermaye Piyasası Kurulu, olay çalışması, yarı güçlü formda etkin piyasa, anormal getiri, denetim.

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Makale Türü: Araştırma

Introduction

The importance of corporate governance and independent external auditing of companies has increased due to the manipulations identified in the financial statements of both the United States' (US) and the rest of the world's largest corporations, such as Long-Term Capital Management (1998), Enron (2001), WorldCom (2002), Parmalat (2003) (Storelli, 2005, s. 791), and Lehman Brothers (2008). The Enron scandal that emerged in 2001 is the most important of these developments. The manipulations of not only Enron, but also the Arthur Andersen independent audit firm, which oversees it, in its accounting and financial reports regarding Enron, started the process that led both Enron and Arthur Andersen auditing company to bankruptcy (Dibra, 2016:284). However, the event is not only the bankruptcy of these companies. Even more important than this is the erosion of investors' confidence in the markets. Upon these developments, the corporate governance approach and independent auditing gained great importance.

Furthermore, when examining the experience of the free market system over the past two centuries, it becomes apparent that a healthy market system does not emerge spontaneously. In fact, if left to its own devices, competition tends to diminish, monopolistic tendencies strengthen, and the process deviates into an imperfect competitive market. To halt this process, there is a need for regulations implemented by the government (Ardıyok, 2002, s. 72).

To prevent unfair competition between companies and the elimination of competition in the markets, the Capital Markets Board conducts inspections. The purpose of these inspections is to guide, constructively and improvingly, the policies pursued by companies, and to take necessary actions when there are transactions that require punitive sanctions. As a result of the inspections conducted by the Capital Markets Board, companies can face warnings, administrative fines, criminal fines, and even imprisonment as penalties.

There are many studies in the literature emphasizing the importance of the corporate governance approach. However, the number of studies measuring company performance after audits conducted by the Capital Markets Board (CMB), which is responsible for the smooth functioning of the capital markets in Turkey, is negligible. There is only one doctoral thesis that investigates the effects of administrative fines imposed by the CMB on stock returns as a result of audits conducted on any company. Additionally, there are two articles that examine the administrative fines given by the CMB from a statistical data perspective. However, there is no study that uses the event study method to determine whether the relevant stocks have abnormal returns in the period following the days when all the CMB audit decisions are reflected in the market. Within the scope of this study, 234 audits conducted by the CMB between January 1, 2000, and December 31, 2018, were examined to investigate the extent and direction of the impact on the performance of the relevant companies.

In the first section of this study, the literature examining the effects of information about companies reflected in the market on stock returns using the event study method has been reviewed. The second section discusses the establishment of the Capital Markets Board, its objectives, and the changes made over the years to adapt to evolving circumstances. In the third section, the efficient market hypothesis and its types are explained, along with the conditions under which relevant markets can be discussed. In the fourth section, it has been examined through the method of event study used in the implementation of the study. In the fifth section, information regarding the data used in the research was provided. The empirical results obtained from the study were interpreted in the sixth section. Finally, the seventh chapter included recommendations to shed light on future studies.

1. Literature Review

In the domestic literature, there are numerous studies discussing the effects of company mergers, acquisitions, stock splits, and administrative fines on stock returns. However, there is no research specifically examining the impact of the supervision processes conducted by the Capital Markets Board on stock returns of publicly traded companies. In the international literature, on the other hand, there are many studies investigating the effects of similar topics and audits conducted by regulatory authorities on stock returns. All studies conducted in this field are briefly summarized below in chronological order, based on their publication dates.

Bülbül (2018, s. 272) conducted a study using three different event study methods to investigate the effects of administrative fines imposed by the Competition Board on stock returns of companies listed on BIST (Borsa Istanbul) between 2002 and 2013. According to the results obtained, statistically significant negative effects on returns were found using both the market model and market-adjusted return methods. However, when using the average-adjusted return method, no significant abnormal returns were observed.

