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MARKET REACTION OF TARGET FIRMS VALUE IN M&As: EMPRICAL EVIDENCE FROM TURKEY

Öznur İlhan

113668015

Supervisor: Assistant Professor Ebru REIS

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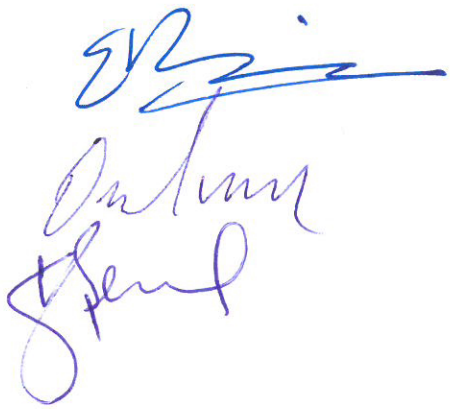
ŞİRKET BİRLEŞME ve DEVRALMALARDA HEDEF FİRMA DEGERİNİN PİYASA REAKSİYONU

Öznur Ilhan
113668015

Tez Danışmanı:	Yrd. Doç. Dr. Ebru Reis
Jüri Üyesi:	Doç. Dr. Cenktan Özyıldırım
Jüri Üyesi:	Prof. Dr. Kerem Şenel



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ABSTRACT

The aim of this research is to examine the impact of announced merger and acquisitions (M&As), occurred between 1992-2014 in Turkey, on stock prices of target company.

To examine the impact of M&As on stock prices, I used the event study method and obtained cumulative abnormal return (CAR) for several pre-defined event windows covering the temporal range between 126 days before and 126 days after the announcement day.

The study covers 124 Public firms in Turkey, although significant CARs were observed around 10 days before and 10 days after the announcement day, the main effect occurred in various windows which resides in a period as early as 126 days before announcement day.

Outcome of my research are in accord with the findings of previous researches. The unexpected change on the stock price of target firms, which occurred before announcement date, supports the hypothesis about the involvement of insider trading.

Very few researches about price effect on the stock states that M&A transactions have commonly been practiced since the beginning of negotiations between Turkey and the European Union in 2005. Following the common approach, I, too, used event study method but examined a different dataset.

To create comparable result with the previous ones and to analyze effect of M&As on pre-and post-periods, periods of event windows were expanded to both 126 days before and after the announcement day.

Effect of M&As on the stock prices of target firms were observed in several long event windows lay in the pre-event period. I used univariate analysis to determine the reason of CAR.

Current investigation on the M&A transaction in Turkey pointed out that, since inflated stock prices occurred before the announcement date, the market is not efficient. Similarly, previous research claim that there could be information leakages thus insider trading could be reason of this result.

ÖZET

Bu çalışmada 1992-2014 yılları arasında Türkiye'de duyurusu yapılan şirket birleşmelerinin, hedef şirketin hisse senedi fiyatları üzerindeki etkilerinin incelenmesi hedeflenmiştir. Şirket birleşme ve satınlamalarının hisse senedi fiyatları üzerindeki etkisi olay etüdü yöntemi kullanılarak incelenmiş, ilan tarihinin 126 gün önce ve 126 gün sonrasını kapsamak üzere çeşitli olay pencereleri için kümülatif anormal getiriler hesaplanmıştır.124 adet halka açık hedef firmanın bilgilerinin incelendiği çalışmada, her ne kadar ilan tarihinden sonraki ilk 10 günlük dönemde hisse senedi fiyatlarında anlamlı kümülatif anormal getiriler gözlense de asıl etkinin ilan edilmeden önceki 126 günlük dönemde çeşitli aralıklarla ortaya çıktığı gözlemlenmiştir.

Araştırma sonucu elde edilen bu bulgular Arslan ve Şimşir'in 2015 yılında yapmış oldukları araştırma sonuçları ile uyumludur Duyuru tarihinde önce hedef firmanın hisse senedi fiyatları üzerinde ortaya çıkan bu etki içerden bilgilendirme olması ihtimali konusunda varsayımları destekler nitelikte olabilir.

Özellikle 2005 te Avrupa Birliği'ne katılım müzakerelerinin başlaması ile birlikte ülkemizde yaygınlaşan şirket birleşme ve satınalmalarının, taraf olan şirketler üzerindeki etkileri gösteren sınırlı sayıda çalışma mevcuttur. Bu çalışmada önceki çalışmalarda kullanılan yöntemlere benzer olarak olay etüdü yöntemi kullanılmakla birlikte 1992-2014 yıllarını kapsayan farklı bir dataset kullanılmıştır.

Hem Arslan ve Şimşir'in (2015) tarafından yapılmış çalışma ile karşılaştırılabilir olması hem de ilan tarihi öncesinde ve sonrasında etkinin incelenmesi amacı ile olay penceresi ilan tarihinin 126 gün öncesine ve 126 gün sonrasına kadar genişletilmiştir. Satınalma ve birleşmelerin hedef firmanın hisse senedi fiyatları üzerindeki etkisi duyuru tarihinden önceki uzun aralıklı pencerelerde gözlemlenmiştir. Çok değişkenli analizler ile olağandışı getirilerin etkenleri saptanmaya çalışılmıştır.

Elde edilen bulgular Türkiye'de gerçekleşen satınalma ve birleşme işlemlerinde içeriden bilgi sızıntıları olduğu ve etkin olmayan bir hisse senedi piyasası varsayımlarını destekler görünmektedir.

INTRODUCTION

As a result of globalization, in increasingly competitive environment, the companies have to develop strategies both to grow and to continue to their business activities. M&A is one of the strategies that firms usually prefer to grow up. In a highly competitive environment; necessity of entering to new market, the pursuit of new technologies and other factors are leading companies to grow up through mergers (Gort, 1969; Mitchell and Mulherin, 1996; Harford, 2005; Powell and Yawson, 2005).

The company mergers, which were first seen in 1800s in the historical continuum, have appeared more frequently since the 1980s and today, the numbers have reached the thousands. In Turkey; M&As occurred in 1987 for the first time, despite an increase in the 90s, mainly following the negotiation with the European Union in 2005, number has increased significantly.

Previous M&A researchers focused on the announcement date, tried to determine whether CAR obtained from stock prices during before and after periods of announcements.

Previous studies reveal that in the USA, the mean CARs vary between 25–30 percent (Eckbo 2009). On the other hand, in Europe, the target CARs shown range of 10 to 20 percent (Campa et.al 2004). These results are distinctly different in emerging economies, for instance, BRICS countries (Brazil, Russia, India, China, and South Africa) hardly exceed 2 percent for target CAR over the [–1,1] window event (Sehgal et. al. 2012). Wong et. al. (2009) focused on far east countries like Hong Kong, China, Taiwan, Singapore, and South Korea and their striking findings for CAR is only –0.24 percent over the [–1,0] period. But southeastern sisters (Indonesia,

Malaysia, and Thailand) perform well and over the [–1,1] window event the CAR is around 2.69 percent (Song et al. 2011)

Various studies conducted in the USA and Europe in terms of the effects on the stock price for the M&A cases, the stock prices of the target companies in the USA showed that CAR was obtained between 16% -23% within 3 days of the announcement (Andrade et al, 2001; Mulherin et.al, 2000; Bargeron et al, 2008; Kuipers et al, 2009). This rate was between 5% and 13% in European stock market

Although there is limited research on the M&A activities of Turkish companies, the findings are similar to those of European and US studies. The study on 12 merging conducted in Turkey revealed that the CAR for first three days of the target company was 7.21% (Mandacı, 2004), another study focused on five of the bank mergers between 2004-2005, found that CAR for target firm 4.70% on the announcement day (Çukur and Eryiğit 2006).

In this study, the effect of the M&As activities on the stock price of the target company is investigated by using the event study method that whether the CAR occurred around the announcement date and tried to determine factors effects such return.

Following the methodology given by Reis (2015), I focused on the 124 M&A transactions which took place between 1992-2014 in Turkey. The data gathered from Thompson Reuter's Securities Data Corporation (SDC) database with following requirements:

- The Target firm is a publicly traded company on the Turkish Stock Exchange (TSE, also known as Borsa Istanbul); in the period of 1992-2014; 639 M&As transactions were listed, but 266 transactions were excluded from this analysis since target firms were not publicly traded in TSE.

- The stock price information of the target firms gathered from Bloomberg. 164 M&As transactions were excluded since stock price list were either not enough or unavailable.

- The transaction status should be completed within the sample period;

- Form of transaction is defined as a "merger," "acquisition of majority interest" "acquisition of Partial Interest" in SDC database.

- Estimation window consists of 400 days starting from pre-126 days of the announcement day, because of availability of limited data, I relaxed the condition and I accepted the transaction even if the stock of the company was traded at least 226 days before the announcement date.

- If Target firms subject to another M&A transaction within 526 days before announcement date the only previous transaction is included. As a result, 85 M&As transactions were excluded since their transactions are overlapping.

Information for market capitalization of target firms, are collected from the Bloomberg. The market capitalizations value of target firms taken from 127^{th} days prior to the announcement date which is the starting point of estimation period.

In this paper, I will outline the Literature Review on M&As effect then, afterward, I carry on with the methodology explaining the event study analysis and its inter steps. A Null and Alternate Hypothesis which needs to be tested is defined. I will briefly outline the Market Model methodology of forecasting the stock returns, I will evaluate the sample data collected for the analysis, Finally, I will show findings and conclusions in the last part.

