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THE EFFECTS OF NEW EQUITY ANNOUNCEMENTS ON STOCK RETURNS: AN EXAMINATION ON BIST*

Sermaye Artırımı Duyurularının Hisse Getirileri Üzerine Etkileri: BİST'te Bir İnceleme

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Keywords:
Rights Issue,
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JEL Codes:
J10, J11, J14.

Abstract

The aim of this study is to examine the effect of rights and bonus issue announcements on stock returns. The study analyzes the companies included in the BIST-30 and BIST-50 indices between 2010 and 2022 and the companies that made capital increase announcements while they were included in these indices. In total, 84 different capital increase announcements of 35 companies were included in the study. In the study, the event study method was used and two different event windows were created as (-10, +10) and (-5, +5). At the end of the analysis, it was observed that new equity announcements affected stock returns. The study revealed that this effect was statistically significant negative. According to this situation, it can be said that the return expectations of the investors from the companies that announce the new equity issue should be negative and they should arrange their portfolios according to this result. According to the results of the research, it has been revealed that Borsa Istanbul is an inefficient market in semi-strong form.

Anahtar Kelimeler:
Bedelli Sermaye Artırımı,
Bedelsiz Sermaye Artırımı,
Olay Çalışması.

JEL Kodları:
J10, J11, J14.

Öz

Bu çalışmanın amacı bedelli ve bedelsiz sermaye artırımı duyurularının hisse senedi getirilerine olan etkisini araştırmaktır. Çalışmada 2010- 2022 yılları arasında BIST-30 ve BIST-50 endekslerinde yer alan ve bu endekslerde bulunduğu sırada sermaye artırımı duyuruları gerçekleştiren şirketler analiz edilmiştir. Toplamda 35 şirketin 84 farklı sermaye artırım duyurusu çalışmaya dahil edilmiştir. Çalışmada olay çalışması yöntemi kullanılmış olup, (-10, +10) ve (-5, +5) olarak iki farklı olay penceresi oluşturulmuştur. Analiz sonunda sermaye artırım duyurularının hisse getirilerini etkilediği gözlemlenmiştir. Çalışma bu etkinin istatistiksel olarak anlamlı negatif yönlü olduğunu ortaya çıkarmıştır. Bu duruma göre yatırımcıların sermaye artırımı duyurusu gerçekleştiren şirketlerden bekledikleri getirilerin negatif olması ve portföylerini bu sonuca göre düzenlemeleri gerektiği önerilmektedir. Araştırma sonuçlarına göre Borsa İstanbul'un yarı güçlü formda etkin olmayan bir piyasa olduğu ortaya çıkmıştır.

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1. Introduction

Companies meet their financing needs through debt financing or equity financing (Karabulut and Seker, 2020). In debt financing, companies obtain financing through foreign sources. Although it is less costly than equity financing, the debt financing method carries a number of risks for companies (Hall, 2002; Rashid, 2014). Equity financing, which is another financing method used by companies, is satisfying the financing needs by issuing their equity (Yasar, 2006). Companies carry out equity issue transactions in two ways. These are the rights issue and the bonus issue. In short, the rights issue is the company's acquisition of new shareholders by issuing new shares. In other words, equity issues with external resources are referred to as the rights issue method. The bonus issue method is a form of equity issue with the company's internal resources. The main difference between these two equity issue methods is that while new funds enter the company from outside the company in the rights issue method, there is no outside cash inflow to the company in the bonus issue method.

Public companies disclose their decisions and other information to the public (Kucuksille and Mizrahi, 2015a). Equity issue decisions are information that publicly traded companies need to announce to the public. How these announcements are perceived by the investors in the market and how the stock prices and returns are shaped in this direction have been examined by many researchers in the literature. This is because changes in stock prices and returns are also related to the fields of market efficiency and behavioral finance. According to the Efficient Market Hypothesis, the information released to the market is evenly distributed, and the prices formed in this way suggest that they are correct prices immediately. There are three types of markets in the Efficient Markets Hypothesis. These are weak form, semi-strong form, and strong form efficient markets. Weak form efficient markets are those in which securities' past price volatility is reflected in the current price. Semi-strong form efficient markets are those in which the past price volatility of securities is reflected in the current price, as well as the publicly available information. Finally, markets in which the historical price volatility of securities, publicly available information, and proprietary information (in-company information) are procured to investors are called strong form efficient markets. However, in all three types of efficient markets, investors cannot receive abnormal returns. Because markets must not be in an efficient form to obtain abnormal returns (Fama, 1970). Since equity issue announcements are publicly available data, examining the price reactions to these announcements can be a test for semi-strong form efficient markets.

According to the Efficient Markets Hypothesis, investors cannot earn more returns than the market normally does. This is because the Efficient Market Hypothesis assumes that information about firms reaches investors equally. However, returns above the market normal can still be obtained in the markets. In this case, anomalies are often involved. By definition, anomalies are observations or realities that are not found in theory but can occur in real life. At the same time, anomalies can be defined as paradigms that are difficult to rationalize (Thaler, 1987). Anomalies are divided into three groups which are firm anomalies, calendar anomalies and price anomalies. Known as firm anomalies, these occur when less valued stocks in the market provide more returns than other stocks. The exhibit performance outside the periodical normal performance of the investment instrument is termed the calendar anomaly (Dogukanli and Ergun, 2011). A price anomaly is a deviation from the mean price that occurs in two ways: underreaction and overreaction (Ege et al., 2012).

