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SOSYAL BİLİMLER ENSTİTÜSÜ  
İŞLETME ANABİLİM DALI  
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**MERGERS & ACQUISITIONS IN TURKEY:  
ANNOUNCEMENT EFFECTS ON STOCK PRICES IN ISE**

Yüksek Lisans Tezi

CENGİZ AVCI

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Marmara Üniversitesi  
Sosyal Bilimler Enstitüsü Müdürlüğü

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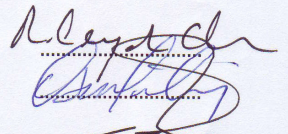
İŞLETME Anabilim Dalı MUHASEBE FİNANSMAN(ING) Bilim Dalı Yüksek Lisans öğrencisi CENGİZ AVCI'nın MERGERS & ACQUISITIONS IN TURKEY: ANNOUNCEMENT EFFECTS ON STOCK PRICES IN ISE adlı tez çalışması, Enstitümüz Yönetim Kurulunun tarih ve sayılı kararı ile oluşturulan jüri tarafından Yüksek Lisans Tezi olarak kabul edilmiştir.

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## **ABBREVIATION**

<b>ISE</b>	Istanbul Stock Exchange
<b>CMB</b>	Capital Market Board
<b>CB</b>	Competition Board
<b>M&amp;A</b>	Mergers and Acquisitions
<b>EPS</b>	Earnings per share
<b>P/E</b>	Price Earning Ratio
<b>CAR</b>	Cumulative Abnormal Return
<b>IFRS</b>	International Financial Reporting Standards
<b>VAT</b>	Value Added Tax
<b>DW</b>	Durbin-Watson Statistics
<b>US</b>	United States
<b>NOI</b>	Net Operating Income
<b>M&amp;M</b>	Modigliani and Miller
<b>CAPM</b>	Capital Asset Pricing Model
<b>NYSE</b>	New York Stock Exchange
<b>LSPD</b>	London Share Price Database
<b>LSE</b>	London Stock Exchange
<b>CRSP</b>	University of Chicago Center for Research in Security Prices
<b>FIGD</b>	Foreign Investment General Directorate
<b>EU</b>	European Union

## **SYMBOLS**

- $V_l$**  Levered Firm
- $V_u$**  Unlevered Firm
- $D_l$**  Lower Durbin – Watson Value
- $D_u$**  Upper Durbin – Watson Value

## **1. INTRODUCTION**

In finance literature, it is frequently encountered that the terms “mergers and acquisitions” are often used interchangeably. In a merger deal, two separate entities combine, leaving one surviving entity. On the other hand, in an acquisition deal one firm (the acquirer) purchases the other firm’s (the target) assets or common stocks. Either merger or acquisition the controlling of the firms is passed from one group of shareholder to another group of shareholders. So, these two transactions in terms of merger and acquisition fall under a new term, takeover. Takeover refers transfer of control of a firm. Another form of takeover occurs when an insurgent group attempts to gain controlling seats on the board of directors.

Although a number of reasons have been detailed why business enterprises enter into a merger and/or acquisition, the dominant reason has been growth in recent years. Combinor managements have been motivated by that dominant reason, growth, to undertake business combinations. And business environments target to take advantageous of expansion and diversification of product lines, or increasing market share of their current products by mergers and acquisitions. Other reasons can be counted as strengthening existing management, manufacturing process or other economies of scale or getting new management and tax advantageous. These motivations have become research issues before and after mergers and acquisitions in finance literature.

Merger and acquisitions have long been subjected to empirical researches, such as post merger and acquisition performance, due diligence process, motivations behind merger and acquisitions, abnormal returns, and announcement effect on the stock prices.

In this study, it is going to examining the mergers and acquisitions announcement effects on the stock prices in Istanbul Stock Exchange. The statistical data are collected from firms’ news published by Istanbul Stock Exchange and matched with weekly bulletin of Capital Market Board and

merger announcements subjected to permission of Competition Board. Event study methodology had been used in order to determine any significant day for merger or acquisition announcements as used by some researchers. Moeller, Schlingemann and Stulz also use standard event study methodology to estimate abnormal return. Andrade, Mitchell and Stafford also use three day - window which is one of two most commonly used event windows for merger studies. Dodd and Ruback measure the post - acquisition performance of acquirers over two periods.

The literature evaluates a merger based on the initial market reaction to the merger announcement (Asquith, 1983) and on the long-run returns to the merger (Loughran and Vijh, 1997). Jensen and Ruback find positive returns to the targets while approximately zero returns to the bidders. Bradley, Desai and Kim find that the target firms' shareholders realize positive abnormal returns in the short run and bidders' shareholders' gain fall down. Agrawal, Jaffe and Mandelkar found that stockholders of acquiring firms do not gain from acquisition in the long-run and acquirers earn negative abnormal return with stock payments. Bouwman, Fuller and Nain's study is consistent with previous studies that acquirers on average have negative long-run abnormal returns but positive returns in the short run.

And some hypotheses have been developed by these researchers. Roll shows that managers of bidding firms may suffer from hubris, so they overpay. Myers and Majluf hypothesizes that firms that issue equity signal that the market overvalues their assets in place (the equity signaling hypothesis). Jensen argues that empire-building managements would rather make acquisitions than increase payouts to shareholders (the free cash flow hypothesis). Finally, Mitchell, Pulvino and Stafford state that there is a price pressure effect on the stock price of the bidder for acquisitions paid for with equity because of the activities of arbitrageurs (the arbitrageur hypothesis).

The first chapter examines the general perspectives of merger and acquisitions including types, history and theories of motivations as

rationality behind the mergers and acquisitions. Furthermore, researches on announcement effect on the stock prices are expressed briefly. The second chapter starts with history and motives of merger and acquisitions in Turkey and then the literature review on announcement effect is detailed. After exposing the researches and data methodologies, our findings are stated.

## 1.1 MERGER VERSUS ACQUISITION

A *merger* is a combination of two firms in which only one of them leaves its juristic personality while the other survives. A statutory merger differs from a subsidiary merger which in a merger of two companies in which the target company becomes a subsidiary or part of a subsidiary of the parent. And statutory merger refers that the other corporations then are dissolved and liquidated and thus cease to exist as separate legal entities, and their activities often are continued as divisions of the survivor, which now owns the net assets, rather than the outstanding common stock, of the liquidated corporations.

