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# MERGERS AND ACQUISITIONS IN TURKEY AND VALUE CREATION

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## ABSTRACT

Subsequently to economic liberalization era in 1980s, due to Turkey's exposure to international capital, increasing number of outbound mergers and acquisitions activities appeared. Aiming at higher returns, local and foreign investors settle on the M&A activity in an emerging market e.g. Turkish market. Verifying the impact and reaching statistical significance of the factors in an event window e.g. abnormal returns, financial indicators and announcement dates, are the main purposes of the studies conducted in the Turkish and international literature. The first chapter provides a general overview of mergers and acquisitions activities, types and history in the globe and in Turkey. The second chapter displays the motivations behind M&A activities, considering the theories in the academic studies and Turkey's macroeconomic environment. The third chapter investigates to what extent the methods assessing value creation of the M&A deals in the academic studies is accurate by analyzing consistency in the results by a comparative approach. The fourth chapter demonstrates an abnormal returns analysis arising out of M&A deal public announcements by investigating 3 companies from Istanbul Stock Exchange within an event window of (-15,15) days. The study aims at evaluating the occurrence of an attainable value creation for the mergers and acquisitions deals in Turkey for shareholders examining pre- and post-event windows by examining the effectiveness of corresponding method applied.

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# 1. INTRODUCTION

Although several reasons detailing why companies merge or acquire others have been put forward, the major reason is growth and value creation (Trautwein, 2013). The combined management of the resultant firms are usually motivated by the desire for growth and increase in value. It is argued that mergers and acquisitions deals are usually associated with product line diversification, increased market share, strengthened management, improved manufacturing process as well as other economies of scale. It presents the different definitions of M&As based on the arguments of different scholars. Additionally, it provides information on the different types of M&As and the evolution of M&A, pointing out that it originated from the developed markets especially in the U.S. The section also investigates the drivers as well as motives that push companies to opt for consolidation, especially in Turkey. The gathered literature also provides an overview of M&A transactions in Turkey.

## 1.1 Overview of Mergers and Acquisitions

The constant need for growth, fear of intense competition and changes in economic conditions all over the world have forced many companies and businesses to look for different ways of surviving (Brewer, 2014). One of the survival strategies that most large business corporations have adopted to maximize growth in value and market share is company consolidation through mergers and acquisitions (M&A). Mergers and acquisitions are often used interchangeably in the financial literature but the two refers to different transactions. A merger may be described as a legal union of two or more business entities combine to form a single large entity (Trautwein, 2013). Simply put, a merger is a transaction in which more than one company cooperate legally and economically for growth. On the other hand, acquisition deals involve the purchase of one firm's assets or common stock by another firm (the acquirer) (Cartwright, & Cooper, 2012). Both mergers and acquisitions are associated with the transfer of the company's control from one group of shareholders to another.

Although M&A activities were initially seen mainly in the United States of America, they have spread all over the world, including emerging markets. Turkey is a good example of an emerging market in which M&A activities have greatly permeated. Some of the factors that have attracted M&A activities in Turkey include: positive changes in the regulatory environment, favorable corporate governance and improved technological infrastructure (Akben-Selcuk, 2015). The three factors combined has made Turkey an important player of M&A activities among the emerging markets. Thus, in the last few decades, Turkey has experienced an increase in the number of M&A activities, in terms of the number of deals and values of the transactions.

However, despite this emerging trend, literature on M&A activities specifically in Turkey is insufficient. Most of the existing studies are based in the developed markets such as the US.

### 1.2 Definitions of M&As

M&A activities have been defined differently by different scholars in the literature of finance. Gaughan, (2010) defined M&A as a general term that describes the consolidation of different companies or their assets through various types of financial transactions. This definition reveals that M&A activities are composed of a number of transactions which include: mergers, acquisitions, company consolidations, tender offers, purchase of assets and acquisition of management. This definition shows that, although the two terms are often used interchangeably in the financial literature, they refer to different transactions.

According to Erel, Liao, & Weisbach, (2012), a merger refers to a transaction that involves two separate entities that combine and leave one surviving entity. In this deal, the board of directors of the involved companies approve the consolidation and seek approval from the stakeholders (Ravenscraft, & Scherer, 2011). Cartwright, & Cooper, (2012) adds on this argument by stating that

after merging of the two companies, the absorbed company (acquired) ceases to exist as it becomes part of the company that acquired it. Therefore, a merger is a legal union of two or more companies into a single large entity. This simply means that in mergers, one company is "dissolved" and the control of the firm is passed on to another group of shareholders. The companies involved cooperate legally and economically for the purposes of growth.

Acquisition transactions slightly differs from mergers since they involve the purchase of assets or common stock by one firm (the acquirer) from the other firm (target firm) (Schmidt, 2015). The participant companies usually retain their names and organizational structure. In most cases, it involves a smaller and a larger company in which the smaller company is absorbed by the larger one. A recent important example of this transaction in Turkey is the one that involved the purchase of 9.95 % stake in Garanti Bank by Spanish BBVA on February 21, 2017.

Both mergers and acquisitions involve the transfer of the company's control from one group of shareholders to another. This implies that the two falls under takeover transactions. This is because takeovers involve the transfer of the firm's control. The joining of more than two companies to act jointly in sales and production creates trust between them. For this reason, combined companies lose their economic independence and centers their management with an aim of attaining market dominance (Atanassov, 2013).

### 1.2.1 Types of M&As

M&A transactions takes different forms that yields different types of mergers and acquisitions. Transaction type is the basis for the classification. They include:

#### 1.2.1.1 Horizontal M&As

Horizontal merger involves two competitor companies coming together to form a single firm (Rodriguez, & Mireles, 2013). The main advantage of this merger is that it enables the two companies to enjoy an increased market power due to reduced competition. In horizontal acquisitions, firm acquisitions usually occur within the same industry, whereby the acquirer and the firm acquired belong to the same industry (Calipha, Tarba, & Brock, 2010). Although the acquired firm retains its name and firm structure, this transaction increases market shares as well as market power for the newly formed firm.

#### 1.2.1.2 Vertical M&As

These type of M&As possess a seller and buyer relationship. This implies that the firms involved in the merger are involved at different steps of the process of production (Normann, 2011). For instance, an ice cream maker merging with a cone supplier. Vertical acquisition involves two firms which are at different levels of production. A good example of this type of acquisition is the one that took place in 1993 involving Merck, a drug company and Medco Containment Services Inc. In this transaction, Merck acquired the later that was mainly involved in marketing of discounted prescription medicines for a cost of 6 billion (Gaughan, 2010). The resultant firm was more powerful having the both production and marketing sections.

#### 1.2.1.3 Conglomerate M&As

Conglomerate refers to diversified corporations that invests in other industries characterized with a different line of production or operation (Bower, 2013). This kind of mergers exist when the ideal conditions does not exist. Examples of such types of mergers include: purchase mergers that occurs when a company buys out another one. It provides a tax benefit that attracts most acquiring companies to prefer this option. The consolidation mergers are is an atypical form of M&As: Two separate entities are acquired and a single firm is established by merging these two.

#### 1.2.1.4 Congeneric M&As

This type of M&As is often realized between firms that operate in the same market but not related either vertically or horizontally (Calipha, et al, 2010). The two involved firms draw their similarities from factors such as production, distribution, customer base or technology. Firms which merge this way may get preferential treatment because the upstream competition, downstream and related markets is affected. These M&As may be split into two different segments. One of them is the market-extension merger that involves two firms which sell the same product but serve different markets. The subsequent group is a product-extension merger which includes two separate firms possessing distinctive but complementary and competence in the same market.

The different types of M&As mentioned are products of the evolution of the initial merger concepts. Regardless of the type of the merger, similar principles still apply and the driving forces that push firms to opt for merging are always similar. In Turkey to be specific, different types of merger transactions have been witnessed and the merger market is still evolving. Changes in regulation is likely to give birth to more types of M&A activities.

### 1.3 Types of mergers in Turkey

Various kinds of business mergers between 1999-2014 may be examined in the graph below. The amount of horizontal mergers is greater compared to the number of other kinds of mergers, besides 2010 with a total deal of 11. In 2012, the value reaches its maximum: 121. Yet another intriguing fact is that actually Turkish literature omits the merger type congeneric. It can entail that the overlapping processes and product line expansion are disregarded as a driver for an M&A deal. The predomination of horizontal mergers verifies that the industries in Turkey tend to possess an increasing market share, a reduced competition and costs.

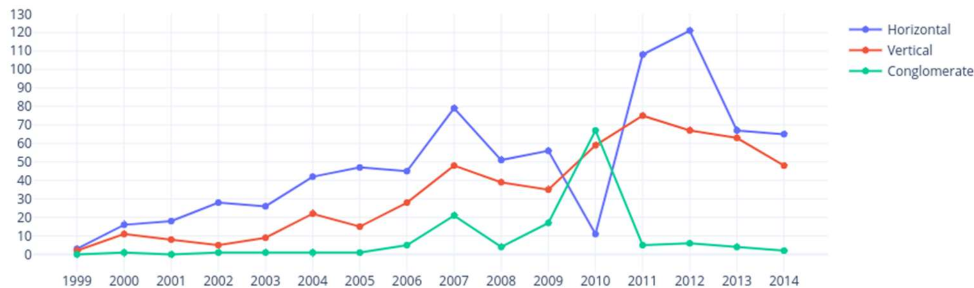


***Figure 1:*** *Types of mergers between years 1999-2014*
***Data retrieved from:*** *Sahin, 2016, "Analysis Of Mergers & Acquisitions In Turkey By Years And Comparison With Worldwide, USA, EU And Asia-Pacific Data", pg. 241*

### 1.4 A brief look at the history

The first merger wave in the US has evoked the recurrence of the M&A deals since the beginning of the 1900s for the rest of the world. The main scope of the study by Calipha, Tarba & Brock (2010) was the dependence of the mergers and acquisitions waves on the socioeconomic circumstances in the post-war era after 1945. The increase in the M&A deals was slowed down by the regulations of the US government. (Cartwright & Cooper, 2014). All of the five waves throughout the history of

mergers and acquisitions can be examined thoroughly in Figure 2 below as it has been statistically illustrated by Martynova and Renneboog (2005).

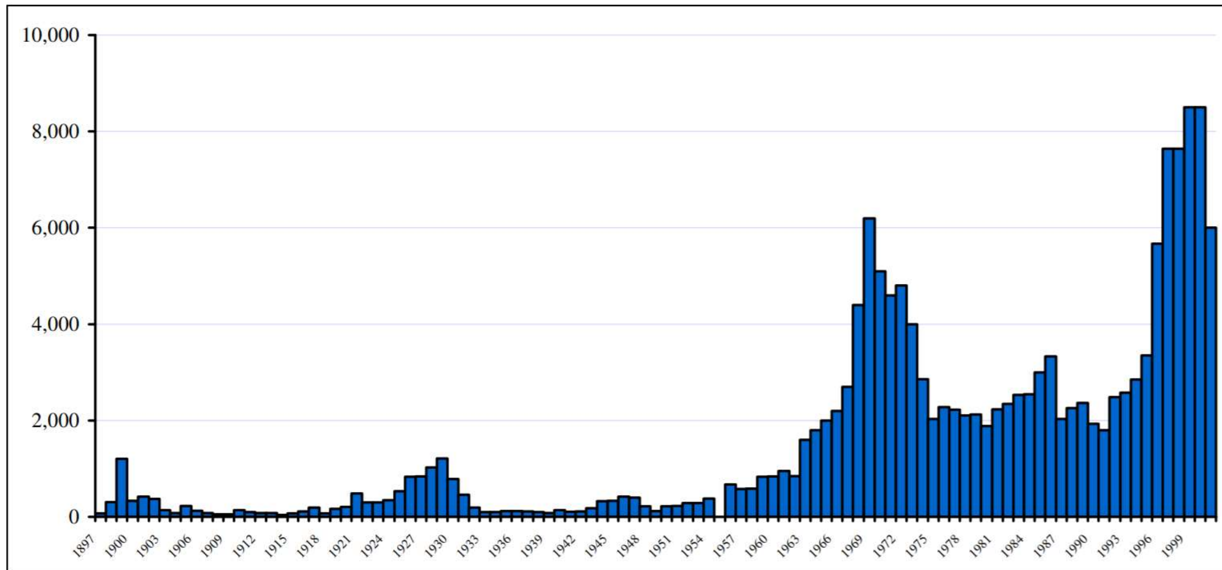


***Figure 2:*** *Total number of deals from 1897 to 2000s*
***Source:*** *Martynova and Renneboog, 2005, "A Century of Corporate Takeovers: What Have We Learned and Where Do We Stand", pg. 5*

### 1.4.1 The First Merger Wave (1897-1904)

The merger waves and the peak points are illustrated distinctively in the figure above. Subsequent to the depression of 1883, the first wave is visible with its peak point in 1900 and its lowest point four years after. Manufacturing and mining industries were the pioneer industries by that time and thus mainly, were affected at most. Large monopolies emerging from the first wave caused a change in the market concentration. Simultaneously, many firms quit or went bankrupt (Cartwright & Cooper, 2012). The most prevailing type of mergers was the horizontal conglomerate. In the time of the first wave, as a result of changing market structure, the operating performance of the firms declined.