The announcement effect is defined as the change in stock prices after the news that companies declare to the market (Cikrikci and Ozyesil, 2018). In the literature, there is no common opinion about the outcome of the announcement effect on stock prices. While some studies have found that the announcement effect has a positive effect on stock prices, some studies have found a negative effect. The reason for this situation may be related to the influence of variables such as how announcements are perceived by investors and the level of effectiveness of the market. Barclay and Litzenberger (1988) explained the effects of new equity offerings on stock prices with three hypotheses. These hypotheses are Information Hypothesis, Price Pressure Hypothesis and Leverage Hypothesis. Information hypotheses are the "Existing Asset Value Signaling Hypothesis", "Cash Flow Signaling Hypothesis" and "Wasteful Investment Hypothesis" (Barclay and Litzenberger, 1988). Before these hypotheses, it is necessary to mention signal theory. Signal theory is an important concept for understanding the impact of market news on prices. When the information presented to the market is well accepted by the investors, it can be observed that the stock price increases due to the reactions of the investors. In the same way, it was stated that the "bad news" released to the market caused low reactivity in the investors and thus a decrease in the stock price. Bhattacharya (1979) stated in his study that stock prices can change according to investors' perceptions. First, The Existing Asset Value Signaling Hypothesis assumes that managers have more information about the intrinsic value of the firm's assets. In the firm's need for external financing, managers assume that they issue equity when they think that the firm's market value is higher than its intrinsic value. However, if the market value of the firm is lower than its intrinsic value, they issue debt. According to the hypothesis, it is assumed that new equity issue announcements have a negative effect on the stock price, while debt issue announcements have a positive effect on the stock price. According to the Cash Flow Signaling Hypothesis, new security issues suggest that it is brought about because firms have insufficient internal funds for new investments. Accordingly, the hypothesis assumes that the effects of both equity and debt issues on stock prices are negative. According to The Wasteful Investment Hypothesis, unexpected new equity issues are seen as signals of investments. However, if the net present values of these investments are less than zero, it is assumed that the effect on the share prices are negative. After the Information Hypotheses, it is necessary to mention the Price Pressure Hypotheses. Price Pressure Hypotheses are Downward Sloping Demand Curve Hypothesis and Transaction Cost Hypothesis. The Downward Sloping Demand Curve Hypothesis assumes that stock prices will decrease due to new issues. According to the Transaction Cost Hypothesis, it is assumed that the new equity issues discount the prices in order to absorb the transaction costs of the investors, and therefore the stock prices decrease. Finally, there are the Leverage Hypotheses. Leverage Hypotheses consist of the Tax Advantage of Debt Hypothesis and Redistribution Hypothesis. According to the Tax Advantage of Debt Hypothesis, firms do not benefit from the tax advantage of debt by making an equity issue and their leverage levels decrease. According to this hypothesis, a low leverage level causes a decrease in stock prices. Conversely, the hypothesis assumes that the debt issue has a positive effect on stock prices. According to the Redistribution Hypothesis, low leverage levels make the firm's debts less risky. For this reason, the unchanged market value increases the expenses of the bondholders. Therefore, it is assumed that new equity issue announcements have a negative impact on stock prices (Barclay and Litzenberger, 1988). In this study, the effect of new equity issue announcements on stock returns through BIST-30 and BIST-50 companies was examined. The related literature has generally found a negative effect of new equity issue announcements on stock returns. In this

context, the findings of this study have also contributed to the formation of this general knowledge in the literature by reaching similar results.

2. New Equity Issues

Businesses raise their equity in two ways. These methods to issue equity are; the rights issue and the bonus issue methods. In the following sections, information about these augmentation methods is given.

2.1. Rights Issue

In short, the rights issue method is a way to increase the equity of companies with new resources. Another definition states it as a situation where companies increase their equity by issuing new shares; this is known as a rights issue (Karan, 2004). The existing shareholders in the rights issue method can own the newly issued shares in proportion to their existing shares, thanks to their pre-emptive rights (Lambrechts and Mostert, 1980). In addition, the rights issue provides additional financing resources to the companies. Companies can benefit in many areas from the new investors they have gained with new shares. These benefits, according to Tuna (2014), are mainly; new investor profiles, new partners, and new visions. In addition to these advantages, the main disadvantages of the rights issue method are increases or changes in audits on company management, sharing company control, and increasing reporting costs in line with the number of new investors (Akkranupornpong and Kleiner, 2004).

In addition to this, there are 4 rights issue models. These models are stock distribution according to share ratio, calls to buy stocks at a different rate than the share rate, initial public offerings (IPO), and sales to a specific buyer. These models are chosen by enterprises according to the purpose of the enterprise and the characteristics of the issue (Broyles et al., 1983).

2.2. Bonus Issue

In addition to the rights issue method, companies can also increase their equity through bonus issues. In this way of the equity issue, company partners acquire new assets without paying any price. Dividends, emission premiums, revaluation value increases, reserves, profits from participation, and fixed asset sales are listed as resources used in bonus equity issues (Arabaci, 2013).

The bonus issue method provides companies with some advantages and disadvantages. The main advantages are tax benefits, the chance to strengthen weakened equities, and investment opportunities for small investors, hence the release gain. In addition, the main disadvantage of the bonus issue method is the inability to obtain funds from outside of the enterprise (Kucuksille and Mizrahi, 2015b).

3. Literature Review

In this section, a literature review on the impact of rights issues and bonus issues on stock prices is given. In some studies, it has been found that equity issues have a positive effect, but in

some studies, a negative effect has also been found. In several studies, it has been found that their effects depend on certain variables. The literature review on the topic is given below.

First, there are studies that carry out their studies on rights issue announcements and have negative effects of the announcements. Ginglinger and Gajewski (2002) investigated the effect of the right issues on stock prices. The study focused on French stocks, during the period of 1986-1996 data. And the data set was analyzed with the event study method. At the end of the study, a negative effect was observed on the returns of the companies that employed the right issue.