LITERATURE REVIEW

1.1. Literature Review of Target CARs

Motivation of M&A is subject to several researches. Berkovitch et.al (1993) claims that three major motivations lead the takeovers; synergy, agency, and hubris. The most emphasized one is synergy. According to the neoclassical theory[1] acquirers are seeking an opportunity to create value for the firm and, in the meantime, manager of target firm accepts the acquisitions only if the result is in favor of the shareholders. In other word; expectations of synergy are based on the positive wealth effect of acquisitions for both acquirers and targets. The agency theory presented by Jensen and Meckling (1976), assume that managers of acquirer firm; instead of trying to maximize shareholder wealth, they give priority to their own interest. We can say that if the acquisition made with the motivation of agency; it creates positive effect on targets but negative gains for acquirers. The last raised motivation is the hubris hypothesis of corporate takeovers as introduced by Roll (1986); it suggests that managers of acquirer firms are optimistic when they asses M&A opportunities due to over self-confidence and this might be resulting with over payment than market value of targets. In the light of these information; all of three theories create expectation in positive abnormal return for target firms regarding to M&A transactions (Akben,2015)

[1] The neoclassical theory based on individual choice: assuming that individuals make rational decisions so as to maximize whatever goal they have; all of this is done in whatever environment may exist

In the researches related to M&A, it is generally examined whether there is abnormal return on stock price before and after announcement date by using event study method.

The research findings that aimed measure for short term M&As impacts generally indicate that shareholder of target companies have a positive abnormal return whereas the acquirers gain negative abnormal return. (Bouwman et.al. 2003)

Considering developed and emerging markets in which Turkey takes place, previous researchers show that, shareholder gain positive CARs after M&A. The subject will be presented in more details in following sections.

1.1.1. Developed Markets

The research focusing on the wealth effect of M&A transaction occurred in US and UK showed that target firms receive statistically significant return (Sudarsanam et.al 2003).

In a study involving large domestic M&A transactions (Kıymaz et.al 2008) in the US in 1989-2003, they found that acquirers have a significant negative return, whereas target firms' shareholder has significantly positive abnormal return both after and before announcement day.

In a study by Campa and Hernando (2004) of 262 M&A deals selected from only EU countries in 1998-2000, they found that there were positive and significant cumulative abnormal returns to targets ranging from nearly 4% over the period [-1, 19] to around 9% over the period [-30, +30]. Around 60% of the target firms display positive cumulative abnormal returns.

Jensen and Ruback (1983) research result show that M&A create statistically significant increases on target stock prices**.**

Swenson (1993) analyzed the US market in period of 1974-1990 and found that target firms gained abnormal return around announcement date but the impact was not observed backward of the event day.

Recently Atm et.al. (2016) studied 50 target firms and 50 acquirer firms from US market. They found that price run-up during the pre-announcement period both for acquirers and target hence they claim that the results indicate information leakages.

1.1.2. Emerging Markets

One of the studies done by Arık and Kutan (2015), In the period of 1997-2013, 1648 M&A transactions, from 20 emerging markets which include Turkey as well (Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Malaysia, Mexico, Morocco, Peru) examined and on target firms' average daily abnormal returns are found to be significantly positive for various event windows. The cumulative average return is for 3 days' event window found 5.17 %.

Also, covering the 1477 M&A transactions between 2000-2005 in Asian markets (Malaysia, the Philippines, China, Singapore, India, Indonesia, South Korea, Taiwan, Thailand, Hong Kong) found that positive cumulative abnormal returns for [0,1], [-1, +1] and [-2, +2] event windows. The impact of return explained with possibilities of information leakage about M&A deals. (Jianyu Ma et.al 2009)

In the study conducted on 227 Indian firms in 1998-2007 period by Mallikarjunappa and Nayak (2013), stated that M&A transaction creates positive abnormal return for shareholder of target firm. Cumulative average abnormal return about 27-37 % for 61 days' event window around the day of announcement.

In period of 1988-2002 Chari et.al (2004) examine M&A between developed country acquirer and an emerging market target and found that CAR for target firms

were 6.9%. The sample they used covers nine emerging countries (Brazil, Chile, Indonesia, Malaysia, Mexico, Philippines, South Korea, and Thailand).

Contrary to both European and US markets, there are very few researches on the effect of M&As on target stock price in Turkey. According to research of Genç (2013), the results of 214 M&A transactions occurred in Turkey between 2001 and 2011, she found that the target company had started to get abnormal returns 10 days before the announcement date. On the other hand, the results showed that the acquirers' abnormal returns were not as high as the target ones.

Yılmaz (2010) studied M&A effect of stock prices and he observed that statistically significant positive excess returns were found in the target stocks for 51 M&As transactions which were traded in ISE during period of 2002-2008.

One of the earlier analysis Mandaci (2004) explored the effects of the M&A announcement for companies from the Istanbul Stock Exchange (ISE) for five years starting from 1998. For the event window [-1; +1] her findings for CAR is 7.21%, in addition, for [-2; +2] 11.39% and for [-5; +5] 9.7%. These figures are statistically sound for asymmetric periods., [-2; 0] and [-5; 0] the CARs are around 6%.

In one of the studies aimed at investigating the long-term effect of M&A in Turkey (Yörük et.al 2006), 8 transactions in the food sector were examined and it was concluded that the shareholders would not benefit six months before and after the transaction, investors may have return only if they invest on 5 days prior the M&As transaction.

In another survey of 142 M&A deals conducted between 1991 and 2006 in Turkey, it was determined that the target firms had average CAR of 8.56 percent for three-month window around of merger announcements date (Hekimoğlu and Tanyeri, 2011)

One of the recent researches (Akben, 2015) investigates wealth effects of M&A on the shareholder of the target firm during period of 2000 to 2014 using 67 merger transactions in Turkey, stated that 21 days around the announcement date average CARs for shareholder varies between 5.25 percent to 8.53 percent.

In the study published by Arslan and Şimsir (2015), while investigating impact of M&As on stock prices they also conduct the research testing whether the date given by SDC is accurate or not. They used two different dates as announcement date; one of them obtained from SDC (it is called DA- Date Announcement) and another date is obtained from news related with M&A different publication sources (it is called ODA – Original Date Announcement) They compared whether CAR is different or not base on two different announcement dates. CAR 3.3% for the event window, which consist of 5 days before and 5 days after period, based on (the date is given in the SDC) DA, whereas CAR for the same event window 6.7% in the calculation based on the ODA. As a result of this research, compared to other markets Arslan and Şimsir (2015) claim that; since M&A transaction known before formal announcement date, only small return impact appears on stock prices.

1.2. Determinants of Target Abnormal Returns

1.2.1. Cross-Border vs. Domestic Acquisitions

As part of growth strategies of firm; since they faced with; necessity to enter new markets, benefiting from tax advantages, the pursuit of cheap labor force drives the companies cross-border M&A and it showed more frequently in last decade. Cross-border M&A provides the firm with the opportunity to enter new markets, and more importantly, it prevents firm from time-consuming tasks such as differences in culture, liability of foreignness, different business practices and institutional constraints. Especially the increase in recent years can be explained in part by

financial liberalization policies, government policies and regional agreements (Coeurdacier et. al 2009)

Cross-border transactions in emerging economies become common. Recently, a report stated that the first step of acquisition came from developed countries, that is 80 percent of the 2,585 acquisitions between developed and emerging countries in 2011 (Arık et. al 2015)

In a study conducted in 49 countries covering 1990-1999, it was found that if the investor protection in the country is high and the number of cross-border M&A has decreased in addition the volume of M&A activity is significantly larger in countries with better accounting policies and strong shareholder rights. (Rossi et.al 2004)

In a study conducted by Danbolt and Maciever (2012) with a sample of 251 UK and 146 non-UK firms in the period of 1980-2008, the target firms earn significant abnormal return 20.9% on around announcement day.

In another research conducted by Danbolt (2004) on the same subject, UK target company shareholders gain significant return both in domestic and cross-border acquisitions made in the UK in 1986-1991, moreover target abnormal returns higher for cross-border merger comparing with domestic mergers for the month before event day.

Contrary to the above findings, according to the report published by the KPMG in The Economist in 1999; only 17% cross-border M&A results in favor of shareholders. Aw and Chatterjee (2004) claim that comparing European cross- border and domestic UK targets; CAR for acquiring firms were significantly more negative for European cross-border merger than domestic UK merger.

During the 2012-2016 period, the research done by Lin and Scott (2016) shows that the results of M&A between Chinese and UK firms; Chinese acquirers

gain significantly positive abnormal return the following day after announcement day the following day after announcement day.

1.2.2. Industry Relatedness

The biggest motivation behind M&As is synergy which expected to emerge after transaction. Especially merger within the same industry provides the firms a lot of benefits like expanded market share, increased efficiency, better working conditions, and tax advantages. Also, industry relatedness creates cost reduction since achieving economies of scale more easily.

There are abundant researches available regarding industry relatedness. According to Danbolt (2004), horizontal,[2] vertical, or conglomerate type M&A create high level operating synergies and at the same time impact on abnormal gain of shareholders.

Sudarsanam et al. (1996) analyze of 429 deals made by UK companies during 1980-1990 revealed that there are no significant gains between the shareholders in related and unrelated acquisitions.

Similarly, one of the studies done by Arık and Kutan (2015), their investigation result shows that if the acquirer and the target firm are in the same industry, it doesn't create any impact on wealth effect of target firms.

Selçuk and Kıymaz (2015) conducted a survey on 98 acquisitions in Turkey from 2000 to 2011 and found that diversifying acquisitions created a statistically significant abnormal return around the announcement date for acquiring firms.

[2] Horizontal Merger is the combination of two companies that compete in the same or in a similar industry. Vertical Merger is the combination of two or more companies involved in different stages of the supply chain of a common product or service. Conglomerate type is a merger between firms that are involved in totally unrelated business activities.

In the work of Ekholm et al (2011), the investigation touched on a different point for industry relativity, and the claims that target firm managers do not want to be acquired by a different industry firm for profit maximization.

1.2.3. Market Value of Target Firm

The research regarding Market capitalization of firm; includes 12023 US acquisitions in the period 1980-2001, it was found that small firms had a significant return compared to large firms, the return percentages 2.24% higher than large firms. (Moeller et al 2004)

1.2.4. Before and After 2001 M&As

During the 1999-2001 period, there was an economic crisis in our country (Kibritçioğlu, 2001). To be able to survive and overcome the crisis with minimal damage, M&As as seen a solution for many companies.

