T. C. DOKUZ EYLÜL ÜNİVERSİTESİ SOSYAL BİLİMLER ENSTİTÜSÜ İNGİLİZCE İŞLETME ANABİLİM DALI İNGİLİZCE İŞLETME YÖNETİMİ PROGRAMI YÜKSEK LİSANS TEZİ

## MERGERS AND ACQUISITIONS AND THEIR EFFECTS ON STOCK PERFORMANCE: EVIDENCE FROM ISTANBUL STOCK EXCHANGE (ISE)

Özlem DEMİRKAPLAN

Danışman

Yrd. Doç. Dr. Berna KIRKULAK

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## YEMİN METNİ

Yüksek Lisans Tezi olarak sunduğum "**Mergers and acquisitions and their effects on stock performance: evidence from Istanbul Stock Exchange (ISE)**" adlı çalışmanın, tarafımdan, bilimsel ahlak ve geleneklere aykırı düşecek bir yardıma başvurmaksızın yazıldığını ve yararlandığım eserlerin bibliyografyada gösterilenlerden oluştuğunu, bunlara atıf yapılarak yararlanılmış olduğunu belirtir ve bunu onurumla doğrularım.

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## Özlem DEMİRKAPLAN

## YÜKSEK LİSANS TEZ SINAV TUTANAĞI

: Özlem DEMİRKAPLAN
: İngilizce İşletme
: İngilizce İşletme Yönetimi
: Mergers and Acquisitions and Their Effects on Stock
Istanbul Stock Exchange (ISE)

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#### ABSTRACT

#### **Master with Thesis**

## Mergers and Acquisitions and Their Effects on Stock Performance: Evidence

## from Istanbul Stock Exchange (ISE)

### Özlem DEMİRKAPLAN

### Dokuz Eylul University Institute Of Social Sciences Department of Business Administration (English)

In recent years, there is an increasing number of research about mergers and acquisitions. Mergers and Acquisitions (M&As) have been one of the favorable methods of achieving growth targets and increasing shareholder value. A merger is the unification of two or more firms into a new one, while an acquisition is one company's purchase of the majority of the shares from another.

This thesis investigates mergers and acquisitions and their effect on stockholders value. Also this thesis discusses the causes and implications of the merger waves and provides empirical evidence on the financial performance of merging firms in the Istanbul Stock Exchange (ISE). The stock performance before and after the merger announcements is investigated by employing cumulative average abnormal returns (CAARs) from 1997 to 2006. The findings present that M&A activities intensified after the 2001 financial crisis. However, it is important to note that manufacturing firms waited to engage in M&A activities until the economy was relatively stabilized. Further, consistent with the previous studies, the findings suggest that although the stock prices prior to merger announcements were more likely to increase, this positive effect disappeared following the M&As.

To verify the analyses, this study includes benchmark methodology for comparing the merged firms' stockholders value with non-merged firms. There are two kinds of control firms which were used in this study. Control firms were classified according to "market equity" and "market to book ratio" of the merged firms. The findings show that the long-run post-takeover performance of the merged firm is better than it would have been without the merger. The benchmark methodology is also implemented for examining the reactions of stock price of non-merged firms in short-run, where the findings are consistent with long-run.

Keywords: Mergers, Stock Returns, Istanbul Stock Exchange (ISE), Benchmarking

#### ÖZET

#### Yüksek Lisans Tezi

## Şirket Birleşmeleri ve Devralmalarının Hisse Seneti Performansı Üzerine Etklieri: İstanbul Menkul Kıymetler Borsası (ISE)'ndan Kanıtlar Özlem DEMİRKAPLAN

Dokuz Eylül Üniversitesi Sosyal Bilimleri Enstitüsü İngilizce İşletme Anabilim Dalı İngilizce İşletme Programı

Son yıllarda şirket birleşmeleri ve devralmalarını konu alan araştırmaların sayısı giderek artmaktadır. Şirket birleşmeleri ve devralmalar, işletmelerin büyüme hedeflerini gerçekleştiren ve hisse senedi değerlerini arttıran yararlı yöntemlerden biridir. Şirket birleşmesi bir ya da daha fazla firmanın yeni bir şirket bünyesinde birleşmesi iken; devralma, bir şirketin diğer bir şirketin hisselerinin büyük çoğunluğunu satın alarak kontrolü ele geçirmesidir.

Bu calışma, şirket birleşmeleri ile devralmaları ve bunların hisse senetleri fiyatları üzerine etkilerini araştırmaktadır. Ayrıca bu tez, şirket birleşmesi dalgalarının sebeplerinden ve oluşumlarından söz etmekte ve İstanbul Menkul Kıymetler Borsası'ndaki birleşme yapan şirketlerin finansal performansları hakkında ampirik bulgular sağlamaktadır. Kümülatif ortalama anormal getiriler yöntemi kullanılarak 1997 ve 2006 yılları arasındaki birleşme duyuruları öncesi ve sonrası hisse senetlerinin performansı incelenmiştir. Bulgular, şirket birleşmeleri ve devralmaların 2001 finansal krizinden sonra yoğunlaştığını göstermiştir. Bununla birlikte, üretim firmalarının birleşme ve aktiviteleri ekonominin devralma için sağlamlaşmasını bekledikleri görülmüştür. Ayrıca, daha önceki çalışmalarla tutarlı olarak, bulgular göstermistir ki; birlesme duvuruları öncesi hisse senedi fivatları artıs göstermesine rağmen bu olumlu etki birleşme sonrası ortadan kaybolmaktadır.

Analizleri çeşitlendirmek için bu çalışma, birleşme yapan şirketler ile yapmayan şirketlerin hisse senedi değerlerini karşılaştırmak amacıyla karşılaştırma ölçütü(benchmark) yöntemini de içermektedir. Bu çalışmada iki kontrol grubu kullanılmıştır. Kontrol grupları, "piyasa değeri" ile "piyasa değeri/defter değer (PD/DD)" oranlarına gore sınıflandırılmıştır. Bulgular; birleşme yapan şirketlerin uzun vadede birleşme sonrası performanslarının, birleşme olmadığındaki performanslarından daha iyi olduğunu göstermiştir. Karşılaştırma ölçütü yöntemi ayrıca; birleşme yapmayan şirketlerin hisse senetlernin kısa vadedeki tepkilerini, uzun vadedeki bulgularla tutarlı olarak, ölçmek amacıyla da uygulanmıştır.

Anahtar Kelimeler: Şirket Birleşmeleri, Hisse Senedi Getirileri, İstanbul Menkul Kıymetler Borsası, Karşılaştırma Ölçütü

## MERGERS AND ACQUISITIONS AND THEIR EFFECTS ON STOCK PERFORMANCE: EVIDENCE FROM ISTANBUL STOCK EXCHANGE (ISE)

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## ABBREVIATIONS

M&A	Mergers and Acquisitions
BHAR	Buy and Hold Abnormal Returns
CAR	Cumulative Abnormal Returns
AAR	Average Abnormal Returns
CAAR	Cumulative Average Abnormal Returns
ISE	Istanbul Stock Exchange
YASED	Foreign Investors Association Turkey
USD	United States Dollar
FDI	Foreign Direct Investment
IDI	International Direct Investment
UNCTAD	United Nations Conference on Trade and Development
LBOs	Lending Buyouts
MBOs	Management Buyouts
EBO	Employee Buyout
US	United States
MNEs	Multinational Enterprises
SARS	Severe Acute Respiratory Syndrome
CEO	Chief Executive Officer
PwC	PricewaterhouseCoopers
EIU	Economic Intelligence Unit
WIR	World Investment Report
IMF	International Monetary Fund
CMBT	Capital Markets Board of Turkey
TCC	Turkish Commercial Code
СМВ	Capital Market Board
CPI	Consumer Price Index
WPI	Wholesale Price Index

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#### **INTRODUCTION**

The phrase mergers and acquisitions refers to the aspect of corporate strategy, corporate finance and management dealing with the buying, selling and combining of different companies that can aid, finance, or help a growing company in a given industry grow rapidly without having to create another business entity.

Growth dominates the minds of CEOs and their Boards. Mergers and Acquisitions (M&A) has been one of the favorable methods of achieving growth targets and increasing shareholder value. In 2007, worldwide M&A activity increased by over 16% to \$1.16 trillion resulting in the highest M&A activity levels since the year 2000 (WIR, 2008). This remarkable growth in activity needs to search on it.

A recent study found that for the first time shareholder value was increased, more than it was reduced as a result of mergers and acquisitions (KPMG, 2003). It was established that 34% of the deals enhanced shareholder value, 32% reduced value and 34% had no effect. This was a significant improvement from the first survey carried out in 1999 where 53% of mergers and acquisitions reduced shareholder value (KPMG, 2003).

Merger waves and the effects of mergers have been the subjects of intense interest by many researchers. There are several factors that push companies to merge or to acquire. Mitchell and Mulherin (1996) argued that merger waves result from financial crises, changes in technology and in economy and regulatory environment. In particular, the periods of financial crises are usually characterized by liquidity problems and hence result in consolidations.

While some studies address the reasons of mergers and acquisitions (M&A), others focus on the impacts of the M&A. In particular, there is a growing concern among researches about the pre-and post-merger performance of the companies regarding the merger announcements. The previous findings prior to merger announcements report positive stock price reactions. Keown and Pinkerton (1981) found significant positive abnormal returns 12 days prior to takeover announcement, which they attribute to illegal trading on inside information prior to the takeover.

Similarly, Dennis and McConnell (1986) document significant abnormal returns prior to merger announcements. However, the findings of stock performance following the announcements are contradictory. While Healy, Palepu and Ruback (1992), Ramaswamy and Waegelein (2003) found an increase in the performance of the companies involved in mergers, Agrawal and Jaffe (2003), Ravenscraft and Scherer (1989), and Dickerson, Gibson and Tsakalotos (1997) found decrease in the stock performance after merger activities.

Given the conflicting research results and in light of the large increase in mergers and acquisitions activity, this approach to organizational growth appears worthy of review. This thesis has three main objectives: (i) to identify the merger and acquisition definition; (ii) to evaluate the link between financial crises and M&A activity; and (iii) to examine the stock price reactions to merger announcement and its effects to shareholders value.

In the early 2000s, the Turkish economy experienced a large wave of mergers and acquisitions. Most of these deals were different from the hostile takeovers. The consecutive economic crises of the 1990's and the ongoing deregulation of Turkish financial markets have motivated many changes in corporate structure. The recent financial crises led to a broad decline in the equity prices and therefore stimulated larger M&A activities. Under the high inflation era of the 1980s and 1990s, investors had become accustomed to high nominal rates of return on their investments. After the implementation disinflationary program the inflation rate sharply declined and this led numerous investors to seek new investment avenues and M&A became popular during the low inflation period.

To our knowledge, there are few studies that comprehensively examine the long-run performance effects of the Turkish mergers. Among them, Citak and Yildiz (2006) examined the buy-and-hold abnormal returns (BHAR) and cumulative abnormal returns (CAR) of post-merge activities for non-financial ISE listed companies from 1997 to 2005. They found a significant positive stock returns 1 month following the merge activities. In the long-run, there is no significant impact of merger announcements on the stock returns.

Mandaci (2004) examined whether the merger and acquisition announcements provides abnormal returns to the stockholders of the companies that are listed in ISE for ten days preceding and ten days following these announcements dates, during 1998-2003 period. Findings show that the statistically significant abnormal returns were observed in the first and in the second day preceding and in the first day following announcement dates. In addition, the cumulative abnormal returns (CAR) were examined for the different event windows and it was found that especially the cumulative abnormal returns (CAR) for the periods before the announcement dates were more statistically significant than those after the announcement dates. This finding shows the existence of the insider traders which indicate that the ISE is not a semi-strong efficient market.

Mandaci (2005) also examined that the effects of merger and acquisition operations on the financial structure and performance of the firms. Her study includes 14 mergers and acquisitions during 1998-2000 period for the manufacturing firms which are traded in ISE and examines the ratios for the 3 years before and after merging events and tries to determine whether the mergers and acquisitions affect the financial structure and the performance of the merging firms. In conclusion, it was found that after the merging operations, firms' current, quick, working capital turnover ratios were decreasing, their total debt/equity ratio was increasing and financial leverage was decreasing. Also their return on assets ratio was decreasing.

The purpose of this study is to examine the causes and implications of the merger wave in Turkey and it provides empirical evidence on the financial performance of merging firms in the Istanbul Stock Exchange (ISE). This thesis investigates the stock performance before and after the merger announcements by employing cumulative average abnormal returns (CAAR) to 37 domestic firms from 1997 to 2006. As it is difficult to avoid the effects of rumor of a merger or an acquisition, it is important to show the stock performance prior to the merger announcements. Therefore, the stock price reactions are examined 12 months prior to merger announcements and the post-merger performance for 12 months after the merger the stock returns of merged firms with non-merged firms. The benchmark group consists of control firms that are not subject to M&A. Each of them contains

36 non-merged ISE-listed firms. These firms are selected based on the closest value of "market equity" and "market to book ratio" of merged firms. In this methodology, merged firms are compared with the control firms in short- and long-run.

The contribution of this thesis is in three parts. First; this thesis gives descriptive background for mergers and acquisitions. It describes types and classification of M&As in detail. Second, this thesis examines merger waves from past to present in particular after the period of the 2001 financial crisis. The thesis reconsiders the connection between the financial crisis and the merger activities in Turkey. Third, it provides empirical evidence of stock returns reactions to M&As before and after the merger announcements. Furthermore, to verify the analyses, the benchmark methodology is applied. The findings give insights into the evolving M&As market in Turkey. It also has furnished expectations regarding the future of M&As in world and in Turkey.

The structure of the thesis is following. Chapter 1 includes a comprehensive literature review about definitions, types and classifications of M&A. Besides, the forces behind mergers and acquisitions are explained according to the literature. Finally, previous studies related with measurement methods for the effects of mergers, which lightened this thesis, are presented. Chapter 2 includes the general perspective of mergers and acquisitions in world. Then, this chapter presents the history and evolution of M&A. Finally, Turkish M&A activities, statistics and predictions about near future of M&A trend in Turkey are presented in this section. Chapter 3 provides statistical analysis and empirical findings of stock price reactions to merger announcements with respect to the companies in Istanbul Stock Exchange (ISE) which has been surveyed towards being domestic and non-financial firms. The research is finalized with the conclusion and recommendation for merger activities in practice.

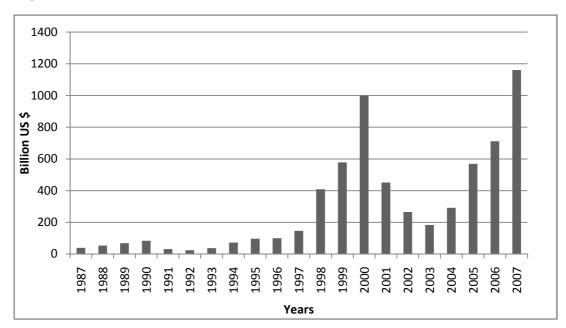
## CHAPTER 1 MERGERS AND ACQUISITIONS

Merger wave model was developed by Gort (1969) as the theory of financial turbulences. According to this theory, merger waves occur when an increase in the general financial activity results in an imbalance in the marketplace of products. Investments who keep a higher positive outlook for future demand from others, give higher price to the bought out companies. Mergers are the result of the efforts for the consolidation of these capital gains (Soubeniotis et al., 2006). When the leading company proceeds to merging movements, then its competitors will follow in the fear that they will stay behind. Thus the actions for the development of the wave are been born. Financial turbulences cause or offer the conditions for larger scale mergers. In some cases, the companies attempt to make mergers when changes are ahead (Davies and Lyons, 1996).