Cotterell (2011) examined the effect of right issue announcements on stock prices. The study examined 35 announcements made on the Johannesburg Stock Exchange (JSE). The study was carried out using 2001-2010 data and the event study method was employed for analyzing the data set. At the end of the study, it was observed that the stock prices were negatively affected by right issue announcements.

Mahmood et al. (2014) examined the effect of issuance announcements on the stock market in the case of Pakistan. With the case study method, the rights issuance announcements made from 2005 through 2012 were studied. At the end of the research, it was found that the right issues made in Pakistan harmed stock prices.

Kucuksille and Mizrahi (2015a) worked only on companies that were traded on the Borsa Istanbul Stock Market between 2010 and 2014 that solely announced a right issue. According to the results of the study, it was found that one, four, and nine days after the announcement, statistically significant negative average returns were obtained. It was stated that the BIST market was not efficient in semi-strong form and was affected by the equity issue announcements. However, no significant changes were observed in the yields within 10 days without the right issue, but the returns reached the lowest level nine days after the announcement.

Otieno and Ochieng (2015) researched 12 companies that employed right issue shares in the Nairobi Securities Exchange. The study examined the years between 2007 and 2014 and used the event study method. The results show that prices and returns had increased before the right issuance announcement. In addition, a decrease was observed in these cases after the announcement. Based on this result, stock prices and returns were interpreted as being dependent on the announcement.

Kendirli and Elmali (2016) examined the relationship between rights issuance announcements and stock returns. In the study, five rights exclusion notices were studied with the event method. These announcements were made by three different companies between 2009 and 2014. At the end of the study, it was found that abnormal returns could be obtained up to ten days after the announcement date. The average abnormal cumulative return was negative ten days after the announcement date.

In addition to the negative effects of rights issue announcements, studies with positive effects are also included in the literature. Bashir (2013) investigated the effect of right issue announcements on stock prices. In the study, 31 right issues announced on the Karachi Stock Exchange (KSE) between 2008 and 2011 were examined. And the data set was analyzed with the event study method. At the end of the study, it was found that positive abnormal returns were obtained on the announcement date.

Kithinji et al. (2014) examined the effect of stock rights issuances on stock performance. In the study, the data from 20 companies that traded in the Nairobi Securities Exchange (NSE)

during the years of 2007-2012 were used. The descriptive study method was used in the study. According to the results, it was found that right issue announcements had a positive effect on stock prices.

Ramesh and Rajumesh (2014) analyzed 78 right issue announcements of 61 companies that traded on the Colombo Stock Exchange. For the analysis, the event study method was employed, and the study period was selected between the years 2008- 2012. At the end of the study, it was found that the right issue announcement had a positive effect and provided the highest return with 7.44% in the next 10 days after the announcement date.

Yolcu and Ozturk (2021) examined the effect of 13 rights announcements of 8 companies traded in the BIST 100 index on stock prices. In the study, data from 2007-2016 were used and examined by event study. At the end of the study, it was found that rights issue announcements can cause positive abnormal returns. Also, it is stated in the results of the study that Borsa Istanbul is not an effective market in semi-strong form.

Finally, Tsangarakis (1993) examined 34 stocks and their price relations that had the right issue on the Athens Stock Exchange between 1981 and 1990. In the study, the event method was employed for analyzing. At the end of the study, both positive and negative effects were observed in the created event window. Also, it was observed that investors who invest in companies with the right issue cannot obtain abnormal returns. In addition, the Greek market was found to be semi-strong efficient.

In the literature, there are studies that work on bonus issue announcements and obtain different results from each other. First, there are studies that investigate bonus issue announcements and conclude that they have a negative effect. Kucuksille and Mizrahi (2015b) examined the effects of bonus issue announcements on stock prices. The study examined companies that traded on the Borsa Istanbul Stock Market between 2012 and 2014 and analyzed them with the event study method. In the study, companies with bonus issues lower than 100%, 100%, and higher were investigated separately. At the end of the study, it was found that it was not possible to obtain a statistically significant positive abnormal return after the announcement dates. However, companies with a bonus issue rate of 100% or higher had a statistically significant negative average abnormal return 4 days after the announcement date. Also, it was stated that Borsa İstanbul is not an effective market in semi-strong form.

Erol and Aytekin (2018) investigated whether companies that received bonus issue approval would obtain abnormal returns. In the study, bonus issue announcements of companies listed on the BIST in 2016-2017 were examined. At the end of the study, it was found that abnormal returns can be obtained in the days before and after the event date. It has been found from the announcements that the company's stock returns would decrease due to the short position that the investors would take. It has also been stated that Borsa Istanbul was not efficient in a semi-strong form market.

In contrast to the negative results, there are also studies that conclude that bonus issue announcements have positive effects. Fernando and Guneratne (2009) studied stock performance with bonus issue announcements. In the study, the companies that traded in the Colombo Stock Market were examined and focused on data from the period between 1991- 2007. Three methodologies established by the event study (the market-adjusted model, the risk-adjusted model, and the mean-adjusted model) were used in the study. At the end of the study, an abnormal

arbitrage opportunity was found until the sixth day of the announcement and the issuance of the bonus.

Raja and Sudhahar (2010) examined the effect of bonus issue announcements on stock prices. In the study, the announcements of 43 companies that traded on the Bombay Stock Exchange (BSE) were examined. For the analysis, the event study method was employed, and the years between 2000- 2007 were selected as the period. At the end of the study, it was found that bonus issue announcements had a positive effect on stock prices, and this positive effect continued for 15 days after the announcement date. In addition, it was observed that the highest return was obtained on the announcement date.