When we make, a comparison based on Acquirer profile before and after 2000; before 2000 Cross-border acquisitions are seen more frequently in terms of both number and transaction value whereas in 1999-2001 period this finding is reversed domestic acquires observed more than cross-border acquirers (Akdoğdu, 2011)

1.2.5. Manufacturing and Retails vs Others

Kıymaz et.al (2008) took into consideration short-term performance, industry effects, and motives: evidence from large M&As involved companies from US over the period 1989-2003 and showed that abnormal returns after M&A differs for acquirers depends on sectors but target firms have significant abnormal return in all industry groups.

The research regarding acquisitions between Chinese and UK firms; for the period 2012-2016 (Lin et.al 2016) shows that the Chinese acquiring firms gain significant positive abnormal returns the day after announcement day. When the determinants of the CARs are examined, it is determined that the sector is one of the factors. According to research positive CARs are obtained in sectors such as real estate, oil & gas, consumer, industrial, technology, and utilities moreover negative abnormal return is obtained in financial sectors.

1.2.6. Public Acquirers vs Private Acquirers

During 2003-2007 US, private percentages of acquirers increased from 6% to 30% in M&A transactions, and transaction value increased from $30 billion to $450 billion in 2007. (Officer et al 2008, Boone and Mulherin, 2008).

In a previous study, it was observed that private firms had lower abnormal return than public firms (Bargeron et al. 2008).

According to research consist of 12023 US acquisitions which occurred between 1980-2001 period (Moeller et. al 2004) shows that if target firm status is public; acquirer gains the abnormal return negative 1.02 percent on the other hand if the target firm is private then acquirer gains better returns. Acquisition of private firms provides better returns than acquisition of public firms.

In a study by Netter, and Stegemoller (2002) in 1990, similar to the above findings, it was determined that acquisitions with private firms resulted in higher abnormal returns than transactions with public companies for target shareholder.

Research in Sweden shows that shareholders of target firm which bought by private ones got a lower return on their stock (Ekholm, 2011)

Arık and Kutan (2015), they are also research the subject on 20 emerging market places which include Turkey as well, claim that if the acquirer is private it creates negative CAR on target stock prices and it is statically significant at 1% level.

1.2.7. Regulated vs Unregulated Industries

The list of regulated sectors as follows[3]: The Energy Market Regulation Authority, the Banking Regulation and Supervision Authority, the Information and Communication Technologies Authority, Tobacco, Tobacco Products and Alcoholic Beverages Market Regulation Board, Sugar Authority, the Radio and Television Supreme Council, the Public Oversight, Accounting and Auditing Standards Authority, Privatization Administration, Public Procurement Authority.

Campa and Hernando (2004) found that if mergers occurred in regulated industries average cumulative abnormal returns for targets and acquirers are smaller whereas for mergers in unregulated industries, cumulative abnormal returns for targets are positive and always significant. Conversely one of the studies done by Arık and Kutan (2015), examination result show that if the target firm from heavily regulated industry, it creates negative wealth effect on target firms.

1.2.8. Banking Sectors vs Others

Frame et.al (1998) research on bank holding company acquisitions announced between 1990 and 1993 and found that bank holding company obtained negative return whereas targets gain positive abnormal returns around announcement day.

Cybo-Ottone and Murgia, (2000) investigated M&A and wealth of shareholder in European banking system and they examined 54 transactions occurred between 1988 and 1997, study showed that gains for acquiring bank shareholder is

[3] Sectors which is subject to regulation obtained following internet pages.

http://www.invest.gov.tr/en-US/investmentguide/investorsguide/Pages/BusinessEnvironment.aspx

1.4 per cent, whereas target shareholder gains more than 12 per cent after the event date.

The study investigated effects of US and European bank mergers during 1990–1999, found that there is significant difference between developed countries, both target and acquirer return positive in Europe but in US only target bank have gain (Scholtens et.al 2004)

METHODOLOGY

2.1. Introduction

In this paper; as used in many previous academic studies (Brown and Warner, 1985) I have selected the event study method to determine whether there is abnormal return on target firm stock prices before and after announcement day of M&A transactions.

In order to determine impact of M&A beside Event study method, three different types of research methods are being used. First one of them is trying to determine impact of M&A via by analyzing Financial statements of firms. In the second method, detailed analyses are made based on case studies, and the sample covered in this method contains only one or a few samples. In the last method, the effects of the M&A transaction are investigated by the questionnaire and one to one interviews with companies that are parts of M&A (Bruner 2002).

The first study on the abnormal return was of Fama et al. (1969). They have investigated the returns followed by stock splits then they introduced event study as a method of computing abnormal return for stock price.

As a definition, the difference between actual return of stock and expected return of stock gives abnormal return. To obtain the abnormal return; expected return is required. In this study, expected return is provided by the Market Model which is frequently employed in previous studies. (Moeller et.al. 2005; Delong,2001). In order to compare my result with those of Arslan and Şimsir (2015), 126 days before and after announcement date define as event window period. The estimation period started from the 526^{th} day before the announcement day and ended on the 126^{th} day before the announcement day.

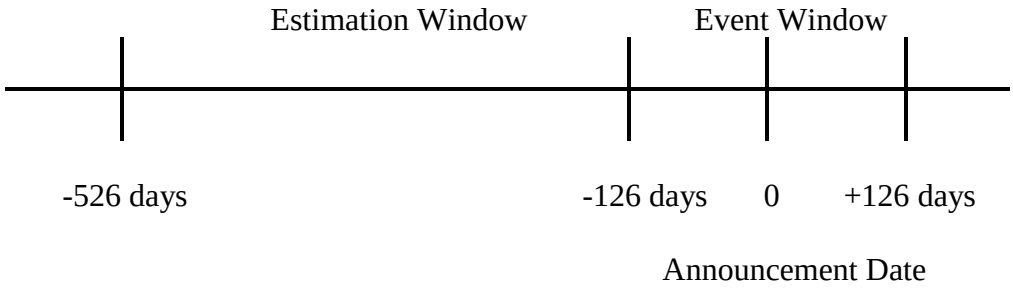

Figure 1. Estimation Period and Event Study Period

As mentioned above, this study uses market model to estimate the expected returns for each stock and it is calculated with:

$$E(R_{it}) = \alpha_i + \beta_{i\,x}\, R_{mt} \qquad (1)$$

Where $E(R_{it})$ denotes expected return on security 'i' in time 't, R_{mt} denotes return on BIST Index in period 't', α_i and β_i parameters of market model which are predicted via ordinary least squares regression (OLSR). In my study, I estimated these parameters from the regression period between -526 to -127 days. Assuming that returns 126 days before the announcement date are not effected and this period accepted as normal period for price fluctuations. After obtaining αi and βi via OLSR, expected return computed for each stock along the event windows using Equation 1.

As the last step; for each stock; the difference between actual return and expected return is calculated to obtain abnormal return and then the sum of these returns is taken for each event window to get cumulative abnormal return (CARit)

$$AR_{it} = R_{it} - E(R_{it}) \qquad (2)$$

$$CAR_i = \sum_{t=1}^{T} AR_{it.} \qquad (3)$$

Finally, significant deviations of abnormal returns and cumulative abnormal returns from zero is tested with T-Test.

Hypothesis are follows:

H0: CAR = 0

H1: CAR ≠ 0

Where H0 hypothesis which states that "Merger and Acquisitions announcement does not effect stock price" and the alternate H1 hypothesis which states that, "M&A announcement effect stock price" will be tested.

If the calculated CAR significantly deviates from zero, i.e. M&As have impact on stock price, we may conclude the market is not efficient and investor might gain abnormal return using news related with this event. On the other hand, if the CAR equal to zero, i.e. M&As don't have any impact on stock price and it reveal that the market is efficient and investor can't obtain any abnormal return using news related with event.

2.1.1. Event Windows

In previous studies, there is no definitive length of event window and it extends up to 41 days prior to the event date. For the purpose of this study, in order to measure M&As effect on stock prices, the period between 126 days before and after the announcement date was selected as main event window. This selection is in accord with previous researches (e.g. Arslan and Şimsir 2015, Schwert 1996). In addition to that 25 different sub event windows were generated covering 253 days around the announcement date. According to T test results only 12 event windows are statically significant at the level of %0.1, %0.5, and %1. I analyzed the deal characteristics of the data using these 12 event windows. In the following section I will outline the progress and give the highlights.

2.1.2. Sample

Following the methodology given by Reis (2015), I focused on the 124 M&A transactions which took place between 1992-2014 in Turkey. The data gathered from Thompson Reuter's Securities Data Corporation (SDC) database with following requirements:

- The Target firm is a publicly traded company on the Turkish Stock Exchange (TSE, also known as Borsa Istanbul); in the period of 1992-2014; 639 M&As transactions were listed, but 266 transactions were excluded from this analysis since target firms were not publicly traded in TSE.

- The stock price information of the target firms gathered from Bloomberg. 164 M&As transactions were excluded since stock price list were either not enough or unavailable.

- The transaction status should be completed within the sample period;

- Form of transaction is defined as a "merger," "acquisition of majority interest" "acquisition of Partial Interest" in SDC database.

- Estimation window consists of 400 days starting from pre-126 days of the announcement day, because of availability of limited data, I relaxed the condition and I accepted the transaction even if the stock of the company was traded at least 226 days before the announcement date.

- If Target firms subject to another M&A transaction within 526 days before announcement date the only previous transaction is included. As a result, 85 M&As transactions were excluded since their transactions are overlapping.

Information for market capitalization of target firms, are collected from the Bloomberg. The market capitalizations value of target firms taken from 127^{th} days prior to the announcement date which is the starting point of estimation period.