Number of takeovers increased drastically during that time, hence the presence of market competition decreased over time with the diminishing number of competitors in the market.

Additionally, increasing M&A activities were primarily derived from the enhancement in the transportation system technologies and the implementation of the contractual freedom in corporate law, which resulted in improved business relations in the first merger wave (Gaughan, 2010). The number of total M&A deals during the first merger wave can be observed in the graph below explicitly.

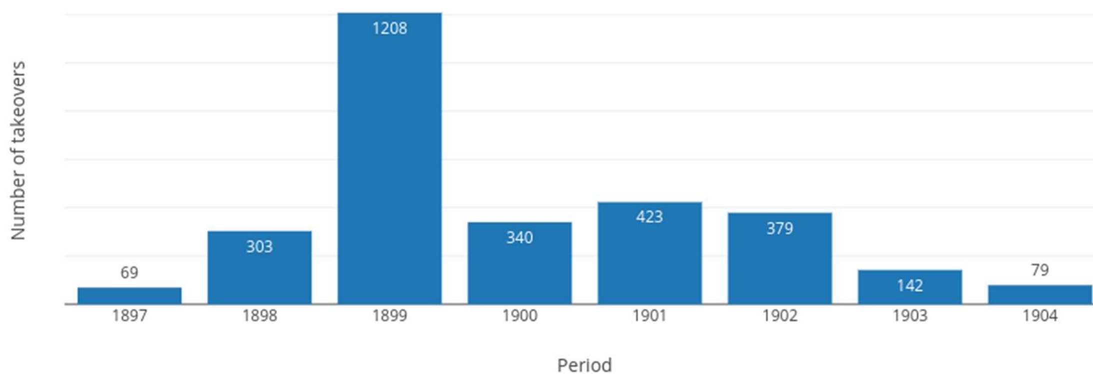


***Figure 3:*** *Number of takeovers during the first merger wave.*
***Data retrieved from:*** *Nelson, 1959, The First Merger Wave*

Notwithstanding, the stock market crush in the end of the first wave and the banking panic in 1907 concluded this period.

### 1.4.2 The Second Merger Wave (1916-1929)

The economic conditions of World War I launched the second merger wave and it lasted until the end of 1929, when the "Black Thursday" occurred with the Wall Street Crash on October 29, 1929 (Calipha, Tarba & Brock, 2010). Prior to the Wall Street Crash, in the beginning of 1920s an increase in the market concentration occurred and the total assets belonged to a few companies in the US. The main difference between the first and second wave could be described by the type of the market structures: Monopoly and oligopoly, respectively. Likewise, another distinction between the first and the second wave is the increasing number of vertical and conglomerate mergers which had a higher quantity than horizontal mergers. (Clougherty & Seldeslachts, 2012).

The purpose of tax avoidance resulted in the incentive of acquisitions for the firms which possess a greater market concentration in 1930-1960. Abruptly, a further increase in the market concentration was not observed after these acquisitions, since the acquirers had a control over less than half of the total assets of the target companies, which implies they could not achieve controlling interest (Calipha, Tarba & Brock, 2010).

### 1.4.3 The Third Merger Wave (1965-1969)

The prevailing domination of economic growth and development during this period was existent due to increase in mass production and merging of small companies. In addition, conglomerate mergers, which occur between two unrelated firms, came on the scene during in the third merger wave under the existence of strict antitrust law (Clougherty & Seldeslachts, 2012). By that time, investment bankers only considered the effects of high interest rates of investments, they did not expect that funding of the mergers would possess high significance.

Subsequent to the Reform Act of 1969, this merger wave has come to an end, since EPS calculation update resulted in an increase of convertible stocks as it became a common stock, which caused the decrease in market stock (Clougherty & Seldeslachts, 2012).

### 1.4.4 The Fourth Merger Wave (1981-1989)

Mega mergers activities are the most significant feature of this period. The sudden ascent in the value of dollars paid for mergers developed in this wave. Albeit, the increase of friendly mergers took place, the number of hostile acquisitions were predominant compared to the previous periods (Calipha, Tarba & Brock, 2010). The absence of approval by the board of directors during the agreement process is the main feature of hostile acquisitions (Gaughan, 2010).

Incentives for the M&A activities of the acquirers increased due to the existence of increased competition, research and development expenses (Gaughan, 2010). This period is chiefly known by the successful mergers of General Motors, IBM, Dupont and General Electric. In 1989, the slowing in the economic growth in 1989 referred to a deadline of this period.

### 1.4.5 The Fifth Merger Wave (1993-2000)

Following the recession in 1990-1991, a new merger started in 1993, which ended in 2000. The impacts of globalization and the deregulation process motivated market leaders to invest in foreign countries (Gaughan, 2010). In the beginning of the new millennium, deregulation of the 90s and globalization were declared to be the main drivers of the acquiring companies to enhance M&A activities. According to Gregor et al. (2001), the importance of the complex relationship between globalization and deregulation in 1990 provoked the increase of cross-border takeovers and therefore the fifth merger wave can be classified distinctively.

### 1.5 History of M&A activities in Turkey

Technological advancements in Turkey have resulted in an increase in competition and deregulation of companies (Akben-Selcuk & Altiok-Yilmaz, 2011). Multinational companies are shifting their focus and investing heavily in Turkey. This influx of foreign investors in Turkey has pushed the existing Turkish companies to grow in order to maintain control of their markets. Most of the Turkish companies are run by family members, but in an effort to grow and expand; they are taking up merging and acquisitions as modes of expanding their operations. As a result, most companies are shifting from being run by family members to being run by professionals (Akben-Selcuk & Altiok-Yilmaz, 2011).

M&As in Turkey started in 1950s. These mergers mostly involved banks and private organizations. During the time, they came as a result of importing new technologies from abroad. With time, the reasons for M&As have changed due to socio-political and economic influences. Some of the earliest mergers in Turkey include a merger between Istanbul Bankasi and Emlak Kredi Bankasi in 1962 and one between Bank-i Osman-i Sahane with Avusturya Osmanli Bankasi in 1974 (Arslan, & Simsir, 2016). In the 1980s, firms also merged to avoid financial distress. A number of mergers between the foreign investors, Turkish private firms and financial markets were noted around this time.

The recent economic crisis in Turkey and the fight against corruption forced the government to put in place rules and regulations to govern banks and other financial institutions (Akben-Selcuk, 2015). These regulations have seen more mergers and acquisitions being witnessed in Turkey. Also, they have ensured that cases of hostile takeovers are minimal. In Turkey, mergers and acquisitions are regulated by Capital Market board communiqués, competition board and the Turkish commercial law (Akdogu, 2011). The Capital market board is related to the investors and the competition board regulates the merging firms and the powers they have. Several codes also govern mergers and

acquisitions in Turkey. Examples include the Turkish commercial code that was established in 1957 and Turkish code of obligations established in 1926. These codes have undergone several amendments over time in order to serve their purposes effectively.

For a general overview throughout the recent history of the numbers of mergers and acquisitions activities in Turkey, the figure below should be examined for years 1988-2008. The figures illustrate the number of M&A deals and the corresponding deal values, respectively. Akdogu (2011) states that 71% of the number of M&A deals occurred after 2000, whereas 13% of the total deal volume has been dispersed before 2000.

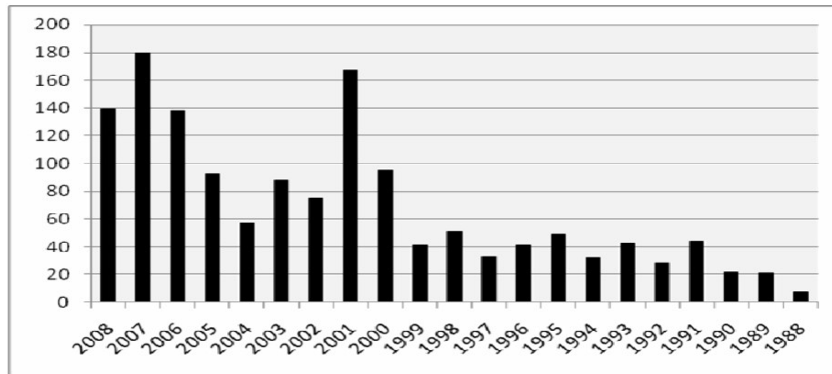


***Figure 4:*** *The number of M&A deals in Turkey between 1988-2008*
***Source:*** *Akdogu, 2011, "Türkiye'de 1988-2008 Dönemindeki Firma Birleşmeleri, Birleşme Dalgaları ve Genel Tablo", pg. 141*

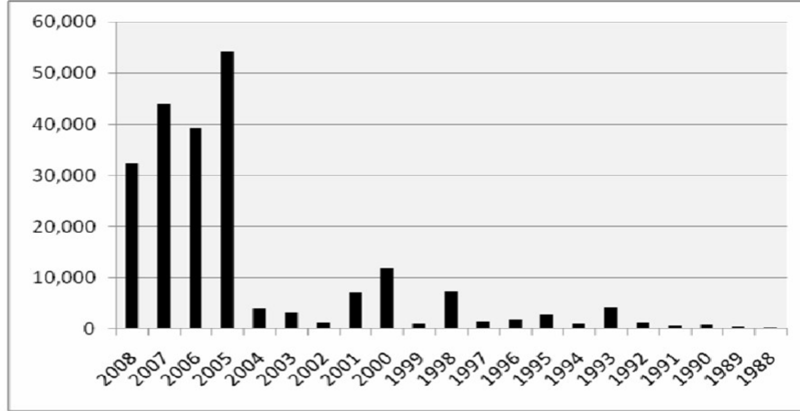


***Figure 5:*** *Deal value of M&A activities in Turkey between 1988-2008*
***Source:*** *Akdogu, 2011, "Türkiye'de 1988-2008 Dönemindeki Firma Birleşmeleri, Birleşme Dalgaları ve Genel Tablo", pg. 141*

## 2 MOTIVATIONS FOR M&A'S

Existing pieces of literature provide in-depth reasons as to why companies choose to combine. For instance, the neo-classical economic theory states that the primary reason that makes companies to merge is the maximization of profits (Lubatkin, 2013). Likewise, companies might merge so that they can achieve economies of scale. In this case, they will strive to improve their distributive, productive, and financing capacity. In some cases, companies merge to outcompete other players in the market. In other words, they come together to enjoy the monopoly of a specific market, labor, or raw material (Hussinger, 2010). It is worth noting that a monopoly controls majority of the market share. Moreover, companies merge when searching for synergies and efficiencies. These two aspects are integral since a company can acquire technology or intangible assets like skills and expertise. However, all the aforementioned reasons can be summed up into one major reason that pushes companies to combine; the urge for continued growth. Merging companies always do so with the belief that the come together will enable them to grow into bigger organizations.