In addition to positive and negative effects, the presence of both effects has been observed in some studies. Barnes and Ma (2001) studied the stock prices' reactions to the bonus issue. The study covers the Chinese stock market and the event study method was employed in the study. The results indicated that stock prices depended on bonus plans (size and direction of bonus) of bonus issues. In the study, it was found that medium and large-scale bonus issues have a positive effect, but small-scale bonus issue announcements have a negative effect. It was stated that the reason for this was that the Chinese stock market was in semi-strong form.

Khurana and Warne (2016) examined the relationship between bonus issue announcements and stock prices. In the study, 34 companies in 11 sectors in NSE 100 were examined. The years 2006-2012 were studied and the event study method was employed. At the end of the study, positive abnormal returns were observed in the period 9 days before the announcement date. However, on the announcement day, a statistically significant negative AAR was observed. Additionally, the Indian Stock Exchange was found to have semi-strong efficiency.

Sakarya et al. (2018) studied the stock prices of companies that announced dividend payments in the case of Turkey. The study was carried out with the data from 2016 and the event study method was used. As a result of the study, both positive and negative effects were found. It was stated that the Turkish market was not efficient in semi-strong form and investors could obtain abnormal returns on stocks.

While the rights issue and the bonus issue are often examined separately in the literature, some researchers have investigated these two methods in a single study. Ozer and Yucel (2001) examined the companies that increased their equity between 1990- 1996 and made a total of 686 observations. Two types of equity issues were also included in the study. The event study method was used for analyzing method. While the effect of stock issuances on stock returns was positive on the day of the issue, this effect turned negative on the days after the issue.

Baskaya and Kaderli (2017) researched the companies that made an equity issue announcement among the companies that traded in Borsa Istanbul between the years of 2015-2016. Two types of equity issues (right issue and bonus issue) were included in the study. According to the results of the study, it was found that 27 companies whose stocks made an announcement were positively affected by 37 announcements. In addition, it has been determined that the market was not in an efficient form.

According to the general studies in the literature, the effect of new equity announcements on stock returns was found negative. However, some studies find that these announcements have a positive effect on stock returns. However, some studies have concluded that these announcements may vary depending on several factors. Therefore, according to the general

studies in the literature, it can be said that the impact of new equity announcements on stock returns is negative. In the following sections of the study, the validity of this assumption, which is supported by a majority of the literature, for the BIST-30 and BIST-50 indices is investigated.

4. Methodology

4.1. Data

Companies that announced an equity issue while listed in the BIST-30 or BIST-50 indices were included in this study. This study examined 35 companies that announced the rights issue and bonus issue in the BIST-30 and BIST-50 indices between 2010- 2022. The reason for including 35 companies in the study was selected according to whether they were included in the indices determined on the dates examined. For the BIST-30, 10 rights issue announcements from 8 companies and 40 bonus issue announcements from 14 companies were detected. For the BIST-50, 17 rights issue announcements from 14 companies and 64 bonus issue announcements from 23 companies were detected. As a benchmark, BIST-100 was included in the study. The reason why the indices are not examined according to their own benchmark and the reason why BIST-100 is determined as a benchmark is because there is not much difference in return and volatility. In addition, BIST-100 is included in the study as a benchmark because it is a more known index.

In the study, firstly, companies that were traded in the BIST-30 and BIST-50 between 2010-2022 from the Borsa Istanbul Historic and Reference Data Platform (BIST) were found. After that, the equity issue dates were obtained from the Is Yatirim (2023). In line with the dates obtained, announcements regarding the increase date were procured from the Public Disclosure Platform (KAP, 2023). After the equity issue, announcement dates of the companies and the type of increase were determined, and the stock prices of the companies and the BIST-100 index value were obtained from the Yahoo Finance (2023) website. The price data of the stocks was determined according to the 365 days before and 10 days after the announcement. Some of the firms were excluded from the analysis due to lack of data in the study. The companies whose equity issue announcements were examined in the study are listed in Table 1.

Table 1. Companies that Announce Equity Issue

1	Ak Enerji	19	İş Gmyo
2	Akbank	20	İzmir Demir
3	Alarko	21	Kardemir
4	Anadolu Efes	22	Koç Holding
5	Anadolu Sigorta	23	Koza Maden
6	Aselsan	24	Netaş
7	Bagfaş	25	Odaş
8	Bim	26	Petkim
9	Eczacıbaşı	27	Sasa
10	Emlak Konut	28	Selçuk Ecza
11	Enka	29	Sinpaş
12	Ereğli	30	Şekerbank
13	Galatasaray	31	Şişecam
14	Gübre Fabrik	32	THY
15	Halk Bank	33	TSKB
16	İhlas	34	Vakıfbank
17	İpek Doğal	35	Yapı Kredi
18	İş Bankası		

4.2. Event Study

In the study, the event study method was employed to analyze the effect of equity issue announcements on stock returns. The event study is a method that allows researchers to reach a conclusion or make a prediction based on the effect of an event (Serra, 2004). At the same time, event study methods are used in academia to reveal the effects of macroeconomic events as well as in accounting and finance (Campbell et al., 1998). The reason for using the event study method in this study is that this method reveals the effect of an event on stock prices, and therefore serves the purpose of the study directly (Sakarya, 2011). Event study methods are generally similar. However, the main differentiation between the methods occurs in the calculation of abnormal returns. In this study, the market model approach, which was employed in many studies in the literature, was used from the approaches of calculating abnormal returns. Two different event windows (-10, +10) and (-5, +5) were created in the analysis. The reason for this is that the (-10, +10) event window is frequently used in studies in the literature. Adding the (-5, +5) event window to the study enables the measure of the effects. After obtaining the 365-day stock price information, the days without price data (weekends, holidays, etc.) were removed because they would distract from the purpose of the study. Thus, forecast windows were created for the study. For the bonus issues, the estimation window of the study was 229 days for the (-10, +10) event window and 234 days for the (-5, +5) event window. For the rights issues, the forecast window of the study was 237 days for the (-10, +10) event window, and 242 days for the (-5, +5) event window.