The technological innovations of the '80s in mass production and transportations as well as the innovations in informatics technology in the '90s boosted the merger wave. Changes in the tax system or demographic changes and state regulations in citizens' pensions are examples of changes in the corresponding factors. These factors offer companies the chance to develop new competitive advantages through buyouts and mergers (Soubeniotis et al., 2006).

During the last decade, the increase in the volume of Mergers and Acquisitions (M&A) have become commonplace. According to the International Investors Association (YASED) in Turkey, 716 billion USD of cross-border M&A deals were announced worldwide in 2005 and had a share of 78% in total FDI inflows of 916 billion USD. In 2006, cross-border M&A deals reached 1 trillion USD and have been climbed around 1200 billion USD in 2007. It seems that more and more companies are merging and thus growing progressively larger. The following Figure 1 supports this impression. Low level of interest rates (especially in developed countries) and enhanced financial integration have prompted a surge in M&A activity by investment funds.

Figure 1: Value of Cross-Border M&A (world)



Source: UNCTAD, cross-border M&A database (www.unctad.org/fdistatistics, June 2008).

This section attempted to show that mergers and acquisitions (M&A) activities grow rapidly by indicating the motives behind M&A. However, it is important to know definitions and types of M&A. Then a brief literature review about this study will be given.

#### 1.1. Definitions of M&A

There are various expressions used in finance literature and among practitioners in connection with corporate mergers and acquisitions, including the terms takeover, transaction, consolidation, concentration, fusion, amalgamation, business combination, tender offer, and sell-off (Wirtz, 2003; Cusatis et al., 2001; Jansen, 2001; Weston et al., 2003; Wübben, 2006). In the absence of a uniform definition, these expressions are generally subsumed under the generic term "mergers and acquisitions". The term M&A typically covers a wide range of corporate activities beyond the traditional means of strategic expansion like business combinations and strategic cooperation (Weston et al., 2003; Gaughan, 1999; Herzel and Shepro, 1990; Copeland and Weston, 1988; Wübben, 2006). For example, Copeland and Weston (1988) stated that the "traditional subject of M&A has been expanded to include takeovers and related issues of corporate restructuring, corporate

control, and changes in the ownership structure of firms."<sup>1</sup> Figure 2 displays the various areas of M&A that can be derived from this broad definition<sup>2</sup>.

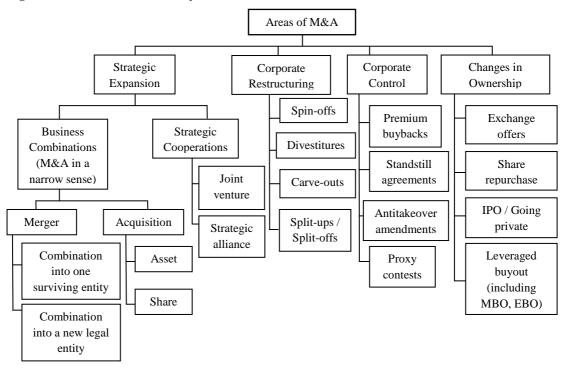


Figure 2: Areas of M&A Activity

Source: Gaughan (1999), p. 7; Copeland and Weston (1988), p. 676; Wübben (2006), p. 6.

Some researchers define a merger that is the unification of two or more firms into a new one, while an acquisition is one company's purchase of the majority of the shares from another (Gilson and Black, 1995; Weston, Mitchell, and Mulherin, 2003).

Additionally it can be said that a merger occurs when one firm assumes all the assets and all the liabilities of another. The acquiring firm keeps its identity, while the acquired firm stops existing. A merger is just one type of acquisition. On the other side, one company (bidder firm) can acquire another in several other ways, including purchasing a part or all of the company's (target firm) assets or buying up

<sup>&</sup>lt;sup>1</sup> Sudarsanam (1995, p. 1) offers a wider definition by interpreting M&A as a "means of corporate expansion and growth".

<sup>&</sup>lt;sup>2</sup> A description of all individual M&A areas is omitted. For a detailed discussion for example refer to Jansen (2001), p. 45 f.; Copeland and Weston (1988), p. 676 ff.

its outstanding shares of stock. In other words; according to Auerbach (1988) and Gaughan (1991), the target firm can either continue independent, or be partially or totally combined into the bidder company, after an acquisition.

The distinction between mergers and acquisitions is mentioned in the study of Brusco et al. (2007). Whereas mergers involve shared ownership in the new firm, they defined acquisitions to be the special case in which one party ends up owning 100% of the new firm, buying out the potential partner entirely.

In action, true mergers are rare. Mostly, one company acquires a majority or minority shares of another. Thereby, the two companies are not legally merged. But, they form an economic unit with both firms remaining legally independent. This kind of merger called as a quasi-merger. The financial results of such a transaction are comparable to those of a true merger (Blumberg, 1993). The term acquisition is often only used when more than 50% of a target company's equity has been purchased by the bidder. Consequently, buyer is gaining complete control over its target (Mueller, 1982). Purchasing a lesser percentage is referred to as minority holdings. Small shareholdings can also exert substantial control of company by capturing the legal right to vote the shares (Blumberg, 1993).

Mergers and acquisitions are generally used together, although they are different from each other theoretically. Internationally, the expression merger and acquisition (shortened as M&A, or simply as mergers or acquisitions) has become a general term that refers to all kinds of activities related to the buying and selling of a company (Straub, 2007). It alludes to classical mergers and acquisitions as well as to management buy-outs and management buy-ins, minority equity purchases, divestitures, spin-offs, joint ventures and strategic alliances (Straub, 2007). In general, however, strategic alliances and joint ventures are frequently considered as an alternative to acquisitions (Straub, 2007).

#### 1.2. Types and Classifications of M&A

There are several ways in which a firm can be acquired by another firm. A buyout does not always lead to a merger of the bought out company. In practice, the implementation of a merger can take other forms; it can be direct or gradual, total or selective resulting in total or partial merging of units, stores, services, resale or closure of others. Usually, the combination of buyout with merger depends on (Soubeniotis et al., 2006):

• The strategy and targets of the companies performing the buyout.

• The business activity and certain basic features of the bought out (corresponding activity, complementarities of operations, compatibility of culture, administrative and labor practices and the existing cooperation schemes between the two companies).

• The general social and economic conjuncture in the country and internationally.

Buyouts and Mergers are distinguished in three ways in Panagopoulou's (2002) study:

#### A) **Depending on the offer:**

• In a *merger*, the boards of directors of two firms agree to combine and seek stockholder approval for the combination. The target firm ceases to exist as a legal entity and becomes part of the acquiring firm.

• In a *consolidation*, a new firm is created after the merger, and both the acquiring firm and target firm stockholders receive stock in this firm. It is the combination of two separate companies to a new company with separate legal existence. In this case, both companies cease to exist. Shareholders' approval is necessary and the administrative executives are entitled to refuse the merging proposal.

• In a *tender offer*, one firm offers to buy the outstanding stock of the other firm at a specific price and communicates this offer in advertisements and mailings to stockholders. By doing so, it bypasses the incumbent management and board of directors of the target firm. Consequently, tender offers are used to carry out hostile takeovers. The acquired firm will continue to exist as long as there are

minority stockholders who refuse the tender. From a practical standpoint, however, most tender offers eventually become mergers, if the acquiring firm is successful in gaining control of the target firm.

• In a *purchase of assets*, one firm acquires particular assets of another, though a formal vote by the shareholders of the firm being acquired is still needed. In this transaction, the company performing the buyout acquires only assets and not obligations. In addition, the selling company maintains its legal existence.

• There is a one final category of acquisitions that does not fit into any of the four described above. Here, a firm is acquired by its own management or by a group of investors, usually with a tender offer. These acquisitions are called *management buyouts*, if managers are involved, and *leveraged buyouts*, if the funds for the tender offer come predominantly from debt.

Furthermore, a public buyout offer exists where the buying company addresses a public invitation to buy a part (usually the majority package) of the common shares of the bought company in a fixed price and in termination date. Usually this offer is subject to certain limitations such as the number of offered shares. The shareholders that offer their shares are paid in money or in securities of the bought out company, usually in common shares. After this transaction, the acquired firm can cease to exist as a publicly traded firm and become a private business. In addition, the administrative executives' consent is not necessary. However, the cooperation of the administration is contributing to the successful implementation of the buyout.

# B) Depending on the position taken by the company's administration:

• A *friendly buyout* occurs, where the administration of the bought out company successfully cooperates for the implementation of the buyout.

• A *hostile buyout* occurs, where the administration of the bought out company rejects the buyout proposal in order to avoid or delay the buyout and takes to defensive tactics.

Schnitzer (1996) focused on one of the most important distinctions between friendly and hostile takeovers, which is the role of the incumbent management. In a 'hostile' takeover, a raider makes a tender offer directly to the shareholders of the target company, without consulting the incumbent management. Each shareholder decides individually whether or not to tender his shares. In contrast, a 'friendly' takeover has to be approved by shareholders and management. The most common friendly acquisition method is a merger.

Morck et al.'s (1988) analysis of hostile takeovers claims that such takeovers take place in swiftly changing or declining businesses and in firms where the management is not able to minimize procedures fast enough, or model other adaptations. Moreover, Hirschey (1986) argues that friendly mergers, hostile takeover bids, and fake outs (including a variety of takeover defenses) can be considered as market mechanisms that help complete the market for managerial talent.

# C) Depending on the correlation of the activities of merged companies or implementation degree:

• *Horizontal Merger:* it concerns companies that belong to the same field, produce similar products and address to the same markets.

• *Vertical Merger:* it concerns companies that are client-supplier related.

• *Conglomerate Merger:* it concerns companies that belong to a different field of economic activity.

• *Concentric Merger:* it concerns participating firms' know-how potentials such as their production technology, distribution system, or research and development capacities.

In a concentric merger, firms can be combined in a useful way so that new core competencies are created, or already existing ones are complemented. The result is an extension of product lines, market participations, or technologies. The main focus is on technology or research and development activities (Straub, 2007).

Wübben (2006) summarizes the categorization of M&A as illustrated in Figure 3.

11

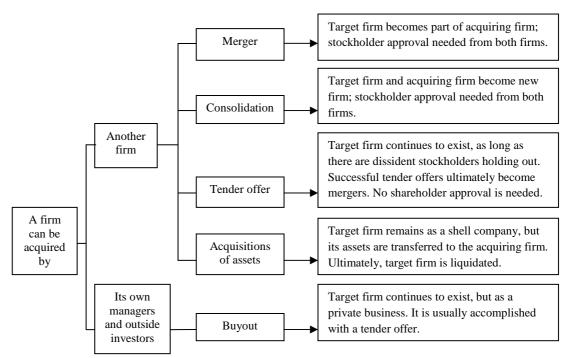
Criteria for Categorizing Mergers and Acquisitions			
Type of Business Combination	Strategic Direction	Acquisition Structure	Status of the Target
- Acquisition	- Horizontal	- Asset Deal	- Private
- Merger	- Vertical	- Share Deal	- Public
	- Conglomerate		
	- Concentric		
Attitude	Form of Payment	Financing	Geographical Focus
- Friendly	- Cash	- Equity	- Domestic
- Hostile	- Securities	- Dept	- Cross-border
		- Hybrid	

Figure 3: Criteria for Categorizing M&A

**Source:** Wübben (2006), German Mergers and Acquisitions in the USA, Gabler Edition Wissenschaft, Germany, p. 7.

Damodaran (2002) summarized the various transactions and the consequences for the target firm by Figure 4 as below:

#### **Figure 4: Classification of Acquisitions**



**Source:** Damodaran (2002), Investment Valuation: Tools and Techniques for Determining the Value of any Asset, 2th edition, John Wiley & Sons, Inc., p. 691.

During the last decade, a new form of mergers is noted known as "going private transactions". These mergers are facilitated with high bank lending and appear in the following forms (Gaughan, 1999; Kootz, 1996):

• *Lending Buyouts (LBOs):* it is the buyout of all shares or the assets of a company which is already introduced to the Stock Exchange by a group of investors through a transaction that is mainly financed via lending. Investors usually are financially supported by enterprise specializing in buyouts or by Investment Banks that arrange such transactions. Following the buyout, the bought out company operates as a company with few shareholders which outside the framework of the stock market.

• *Management Buyouts (MBOs):* it is the buyout that starts with the initiative of a group of management executive who buy out part of the company's shares. The remaining money is deposited by investment banks either as share capital or loans.

• *Unit MBOs:* it is a special form of a company buyout where buyers, usually guided by a manager of the mother company, buy a subsidiary company. Buyers pay part of the capital while the remaining capitals are drawn by investment banks in the form of share and loan capital.

• *Reverse LBOs*: according to this form, the shareholder of a company which is not introduced to the stock exchange participate in the issuance of rights concerning a company already introduced to the stock exchange, and uses the drawn capitals in order to buy out the first and secure its introduction to the Stock Exchange.

#### 1.3. Driving Forces behind M&A

Research on M&A activity has predominantly focused on value addition (Seth, 1990; Jensen and Ruback, 1983) and post-merger performance (Healy et al., 1992). Analysis of the intent of M&A activity has not received as much research attention (theoretical and empirical), as the consequences of M&A.

Andrade et al. (2001) have studied M&A activity and suggest that industry level changes like deregulation and technological innovations act as shocks, leading

to mergers. Jensen and Ruback (1983) have classified acquirer intents into four categories – to reduce production or distribution costs, financial motivations, to gain market power in product markets, and to eliminate inefficient target management. McCann (1996) has elucidated the following benefits accruing to service firms – (1) increased economies of scale, (2) increased market share, (3) more efficient resource allocations, (4) the ability to provide new services, (5) a larger asset base, (6) added name recognition, and (7) acquisition of expert talent lacking in one or the other firm.

Brouthers et al. (1998) have identified 17 merger motives, grouped into three categories – economic, personal and strategic motives<sup>3</sup>. Lubatkin (1983) has identified three potential sources of strategic relatedness between the acquiring and target firms, that could be treated as motives for mergers – technical economies (scale economies through improving process efficiencies), pecuniary economies (achieved through dictating prices by exerting market power), and diversification economies (improving a firm's performance relative to its risk attributes through managing a portfolio of businesses). Walter and Barney (1990) have analyzed the relative importance of merger motives across different M&A types.

Several principles form the basis for the value addition observed in M&A activity. In some cases the underlying cause is clear; in others it may be impossible to distinguish between two or more possible sources. Most observers agree that mergers are driven by a complex pattern of motives, and that no single approach can render a full account. Basic motives for undertaking M&A activity has been summarized by Trautwein (1990) as shown in the following table:

<sup>&</sup>lt;sup>3</sup> Economic motives include marketing economies of scale, increasing profitability, risk spreading, cost reduction, technical economies of scale, differential valuation of target, defense mechanism, responding to market failures, and creating shareholder value; Personal motives include increasing sales, managerial challenge, acquisition of ineffective management, and enhancing managerial prestige; and Strategic motives include pursuit of market power, acquisition of a competitor, acquisition of raw materials, and creation of barriers to entry.