2.1.3 Sample Description

Table 1 Panel A shows deal characteristic of the sample with number and percentage. The deal-specific characteristics and the industries of firms are obtained from Thomson Reuter's database. The sample data set consist of 124 completed M&A transaction which were announced in the period of 1992-2014 in Turkey. In the sample, there are 1(1%) Merger, 79(64%) acquisition of partial interests and 44(35%) acquisition of majority interests. There are 34 (%27) public acquirer firms, 61 (%49) private acquirer firms, 28(%23) subsidiary acquirer firms and 1 (1%) in one of the transaction, the acquirer is the government. The sample consists of 79 (%64) domestic acquirers and 45 (%36) cross-border acquirers. Region of the Cross- border acquirer firms are as follows; 33 (%73) acquirer firms from Europe Region, 7 (%16) from Asia and 5 (%11) from America. Based on the industry code in the SDC database; 44 out of 124 (35%) transactions occurred between the same business and remaining 80 (%65) M&As occurred between unrelated business. Half of the sample experienced with M&A transaction and remaining part take a role as acquirer in M&A process for the first time. 41 out of 62 experienced firms had deal with the same target, in other words, at the beginning of the M&A process; acquirer percentage (toehold) was different than zero. For remaining 83(67%) transaction; target and acquirer come together for the first time. When we classify the target companies in the sample as Financial and Non-Financial, the distribution is as follows; 94 (76%) Non-Financial target firms and 30 (24%) Financial target firms.

Table 1 Panel B presents Sectoral distribution of target and acquirer firms. Banks and Other Financials groups have a big share among the target firms. There are 16 (13%) banks and insurance and 7 (6%) other financials that generally consist of investment companies. Other active industries are "Food and Beverage" with 16 (13%) observations and "Oil and Gas" with 9 (7%) observations. For the acquirers, Sectoral

distribution as follows: Share of Other financials 40 (32%) observations the biggest since it includes investor groups, investment companies, and personal investors, it is followed by "banks and insurance" with 11 (9 %) transaction, "Asset Management" with 10 (8%) transactions.

Panel C of Table 1 Shows M&A transactions distribution over the years. The number of transactions in the 1990s only 13, but after the 2001 crisis merger and acquisitions volume increased and significant change started in 2005 because of EU negotiation had been started.

RESULTS

In this study, I attempted to measure the effect of M&A announcement on the stock prices of the target companies., At the beginning several event windows determined which cover 253 days around the announcement day and CAR was calculated for 25 different event windows. It was tested whether they were significant or not by statistical analysis. Trim mean[4] (3%) and winsorising mean (3%) were calculated to determine the effect of the outliers on the results of the analysis, since there was little difference between results both were excluded from this Lastly, in order to define the determinants of the effect on the stocks, the study was conducted on the 12 event windows which are significant at the level of 0.01%, 0.05%, and 0.10%; I compared 15 different variations and analyzed the results. Although meaningful result is only for the [+1, +10] window at level of 0.05%. It is observed that the actual activity on the stock prices has occurred before the announcement date. This finding in the study is consistent with previous studies in this area and supports the assumptions that there were information leakages to the market prior the announcement date. (e.g. Hekimoğlu and Tanyeri 2011)

3.1. Univariate Analysis

3.1.1. Univariate Analysis of Cumulative Abnormal Returns

Table 2 shows test results (CAR) which belong to 124 sample with 12 different event windows. For the longest event window in event period [-126, +126] the mean and median CAR is 12.48% and 5.53% respectively and statistically significant at 10% level. The CAR means of shortest event windows [+1, 10] and [-10, -1] -2,86% and

[4] Winsorising data means to replace the extreme values of a data set with a certain percentile value from each end, while Trimming ignoring extreme values, some fraction in each tail.

6,27% and both statistically significant at 5% level. Abnormal return mean on announcement date is 0.98% statistically significant at 10% level.

Wilcoxon signed rank test presents the significance of medians and the medians are statistically significant for all event windows except on announcement day, [-126, -90] and [-126, +126] event windows.

Overall the findings of this study are consistent with previous researches (Kıymaz et.al 2008, Campa and Hernando 2004, Arık and Kutan 2015, Mallikarjunappa and Nayak 2013, Mandaci 2004, Akben, 2015, Arslan and Şimsir 2015). The target stock price is affected by M&A transaction especially before announcement date which possibly indicate for information leakages, i.e., insider trading in the market.

3.1.2. Domestic Acquisitions vs. Cross-border Acquisitions

As a result of globalizations and deregulations, the number of the cross-border acquisitions around world has increased and more than %80 of all foreign direct investment were made through cross border acquisitions. Impact of cross- border acquisitions on shareholder wealth is investigated in previous research; but the results are mixed (Danbolt et. al 2012).

Table 3 shows the comparison of CARs means of domestic and cross-border acquisitions. There is not any statistically significant difference between cross-border and domestic M&As. Max mean 19.35% for domestic acquisition and 14.40% for cross-border. The result is not consistent with a study conducted by Danbolt and Maciever (2012) their work with a sample of 251 UK and 146 non-UK firms in the period of 1980-2008 showed that, the target firms earn significant abnormal return 20.9% on around announcement day in cross border transaction. But the results are consistent with those of Campa and Hernando (2004). Their investigation shows that there is no significant difference between cross-border and domestic acquisitions

3.1.3. Cross-border Acquirer's Region

The sample covers 33 Europe, 7 Asian and 5 American acquirers. Table 4 shows as a continuation of the previous comparison I try to find out whether region of acquirer create any difference on target return. In order to capture comparable sample size, region of cross-border acquirer divided by two part as European and others. As seen on table 4 no significant results were obtained in two groups.

To my knowledge there is no comprehensive research but in study of Shareholder wealth effects of mergers and acquisitions, Flug (2009) found that CAR value for UK targets are 17.96 % but parallel number for targets from Continental Europe is 13.23% and claimed that since the shareholder protection level higher in UK compared to other European countries, it creates positive effect in favor of target firms.

3.1.4. Public Acquirer vs. Private Acquirer

Table 5 shows comparison between public and private firms. Although no significant result has been observed in any event window, CAR of public companies is higher than those of private firms. In a study by Netter, and Stegemoller (2002) it was determined in 1990, that acquisitions with private firms resulted in higher abnormal returns than transactions with public companies. Arık and Kutan (2015) found that if the acquirer is private it creates negative CAR on target stock prices and it is statically significant at 1% level. In study of comparison the private acquirers and public acquirers effect on the target gains show that if the acquirer is public firm, return of target shareholders statically significant (Bargeron et.al 2008).

3.1.5. Financial Target Firms vs Non-Financial Target Firms

Table 6 show comparison between financial and non-financial target firms. There are statistically significant differences for 6 event windows which are [-20, -1],

[-30, -1], [-126, -1], [-126, -5] at 0,10% level; [-60, -1] significant at 0,05% level and [-90, -1] significant at 0,01% level. The result consists with Hudgins et.al (1996) they found that if U.S. financial firms that are acquired by foreign firms; return of target firm shareholder is significantly positive around the announcement day. The research investigated European bank mergers and US bank mergers effect on shareholder; found that both targets and acquirer have positive CAR in Europe, whereas in the US only target banks has gain (Scholtens, et.al 2004)

3.1.6. Acquisition of Major Interests vs Acquisition of Partial Interests

Table 7 presents comparison between Major Acquisition[5] and Partial Acquisition. The mean of partial interest is 5.87% and the mean of major acquisitions is 6.55% for [-10, +-1] event window and statistically significant at the 5% level. Other event windows are not significant for any level.

3.1.7. Final Acquisition Percentages for Acquirer

Another comparison was made regardless of toehold; the sample divided into two groups based on final acquired percentages. For ¾ of the 120 transactions; final acquired percentages between %1 and %49.9 and remaining part ¼ of the 120-transaction final acquired percentages between %50 and %100 determined. As seen on table 8; the comparison result of these two groups as follows: for event window [-10, -1] significant at level 0.01% according to Mann-Whitney test. Additionally, for larger pre-announcement event windows such as [-126, -1], [-126, -5], [-126, +5], [-126, +126], average CARs for the group of final acquired percentage under 49,99% are insignificantly higher than the group of acquired percentage over 50%. Conversely along the one month prior the announcement day such as [-10, -1], [-20, -1], [-30, -1] average CAR higher for the group of final acquired percentage over 50%.

[5] Information about Major and Partial determination gathered from Thompson Reuter's Securities Data Corporation (SDC) database.

3.1.8. Related Business vs. Unrelated Business

Table 9 presents comparison of related and unrelated business average CARs. The mean of related business is -0,06% and the mean of is -4,39 % for [+1, +10] event window and statistically significant at the 10% level. Other event windows are not significant for any level. These results are inconsistent with this findings of Sudarsanam et.al (1996). They reported that there were no significant gains between the shareholders in related and unrelated acquisitions. Similar to previous research mentioned above, if the acquirer and the target firm are in the same industry, it doesn't create any impact on wealth effect on target firms (e.g. Arık and Kutan 2015).

3.1.9. Regulated vs Unregulated Industries

The list of regulated sectors[6] as follows: The Energy Market Regulation Authority, The Banking Regulation and Supervision Authority, The Information and Communication Technologies Authority, Tobacco, Tobacco Products and Alcoholic Beverages Market Regulation Board, Sugar Authority, The Radio and Television Supreme Council, The Public Oversight, Accounting and Auditing Standards Authority, Privatization Administration, Public Procurement Authority. 124 firms are categorized as regulated and unregulated according to above list and there is no statistically significant difference between two groups on table 10. Contrary to this study findings, research by Arık and Kutan (2015) show that if the target firm from heavily regulated industry, it creates negative wealth effect on target firms. The result of research on EU countries show that average CARs for target and acquirer are smaller if mergers occurred in regulated industries whereas for mergers in unregulated industries, CAR for targets are positive and always significant (Campa et.al 2004)

[6] Sectors which is subject to regulation obtained following internet pages.

http://www.invest.gov.tr/en-US/investmentguide/investorsguide/Pages/BusinessEnvironment.aspx

3.1.10. Manufacturing and Retails vs Others

In addition to sector based comparison; the sample categorized to four main sectors; Power, Finance, Technology, and Retails Manufacturing, to achieve comparable sample size; comparison was done as Retails& Manufacturing vs Others. As seen on table 11 there is no statistically significant difference between two groups. Moreover, for Production & Manufacturing CAR mostly higher than other sectors. One of the research target firms categorized based on their industrial classification code (SIC) and found that in all industry groups, target firms gain abnormal return on the two-day event window at the 0,01 level (Kıymaz et.al 2008)

3.1.11. Acquirer Industry Bank vs Other

The comparison is based on sectors, the sample divided two groups whether acquirers sector is a bank or not. Table 12 shows the result and there is no statistically significant difference between two groups. Moreover, for wider event windows which cover pre-event period [-90, -1], [-126, -1], [-126, -5], [-126, +5] average CARs of bank acquirers group higher than others. This findings in the study are not consistent with previous studies in this area. Frame et.al (1998) conducted a research on bank holding company acquisitions announced between 1990 and 1993 and found that bank holding company obtained negative return whereas targets gain positive abnormal returns around announcement day. Additionally, one of the study of 54 mergers in European banking industry occurred in period of 1988-1997 result show that abnormal return for acquiring bank shareholder 1.4 per cent but target shareholder abnormal return average more than 12 per cent after the announcement date. (Cybo-Ottone et.al 2000)

3.1.12. Small Firms vs Big Firms

Firm size might take place while investigating the determinants of target abnormal return. The sample divided two groups based on Market capitalization value. Companies that are below the median value named with the small firms and firms that are above the median value named with big firms. Comparison result between small firms and big firms remarkable. As seen on table 13 except first two windows the average CARs for the documented event windows are statistically (mostly at the 1% level) significant. This result consists with the previous studies. Regarding Market capitalization of firm, the research done on 12023 US acquisitions in the period 1980-2001, it was found that Small firms had a significant return compared to large firms, which was 2.24% higher than that of large firms for small firms (Moeller et al 2004).