Contemporary studies use theories of motives to expound on the reasons as to why consolidation of companies occurs, especially in Turkey. This can be well explained through the efficiency theories. It is essential to understand that this theory tries to provide explanations for various synergies that present as M&As. Typical examples of these synergies include managerial, operational as well as financial synergies. Additionally, researchers elaborate on the drivers of M&As using the Monopoly Theory (Kalecki, 2013). In this scenario, companies merge to acquire monopolistic positions in the market. Moreover, mergers and acquisitions occur due to wealth transfer as explained in Raider's Theory. Ultimately, companies enjoy some benefits when they operate as one as depicted by valuation theory. A detailed explanation of these theories is provided below.

### 2.1 Efficiency Theory

The Efficiency Theory postulates that synergetic gains are the reasons as to why firms may wish to merge with each other. Synergy means that a more significant reaction could be produced when two firms (factors) combine, compared to the sum that the firms involved can independently produce. The increased value of combined companies after a merger is the main parameter used to measure success of the merger although the rationale may be different from one merger to another (Višić & Perić, 2011). Therefore, this measure shows that synergy is perhaps the most justifiable reason for mergers and acquisitions. The benefits of synergies include tax benefits, revenue enhancements, cost savings and process involvements (Berkovitch & Narayanan). It is argued that the production capacity of the merged firms is always higher than that of a single firm. There are three types of synergies that companies may opt for. They include:

#### 2.1.1 Financial Synergies

These refers to the effect that M&A activities may have on the cost of capitalization. Generally, the M&A activity should result in a lowered cost of capital for the acquiring and acquired firm to gain from financial synergy. The firms can invest in an unrelated business to reduce the systematic risk for them to achieve the goal of lowering the cost of capital. These type of mergers and acquisition are likely to succeed because of the increase in cash flow streams for the combined companies (Akben-Selcuk & Altiok-Yilmaz, 2011).

Access to cheaper capital also enhances growth for the two combined companies. This is possible since large firms usually benefit from reduced cost of borrowing by issuing bonds. The access to capital makes it possible for them to undertake industrial diversification. Generally, there is an assumption that both the acquiring and acquired firms must be related in some way for the two

companies to benefit from the synergies that result from their coming together (Gaughan, 2010). The two firms can be related when they are in the same industry, or when they have a vertical value chain. Notably, value creation usually occurs when a cash-rich firm acquires a cash-starved company, regardless of the industrial overlap. Therefore, majority of the acquisitions that occur between unrelated companies are indicators of cash-motivated mergers.

### 2.1.2 Operational Synergies

Companies can combine their operations by acquiring or merging their corporate assets to increase output, reduce production costs, obtain new technologies, improve product quality or provide new products (Grigorieva & Petrunina, 2015). The operating synergy can be achieved through asset configuration or by moving to an alternative production technology that is less costly, to realize economies of scale. Operational synergies may enable firms to offer unique services/products or may lower the cost of conducting business.

### 2.1.3 Managerial Synergies

In this type of synergies, the bidders think that they have better managerial skills than the target, so the target's value would rise under its control. The argument is usually valid in scenarios where large firms target a merger with small ones. According to Trautwein (2013), the studies by Scherer and Ravenscraft (1987), McConnell and Dennis (1986), Jansen (1984), and Chung & Weston (1983), provided indirect evidence concerning this type of synergies. The three studies found out that mergers are usually valued positively and targets' shareholders have positive gains while the bidders' shareholders have no returns (Akben-Selcuk, 2015). However, Trautwein (2013), found out that the

efficiency theory is consistent with quotations of the stock market but not with the actual performance of companies.

## 2.2 Monopoly Theory

The arguments presented in this theory revolve around the market power. In particular, this theory states that the motives behind M&As include the need to gain market power (Foster, 2014). Ideally, M&As have three primary benefits to the companies involved. First, merging tend to reduce competition on the market. Secondly, it increases the revenue of the resultant company. Lastly, the monopolies created by M&As reduce the likelihood of new players entering the market. It is worth to note that the aforementioned benefits lack efficiency gain since they focus on wealth transfer. Ideally, this theory mandates other companies in the market to increase their stock price. However, monopolies tend to exploit consumers.

## 2.3 The Raider Theory

This theory states that M&A activities lead to transfer of wealth from the original stakeholders to the newly formed stakeholders (Tirole, 2009). Examples of wealth transfers include excessive compensation or green email which occurs after merging with or acquiring a new firm. It is essential to understand that greenmail refers to a condition where a firm or an individual purchases stocks or shares at a higher price than the existing market price. Basically, wealth transfer occurs due to the ability of the raider to pay premium. However, shareholders of some selected firms still benefit from M&As as revealed by a number of empirical studies.

### 2.4 Valuation Theory

In this theory, the stock market has less information on the targets' value than the managers. Usually, M&A activities create value to the previously separate companies if the synergy benefits of integration and combination surpass the costs (Edwards & Davis, 2014). A clear indication of the value created by a merger is the share price of the firm. However, information for some companies, is not available to the public. This aspect makes it hard for the market to evaluate the value created by some companies correctly. It is also important to note that this theory requires firms to disclose all the information to the public.

Furthermore, managers have a significant influence on the value of a company. For instance, the information revealed by the managers makes it hard for the potential buyer to value the company's assets. In most cases, the managers are likely to over-value certain assets like shares after merging with another firm. As mentioned earlier, a common indicator used to evaluate the value created by acquisition is the share capital. Therefore, M&As increase the value of the company by raising its cost of shares (Zhang, 2013). Generally speaking, companies might merge to increase the value of their stocks.

### 2.5 Financial Motives

Financial motives occur when a merger is expected to lower the cost of capital. The cost of capital refers to the mix of various securities of the companies involved in the merger. The three theories that explain the capital structure of the firms are the Modigliani Miller (M&M) theory, Traditional Approach and Independence Hypothesis (Net Operating Income). According to Modigliani & Miller proposition I, a firm's value and a present value of the discounted free cash flow are equal ($V_u = V_l$) and capital structure is irrelevant (Marks & Mirvis, 2010). The proposition II of Modigliani & Miller states that the increase in financial leverage results in growth in the required rate of return on equity.

The Independence Hypothesis argues that both companies' common stock price and composite cost of capital depends on the degree of financial leverage that the firm chooses.

## 2.6 Other Motives

### 2.6.1 Tax Motive

Most governments tax companies based on their net profits. Therefore, tax may push companies to combine their assets. For example, some governments might exempt merged companies from paying some taxes. In particular, the 1986 Tax Reform exempted companies that merged with unprofitable firms from paying taxes. Therefore, these motives have a significant influence on mergers and acquisitions since it contributes to the profitability of the involved companies (Trautwein, 2013).

### 2.6.2 Diversification

Ultimately, companies that participate in M&A activities in Turkey do so due to the need to diversify their market and sources of raw materials. Diversification enables companies to conduct their business in a new market without incurring additional marketing costs. Also, acquisition reduces the bargaining power of the suppliers and buyers. In this context, both the buyers and suppliers cannot alter prices of services or products of the formerly separated companies (Gaughan, 2010).

### 2.6.3 Acquisition of Control

Acquisitions that results in transfer of control causes a shift in the boundary of the acquiring company and can alter the incentives of the acquiring firm to invest in the target or transfer technology. Research reveals that the acquisition of control is less necessary in labor-intensive industries and more common in the presence of proprietary assets (Ravenscraft & Scherer, 2011). Countries having

poor enforcement and protection of the minority shareholder rights encourages the acquisition of majority's control. Joint returns should increase if the transfer of control results to transfer of technology and an increase in investment. Acquiring firms may gain if they manage to achieve control of the acquired firms. Therefore, acquisition of control is a significant motive for M&A activities.

According to a survey made by Acuris Global (2018), the main factors which drive the acquirer to reach an acquisition decision are as follows, which illustrates that recently i.e. in 2014-2018, the typical motivations have changed throughout the history with the fact that the main reason for an acquisition has become geographical reach expansion by 65 percent.

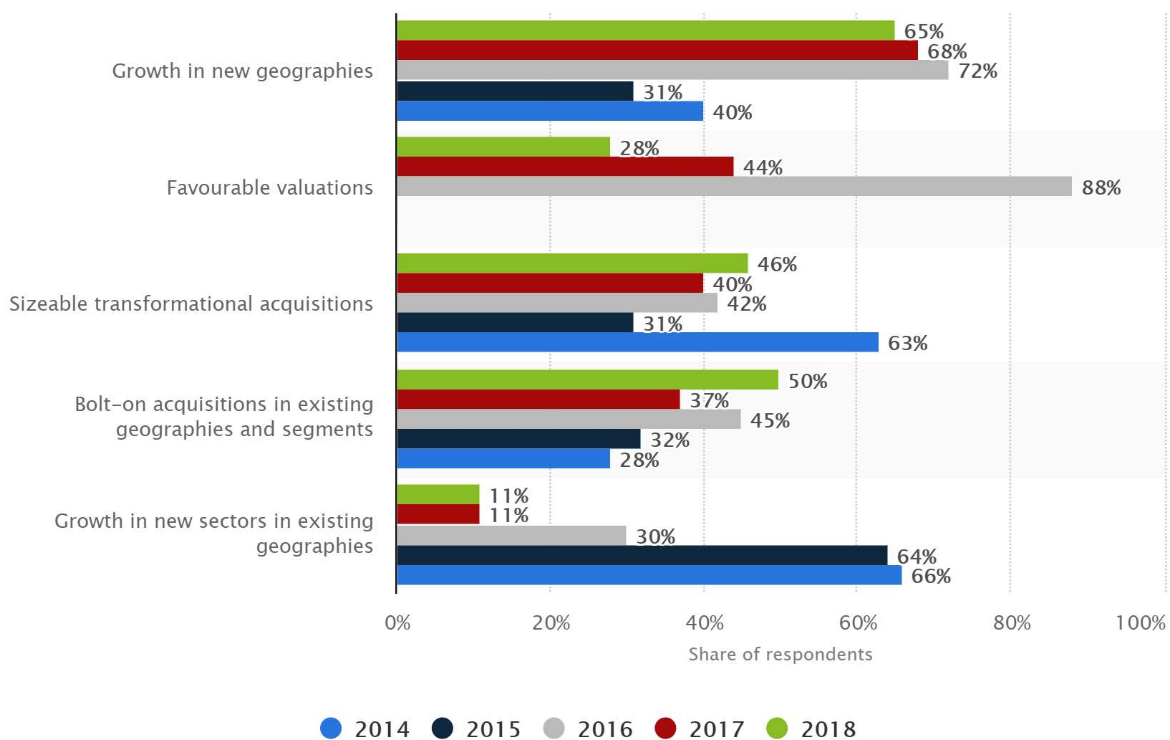


***Figure 6:*** *Acquisition motivations in Europe in 2014-2018*
***Source:*** *statista.com*

## 2.7 Motives of M&A activities in Turkey

Several factors are known to push companies in Turkey to opt for mergers and acquisitions. The main motive is usually to avoid financial distress (Gurbuz, Yanik & Ayturk, 2013). The Competition Board in 1997 came up with a set of regulations that determines which type of mergers are permitted and to ensure competition does not lead to the exit of firms from the market. They also keep record of the merger and acquisitions which take place in Turkey. Taxation is also another motive that pushes firms in Turkey to merge. Acquisition of assets from the smaller firm enables the bigger firm to avoid any risks of historic tax and commercial liabilities. Proceeds from the asset transfer are considered as part of the commercial income (Gurbuz, Yanik & Ayturk, 2013). The Government of Turkey has set a number of guidelines and regulations revolving around mergers and taxes through avenues such as the corporate tax law and establishment of the Banking Regulation and Supervision Agency (Gurbuz, Yanik & Ayturk, 2013).