Münyas (2018, s. 128) classified administrative fines imposed by the Capital Markets Board between 2006 and 2016, based on violations of Articles 103, 104, and 105 of the Capital Markets Law, statistically for both individuals and legal entities. According to this study, it is mentioned that the highest amount of fines was imposed in 2016, while the lowest amount was recorded in 2012.

Sakarya, Yazgan, and Yıldırım (2017, s. 57) investigated the effects of corporate governance rating on firm performance with the event study method in their study on 58 companies included in the BIST Corporate Governance Index between 2011 and 2015. They examined the cumulative abnormal returns of the companies in the period between 10 days before and 10 days after the announcement of the corporate governance rating result, and according to the results obtained, no abnormal returns were obtained before or after the date of the announcement, and according to this result, the market was also in a semi-efficient form. They have come to the conclusion that it is strong.

Çıtak and Ersoy (2016, s. 56), in their study using the case study method, were also included in the BIST-30 with 15 businesses that were included in the BIST-30 index between 4 November 2014 and 19 June 2015, and were also included in the BIST Sustainability Index. They found that there is no statistically significant difference between the average returns of the other 15 businesses that are not included in the BIST Sustainability Index.

Kılıç and Güçlü (2015, s. 8) examined statistical data on administrative fines imposed by the Capital Markets Board on companies listed on BIST between 2006 and 2013 to determine the sectors in which they were concentrated. According to their findings, the banking and private financial institutions sector had the highest amount of administrative fines during the relevant years, with a total of 3,309,995 TL. They also found that the real estate investment trusts sector received the highest number of administrative fines, with 10 companies. The company that received the highest single fine was Akbank, with a penalty of 996,226 TL.

Şahin and Doğukanlı (2015, s. 23) conducted a study using the event study method to investigate the effects of mergers and acquisitions on stock returns of 13 publicly traded deposit banks after the year 2001. According to their findings, they obtained statistically significant positive returns in the period from five days before the event day to the event day itself. However, they observed statistically significant negative returns from the event day to 10 days after the event day.

Aguzzoni, Motta, and Langus (2013, s. 330) examined administrative fines imposed on publicly traded companies for antitrust law violations by the European Union between 1979 and 2009 using the event study method. According to their findings, they concluded that the administrative fines imposed on companies resulted in statistically significant negative returns within a 1% confidence interval.

Yolsal (2011, s. 69) examined stock split transactions of companies listed in the BIST-30 index between 2005 and 2011 using the event study method. According to the results obtained, Yolsal concluded that stock splits did not cause statistically significant changes in returns.

Sakarya (2011, s. 157) investigated whether 11 companies included in the Borsa Istanbul Corporate Governance Index caused cumulative abnormal returns in their stocks in 2009, on the dates of the announcement of their corporate governance grades, using the case study method. According to the results obtained, it was determined that negative abnormal returns were obtained before the announcement of the corporate governance ratings, and positive abnormal returns after the announcement of the rating. This shows that BIST is not efficient even in semi-strong form.

Aygören and Uyar (2007, s. 41-42) investigated the effect of audit opinions in audit reports on stock earnings of 101 companies traded in BIST between 2004 and 2005. They detected the presence of abnormal gains within the event window. They also concluded that investors did not evaluate their audit ideas in the same way at different times. As a result, they concluded that BIST is not efficient even in semi-strong form.

Kim and Yoon (2007, s. 25) investigated the relationship between institutionalism and business performance on companies in Korea. In the study, they determined that there is a positive relationship between the establishment of free management boards in businesses and business profitability. They also found that institutionalization and auditing reduced the conflicts between the internal and external of the enterprise and had a positive effect on the return.

Yörük and Ban (2006, s. 97-100) conducted a study using the event study method to investigate the effects of merger and acquisition transactions in the food sector of the BIST (formerly known as Istanbul Stock Exchange) between 1997 and 2004 on stock returns. According to the findings of their research, they determined that there was no statistically significant effect observed.

Kıymaz (2006, s. 81) examined 205 company mergers that took place in the United States between 1989 and 2002 using the event study method. According to the findings, Kıymaz found statistically significant cumulative positive returns in the stock returns of both acquiring and target companies.