Assuming reaction of market might be ineffectual to event that related with small firms or information leakage might be lower in big firms since corporate governance level in big firms, these factors can be evaluated explanations of my study result.

3.1.13. First 20 vs Last 20 Firms in terms of Market Capital

Considering previous comparison result; the first 20 and the last 20 firms selected from the sample, after a kind of polarizing the data, comparison was repeated. As table 14 presents there are statistically significant differences for [-126, -90] and [-126, +5] event windows at the 5% level and at the 10% level for [-126, -1] event window. Average CAR values for the first 20 firms are higher than the last 20 firms in all windows. This result supports the assumptions mentioned previously.

3.1.14. Experienced Acquirer vs. Inexperienced Acquirer

As stated in sample description part, half of the sample experienced with M&A transaction and remaining part take a role as an acquirer in M&A process for the first time. Table 15 shows comparison between experienced acquirer and

inexperienced acquirer. Only for [-126, -90] and [-126, -1] event windows the difference statistically significant at 1% level and 10% level. The average target CARs by experienced and inexperienced acquirers are -1.63% and 11.94%, 8.36% and 20.82% in these event windows respectively. Previously research show that experienced acquirers show higher performance than inexperienced acquirer (Conn et.al 2004) but this result is not consisting with my study result especially in wider event window target firm average CAR higher that acquired by inexperienced acquirer. Study of Bruton et al (1994) support my finding since they claimed that acquisitions experience had no effect on target firms.

3.1.15. Acquirer Experience Status

41 out of 62 experienced firms had deal with the same target, in other words, beginning of the M&A process; acquirer percentage (toehold) was different than zero. For remaining 83(67%) transaction; target and acquirer come together for the first time. Table 16 presents result of comparison between experienced and inexperienced acquirers; [+1, +10] and [-126, -90] event windows statistically significant at the 5% level the mean of experienced firm is 0.72%, -0.92% and the mean of first deal firm is -4.62%,8.16% respectively. [126, -1] event window also significant with 0,10% level.

3.1.16. After 2001 vs. Before 2001 M&As

M&A is seen a way both to survive in highly competitive markets as well as to overcome the effect of the local and global scale financial crisis. During the 1999-2001 period, there was an economic crisis in our country (Kibritçioğlu, 2001) and according to Akdoğdu (2011); number of domestic acquisitions increased in period of 1999-2001. In the light of above information, we can assume that firms in Turkey evaluated M&A as an option to overcome post crisis effect. The result of comparison supports the assumption. In order to determine whether 2001 crisis is affecting CARs of target firms or not, the sample divided two groups as M&As before and after 2001.

Table 17 shows that there are statistically significant differences for [-20, -1] event window at the 5% level and at the 10% level for [-126, -1], [-126, -5], [-126, +5], [-126, -90] event windows. The highest and lowest CAR means are evaluated as 40.71% and the lowest -7.12% for [-126, -1] and [+1, +10] event windows respectively.

CONCLUSION

This study investigates the stock price reaction of target firms to the announcement of M&A in Turkey for twelve years from January 1, 1992 to December 31, 2014 using sample of completed transactions.

The CARs are calculated for a 253-day window period using market model. To obtain expected return; parameters of the market model (α_i and β_i) are calculated through an estimation period of 400 days (-526 to -126 days) prior announcement date of M&A. I created several event windows which cover both pre-and post the announcement date.

Results of this study show that M&As in Turkey create abnormal return for target companies and it is consistent with previous result. The highest average cumulative abnormal return comes from the largest event window of pre-event period [-126, -1] and is 14.59%. This result might be indicating that there are some information leakages or rumors before the official announcement date.

The study shows that abnormal return is significantly higher for non-financial target firms than those of financial ones. If the acquisition type is a majority interest then it creates wealth increase 10 days before pre-event period. Also, if the acquirer is inexperienced, it creates positive abnormal return on target almost four months before M&A announcement date. Similarly, before 2001 M&As transaction created positive abnormal return during the four months prior of event date. The most remarkable result comes from comparison of small and big firms based on market capitalization. There are huge differences between average CARs of small and big firms, and higher CARs observed for small firms in all event windows.

Nevertheless, there is no evidence found that acquirer industry type, acquirer public status or cross-border acquisitions create effect on Target firms stock price after M&A transactions.

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TABLES

Table 1: Sample Description

Panel A: Deal Characteristics

Table 1 Panel A presents deal characteristic of sample. Panel B presents data on the distribution of industry categories for both target and acquirers. Panel C presents the distribution of M&As by year.

Form of Transaction	N	Acquisition of Majority Interests	Acquisition of Partial Interests	Merger
	124	44	79	1
		35%	64%	1%

Acquirer Status	N	Public	Private	Subsidiary	Government
	124	34	61	28	1
		27%	49%	23%	1%

Acquirer Nation	N	Domestic	Cross-Border
	124	79	45
		64%	36%

Cross Border Region	N	Europe	Asia	America
	45	33	7	5
		73%	16%	11%

Same/ Unrelated Business	N	Same Business	Unrelated Business
	124	44	80
		35%	65%

Experienced vs Unexperienced	N	Inexperienced	Experienced
	124	62	62
		50%	50%

Acquisition experience with the same firm	N	Experienced	First Deal
	124	41	83
		33%	67%

Target Financial vs. Non-Financial	N	Financial Targets	Non-Financial Target
	124	30	94
		24%	76%

Panel B: Distribution of industries in the sample

	Target		Acquirer	
Industry	No. of Obs	% of sample	No. of Obs	% of sample
Agriculture & Livestock	1	1%	0	0%
Alternative Financial Investments	1	1%	4	3%
Asset Management	0	0%	10	8%
Automobiles & Components	5	4%	3	2%
Banks/Insurance	16	13%	11	9%
Building/Construction	0	0%	3	2%
Chemicals	6	5%	2	2%
Computers & Electronics Retailing	1	1%	1	1%
Computers & Peripherals	1	1%	0	0%
Construction Materials	6	5%	4	3%
Containers & Packaging	2	2%	3	2%
Credit Institutions	1	1%	2	2%
Discount and Department Store Retailing	4	3%	0	0%
Electronics	2	2%	1	1%
Food & Beverage Retailing	4	3%	0	0%
Food and Beverage	16	13%	8	6%
Home Furnishing	1	1%	1	1%
Household & Personal Products	2	2%	0	0%
Investment Banking & Brokerage Services	0	0%	3	2%
Industrial Machinery & Equipment	3	2%	2	2%
Metals & Mining	5	4%	3	2%
Oil & Gas	9	7%	5	4%
Other Financials	7	6%	40	32%
Paper & Forest Products	5	4%	1	1%
Pharmaceuticals	1	1%	1	1%
Power	3	2%	2	2%
Publishing	4	3%	2	2%
REITs	5	4%	0	0%
Recreation & Leisure	0	0%	1	1%
Semiconductor	1	1%	0	0%
Software	1	1%	2	2%
Telecommunications Equipment	0	0%	1	1%
Textiles & Apparel	6	5%	6	5%
Transportation & Infrastructure	2	2%	1	1%
Wireless	3	2%	0	0%
National government	0	0%	1	1%
TOTAL	**124**	**100%**	**124**	**100%**

Panel C: Distribution of M&As by Year

Year	Number of Transaction	% of Total Sample
1992	1	1%
1993	4	3%
1994	1	1%
1995	1	1%
1996	0	0%
1997	1	1%
1998	4	3%
1999	1	1%
2000	3	2%
2001	8	6%
2002	3	2%
2003	3	2%
2004	0	0%
2005	8	6%
2006	7	6%
2007	8	6%
2008	7	6%
2009	8	6%
2010	7	6%
2011	7	6%
2012	17	14%
2013	20	16%
2014	5	4%
TOTAL	**124**	**100%**

Table 2: Target Cumulative Abnormal Returns (CARs)

Panel A: Full Sample with all event windows

This table presents the abnormal returns (ARs and CARs) to targets surrounding M&A announcements. The null hypothesis is that the average abnormal returns are not statistically different from zero. The sample period is from 1992 to 2014 and has 124 observations. Estimation period covers 400 days starting from pre-126 days of the announcement day and event period consist of 253 days. Trim mean (3%) and winsorising mean (3%) were calculated to determine the effect of the outliers.