The following formulas were used in the analysis of the study.

$$R_{it} = ln\left(\frac{P_t}{P_{t-1}}\right) \quad (1)$$

R_{it}: stock return,
P_t: the closing price of the stock in period t,
P_{t-1}: the closing price in period $t-1$.

Abnormal returns were obtained with the estimation errors (ϵ_{it}) of the market model (Cowan and Sergeant, 1996).

$$R_{it} = \alpha_i + \beta_i R_{mt} + \epsilon_{it} \quad (2)$$

R_{it}: the return of stock i at time t,
R_{mt}: market return at time t,
α_i: constant coefficient of the model (intercept),
β_i: stock beta (slope).

In the calculation of abnormal return (AR_{it});

$$AR_{it} = R_{it} - (\hat{a} + \hat{\beta} R_{mt}) \quad (3)$$

To calculate the abnormal returns (AAR_t) of the days of the event window;

$$AAR_t = \frac{1}{N}\sum_{t=1}^{N} AR_{it} \quad (4)$$

To calculate the cumulative average abnormal return ($CAAR_t$) starting from the -10th day in the event window;

$$CAAR_t = \sum_{t=-10}^{10} AAR_t \quad (5)$$

To calculate the $CAAR_t$ from day -5 in the event window;

$$CAAR_t = \sum_{t=-5}^{5} ARR_t \quad (6)$$

formulas were used. The formulas used to calculate the t statistics of abnormal returns are given below (Brown and Warner, 1985).

$$t = \frac{AAR}{S(AAR_t)} \quad (7)$$

To calculate the t statistics of rights issue announcements;

$$S(AAR_t) = \sqrt{\frac{1}{236} \sum_{t=-247}^{t=-11} (AAR_t - AAR)^2}$$
$$AAR = \frac{1}{237} \sum_{t=-247}^{t=-11} AAR_t \quad (8)$$

To calculate the t statistics of bonus issue announcements;

$$S(AAR_t) = \sqrt{\frac{1}{228} \sum_{t=-239}^{t=-11} (AAR_t - AAR)^2}$$
$$AAR = \frac{1}{229} \sum_{t=-239}^{t=-11} AAR_t \quad (9)$$

5. Results and Discussions

In this part, the results of the analysis were provided. First of all, the analysis findings of the companies that made BIST-30 rights issue announcements were included. In Table 2., average abnormal returns (AAR), t-statistics of abnormal returns, 10-day cumulative average abnormal returns (CAAR), and 5-day CAAR are calculated for the companies that announced the rights issue in BIST-30. The most striking points in the results are the statistically significant -3.39%, -3.70% and 1.10% values seen on the announcement date (t), the one day after the announcement day (t_{+1}) and two days after the announcement day (t_{+2}). According to 10-day CAAR values, the highest 10-day cumulative value is 1.01% eight days before the announcement date (t_{-8}) and the lowest value is on the first day after the announcement date (t_{+1}) observed as -8.99%. Likewise, according to the 5-day CAAR values, the highest value was observed as 0.00% on the fifth day before the announcement date (t_{-5}), and the lowest value was observed as -9.60% on the first day after the announcement date (t_{+1}). The highest values in both two CAAR windows occurred before the announcement date and before the lowest values. The negative effect of equity issue announcements can be mentioned in this case.

Table 2. Analysis Results of Companies that Announced the Rights Issue in BIST-30

T	AAR	T-statistic AAR	CAAR (10 days)	CAAR (5 days)
10	-0.38%	-0.71	-8.71%	
9	-0.48%	-0.89	-8.33%	
8	-0.03%	-0.05	-7.85%	
7	-0.45%	-0.83	-7.82%	
6	0.58%	1.08	-7.38%	
5	-0.08%	-0.14	-7.96%	-8.57%
4	0.59%	1.10	-7.88%	-8.49%
3	-0.58%	-1.08	-8.48%	-9.08%
2	1.10%	2.05*	-7.89%	-8.50%
1	-3.70%	-6.89**	-8.99%	-9.60%
0	-3.39%	-6.31**	-5.29%	-5.90%
-1	-0.81%	-1.51	-1.91%	-2.52%
-2	-0.32%	-0.60	-1.10%	-1.70%
-3	-0.61%	-1.14	-0.77%	-1.38%
-4	-0.77%	-1.43	-0.16%	-0.77%
-5	0.00%	0.00	0.61%	0.00%
-6	-0.31%	-0.57	0.61%	
-7	-0.09%	-0.17	0.92%	
-8	0.84%	1.56	1.01%	
-9	0.12%	0.22	0.17%	
-10	0.05%	0.10	0.05%	

Note: * Statistical significance at the level of 0.05. **** Statistical significance at the level of 0.01

In Table 3, the CAAR values of the companies made right issue announcements listed in BIST-30 examined for chosen periods. These values are divided into periods as before the announcement date, after the announcement date, and before and after the announcement date. Accordingly, statistically significant CAAR values observed in four event periods. These are the period (-5,-1) before the announcement date, the period (+1,+10), the period (-5,+5) and the period (-10,+10). In short, it can be said that the rights issue announcements made in BIST-30 provide statistically significant negative CAAR.