Martinez, Martinez and Benau (2004, s. 276) investigated the existence of a relationship between the conditional audit opinion and stock values for the period between 1992-1995 in the Spanish capital market. However, according to the results obtained, they determined that there is no relationship between the audit opinion and the stock value.

Chen, Charles, and Zhao (2000, s. 452) found in their study, conducted using the event study method on stocks traded on the Shanghai Stock Exchange between 1995 and 1997, that positive and conditional audit opinions have an impact on stock value and lead to abnormal returns.

Ameen, Elsie and Guffey (1994, s. 1009) investigated the effect of qualified audit opinion on stock values in 177 small-sized companies traded in the United States stock exchange between 1974-1978. As a result of the study, which was carried out using the event study according to the market model, they determined that the stock values were adversely affected in the period before the announcement of the qualified audit opinion, and no effect occurred after the period when the results were announced.

Reichert, Lockett, and Rao (1993, s. 26-27) examined the effects of lawsuits filed against companies due to corporate crimes on stock returns using the event study method between 1980 and 1990. According to their findings, they observed statistically significant cumulative negative returns during and after the period when the news of the lawsuit became public.

Gul (1990, s. 25), in his research, discussed the existence of the effect of qualified audit opinion and positive audit opinion on stock values. For this purpose, the statistical data obtained were analyzed with the analysis of variance (anova) method. The results show that positive audit opinions have no effect on stock value; however, it revealed that the qualified audit opinion had an adverse effect on the value of the stock.

Houghton (1983, s. 18) examined different audit ideas and whether it creates differences in stock values at the decision-making stage without a report. In the research, positive, conditional audit report and financial statements without report were processed. As a result, it was determined that these three different conditions did not cause a significant effect on the stock values.

2. Capital Markets Board

99.9% of the enterprises operating in Turkey consist of enterprises with Small and Medium Enterprises (SME) status. In addition, SMEs account for 65.5% of total purchases of goods and services, 56.2% of production, 53.2% of gross investments, 55% of total value added, 65.5% of total sales, 39.9% of total imports, It realizes 59.2% of exports, 26% of bank loans and 75.8% of employment. 9% of agricultural enterprises, 12.5% of industrial enterprises, 51.4% of commercial enterprises and 35.2% of other enterprises are in SME status, and most of these enterprises operate as family businesses (TOBB-SME Research and Consultancy Center, Directorate, 2018) results in the fact that these companies are not very willing to adopt a corporate governance approach and engage in independent auditing. The most important reasons for this are the lack of sufficient level of independent auditing institutions and accordingly the cost of them entering into independent auditing is at a considerable level. For this reason, the Capital Markets Board receives 100 million TL from public companies, financial institutions and markets. It has made independent auditing a necessity for companies that want to borrow money. The fact that these institutions are relatively stronger economically makes it easier for them to absorb auditing costs. On the other hand, the necessity of protecting the interests of both the partners and third parties who have the potential to become partners in the company due to their public company status, justifies the necessity of independent auditing. However, it is inevitable for other companies operating in the markets to be audited in order to prevent them from engaging in practices that will orient them to formations such as monopolies, trusts and cartels to eliminate competition in the markets which would lead to unfair competition between companies. In order to achieve this, the Capital Markets Board (CMB) was established under the control of the state. This board operates in order to ensure the continuation of the market mechanism without interruption.

In order to provide assurance especially to foreign investors coming to Turkey, the corporate governance approach has become extremely important. While independent audit firms inspect companies in terms of their financial performance in general, the CMB mostly carries out activities to ensure the effective functioning of the market mechanism and to prevent violating behaviors. Therefore, the CMB makes an effort to make the audit mechanism work more effectively.