#### **Table 1: Theories of Merger Motives**

	Merger Motives		Theories	Description
		Net gains through synergies	Efficiency theory	Exploiting financial, operational, managerial synergies
	Margar hanafita	Wealth transfers from customers	Monopoly theory	Achieving market power
Mergers as rational choices	Merger benefits bidder's shareholders	Wealth transfers from target's shareholders	Raider theory	Activities of 'corporate raiders'
		Net gains through private information	Valuation theory	Exploiting information asymmetries between the acquirer and the public
	Merger benefits managers		Empire-building theory	Managers' personal benefits rather than shareholder value
Merger as process outcomes		Process theory	Strategic decision processes leading to (and after) the merger	
Merger as macro-economic phenomenon		Disturbance theory	Mergers as a consequence of economic disturbances	

**Source:** Trautwein, F, 1990, "Merger Motives and Merger Prescriptions," Strategic Management Journal, Vol 11, No 4, p 284.

#### **1.3.1. The Efficiency Theory**

In the strategy and industrial organizational research, M&A are frequently described in terms of synergies or efficiencies. These descriptions are based on the hypothesis that due to operational, managerial and financial synergies, combined companies produce more benefits than two companies working independently (Straub, 2007).

Operational synergies produced by an M&A refer to economies of scale, scope, as well as experience. The theory of economies of scale is based on decreasing marginal production costs while increasing the output volume (Hughes et al., 1980) through which plant-specific and product-specific economies of scale can be achieved. If a company is below the minimum efficient size, it can decrease its costs by increasing or reorganizing its manufacturing output after an M&A. Cost savings can also be obtained because a bigger production volume allows the utilization of another, more efficient manufacturing technology.

Production-linked scale economies may be achieved in the areas of purchasing or inventory management in the case of mergers involving firms using common raw materials or components. In addition to production, scale economies may be present in other functional areas of a business such as advertising, distribution, service networks, and research and development (Porter, 1980; Scherer, 1970).

Economies of scope can also generate operational synergies that arise from the advantages provided by a multi-product company and lacking in a single-product company. This is, however, only relevant where an M&A enlarges a firm's product line and where there are complementarities, such as the multiple usages of brand names, distribution channels, or a customer base. These complementarities might simplify the process of entering other markets, or just help to achieve a larger market share. Furthermore, companies can lower prices through bundling strategies, which means linking the sales of various products (Straub, 2007).

An additional competitive advantage produced by M&A is economies of experience. This term refers to the learning curve outcomes and the exchange of management know-how between the two firms involved in an M&A. Although economies of scale and economies of experience frequently go well together, they are evidently different. This distinction is mentioned by Straub (2007) as economies of scale indicate the efficient utilization of production technologies and machinery throughout a certain time, while economies of experience are difficult to grasp and refer to each company employee's cumulative knowledge.

Managerial synergies are sometimes coupled with economies of experience and constitute another possible motive for a merger (Hughes et al., 1980; Trautwein, 1990). This occurs when it is presumed that the bidding company has greater management skills, which will allow it to run the acquired company more efficiently. In addition, a change of ownership and management could streamline a firm's managerial overheads (Scherer and Ross, 1990). Theoretically, this could also be obtained through change in management styles; it is usually a lot easier and more beneficial to change the management itself.

Differing completely from M&A being undertaken to achieve managerial synergies is the concept of undertaking M&A to achieve a market for corporate control. The market for corporate control can be defined as "a market in which alternative managerial teams compete for the rights to manage corporate resources" (Jensen and Ruback, 1983). Managerial synergies focus on a firm's market valuation and the optimal utilization of its assets. The hypothesis that a management's main objective is to maximize shareholder value is also fundamental to this motive. If a firm's management invests in disadvantageous projects instead of returning the money to the stockholders, rival companies' management teams, who identify these management inefficiencies, will try to buy the particular company and replace the executives. To summarize, M&A are used as a disciplinary measure exerted by the capital market as a replacement for the lack of internal control by the stockholders (Jensen and Ruback, 1983).

Achieving financial synergies is a possible cause of M&A (Jensen and Ruback, 1983; Trautwein, 1990). One way to achieve this is by lowering the systematic risk of a company's investment portfolio by investing in unrelated businesses. Another way is increasing the company's size, which may give it access to cheaper capital. A third way is establishing an internal capital market. As the internal market has access to better information, this implies that it can allocate capital more efficiently (Trautwein, 1990). Potential tax savings are another reason that is often cited as a motive for M&A activities (Scherer, 1988; Steiner, 1975). Internal capital transfers, as well as the pooling of losses might reduce the acquirer's tax obligations. Differently, these tax advantages are only for the companies involved, but do not benefit the economy in general (Hughes et al., 1980).

#### **1.3.2.** The Monopoly Theory

The monopoly power theory takes a company's market share and its barriers to entering other markets. A significant motive for M&A is that it helps increase the firms' market power through increase in size (market shares). Increase in market shares leads to an increase in industry concentration, which provides firms with greater growth opportunities through access to better technology, control over demand and supply of intermediary products and services, or the power to set prices, establish industry norms (dominant designs) in technology or (best practices) customer service (Lubatkin, 1983). Straub (2007) mentioned a clear relationship between barriers to entry, market share, and a company's profits. The greater the market share, and thus a company's monopoly power, the greater autonomy it has to fix its prices and increase its profitability.

A firm can acquire a larger volume of operations sooner if it goes for horizontal acquisition, rather than developing internally. Horizontal M&A, imply a quick and easy ability to increase a company's market share and reduce competition in a specific industry. The resulting increase in market share will help the firm achieve economies of scale and pursue more growth opportunities. In vertical acquisitions, the firm gets control over its resources and raw materials through backward integration; marketing capability and distribution network through forward integration. This will give the acquiring firm better control over a larger part of the value chain, which in turn, will give the firm an advantage over its competitors. Similarly, access to better technology is also a reason for a firm acquiring another firm (Hughes et al., 1980; Trautwein, 1990). On the other hand, target firm's motive for M&A is similar. If a firm cannot acquire another firm with better control over the value chain, it can sell off itself to the larger firm. Being a part of a larger firm, it will have easier access to markets, capital and technological resources and it will help growing faster.

Past studies show that the market power theory is weaker than the efficiency theory in explaining merger and acquisition (Trautwein, 1990). Empirically, little proof has been found of the monopoly motivation. It is therefore not surprising that according to managers, M&A are not undertaken in order to realize monopoly power. M&A gains are not derived from the M&A's construction of monopoly market power (Jensen, 1984).

### 1.3.3. The Raider (Speculation) Theory

Holderness and Sheehan (1985) interpret the term as meaning a person who causes wealth transfers from the stockholders of the companies he bids for. These wealth transfers include greenmail<sup>4</sup> or excessive compensation after a successful takeover. Those who usually organized M&A also did so when these activities only had a modest probability of securing substantial monopoly power. Another ruse that these promoters employed to obtain additional large earnings for themselves was to manipulate the market by distributing fake information, such as rumors, or other suspect techniques (Straub, 2007).

Although promoters are no longer as influential as they were, speculation could still be an issue affecting M&A. For instance, Hughes et al., (1990) maintain that currently inside managers occasionally take on the role that outside promoters had historically taken. Earnings not based on real economic profits, could be made through pre-M&A speculation with the target company's shares by managers of both the acquirer and the target company. It is evident that these actions are illegal from the perspective of current legal norms.

On the whole, Trautwein (1990) dismisses this M&A motive as being irrational and doubtful by empirical research, which discovered that normally it is not the acquiring company or its stakeholders, but the target's stakeholders who gain from an M&A (Trautwein, 1990; Jensen, 1984).

<sup>&</sup>lt;sup>4</sup> Greenmail is when a company buys enough shares in another company to threaten a takeover and makes a profit if the other company buys back its shares at a higher price. Family control would prevent any hostile takeover or greenmail attempt. In other words; greenmail means threat to control a company by buying a large amount of its shares (in order to sell them back to the company at an inflated price).

#### **1.3.4.** The Valuation (Information) Theory

According to Trautwein (1990), a company's present market price does not mirror its proper value. Market inefficiencies due to an asymmetric distribution of information can lead to undervaluation. The acquiring firm may know more about the target company's financial state than the market itself, and may be more knowledgeable regarding how to manage the company productively. At the same time combining the target's businesses with their own, acquirer firms may have information about possible advantages. As a result, it regards the target firm's proper value as being higher than its current market price, in which case, the acquirer is stimulated to buy the company. The primary motive for such an M&A activity is therefore the market's inefficiency and not the gaining of synergies.

This does not mean that the valuation and the efficiency assumptions are not linked to each other. A firm that purchases an undervalued company does so because it presumes it could manage the target firm better than its existing management. This hypothesis therefore partially includes the gaining of synergies (Straub, 2007). Additionally, Straub (2007) mentioned a difference between efficiency theory and valuation theory. The efficiency motive centers on real profits resulting from synergies, whereas the valuation motive emphasizes M&A from a financial point of view.

Actually, corporate trading activities are based on financial markets' assumptions and not on an individual company's financial states. Related to this assumption, the valuation motive opposes the efficient capital markets approach. As a result, the capital market theory rejecting the theory. But, there is a potential to link this M&A motive to the efficient market theory. For instance, if one were to assume that private information regarding the company is available, a possible acquirer could value a company differently than the rest of the market. However, through his bid, the share price will nevertheless increase, and he would lose the advantage he had by possessing critical information. Consequently, the supposition of an efficient market does not preclude the existence of undervalued target firms, but only the possibility of capitalizing on revealed private information (Trautwein, 1990).

#### **1.3.5.** The Empire-Building (Agency) Theory

In this theory, managers could try to realize insider advantages contrary to the stockholders' interests lead to the managerial M&A motives. The central focus is the manager and his benefits, which could clash with the stockholders' interests.

According to Trautwein (1990), mergers are planned and executed by managers who thereby maximize their own utility instead of their shareholders' value. In the literature, two models are described by Marris (1963) and Baumol (1967). Both claim that managers try to maximize revenues and asset's growth rates as well as that of sales but they are not sufficient to lead the maximization of stockholders' wealth. The motive for this conduct could be managers' efforts to guard their personal interests. These motives, like power and prestige, cannot be measured in monetary terms. As Marris (1963) mentioned, managements are likely to see the growth of their own organization as one of the best ways for satisfying personal needs and ambitions, an attitude which is reinforced by psychological tendencies to identify the ego with the organization. Therefore, the desire to maximize revenues and assets as well as sales' growth rates is more strongly linked to a firm's size and growth rate than to its profitability. Regarding risk by managers is another important viewpoint to consider (Straub, 2007). Managers are usually regarded as more risk averse than shareholders. Their whole livelihood, nonmonetary rewards, human capital as well as financial rewards are contingent upon the advantages that the company enjoys, while stockholders can spread their risk.

Managers may overestimate their capabilities to positively integrate and better manage the target company. As a consequence, their M&A activities do not improve. Failure occurs when managers are motivated by the wish to build an empire which means numerous M&A (Scherer and Ross, 1990). It could suggest a reason for failures and to cause difficulties if they do not stop acquiring companies.

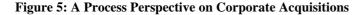
Jensen and Meckling (1976) formulated the implications of agency problems. Agency problems occur when the separation of ownership and management leads the management to work towards their personal benefit rather than the benefit of owners. In most public firms, the top management owns little or no shares in the firm. Such separation of ownership between the agents (managers) and principals (owners) could also arise from the lack of motivation by minority owners (who own a small proportion of shares) to monitor and control the strategies of the managers. A number of repayment arrangements and the market for managers may soften the agency problem (Fama, 1980). The agency problem could be handled by either making the managers more accountable to the shareholders, or increasing the stake of the managers in the firm through various stock ownership plans. Agency problems also give rise to merger motives of the empire-building theory (Trautwein, 1990).

Strongly associated with the managerial motives, but frequently mentioned independently, is Jensen's (1986) free cash flow motive, which called agency theory for M&A. This principal-agent relationship leads to difficulty in respect of the utilization of free cash flows. It is claimed that managers tend to control capital flows instead of giving them to the stockholders. Acquiring a firm is therefore a technique through which to achieve control of such capital flows (Jensen, 1986). Therefore, increased free cash flows can impact M&A activities.

#### **1.3.6.** The Process Theory

This theory depends on strategic decision processes in the organizations. According to this theory, decisions are not rational choices, but rather the results of existing processes characterized by the persons concerned and their environment. Organizational routines, political interests, and managers' former experiences are, for example, essential contextual and environmental motives that could impact the process of decision making and its outcomes (Straub, 2007).

As a result, M&A are not regarded as outcomes of rational strategies, but rather as negotiated results of in-house decision-making processes. According to Jemison and Sitkin (1986), M&A are processes that influence firm activities and results. Consequently, the process perspective emphasizes that the acquisition process is an important determinant of acquisition activities, in addition to strategic and organizational fit, that affects acquisition outcomes. Figure 5 shows a process perspective on corporate acquisitions.





**Source:** Jemison D. B., Sitkin S. B. (1986). Corporate Acquisitions: A process perspective. Academy of Management Review, 11(1): 146.

There is less evidence relating to this motive then empire-building theory (Trautwein, 1990). The scarcity of direct evidence can be seen as being caused by managers attempt to rationalize their actions. This would also explain the overall complexity associated with researching this motive for M&A. However, Trautwein (1990) supports this motive as one of the most favorite explanations for M&A. Trautwein (1990) highlights that together with the empire-building and valuation motives, it has the highest degree of logic and therefore ought to be paid more attention while examining M&A.

#### **1.3.7.** The Disturbance Theory

Gort's (1969) disturbance theory based on that merger waves are caused by economic disturbances. They cause changes on expectations of individuals and increase the level of uncertainty. According to Gort (1969), the economic disturbance increases the variance in valuations because scarcity of information about the past affects predicting the future negatively.

For an M&A to occur, the existing expectations have to change. This theory suggests that differences in expectations increase in times of economic disturbance (Straub, 2007). For instance, if expectations change, so that the acquirers' management turns out to be more optimistic and the target's management (and the both company's shareholders) become rather more pessimistic, thereby, large numbers of shares will change hands and an M&A will take place (Straub, 2007).

This theory is not considered further for three reasons (Trautwein, 1990). First, it does not discuss the institutional framework for mergers. Second, most disturbances are of a sectoral nature. This should lead to a sectoral pattern of mergers. Third, Gort's (1969) account of how disturbances affect individual expectations is not sufficient for his hypothesis that this overturns the ordering of expectations.

## CHAPTER 2 GLOBAL MERGERS AND ACQUISITIONS

Firms decide to merge or acquire other companies for various reasons. Some transactions may be motivated by firms trying to take advantage of free cash flows. Others may be explained by the strategies pursued by multinationals to enter new markets and extend their competitive advantage abroad, to seek strategic assets such as technology and management capabilities, to realize economies of scale and scope by restructuring their businesses on a global basis and, to eliminate actual or potential competitors. Merger activity can have substantial and complex effects on the economy and therefore deserves attention (Ray and Mukherjee, 2008). In addition, macroeconomic indicators such as the evolution of overall M&A activity may be useful in assessing business dynamism and confidence and to help forecast economic performance (Regling, 2004). Finally, an analysis of M&A at the global level can help to explain flows of FDI around the world and serve as a basis for a better assessment of European, Turkish and world economic integration. In this way, this thesis aims to give a fundamental perspective to further researches.

Understanding the drivers of mergers and acquisitions means that understanding their cyclical nature.<sup>5</sup> Historically, there were five M&A waves: the 1890s, the 1920s, the 1960s, the 1980s, and the 1990s. Horizontal and vertical M&A were common before the third M&A wave. Until the forth M&A wave, efficiency gain was stressed as the outcome of M&A. The post-1995 is classified to be the fifth M&A wave, which focuses on the strategic M&A for rapid size growths of global MNEs (multinational enterprises). Accordingly, the frequency of world M&A has sharply increased until the 2000 and M&A cash flows show an identical pattern.