In relation to the corporate tax law, the profits that result from the M&A transactions are usually exempted from the corporate tax, so long as the procedures laid down in the corporate law are well complied with (Bakir, & Öniş, 2010). Additionally, profits realized as a result of spin-off as well as share exchange transactions do not attract additional taxation so long as the stipulated conditions are adhered to well. Spin-off transactions are also exempted from the stamp taxes (Bakir, & Öniş, 2010). Introduction of these new regulations have encouraged many companies to opt for mergers and acquisitions.

Changes in the regulatory environment, Turkish Commercial Code (TCC) in this case, has the proficiency to accelerate M&A activity on the basis of eliminating lack of transparency which is existing due to valuation gaps and regulatory obstacles. According to a survey conducted by KPMG (2010) among participants including executives, lawyers and investment bankers, the most critical

limitations on M&A transactions are regulatory obstacles and valuation gaps by 27% and 23% respectively. 73% of the participants of the survey possess an expectation of a Turkish Commercial Code reform and 92% of them forecast a positive impact on the M&A transactions specifically due to the compliance to Basel III and Solvency II of financial institutions and insurance companies which can increase transparency and identifying risks. Hence, new amendments of Turkish Commercial Code have the potential of encouraging foreign investors by enhancing the transparency of the financial environment. Additionally, pursuant to Article 147 of Turkish Commercial Code No. 6102, the purpose and the motivations of the mergers should be included in the merger report (pwc, 2017). Thus, the status of regulatory environment is a significant motivation for a merging decision.

Categorically, examining the foreign direct investment in the financial services in Turkey can result in interpreting of the motivations in a different way.

Akguc (2007) specifies these motivations by the time the study was conducted:

- ✓ Higher profitability of Turkish financial sector relative to other countries
- ✓ Liberalization and privatization policies of Turkey
- ✓ Lower market penetration rates compared to developed countries
- ✓ Geopolitics of Turkey
- ✓ Accession process of Turkey to the European Union
- ✓ Banking reform of Turkey

The influence of the FDI in the financial services in Turkey can be observed effortlessly in the Figure below in billion dollars. Value of cross-border M&A deals is higher than the domestic ones in total with 54% throughout the period of 2003-2015 which can be associated with the motivation of geographical reach expansion as noticed in the previous section. In 2005-2008, prior to the global

financial crisis, total deal value of outbound M&A deals with a percentage of 79 surpasses the value of inbound M&A deals predominantly. The largest decline of number of foreign deals can be observed between 2008 and 2009 by 87,5%, which is related to the aftermath of 2007-2008 financial crisis. Additionally, within the same period, the most active industry is the financial services by far: 45% of the acquirers and 20% of the targets operate in the banking (Akdogu,2011). Hence, the motives for cross-border M&A deals in the financial services can signify a general overview of the drivers of M&A activities in Turkey.

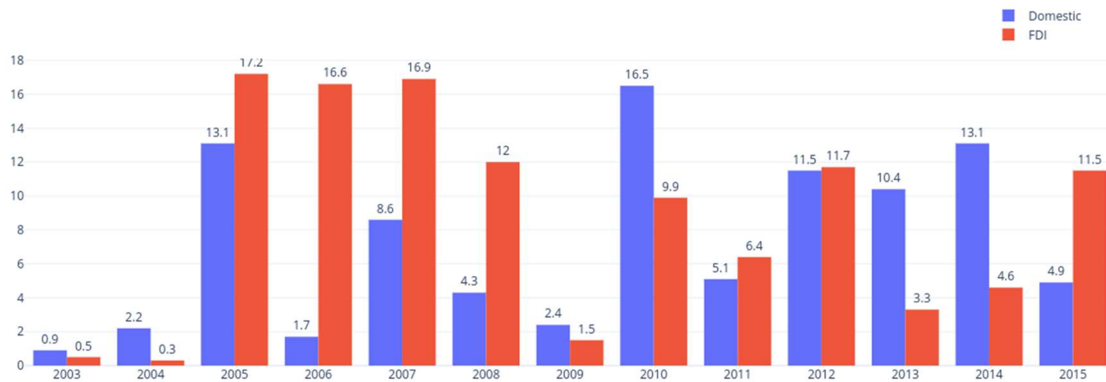


***Figure 7:*** *Values of the domestic and foreign M&A deals in Turkey in 2003-2015*
***Data retrieved from:*** *Deloitte, 2015, "Annual Turkish M&A Review"*

# 3 VALUE CREATION OF M&A ACTIVITIES IN TURKEY: A COMPARATIVE ANALYSIS

## 3.1 How to measure value creation?

As highlighted before, exclusively, the synergies, which are one of the most influential motivations, can be found in the quantitative results of the abnormal returns. Common financial indicators such as operating margins, i.e. EBITDA, ROE and EPS depend merely on the existing as well as the past. Albeit, these measures are imperative to evaluating the performance of the company, they only possess a momentary focus and not convenient enough to evaluate value creation. The attainment of shareholder returns is detectable in the presence of value creation. Therefore, the stock prices in the market should be examined, which are the only publicly available information and indicate the promising earnings in the market. As a measure, stock prices can signal the potential change in the value creation, i.e. the target's and the acquirer's tangible and intangible assets, critical decisions which are taken and operational strategies. Accordingly, total shareholder returns are meaningful for evaluating the potential value creation (pwc, 2018).

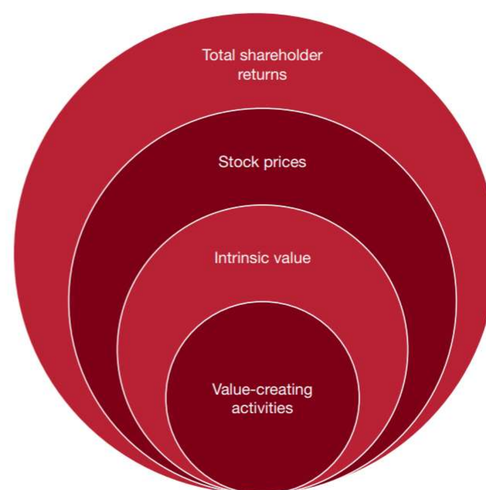


***Figure 8:*** *Measuring value creation*
***Source:*** *pwc, 2018, "Value creation: Laying the foundation for mergers and acquisitions"*

### 3.1.1 Abnormal return analysis

Financial literature usually aims at measuring value created in a merger transaction and how such incremental value is shared by the firms involved (Lubatkin, 2013). The value creation or destruction as a result of a merger is usually determined by measurement of the average abnormal stock market reaction in response to the merger. In the case of an efficient capital market, the prices of stocks usually adjust quickly after the announcement of the merger (Lubatkin, 2013).

According to Huyghebaert & Luypaert (2012) as well, the best assessment strategy for a value creation of a M&A deal would be the measurement of the abnormal returns about the day of announcement. The examination period of the event can determine the outcome of the abnormal return analysis, hence the returns can be inspected in two different periods: In the short run and the long run.

#### 3.1.1.1 Returns in the Short Run

According to Lubatkin (2013), in the short run, the targets enjoy positive returns while the bidders experience zero returns. Therefore, shareholders for the bidder companies realize positive abnormal returns. However, the returns greatly depend on the type of payment as well as the type of the target firm. It has been found out that at the time of announcement of M&As, the abnormal returns are usually hire for the acquirer firms that use cash to make the merger transaction than those that use stocks. Therefore, offers involving cash yield significantly increased abnormal returns to the shareholders of the acquirer firms as compared offers involving stocks. On the other hand, acquirer

firms often spend huge premiums on merger transactions that involve stocks that those financed by cash. This is because when premium is paid in cash, it is readily taxed. Therefore, the acquirer firms pay huge premiums to the shareholders of the target firms as a compensation for the taxed cash that would have been evaded when the transaction was based on stocks.

#### 3.1.1.2 Returns in the Long Run

It is argued that in the long run, acquirers have a high chance of experiencing abnormal returns. In a study conducted by Ismail, Abdou, & Annis, (2011), it was found out that stockholders in the acquirer firms fail to gain from the M&A activity in the long run. For the acquirers that opt to pay using cash, they experience positive abnormal returns while those that opt to pay with stock experience negative abnormal returns. It has been argued that investors fail to assess the financial impact that may result from merger announcements and ends up in financial problems.

At the time of the merger, acquiring firm's stockholders tend to earn normal returns resulting from the M&A activity just as any other risky production activity. However, for the acquired firm, its stockholders suffer from abnormal to the tune of 14% for around seven months post the M&A activity (Abdou, & Annis, 2011). Additionally, for the merged entity, it experiences a cumulative average negative returns to the tune of -0.014 for the first one month and 10 days after the merger (Ma, Whidbee, & Zhang, 2011). It is anticipated that the merged companies experience abnormal returns for the first ten months after the merger.

#### 3.1.1.3 Results of cumulative abnormal return analysis in the world

The condition for the value creation to be proven is the statistical significance of abnormal positive returns of the investment in the acquired firm about the day of announcement. Hence, in the literature, the majority of the papers written about value creation of M&A deals are about cumulative abnormal

returns. As shown in the table below, not all of them were able to reach the statistical significance and positive abnormal returns after the acquisition announcement (Ekholm, 2009). The possibility for the cumulative abnormal returns would be positive in a shorter event window is higher. Particular attention should be given to the variety of the event windows, thereby the standardization of the examination of the cumulative abnormal returns is a bit demanding. Ekholm (2009) maintains that the uncertainty of the conflicting results cannot be eliminated, howbeit the acquisitions are examined within the same period.

| Year | Author | Period | Market | No. of deals | Event-window | | CAR |
|---|---|---|---|---|---|---|---|
| 1980 | Firth | 1969-1975 | UK | 642 | [-1, 1] | months | - |
| 1980 | Dodd | 1970-1977 | US | 151 | [-40, 40] | days | - |
| **1989** | **Franks and Harris** | **1955-1985** | **UK** | **1058** | **[- 4, 1]** | **months** | **+** |
| **1990** | **Mitchell and Lehn** | **1980-1988** | **US** | **232** | **[-1, 1]** | **days** | **-** |
| 1991 | Franks, Harris and Titman | 1975-1984 | US | 399 | [-5, 5] | days | +/- |
| 1991 | Lang *et al* | 1968-1986 | US | 87 | [-5, 5] | days | +/- |
| **1994** | **Smith and Kim** | **1980-1986** | **US** | **177** | **[-1, 0]** | **days** | **-** |
| **1997** | **Holl and Kyriazis** | **1979-1989** | **UK** | **178** | **[0, 2]** | **months** | **-** |
| 1998 | Higson and Elliot | 1975-1990 | UK | 1660 | [0, 3] | months | + |
| **2000** | **Walker** | **1980-1996** | **US** | **556** | **[-2, 2]** | **days** | **-** |
| **2003** | **Sudarsanam and Mahate** | **1983-1985** | **UK** | **519** | **[-1, 1]** | **days** | **-** |
| **2004** | **Gupta and Misra** | **1980-1998** | **US** | **285** | **[-10, 10]** | **days** | **-** |
| **2004** | **Song and Walkling** | **1985-2001** | **US** | **5726** | **[-1, 0]** | **days** | **+** |
| **2004** | **Campa and Hernando** | **1998-2000** | **EU** | **262** | **[-30, 30]** | **days** | **-** |
| **2006** | **Ben-Amar and Andre** | **1998-2000** | **Canada** | **238** | **[-1, 1]** | **days** | **+** |

***Table 1:*** *Important CAR studies done to examine value creation activities*
***Source:*** *Ekholm and Svensson (2009), "Value creation through mergers and acquisitions", pg.11*