The high inflation experienced in Turkey in the 1970s made the deposit and bond (debt stock) interest rates negative in real terms. However, due to the tight control of the Central Bank, the issuer banks' inability to exceed the predicted interest rates gave birth to bankers; A second market, in which deposit and debt securities were exchanged, was formed by the bankers who took advantage of the legal vacuum. As a result of the bankers selling the bonds they bought from the issuing banks at a cheaper rate and subsidizing the difference in some way, the small banks could not credit the deposits they collected and eventually this turned into a crisis due to the fact that they could no longer handle their burdens. As always, small depositors paid the biggest bill. The Capital Markets Law, dated 28.07.1981 and numbered 2499, which was prepared and accepted in such an environment, aimed to put an end to the idleness by taking the markets under control and to ensure that the capital market operates in confidence, transparency and stability.

Some changes were made in the Capital Market Law over time due to reasons such as the requirements of the development speed of the Capital Market, the crises experienced in the markets, and the desires for institutional harmonization brought by international standards. The CMB was rearranged with the Capital Markets Law dated 6/12/2012 and numbered 6362. The purpose of these regulations is to ensure the effective participation of the public in economic development by directing their savings to securities, to protect the rights and interests of savers, to monitor and control the operation of the market in confidence, transparency and stability. The Board is a public legal entity with administrative and financial autonomy. Also, the board acts independently while performing the duties and exercising the powers assigned to it by law. Naturally, the responsibility arising from these works and actions also belongs to it. Again, with the additional article added to Article 22 of the Capital Markets Law No. 2499, the board was given the task of publishing the regulatory texts it issued in the Official Gazette and announcing the special resolutions in the weekly bulletin of the board, in addition to its function of making regulations regarding the sector regulations, directives, etc.) have been made public, and the means of informing the public have been put into effect. When the regulations listed in Article 22 are examined, the basic functions of the CMB are: to take measures to ensure the effective and efficient functioning of the markets, to determine the operating rules of the capital markets and the institutions that will operate in these markets, to monitor whether the determined rules are followed and to impose sanctions on violating behaviors, thus protecting the rights and interests of those who invest in the capital market.

3. Effective Markets

Until the 1950s, there was a belief among investors who invested in the capital markets that they could beat the market (receiving more than the average return of the market) through approaches based on fundamental and technical analysis. However, in the academic studies conducted between the 1950s and 1960s, the views that would reject this belief radically gained weight, and the Random Walk Theory, whose foundations were put forward by Bachelier in the 1900s, came back to the agenda of investors. Another result obtained in the studies carried out was the destruction of the belief that prices reacted slowly to the information reflected in the markets until then. The academic results obtained were in the form of stock prices reacting instantly to new information reflected in the market. The most striking of these studies was the Random Walk Theory made by Paul Samuelson in 1965. As a result of the continuation of the studies in this field in the following years, the Random Walk Theory was taken one step further and the Efficient Markets Hypothesis was developed by Eugene Fama. According to the Efficient Markets Hypothesis, which is, in a sense, an improved version of the Random Walk Theory, markets where new information is accurately reflected in prices are deemed "effective". The efficiency of the markets according to the theory; in the case of new information entry, it is determined by how quickly and in what direction the prices react. According to this definition, the efficiency of a market depends on the following conditions (Karan, 2011, s. 275-276):

• Prices should reflect the market equilibrium created by using all available information.

• These prices should reflect the response to new information entry with little delay.

Markets can be effective in three different forms, as weak form, semi-strong form and strong form, depending on the type of information entry. The main difference that distinguishes the markets, which can be defined in these three different forms, is based on the information sets reflected by the securities prices. The general characteristics of efficient markets are that securities prices react fully and accurately to a new information reflected on the market, that securities prices change in accordance with a random walk, that investors can not get more abnormal returns from the market neither by any method nor by coming together and acting collectively.

Random Walk Theory states that it is not possible to accurately predict future prices by using past price data. In other words, it is argued that it is not possible to obtain more than the average return provided by the market using technical analysis. It argues that in a weak-form efficient market, an abnormal return cannot be obtained in the market by using this information, since historical price data are fully reflected in prices. From this point of view, Weak-Form Efficient Market and Random Walk Theory are based on the same foundations.