Merger ( $A+B=A$ ), where the company B merges with company A, consolidation ( $A+B=C$ ), where C is entirely new firm<sup>1</sup>. In a consolidation a new firm is formed to issue its common stock for the outstanding common stock of two or more existing corporations, which then go out of existence. The new corporation thus acquires the net assets of the defunct corporations, whose activities may be continued as divisions of the new corporation. According to Ross<sup>2</sup> acquisition may occur in three ways; merger /consolidations, acquisition of assets and acquisition of common stocks. Ross defines merger as a form of acquisition.

## 1.2 MERGER and ACQUISITION TYPES

### 1.2.1 Horizontal Mergers and Acquisitions

This type of acquisitions requires acquiring a firm in the same industry with the acquirer firm. The firms compete with each other in their product. Horizontal merger occurs when two competitors combine. For example, in 1994 two defense firms, Northrop and Grummon, combined in a

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<sup>1</sup> Zabihollah Rezaee, **Financial Institutions, Valuations, Mergers and Acquisitions: The Fair Value Approach**, John Wiley & Sons, New York, 2001, p.73.

<sup>2</sup> Stephan A. Ross, Randolph W. Westerfield and Jeffrey F. Jaffe, **Corporate Finance**, McGraw Hill, Fourth Edition, p. 769.

\$2,17 billion merger<sup>3</sup>. If a horizontal merger causes the combined firms to experience an increase in market power that will anticompetitive effects.

### 1.2.2 Vertical Mergers and Acquisitions

A vertical acquisition involves firms at different steps of the production process. The acquisition by online company of a travel agency would be a good example for vertical acquisition. Vertical mergers have buyer and seller relationship. For example, in 1993 Merck, the world's largest drug company acquired Medco Containment Services Inc. the largest marketer of discount prescription medicines, for 6 billion. This transaction was no opposed by antitrust regulators even though the competition clearly resulted in a more powerful firm.

### 1.2.3 Conglomerate Merger and Acquisitions

Another type of mergers and acquisitions occur when the two conditions does not exist. The conglomerate refers a diversified corporation by investment in other industries. One example would be Philip Morris, a tobacco company, which acquired General Foods in 1985 for 86,5 billion<sup>4</sup>.

### 1.2.3 Congeneric Mergers and Acquisitions

Congeneric mergers and acquisitions realizes between firms operating in related markets that are neither directly vertically nor horizontally related. Instead, the linkage may be through similarities in production technology, customer base, or distribution channels.

One concern that results from vertical or congeneric mergers is that the competitiveness of upstream, downstream, or related markets will be affected. Such effects could result if affiliated firms are given preferential treatment relative to unaffiliated firms.

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<sup>3</sup> Patrick A. Gaughan, **Mergers, Acquisitions and Corporate Restructurings**, John Willey & Sons, New York, 2002, p.7-8.

<sup>4</sup> Gaughan, p.7-8.

### 1.3 HISTORY of MERGERS and ACQUISITIONS

Historically, merger and acquisition have been periodically and have been increased while the stock prices are high<sup>5</sup>. The first merger wave had started at the beginning of the 20. century in the world.

Especially, after the world war second social and economical conditions (the prices and income to increase) had changed which had resulted in mergers and acquisitions wave. In 1968, anti trust laws became an obstacle of rapid growth of merger and acquisitions. Mergers and acquisition could be seen not only country specific mode but only international mode.

#### 1.3.1 The First Merger Wave (1897 – 1904)

The first *Merger Wave* occurred after *the Depression* of 1883 peaked between 1898 and 1902, and ended in 1904. All major mining and manufacturing industries were affected by the first merger wave.

A near monopolistic market structure arisen as a result of the first merger wave. This merger period contributed to create large monopolies and at the same time, lots of companies (in excess of 3.000 companies according to Ralph Nelson<sup>6</sup>) disappeared during this period.

Throughout the first merger wave, trusts were seen in many industries because of poor performance of the companies. The structure of industries was the dominant reason that poor performance. In the new structure, market leaders had been revealed and the competition among the firms was reduced by establishing trusts.

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<sup>5</sup> Hüseyin Akay, **İşletme Birleşmeleri ve Muhasebesi**, Yayılım Basımevi, İstanbul, 1997, p. 25.

<sup>6</sup> Ralph Nelson, **Merger Movements in American Industry: 1885-1956** Princeton, N.J: Princeton University Press, 1959.

**Table 1**

**Number of Takeovers During the First Merger Waves**

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<b>Years</b>	<b>Number of takeovers</b>
1897	69
1898	303
1899	1.208
1900	340
1901	423
1902	379
1903	142
1904	79

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*Resource: Ralph Nelson*

On the other hand liberalization of corporate law was shown as another factor effected to increase in merger activity through that time. The liberalization of corporate law contributes the corporations to finance an acquisition much more easily by entering new capital markets and to hold stocks of other corporations for purpose of acquiring them. Bris and Cabolis had found reliable information on enactment dates for 42 countries. As to that working paper only the US (1914) and the Japan (1947) had passed merger laws prior to 1950 (two countries in 1950s, six in 1970s, eight in 1980s, and twenty four since 1990s). These data state that importance of merger laws<sup>7</sup>. Because, merger laws prevent the companies to get the market power and encourage the competition.

The other reason for the increase in merger activity through this period was the development of transportation system which allowed the corporations to reach the national markets. The greater accessibility of the

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<sup>7</sup> Arturo Bris and Christos Cabolis, "Merger Laws, Globalization and Corporate Value", p.4.

market of other countries enforces the corporations to merge with other companies originated in those markets<sup>8</sup>.

The end of first merger wave came with the financial factors such as the stock market crash of 1904, followed by Banking Panic of 1907.

### 1.3.2 The Second Merger Wave (1916 – 1929)

The post-First World War boom (which ended with the 1929 crash) sparked the second merger wave. Around 4,600 mergers were announced, and 800-1,000 companies disappeared as a result of the consolidation. As corporate concentrations increased towards the end of the 1920s, the top 200 companies in the US controlled just more than half of the total assets<sup>9</sup>. The monopoly characteristic of the industry structure seen during the first merger wave had changed towards the oligopolistic one. This wave was dominated by vertical and conglomerate mergers<sup>10</sup>.