Event Window	N	Mean CAR	Median CAR	Trimmean	Winmean	Max CAR	Min CAR	t-test	Wilcoxon signed-rank
CAR (+1,+126)	124	-3.09%	-1.89%	-4.12%	-4.37%	242.31%	-123.58%	-0.79	0.91
CAR (+90,+126)	124	-1.37%	-1.91%	-1.04%	-1.03%	37.59%	-81.65%	-0.90	1.11
CAR (+1,+90)	124	-1.51%	-2.23%	-2.43%	-2.36%	236.58%	-127.06%	-0.41	0.81
CAR (+60,+90)	124	-0.14%	-0.83%	-0.27%	-0.24%	115.77%	-99.86%	-0.07	0.46
CAR (+1,+60)	124	-1.67%	-3.83%	-1.61%	-1.71%	121.90%	-132.06%	-0.59	1.04
CAR (+30,+60)	124	0.32%	0.42%	0.20%	0.09%	97.13%	-82.46%	0.17	0.02
CAR (+1,+30)	124	-2.06%	-2.85%	-2.16%	-2.54%	77.20%	-69.10%	-1.17	1.48
CAR (+1,+20)	124	-1.95%	-1.03%	-1.73%	-1.59%	37.00%	-67.69%	-1.37	1.07
CAR (+1,+10)	124	-2.86%	-1.65%	-2.66%	-2.72%	33.04%	-62.68%	-2.39**	2.11**
AR (0)	124	0.98%	0.16%	0.92%	0.94%	22.62%	-13.28%	1.94*	1.44
CAR (-10,-1)	124	6.27%	1.26%	4.22%	4.40%	290.59%	-27.58%	2.37**	2.51**
CAR (-20,-1)	124	7.95%	1.53%	5.98%	6.18%	290.71%	-34.36%	2.87***	2.92***
CAR (-30,-1)	124	8.14%	1.77%	6.24%	6.45%	289.87%	-41.81%	2.71***	2.33**
CAR (-60,-30)	124	0.25%	-0.61%	0.08%	0.28%	83.33%	-61.64%	0.15	0.58
CAR (-60,-1)	124	8.26%	1.86%	6.62%	6.97%	284.51%	-67.22%	2.38**	1.72*
CAR (-90,-60)	124	0.68%	0.27%	0.04%	0.10%	139.07%	-59.52%	0.38	0.01
CAR (-90,-1)	124	9.29%	3.11%	8.14%	7.94%	278.91%	-119.11%	2.32**	1.88*
CAR (-126,-90)	124	5.16%	-1.29%	4.60%	4.57%	119.31%	-41.18%	2.21**	0.76
CAR (-126,-1)	124	14.59%	7.80%	13.82%	15.20%	264.53%	-141.24%	3.11***	2.69***
CAR (-1,+1)	124	1.45%	0.63%	1.27%	1.35%	64.65%	-39.69%	1.43	1.62
CAR (-5,+5)	124	3.74%	0.22%	2.06%	1.97%	290.19%	-77.73%	1.31	0.69
CAR (-10,+10)	124	4.39%	0.39%	2.88%	2.36%	288.00%	-94.11%	1.44	1.2
CAR (-126,-5)	124	12.90%	2.89%	12.10%	11.99%	262.66%	-139.46%	2.71***	1.94*
CAR (-126,+5)	124	13.79%	5.21%	12.98%	13.17%	271.80%	-145.89%	2.72***	2.36**
CAR (-126,+126)	124	12.48%	5.53%	11.94%	11.27%	294.52%	-203.23%	1.86*	1.57

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively

Table 2: Target Cumulative Abnormal Returns (CARs) Contd.

Panel B: Full Sample (Only Significant Event Windows)

This table presents the abnormal returns (ARs and CARs) to targets surrounding M&A announcements. The null hypothesis is that the average abnormal returns are not statistically different from zero. The sample period is from 1992 to 2014 and has 124 observations .Estimation period covers 400 days starting from pre-126 days of the announcement day and event period consist of 253 days.

Event Window	N	Mean CAR	Median CAR	Max CAR	Min CAR	t-test / t- value	Wilcoxon signed-rank
CAR (+1,+10)	124	-2.86%	-1.65%	33.04%	-62.68%	-2.39**	2.11**
AR (0)	124	0.98%	0.16%	22.62%	-13.28%	1.94*	1.44
CAR (-10,-1)	124	6.27%	1.26%	290.59%	-27.58%	2.37**	2.51**
CAR (-20,-1)	124	7.95%	1.53%	290.71%	-34.36%	2.87***	2.92***
CAR (-30,-1)	124	8.14%	1.77%	289.87%	-41.81%	2.71***	2.33**
CAR (-60,-1)	124	8.26%	1.86%	284.51%	-67.22%	2.38**	1.72*
CAR (-90,-1)	124	9.29%	3.11%	278.91%	-119.11%	2.32**	1.88*
CAR (-126,-90)	124	5.16%	-1.29%	119.31%	-41.18%	2.21**	0.76
CAR (-126,-1)	124	14.59%	7.80%	264.53%	-141.24%	3.11***	2.69***
CAR (-126,-5)	124	12.90%	2.89%	262.66%	-139.46%	2.71***	1.94*
CAR (-126,+5)	124	13.79%	5.21%	271.80%	-145.89%	2.72***	2.36**
CAR (-126,+126)	124	12.48%	5.53%	294.52%	-203.23%	1.86*	1.57

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively

Table 3: Domestic vs. Cross-Border

This table presents comparison between 79 Domestic and 45 Cross-Border acquisition.
The T-statistics appear in 6th column and Mann-Whitney test in 7th column.

	Domestic N:79		Cross-border N:45		Difference Tests	
Event Window	**Mean CAR**	**Median CAR**	**Mean CAR**	**Median CAR**	**t-test / t- value**	**Mann-Whitney test/ z-value**
CAR (+1,+10)	-2.62%	-1.64%	-3.28%	-2.09%	0.25	0.30
AR (0)	0.93%	0.13%	1.06%	0.18%	-0.11	0.13
CAR (-10,-1)	7.00%	1.91%	4.99%	0.12%	0.43	0.14
CAR (-20,-1)	9.24%	3.70%	5.70%	0.20%	0.71	0.64
CAR (-30,-1)	10.35%	1.77%	4.26%	1.89%	1.13	0.73
CAR (-60,-1)	8.62%	3.16%	7.62%	1.51%	0.15	0.35
CAR (-90,-1)	10.29%	3.67%	7.54%	-2.83%	0.36	0.21
CAR (-126,-90)	4.31%	-1.33%	6.65%	0.52%	-0.49	0.72
CAR (-126,-1)	14.70%	5.93%	14.40%	7.95%	0.03	0.36
CAR (-126,-5)	12.96%	1.96%	12.79%	5.96%	0.02	0.95
CAR (-126,+5)	14.34%	5.12%	12.82%	5.30%	0.15	0.04
CAR (-126,+126)	19.35%	12.05%	0.41%	-0.80%	1.44	1.64

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively

Table 4: Cross-Border Acquirer Region

This table presents regional comparison results. 33 Acquirer from Europe and 12 Acquirer from other regions (7 Asian and 5 American). The t-statistics appear in 6th column and Mann-Whitney test in 7th column.

	Europe N:33		Other Region N:12		Difference Tests	
Event Window	**Mean CAR**	**Median CAR**	**Mean CAR**	**Median CAR**	**t-test t- value**	**Mann-Whitney test/ z-value**
CAR (+1,+10)	-2.03%	-1.35%	-6.71%	-3.30%	0.80	0.47
AR (0)	0.69%	0.18%	2.08%	0.32%	-0.65	0.42
CAR (-10,-1)	5.30%	2.05%	4.13%	-0.40%	0.22	0.68
CAR (-20,-1)	6.06%	1.38%	4.70%	-0.87%	0.23	0.19
CAR (-30,-1)	2.62%	0.34%	8.79%	3.18%	-0.95	1.09
CAR (-60,-1)	7.16%	-0.07%	8.90%	5.28%	-0.23	1.09
CAR (-90,-1)	5.74%	-4.67%	12.51%	11.79%	-0.70	1.09
CAR (-126,-90)	8.71%	0.76%	1.00%	-4.41%	1.24	0.83
CAR (-126,-1)	14.55%	7.65%	13.99%	9.12%	0.05	0.40
CAR (-126,-5)	13.35%	-0.91%	11.26%	7.98%	0.19	0.24
CAR (-126,+5)	13.24%	4.21%	11.67%	8.21%	0.12	0.17
CAR (-126,+126)	1.35%	-2.64%	-2.19%	1.14%	0.20	0.30

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively

Table 5: Public vs. Private Acquirers

This table presents comparison of Acquisation by 90 Private Acquirer and 34 Public Acquirer . The t-statistics appear in 6th column and Mann-Whitney test in 7th column.

	Private N:90		Public N:34		Difference Tests	
Event Window	**Mean CAR**	**Median CAR**	**Mean CAR**	**Median CAR**	**t-test t- value**	**Mann-Whitney test/ z-value**
CAR (+1,+10)	-3.10%	-1.53%	-2.21%	-2.43%	-0.24	0.48
AR (0)	0.70%	0.09%	1.72%	0.49%	-0.71	0.43
CAR (-10,-1)	2.42%	0.81%	16.46%	3.39%	-1.56	0.63
CAR (-20,-1)	4.14%	1.42%	18.05%	4.12%	-1.50	0.78
CAR (-30,-1)	4.77%	1.83%	17.05%	-0.24%	-1.26	0.49
CAR (-60,-1)	4.41%	1.53%	18.45%	2.98%	-1.31	0.70
CAR (-90,-1)	7.17%	3.11%	14.91%	1.32%	-0.65	0.19
CAR (-126,-90)	4.84%	-2.00%	6.01%	1.32%	-0.20	0.64
CAR (-126,-1)	12.04%	7.80%	21.35%	7.80%	-0.75	0.39
CAR (-126,-5)	10.77%	2.29%	18.53%	4.46%	-0.60	0.13
CAR (-126,+5)	10.98%	6.43%	21.21%	2.60%	-0.78	0.28
CAR (-126,+126)	10.52%	5.53%	17.65%	5.30%	-0.35	0.14

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively

Table 6: Financial Target Firms vs Non-Financial Target Firms

This table presents comparison 94 Non Financial Target and 30 Financial Target transaction. The t-statistics appear in 6th column and Mann-Whitney test in 7th column.