Table 3. Rights Issue CAAR Values of BIST-30 in the Event Windows

	Event Period	CAAR	T-statistics CAAR
Before Announcement Date	(-10,-1)	-1.91%	-1.12
	(-5,-1)	-2.52%	-2.10*
After Announcement Date	(+1,+5)	-0.58%	-0.49
	(+1,+10)	-3.42%	-2.01*
Before and After Announcement Date	(-5,+5)	-8.57%	-4.81**
	(-10,+10)	-8.71%	-3.54**

Note: * Statistical significance at the level of 0.05. **** Statistical significance at the level of 0.01

In Table 4., AAR, t-statistics of abnormal returns, 10-day CAAR, and 5-day CAAR are calculated for bonus issues announced in BIST-30. There are two remarkable points in this analysis's AAR calculated. These are statistically significant at -0.65% on the ninth day before the equity issue announcement (t_{-9}) and statistically significant at -0.60% on the fourth day after the announcement date (t_{+4}). Accordingly, it has been observed that the equity issue announcement has a statistically significant negative effect on returns. In the 10-day CAAR, the highest value of the event window is 0.52% on the tenth day before the announcement date (t_{-10})

and the lowest value is -2.35 on the fifth day after the announcement date (t_{+5}). In addition, the positive value (t_{-10}) on the tenth day before the announcement date decreased to the negative value after this date and continued as the negative value. According to the 5-day CAAR, the highest value of the event window is seen as 0.02% on the first day after the announcement date (t_{+1}). Also, the lowest value is on the fifth day after the announcement date (t_{+5}) observed as -1.58%. For the 10-day CAAR analysis, the negative progress starts from the ninth day (t_{-9}) before the event date and continues until the tenth day (t_{+10}) after the announcement is seen. For the 5-day CAAR analysis, the value was 0.00% on the fifth day before the announcement date (t_{-5}), but continued to be negative until the announcement date (t) and changed to a positive value (t_{+1}) on the first day after the announcement date. This value is the highest in the event window. After reaching the highest value, it decreased to negative values again and reached the lowest value of the event window on the fifth day (t_{+5}) after the announcement date.

Table 4. Analysis Results of Companies that Announced the Bonus Issue in BIST-30

T	AAR	T-statistic AAR	CAAR (10 days)	CAAR (5 days)
10	-0.36%	-1.22	-2.25%	
9	-0.35%	-1.21	-1.89%	
8	0.11%	0.38	-1.54%	
7	0.54%	1.84	-1.65%	
6	0.16%	0.56	-2.19%	
5	-0.41%	-1.42	-2.35%	-1.58%
4	-0.60%	-2.07*	-1.94%	-1.16%
3	-0.46%	-1.59	-1.33%	-0.56%
2	-0.11%	-0.38	-0.87%	-0.09%
1	0.35%	1.21	-0.76%	0.02%
0	0.07%	0.25	-1.11%	-0.33%
-1	-0.02%	-0.08	-1.18%	-0.41%
-2	0.08%	0.29	-1.16%	-0.38%
-3	-0.43%	-1.48	-1.24%	-0.47%
-4	-0.03%	-0.12	-0.81%	-0.04%
-5	0.00%	-0.01	-0.78%	0.00%
-6	-0.33%	-1.13	-0.77%	
-7	-0.01%	-0.02	-0.45%	
-8	-0.31%	-1.05	-0.44%	
-9	-0.65%	-2.24*	-0.13%	
-10	0.52%	1.78	0.52%	

Note: * Statistical significance at the level of 0.05

In Table 5, the CAAR values of the companies made bonus issue announcements listed in BIST-30 examined for chosen periods. According to the analysis performed, no statistically significant value was found in the CAAR values. On the other hand, the highest CAAR value, which is not statistically significant, was found in the (-5, -1) period.

Table 5. Bonus Issue CAAR Values of BIST-30 in the Event Windows

	Event Period	CAAR	T-statistics CAAR
Before Announcement Date	(-10,-1)	-1.18%	-1.28
	(-5,-1)	-0.41%	-0.63
After Announcement Date	(+1,+5)	-1.24%	-1.91
	(+1,+10)	-1.14%	-1.24
Before and After Announcement Date	(-5,+5)	-1.58%	-1.63
	(-10,+10)	-2.25%	-1.68

In Table 6., AAR, t-statistics of abnormal returns, 10-day CAAR, and 5-day CAAR are calculated for rights issues that were announced in BIST-50. There are three remarkable points in the AAR calculated in this analysis. These are statistically significant, at -1.07% value at one day before announcement day (t_{-1}), -2.04% value at the announcement date (t) and a statistically significant -4.59% value on the first day after the announcement date (t_{+1}). Also, a statistically significant value was found on the second day after the announcement date (t_{+2}) at a statistically significant value of 1.16%. Also, there are two statistically significant point at the sixth days after announcement day (t_{+6}) and ninth day after the announcement day (t_{+9}) with the values of 0.97% and -1.06%. Accordingly, it was observed that the equity issue announcement had a statistically significant negative effect on the returns on the announcement date and the first day after it. However, this effect was reversed on the second day. The positive return value was not permanent and continued to change from negative and positive values. However, these values were statistically insignificant. From this situation, it can be deduced that abnormal returns may be obtained on the announcement date and the next two days. In the 10-day CAAR, the highest value of the event window is 0.61% on the seventh day before the announcement date (t_{-7}), and the lowest value is -10.27% on the tenth day after the announcement date (t_{+10}). In addition, the value that was positive until the sixth day before the announcement date (t_{-6}) turned negative after this date and continued negatively. According to the 5-day CAAR, the highest value of the event window is seen as -0.77% on the fifth day before the announcement date (t_{-5}). Additionally, the lowest value is on the fifth day after the announcement date (t_{+5}) observed as -9.90%.