### 3.1.1.4 An example of an abnormal return analysis in Turkey

One of the most important analyses conducted about the value creation is by Akben-Selcuk(2015). The author prepared her dataset from various industries with 67 companies targeted in total. The data are taken from Dealwatch and Is Yatirim. The aim of the study was to inspect the abnormal returns

around the acquisition announcement event. As it can be seen in the figure below, on the event date the average abnormal return is 1,97 and it is statistically significant and positive simultaneously, in this manner positive value can be created by investing in the declared companies of the M&A deals. Positive and significant returns prior to the announcement date confirm that there is a high probability of information asymmetries, which resulted in positive returns for the parties who are closer to the information.

| Day | AAR(%) | Day | AAR(%) |
|---|---|---|---|
| -10 | 0.04 | +1 | **1.56**** |
| -9 | 0.84 | +2 | -0.53 |
| -8 | -0.14 | +3 | 0.84 |
| -7 | 0.22 | +4 | 0.64 |
| -6 | -0.23 | +5 | 0.26 |
| -5 | -0.19 | +6 | 0.61 |
| -4 | -0.77 | +7 | 0.50 |
| -3 | -0.69 | +8 | 0.83 |
| -2 | **1.21*** | +9 | -0.23 |
| -1 | **1.72***** | +10 | 0.07 |
| 0 | **1.97***** | | |

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

***Table 2:*** *Average abnormal returns of 67 Turkish companies between from January 2000 to December 2014*
***Source:*** *Akben-Selcuk, 2015, "Do mergers and acquisitions create value for Turkish target firms? An event study analysis"*

### 3.1.2 Other financial indicators for determining value creation

In reference to the section, "How to measure value creation?"; typical financial indicators such as EBITDA, ROE and ROA, are long term based and past oriented indicators and their capability to demonstrate value creation of M&A activities is hence limited. When examining specific events such as M&A deals, for instance, EBITDA has the ability of dampening the effects of tax and capital structure changes (Barber & Lyon, 1996). Additionally, they continue to state that leverage may arise

for a deal and the resulting change in the capital structure has no impact on EBITDA. An acquisition also means a differentiation in the tax rates, depreciation and amortization expenses which certainly does not affect EBITDA, since their effects are absent in the profitability calculation.

A problematic issue would be the different application of accounting methods of the two sides of the M&A deal, principally the choose of cash or accrual basis may be derived from a geographical difference which specifies the change in the accounting standards. Accordingly, EBITDA values could be altered by adding the effects of the working capital (Barber & Lyon, 1996).

A mix of both measures of EBITDA and ROA would result in a compact analysis. Appropriately, an important study about EBITDA in the Turkish market is conducted by Arslan and Simsir (2014). They examined the EBITDA/Total assets, which is a modified version of return on assets (ROA) and EBITDA/Total sales, which can be a suitable financial indicator for the profitability. The aim of their study is to investigate the unadjusted operating performance of the acquired company within the event period of three years before and after the acquisition. The data consisting 71 public listed companies in 17 different industries is retrieved from Thompson Reuters Securities Data Corporation. Applying one-sample t test for mean values and one sample Wilcoxon signed-ranked test for median values with the hypotheses that mean and median values are equal to zero, following results can be observed in the table below. During the pre-announcement window, the mean and the median of the values are statistically significant and positive. Additionally, the indicators signal a lower performance after the acquisitions in comparison with the pre-event window. Arslan and Simsir (2014) emphasize that the decrease in both values for Turkish acquired firms contradicts with the expectation of an increasing firm performance occurring after the M&A activity which could imply that the value creation in for the target firms are mostly negative unlike the most of the abnormal return studies in the literature.

|  | EBITDA/Total assets | | | EBITDA/Total sales | | |
|---|---|---|---|---|---|---|
| Years | N | Mean | Median | N | Mean | Median |
| t-3 | 56 | 0,019*** | 0,020*** | 54 | 0,089** | 0,067*** |
| t-2 | 57 | 0,018*** | 0,018*** | 55 | 0,079 | 0,081*** |
| t-1 | 59 | 0,019*** | 0,014*** | 57 | 0,200*** | 0,061*** |
| t | | | | | | |
| t+1 | 49 | 0,005 | 0,009 | 47 | -0,072 | 0,039 |
| t+2 | 46 | 0,010* | 0,004* | 46 | -0,083 | 0,031* |
| t+3 | 46 | -0,023** | -0,013* | 44 | -0,490* | -0,041 |

*Significance level at 10%, **at 5%, ***at 1%

***Table 3:*** *Pre- and post- acquisition of operating performance of Turkish target firms from various industries*
***Data retrieved from:*** *Arslan and Simsir (2014), "Satin Alim Öncesi Ve Sonrasi Türk Hedef Şirketlerinin Finansal Performansi"*

An adjusted version of ROA was used before, nonetheless the typical ROA, as an accounting measure, can also be observed for the evaluation of the value creation. Return on Assets pinpoints the capability of a company's earnings performance compared to its total assets. The mostly accepted formula in the literature is the net income divided by the total assets. The efficiency of future earnings generation can be measured by ROA. Additionally, ROA was investigated more than other accounting-based measures such as, ROE and ROS, in the literature, since ROA as an indicator possesses less tendency to be manipulated by the financial analyst compared to the others aforementioned (Thanos and Papadakis,2012).

A study conducted by Eyuboglu and Sevim (2017), indicates the results of the return on assets before and after the announcement and their significance in Table 4, 13 public listed acquiring companies in Turkey between 2008-2010 not in the industry of financial services in an event window of (-3,+3). The examination of the ratios, specifically the ROA ratio of the acquirers before and after the M&A announcement is the mostly used method for value creation, which is in parallel with the study of Thanos and Papadakis (2012). The outcome in the most cases is statistically insignificant declining

profitability (5 decreases in total) for the acquirer after the M&A deal, which again complies with the international literature, as emphasized by Thanos and Papadakis (2012).

| | ROA | | |
|---|---|---|---|
| Acquirer | t-3 | t+3 | Significance |
| CIMSA | 17.2 | 9.3 | 0.18 |
| ZOREN | -1.8 | -4.1 | 0.70 |
| KENT | 4.2 | -0.3 | 0.13 |
| EMNIS | -7.9 | -12 | 0.42 |
| PINSU | 9.6 | 1.06 | 0.03 |
| PRKME | 17.5 | 17.3 | 0.97 |
| KARSN | -9.7 | -5.1 | 0.60 |
| KRDMD | 9.37 | 7.91 | 0.83 |
| KOZAA | 14.7 | 22.5 | 0.31 |
| TEKTU | -4.3 | 1.3 | 0.00 |
| BRISA | 6.8 | 8.1 | 0.65 |
| MILPA | -8.4 | -16 | 0.35 |
| DEVA | 1.10 | 1.78 | 0.96 |

***Table 4:*** *ROA values of 13 Turkish acquirer companies between 2008-2010*
***Source:*** *Eyuboglu and Sevim, 2017, Birleşme ve Satın Alma Faaliyetlerinin Finansal Oranlar Üzerindeki Etkisi: Türkiye Örneği*

### 3.1.2.1 CAMELS analysis for the banking industry

Another method which can be applied to assess the value creation performance of the M&A deals would be the CAMELS analysis. The acronym CAMELS is an abbreviation of "Capital adequacy, Asset quality, Management, Earnings, Liquidity and Sensitivity to Market Risk" which constitutes the conditions to determine a bank's overall situation. By origin, in 1979, it was applied by Federal Financial Institutions Examination Council to rate the overall performance of the banks. Ulteriorly, the acknowledgement as a standard audit tool to evaluate the soundness of financial institutions. In Turkey, one and only, Banking Regulation and Supervision Agency is authorized for applying this method officially (bddk.org.tr, 2018). According to Banking Regulation and

Supervision Agency (2014), typically, the scale of the rating is 1 to 5 for all the components of the analysis, namely "C", "A", "M", "E", "L" and "S".

The rating for each component is calculated based on the financial ratios and their weights in the table below. Therefore, the outcome of the analysis will be more precise and versatile for a financial performance evaluation of the M&A deals, since it incorporates multiple financial indicators, in contrary to the single financial measures, i.e. ROE and EBITDA.

| Capital Adequacy | Asset Quality | Management |
|---|---|---|
| Capital Adequacy Ratio; 0,40 | Loans / Total Assets; 0,20 | Current + Saving Deposits / Total Deposits; 0,15 |
| Equity / Total Liabilities; 0,20 | Fixed Assets / Total Assets; 0,20 | Net Income Per Branch (Growth Rate); 0,20 |
| Equity / Net Loans; 0,20 | Nonperforming Loans / Gross Loans; 0,30 | Non-Interest Exp. + Impairment Exp. / Total Assets; 0,20 |
| Equity / Total Assets; 0,20 | Specific Provision Reserve / Nonperforming Loans; 0,15 | Net Interest Income / Non-Interest Expenses; 0,15 |
| | Bearing Assets / Total Assets; 0,15 | Net Interest Income / Net Income; 0,15 |
| | | Net Interest Income / Non-Interest Expenses; 0,15 |
| **Earnings** | **Liquidity** | **Sensitivity** |
| Net Income/Total Assets; 0,25 | Liquid Assets/Total Assets; 0,30 | Securities Portfolio/Total Assets; 0,30 |
| Net Income/Equity; 0,25 | Liquid Assets/Total Foreign Liabilities; 0,25 | Bearing Assets/Costly Liabilities; 0,30 |
| Net Interest Margin; 0,20 | Gross Loans/ Deposit; 0,20 | Net Interest Income/Total Assets; 0,40 |
| Non-Interest Expenses/ Net Interest Income+ Non-Interest Income; 0,15 | Customer Deposits/ Total Funding; 0,25 | |
| Non-Interest Income/Net-Interest Income + Non-Interest Income; 0,15 | | |

***Table 5:*** *Financial ratios and their weights under each category of CAMELS analysis*
***Data retrieved from:*** *Ghazavi and Bayraktar, 2018, "Performance Analysis of Banks in Turkey Using Camels Approach Case Study: Six Turkish Banks During 2005 To 2016"*

Nonetheless, in a recent study by Coskun et. al. (2016) the 1-to-5 rating approach is not applied due to the difference in the acquisition periods. Hence, the application in their study is based on the eight steps below. The last step was disregarded by Coskun et.al. (2016).

**1)** Determination of ratios, weights and reference values

**2)** Calculation of index number, division of ratios by reference value and multiplication by 100.

**3)** Calculation of standard deviation values

**4)** Calculation of standard deviation values based on the weight of the corresponding ratio

**5)** Summation of new standard deviation values for each component

**6)** Multiplication of component values by their weight

**7)** Summation of new component values

**8)** Determination of CAMELS rating in a scale of 1 to 5.

In the study, the CAMELS analysis was conducted in an event window of (-3,+3) years to evaluate the financial performances of the three target banks acquired by three foreign banks. The related information can be found in Appendix. The CAMELS values of the banks were compared to the reference value of zero. The assumption is that the mean value of the financial ratios of all Turkish banks leads to a calculation of a CAMELS ratio of zero. The results in the Figure proved that the financial performance of the banks worsened after the acquisitions, analogous to other Turkish studies of value creation despite the shift in the method applied.

| | Denizbank | | Finansbank | | Oyak Bank | |
|---|---|---|---|---|---|---|
| | t-3 | t+3 | t-3 | t+3 | t-3 | t+3 |
| C | -16,02 | -8,32 | -20,75 | -0,10 | -11,95 | -6,16 |
| A | 16,11 | 9,35 | 39,61 | 7,65 | 39,54 | 18,00 |
| M | -2,24 | -22,17 | 41,59 | -20,39 | 6,57 | -37,90 |
| E | 18,44 | -3,86 | 26,25 | -12,09 | 43,85 | -52,87 |
| L | 14,58 | -27,79 | -33,22 | -23,05 | -27,35 | -18,62 |
| S | -9,70 | -96,95 | -86,79 | -113,76 | -30,98 | -81,87 |
| CAMELS ratio | 5,58 | -14,32 | 5,14 | -15,86 | 13,07 | -20,25 |

***Table 6:*** *CAMELS components results of target banks before and after acquisition*
***Source:*** *Coskun and Kargin, 2016, "Sınır Ötesi Birleşme ve Satın Almaların Bankaların Finansal Performansına Etkileri: Üç Banka Üzerinde CAMELS Analizi"*

In our report, the largest decline in value of cross-border M&A deals was observed after the 2007-2008 financial crisis. The change of the CAMELS ratios in the aforementioned study tends to refer to a consistency of both results. The event window applied for the corresponding study coincides with the pre- and post-crisis era, namely, 2006-2010, hence the ambiguity of the reason explaining the massive decline of CAMELS ratio should be evaded by expanding the sample or changing the event window. Accordingly, investigating the impact of the M&A deals for a changing period can alter the negative outcome of the CAMELS analysis. BBVA acquired 24,9% and 14,89% stakes of Garanti Bank in 2010 and 2014, respectively (Deloitte, 2010:2014). Decreases of CAMELS ratios by 7,59% in 2011 and 1,57% in 2015, demonstrates the declining performances after the M&A transactions.