In this period of merger waves antitrust environment were stringent and more oligopolies and vertical merger occurred. Significant amounts of debts were used by these companies and small group of shareholders controlled big corporations.

The end of second merger wave came with the “Black Thursday” on October 29, 1929. After the stock market crash on October 29, the number of corporate merger dramatically declined.

From 1930 to 1960, larger firms had acquired smaller firms privately held firms for motive of tax relief. These mergers did not result in intensified concentration because most of them did not represent a noteworthy percentage of total industry’s assets.

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<sup>8</sup> Mark L. Mithcell and J. Harold Mulherin, “The Impact of Industry Shocks on Takeover and Restructuring Activity”, **Journal of Financial Economics**, 41(2), 1996, p. 219.

<sup>9</sup> A. Srikanth, “India: The Fifth Merger Wave”, **Businessline** Chennai: Jan 9, 2000. p. 1.

<sup>10</sup> Jörn Kleienert and Henning Klodt, “Causes and Consequences of Merger Waves”, **Kiel Working Paper**, No:1092, p:6.

### 1.3.3 The Third Merger Wave (1965 – 1969)

The third wave was dominated by the strive for economies of scale by industrial mass production in consumer goods industries by the diversification of the products, and by acquiring firms from other markets<sup>11</sup>. And this period was also known as conglomerate merger. The conglomerate used to refer diversified corporations which have some subsidiaries in other industries but majority of their production within one industry production category. Companies who wanted to grow were forced to interest in other industries because of antitrust law which hindered the horizontal and vertical merger.

In contrast, investment bankers did not play a role in financing of most mergers. High interest rates were the main factor for the investment banker not to finance these mergers. Furthermore, the booming stock market prices provided equity finance for many of the conglomerate takeovers. P/E ratios became main indicators for the investors during the third merger wave. But when the stock market had fallen down in 1969, P/E ratios did not attract the investors' attention as much as previous period.

The 1969 Tax Reform Act which changed the computation of EPS by treating the convertible bond as common stock was pointed out as one of the main reason of dropping stock market<sup>12</sup>.

### 1.3.4 The Forth Merger Wave (1981 -1989)

The forth wave became the period of mega mergers. The dollar value paid in acquisition rose sharply during this decade<sup>13</sup>. The companies tried to prepare for the completion of the single market by converting national corporations into international or at least European ones<sup>14</sup>.

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<sup>11</sup> Kleinert and Klodt, p.4.

<sup>12</sup> Gaughan, p.32.

<sup>13</sup> Gaughan, p.47.

<sup>14</sup> Kleinert and Klodt, p.4.

The other determinant of the fourth merger wave was the role of hostile mergers. When the board of directors of acquired firms approves the takeover it is considered friendly, if not approved it is called hostile takeover. The number of hostile takeover increased during this period.

The corporations became optimistic for merger and acquisitions because of increasing competitions, technological innovations, cost of research and development expenses and etc.. During this period the most important mergers and acquisitions are Dupont, General Motors, General Electric and IBM.

And the fourth merger wave ended by economic slowdown in 1989.

#### 1.3.5 The Fifth Merger Wave

Globalization and the deregulation are the main characteristics of this wave. Globalizations leads to an extension of markets and firms sizes tend to follow this trend. Deregulations open up former national monopolies. Their interrelation caused the fifth merger wave arising cross – border mergers to be an important part of this wave.

It is clear that deregulation was a key driver of merger activity over the last ten years<sup>15</sup>.

Deregulation activities which were strongly supported by the EU Commission, concentrated on network industries, on transport, and on financial markets. A substantial part of the economy within the European Union was re-exposed to market-oriented mechanisms which effectuated severe adjustment requirements. Mergers are one activity among others to cope with these requirements<sup>16</sup>.

Globalization is the second major source of increased merger activities in the 1990s. This applies not only to typical globalization

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<sup>15</sup> Gregor Andrade, Mark Mitchell and Erick Stafford, “New Evidence and Perspectives on Mergers”, **Journal of Economic Perspectives**, Volume 15, Number 2, Spring 2001, p.108.

<sup>16</sup> Kleinert and Klodt, p. 8.

industries such as chemicals, motor vehicles, and non-electrical and electrical machinery, but increasingly also to certain service industries such as retail trade, banking, and business services, In addition, privatization of state-owned monopolies has enabled the respective firms to take part in international merger activities which had been prevented by government rules in the past. As a result of a dominant impact of globalization, the share of cross-border activities accounts for one quarter up to one third of the total transaction volume in worldwide mergers and acquisitions. Moreover, increased competition from globalization may also be responsible for national merger activities because it also alters competition intensity in national markets. Many national mergers in the European banking sector, for instance, can be explained by increased competition intensity in their international environment.

The determinants of merger activities called merger waves depend on the technological innovation, supply shocks such as oil gas shocks and deregulations and globalizations in the financial markets. The first merger wave included many horizontal combinations and the consolidation of industries. Although many horizontal mergers were dominant type of mergers, vertical transactions started to be seen in the second wave. The third merger wave means conglomerate mergers. Hostile merger and the size of the transaction became important in the fourth wave. Junk bonds were used to finance the mergers and acquisitions activities. This fourth merger wave ended up with the collapsed Junk Bond market in 1989. With the effect of globalization and the deregulations merger activities increased in 1990s and the cross border merger has risen.

#### **1.4 MOTIVES of MERGERS and ACQUISITIONS**

Mergers occur when two or more companies join together to form a single company. Many explanations have been supplied as to why mergers occur. According to neo-classical economic theory, mergers occur as the result of a profit-maximizing behaviour. Companies may wish to merge because they want to better their productive, distributive, and/or financing

capacity by achieving economies of scale or scope. Or they might wish to increase their market power, thereby enhancing the monopolistic characteristics of the market they operate in. Another reason is the search for cost efficiencies and synergies, deriving for instance from the acquisition of technology or of intangible assets such as the knowledge of the market. Also, mergers might occur to displace inefficient management. There are however also other, non-profit maximizing reasons, related to managerial objectives. Especially in large companies, when ownership is spread among thousands of shareholders, managers may have plenty of power to pursue their own goals, like maximizing sales or growth; reducing cash-flow risks; or simply trying to make themselves look grand. In such circumstances managers can initiate a merger not to maximize the value of the company (i.e. the net present value of future profits), but their own utility.