Table 6. Analysis Results of Companies that Announced the Rights Issue in BIST-50

T	AAR	T-statistic AAR	CAAR (10 days)	CAAR (5 days)
10	-0.42%	-0.86	-10.27%	
9	-1.06%	-2.17*	-9.85%	
8	0.25%	0.50	-8.79%	
7	-0.50%	-1.02	-9.04%	
6	0.97%	1.98*	-8.54%	
5	-0.41%	-0.85	-9.51%	-9.90%
4	-0.07%	-0.15	-9.09%	-9.49%
3	-0.71%	-1.47	-9.02%	-9.41%
2	1.16%	2.38*	-8.30%	-8.70%
1	-4.59%	-9.42**	-9.46%	-9.86%
0	-2.04%	-4.19**	-4.87%	-5.27%
-1	-1.07%	-2.19*	-2.83%	-3.22%
-2	0.04%	0.09	-1.76%	-2.16%
-3	-0.57%	-1.17	-1.81%	-2.20%
-4	-0.87%	-1.78	-1.24%	-1.64%
-5	-0.77%	-1.58	-0.37%	-0.77%
-6	-0.21%	-0.44	0.40%	
-7	0.01%	0.01	0.61%	
-8	0.35%	0.72	0.60%	
-9	0.06%	0.12	0.25%	
-10	0.19%	0.40	0.19%	

Note: * Statistical significance at the level of 0.05. **** Statistical significance at the level of 0.01.

In Table 7, the CAAR values of the companies made right issue announcements listed in BIST-50 examined for chosen periods. Accordingly, there are statistically significant CAAR

values in almost all periods. Except for the (-10,-1) period, other periods provide statistically significant negative CAAR. In addition, the period with the highest statistical significance value is the period (-5,+5). On the other hand, the highest CAAR value is in the period (-10,+10).

Table 7. Rights Issue CAAR Values of BIST-50 in the Event Windows

	Event Period	CAAR	T-statistics
Before Announcement Date	(-10,-1)	-2.83%	-1.84
	(-5,-1)	-3.22%	-2.96**
After Announcement Date	(+1,+5)	-4.63%	-4.25**
	(+1,+10)	-5.40%	-3.50**
Before and After Announcement Date	(-5,+5)	-9.90%	-6.13**
	(-10,+10)	-10.27%	-4.60**

**Note: ****Statistical significance at the level of 0.01

Table 8. Analysis Results of Companies that Announced the Bonus Issue in BIST-50

T	AAR	T-statistic AAR	CAAR (10 days)	CAAR (5 days)
10	-0.62%	-2.52*	-0.43%	
9	-0.36%	-1.45	0.18%	
8	0.23%	0.93	0.54%	
7	0.09%	0.36	0.31%	
6	0.13%	0.55	0.22%	
5	0.02%	0.08	0.09%	1.05%
4	-0.23%	-0.93	0.07%	1.03%
3	0.03%	0.11	0.30%	1.26%
2	0.29%	1.16	0.27%	1.23%
1	0.67%	2.73**	-0.02%	0.95%
0	0.39%	1.60	-0.69%	0.28%
-1	0.08%	0.34	-1.08%	-0.12%
-2	0.15%	0.60	-1.16%	-0.20%
-3	-0.37%	-1.49	-1.31%	-0.35%
-4	-0.02%	-0.08	-0.95%	0.02%
-5	0.04%	0.15	-0.93%	0.04%
-6	-0.40%	-1.64	-0.96%	
-7	-0.28%	-1.15	-0.56%	
-8	-0.22%	-0.88	-0.28%	
-9	-0.26%	-1.05	-0.06%	
-10	0.20%	0.81	0.20%	

Note: * Statistical significance at the level of 0.05. ****** Statistical significance at the level of 0.01.

In Table 8., AAR, t-statistics of abnormal returns, 10-day CAAR, and 5-day CAAR are calculated for bonus issues announced in BIST-50. There are two statistically significant points in the AAR calculated in this analysis. These are a statistically significant 0.67% value on the first day after the equity issue announcement date (t_{+1}) and a statistically significant -0.62% value on the tenth day after the announcement date (t_{+10}). In this case, it can be deduced that high-value abnormal returns cannot be obtained in equity issue announcements. In 10-day CAAR, the highest value of the event window is 0.54% on the eighth day after the announcement date (t_{+8}), and the lowest value is -1.31% on the third day before the announcement date (t_{-3}). In addition, the positive value on the tenth day (t_{-10}) before the announcement date turned negative after this date and continued to be negative on the second day after the announcement date (t_{+2}). Also, values continued from the second day after the announcement day (t_{+2}) to the ninth day after the

announcement date (t_{+9}) positively, but on the tenth day after the announcement (t_{+10}), they became negative again. According to the 5-day CAAR, the highest value of the event window is 1.26% on the third day after the announcement date (t_{+3}), while the lowest value is on the third day before the announcement date (t_{-3}), observed as -0.35%. In addition, within this event window, the first (t_{-1}), second (t_{-2}), and third (t_{-3}) days before the announcement date have negative values.

In Table 9, the CAAR values of the companies included in BIST-50 and made bonus issue announcements are examined for chosen periods. Statistically significant CAAR values could not be reached in the analysis. On the other hand, the highest CAAR value is 1.05% in the (-5,+5) period.