In the semi-strong form efficient market, it is not possible to make abnormal profits neither with technical analysis nor with fundamental analysis (Karan, 2011, s. 277). According to this, not only by following the past price movements of securities (technical analysis) but also by using the information in the balance sheet, income statement, other financial statements, and reports announced by the companies (basic analysis), the general state of the economy reflected in the markets or any other information that affects the market values of the companies, will it not be possible to make abnormal returns compared to the market average. Securities react to all kinds of information reflected in the markets at once and immediately.

Strong-form efficient markets, on the other hand, are those in which it is not possible to obtain abnormal returns neither with technical and fundamental analysis nor with insider trading. The reason for this is that any information that has or has not yet been reflected in the markets reaches all investor groups very quickly and simultaneously.

4. Event Study Method

Within the scope of this study, it is aimed to investigate whether the stocks of the companies operating in Turkey which the CMB has audited over the years and for which it has been penalized if necessary, have an abnormal market return before or after the relevant period. In order to realize the general purpose of the research, the Event Study method was used. In the literature, there are many studies on stock returns using case studies. However, there is no study using the event study method on whether the related stocks have abnormal returns in the period following the days when the CMB's audit decisions regarding any company are reflected on the market.

The case study stands out as a method that measures the extraordinary effect of an event related to a company on the stock prices of that company (Sakarya, Yazgan, & Yıldırım, 2017, s. 65). With the event study method, it is possible to measure the effect of a particular event on the price of the stock. Incident study method; It is implemented in three phases: the forecast window, the event window, and the post-event window. The timeline used for the implementation of the event study is given in Figure-1.

The first stage of the case study implementation is the forecast window. At this stage, the average return of the relevant security is calculated over the period from a certain date to the event day. Taking this period as a short period of time may cause errors, especially with the effect of seasonal events, and in case of using a very long time interval, it may be objectionable because of the errors it may create in reflecting its relationship with the Stock Exchange index. For this reason, this period is generally taken as a maximum business year in applications. The second stage of event processing is the event window. In this period, the average returns for the period 10 days before the event day, on the day of the event and 10 days after the event day are found. Then, the difference between the average returns found and the average returns obtained within the forecast window interval is calculated. Whether this difference is significant is tested with the t-distribution. The final stage of event processing is the post event window. The peculiarity of this stage is to determine whether abnormal returns continue beyond the event window.

The event study method can be applied in three different ways: Mean Adjusted Returns, Market-Adjusted Returns, and Conditional Risk-Adjusted Returns. However, in this study, the Market-Adjusted Returns Model was used. Briefly, the steps of the event study according to the Market Model can be explained as follows:

Figure 1: Cyberattack (Event Study Timeline)

Source : Tweneboah-Koduah, Atsu and Buchanan, (2018, s. 645).

Step 1: Daily returns were calculated for each stock using the daily adjusted weighted average price data. The following formula was used to obtain the daily return:

$$R_{it} \text{ (Return)} = (P_{it} - P_{it}\text{-}1) / P_{it}\text{-}1 \qquad (1)$$

R_{it} : *the return of stock i on day t,*

P_{it} : *the weighted average price of stock i on day t,*

P_{it-1} : *the weighted average price of stock i on day t - 1,*

This formula does not include any dividends distributed during the period. This is because the price data used are adjusted price data. In the adjusted price data, dividend payments made during the period and new stocks issued due to paid and/or bonus issues are also reflected in the prices, so dividend payments are not taken into account.

Step 2: The Market Return is calculated. The following formula was used to calculate the market return:

$$R_{mt} = (I_t - I_t\text{-}1) / I_{t-1} \qquad (2)$$

R_{mt} : *the return of BIST 100 index at time t,*

I_t : *the closing value of the BIST 100 index on day t,*

I_{t-1} : *the closing value of the BIST 100 index on day t - 1,*

Step 3: The market model is calculated. The formula below was used in the calculation of the market model:

$$R_t = \alpha_t + \beta_t * R_{m,t} \qquad (3)$$

R_t : *the return on day t,*

α_t : *constant coefficient calculated in the forecast window,*

β_t : *beta coefficient calculated in the forecast window,*

$R_{m,t}$: *the return of BIST 100 index at time t,* Step 4: Expected returns are calculated. The formula below was used to calculate the expected returns:

$$E(R)_t = \alpha_t + \beta_t * R_{m,t} \qquad (4)$$

$E(R)_t$: *the expected return on day t,*

α_t : *constant coefficient calculated in the forecast window,*

β_t : *beta coefficient calculated in the forecast window,*

$R_{m,t}$: *the return of BIST 100 index at time t,*

Step 5: By subtracting the expected return from the daily return data, abnormal returns were calculated for each stock:

$$AR_t = R_t - E(R)_t \qquad (5)$$

AR_t : *abnormal return on day t,*

R_t : *the return on day t,*

$E(R)_t$: *the expected return on day t,*

Step 6: Cumulative Abnormal Returns (CAR) are obtained by taking the cumulative sums of AR (Abnormal Returns) for the event window period. These cumulative abnormal returns were applied for each stock 10 days before and 10 days after the event date:

$$CAR_t = AR_t + CAR_{t-1} \qquad (6)$$

CAR_t : *cumulative return on day t,*

AR_t : *abnormal return on day t,*

CAR_{t-1} : *cumulative return on day t - 1,*

Step 7: Cumulative returns for each stock are averaged on day t:

$$CAAR_t = 1/n \, . \, \Sigma CAR_t \qquad (7)$$

$CAAR_t$: *the average of the cumulative returns of all stocks on day t,*

n : *the number of shares,*

shows.

Within the scope of this study, it will also be tried to test whether Borsa İstanbul (BIST) is effective in semi-strong form. In semi-strong form efficient markets, it is not possible to obtain abnormal returns by using the information reflected in the market. If BIST is effective in a semi-strong form, an abnormal return should not occur before or after the CMB's audit decision results are announced to the market.

5. Data Acquisition and Analysis

In the first stage, audits conducted by the CMB, which were published in the weekly bulletin, were identified. Out of a total of 703 audit procedures conducted by the CMB between January 1, 2000, and December 31, 2018, only 236 were carried out for companies listed on the BIST National Index. The remaining 467 audits belong to companies that are not listed on the BIST National Index. Three of these 236 audit procedures were conducted for the same company (Kardemir) on the same date (07/09/2012) and were related to the A, B, and D shares. Over 90% of the trades conducted during the day in KRDM were exclusively for KRDMD shares. Only 10% or less of the trades during the day took place in the A and B shares. Therefore, trades were made using only the returns of KRDMD shares from KRDMA, KRDMB, and KRDMD. As a result, the audits included in this study cover only the 234 studies that have daily price data available. The distribution of audits conducted by the CMB over the years is provided in Appendix-1 in chronological order.

In the second stage, the prediction window was set to 401 days, ranging from 200 days before the date of public disclosure of the audit results for the companies to 200 days after the announcement date. Weighted average price data for this 401 day period was extracted from the dataset obtained from Borsa Istanbul. The price data obtained from Borsa Istanbul are daily price data adjusted in Turkish Lira. The event window was defined as a total of 21 days, including 10 days before the event, the event day, and 10 days after the event. In the third stage, the event study was applied according to the market model. The dates on which the audit results for the companies were published in the CMB's weekly bulletins and announced to the public were taken as the basis for the study.