The Turkey's M&A waves are deeply associated with the M&A waves in the US and Europe. Therefore, this section traces the evolution of world-wide M&A waves and studies the M&A activity of Turkey.

<sup>&</sup>lt;sup>5</sup> One of the earliest documentations of this phenomenon is demonstrated by Golbe and White in 1993.

### 2.1. M&A Activities in Globe

To understand M&A activity in Turkey, first of all we should consider worldwide activities generally as an introduction. There are several general trends. As summarized by MacCarthy and Schmidt (2006), in the 1980s, the M&A market was primarily driven by hostile takeovers, demergers of earlier formed conglomerates and higher financial gearing as well as the application of new financial instruments. Up through the late 1990s, the M&A market was characterized by strategic expansion and liquid capital markets. The focus was on technology and growth supported by strong financials. The period between 2000 and 2005 was characterized by a focus on core competencies and profitability rather than growth and expansion. Structural changes in most corporate sectors were driven by increasing internalization and globalization as well as by escalating technological development. As of 2005, a phase of global expansion coupled with consolidation is in evidence in a wide range of sectors, driven by strong economic growth in the Far East (especially China) and the strong purchasing power of private equity funds that are under pressure to invest.

#### 2.1.1. Causes and Consequences of Merger Waves in the History

Transactions occur every year. Among them there were significant accumulations of M&A activity in the past. These cluster of M&A called "merger waves". Over the 20<sup>th</sup> century, five such waves were observed. They generally differ with each other based on strategic direction of the transaction and the underlying motives. At the turn of the 20<sup>th</sup> century, the first M&A wave occurred in light of the industrial revolution and was marked by the creation of large monopolistic companies (Lamoureaux, 1985). The second wave occurred between 1916 and 1929 primarily between companies aiming at vertical integration. It was given that increasing anti-trust regulations impeded horizontal combinations (Borgese, 2001). During the third wave from 1965 to 1969 transactions were mainly motivated by the pursuit to diversify (Reed and Lajoux, 1999). The fourth merger wave in the late 1980s is widely viewed as a reaction to the creation of conglomerate corporate groups in the previous wave. It appeared to be difficult to effectively manage and it

seemed to generate a comparably lower return on investment than companies focusing on their core business (Carroll, 2002; Hitt et al., 2001). As a result, significant restructurings of widely diversified groups occurred. They often initiated by corporate raiders through hostile and highly leveraged takeovers (Scherer and Ross, 1990). An overview of various definitions of prior merger waves is given by DePamphilis (2007).

Worldwide M&A activity substantially increased during the 1990s, as illustrated in Figure 6. The period including the years from 1993 to 2000 is labeled "the fifth M&A wave" and is characterized by a high number of "mega-deals" (Jansen, 2001). Compared to transactions in the 1980s, the fifth merger wave was characterized by a decline of diversifying transactions, an increased use of shares as the form of payment, and a fairly low number of hostile bids (Andrade et al., 2001). The M&A activity reached a record regarding the number of transactions. However the total transaction volume in 2000, in which the total deal volume was almost 10 times higher than in 1990. Industries experiencing the highest level of acquisition activity were the energy, financial services, telecommunications, healthcare, and media sectors (Carroll, 2002).

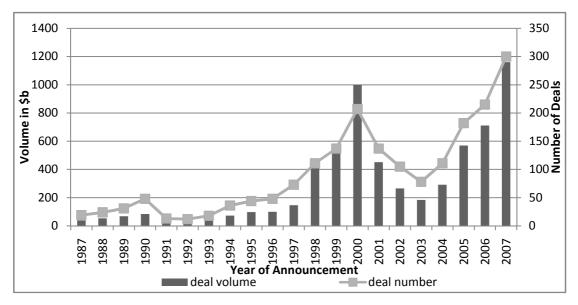


Figure 6: Worldwide Cross-Border M&A<sup>6</sup>

Source: UNCTAD, World Investment Report 2008, p. 6.

<sup>&</sup>lt;sup>6</sup> M&A activities in the figure are valued at over \$1 billion.

Along with the sharp decline of worldwide stock markets and the burst of the "internet-bubble", compared to 2000 the total volume of announced deals reduced in 2001 by 48 percent. In light of the terror attacks on New York and Washington on September 11, 2001, the war in Iraq, the outbreak of SARS, and the accompanying downshift in the global economy, this development continued in 2002 and 2003, in which M&A activity fell to levels not seen since 1997 (Wirtz, 2003). The decline particularly affected the occurrence of mega-deals, as the use of shares to pay for acquisitions was less advantageous. The level of cash transactions declined as well due to the steep deterioration of corporate earnings and the generally higher level of precaution by companies in approaching transactions (Sidel, 2002). Beginning in 2004, with an overall improved economic environment and increasing M&A activity by private equity companies, the worldwide transaction volume bounced back<sup>7</sup>.

According to Wright et al. (2006) it may be seen that there will become "a sixth wave" because takeover activity has been increasing since 2003 in the United States. As with the other waves, this wave seems to have been triggered by the market recovery after the 2000 downturn. According to the Thomson Database, M&A volume saw a 71% increase in 2004, for a total of about USD 1 trillion, compared to 2002 when it totaled about USD 500 billion. A similar trend has been seen in Europe. In 2004, total takeover value was approximately U.S. USD 760 billion, up from USD 517 billion in 2002. In fact, cross-border acquisitions from 2002 through mid-2005 account for more than 43% of the total value of all European M&A' and 13% of the total value of all U.S. USD 3 billion in 2002 to almost USD 19 billion in the first half of 2005.

Conclusions about the drivers of any new wave cannot be drawn yet, but some things are apparent. First, the events of September 11, 2001, are believed to have played a large part, causing a delay in certain transactions that are now coming to fruition. Second, there has been an increase in governments' selling shares in major national companies, thus increasing the supply of target firms (this is especially true in China). Third, firms afloat with cash from the recent bull market

<sup>&</sup>lt;sup>7</sup> KPMG (2004) is noted that acquisitions by private equity firms accounted for 11 percent of global transaction volume in 2004.

seem to be seeking to expand into new markets. And, fourth, private equity investments in sectors like real estate and retail, have escalated dramatically recently (Wright et al, 2006).

#### 2.1.2. Recent M&As and Their Prospects for Globe

The high level of global M&A activity was stimulated by various exogenous influences of the business environment, predominantly changes in the regulatory environment, technological developments, continuous globalization and competition, and increased opportunities and demands of the global capital markets (Eschen, 2002). All of these factors led to a decade of relatively high economic growth.

In terms of global M&A activity, 2005 represented a straight year of growth in both global deal volume and value as illustrated in Figure 6, and it is seen that trend continuing into 2006. US buyers' and sellers' share of the global M&A market gained significance in 2004 and 2005, as the U.S. M&A market strengthened greatly and domestic companies increasingly looked abroad for acquisition targets. In terms of destinations for U.S. acquisitions, Europe remained the most significant geography, approaching nearly \$100 billion in 2005 deal value. Acquisitions in Asia have been more measured due to regulatory restraints and other challenges, although foreign investment in Asia by US companies remained very strong in 2005 and is continuing to increase (Flanigan, 2006).

According to the results of the 11<sup>th</sup> Annual Global CEO Survey issued by PwC (2008), 24% of CEOs have stated that they have carried out at least one crossborder M&A transaction during the previous 12-month period, while 31% of CEOs have stated that they would conclude at least one agreement in the coming 12-month period. Asia, West Europe, East Europe and North America have been designated as the most preferred regions for M&A transactions. It is evident that in 2008 attention will again focus mostly on the Asia-Pacific region, where CEO confidence is highest (YASED, 2008). Medium- and long-term estimates of the "World Investment Prospects to 2011" report of the Economic Intelligence Unit –EIU (2007), on M&A transactions, predict that the USA-centered credit crisis and the financial turbulence caused by this crisis will be put under control, through the healthy-working global economic structure. Since most M&A transactions have been accomplished by strategic investors who enjoy healthy balance sheets and powerful cash flows (YASED, 2008).

Overall, the financial crisis that began in the second half of 2007 in the United States sub-prime mortgage market did not exert a visible dampening effect on global cross-border M&A that year. However, the current crisis has led to a liquidity crisis in money and debt markets in many developed countries. This liquidity crisis has begun to depress the M&A business in 2008, especially leveraged buyout (LBOs) transactions, which normally involve private equity funds (WIR, 2008). Indeed, the buyout activities by private equity funds, a major driver of cross-border M&A in recent years, are currently slowing down. Contrasts with the situation in 2008, cross-border M&A involving such funds almost doubled, to \$461 billion in 2007– the highest share observed to date, accounting for over one quarter of the value of worldwide M&A as seen from Table 2.

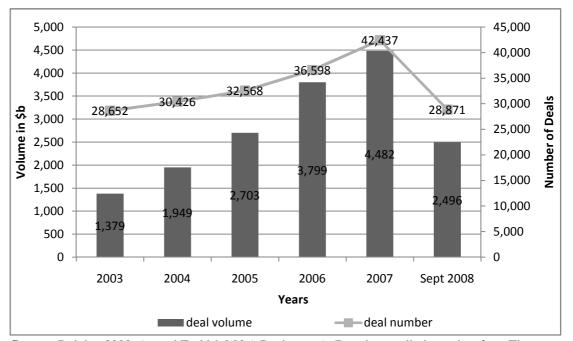
Year	Number of Deals (number)	Value (\$ billion)	Year	Number of Deals (number)	Value (\$ billion)
1987	158	13.4	1998	906	77.9
1988	203	12.6	1999	1147	86.9
1989	292	26.2	2000	1208	91.6
1990	531	41.0	2001	1125	87.8
1991	648	28.1	2002	1126	84.7
1992	652	34.9	2003	1296	109.9
1993	707	45.3	2004	1613	173.7
1994	720	35.5	2005	1707	211.0
1995	722	33.6	2006	1649	282.6
1996	715	44.0	2007	1813	461.0
1997	782	55.4	$2008^{a}$	715	193.7

Table 2: Cross-Border M&As by Private Equity Firms and Hedge Funds

Source: UNCTAD, World Investment Report 2008, p. 6.

**Note:** <sup>a</sup> refers to only first half of 2008. Private equity firms and hedge funds refer to acquirers whose industry is classified under "investors not elsewhere classified". This classification is based on that used by the Thomson Finance database on M&As.

A lack of available financing, the global financial crisis and suffering stock markets affect the five years of deal growth as clearly seen from the Figure 7.





**Source:** Deloitte 2008, Annual Turkish M&A Review p. 6. (Based on preliminary data from Thomson Reuters)

With the size of the funds growing, private equity investors have been buying larger, and also publicly listed, companies according to World Investment Report (2008). Some factors have emerged that raise doubts about the sustainability of FDI (International Direct Investment) activity by private equity funds. These include a review of the favourable tax rates offered to private equity firms by authorities in some countries and the risks associated with the financial behaviour of such firms. It is particularly because of concerns about the availability and cost of credit in the aftermath of the sub-prime mortgage crisis. They also include an ongoing debate in some countries about possible regulation of private equity market participants. An increased regulatory burden could cause the private equity industry to stay away or migrate to more lightly regulated jurisdictions (WIR, 2008).

As for the trends in M&A transactions, the results of PwC's 12th Annual Global CEO Survey (2009) demonstrates that joint ventures and strategic cooperation alliances will be the methods to be preferred more often than M&As during the next three years (YASED, 2009).

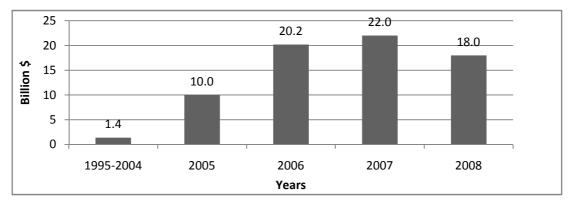
In conclusion, merger activities will be decreased in a short period which includes two or three years after 2007. It is due to the recent financial crisis. Besides the challenge of taking credits from financial sector (because of the monetary problems and the crisis) for implementing the merger activity will be caused the end of this new sixth merger wave. So, a slowdown of merger activity is strongly expected. Additionally, Turkish economy and also Turkish M&A activity will be affected from that trend.

#### 2.2. M&A Activities in Turkey

With basic traits such as high growth, economic stability and reforms which have created an investor-friendly environment, Turkey has become one of the most attractive countries for investment and is now considered a healthy investment environment by investors.

Through the political and macroeconomic stability maintained in Turkey and the efforts given for the reform process and the improvement of the investment environment, annual FDI (Foreign Direct Investment) inflows, which were approximately USD 1.4 billion on the average in 1995-2004 period, have climbed to USD 10 billion in 2005, USD 20 billion in 2006 and USD 22 billion in 2007 as seen in Figure 8. When real estate purchases are not taken into consideration, M&A transactions constitute 90%, and greenfield and enlargement investments constitute approximately 10% of total FDI inflows (YASED, 2008).

Figure 8: Annual FDI Inflows of Turkey



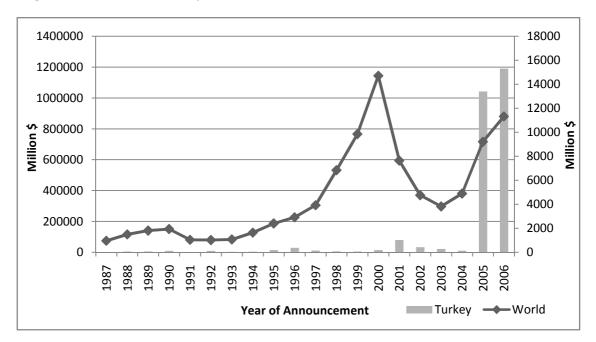
Source: YASED, International Direct Investment Report 2009, p.2.

FDI inflows to Turkey, which had reached to a level of USD 20 billion in 2006 and 2007, dropped - consistent with global decline - to USD 18 billion in 2008 with 18 percent decrease (YASED, 2009).

There is not enough statistical data about mergers and acquisitions in Turkey. Therefore, total number of firms, which implement merger or acquisition, cannot be known certainly. The consequence of researches in UNCTAD (United Nations Conference on Trade and Development), recent information about Turkey is being available. Figure 9 shows the trend of M&A sales in Turkey which is comparable with world's sales at the period of 1987-2006.

Turkish M&A activity is consistent with M&A in worldwide. There is a significant increase in sales of M&A in 2001, and it is important to say that there was a financial crisis in Turkey at the same year. In 2005-2006, big amount of sales occurred. Compared to transactions in the 1990s, there is a remarkable leap on the values according to the data from UNCTAD (WIR, 2007).

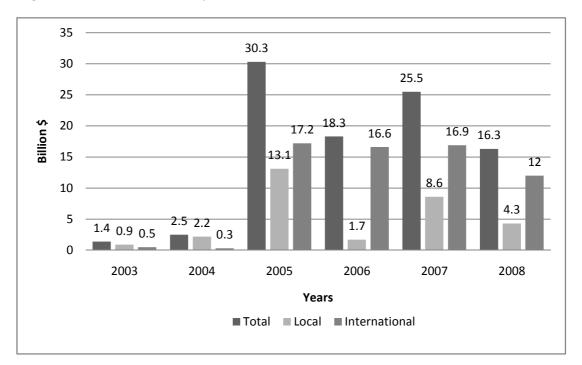
Figure 9: M&A Sales in Turkey



**Source:** UNCTAD, based on its FDI/TNC database (www.unctad.org/fdi statistics), and IMF, International Financial Statistics, June 2008.