The motives of mergers and acquisitions had been tried to focus on by referring theories of motives. This section starts with the "Efficiency Theories" explains the synergetic gains from M&A. Different types of synergies; financial, operational and managerial synergies, gained from mergers and acquisitions are discussed. The second theory is "Monopoly Theory" which argues mergers and acquisitions as achieving market power. The companies which want to grow merge or acquire other firms in the market and get monopoly position. The third one is "Raider Theory" discussed as an explanatory theory behind the mergers and acquisitions motives and states a wealth transfer. After mergers and acquisitions the values of the combined firms are considered as one of the motivation explained by "Valuation Theory". Managers' own utilities are discussed as a motivation and detailed in "Empire – Building Theory". The "Process Theory" and "Disturbance Theory" are emphasized as the last two theories point out the motives of mergers and acquisitions.

#### 1.4.1 Efficiency Theory

This theory argues that a firm merges with another firm for the synergistic gains<sup>17</sup>. Synergy refers that when two firms (in general two substance or factors) combine, a greater reaction could be produced than the sum of two firms independently produces<sup>18</sup>. Although the rationale may differ from one merger or acquisition to another, a common measure of success of a merger is the increased value of the combined firm. Based on this measure, synergy stands out as perhaps the most justifiable motive in M & A. Some of them outline the sources of synergies as cost savings, revenue enhancements, process involvements and tax benefits. Berkovitch and Narayanan<sup>19</sup> argued synergies as a motive that assumes manager of targets and acquirers maximize shareholders' wealth and would engage in takeover activity only if it results in gains to both sets of shareholders. Therefore, it follows that measured gain to both target and acquirer shareholders would be positive.

In general, three types of synergies can be distinguished.

##### *a- Financial Synergies*

Financial synergy refers the effect of mergers and acquisitions on the cost of capital<sup>20</sup>. In order to gain from financial synergy the cost of capital of acquired and acquiring firms should be lowered.

Firms can achieve to this goal lowering the cost of capital by reducing the systematic risk by investing in unrelated business. The term of unrelated business is used to refer the correlation of the income streams of two firms which is less than perfectly correlated. If the income stream's volatility is decreased after mergers and acquisitions this firm is considered as less risky firms than others. The other important point for the success of

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<sup>17</sup> Friedrich Trautwein, "Merger Motives and Merger Prescriptions", **Strategic Management Journal**, Volume: 11, May/June 1990, p.283.

<sup>18</sup> Gaughan p.113

<sup>19</sup> Elazar Berkovitch, and Narayanan M.P., "Motive for Takeover: An Empirical Investigation", **Journal of Financial and Quantitative Analysis**; September 1993, Volume: 28, No: 3, p. 350

<sup>20</sup> Trautwein, p. 284.

mergers and acquisition is to increase the cash flow streams of combined firms.

Another way for increasing the companies' size is to access to cheaper capital. Because cost of borrowing by issuing bonds is lower for the larger firms which offer lower interest rates.

If the cost of capital is higher in the target's market, which is likely if the target is located in a developing country, then a cross border acquisition could create value by providing the target with access to a lower cost of capital through the internal capital market in the combined firm. If this is the case, projects which would otherwise not be undertaken by the target firm may become profitable and be a source of value creation. Note, however, that access to internal capital markets is often cited as a possible source of value destruction in developed market acquisitions. The concern with internal capital markets within large diversified conglomerates is that they may be less efficient than external capital markets in the allocating capital across projects. If bad projects are not properly evaluated and get funded, total value will be reduced within diversified conglomerates.

During financial crises, the cost of capital is likely to increase even further in emerging markets, creating even more of an incentive for cross-border mergers and acquisitions, and possibly bigger gains from the acquisition for cash-strapped targets. If this is indeed true then crisis periods should coincide with greater joint acquirer and target gains.

The access to capital leads to a further prediction related to industrial diversification. It is a common assumption that for both the acquirer and target firms to benefit from synergies that accrue from an acquisition, the two firms must be related in some way. The two firms could be related because they are in the same industry, or through a vertical value chain. However, value creation can be associated with the acquisition of a cash-starved firm by a cash-rich firm, regardless of industrial overlap. A high number of acquisitions between unrelated industries could in fact be a sign of cash-motivated mergers.

Researchers have criticized the financial synergy because of unreachable characteristic in an efficient capital market. Trautwein states that the efficiency theory's record is unfavorable. According to him if one regards financial statements as more reliable than the stock prices the efficiency theory has to be rejected.

#### *b- Operational Synergies*

Firms may combine their operations through merging or acquiring of corporate assets to reduce production costs, increase output, improve product quality, obtain new technologies or provide entirely new products<sup>21</sup>. Operating synergy may arise from economies of scale by moving to an alternative less costly production technology or asset configuration. Economies of scale refer to decrease in per – unit costs that result from an increase in the size or scale of company's operations.

In summary, operational synergies may lower the cost of the involved business units or may enable the company to offer unique products and services<sup>22</sup>.

#### *c- Managerial Synergies*

The bidders believe that its management skills are better than the target so, the value of the target would rise under its control. This argument may be valid in cases of large companies making offers for smaller ones.

Trautwein states that three studies summarize the indirect evidence on the efficiency theory. According to these three studies by Weston and Chung (1983), Jensen (1984), Dennis and McConnell (1986), and Ravenscraft and Scherer (1987) mergers generally are valued positively and bidders' shareholders have no gains on average while the targets' shareholders have positive return. But Trautwein found the efficiency theory to be consistent with stock market quotations but not with companies'

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<sup>21</sup> Paul A. Pautler, "Evidence on Mergers and Acquisitions", **Bureau of Economics**: Federal Trade Commission, September 25, 2001, p.2.

<sup>22</sup> Trautwein, p. 285.

actual performance. And he says if you think financial statements are more reliable than stock prices the efficiency theory has to be rejected.