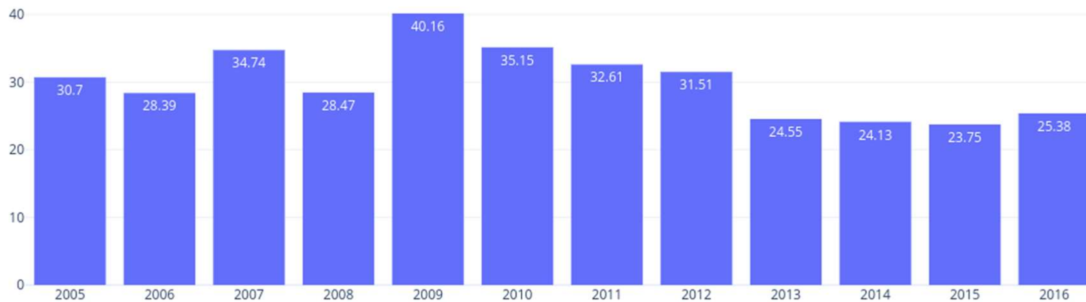


***Figure 9:*** *CAMELS ratios of Garanti Bank in 2005-2016*
***Data retrieved from:*** *Ghazavi and Bayraktar, 2018, "Performance Analysis of Banks in Turkey Using CAMELS Approach Case Study: Six Turkish Banks During 2005 To 2016"*

# 4. QUANTITATIVE ANALYSIS

## 4.1 Methodology

### 4.1.1 Introduction

This chapter of methodology describes the actual method that used to search for M&A transactions in Turkey and the companies involved. This is followed with analysis of various parameters to determine the value creation abilities of M&A transactions in Turkey. It outlines the approaches used to search for the merged companies, the techniques used to gather the information as well as analysis of the gathered data.

### 4.1.2 Research Method

In Chapter 4.2, the research was conducted based on three companies at the Istanbul Stock Exchange (BIST) in the period of 2010-2015. The aim of this study was to examine the behavior of the companies' stock prices against mergers and acquisitions activities. Analogous to the other value creation studies indicated above, the data includes three companies from different industries which can be examined in Section 4.2.

### 4.1.3 Approach used

#### 4.1.3.1 Event study approach

In Chapter 4.2, the event study approach was employed, analogously to the abnormal return study done by Akben-Selcuk (2015), but with a smaller sample to check the compatibility of the results. The purpose of this methodology is to reveal whether the announcements of mergers and acquisitions decisions have any effect on the stock returns of the companies which are involved. By this method, the scope of the effectiveness of Istanbul Stock Exchange will be checked. An event study is an

empirical method conducted to weigh the capability of a specific occurrence linked to any company on stock prices and adopted extensively today. To determine the possibility of an excess return close to the announcement date is the primary aim of an event study. According to Rao (1995), excess returns are the returns which are acquired in the event of a non-disclosure to the market and they can fluctuate around the values of the expected returns. The affiliation is between the performance of these returns and the total market index and it results in a denotation of the abnormal returns.

### 4.1.4 Research Strategy Employed

The main idea behind this report was to assess M&A activities in Turkey and their ability to create value for the companies involved. Therefore, to permit an in-depth analysis of some of the companies that have ever participated in M&A activities, an event study approach was used.

### 4.1.5 Method of Collecting Data

Since the report is based on data from secondary sources, sources that include published journals from the merged companies, M&A transaction reports in Turkey, annual financial statements and reports from the merged companies were used for determining the announcement date. The retrieved information was both qualitative as well as quantitative and related to M&A activities in Turkey.

### 4.1.6 Analysis of Data

For the analysis, the method used by Samontaray and Choudhary (2006) is applied. Analogous to aforementioned studies and results, the abnormal returns of the companies in the M&A deals in Turkey around the announcement day were analyzed. However, in the analysis, a simpler approach was used to evaluate the statistical significance of abnormal returns.

At first, the event study should be conducted by analyzing the fluctuations in the stock prices. The cruciality of resolving the exact date and the time interval is not to be neglected. After determining the time interval, the estimated return of the stocks should be calculated for each company in the analysis. To determine the expected return, market index returns and stock returns for each company should be retrieved from a reliable data source. For each day in this time interval, it is required to calculate stock returns and market index returns.

The daily return for a stock is as below.

$$R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}} \text{ (I)}$$

- $R_{it}$ : the daily return of a stock price of the company *i* on the day *t*
- $P_{it}$ : the stock price of the company *i* on the day *t*
- $P_{it-1}$ : the stock price of the company *i* on the day *t-1*

Similarly, the daily return of the market index is as below.

$$R_{mt} = \frac{P_{mt} - P_{mt-1}}{P_{mt-1}} \text{ (II)}$$

- $R_{mt}$ : the daily return of the composite market index on the day *t*
- $P_{mt}$ : the closing price of the composite market index on the day *t*
- $P_{mt-1}$ : the closing price of the composite market index on the day *t-1*

The next step after calculating the daily returns and the market index returns is to calculate the expected returns.

With the help of the Capital Asset Pricing Model it is more accurate to complete the calculations for the abnormal return as in the equation (III).

$$AR_{it} = R_{it} - (\alpha_i + \beta_i \, x \, R_{mt}) \text{ (III)}$$

Lastly, the cumulative abnormal returns should be obtained by the formula given below. (IV)

$$CAR_{it} = \sum AR_{it} \text{ (IV)}$$

According to Beyazitli (2008), the case of a differentiation of the calculated cumulative abnormal values from zero indicates that the given stock exchange is not “semi-strong efficient”. Therefore, abnormal returns can be obtained by following the acquisition announcements, vice versa.

The $P_{mt}$ values for Istanbul Stock Exchange (XU-100 index) and the $P_{it}$ values for the 3 companies were retrieved from the Istanbul Stock Exchange database, the announcement dates of the acquisition from the website of the Public Disclosure Platform subsequently. $\alpha$ and $\beta$ values were estimated for an estimation window of (-30, -240) to prevent the overlapping with the event window, thus the acquisition event has no impact on the parameters. The statistical results were calculated by Event Study Tools.

### 4.2 Merged Companies in Turkey: Abnormal return analysis

Results reached by aforementioned calculations establish the graphs underneath. The quantitative analysis investigates a small dataset with 3 companies included in the Istanbul Stock Exchange Corporate Index with 10 years price data of 20 companies in 2006-2016. The firms were set with the

purpose whether the acquisition announcements in various industries possess discrete impacts on the cumulative abnormal returns within the event window.

| Acquirer | Target | Stake | Industry | Announcement date |
|---|---|---|---|---|
| Banco Bilbao Vizcaya Argentaria S.A. | Garanti Bank A.S. | 24,9% | Banking | 02-11-10 |
| Anadolu Grubu | Migros Ticaret A.S. | 40,25% | Retail supermarket | 31-12-14 |
| SOCAR Turkey Enerji A.S. | Petkim Petrokimya Holding A.S. | 10,3% | Petrochemistry | 09-05-12 |

***Table 7:*** *Three companies selected in abnormal return analysis*

The abnormal returns were investigated for 30 days to inspect the compliance with the other Turkish scientific papers i.e. Kucuksille and Mizrahi (2015) and to check whether a longer event period leads to a significant change of the results.

Table 8 and 9 show the results of the statistical analysis namely t-test for single firms. The entity of non-zero abnormal returns after the announcement event is not congruent with the efficient-market hypothesis. To take into account the possibility of predicting the event, cumulative abnormal returns must be calculated. The most critical requirement for a t-test is to build up a null hypothesis. Thus, the null hypothesis is;

$H_0$: Average abnormal and cumulative abnormal returns are equal to zero. There is a "semi-strong" market efficiency.

The other hypothesis is;

$H_1$: Average abnormal and cumulative abnormal returns are not equal to zero. There is no "semi-strong" market efficiency.

Table 8 proves the existence of average abnormal returns induced on the acquisition event date, for Petkim there is some positive abnormal returns, yet the others possess negative returns. On the announcement date, the abnormal return of Petkim, Garanti and Migros are 0.0074; -0,0164 and

-0,0119; respectively. None of them is statistically significant. All of the highest returns for all companies are statistically significant. An ex-post evaluation of the event date implies that there are statistically significant AR values at different confidence intervals. The maximum abnormal returns can be seen on t+10; t+11 and t-6 respectively.

| | Petkim | | | Garanti | | | Migros | | |
|---|---|---|---|---|---|---|---|---|---|
| | AR | t-Stat | Significance | AR | t-Stat | Significance | AR | t-Stat | Significance |
| t-15 | 0.0024 | 0.2077 | No | 0.0110 | 0.9605 | No | -0.0320 | -2.7891 | 99% CI |
| t-14 | -0.0038 | -0.3292 | No | -0.0021 | -0.1824 | No | 0.0154 | 1.3416 | No |
| t-13 | 0.0041 | 0.3608 | No | -0.0093 | -0.8154 | No | 0.0060 | 0.5218 | No |
| t-12 | 0.0064 | 0.5590 | No | -0.0211 | -1.8367 | 90% CI | 0.0046 | 0.4036 | No |
| t-11 | 0.0014 | 0.1255 | No | -0.0168 | -1.4622 | No | 0.0159 | 1.3881 | No |
| t-10 | -0.0056 | -0.4920 | No | -0.0017 | -0.1515 | No | -0.0201 | -1.7573 | 90% CI |
| t-9 | -0.0052 | -0.4514 | No | 0.0292 | 2.5446 | 95% CI | -0.0183 | -1.5972 | No |
| t-8 | -0.0163 | -1.4221 | No | -0.0193 | -1.6852 | 90% CI | 0.0059 | 0.5170 | No |
| t-7 | 0.0169 | 1.4751 | No | 0.0139 | 1.2113 | No | -0.0024 | -0.2082 | No |
| t-6 | 0.0056 | 0.4895 | No | 0.0112 | 0.9747 | No | 0.0193 | 1.6825 | 90% CI |
| t-5 | 0.0090 | 0.7811 | No | -0.0031 | -0.2726 | No | -0.0163 | -1.4202 | No |
| t-4 | -0.0001 | -0.0059 | No | -0.0086 | -0.7497 | No | 0.0045 | 0.3906 | No |
| t-3 | -0.0014 | -0.1233 | No | 0.0134 | 1.1670 | No | 0.0026 | 0.2237 | No |
| t-2 | -0.0029 | -0.2531 | No | 0.0029 | 0.2550 | No | -0.0043 | -0.3786 | No |
| t-1 | 0.0015 | 0.1267 | No | 0.0075 | 0.6527 | No | 0.0088 | 0.7650 | No |
| t | 0.0074 | 0.6461 | No | -0.0164 | -1.4280 | No | -0.0119 | -1.0418 | No |
| t+1 | -0.0089 | -0.7747 | No | -0.0103 | -0.9025 | No | -0.0069 | -0.5993 | No |
| t+2 | -0.0088 | -0.7700 | No | 0.0124 | 1.0829 | No | -0.0111 | -0.9710 | No |
| t+3 | 0.0078 | 0.6837 | No | 0.0001 | 0.0063 | No | -0.0024 | -0.2108 | No |
| t+4 | -0.0145 | -1.2664 | No | 0.0207 | 1.8047 | 90% CI | -0.0045 | -0.3927 | No |
| t+5 | -0.0069 | -0.6030 | No | -0.0031 | -0.2699 | No | -0.0051 | -0.4463 | No |
| t+6 | 0.0018 | 0.1582 | No | -0.0156 | -1.3632 | No | 0.0138 | 1.2047 | No |
| t+7 | -0.0070 | -0.6146 | No | -0.0152 | -1.3223 | No | -0.0098 | -0.8511 | No |
| t+8 | 0.0011 | 0.0987 | No | 0.0004 | 0.0343 | No | -0.0155 | -1.3540 | No |
| t+9 | -0.0044 | -0.3799 | No | 0.0027 | 0.2313 | No | 0.0071 | 0.6184 | No |
| t+10 | 0.0237 | 2.0700 | 95% CI | -0.0011 | -0.0927 | No | 0.0105 | 0.9181 | No |
| t+11 | -0.0140 | -1.2235 | No | 0.0305 | 2.6652 | 99% CI | -0.0059 | -0.5153 | No |
| t+12 | 0.0113 | 0.9828 | No | -0.0001 | -0.0081 | No | -0.0045 | -0.3952 | No |
| t+13 | 0.0162 | 1.4130 | No | -0.0021 | -0.1812 | No | -0.0202 | -1.7602 | 90% CI |
| t+14 | 0.0184 | 1.6076 | No | -0.0093 | -0.8120 | No | -0.0254 | -2.2138 | 95% CI |
| t+15 | -0.0168 | -1.4622 | No | 0.0043 | 0.3747 | No | 0.0024 | 0.2097 | No |