According to YASED (International Investors Association), Turkish M&A activity supported, as illustrated in Figure 10. The period including the years from 2002 to 2006 is characterized by a high number of deals and high volume of transactions. The M&A activity reached a record regarding the total transaction volume in 2005, in which the total deal volume was almost 15 times higher than in 2004, and it is similar in 2006 and 2007. There is a significant decrease in volume of M&A deals in 2008. This is consistent with the M&A volume of world (YASED, 2009). Besides, industries experiencing the highest level of acquisition activity were the energy, retail, financial services, and tobacco.

Figure 10: M&A Deals in Turkey



Source: YASED, International Direct Investment Report 2009, p.5.

Last six years' M&A volume reached a level of USD 94 billion, while USD 90 billion of which occurred in the last four years. After years of less than a billion USD of M&A, M&A activity boomed in the beginning of 2005 and has entered a steady path over the years of 2006 and 2007 as seen in Figure 9 and Figure 10. As of 2008, a significant decline occurred both in Turkey and in globe in the light of effects of 2007 worldwide financial crisis. Figure 7 and Figure 10 proof this statement.

# 2.2.1. Financial Crises in Turkey and Their Effects

Turkey, as an emerging market, is shaped by economic crises and turbulences as well as merger waves. In the history of the Turkish economy, there have been several financial crises. Six of them (1929-31, 1958-61, 1978-81, 1988-89, 1994, 1998-2002) were very serious financial crises and they eroded economy deeply. Among them, the 1994 crisis and the 2001 crisis had extensive effects. The Turkish economy was put under global pressure during 1990s. The exchange rates increased dramatically, foreign investment left the country, problems of short-term debt payment increased, and the availability of internal credit decreased. At the end of the 1990s, the Asian crisis in 1997 and the Russian crisis of 1998 affected the economy negatively and they portended the 2001 financial crisis (Akyuz and Borotav, 2002; Onis and Alper, 2002; Yeldan 2002).

WPI	СРІ	YEAR	WPI	СРІ
100%	99%	2002	50%	44%
86%	89%	2003	25%	25%
75%	80%	2004	11%	10%
81%	85%	2005	8%	10%
71%	84%	2006	10%	11%
53%	64%	2007	6%	9%
51%	54%	2008	12%	10%
61%	54%			
	100% 86% 75% 81% 71% 53% 51%	100%       99%         86%       89%         75%       80%         81%       85%         71%       84%         53%       64%         51%       54%	100%       99%       2002         86%       89%       2003         75%       80%       2004         81%       85%       2005         71%       84%       2006         53%       64%       2007         51%       54%       2008	100%99%200250%86%89%200325%75%80%200411%81%85%20058%71%84%200610%53%64%20076%51%54%200812%

Table 3: WPI and CPI from 1994 through 2008

Source: Turkish Statistical Institute, Inflation and Price Statistics Reports, 2005.

Table 3 shows consumer price index (CPI) and wholesale price index (WPI) over years. As clearly seen from the table that Turkish economy succumbed to hyperinflation and it was fragile over years. Hyperinflation reduced the size of the financial sector and gradually eroded the efficiency of the price system. The 2001 banking crisis has been a feature of the hyperinflation and the cause of the fragility was high public sector borrowing requirement and the way it was financed.

Turkey initiated a recovery program with the help of IMF and accelerated its privatization program in order to overcome the 2001 financial crisis. Pressures weakened and the exchange rate recovered somewhat and long-term interest rates declined. Turkish economy grew rapidly after the 2001 financial crisis. The recovery was impressive, annual inflation fell steadily, reaching single digits in 2004 for the

first time in three decades, while sound fiscal and monetary policies improved confidence and reduced risk premium, thereby enhancing business investment and FDI inflows. Turkey has become attractive to new investors both domestic and external. The increase of competition in all markets pushed the merger waves. The analysis of this thesis supported at the next section that large amount of merger activities has occurred after the 2001 financial crisis.

According to Jones (2008), the world economy is currently surrounded by more macroeconomic uncertainty than at any time in the last 25 years. The financial crisis that started in the summer of 2007 and intensified in September 2008 has affected all over the world. Jones (2009) stated that the current recession is a balance sheet crisis, both on the firm side and on the household side. It is similar to the Great Depression which occurred in 1930s. Turkish economy was also affected negatively from this current financial crisis.

M&A activity is primarily significant for Turkey as a center of attraction for investing. In the last couple of years, Turkey benefited profitably from the positive waves of the global economy. Furthermore, the Turkish economy has shown resistance against the effects of the global credit crunch in the second half of 2007. Foreign investors maintained their interest towards Turkish companies in 2007 although there is a financial crisis in globe. Considering the increase in the number of local acquirers, the total volume of M&A activity in 2007 settled at approximately 25 billion USD level. Turkey's M&A volume reached to 90 billion USD. On the other hand, global financial turbulence due to the credit crunch and mortgage crises is expected to affect the Turkish M&A trend negatively in the near future (Deloitte, 2008).

#### 2.2.2. Recent M&As and Their Prospects for Turkey

Total value of M&A in Turkey shows a slight decrease in last two years. The decline in the value and number of deals is a direct consequence of the global economic crisis. However, Turkey continued to attract foreign investors' interest. It seems that M&A activities may increase despite of global crisis. The number and

value of the deals is expected to keep decrease due to a shortage of cash and difficulty in securing loans from the banks. However this will not be a large barrier in the Turkish M&A market. Turkey has a large and growing domestic market, a skilled and cost effective labour force, strong local companies and access to other expanding markets in addition to its political stability and liberal legal framework for foreign direct investments (Yuksel and Sumer, 2009). The total value of M&A in near future is not expected to decline to the level prior to 2004.

The recent financial crisis caused a recession in developed countries. Therefore, strategic investors prefer to focus on domestic markets and postpone their plans to expand geographically. Similarly, investors will have difficulty in financing their acquisitions because of the credit crunch in the financial markets. Therefore, financial investors' deals are expected to decrease in 2009.

Turkish companies could sell their shares at high valuations along with the past few years. Consistent with the decline in the purchasing power and the change of risk perception towards Turkey, values of assets tend to decrease. This situation is a consequence of decrease in the M&A activities.

On the contrary, privatizations and sales of financially distressed companies with cash flow problems will occur in 2009. Previously delayed privatizations (i.e. electricity distribution and generation, highways and bridges) will be the drivers of foreign investment. Furthermore, there is a probability of a consolidation in certain sectors (Deloitte, 2008).

It is expected that M&A volume in 2009 will be decrease to a level half of the M&A volume in 2008. Furthermore, it can be foreseen that the first quarter of 2009 is possibly be the lowest M&A volume since 2004 (Deloitte, 2008).

# CHAPTER 3 DATA ANALYSIS AND RESULTS

There is a consensus among the various studies that target firms earn abnormal positive returns during the announcement period of a takeover bid. However, whether the successful takeover increases or decreases the value of bidder common stock is not clear. Jensen and Ruback's (1983) studied of the US takeovers and mergers prior to 1980. They concluded that the target firm's shareholders benefit while the bidding firm's shareholders do not lose. Jarrell, Brickley and Netter (1988) provided a comprehensive review of the empirical evidence regarding takeovers since 1980. They noted that the target firms benefit, while there is a statistically insignificant loss for the bidder's shareholders.

In the United Kingdom's experience, Franks, Broyles and Hecht (1977), reported gains for both target and bidder firms. However, Firth (1979, 1980) found gains by the targets are more than offset by losses to the bidders. After a while, Frank and Harris (1989) noted that around the merger announcement date, target firms gain and bidders earn zero or modest gains.

Murray's studied (1991) of Irish takeovers and mergers reports significant gains to target firms, and an insignificant loss to bidders. However, he noted that the evidence on the performance of bidders and targets indicates that mergers and takeovers are, on average, value enhancing.

While some of the studies in literature considers the effects of mergers by using account data, some of them are considers through the returns on stocks. Abnormal returns around merger announcements are commonly investigated to analyze the effects of mergers on shareholders. Therefore, calculating cumulative abnormal returns<sup>8</sup> of both firms (bidder and target) for the long and short periods after and before the mergers, takes a commonplace in the literature (Yilgor, 2004).

One of the basic issues that remains unclear in finance is the poor long-run performance of acquiring firms. Franks, Harris, and Titman (1991) studied 399

<sup>&</sup>lt;sup>8</sup> In finance, an abnormal return is the difference between the expected return of a security and the actual return.

acquisitions during the 1975-1984 period. After adjusting for systematic risk and size, not for the book-to-market ratio, they find positive and significant long-run abnormal returns only for small transactions.

Loderer and Martin (1992) studied 304 mergers and 155 acquisitions that took place between 1965 and 1986. They observed a negative abnormal returns over the five subsequent years for the mergers and positive abnormal returns for the acquisitions. These returns are insignificant even though significant when they measured over three years. However, they noted that the long-run abnormal returns over three years are statistically significant only in the 1960s.

In contrast, Agrawal, Jaffe, and Mandelker (1992) found negative and significant abnormal returns for 937 mergers over the five subsequent years. They also found positive but insignificant abnormal returns for 227 tender offers that occurred from 1955 to 1987.

Recently, Loughran and Vijh (1997) and Rau and Vermaelen (1998) improved the measure of long-run performance by adjusting for systematic risk, size, and book-to-market. Loughran and Vijh (1997) found that five-year buy-and-hold abnormal returns are -15.9% (t = -2.36) for mergers, but 43% in the case of tender offers (t = 1.67). They also performed the same tests on a sample in which there is no overlapping of events by the same firm and find long-run abnormal returns of -14.2% (t = -1.69) for mergers and 61.3% (t = 1.86) for tender offers. Rau and Vermaelen (1998) used a three-(rather than a five-) year window and found that long-run abnormal returns are respectively negative and significant for mergers (-4.04%), but positive and significant for acquisitions (8.85%).

Mitchell and Stafford (2000) and Ikenberry, Lakonishok, and Vermaelen (2000) performed a more general examination of the long-run financial performance of three types of events: share repurchases, equity offerings, and M&A. Mitchell and Stafford (2000) analyzed 2,068 transactions announced between 1961 and 1993. They reported negative mean abnormal monthly returns over three years of -0.04% and -0.03% for equal-weighted and value-weighted M&A portfolios respectively, using calendar-time abnormal returns based on the Fama-French three-factor model. Ikenberry et al. (2000) examined a sample of 27 acquisitions in Canada between

1989 and 1995, a third of which are financed by shares. They found that the threeyear abnormal returns are negative. However, the returns were not significantly different from zero.

There are few studies on the long-run performance of acquiring firms in Turkey. Citak and Yildiz (2006) examined 40 domestic successful acquisitions in Turkey during the 1997-2005 period. They examined the buy-and-hold returns (BHARs) and cumulative abnormal returns (CARs) of post-merge activities for these 40 non-financial ISE listed companies. They found a significant positive stock returns 1 month following the merge activities. In the long-run, there is no significant impact of merger announcements on the stock returns.

Mandaci (2004) examined whether the merger and acquisition announcements provides abnormal returns to the stockholders of the companies that are listed in ISE for ten days preceding and ten days following these announcements dates, during 1998-2003 period. Findings show that the statistically significant abnormal returns were observed in the first and in the second day preceding and in the first day following announcement dates. In addition, the cumulative abnormal returns (CAR) were examined for the different event windows and it was found that especially the cumulative abnormal returns (CAR) for the periods before the announcement dates were more statistically significant than those after the announcement dates. This finding shows the existence of the insider traders which indicate that the ISE is not a semi-strong efficient market.

Furthermore, Mandaci (2005) analyzed that the effects of merger and acquisition operations on the financial structure and performance of the firms. The study includes 14 mergers and acquisitions during 1998-2000 period for the manufacturing firms which are traded in ISE. The findings show that after the merging operations, firms' current, quick, working capital turnover ratios decreased. The firms' total debt/equity ratio increased and financial leverage decreased. Further, the findings indicate that the profitability of the firms namely ROA (Return on Asset) also decreased.

In Turkey, the studies on mergers and takeovers are still very scarce, due to the infancy of the Turkish equity market. After the implementation disinflationary program the inflation rate sharply declined. There has been an increase of corporate takeovers and mergers and they became popular during the low inflation period. In the light of other relevant empirical literature on the subject from different established equity markets, this study will attempt to determine the effects of acquisition announcement on the price behavior of the Turkish bidder and target firms.

#### **3.1. Data**

The sample is constructed by examining the `Year Book of Companies` of the ISE (Istanbul Stock Exchange) from 1997 to 2006. Merge activities in Turkey from 1997 to 2006 were determined after reading all of the "Year Book of Companies" for all of the companies which are existed in ISE. Each merge activity was gathered manually and the date of registrations regarding the merge was noted carefully. It took a long time because of the scarcity of statistical data for M&As in Turkey.

The sample is restricted to the ISE listed non-financial companies. In Turkey, bank M&A became very common, in particular, after the 2001 financial crisis<sup>9</sup>. Since the analysis of financial statements of banks need special treatment, the sample is restricted to ISE listed non-financial companies. Thereby, 37 firms are used in the analyses of this thesis which is an adequate number for a statistical measurement.

To compare the merged firms returns and non-merged firms returns, an alternative methodology is applied. It is common practice in the literature, whenever a new model is suggested, to compare firms' performance with a benchmark model.

<sup>&</sup>lt;sup>9</sup> Capital Markets Board of Turkey, Communiqué Serial:1, No:31 on Principles regarding Mergers regulates The Steps of M&A are Pre-Agrement, Due Diligence, Negotiation, Conditions Precedent and Closing. M&A transactions (M&A activities) involve more than one field of law. M&A under Turkish Law involve both the Turkish Commercial Code (TCC) and the Capital Market Law. In addition the relevant comminiqué of the Capital Market Board (CMB), the Code of Obligations and Law on the Protection of Competition, Labor Code, Banking Law and Tax La contain provisions regulating M&A.

### 3.1.1. Selection of the Matched Control Firm

Each acquiring firm in the sample is associated with a control firm that is matched to the acquirer by market equity and by the ratio of market to book. Thus two groups of control firms are used in the benchmark methodology. To match by market equity (ME), market equity of all firms is constructed for each calendar year from 1997 to 2006. The population of all firms, listed in Istanbul Stock Exchange on the 31<sup>st</sup> December of each year, is used. From the set of firms belonging to market equity, the control firm as the one with the market equity that is closest to the market equity of the acquirer is selected at the year of declaration of M&A by CMBT. To match the firms according to market to book ratio (M/B), M/B ratios of all firms are constructed for each calendar year from 1997 to 2006. Similarly, from the set of market to book ratio, the control firm as the one with the market to book ratio that is closest to the market to book ratio of the acquirer is selected at the year of declaration date of M&A. Both groups consist of 36 non-merged and non-financial firms which exist in Istanbul Stock Exchange (ISE). The financial statement data was obtained from ISE CD Rom financial database. The daily stock price data is obtained for acquirer and target firms from the Analiz Software Co. Database. "Market equity" and "market to book ratio" of firms are calculated according to nonadjusted data for benchmark analyses.