	Financial Targets N:30		Non-Financial Target N:94		Difference Tests	
Event Window	**Mean CAR**	**Median CAR**	**Mean CAR**	**Median CAR**	**t-test / t- value**	**Mann-Whitney test/ z-value**
CAR (+1,+10)	-1.78%	-1.14%	-3.20%	-2.12%	-0.45	1.21
AR (0)	0.17%	-0.25%	1.24%	0.37%	0.94	1.23
CAR (-10,-1)	2.24%	3.37%	7.56%	1.12%	1.40	0.15
CAR (-20,-1)	2.44%	-0.87%	9.71%	3.09%	1.73*	0.98
CAR (-30,-1)	2.11%	-0.28%	10.06%	2.57%	1.69*	0.86
CAR (-60,-1)	-1.91%	2.33%	11.51%	1.86%	2.27**	0.91
CAR (-90,-1)	-4.04%	-3.39%	13.55%	5.60%	2.75***	1.81*
CAR (-126,-90)	7.59%	-0.47%	4.38%	-1.39%	-0.55	0.66
CAR (-126,-1)	3.54%	6.26%	18.12%	8.01%	1.72*	1.22
CAR (-126,-5)	0.91%	-1.61%	16.73%	3.41%	1.80*	1.34
CAR (-126,+5)	3.30%	2.88%	17.13%	5.60%	1.42	1.16
CAR (-126,+126)	7.27%	-10.29%	14.14%	10.38%	0.45	0.72

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively

Table 7: Acquisition of Major Interests vs Acquisition of Partial Interests

This table presents comparison between 79 Acquisition of Partial Interests and 44 Acquisition of Majority Interests transactions . The t-statistics appear in 6th column and Mann-Whitney test in 7th column.

	Acquisition of Partial Interests N:79		**Acquisition of Majority Interests N:44**		**Difference Tests**	
Event Window	**Mean CAR**	**Median CAR**	**Mean CAR**	**Median CAR**	**t-test t- value**	**Mann-Whitney test/ z-value**
CAR (+1,+10)	-2.64%	-1.42%	-3.64%	-3.59%	0.37	0.75
AR (0)	0.64%	0.03%	1.69%	0.94%	-0.91	1.42
CAR (-10,-1)	5.87%	0.12%	6.55%	3.78%	-0.15	2.35**
CAR (-20,-1)	7.74%	-0.14%	7.98%	5.01%	-0.05	1.34
CAR (-30,-1)	7.49%	0.29%	9.04%	5.29%	-0.28	1.43
CAR (-60,-1)	8.79%	1.50%	7.21%	2.52%	0.24	0.39
CAR (-90,-1)	10.53%	-0.42%	6.92%	5.60%	0.48	0.19
CAR (-126,-90)	4.72%	-1.19%	6.47%	-1.35%	-0.35	0.35
CAR (-126,-1)	15.44%	6.59%	13.41%	8.27%	0.21	0.21
CAR (-126,-5)	15.29%	5.78%	9.16%	-2.23%	0.64	0.59
CAR (-126,+5)	14.76%	5.30%	12.26%	6.46%	0.24	0.22
CAR (-126,+126	13.37%	5.33%	10.44%	6.90%	0.22	0.17

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively

Table 8: Final Acquisition Percentages for Acquirers

This table presents comparison based on final acquisation percantages . Related information gathered from SDC database. First group final acquired percentage between 1%-49.99% and second group final acquired percentage 50%-100% . The t-statistics appear in 6th column and Mann-Whitney test in 7th column.

	Acquired percentage 1%-49.99% N:90		**Acquired percentage 50%-100% N:30**		**Difference Tests**	
Event Window	**Mean CAR**	**Median CAR**	**Mean CAR**	**Median CAR**	**t-test t- value**	**Mann-Whitney test/ z-value**
CAR (+1,+10)	-2.68%	-1.56%	-2.99%	-2.83%	0.11	0.26
AR (0)	1.05%	0.04%	0.89%	0.94%	0.13	0.70
CAR (-10,-1)	5.88%	0.77%	9.28%	7.29%	-0.76	2.69***
CAR (-20,-1)	7.54%	0.24%	10.01%	7.53%	-0.50	1.64
CAR (-30,-1)	7.91%	0.47%	8.48%	3.63%	-0.11	0.99
CAR (-60,-1)	9.49%	1.83%	2.72%	0.20%	1.10	0.34
CAR (-90,-1)	10.61%	0.64%	3.63%	7.24%	0.91	0.08
CAR (-126,-90)	4.02%	-1.26%	3.72%	-1.93%	0.06	0.09
CAR (-126,-1)	14.82%	6.26%	7.55%	9.43%	0.75	0.02
CAR (-126,-5)	14.22%	4.46%	1.46%	-5.00%	1.32	1.08
CAR (-126,+5)	14.49%	4.21%	5.09%	11.03%	0.88	0.14
CAR (-126,+126)	13.06%	5.05%	2.34%	5.95%	0.73	0.19

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively

Table 9: Related Business vs. Unrelated Business

The table presents comparison of related business acquisition and unrelated business acquisition. The t-statistics appear in 6th column and Mann-Whitney test in 7th column

	Related Business N:44		Unrelated Business N:80		Difference Tests	
Event Window	**Mean CAR**	**Median CAR**	**Mean CAR**	**Median CAR**	**t-test t- value**	**Whitney test/ z-value**
CAR (+1,+10)	-0.06%	-1.26%	-4.39%	-2.12%	-1.85*	0.71
AR (0)	0.74%	-0.23%	1.11%	0.55%	0.35	1.03
CAR (-10,-1)	7.42%	3.02%	5.63%	0.77%	-0.39	1.58
CAR (-20,-1)	9.11%	1.47%	7.32%	2.41%	-0.36	1.25
CAR (-30,-1)	8.75%	3.15%	7.80%	1.18%	-0.18	0.91
CAR (-60,-1)	6.25%	-0.43%	9.37%	2.83%	0.48	0.17
CAR (-90,-1)	7.85%	4.38%	10.09%	2.35%	0.30	0.22
CAR (-126,-90)	5.39%	-3.69%	5.03%	-0.53%	-0.07	1.10
CAR (-126,-1)	13.10%	7.12%	15.42%	8.81%	0.25	0.40
CAR (-126,-5)	10.32%	0.69%	14.32%	4.20%	0.43	0.58
CAR (-126,+5)	13.42%	4.21%	13.99%	7.38%	0.06	0.38
CAR (-126,+126)	10.63%	0.78%	13.50%	10.76%	0.20	1.08

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively

Table 10: Regulated vs Unregulated Industries

The table presents comparison of related business acquisition and unrelated business acquisition. The t-statistics appear in 6th column and Mann-Whitney test in 7th column.

	Regulated Industries N:63		Unregulated Industries N:61		Difference Tests	
Event Window	**Mean CAR**	**Median CAR**	**Mean CAR**	**Median CAR**	**t-test t- value**	**Mann-Whitney test/ z-value**
CAR (+1,+10)	-3.71%	-1.64%	-1.97%	-2.14%	-0.72	0.18
AR (0)	1.08%	0.24%	0.88%	0.11%	0.20	0.20
CAR (-10,-1)	2.24%	1.91%	10.43%	1.03%	-1.53	0.43
CAR (-20,-1)	3.98%	0.72%	12.06%	3.70%	-1.44	0.30
CAR (-30,-1)	5.25%	1.77%	11.12%	1.77%	-0.96	0.19
CAR (-60,-1)	4.00%	2.15%	12.66%	1.56%	-1.24	1.03
CAR (-90,-1)	6.32%	-1.63%	12.37%	6.59%	-0.75	1.55
CAR (-126,-90)	6.52%	0.12%	3.75%	-1.58%	0.59	0.86
CAR (-126,-1)	13.04%	5.46%	16.20%	10.00%	-0.33	0.94
CAR (-126,-5)	11.83%	2.62%	14.00%	3.67%	-0.22	0.68
CAR (-126,+5)	12.86%	4.22%	14.74%	5.30%	-0.18	0.81
CAR (-126,+126	9.72%	-9.66%	15.33%	12.90%	-0.41	1.36

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively

Table 11: Manufacturing and Retails vs Others

This table presents the abnormal returns (ARs and CARs) to the 124 targets surrounding M&A announcements based on their standard industrial classification (SIC) code. Except Manufacturing and retails, all industries named other group. The t-statistics appear in 6th column and Mann-Whitney test in 7th column.

	Manufacturing & Retails N:71		Other N:53		Difference Test	
Event Window	**Mean CAR**	**Median CAR**	**Mean CAR**	**Median CAR**	**t-test t- value**	**Whitney test/ z-value**
CAR (+1,+10)	-1.98%	-1.47%	-4.03%	-2.19%	0.82	0.18
AR (0)	0.97%	0.11%	0.99%	0.24%	-0.02	0.09
CAR (-10,-1)	8.87%	0.44%	2.78%	2.54%	1.29	0.29
CAR (-20,-1)	10.66%	1.56%	4.33%	1.49%	1.26	0.22
CAR (-30,-1)	10.07%	1.77%	5.55%	1.89%	0.81	0.03
CAR (-60,-1)	12.19%	1.56%	2.99%	2.15%	1.40	0.87
CAR (-90,-1)	13.83%	5.54%	3.21%	-0.42%	1.42	1.16
CAR (-126,-90)	5.06%	-1.24%	5.29%	-2.48%	-0.05	0.07
CAR (-126,-1)	19.02%	10.26%	8.66%	4.07%	1.16	1.22
CAR (-126,-5)	16.56%	3.67%	8.00%	1.30%	0.94	0.73
CAR (-126,+5)	18.04%	8.63%	8.09%	0.98%	1.03	1.11
CAR (-126,+126	16.96%	12.90%	6.48%	-5.50%	0.78	1.35

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively

Table 12: Acquirer Industry Bank vs Other

The table presents comparison based on acquirer industry. The sample divided by two group as bank and other. The t-statistics appear in 6th column and Mann-Whitney test in 7th column.