While Trautwein is highly critical of efficiency theory (as a prescriptive tool) he does acknowledge that it is the most widely accepted theory used to explain the motivation for corporate acquisitions. The general acceptance of this theory of corporate acquisitions is important to corporate management as it emphasises that acquirer shareholders are the intended beneficiaries of the investment, rather than management themselves.

#### 1.4.2 Monopoly Theory

This theory states that the rationality behind the mergers and acquisitions is to achieve market power. Competition is reduced via merger and acquisitions while monopoly profits are obtained<sup>23</sup>.

Monopoly Theory discusses three beneficial effects of taking the control of market by merging.

First of all, the companies could sustain their profits. The second one is to limit the competition in more than one market. And the last one is to set the barriers for the competitors not to enter market<sup>24</sup>. These three benefits resulting from M&A states wealth transfer from customers. So, there is no efficiency gain. Monopoly theory requires that the stock price of competitors' stocks should rise upon an announcement and drop if the merger is cancelled.

With a substantial increase in market share the lack of significant product differentiation or barriers to entry could prevent a firm from being able to raise its price significantly above marginal costs.

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<sup>23</sup> Ross, Westerfield and Jaffe, p. 777.

<sup>24</sup> Trautwein, p. 286.

### 1.4.3 Raider Theory

According to this theory raider (a person) causes wealth transfer from the stockholders of the companies he bids for. These wealth transfers include greenmail or excessive compensation after a successful takeover<sup>25</sup>. As known, greenmail is a situation in which a firm trying to avoid a takeover buys back stock at a price above the existing market price from the person(s) trying to gain control of the firm<sup>26</sup>.

The main reason of wealth transfer is that premium paid by raider to take the control of the firm. But empirical studies have shown that the target firms' shareholders gains from merger and acquisitions. So, the result is inconsistent with the Raider Theory because the raider could not transfer the wealth from the stockholder of the companies he bids for.

### 1.4.4 Valuation Theory

In respect of "Valuation Theory", managers have greater information than the stock market about the targets' values.

In terms of merger and acquisitions, value is created when the benefits of the synergy that is gained through the combination and the integration of formerly separate firm exceeds the costs that are incurred to create that synergy. A firms' share price is one indicator of the value that is generated by mergers and acquisitions. But the shares of some firms are incorrectly valued by the market because relevant information about those firms is not available to the public.

"Valuation Theory" creates a conflict between the "Efficient Market Hypothesis" which requires that all publicly available information is incorporated in the stock price<sup>27</sup>.

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<sup>25</sup> Trautwein, p. 289.

<sup>26</sup> Scott Besley and Eugene F. Brigham, **Essentials of Managerial Finance**, Twelfth Edition, p.19.

<sup>27</sup> Trautwein, p. 287.

If all potential acquirers have similar perceptions about the value of potential targets and the market for corporate control is competitive, the potential acquirers would bid up the price of targets which appeared to be bargains until the acquiring firms would, at the margin, expect to receive only a normal return from their acquisitions.

But managers know better information that makes the deal a good buy for acquirers. The assets are not valued correctly because of that information. The owner of private information places a higher value on certain assets than does their current owner.

As discussed above share price is one indicator of the value that is generated by an acquisition. When the literature is viewed it is clear that the researches state the permanent rise in the price of target firms even in the case of unsuccessful mergers and acquisitions. Henock<sup>28</sup> defines at least two explanations about unsuccessful mergers; one of them is information asymmetry and the other one is performance extrapolation.

In order for the target firm to negotiate the best possible offer, the target must be in a position to form an accurate estimate of its fundamental value. If the target is uncertain about its true stand-alone value, the firm may undervalue its assets. On the other hand, if acquirers are better able to assess the synergies from the merger, acquirers may be able to select and execute only those transactions that result in significant gains for them. The ability of acquirer firms to form a better estimate of the target's true value has particular significance in emerging markets where the stock price is often viewed as an especially noisy estimate of true firm values. Furthermore, crisis periods result in a collapse about beliefs about future payoffs in the emerging stock markets. If these beliefs are irrational and acquirers have greater confidence in the fundamentals, acquirers may realize further gains during times of crisis.

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<sup>28</sup> Henock Louis "The Causes of Post Merger Underperformance: Evidence from Successful and Unsuccessful Bidders" p.1, ([http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=316960](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=316960)).

Acquirers are over-valued in respect of information asymmetry before the mergers. Performance extrapolation maintains that acquirers become over-valued as a result of the mergers. According to Henock, in general the results of the studies are consistent with the information asymmetry hypothesis and inconsistent with the performance extrapolation.

#### 1.4.5 Empire - Building Theory

The "Empire Building Theory" argues that managers act for their own utilities instead of their shareholders' utilities. The "Empire Building Theory" is a common name of a variety of merger explanations.

Merger and Acquisition is motivated by the acquirers' managements' self interest and enables the managements to extract wealth from shareholders. Manager would not give sufficient attention whether the acquisition lower the value of the firm or not<sup>29</sup>.

Richard Roll<sup>30</sup> states that managers seek to acquire firms for their own personal motives and hubris may induce the management of an acquiring firm to overbid for its targets. The hubris hypothesis maintains that acquisitions are motivated by managers' mistakes and that there are no synergy gains.

According to the efficient market hypothesis, there is no gain to be realized from corporate takeovers primarily because financial markets, product markets and labor markets are assumed to be totally efficient. But Roll concluded that any perceived monetary gains of mergers are offset by the true economic value of the combined firms<sup>31</sup>.

Managerial hubris may occur in the due diligence process. This drives the managers to pay a premium to the firm objectively valued in the market.

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<sup>29</sup> Berkovitch, and Narayanan, p. 348

<sup>30</sup> Richard Roll, "The Hubris Hypothesis of Corporate Takeovers", **Journal of Business**, 59 No: 2, April 1986, p.199.

<sup>31</sup> Rezaee, p. 87.

The main idea of agency motive is to extract value from the acquirer shareholders by acquirer management. According to Berkovitch and Narayanan, "specialist" managements acquire firms in their own lines of business so that the success of combined entity will depend even more on their specific skills. These management's actions result in agency costs which decrease the total gains from M&A. So, there is an inverse relation between the total and target gains.