6. Empirical Results

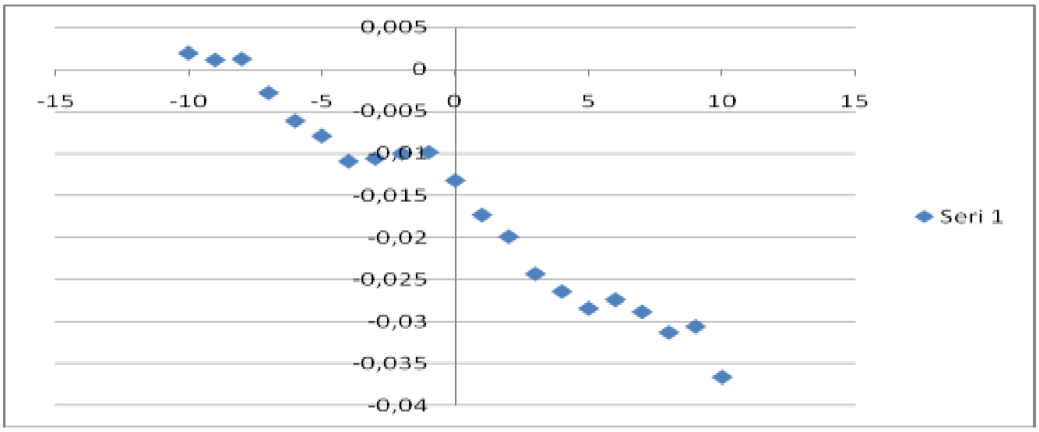
Within the scope of this study, the abnormal returns on the day (the day of the event), 10 days before and 10 days after the results of 234 different audits carried out by the CMB between January 1, 2000 and December 31, 2018 were announced to the public.

As can be seen in Figure 2, it was concluded that the audits carried out by the Capital Markets Board caused abnormal returns. While no change is observed in the returns 8 to 10 days before the event day, the returns decrease by around one percent between the day of the event and 7 days before. In the days following the announcement of the decision, the returns continue to decrease rapidly. It was determined that cumulative returns decreased by 3.5% on average 10 days after the event day.

In addition, the results obtained in Figure 2 show that it is possible for some investors to hear about the results of the audit conducted by the Capital Markets Board 7 days in advance on average.

According to Table 1, where the reliability levels of the results obtained are presented, it was determined that t-statistics and p-values were significant at the 5% confidence interval for 10 days after the event day. In addition, t-statistics and p-values were found to be significant in the 1% confidence interval between the 3rd day and the 10th day after the event day. This means that the negative returns occurring in the days following the announcement of the audits carried out by the Capital Markets Board in the bulletin are statistically significant.

Figure 2: 10 Days before event day, event day and 10 days of event day average cumulative abnormal in the period after the day returns



Source: Çetinkaya and Somuncu, (2019:48).

This shows that in the days after the CMB audits are announced to the public, the related stocks are heavily sold in the market and the prices and returns are adversely affected in the days following the announcement of the decisions. In addition, another important information in terms of the results presented in Table 1 is that the negative returns on the day the CMB audit results are announced to the public are not statistically significant. This shows that the bulletins may have been announced to the public by the CMB after the markets closed, rather than during the day.

Negative returns of approximately 1%, which started 7 days before the event day and continued until the event day, were not found significant in the 5% confidence interval according to t-statistics and p-values. Therefore, this change that occurred before the day of the event may be coincidental, or it may be the result of the cautious behavior of the big players.

Table 1: Period 10 days before and 10 days after the event day for t-statistics and p-values.

	t istatistikleri	P(T<=t) Tek-Uçlu	Ortalama
-10	-0,878462093	0,190295145	0,001924634
-9	-0,295773752	0,383832027	0,001118484
-8	-0,248899504	0,401827956	0,001232910
-7	0,527838733	0,299054652	-0,002821105
-6	1,074574429	0,141833692	-0,006181517
-5	1,311669057	0,095455899	-0,007933138
-4	1,676041609	0,047529956**	-0,010957163
-3	1,466287144	0,071953453	-0,010625300
-2	1,303854809	0,096779423	-0,010025869
-1	1,218900701	0,112052004	-0,009867700
0	1,429080763	0,077154461	-0,013257913
1	1,781420734	0,038067598**	-0,017364464
2	2,038078619	0,021331031**	-0,019925498
3	2,420876424	0,008121026***	-0,024384801
4	2,511242484	0,006351501***	-0,026497799
5	2,574855342	0,005320769***	-0,028466400
6	2,344430304	0,009944921***	-0,027454168
7	2,321414953	0,010560357***	-0,028878126
8	2,453706302	0,007433191***	-0,031337193
9	2,350422626	0,009789949***	-0,030630759
10	2,719905883	0,003508933***	-0,036679832

Note: ** 5% significance level *** 1% significance level

Source: Çetinya and Somuncu, (2019:49).