***Table 8:*** Results of the AR analysis

The non-significance of the pre-event data is evident for the acquisition of Petkim, yet it is not the only condition for the predictability of the reflection of the announcement information for the pre-event window. Thus, the calculations of Cumulative Abnormal Returns are given below.

| | CAR | | |
|---|---|---|---|
| | Petkim | Garanti | Migros |
| t-15 | 0.0024 | 0.0110 | -0.0320 |
| t-14 | -0.0014 | 0.0089 | -0.0166 |
| t-13 | 0.0027 | -0.0004 | -0.0106 |
| t-12 | 0.0092 | -0.0215 | -0.0060 |
| t-11 | 0.0106 | -0.0382 | 0.0099 |
| t-10 | 0.0049 | -0.0400 | -0.0102 |
| t-9 | -0.0002 | -0.0108 | -0.0285 |
| t-8 | -0.0165 | -0.0301 | -0.0226 |
| t-7 | 0.0004 | -0.0162 | -0.0250 |
| t-6 | 0.0060 | -0.0051 | -0.0057 |
| t-5 | 0.0149 | -0.0082 | -0.0220 |
| t-4 | 0.0149 | -0.0168 | -0.0175 |
| t-3 | 0.0135 | -0.0034 | -0.0149 |
| t-2 | 0.0106 | -0.0005 | -0.0193 |
| t-1 | 0.0120 | 0.0070 | -0.0105 |
| t | 0.0194 | -0.0094 | -0.0224 |
| t+1 | 0.0105 | -0.0197 | -0.0293 |
| t+2 | 0.0017 | -0.0073 | -0.0404 |
| t+3 | 0.0096 | -0.0072 | -0.0429 |
| t+4 | -0.0050 | 0.0135 | -0.0474 |
| t+5 | -0.0119 | 0.0104 | -0.0525 |
| t+6 | -0.0101 | -0.0053 | -0.0387 |
| t+7 | -0.0171 | -0.0204 | -0.0484 |
| t+8 | -0.0160 | -0.0200 | -0.0639 |
| t+9 | -0.0203 | -0.0174 | -0.0569 |
| t+10 | 0.0034 | -0.0184 | -0.0463 |
| t+11 | -0.0106 | 0.0121 | -0.0522 |
| t+12 | 0.0006 | 0.0120 | -0.0568 |
| t+13 | 0.0168 | 0.0099 | -0.0769 |
| t+14 | 0.0353 | 0.0006 | -0.1023 |
| t+15 | 0.0185 | 0.0049 | -0.0999 |

***Table 9:*** *Results of the CAR analysis*

t+14; t+4 and t-1 are the days with the maximum CAR values respectively. The CAR values for the event window of (-15,+15) are 0,0185, 0,0049 and -0,0999, which possess a statistical significance with a confidence level of 99%. This implies a sensitivity of investors to the announcement events. For instance, for Migros cumulative abnormal returns maintain declining and for the others there are negative returns even after the acquisition, which complicate to indicate the positive effect of the announcement event and cumulative returns. The existence of statistically significant abnormal returns and cumulative abnormal returns before and after the announcement event proves that the hypothesis $H_0$ can be rejected and $H_1$ can be accepted for all three of the acquisitions. In Appendix, abnormal return graphs of three companies of the sample can be found as an example. The different trends of increase and decline prove the complexity of determining the positive or negative effects of the announcement events. The presence of an extensive range of factors causes complications for the measurement of the impact of the announcement event to the stock prices.

## 5 COMMENTS AND CONCLUSION

Increasing number of investors tend to earn higher returns by depending on various motivations, hence the decision for a mergers and acquisitions deal is an applicable option. Progress of regulatory environment, corporate governance and technological infrastructure specifically in emerging markets such as Turkish market, have the capability to promote an increase in value and number of M&A transactions.

The generated types of the M&A transactions stem from the type of competition, product lines, distinction in the market segments, range of products and services, types of supply chain relationship and relation of business activities. The number of horizontal mergers in Turkish M&A market have been growing recently, which signals a tendency toward monopoly. The overdue establishment of the commercial code in Turkey possesses a historical acumen explaining the delayed launch of M&A transactions. Exposure to international trade and economic liberalization have boosted the increase in foreign direct investment inflows in terms of value and number since 1980s. The headlines of the drivers behind signing an M&A disclosure agreement defined by the scholars is presented as: Financial, operational, managerial synergies; financial, tax motive; diversification and acquisition of control. Nonetheless, the results of surveys and questionnaires among investors represent the motivations diversely: Geographical reach expansion, regulatory compliance with international standards and transparency are key success factors for the M&A transactions, in emerging markets, exclusively.

The difficulty to quantify value creation generated by the M&A deal, results in a disagreement of the methods in the academic studies. These methods can be divided into two headlines: Abnormal return

and financial ratio analysis. Both methods include the necessity of determining an event window before and after the announcement. Abnormal returns analyses in the international literature investigated cumulative abnormal returns predominantly. For a high number of studies, CAR values are negative, yet narrowing the event window could reverse this trend. A small number of academic studies, diversely, in Turkey applied the cumulative abnormal return approach. Primarily, the methods were based on abnormal returns calculation. Results of most of the studies indicate positive abnormal returns in the pre-event window approaching the announcement date, referring to information asymmetries. The subsequent method is the analyzing returns by assessing accounting-based financial indicators. Due to the lower frequency of financial reporting compared to the daily return data of the stock exchange, the event windows are in a scale of years. In the studies conducted, EBITDA adjusted ROA analysis, which possesses abilities of both measures, indicate a declining profitability, namely value creation, after the announcement year, as well as, the simple ROA analysis. The role of banking sector in M&A deals in Turkey induces the necessity of analyzing it individually. The CAMELS analysis is a compact measurement system for a bank's overall performance which includes the calculation of various financial ratios. Related studies present a decline in the performance of the evaluated banks in Turkey. It is noteworthy that the event window of some Turkish studies coincides with the post-crisis era after 2008, thusly, the simultaneous impact of various factors on the metrics implies an uncertainty of the reason of value creation. Overall, applying one of the methods to determine the value created in the Turkish M&A market would be insufficient to reach an absolute conclusion due to the existence of conflicting results: An abnormal return analysis would assess value creation of an M&A transaction in terms of daily changes in Istanbul Stock Exchange, contrarily a financial metric indicates the long-term performance of the M&A deal.

In the quantitative analysis part of the report, the impacts of the announcement events on stock prices were investigated by an abnormal return analysis due to its short-term basis. Daily rates of returns which occur 15 days before and after the acquisition announcement were determined and calculated for an event study analysis. The obtained results show that impact of the event date is not huge as expected. Investors can earn some abnormal returns followed by the acquisition announcement which is also proven by accepting the hypothesis $H_1$.

Albeit, narrowing the event window from years to days scale does not indicate a definite decline in the abnormal returns, we cannot claim that the announcement events contribute to the existence of positive abnormal returns accurately. Statistical significance can be seen before the event date, mostly. This statistical significance validates that the investments in the stock exchange are sensitive to information including the acquisition announcement since there is some abnormal return. Thus, the stock prices in Istanbul Stock Exchange are neither in equilibrium, nor fairly priced, which means the Istanbul Stock Exchange is not even a semi-strong efficient market, thereby the analysis indicates that the value creation of an investment in the Istanbul Stock Exchange massively depends on insider trading caused by the information asymmetry which complies with the results obtained by Turkish literature, i.e. Kaderli (2007).

Information asymmetry disrupts the equality of opportunities in a stock market. Aforementioned markets possess a tendency to be effortlessly manipulated by the parties who have better information and the stock market confidence declines. Consequently, the cost of capital increases and hence, extra measures should be taken by the Capital Markets Board and Istanbul Stock Exchange authorities to provide consistency of the value creation before and after an M&A activity. The discrepancy in literature especially concerning the relationship between M&A and value creation justifies the need to carry out this research, particularly to standardize the methods.

## REFERENCES


Akgüç, Ö., 2007, “Türkiye’de Yabancı Bankalar”, Muhasebe ve Finansman Dergisi 36, 6-17.

Akdoğu, E., 2011, “Türkiye’de 1988-2008 Dönemindeki Firma Birleşmeleri”, Birleşme Dalgaları ve Genel Tablo. Muhasebe ve Finansman Dergisi 52, 137-152.

Akben-Selcuk, E., and Altiok-Yilmaz, A., 2011, “The impact of mergers and acquisitions on acquirer performance: Evidence from Turkey”, Business and Economics Journal 22, 1-8.

Andrade G., Mitchell M. & Stafford E., 2001, “New Evidence and Perspectives on Mergers”, Journal of Economic Perspectives, v. 15, i. 2, p.108.

Atanassov, J.,2013, “Do hostile takeovers stifle innovation? Evidence from antitakeover legislation and corporate patenting”, The Journal of Finance, v. 68, i. 3, 1097-1131.

Arslan, H. B., and Simsir, S. A., 2016, “Measuring takeover premiums in cross-border mergers and acquisitions: Insights from Turkey”, Emerging Markets Finance and Trade, v.52, i.1, 188-203.

Akben-Selcuk, E., 2015, “Do mergers and acquisitions create value for Turkish target firms? An event study analysis”, Procedia Economics and Finance 30, 15-21.

Bakir, C., & Öniş, Z., 2010, “The regulatory state and Turkish banking reforms in the age of post-Washington Consensus”, Development and Change, v.41, i.1, 77-106.

Barber, B. & Lyon, J.D. 1996, “Detecting abnormal operating performance: The empirical power and specification of test statistics”, Journal of Financial Economics, 1996, v. 41, i. 3, 359-399.

Bower, J. L., 2013, “Not all M&As are alike: And that matters. In Mergers & Acquisitions”, Routledge, 27-36.