Table 9. Bonus Issue CAAR Values of BIST-50 in the Event Windows

	Event Period	CAAR	T-statistics CAAR
Before Announcement Date	(-10,-1)	-1.08%	-1.39
	(-5,-1)	-0.12%	-0.21
After Announcement Date	(+1,+5)	0.78%	1.41
	(+1,+10)	0.25%	0.33
Before and After Announcement Date	(-5,+5)	1.05%	1.29
	(-10,+10)	-0.43%	-0.39

In the analysis of companies that announced a rights issue in the BIST-30, it is possible to obtain statistically significant negative abnormal returns on the announcement date (t) and the first day after the announcement date (t_{+1}). In the analysis of companies that announced a bonus issue within the BIST-30, it is possible to obtain statistically significant negative abnormal returns four days after the announcement date (t_{+4}) and on the ninth day before the announcement date (t_{-9}). It is possible to obtain statistically significant negative abnormal returns on the announcement date (t) and the first day after the announcement date (t_{+1}) in the analysis of companies that announced the rights issue in the BIST-50. In addition, it was found that it is possible to obtain statistically significant positive abnormal returns on the second day after the announcement date (t_{+2}). Also, it is possible to obtain statistically significant positive abnormal returns on the first day after the announcement date (t_{+1}) in the analysis of companies that announced a bonus issue in the BIST-50. However, it has been found that it is possible to obtain statistically significant negative abnormal returns on the tenth day after the announcement date (t_{+10}).

In the CAAR analysis, in which the event window of the companies that announced a rights issue in the BIST-30 (-10, +10) was examined, it was found that there was no significant change until the fourth day before the announcement date (t_{-4}). However, after this date, the CAARs were found to decrease rapidly and remained negative until the end of the event window. Results similar to the (-10, +10) analysis were found in the event window (-5, +5). In the CAAR analysis, in which the event window of the companies that announced a bonus issue in BIST-30 was examined, it decreased to negative values on the ninth day before the announcement date (t_{-9}) and there was no significant change. However, a rapid decrease was observed on the fourth day after the announcement date (t_{+4}). Similar results were found in the (-5, +5) event window (-10, +10) analysis, but five days before the announcement date (t_{-5}) the yield decreased to 0.00%. In

the CAAR analysis, in which the event window (-10, +10) of the companies that announced a rights issue in the BIST-50 was examined, the return values that were positive until the fifth day before the announcement date (t_{-5}) decreased to negative values at this date. This decrease accelerated one day before the announcement date (t_{-1}). This decline continued until the last day of the event window. Similar results were found in the (-5, +5) event window (-10, +10) analysis, but the difference did not decrease from positive to negative. Negative values continued to shrink. In the CAAR analysis, which examines the event window of the companies (-10, +10) that announced the bonus issue in the BIST-50, the returns decreased to negative values on the ninth day before the announcement date (t_{-9}). It continued to be negative until the second day after the announcement date (t_{+2}) and increased to positive values again on this date. However, on the tenth day after the announcement date (t_{+10}), it decreased to negative values again. In the event window (-5, +5), the returns decreased to negative values on the third day before the announcement date (t_{-3}), increased to positive values at the announcement date (t), and remained positive until the end of the event window.

6. Conclusion

In this study, the stock returns of the companies that announced the rights issues and bonus issues on the dates when the relevant companies were included in the BIST-30 and BIST-50 were examined. 35 companies that announced capital increases between 2010-2020 while they were included in the BIST-30 and BIST-50 indices were examined. 10 rights issue announcements made by 8 companies and 40 bonus issue announcements made by 14 companies were examined for BIST-30. In addition, 17 rights issue announcements made by 14 companies and 64 bonus issue announcements made by 23 companies were examined for BIST-50. The event study method was used as the analysis method and two different event windows were created; as (-10, +10) and (-5, +5) event windows.

As the result of the analysis, it has been seen that rights issue announcements provide statistically significant negative AAR and CAAR in both BIST-30 and BIST-50 indices. However, while statistically significant negative AAR values were observed in bonus issue announcements made in BIST-30, no statistically significant CAAR value was found. Finally, statistically significant both positive and negative AAR values were observed in the bonus issue announcements made in BIST-50. However, as in BIST-30, statistically significant CAAR values were not found for bonus issue announcements in BIST-50.

The rights issue result of the study is similar to the results of Kendirli and Elmali (2016), Kucuksille and Mizrahi (2015a), Mahmood et al. (2014), Ozer and Yucel (2001), Ginglinger and Gajewski (2002) and Cotterell (2011) in the literature. The results of the bonus issue of the study are similar to the results of Erol and Aytekin (2018), Kucuksille and Mizrahi (2015b), Ozer and Yucel (2001), and Sakarya et al. (2018). On the other hand, Baskaya and Kaderli (2017), and Raja and Sudhahar (2010) found in their studies that there is a positive effect on the bonus issue.

Finally, the negative findings are in parallel with the Information Hypothesis, Price Pressure Hypothesis and Leverage Hypothesis which are used to explain the effects of new equity offerings on stock prices. In addition, it was found that BIST was not an efficient market in semi-strong form in the analyzed period. The knowledge that announcements of new equity issues will have a negative impact on stock returns will be useful for firm managers during and after the

financing decision process. For example, according to the findings, a firm that is focused on increasing firm value may be better advised to obtain capital from other sources, if possible. Or, investors may benefit from following new equity issue announcements and making portfolio revisions accordingly, taking this negative effect into account.

Declaration of Research and Publication Ethics
This study which does not require ethics committee approval and/or legal/specific permission complies with the research and publication ethics.

Researcher's Contribution Rate Statement
The authors declare that they have contributed equally to the article.

Declaration of Researcher's Conflict of Interest
There are no potential conflicts of interest in this study.

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