#### 1.4.6 The Process Theory

It depends on strategic decision process. There is less evidence relating to Process Theory than to the Empire-Building Theory. The scarcity of direct evidence can be seen as being caused by merger makers' attempts to rationalize their actions. The decision makers of acquirer firms should provide the positive outcomes from an acquisition. The lack of appropriate due diligence process is referred as one of the main reason for the unsuccessful acquisition.

Due diligence is a process that requires to analysis target firms financial condition, management capabilities, physical assets, intangible assets and other relevant information to the acquisition. Successful acquisition requires the manager to take strategic decision which is made by knowing all information relevant to acquisition. Due diligence process as defined above focuses on that relevant information to be cleared out.

#### 1.4.7 Disturbance Theory

Trautwein determines "Disturbance Theory" as a cause of merger wave. In terms of disturbance, Trautwein states economic disturbance that shifts expectations of people and effect the uncertainty.

As in 1929, individual expectation had changed on "Black Thursday" and the second merger wave dominated by vertical and conglomerate merger came to end. But, Trautwein criticized this theory especially in macro level and asked why the oil crisis in 1973/74 did not trigger a merger

wave. According to "Disturbance Theory" the oil crisis should have caused a merger wave but did not.

#### 1.4.8 Financial Motives

Financial motive refers to achieve a level for cost of capital lower than pre-merger level. In a successful M & A cost of capital should be lowered.

The cost of capital can be defined as the mix of different securities of the firms. There are three theories explain the capital structure of the firms; Independence Hypothesis (NOI – Net Operating Income), Traditional Approach and the Modigliani Miller Theory well known as M&M Theory. According to the Independence Hypothesis the firms' composite cost of capital and the common stock price are both independent of the degree to which the company chooses to the financial leverage. U-shaped average cost of capital curve is achieved in traditional approach. Even though the cost of common equity is rising, it is not enough to offset the use of the less expensive debt financing. On the other hand, Traditional Approach determines an optimal point of capital structure and the firm's cost of capital is at minimum level and the firm takes advantage of the financial leverage at maximum level.

Modigliani & Miller Proposition I states that capital structure is irrelevant and firm value is equal to the present value of the free cash flow discounted at the relevant cost of capital ( $V_u = V_l$ ). Proposition II indicates that the required rate of return on equity increases with financial leverage<sup>32</sup>.

M & A are financed through a cash purchase, an exchange of stock or a combination of cash and stock. Using one of these three payment methods will affect the financial performance of the mergers. Mitchell, Pulvino and Stafford<sup>33</sup> found that acquiring firms paying with cash experience a positive

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<sup>32</sup> Franco Modigliani and Merton H. Miller, "The Cost of Capital, Corporation Taxes and The Theory of Investment", **American Economic Review**, Volume XLVIII, No: 3, June 1958, 275.

<sup>33</sup> Mark L. Mitchell, Todd C. Pulvino and Erick Stafford, "Price Pressure Around Mergers", **Harvard NOM Research Paper**, No: 02-22, July 2002, p.3.

stock price reaction at the merger announcements, while firms that use stock to finance their purchase encounter a negative reaction at the merger announcements.

Another financial motive is to reduce risk level of combined company by lowering the volatility of cash flows. If the combined firm reduces the volatility of cash flows technical insolvency may not occur which refers the total liabilities exceeds the total assets.

Under these circumstances "debt coinsurance" plays a strategic role for creditors. If the two firms' incomes streams are not positively correlated the creditors may not suffer a loss. The income stream of successful firm will compensate the deficit created by failed firms.

Increased debt capacity by M & A is another financial motive. After M & A, the combined firm may borrow at a lower interest rate and will use financial leverage in order to increase firm value. Debt holders may lose high interest returns but may gain by holding debt instruments of a less risky firm. The merged firm will borrow much more than the pre-merger stage because of increased debt capacity and lowered interest rate. These researches assume that total returns are constant for the combined firm. This will result in a wealth transfer from stockholders to bondholder. Interest rates will play a deterministic role whether the stockholders gain or not. If interest charges are higher than the pre-merger stage, net income will be reduced and also dividend will be reduced. So, stockholders will lose or vice versa. In this point, tax is a crucial point to be discussed as a financial motive because of decreased taxable income by higher interest expenses.

Fixed costs to issue securities such as registration fees, legal costs and etc. will be brought down because of much more issuance of securities and the combined firm will achieve financial economies of scale.

#### 1.4.9 Other Motives

##### *a- Tax Motive*

Tax motive is an important determinant of mergers and acquisitions. Prior to the mid-1980's, there may also been significant tax reduction benefits associated mergers and acquisitions. "The Tax Reform Act of 1986" restricted the companies' ability because these companies had merged with unprofitable firms to use these firms' net operating losses to reduce future tax. On the other hand, the tax reform has put the limits of the unprofitable firms to sell their net operating losses trough merges.

The other tax motivation is the market value of depreciable assets. When the targets have the depreciable assets which have the greater market value than the book value this will lead tax savings to acquiring firms because of increasing depreciation expense.

Accounting treatment becomes an important issue at that point. Accounting treatment to be used in mergers acquisition is polling and purchase method. According to the purchase method the transaction is recorded at its fair market value. So, the higher market value of depreciable assets means the higher tax incentive for mergers and acquisitions. In contrast, pooling method requires recording the transaction at its book value. So, the depreciation expense can not reduce the taxable income as much as in pooling method. But Hopkins, Houston and Peters<sup>34</sup> discuss using pooling method is distractive because of amortization of goodwill and the performance of combined firm after M & A. They found that purchase method used to combine the financial statements of the two parts can impair fair value of combined firms.

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<sup>34</sup> Patrick E. Hopkins, Richard W. Houston and Michael F. Peters, "Purchase, Pooling and Equity Analysts' Valuation Judgements", September 13, 1999, p. 3. ([http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=181278](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=181278)).

### *b- Diversification*

Diversification is discussed as a financial motive for bondholder to hold less risky firms' bonds.

Entering a new industry by merging with another firm may reduce cost and may stable the cash flows expected during the life of the merged company. And the company may reduce its beta relative to pre-merger beta.