Bddk.org.tr, 2018, “Kurum Hakkında”, https://www.bddk.org.tr/Sss-Kategori/Kurum-Hakkinda/1

Beyazıtlı, E., 2008, “Kâr Payı Dağıtma Duyurularının Firmaların Hisse Senedi Getirilerine Etkisi: İMKB’ye Kayıtlı Taş Toprağa Dayalı Sanayide Faaliyet Gösteren Bazı Firmalar Üzerinde Bir Olay Etüdü Çelişmesi”, Muhasebe ve Denetime Bakış Dergisi 26, 1-16.

Brewer, R., 2014, “Advanced persistent threats: minimizing the damage”, Network security 4, 5-9.

Cartwright, S., and Cooper, C. L., 2014, “Mergers and acquisitions: The human factor”, Butterworth-Heinemann

Cartwright, S., and Cooper, C. L., 2014, “Managing mergers acquisitions and strategic alliances”, Routledge.

Clougherty, J. A., & Seldeslachts, J., 2012, “The deterrence effects of US merger policy instruments”, The Journal of Law, Economics, & Organization, v. 29, i. 5, 1114-1144.

Calipha, R., Tarba, S., & Brock, D., 2010, “Mergers and acquisitions: a review of phases, motives, and success factors.”, Emerald Group Publishing Limited.

Coşkun, S , Karğın, S., 2016, “Sınır Ötesi Birleşme ve Satın Almaların Bankaların Finansal Performansına Etkileri: Üç Banka Üzerinde CAMELS Analizi”, Muhasebe ve Finansman Dergisi 69, 41-60.

Edwards, R. B., & Davis, J. W., 2014, “Forms of Value and Valuation: Theory and Application”, Wipf & Stock Publishing.

Ekholm. D. & Svennson, P., 2009, ”Value creation through mergers and acquisitions – A study on the Swedish market”, Working paper, Lund University.

Erel, I., Liao, R. C., & Weisbach, M. S., 2012, “Determinants of cross-border mergers and acquisitions”, The Journal of Finance, v. 67, i. 3, 1045-1082.

Eventstudytools.com, 2019, “Event Study Calculators [ARC, AVC, AVYC]”; https://www.eventstudytools.com/barc/upload

Eyüboğlu, K , Sevim, U., 2017, “Birleşme ve Satın Alma Faaliyetlerinin Finansal Oranlar Üzerindeki Etkisi: Türkiye Örneği”, Aksaray Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, v. 9, i. 2, 127-138.

Foster, J. B., 2014, “The theory of monopoly capitalism: An elaboration of Marxian political economy”, New York: Monthly Review Press.

Gaughan, P. A., 2010, “Mergers, acquisitions, and corporate restructurings”, John Wiley & Sons.

Gurbuz, A. O., Yanik, S., & Ayturk, Y., 2013, “Income diversification and bank performance: Evidence from Turkish banking sector. Journal of BRSA Banking and Financial markets”, v.7, i.1, 9-29.

Ghazai, M., & Bayraktar, S., 2018, “Performance Analysis of Banks In Turkey Using Camels Approach Case Study: Six Turkish Banks During 2005 To 2016”, Journal of Business Research - Turk, v. 10, i. 2, 847–874.

Grigorieva, S., & Petrunina, T., 2015, “The performance of mergers and acquisitions in emerging capital markets: new angle”, Journal of Management Control, v. 26, i. 4, 377-403.

Hekimoğlu, M. H., & Tanyeri, B., 2011, “Stock Market Reactions to Mergers of Non-Financial Turkish Firms”, SSRN Electronic Journal.

Huyghebaert N. & Luypaert M., 2013, “Value creation and division of gains in horizontal acquisitions in Europe: the role of industry conditions”, Applied Economics, v. 45, i. 14, 1819-1833

Hussinger, K., 2010, “On the importance of technological relatedness: SMEs versus large acquisition targets”, Technovation, v. 30, i. 1, 57-64.

Ismail, T. H., Abdou, A. A., & Annis, R. M., 2011, “Review of literature linking corporate performance to mergers and acquisitions”, The Review of Financial and Accounting Studies 1, 89-104.

Kaderli, Y . "Yapılan İhracat Bağlantılarının İlgili Firmaların Hisse Senedi Getirileri Üzerindeki Etkisinin Olay Etüdü İle İncelenmesi: İstanbul Menkul Kıymetler Borsası’ndaki Bazı Firmalar Üzerine Bir Uygulama". Muhasebe ve Finansman Dergisi (2007): 144-154

Kalecki, M., 2013, “Theory of economic dynamics”, Routledge.

Kiliç, M., 2011, “Cross-border bank acquisitions and banking sector performance: an empirical study of Turkish banking sector”, Procedia-Social and Behavioral Sciences 24, 946-959.

Kucuksille E. & Mizrahi R., 2015, “Bedelsiz sermaye artırımı duyurularının şirketlerin piyasa değerlerine etkisi: Borsa İstanbul örneği”, Journal of Social Sciences and Humanities Researches 35, 129-149

KPMG, 2010, “Turkey M&A Outlook: Identifying opportunities in a changing market”, http://www.turkey-japan.com/business/category1/category1_62.pdf.

Lubatkin, M. ,2013, “Merger strategies and stockholder value”, Mergers & Acquisitions, Routledge, 43-57

Ma, Q., Whidbee, D. A., & Zhang, A. W., 2011, "Value, valuation, and the long-run performance of merged firms", Journal of Corporate Finance 17, 1-17.

Marks, M. L., & Mirvis, P. H., 2010, "Joining forces: Making one plus one equal three in mergers, acquisitions, and alliances", John Wiley & Sons.

Martynova M., Renneboog L., 2005, "A Century of Corporate Takeovers: What Have We Learned and Where Do We Stand", Working Paper, ECGI

Normann, H. T., 2011, "Vertical Mergers, Foreclosure and Raising Rivals' Costs–Experimental Evidence", The Journal of Industrial Economics, v. 59, i. 3, 506-527.

PWC, 2017, "New Turkish Commercial Code: A blueprint for the future", https://www.pwc.com.tr/en/publications/ttk-assets/pages/ttk-a_blueprint_for_the_future.pdf.

PWC, 2018, "Value creation: Laying the foundation for mergers and acquisitions", https://www.pwc.in/assets/pdfs/publications/2018/value-creation.pdf.

Rao, R., 1995, "The determinants of Board composition: an agency perspective", Managerial and Decision Economics 19, 59-69.

Ravenscraft, D. J., & Scherer, F. M., 2011, "Mergers, sell-offs, and economic efficiency", Brookings Institution Press.

Rodriguez, I. H., & Mireles, J. A. M., 2013, "Do mergers & acquisitions undertaken by developed countries acquirers in emerging markets generate more returns than those with US targets?: An event study".

Sahin, O. N., 2016,. **"**Analysis Of Mergers & Acquisitions In Turkey By Years And Comparison With Worldwide, USA, EU And Asia-Pacific Data", Journal of Academic Researches and Studies, v. 8, i. 15.

Samontaray D.P. & Choudhary K., 2013, "Merger & Acquisition in Indian Banking Industry: An Event Study Approach", Australian Journal of Basic and Applied Sciences, v. 7, i. 11, 252-262

Schmidt, B., 2015, "Costs and benefits of friendly boards during mergers and acquisitions", Journal of Financial Economics, v. 117, i. 2, 424-447.

Statista.com, 2018, "European M&A: main corporate reasons for expected acquisition 2014-2018", https://www.statista.com/statistics/410668/europe-m-and-a-acquiring-reasons/.

Thanos, I.C. & Papadakis V.M., 2010, "Measuring the Performance of Acquisitions: An Empirical Investigation Using Multiple Criteria", British Journal of Management, v. 21, i. 4.

Trautwein, F., 2013, "Merger motives and merger prescriptions", Mergers & Acquisitions, Routledge, 14-26.

Tirole, J., 2009, "The Theory of Corporate Finance", Princeton University Press.

Višić, J., & Perić, B. Š., 2011, "The determinants of value of incoming cross-border mergers & acquisitions in European transition countries", Communist and Post-Communist Studies, v. 44, i. 3, 173-182.

Zhang, G., 2013, "Accounting information and equity valuation: Theory, evidence, and applications", New York: Springer.

## APPENDIX

| Acquirer | Target | Year | Stake |
|---|---|---|---|
| Dexia | Denizbank | 2006 | 75% |
| NBG | Finansbank | 2006 | 46% |
| ING Bank | Oyak Bank | 2007 | 100% |

***Table 10:*** *Three cross-border M&A deals examined in CAMELS analysis*

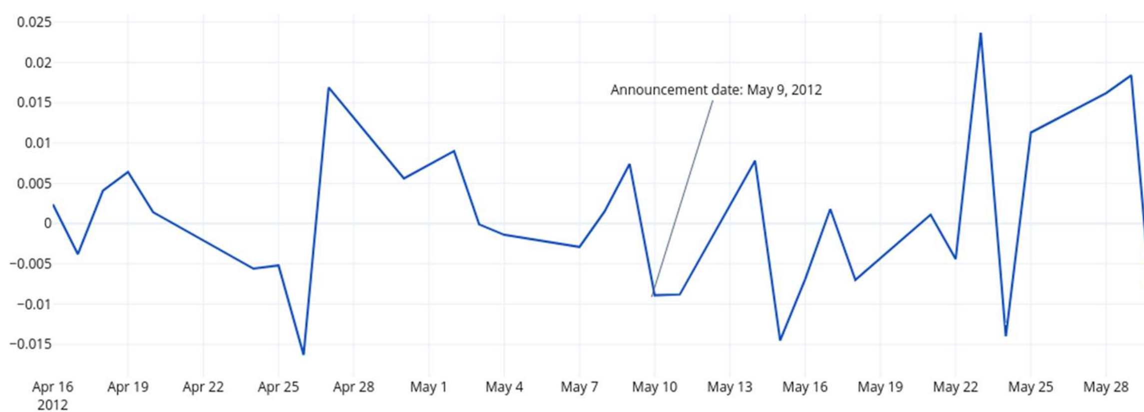


***Figure 10:*** *Abnormal return values of Petkim, in an event window of (-15,+15)*

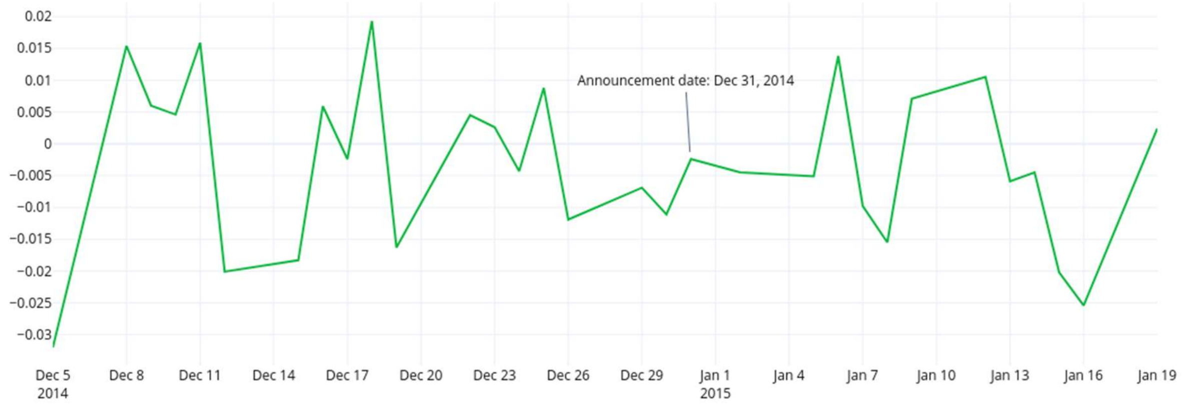


***Figure 11:*** *Abnormal return values of Migros, in an event window of (-15,+15)*

***Figure 12:*** *Abnormal return values of Garanti, in an event window of (-15,+15)*