In addition, the negative returns in the related stock for a total of 18 days, starting from 7 days before the event day and continuing until 10 days after the event, are remarkable. It will be possible for investors who trade regularly in the market to create a pre-warning system by using this information. Accordingly, if the returns of a security regularly generate negative returns for more than 3 days, this indicates that an important information that has not yet been reflected in the market is started to be purchased by the investors. It can be interpreted that the information that causes negative returns will be reflected in the market within 3-4 days and may lead to important results. The investor can create a protective shield for their investment by using the "Average True Range" (ATR), method in the "stop-loss" order, which is used in technical analysis.

When Figure 2 and Table 1 are evaluated together, it will be possible for an investor who will sell short on the day of the event to obtain abnormal returns. This situation shows that Borsa İstanbul is not efficient even in semi-strong form. In addition, negative returns starting 7 days before the event date may be purely coincidental, as it may emphasize the possibility that investors will receive news of the results of CMB audits 7 days before the announcement of the decision.

The obtained results are consistent with the findings of Bülbül (2018) using market model and market-adjusted return methods, as well as the findings of Şahin and Doğukanlı (2015), Aguzzoni, Motta, and Langus (2013), Sakarya (2011), Aygören and Uyar (2007), Kim and Yoon (2007), Kıymaz (2006), Chen, Charles, and Zhao (2000), and Gul (1990). However, they do not align with the results obtained by Bülbül (2018) using the mean-adjusted return method, as well as the findings of Sakarya, Yazgan, and Yıldırım (2017), Çıtak and Ersoy (2016), Yolsal (2011), Yörük and Ban (2006), Martinez, Martinez, and Benau (2004), Ameen, Elsie, and Guffey (1994), and Houghton (1983).

7. Recommendations

This study has examined the potential effects of penalties imposed on companies as a result of institutional audits conducted solely by the Capital Markets Board (CMB) on their stock returns. Furthermore, this study can be further developed to investigate the effects of manipulation and insider trading on the stock returns of companies engaged in such activities.

Additionally, it can be explored whether the company audits and subsequent penalties imposed by the CMB lead to a significant increase in short selling transactions on the stock market on the day of and after their occurrence.

In this study, abnormal returns have been attempted to be determined using the market model. The results of implementing the other two methods can also be investigated. This would allow for a comparison among the methods used in Event Studies.

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APPENDİX

APPENDIX-1: Number of audits implemented by CMB distribution by years

Number of Audits Carried Out by the CMB	
Years	Number of Audits
2000	2
2001	8
2002	9
2003	2
2004	6
2005	4
2006	8
2007	5
2008	6
2009	14
2010	7
2011	9
2012	19
2013	13
2014	27
2015	31
2016	33
2017	15
2018	16

ETİK ve BİLİMSEL İLKELER SORUMLULUK BEYANI

Bu çalışmanın tüm hazırlanma süreçlerinde etik kurallara ve bilimsel atıf gösterme ilkelerine riayet edildiğini yazar(lar) beyan eder. Aksi bir durumun tespiti halinde Afyon Kocatepe Üniversitesi Sosyal Bilimler Dergisi'nin hiçbir sorumluluğu olmayıp, tüm sorumluluk makale yazarlarına aittir. Yazarlarca çalışmanın etik kurul izni gerektirmediği belirtilmiştir.

ARAŞTIRMACILARIN MAKALEYE KATKI ORANI BEYANI

1. yazar katkı oranı: %40
2. yazar katkı oranı: %60

Bu çalışma, 2019 yılında Afyon Kocatepe Üniversitesi Sosyal Bilimler Enstitüsü'nde Dr. Öğr. Üyesi Kartal Somuncu'nun danışmanlığında, İsmail Çetinkaya tarafından hazırlanan "Sermaye Piyasası Kurulu Denetimlerinin Hisse Senedi Getirileri Üzerine Etkileri" başlıklı yüksek lisans tezinden özetlenerek hazırlanmıştır.