## 3.1.2. Limitations of the Study

There are some limitations of the study. One of them is that merger announcements are poorly kept secrets. Therefore, the stock price reactions around the merger announcements may not reflect the real values. There is a significant concern about the rumors of M&A and it is difficult to avoid the informed traders. The level of informed trading in stock markets is a crucial question. In order to avoid the effect of the rumor of a merger or acquisition, it is analyzed that the stock price reactions maximum 12 months prior to announcements. Statistical data about mergers and acquisitions are very scarce in Turkey. Therefore, the data collection process took a long time. It needs to be careful, while it was so difficult to gather data by reading all the firm news from 1997 to 2006. In addition; there is a limited number of studies with regard to mergers and their effect on stock returns. Hence, this study aims to provide empirical evidence to fill this gap.

#### 3.2. Methodology

The common method of performance measurement is the change in the share price of a company in the periods surrounding the merger activity. The majority of previous M&A studies have measured the short-run stock price reaction to merger announcements applying event study methodology. In this study it is examined that the abnormal returns of the acquirer firm, the target firm and the combined firms; before, around and after the merger announcement date. It is calculated that the premerger performance of 12 months and post-merger performance of 12 months.

To measure stock price reactions to merger announcements, a standard event study methodology is applied. One month consists of 20 trading days. The market-adjusted return for stock i in event month t defined as:

$$ar_{i,t} = r_{i,t} - r_{m,t} \tag{1}$$

The average market-adjusted return on a portfolio of n stocks for event month t is the arithmetic average of the market-adjusted returns:

$$AAR_{t} = \frac{1}{n} \sum_{i=1}^{n} ar_{i,t}$$
(2)

Cumulative average abnormal returns (CAARs) are used to evaluate the short-run and long-run performance of stock returns following the merger announcements. The short-run performance analysis covers 5 consecutive days of returns data. However, the long-run performance analysis covers 12 consecutive months of returns data. Monthly market-adjusted returns are calculated as the monthly return on a stock minus the ISE-100 index return.

The cumulative average abnormal return (CAAR) from month q to month s is defined as:

$$CAAR_{q,s} = \sum_{t=q}^{s} AAR_{t}$$
(3)

Benchmark methodology contains two groups of control firms in this study. Sample size of the control groups is 36 for both. The acquiring firms and the control firms match according to market equity and market to book ratio. Calculations of the benchmark analyses are same as above. Cumulative average abnormal returns (CAARs) are used to evaluate the short- and long-run performance of stock returns. The short-run performance analysis covers 5 consecutive days of returns data. However, the long-run performance analysis covers 12 consecutive months of returns data.

#### **3.3. Empirical Results**

Descriptive statistics show the cluster of M&A by industry. The findings of the study present that the merger activities intensified during the financial crises. In particular, investors showed interest in M&A when the inflation rate declined sharply. Consistent with the previous studies, the findings of this thesis suggest that the post-merger stocks underperform in the long-run. However, the stock performances prior to merger announcement show positive returns.

Table 4 presents M&A activities based on the industrial classification. Most of the M&A activities are in the manufacturing industry and in the form of horizontal mergers. Also most of the target firms are not listed in ISE. While the economic situation of world encourages firms to incorporate their powers as a strategy, most mergers occur between big companies of a sector. Most common causes of merger in Turkey are: cost saving, efficient management, increasing the competition power, acquiring the advantage on import and export, increasing the profitability of actions, creating the synergy, creating the opportunity of financing, being careful towards the crises, taking advantage from financial statement of target or bidder firms (tax advantage).

Many Turkish companies are family-owned and they lack of institutional structure and professional management system. The distinction between owner of the

firm (shareholders, stockholders), board of directors and professional managers is not sufficient. Generally, CEO-duality is the common case among Turkish companies. Therefore, it is hard to improve the process of mergers and acquisitions. That is one of the reasons why firms tend to implement horizontal mergers. In the last decade, privatization process is getting common and the number of publicly-owned firms is increasing. These make the merger process easier. So the number of M&A is increasing rapidly.

Table 5 shows industrial classification of bidder and target firms which are used in the analyses. The sample of acquiring firms is mostly clustered in manufacturing industry and their target firms are also grouped in identical industries. This supports that firms are more likely to implement horizontal mergers in Turkey. Furthermore, the results reveal that target firms are not generally listed in ISE.

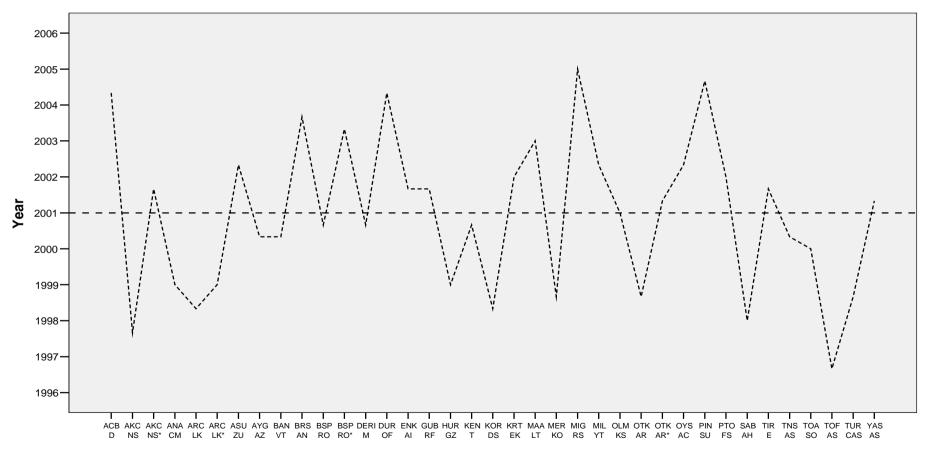
Table 4. Industrial Diversification of MacA Activities	Table 4: Industrial	Diversification	of M&A	Activities
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Bidder Firm + Target Firm $\rightarrow$ Result	Industry	Sub-Industry
$TOFAS + Opar Otomotiv \rightarrow TOFAS$	Manufacturing	Motor Vehicles, Bodies and Trailers, an Parts
$AKCNS + Betonsa Beton \rightarrow AKCNS$	Manufacturing	Nonmetallic Materials
$TURCS + Tabaş \rightarrow TURCS$	Manufacturing	Petroleum and Coal Products
$ARCLK + ARDEM \rightarrow ARCLK$	Manufacturing	Motor Vehicles, Bodies and Trailers, an Parts
$OTKAR + Otokar \rightarrow OTKAR$	Manufacturing	Motor Vehicles, Bodies and Trailers, an Parts
$SABAH + BUGUN \rightarrow SABAH$	Manufacturing	Printing and Related Support Activities
$KORDS + Dusa Endüstriyel \rightarrow KORDS$	Manufacturing	Textile Mills and Textile Product Mills
$ARCLK + T$ ürk Elektrik&Atılım&Gelişim $\rightarrow ARCLK$	Manufacturing	Motor Vehicles, Bodies and Trailers, an Parts
$MERKO + Sultanköy\&Frumiks \rightarrow MERKO$	Manufacturing	Food and Beverage and Tobacco Produc
$HURGZ + Gerçek \rightarrow HURGZ$	Manufacturing	Printing and Related Support Activities
$ANACM + Topkapi \rightarrow ANACM$	Manufacturing	Nonmetallic Materials
$AYGAZ + Gazal \rightarrow AYGAZ$	Mining	Oil and Gas Extraction
$BANVT + Tadpi \rightarrow BANVT$	Manufacturing	Food and Beverage and Tobacco Produc
$TOASO + TOFAS \rightarrow TOASO$	Manufacturing	Motor Vehicles, Bodies and Trailers, an Parts
$DERIM + Has Deri \rightarrow DERIM$	Manufacturing	Apparel and Leather and Allied Produc
$BSPRO + BSHGr"unberg\&BSHEv\&Profilo \to BSPRO$	Manufacturing	Motor Vehicles, Bodies and Trailers, an Parts
$OLMKS + Olmuksa \rightarrow OLMKS$	Manufacturing	Paper Products
$YASAS + BYRBY \rightarrow YASAS$	Manufacturing	Chemical Products
$AKCNS + Agregasa \rightarrow AKCNS$	Manufacturing	Nonmetallic Materials
$ENKAI + ENKA \rightarrow ENKAI$	Manufacturing	Nonmetallic Materials
TNSAS + ATI Dış Ticaret $\rightarrow$ TNSAS	Retail Trade	n.a.
$TIRE + Bomsaş \rightarrow TIRE$	Manufacturing	Paper Products
$GUBRF + Gübretaş \rightarrow GUBRF$	Manufacturing	Chemical Products
$OTKAR + Istanbul Fruehauf \rightarrow OTKAR$	Manufacturing	Motor Vehicles, Bodies and Trailers, an Parts
$KRTEK + Konfeksiyon Sanayi \rightarrow KRTEK$	Manufacturing	Textile Mills and Textile Product Mills
$PTOFS + Is Doğan \rightarrow PTOFS$	Manufacturing	Petroleum and Coal Products
$ASUZU + Otopar \rightarrow ASUZU$	Manufacturing	Motor Vehicles, Bodies and Trailers, an Parts
NIGDE + Oysa İskenderun → NIGDE	Manufacturing	Nonmetallic Materials
$\text{KENT} + \text{Birlik} \rightarrow \text{KENT}$	Manufacturing	Food and Beverage and Tobacco Produc
$MILYT + Simge \rightarrow MILYT$	Manufacturing Educational	Printing and Related Support Activities
$MAALT + T$ ütaş $\rightarrow MAALT$	Services, Health Care, and Social Assistance	Social Assistance
$BRSAN + Mannesmann \rightarrow BRSAN$	Manufacturing	Plastic and Rubber Products
BSPRO + BSH PEG Beyaz Eşya → BSPRO	Manufacturing	Motor Vehicles, Bodies and Trailers, an Parts
ACIBD + Acıbadem Bursa&Acıbadem Kanser $\rightarrow$ ACIBD	Educational Services, Health Care, and Social Assistance	Hospitals and Nursing and Residential Care Facilities
DUROF + Duran Makine&Doğan Matbaacılık → DUROF	Manufacturing	Paper Products
$PINSU + Marmara \rightarrow PINSU$	Manufacturing	Food and Beverage and Tobacco Produc
$MIGRS + TNSAS \rightarrow MIGRS$	Retail Trade	n.a.

<b>Bidder Firm</b>	Industry	Target Firm	Industry
TOFAS	Manufacturing	Opar Otomotiv	Manufacturing
AKCNS	Manufacturing	Betonsa Beton	Manufacturing
TURCS	Manufacturing	Tabaş	Manufacturing
ARCLK	Manufacturing	ARDEM	Manufacturing
OTKAR	Manufacturing	Otokar	Manufacturing
SABAH	Manufacturing	BUGUN	Manufacturing
KORDS	Manufacturing	Dusa Endüstriyel	Manufacturing
ARCLK	Manufacturing	Türk Elektrik&Atılım&Gelişim	Manufacturing
MERKO	Manufacturing	Sultanköy&Frumiks	Manufacturing
HURGZ	Manufacturing	Gerçek	Manufacturing
ANACM	Manufacturing	Topkapı	Manufacturing
AYGAZ	Mining	Gazal	Manufacturing
BANVT	Manufacturing	Tadpi	Manufacturing
TOASO	Manufacturing	TOFAS	Manufacturing
DERIM	Manufacturing	Has Deri	Manufacturing
BSPRO	Manufacturing	BSH Grünberg&BSH Ev&Profilo	Manufacturing
OLMKS	Manufacturing	Olmuksa	Manufacturing
YASAS	Manufacturing	BYRBY	Manufacturing
AKCNS	Manufacturing	Agregasa	Manufacturing
ENKAI	Manufacturing	ENKA	Manufacturing
TNSAS	Retail Trade	ATI Dış Ticaret	Retail Trade
TIRE	Manufacturing	Bomsaş	Manufacturing
GUBRF	Manufacturing	Gübretaş	Manufacturing
OTKAR	Manufacturing	İstanbul Fruehauf	Manufacturing
KRTEK	Manufacturing	Konfeksiyon Sanayi	Manufacturing
PTOFS	Manufacturing	İş Doğan	Manufacturing
ASUZU	Manufacturing	Otopar	Manufacturing
NIGDE	Manufacturing	Oysa İskenderun	Manufacturing
KENT	Manufacturing	Birlik	Manufacturing
MILYT	Manufacturing	Simge	Manufacturing
MAALT	Educational Services, Health Care, and Social Assistance	Tütaş	Educational Services, Health Care, and Social Assistance
BRSAN	Manufacturing	Mannesmann	Manufacturing
BSPRO	Manufacturing	BSH PEG Beyaz Eşya	Manufacturing
ACIBD	Educational Services, Health Care, and Social Assistance	Acıbadem Bursa&Acıbadem Kanser	Educational Services, Health Care, and Social Assistance
DUROF	Manufacturing	Duran Makine&Doğan Matbaacılık	Manufacturing
PINSU	Manufacturing	Marmara	Manufacturing
MIGRS	Retail Trade	TNSAS	Retail Trade

Table 5: Industrial Diversification of Bidder and Target Firms





Firms

Figure 11 shows merger and acquisition activities over years. In the late 1990s, merger waves occurred. In particular, merger activities were intensified after 2001 when the financial crisis emerged. It is not a coincident that many firms tended to merge during the crisis period. Many firms were hit by a financial crisis and they tended to involve M&A activities in order to increase size thus they have cost savings, improve risk management and ensure stable earnings.

It is important to note that merger activities speeded up in the banking industry following the financial crisis. Since the crisis emerged in the financial sector, most of the banks were acquired by foreign investors. However, M&A activities in the other industries intensified after 2003 when the economy was relatively stabilized. As documented in Table 4, the majority of the M&A activities are in the form of horizontal merger. It is the fact that during the financial crises most of the target companies are acquired at low cost due to liquidity problems. Therefore, it is likely that in particular manufacturing companies waited until the economy was stabilized. The year 2003 was a turning point that economic indicators exhibited a range of positive trends. As stated in Table 3, the inflation rate decreased, macro-economic indicators improved, and the confidence in the economy was restored in all segments.

Ratios	Number of Firms (N)	Rumor (Mean)	Approval (Mean)	t-test
Tangibility Ratio	36	0.420	0.482	-1.373
Profitability Ratio (ROA)	35	0.057	0.042	0.603
Liquidity Ratio	36	1.788	1.819	-0.116
Capital Ratio	36	0.428	0.461	-0.642
ST/TL	36	0.691	0.679	0.285
ST/TA	36	0.399	0.366	0.748
LT/TA	36	0.170	0.172	-0.097
Leverage Ratio (ST+LT)/TA	36	0.569	0.539	0.595
Growth Potential	35	8.006	5.853	-0.066

**Table 6: Financial Performance of Firms Before and After Merging** 

**Note:** Tangibility Ratio refers to total fixed assets divided by total assets, Profitability Ratio refers to net income after tax divided by total assets, Liquidity Ratio refers to current assets divided by current liabilities, Capital Ratio refers to equity capital divided by total assets, ST/TL is the ratio of short-run liabilities to total liabilities, ST/TA is the ratio of short-run liabilities to total assets, Leverage Ratio refers to total liabilities divided by total assets, Growth Potential refers to market to book ratio.

Table 6 shows the financial performance of firms before and after the M&A activities. It is assumed that firms merge in order to accelerate their growth and create synergy. Hence, the financial performance of the firms is expected to be better after the M&A activities. The column of *Rumor* denotes the date, 6 months prior to official declaration of the M&A of a firm. It is assumed that rumors about the M&A activities start 6 months prior to official declaration on average. The column of *Approval* denotes the official approval date of the M&A of a firm. The findings show that while the tangibility, liquidity, capital, and LT/TA ratios are increased, the profitability, leverage, ST/TL, and ST/TA ratios and growth potential of the firms decreased at the date of M&A official approval by the CMBT. There is a tiny difference observed between the ratios at the date of rumor and at the date of approval. In general, the reported financial ratios are higher after the M&A activity is officially approved. However, none of the findings is statistically significant. This suggests that there is no significant effect of officially M&A approval announcement on the financial performance of the firms.