Gains from cross-border acquisitions also depend on the systematic risk of the target's cash flows as reflected in the covariance between the discount rate and the target's cash flows. If the acquisition switches the benchmark for pricing the systematic risk associated with the target's cash flows from the domestic market to the acquiring firm's market the acquisition could provide diversification benefits for both the target and acquiring firm resulting in value creation.

M & A are used to achieve a new product line that is grater and cheaper than to develop new products internally. By achieving a new product line trough mergers and acquisitions companies diversify their unsystematic risk<sup>35</sup>. As known from Capital Asset Pricing Model, unsystematic risk is reduced by diversification but systematic risk can not be diversified. Ross states that company level diversification should reduce the unsystematic risk but shareholders can diversify more easily than corporation by simply purchasing common stock in different industries. The rational mind behind the diversification is that the motivation of acquiring company to operate in a growth industry<sup>36</sup>.

Furthermore, selling the firm's share for diversification may result in to share the controlling of the company and tax liabilities to the owner.

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<sup>35</sup> Ross, Westerfield and Jaffe, p. 757.

<sup>36</sup> Haluk Sumer and Helmut Pernsteiner, **Şirket Birleşmeleri**, Alfa Yayınları, İstanbul, 2003, p. 385.

As discussed above, individual level diversification may be advantageous for small shareholders and the company level diversification may be advantageous for owners, managers and large shareholders.

*c- The Acquisition of Control*

In a world with incomplete contracts, the allocation of ownership within firms becomes important. If the acquisition results in a transfer of control, it will shift the boundary of the acquiring firm and can alter the acquiring firm's incentives to transfer technology or invest in the target. The stock price reactions of the acquiring and target firms when a cross border acquisition leads to a majority control of the target firm by the foreign owner capture the importance of acquiring control.

Previous research suggests that the acquisition of control is important in the presence of proprietary assets and less common in labor-intensive industries<sup>37</sup>. The acquisition of majority control may also be more important in countries with poor protection and enforcement of the minority shareholder rights. Partially-owned affiliates of US multinational companies receive less training use older technologies and export less to their parents than their wholly owned counterparts<sup>38</sup>.

If the transfer of control leads to an increase in investment and transfer of technology, joint returns should increase with control. Acquirers may also gain from acquisitions that achieve control of the target firm. This gain may be the result of total gains being higher and the target and acquire split these gains in a constant ratio. Alternatively, acquirers could pay different prices when they acquire control of the target.

The impact of the foreign acquirer gaining majority control on the target's stock price is less clear. On the one hand, if the market expects that the acquirer will transfer better technology and provide access to

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<sup>37</sup> Theodore Moran, "Parental Supervision: The New Paradigm for Foreign Direct Investment and Development" **Institute of International Economics**, Washington DC, 2001.

<sup>38</sup> Mihir Desai, C. Fritz Foley and James R. Hines, "The Costs of Shared Ownership: Evidence From International Joint Ventures" **Forthcoming in the Journal of Financial Economics**, 2003, (<http://www.ftc.gov/be/workpapers/wp243.pdf>).

cheaper capital to the target its stock price will increase. On the other hand if the foreign acquisition dilutes the ability of the previous owners to exercise private benefits of control, the target's stock price may fall (Dyck and Zingales 2004).

In summary, value creation through cross border mergers and acquisitions is a function of a whole host of factors. The value of the combined firm will be greater than the stand alone values of the acquirer and target firms if the acquisition leads to the creation of synergies, access to internal capital markets for target firms and the provision of diversification benefits for the acquiring firms. Acquiring firms may gain from acquisitions in emerging markets if they have better bargaining power in emerging markets, are able to form better estimates of the true stand alone value of the target or because they acquire control of the target firm. It is not easy to identify variables that precisely map into the various factors that affect value creation through cross border mergers and acquisitions. Nevertheless, the empirical estimation strategy employed in this paper includes proxies for the acquisition of majority control, target and acquirer characteristics such as firm size and liquidity, a measure of industrial diversification and transaction characteristics such as method of payment as factors that may drive value creation through cross border acquisitions.

## **2. ANNOUNCEMENT EFFECTS on THE STOCK PRICES**

### **2.1 SHORT – RUN ABNORMAL RETURNS**

Measuring value creation resulting from mergers and determining how this incremental value is distributed among mergers' participants are two of the central objectives in finance literature. Market reaction to mergers and acquisitions is investigated by researchers.

The average abnormal stock market reaction to merger announcements is used as a measurement of value creation or destruction. In an efficient capital market, stock prices quickly adjust following a merger announcements.

### 2.1.1 Cash and Stock Financed Mergers and Acquisitions

Jensen and Ruback<sup>39</sup> had used data on mergers and acquisitions from the 1950s through the 1970s. They find positive returns to the targets while approximately zero returns to the bidders. Bradley, Desai and Kim<sup>40</sup> find that excess returns to bidders at the announcement of a takeover fall from the 1960s through the 1980s and the target firms' shareholders realize positive abnormal returns.

In addition, Mulherin and Boone find that positive abnormal returns for target shareholders but insignificant bidder returns.

On the other hand, Fuller, Netter and Stegemoller<sup>41</sup> state that bidders in the 1990s have statistically significant positive returns. However, this return is driven by the method of payment and the target type (public, private or subsidiary target). And they find that the abnormal returns at the announcements of mergers and acquisitions are higher for cash acquirer than for stock acquirer. Cash offers result in significantly higher abnormal returns to acquirer shareholders than stock offers.

Travlos<sup>42</sup> finds that acquirers experience positive abnormal returns at the announcements of cash mergers and negative abnormal returns at the announcements of stock – of stock mergers, consistent with the information asymmetry hypothesis.

Rau and Vermaelen states that acquirers would pay a higher premium in stock financed mergers than cash financed mergers under the information asymmetry hypothesis. The premium paid in cash is immediately taxable. The acquirer should pay a higher premium to target

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<sup>39</sup> Michael Jensen C. and R.S. Ruback, "The Market for Corporate Control: The Scientific Evidence", **Journal of Financial Economics**, 5, April 1983, p.10.

<sup>40</sup> Micheal Bradley, Anaoud Desai and E.Han Kim, "Determinant of Wealth Effect of Corporate Acquisition," **Working Paper**, Ann Arbor: Univeresity of Michigan, 1984.