	Acquirer Industry Other N:113		Acquirer Industry Bank N:12		Difference Tests	
Event Window	**Mean CAR**	**Median CAR**	**Mean CAR**	**Median CAR**	**t-test t- value**	**Mann-Whitney test/ z-value**
CAR (+1,+10)	-2.28%	-1.64%	-8.74%	-3.37%	1.37	1.30
AR (0)	0.90%	0.11%	1.84%	0.84%	-0.76	0.85
CAR (-10,-1)	6.94%	1.91%	-0.58%	0.12%	1.77	0.91
CAR (-20,-1)	8.50%	2.09%	2.35%	0.28%	1.52	0.42
CAR (-30,-1)	8.79%	1.77%	1.44%	-2.67%	1.18	0.68
CAR (-60,-1)	8.14%	2.15%	9.49%	1.51%	-0.17	0.40
CAR (-90,-1)	8.18%	3.23%	20.75%	-3.54%	-0.65	0.14
CAR (-126,-90)	4.75%	-1.45%	9.39%	0.76%	-0.65	0.92
CAR (-126,-1)	13.11%	6.59%	29.84%	9.66%	-0.66	0.14
CAR (-126,-5)	11.23%	1.96%	30.02%	12.00%	-0.76	0.49
CAR (-126,+5)	12.47%	5.30%	27.29%	4.22%	-0.57	0.10
CAR (-126,+126)	12.02%	5.73%	17.18%	-0.64%	-0.18	0.57

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively

Table 13: Small Firms vs Big Firms

The table presents comparison of small and big firms based on market capitalization. Above the median of market capitalization value named small firms and below the median of market capitalization value named big firms. Market capitalization value obtained from Bloomberg and taken from 127th days prior to the announcement date which is the starting point of estimation period. .The t-statistics appear in 6th column and Mann-Whitney test in 7th column.

	Small Firms N:58		**Big Firms N:58**		**Difference Tests**	
Event Window	**Mean CAR**	**Median CAR**	**Mean CAR**	**Median CAR**	**t-test t- value**	**Mann-Whitney test/ z-value**
CAR (+1,+10)	-1.72%	-1.29%	-2.52%	-1.90%	0.35	0.61
AR (0)	1.21%	-0.08%	0.97%	0.49%	0.24	0.67
CAR (-10,-1)	7.00%	4.59%	2.14%	0.10%	1.85*	2.05**
CAR (-20,-1)	10.28%	8.03%	1.20%	-1.44%	2.85***	2.9***
CAR (-30,-1)	10.59%	6.33%	0.67%	-2.65%	2.55**	2.51**
CAR (-60,-1)	11.74%	5.48%	-0.75%	-2.16%	2.39**	2.06**
CAR (-90,-1)	14.10%	11.49%	-3.11%	-3.17%	2.89***	2.42**
CAR (-126,-90)	8.72%	-0.54%	-0.82%	-4.33%	2.09**	1.82*
CAR (-126,-1)	22.50%	14.87%	-3.34%	-3.37%	3.45***	3.37***
CAR (-126,-5)	20.22%	12.60%	-5.30%	-5.45%	3.36***	3.13***
CAR (-126,+5)	23.96%	19.96%	-5.42%	-3.49%	3.54***	3.89***
CAR (-126,+126)	29.10%	18.97%	-11.25%	-7.58%	3.33***	3.14***

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively

Table 14: First 20 vs Last 20 Firms in terms of Market Capital

The table presents comparison of first 20 and last 20 firms based on market capitalization. After ranking Market capitalization of target firm top 20 and last 20 firms selected. Market capitalization value obtained from Bloomberg and taken from 127th days prior to the announcement date which is the starting point of estimation period. .The t-statistics appear in 6th column and Mann-Whitney test in 7th column.

	First 20 Firms N:20		**Last 20 Firms N:20**		**Difference Tests**	
Event Window	**Mean CAR**	**Median CAR**	**Mean CAR**	**Median CAR**	**t-test t- value**	**Mann-Whitney test/ z-value**
CAR (+1,+10)	0.66%	0.48%	-2.84%	-2.17%	0.89	1.28
AR (0)	3.01%	0.65%	0.53%	0.98%	1.32	0.69
CAR (-10,-1)	5.07%	0.46%	4.63%	2.84%	0.09	0.77
CAR (-20,-1)	6.41%	1.40%	4.45%	3.85%	0.36	0.34
CAR (-30,-1)	1.75%	-0.59%	3.52%	2.59%	-0.27	0.47
CAR (-60,-1)	6.80%	-1.99%	4.03%	1.83%	0.28	0.58
CAR (-90,-1)	8.80%	3.45%	4.18%	0.08%	0.43	0.15
CAR (-126,-90)	14.09%	7.39%	-2.73%	-2.45%	2.31**	1.88*
CAR (-126,-1)	22.46%	21.03%	1.70%	4.22%	1.72*	1.69*
CAR (-126,-5)	19.04%	18.94%	0.38%	0.90%	1.52	1.31
CAR (-126,+5)	26.62%	24.57%	0.42%	0.84%	1.70	1.96**
CAR (-126,+126)	31.02%	2.72%	-5.20%	2.16%	1.51	0.88

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively

Table 15: Experienced Acquirer vs. Inexperienced Acquirer

The table presents comparison between targets abnormal return acquired by experienced acquirer and inexperienced acquirer. The information gathered from SDC.The t-statistics appear in 6th column and Mann-Whitney test in 7th column.

	Experienced N:62		**Inexperienced N:62**			**Difference Tests**
Event Window	**Mean CAR**	**Median CAR**	**Mean CAR**	**Median CAR**	**t-test / t- value**	**Mann-Whitney test/ z-value**
CAR (+1,+10)	-2.25%	-1.32%	-3.47%	-2.26%	0.51	0.66
AR (0)	0.84%	0.49%	1.12%	-0.14%	-0.27	0.66
CAR (-10,-1)	8.25%	2.15%	4.29%	0.28%	0.75	0.56
CAR (-20,-1)	9.91%	2.91%	5.99%	1.42%	0.70	0.10
CAR (-30,-1)	10.77%	-1.63%	5.51%	3.32%	0.88	0.58
CAR (-60,-1)	10.91%	1.86%	5.61%	1.86%	0.76	0.07
CAR (-90,-1)	9.32%	-0.83%	9.27%	8.57%	0.01	0.74
CAR (-126,-90)	-1.63%	-1.65%	11.94%	-0.25%	-2.99***	1.80*
CAR (-126,-1)	8.36%	2.55%	20.82%	10.28%	-1.33	1.69*
CAR (-126,-5)	6.96%	-0.85%	18.84%	8.34%	-1.25	1.55
CAR (-126,+5)	8.46%	0.42%	19.12%	11.14%	-1.05	1.26
CAR (-126,+126)	9.79%	4.00%	15.17%	7.36%	-0.40	0.06

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively

Table 16: Acquirer Experience Status

The table present comparison based on toehold. If the acquirer percentages different than "0" the acquirer grouped under Experienced, if equal to "0" then it named First deal. The t-statistics appear in 6th column and Mann-Whitney test in 7th column.

	Experienced N:41		**First Deal 83**		**Difference Tests**	
Event Window	**Mean CAR**	**Median CAR**	**Mean CAR**	**Median CAR**	**t-test t- value**	**Mann-Whitney test/ z-value**
CAR (+1,+10)	0.72%	-0.11%	-4.62%	-3.33%	-2.30**	2.17**
AR (0)	0.68%	0.08%	1.13%	0.18%	0.46	0.37
CAR (-10,-1)	9.10%	1.14%	4.87%	1.91%	-0.57	0.03
CAR (-20,-1)	10.60%	-0.14%	6.64%	2.09%	-0.52	0.71
CAR (-30,-1)	10.30%	-2.49%	7.07%	3.36%	-0.40	1.31
CAR (-60,-1)	10.62%	-1.16%	7.09%	2.50%	-0.37	0.90
CAR (-90,-1)	8.33%	-0.96%	9.77%	8.15%	0.14	1.02
CAR (-126,-90)	-0.92%	-1.58%	8.16%	-1.24%	2.18**	1.10
CAR (-126,-1)	7.90%	-2.76%	17.90%	9.66%	0.94	1.66*
CAR (-126,-5)	7.35%	-0.57%	15.64%	5.35%	0.77	1.30
CAR (-126,+5)	8.61%	-1.69%	16.34%	11.05%	0.68	1.26
CAR (-126,+126)	7.32%	3.24%	15.03%	7.36%	0.54	0.20

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively

Table 17: Before 2001 vs. After 2001 M&As

The table shows comparison of M&A which emerged before 2001 and after 2001.The information gathered from SDC.The t-statistics appear in 6th column and Mann-Whitney test in 7th column.

	Before 2001 N:24		After 2001 N:101		Difference Tests	
Event Window	**Mean CAR**	**Median CAR**	**Mean CAR**	**Median CAR**	**t-test t- value**	**Mann-Whitney test/ z-value**
CAR (+1,+10)	-7.12%	-4.01%	-1.83%	-1.39%	1.25	1.32
AR (0)	1.60%	0.85%	0.83%	0.12%	-0.48	0.41
CAR (-10,-1)	16.87%	4.45%	3.73%	1.23%	-1.03	0.13
CAR (-20,-1)	21.90%	8.03%	4.61%	0.00%	-1.37	2.03**
CAR (-30,-1)	19.55%	3.76%	5.40%	1.18%	-1.08	0.66
CAR (-60,-1)	18.50%	0.72%	5.80%	2.18%	-0.83	0.21
CAR (-90,-1)	24.38%	-0.36%	5.67%	3.45%	-1.11	0.12
CAR (-126,-90)	16.20%	7.55%	2.51%	-1.65%	-1.76*	1.57
CAR (-126,-1)	40.71%	21.03%	8.32%	5.86%	-1.85*	1.62
CAR (-126,-5)	38.47%	29.04%	6.76%	2.29%	-1.8*	1.41
CAR (-126,+5)	38.83%	23.36%	7.78%	4.21%	-1.57	1.69*
CAR (-126,+126)	19.91%	10.97%	10.70%	5.05%	-0.40	(0.00)

***, **, and * denote statistical significance at 1%, 5% and 10%, respectively