In addition, Mandaci (2005) examined that the effects of merger and acquisition operations on the financial structure and performance of the firms. It was found that after the merging operations, firms' current, quick, working capital turnover ratios were decreasing, their total debt/equity ratio was increasing and financial leverage was decreasing. Also their return on assets ratio was decreasing.

Panel A: Short-run Pre-Merger Stock Returns									
Stock		Ru	mor	Declaration				Approval	
Returns	AAR	CAAR	t- values	AAR	CAAR	t values	AAR	CAAR	t values
- 5 days	0.699	0.699	1.76 <sup>c</sup>	0.993	0.993	$2.49^{b}$	0.418	0.418	1.289
- 4 days	0.574	1.273	1.43	1.187	2.180	$2.54^{b}$	0.245	0.663	0.651
- 3 days	0.636	1.909	1.25	1.216	3.396	$2.28^{b}$	0.177	0.840	0.391
- 2 days	1.195	3.104	$2.07^{b}$	1.329	4.725	$1.92^{c}$	-0.222	0.618	-0.430
- 1 day	1.668	4.772	1.99 <sup>c</sup>	2.023	6.748	$2.17^{b}$	-0.282	0.336	-0.519
Panel B: Sho	ort-run Post	t-Merger St	ock Returns						
+ 1 day	0.563	0.563	0.96	2.492	2.492	$2.71^{a}$	0.597	0.597	0.73
+ 2 days	0.168	0.731	0.36	0.872	3.364	1.46	0.108	0.705	0.27
+ 3 days	0.183	0.914	0.42	1.011	4.375	$2.07^{b}$	0.040	0.745	0.12
+ 4 days	0.170	1.084	0.43	0.670	5.045	$1.81^{c}$	-0.019	0.726	-0.06
+ 5 days	-0.055	1.029	-0.15	0.648	5.693	$2.10^{b}$	0.165	0.891	0.52
Number		37			37			37	
of Firms					51			57	

Table 7: Short-run Pre-and Post-Merger Stock Returns

**Note:** AAR shows Average Abnormal Returns and CAAR indicates Cumulative Average Abnormal Returns. Numbers are mean values. t–statistics are given with a null hypothesis of equal means. <sup>a</sup> 1% significant level, <sup>b</sup> 5% significant level, <sup>c</sup> 10 % significant level.

Table 7 reports short-run pre-and post-merger stock returns from -5 days through +5 days. There are 3 time lines. The first *rumor* column represents the time lag of 6 months prior to official M&A declaration date. It is assumed that the rumor of the M&A activities started almost 6 months before the official declaration date on average. The second column of *declaration* represents official declaration date of M&A by CMBT and the last column of *approval* represents official M&A approval date. The findings show that the market reacted positively prior to official declaration announcement in short-run. However, in general, the t-values of stock returns around to M&A approval date are not statistically significant. It seems that the declaration date of M&A announcement has significant effect on the prior stock returns in short-run.

Table 8 reports long-run pre-and post-merger stock returns from -12 months through +12 months. The post-merger stock returns are positive and significant. This is consistent with the findings of Citak and Yildiz (2006) who find positive and significant 1 month stock returns following the M&A announcement. Also this is consistent with the findings of Kirkulak and Demirkaplan (2008) who find positive and significant 1 month, 2 months, 3 months, 6 months and 12 months stock returns after the M&A announcement. Mandaci (2004) found similar findings that statistically significant abnormal returns were observed in the first and in the second day preceding and in the first day following the announcement dates. The findings in this thesis further suggest that post-merger stock returns are generally lower than premerger stock returns. M&A announcement has positive effects on the pre-merger stock returns. Following the declaration of the M&A, stock returns started to decline slightly and these declines are statistically significant. It is consistent with the findings of Mandaci (2004) who found that the cumulative abnormal returns for the periods before the announcement dates were more statistically significant than those after the announcement dates at her study.

Panel A: Long- Stock		Rumor			Declaratio	on	Approval		
Returns	AAR	CAAR	t-values	AAR	CAAR	t-values	AAR	CAAR	t-values
- 12 months	0.274	0.274	5.74 <sup>a</sup>	0.317	0.317	6.76 <sup>a</sup>	0.261	0.261	$5.84^{a}$
- 11 months	0.264	0.538	5.03 <sup>a</sup>	0.293	0.610	$5.88^{a}$	0.283	0.544	$6.21^{a}$
- 10 months	0.275	0.813	$5.08^{a}$	0.284	0.894	5.25 <sup>a</sup>	0.296	0.840	$6.43^{a}$
- 9 months	0.278	1.091	$4.99^{a}$	0.262	1.156	$4.16^{a}$	0.284	1.124	$5.77^{a}$
- 8 months	0.307	1.398	$5.52^{a}$	0.243	1.399	$3.41^{a}$	0.289	1.413	5.81 <sup>a</sup>
- 7 months	0.324	1.722	$5.11^{a}$	0.265	1.664	$4.04^{a}$	0.317	1.730	$5.64^{a}$
- 6 months	0.346	2.068	$5.26^{a}$	0.288	1.952	$4.35^{a}$	0.335	2.065	5.63 <sup>a</sup>
- 5 months	0.357	2.425	$4.79^{a}$	0.320	2.272	$4.24^{a}$	0.326	2.391	$5.05^{a}$
- 4 months	0.313	2.738	$3.09^{a}$	0.379	2.651	$4.50^{a}$	0.328	2.719	$4.67^{a}$
- 3 months	0.276	3.014	$2.02^{b}$	0.396	3.047	4.15 <sup>a</sup>	0.329	3.048	$3.66^{a}$
- 2 months	0.220	3.234	1.16	0.454	3.501	$3.03^{a}$	0.338	3.386	$2.64^{b}$
- 1 month	0.107	3.341	0.50	0.554	4.055	$2.52^{b}$	0.332	3.718	$2.05^{b}$
Panel B: Long-	run Post-N	lerger Stocl	k Returns						
+ 1 month	0.193	0.193	0.95	0.406	0.406	$3.70^{a}$	0.350	0.350	$2.04^{b}$
+ 2 months	0.053	0.246	0.46	0.284	0.690	$2.72^{a}$	0.126	0.476	1.49
+ 3 months	0.142	0.388	1.43	0.232	0.922	$2.37^{b}$	0.191	0.667	$2.92^{a}$
+ 4 months	0.158	0.546	$1.76^{c}$	0.188	1.110	$2.56^{b}$	0.146	0.813	$2.32^{b}$
+ 5 months	0.231	0.777	$3.17^{a}$	0.204	1.314	$3.51^{a}$	0.158	0.971	$2.86^{a}$
+ 6 months	0.253	1.030	$4.18^{a}$	0.158	1.472	$2.70^{a}$	0.172	1.143	$2.63^{b}$
+ 7 months	0.294	1.324	$5.36^{a}$	0.173	1.645	$3.31^{a}$	0.164	1.307	$2.65^{b}$
+ 8 months	0.269	1.593	$5.07^{a}$	0.192	1.837	$3.77^{a}$	0.142	1.449	$2.74^{a}$
+ 9 months	0.268	1.861	$5.68^{a}$	0.215	2.052	3.69 <sup>a</sup>	0.140	1.589	$3.02^{a}$
+ 10 months	0.227	2.088	5.71 <sup>a</sup>	0.239	2.291	$4.36^{a}$	0.146	1.735	$3.09^{a}$
+ 11 months	0.249	2.337	$7.08^{a}$	0.251	2.542	$4.69^{a}$	0.156	1.891	$3.53^{a}$
+ 12 months	0.222	2.559	$5.98^{a}$	0.248	2.790	4.75 <sup>a</sup>	0.145	2.036	$3.53^{a}$
Number of Firms		37			37			37	

**Table 8: Long-run Pre-and Post-Merger Stock Returns** 

**Note:** AAR shows Average Abnormal Returns and CAAR indicates Cumulative Average Abnormal Returns. Numbers are mean values. t–statistics are given with a null hypothesis of equal means. <sup>a</sup> 1% significant level, <sup>b</sup> 5% significant level, <sup>c</sup> 10% significant level.

A theoretical model for measuring the effects of stock price reactions to shareholders value should be able to reproduce the empirical features of these variables better than competing alternatives. Therefore, it is common practice in the literature, whenever a new model is suggested, to compare firms' performance with a benchmark model. Thus, this study also analyzed short- and long-run pre- and postmerger stock returns by developing a new benchmark methodology which is based on forecasts of performance of the bidder firms with control firms matched to the event firms. This benchmark captures what the performance of the bidder firms would have been had the merger not occurred.

Declaration Year of Merger	Bidder Firms	ME	MB
1997	<b>TOFAS</b> + Opar Otomotiv $\rightarrow$ TOFAS	VESTL	MIGRS
1998	$AKCNS + Betonsa Beton \rightarrow AKCNS$	VESTL	DENCM
1999	<b>TURCS</b> + Tabaş $\rightarrow$ TURCS	TATKS	KOTKS
1998	$\mathbf{ARCLK} + \mathbf{ARDEM} \rightarrow \mathbf{ARCLK}$	AYGAZ	HZNDR
1998	<b>OTKAR</b> + Otokar $\rightarrow$ OTKAR	BOYNR	TUPRS
1998	$SABAH + BUGUN \rightarrow SABAH$	YATAS	TOFAS
1998	KORDS + Dusa Endüstriyel → KORDS	AKSA	EGGUB
1999	ARCLK + Türk Elektrik&Atılım&Gelişim → ARCLK	THYAO	TOASO
1999	$MERKO + Sultanköy\&Frumiks \rightarrow MERKO$	BRFEN	ANACM
1999	$HURGZ + Gerçek \rightarrow HURGZ$	ADANA	DITAS
1999	$ANACM + Topkapi \rightarrow ANACM$	BRSAN	KRTEK
2000	$\mathbf{AYGAZ} + \mathbf{Gazal} \rightarrow \mathbf{AYGAZ}$	BSPRO	KERVT
2000	<b>BANVT</b> + Tadpi $\rightarrow$ BANVT	GOODY	GOODY
2000	$TOASO + TOFAS \rightarrow TOASO$	TNSAS	BURCE
2001	<b>DERIM</b> + Has Deri $\rightarrow$ DERIM	KLBMO	UNYEC
2001	BSPRO + BSH Grünberg&BSH Ev&Profilo → BSPRO	CIMSA	ALCTL
2001	<b>OLMKS</b> + Olmuksa $\rightarrow$ OLMKS	BAGFS	LIOYS
2001	$\mathbf{YASAS} + \mathbf{BYRBY} \rightarrow \mathbf{YASAS}$	OYSAC	KENT
2002	$AKCNS + Agregasa \rightarrow AKCNS$	BSPRO	PTOFS
2002	$ENKAI + ENKA \rightarrow ENKAI$	TUPRS	TCELL
2000	<b>TNSAS</b> + ATI D1ş Ticaret $\rightarrow$ TNSAS	AKCNS	CBSBO
2002	<b>TIRE</b> + Bomsaş $\rightarrow$ TIRE	FMIZP	DOKTS
2002	<b>GUBRF</b> + Gübretaş $\rightarrow$ GUBRF	HEKTS	DOBUR
2001	<b>OTKAR</b> + İstanbul Fruehauf $\rightarrow$ OTKAR	KIPA	ZOREN
2002	<b>KRTEK</b> + Konfeksiyon Sanayi $\rightarrow$ KRTEK	HEKTS	HEKTS
2002	<b>PTOFS</b> + İş Doğan $\rightarrow$ PTOFS	ARCLK	LINK
2002	$ASUZU + Otopar \rightarrow ASUZU$	ALCAR	OTKAR
2002	<b>NIGDE</b> + Oysa İskenderun $\rightarrow$ NIGDE	ACIBD	ALKIM
2000	<b>KENT</b> + Birlik $\rightarrow$ KENT	BUCIM	FROTO
2002	$\mathbf{MILYT} + \mathbf{Simge} \rightarrow \mathbf{MILYT}$	SARKY	ALKIM
2003	$MAALT + T$ ütaş $\rightarrow MAALT$	UKIM	MUTLU
2004	<b>BRSAN</b> + Mannesmann $\rightarrow$ BRSAN	BSPRO	TNSAS
2003	<b>BSPRO</b> + BSH PEG Beyaz Eşya → BSPRO	SISE	FMIZP
2004	<b>ACIBD</b> + Acıbadem Bursa&Acıbadem Kanser $\rightarrow$ ACIBD	KIPA	TOASO
2004	DUROF + Duran Makine&Doğan Matbaacılık → DUROF	n.a.	n.a.
2005	<b>PINSU</b> + Marmara $\rightarrow$ PINSU	HZNDR	ECILC
2005	$\mathbf{MIGRS} + \mathbf{TNSAS} \rightarrow \mathbf{MIGRS}$	TOASO	FROTO

Table 9: Control Firms which Used in Benchmark Model

Note: ME refers to Market Equity and MB refers to Market to Book Ratio of firms.

Table 9 shows the list of control firms which are gathered by matched with the bidder firms depends on "market equity (ME)" and "market to book ratio (MB)". Control firms are selected according to the closest value of ME and MB of the bidder firms at the time of declaration date. Furthermore, control firms do not merge at the time of bidder firms' declaration date and they also exist in ISE. Non-adjusted data are used to calculate ME and MB. As a result, there are 36 control firms to use in benchmark analyses. Thereby, the control firms consist of two groups as ME and MB.

Panel A: Short-run Pre-Merger Stock Returns of ME										
Stock		Rumor		Declaration			Approval			
Returns	AAR	CAAR	t-values	AAR	CAAR	t-values	AAR	CAAR	t-values	
- 5 days	0.351	0.351	1.25	0.398	0.398	1.28	-0.187	-0.187	-0.52	
- 4 days	0.130	0.482	0.41	0.251	0.649	0.83	-0.094	-0.281	-0.25	
- 3 days	0.030	0.512	0.08	0.207	0.856	0.55	-0.240	-0.521	-0.58	
- 2 days	0.443	0.956	1.02	0.402	1.259	0.93	-0.208	-0.730	-0.39	
- 1 day	0.676	1.632	1.00	0.166	1.425	0.28	-0.212	-0.942	-0.29	
Panel B: Short	-run Post-N	Aerger Stoc	k Returns of	f ME						
+ 1 day	0.147	0.147	0.17	0.946	0.946	$1.70^{\circ}$	0.856	0.856	1.22	
+ 2 days	-1.784	-1.637	-1.29	0.821	1.768	$1.88^{c}$	0.629	1.486	1.39	
+ 3 days	-0.673	-2.310	-0.79	0.962	2.730	$2.81^{a}$	0.437	1.923	1.32	
+ 4 days	0.026	-2.284	0.03	0.858	3.589	$3.52^{a}$	0.422	2.345	1.41	
+ 5 days	0.152	-2.132	0.24	0.905	4.494	$3.02^{a}$	0.681	3.027	$2.29^{b}$	
Number of	36 36 36									
Firms		20			50			50		

Table 10: Short-run Returns of Benchmark Model for ME

**Note:** ME refers to Market Equity of firms. AAR shows Average Abnormal Returns and CAAR indicates Cumulative Average Abnormal Returns. Numbers are mean values. t–statistics are given with a null hypothesis of equal means. <sup>a</sup> 1% significant level, <sup>b</sup> 5% significant level, <sup>c</sup> 10% significant level.

Table 10 reports short-run pre-and post-merger stock returns of firms which are gathered based on the closest value of ME data of bidder firms at the time of declaration date of bidder firms. This benchmark model captures the time period from -5 days through +5 days. There are 3 time lines. The first is rumor, second is declaration and finally third one is approval.

According to the findings of benchmark model, the market reacted positively after the official declaration announcement in short-run. However, in general, the tvalues of stock returns prior to M&A approval date are not statistically significant. It seems that the declaration date of M&A announcement has significant effect on the prior stock returns in short-run.

Stock		Rumor			Declaratio	n		Approval	
Returns	AAR	CAAR	t-values	AAR	CAAR	t-values	AAR	CAAR	t-values
- 12 months	0.155	0.155	$3.46^{a}$	0.104	0.104	$2.39^{b}$	0.063	0.063	1.21
- 11 months	0.137	0.293	$3.06^{a}$	0.087	0.191	$1.78^{c}$	0.077	0.141	1.42
- 10 months	0.123	0.416	$2.69^{b}$	0.076	0.268	1.43	0.083	0.224	1.40
- 9 months	0.130	0.546	$2.62^{b}$	0.059	0.328	1.14	0.074	0.298	1.27
- 8 months	0.139	0.686	$2.48^{b}$	0.051	0.379	0.83	0.081	0.379	1.27
- 7 months	0.128	0.814	$2.06^{b}$	0.050	0.430	0.76	0.096	0.476	1.43
- 6 months	0.186	1.000	$2.46^{b}$	0.040	0.470	0.50	0.117	0.593	1.66
- 5 months	0.148	1.149	1.89 <sup>c</sup>	0.058	0.528	0.67	0.105	0.698	1.36
- 4 months	0.147	1.296	1.37	0.151	0.680	$1.79^{c}$	0.058	0.757	0.65
- 3 months	0.186	1.483	1.60	0.244	0.924	$2.68^{b}$	0.105	0.862	1.12
- 2 months	0.137	1.621	0.84	0.225	1.150	$1.82^{c}$	0.104	0.967	0.83
- 1 month	-0.006	1.614	-0.03	0.217	1.368	1.41	-0.158	0.808	-0.76
Panel B: Long-	-run Post-M	lerger Stoc	k Returns of	ME					
+ 1 month	0.091	0.091	0.38	0.217	0.217	1.10	0.555	0.555	$2.60^{b}$
+ 2 months	-0.144	-0.053	-0.87	0.249	0.467	$1.73^{c}$	0.412	0.968	$3.59^{a}$
+ 3 months	-0.144	-0.197	-1.20	0.183	0.650	1.61	0.288	1.257	3.43 <sup>a</sup>
+ 4 months	-0.040	-0.238	-0.41	0.174	0.825	$2.19^{b}$	0.229	1.486	$3.13^{a}$
+ 5 months	0.018	-0.220	0.22	0.216	1.042	$2.86^{a}$	0.224	1.710	$3.12^{a}$
+ 6 months	0.027	-0.192	0.34	0.150	1.192	$2.15^{b}$	0.148	1.859	$1.90^{c}$
+ 7 months	0.050	-0.141	0.76	0.127	1.319	$2.06^{b}$	0.147	2.006	$2.13^{b}$
+ 8 months	0.068	-0.073	1.25	0.158	1.478	$2.81^{a}$	0.146	2.152	$2.52^{b}$
+ 9 months	0.090	0.017	1.67	0.156	1.634	$2.64^{b}$	0.126	2.279	$2.35^{b}$
+ 10 months	0.084	0.101	$1.72^{c}$	0.176	1.810	$2.83^{a}$	0.103	2.382	$2.31^{b}$
+ 11 months	0.105	0.207	$2.42^{b}$	0.184	1.995	$3.40^{a}$	0.124	2.507	3.33 <sup>a</sup>
+ 12 months	0.086	0.293	$2.15^{b}$	0.183	2.179	$3.24^{a}$	0.105	2.613	$2.93^{a}$
Number of Firms		36			36			36	

Table 11: Long-run Returns of Benchmark Model for ME

**Note:** ME refers to Market Equity of firms. AAR shows Average Abnormal Returns and CAAR indicates Cumulative Average Abnormal Returns. Numbers are mean values. t–statistics are given with a null hypothesis of equal means. <sup>a</sup> 1% significant level, <sup>b</sup> 5% significant level, <sup>c</sup> 10 % significant level.

Table 11 reports long-run pre-and post-merger stock returns of firms which are gathered based on the closest value ME data of bidder firms at the time of declaration date of bidder firms. This benchmark model captures the time period from -12 months through +12 months. There are 3 time lines. The first is rumor, second is declaration and finally third one is approval.

The stock returns after the declaration and approval date of post-merger stock returns have positive and significant effect on non-merged firms. The findings further suggest that post-merger stock returns after these dates are generally higher than pre-merger stock returns. M&A announcement has positive effects on the stock returns on non-merged firms.

Panel A: Short-run Pre-Merger Stock Returns of MB										
Stock		Rumor		Declaration			Approval			
Returns	AAR	CAAR	t-values	AAR	CAAR	t-values	AAR	CAAR	t-values	
- 5 days	0.332	0.332	0.63	0.426	0.426	1.40	0.064	0.064	0.14	
- 4 days	0.369	0.702	0.76	0.429	0.856	1.29	0.044	0.108	0.08	
- 3 days	0.107	0.809	0.21	0.571	1.427	1.36	-0.129	-0.020	-0.25	
- 2 days	0.602	1.412	1.07	0.917	2.344	$1.84^{c}$	0.092	0.071	0.16	
- 1 day	0.240	1.652	0.35	0.701	3.046	1.34	-0.186	-0.114	-0.22	
Panel B: She	ort-run Post	t-Merger St	ock Returns	of MB						
+ 1 day	-0.210	-0.210	-0.23	-0.603	-0.603	-1.20	1.055	1.055	1.48	
+ 2 days	-0.615	-0.825	-1.00	-0.384	-0.988	-0.91	0.509	1.564	0.93	
+ 3 days	-0.236	-1.061	-0.42	0.162	-0.826	0.52	0.394	1.958	0.98	
+ 4 days	0.192	-0.869	0.43	0.402	-0.423	1.07	0.162	2.121	0.41	
+ 5 days	0.130	-0.739	0.33	0.460	0.036	0.99	0.160	2.281	0.49	
Number		36			36			36		
of Firms										

Table 12: Short-run Returns of Benchmark Model for MB

**Note:** MB refers to Market to Book Ratio of firms. AAR shows Average Abnormal Returns and CAAR indicates Cumulative Average Abnormal Returns. Numbers are mean values. t–statistics are given with a null hypothesis of equal means. <sup>a</sup> 1% significant level, <sup>b</sup> 5% significant level, <sup>c</sup> 10% significant level.

Table 12 reports short-run pre-and post-merger stock returns of firms which are gathered based on the closest value of MB data of bidder firms at the time of declaration date of bidder firms. This benchmark model captures the time period from -5 days through +5 days. There are 3 time lines. The first is rumor, second is declaration and finally third one is approval.

The findings show that there is no significant effect of merger announcement on non-merged firms which are chosen according to market to book ratio in the short-run. However, the market reacted positively after the official approval announcement in the short-run. In general, the stock returns decline significantly at the date of rumor and declaration. It seems that the approval date of M&A announcement has significant effect on the stock returns of non-merged firms in the short-run.

Stock	Rumor			Declaration			Approval		
Returns	AAR	CAAR	t-values	AAR	CAAR	t-values	AAR	CAAR	t-values
- 12 months	0.132	0.132	$2.38^{b}$	0.175	0.175	$3.54^{a}$	0.092	0.092	1.85 <sup>c</sup>
- 11 months	0.108	0.240	$1.79^{c}$	0.152	0.328	$2.99^{a}$	0.104	0.197	$1.90^{c}$
- 10 months	0.101	0.342	$1.70^{c}$	0.151	0.479	$2.80^{a}$	0.113	0.310	$1.98^{c}$
- 9 months	0.108	0.451	1.62	0.112	0.591	$1.86^{c}$	0.113	0.424	$1.98^{c}$
- 8 months	0.108	0.559	1.52	0.092	0.684	1.28	0.120	0.544	$1.97^{c}$
- 7 months	0.152	0.711	$2.08^{b}$	0.140	0.824	$1.75^{c}$	0.120	0.664	$1.71^{c}$
- 6 months	0.234	0.945	$2.86^{a}$	0.168	0.992	$2.10^{b}$	0.115	0.780	1.61
- 5 months	0.175	1.121	$1.72^{c}$	0.166	1.159	1.59	0.138	0.918	1.64
- 4 months	0.192	1.313	1.51	0.261	1.421	$2.29^{b}$	0.123	1.042	1.08
- 3 months	0.124	1.437	0.84	0.354	1.775	$3.36^{a}$	0.138	1.180	0.97
- 2 months	0.002	1.440	0.01	0.352	2.128	$2.91^{a}$	0.112	1.293	0.64
- 1 month	-0.059	1.381	-0.19	0.291	2.419	1.45	0.098	1.391	0.48
Panel B: Long-	run Post-M	erger Stock	Returns of	MB					
+1 month	0.280	0.280	1.18	0.293	0.293	1.33	0.327	0.327	1.66
+ 2 months	0.018	0.299	0.14	0.097	0.391	0.58	0.061	0.389	0.40
+ 3 months	-0.003	0.295	-0.03	0.020	0.412	0.16	0.157	0.546	1.47
+ 4 months	0.046	0.341	0.41	0.013	0.425	0.13	0.175	0.721	$2.19^{b}$
+ 5 months	0.152	0.494	1.69 <sup>c</sup>	0.025	0.450	0.24	0.164	0.886	$2.17^{b}$
+ 6 months	0.136	0.630	1.64	-0.018	0.432	-0.20	0.091	0.978	1.25
+ 7 months	0.175	0.806	$2.70^{b}$	-0.012	0.419	-0.17	0.077	1.055	1.13
+ 8 months	0.146	0.952	$2.40^{b}$	-0.007	0.412	-0.10	0.070	1.125	1.19
+ 9 months	0.120	1.073	1.94 <sup>c</sup>	0.022	0.434	0.34	0.085	1.211	$1.78^{c}$
+ 10 months	0.098	1.171	$1.71^{c}$	0.059	0.493	1.03	0.068	1.279	1.51
+ 11 months	0.103	1.275	$1.80^{c}$	0.063	0.557	1.21	0.074	1.354	1.91 <sup>c</sup>
+ 12 months	0.056	1.331	1.03	0.060	0.618	1.16	0.081	1.435	$2.27^{b}$
Number of	26		36			36			
Firms	36								

Table 13: Long-run Returns of Benchmark Model for MB

**Note:** MB refers to Market to Book Ratio of firms. AAR shows Average Abnormal Returns and CAAR indicates Cumulative Average Abnormal Returns. Numbers are mean values. t–statistics are given with a null hypothesis of equal means. <sup>a</sup> 1% significant level, <sup>b</sup> 5% significant level, <sup>c</sup> 10 % significant level.

Table 13reports long-run pre-and post-merger stock returns of firms which are gathered based on the closest value of MB data of bidder firms at the time of declaration date of bidder firms. This benchmark model captures the time period from -12 months through +12 months. There are 3 time lines. The first is rumor, the second is declaration and finally the third one is approval.

The post-merger stock returns are not statistically significant. The findings further suggest that there is no significant difference between post-merger stock returns and pre-merger stock returns. It seems that merger announcements have no effect on non-merged firms which are selected based on market to book ratio in the long-run.

#### **DISCUSSION AND CONCLUSIONS**

The contribution of this thesis is in three parts. Firstly; this thesis gives descriptive background for mergers and acquisitions. It describes types and classification of M&As in detail. Secondly, this thesis examines merger waves from past to present in particular after the period of the 2001 financial crisis. The thesis reconsiders the connection between the financial crisis and the merger activities in Turkey. Thirdly, it provides empirical evidence of stock returns reactions to M&As before and after the merger announcements. Furthermore, to verify the analyses, the benchmark methodology is applied. The findings give insights into the evolving M&As market in Turkey. It also has furnished expectations regarding the future of M&As in world and in Turkey.

The main purpose of this study is to evaluate the stock price reactions to merger announcements and its effects to stockholder value. Also this study attempted to look at the merger waves of the past and what appears to be a new wave in particular after the period of the 2001 financial crisis. The study reconsiders the connection between the financial crisis and the merger waves in Turkey. It provides empirical evidence of stock returns before and after the merger announcements. Moreover, this thesis compares the stock return performances of merged firms with non-merged firms by using the market value and market to book ratio benchmarks.

The findings show that merger activities increased especially after the financial crises. It can be said that there is a correlation between merger waves and financial crises according to findings. In Turkey, M&A activities intensified after the 2001 financial crisis. However, it is important to note that manufacturing firms waited to engage in M&A activities until the economy was relatively stabilized.

The stock returns are calculated using cumulative average abnormal returns (CAAR). Since one of the major limitations of M&A studies is informed investors, stock returns prior to M&A declaration date are calculated. It is assumed that investors might get M&A news before the declaration and approval dates. It is the case that sometimes M&A news and rumors appear on the newspapers even 1 year before. Thus, it is calculated that the pre-merger stock returns.

The findings present that the financial performance of the firms does not change. Although liquidity, tangibility, capital, LT/TA ratios of the firms increased after M&A, these financial performance improvements are not statistically significant. The results suggest that consistent with the previous studies, both premerger and post-merger returns are positive. However, pre-merger stock returns are higher than post-merger returns.

The findings show that the market reacted positively prior to official declaration announcement in short-run. However, in general, the t-values of stock returns around to M&A approval date are not statistically significant. It seems that the declaration date of M&A announcement has significant effect on the prior stock returns in short-run.

The findings reflect that the post-merger stock returns are positive and significant in the long-run. This is consistent with the findings of Citak and Yildiz (2006) who find positive and significant 1-month stock returns following the M&A announcement. Also this is consistent with the findings of Kirkulak and Demirkaplan (2008) who find positive and significant 1-month, 2-month, 3-month, 6-month and 12-month stock returns after the M&A announcement. Mandaci (2004) found similar findings that statistically significant abnormal returns were observed in the first and in the second day preceding and in the first day following the announcement dates. The findings in this thesis further suggest that post-merger stock returns are generally lower than pre-merger stock returns. M&A announcement has positive effects on the pre-merger stock returns. Following the declaration of the M&A, stock returns started to decline slightly and these declines are statistically significant. It is consistent with the findings of Mandaci (2004) who found that the cumulative abnormal returns for the periods before the announcement dates at her study.

This thesis also suggests that the long-run post-takeover performance of the merged firm is better than it would have been without the merger. The benchmark methodology is verified by examining the reactions of stock price of non-merged firms in short-run, where the findings are consistent with long-run. This study proofs that the performance of merged firms is better than it would have been without the merger. Therefore, this thesis supports firms to merge.

In the further research, it is aimed to examine the determinants of stock returns before, around and after the M&A announcements. It will be also interesting to investigate whether insider trading has significant effect on the pre-merger stock returns or not. This thesis is a first attempt to apply market equity and market to book ratio benchmarks that provides useful insight in evaluating post-merger performance over the long run. Further research is needed to control the biases in measuring long-run abnormal performance so that it can be understood whether 'post-merger underperformance' is really a puzzle or merely a statistical artifact of the data. These are interesting and important issues for future research.

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