<sup>41</sup> Kathleen Fuller, J. Netter, and M. Stagemoller, "What Do Returns To Acquiring Firms Tell Us? Evidence From Firms that Make Many Acquisitions", **Journal of Finance** 57, 2002, p. 1770.

<sup>42</sup> N., Travlos, "Corporate takeover bids, method of payment, and bidding firms' stock returns", **The Journal of Finance** 42, p. 950.

shareholders to compensate the tax disadvantageous than the premium paid in stock.

Bouwman, Fuller and Nain<sup>43</sup> find that the three-day announcement returns are significantly positive for acquirers. They state that evidence on the returns to bidders engaging in mergers is mixed and determine the reason why it is difficult to measure bidders' returns.

First, bidders are big relative to targets, so even successful acquisitions could have little impact on the bidders' stock prices.

Second, if a bidder is known to be engaging in an acquisition strategy, the stock price reaction to any acquisition announcement will only represent how the market perceives that acquisition to be different from the anticipated acquisition.

Third, M & A process may take a long time, if the target resists. Thus, the uncertain outcome of the event makes it difficult to isolate the market's perception of the bid.

Abnormal returns extracted from the mergers and acquisitions depend on the method of payment. The bidder and target returns for stock offers on average are lower than for cash offers. There are also two explanations for this relation. First, information asymmetry which causes the post merger share price of the acquirer to be undervalued while the value of cash paid not to be debatable is greater for stock offer than cash offer<sup>44</sup>. A number of studies on acquirers states that acquirers have negative abnormal returns or approximately zero returns on average. Dunstan determines three reasons for the negative abnormal return to acquirers' shareholders. First one is choosing an appropriate benchmark for determining the any abnormal returns. Second one is the size effect of acquisitions which result in obvious size increases. This result in pre –

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<sup>43</sup> Christa Bauwman, Kathleen Fuller and Amrita Nain, "The Performance of Stock - Price Driven Acquisitions", May 2003, p. 5.

<sup>44</sup> Keitha Dunstan, "Corporate Acquisitions: Motivation and Consequence" Working Paper No: 1999-05, p.4., (<http://www.bus.qut.edu.au/schools/accountancy/research/documents/1999-005Dunstan.pdf>).

takeover data are probably biasing their results. The third one is related to the time period of event windows studies. Some of them argue that acquirers' gains accrue over a long period while the others state vice versa.

## **2.2 LONG – RUN PERFORMANCE**

### **2.2.1 Cash and Stock Financed Mergers and Acquisitions**

The researches on long-run abnormal returns to acquirer can be divided in to two groups. One of them states that acquirer earn negative abnormal returns in the long-run.

Agrawal, Jaffe and Mandelkar<sup>45</sup> found that stockholders of acquiring firms do not gain from acquisition in the long-run. Acquirer who pays in cash earns positive abnormal returns while acquirer who pays with stock suffers negative abnormal returns. According to these studies, investors systematically fail to assess quickly the full impact of corporate announcements. It is difficult to determine whether an abnormal return is statistically significant or not.

An additional statistical concern with many long-term event studies is that the test statistics assume that abnormal returns are independent across firms. Mitchell and Stafford<sup>46</sup> argues that the test statistics assume independence of abnormal return even though major corporate actions are not independent events. They found the methodology inappropriate because of independence of abnormal returns.

This is particularly relevant for acquisitions which tend to cluster by industry and occur in waves.

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<sup>45</sup> Anup Agrawal, Jeffery F. Jaffe and Gershon N. Mondelkar, "The Post Merger Performance of Acquiring Firms: A Re-examination of an Anomaly", **Journal of Finance** 47, 1992, p.1619.

<sup>46</sup> Mark Mitchell and Erick Stafford, "Managerial Decision and Long-Term Stock Price Performance", **Journal of Business** 73. 2000, p 300.

Mandelker<sup>47</sup> is generally considered the first modern treatment of the financial consequences of mergers, with merger completion dates being precisely determined and abnormal returns being calculated relative to a benchmark. Mandelker analyzes 241 mergers both the acquiring and the acquired firms were listed on the New York Stock Exchange (NYSE). These mergers took place during 1941-1962.

Mandelker's major focus is on returns around the time of the merger, with perhaps his most important finding being (p. 303): "stockholders of acquiring firms seem to earn normal returns from mergers as from other investment-production activities with commensurate risk levels. Stockholders of acquired firms earn abnormal returns of approximately 14%, on the average, in the seven months preceding the merger."

In addition, he also presents returns for the combined entity subsequent to the merger. He shows cumulative average abnormal returns 12 (CAARs) of -0.014 over the 40 months following merger completion, clearly an economically insignificant drop. While no t-statistics over the 40-month period are provided, Mandelker shows statistically insignificant abnormal returns over the first 10 months and the first 20 months following merger completion.

In his study a firm's beta for month  $t$  is measured using data over the previous 60 months. The beta for month  $t$  is measured using data from months  $(t-30, t-1)$  and  $(t+1, t+30)$ . Here, the CAAR over the 40 months following merger completion is -0.026.

Dodd and Ruback<sup>48</sup> examine stock return performance both before and after tender offers. Market model is used to determine abnormal returns. The study measures the post-acquisition performance of acquirers

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<sup>47</sup> Gershon Mandelker, "Risk and Return: The Case of Merging Firms," **Journal of Financial Economics**, 1: 1974, p. 325.

<sup>48</sup> Peter Dodd and Richard Ruback, "Tender Offers and Shareholder Returns: An Empirical Analysis", **Journal of Financial Economics**, 5: p.363.

over two periods, months (+1, +12) and (+13, +60), relative to the first public announcement of the bid.

Langetieg<sup>49</sup> examines 149 mergers between NYSE firms over the period from 1929 to 1969. Langetieg adjusts returns for both market and industry factors. He abstracts from market returns by using either the Capital Asset Pricing Model (CAPM) or the Black (1972) two-factor model, and employs two industry indices, yielding four measures of abnormal performance. His study states large negative returns over three intervals (months (+1, +12), (+13, +24), and (+25, +70)) after the merger.

His control firm “represents the firm in the merging firm’s two-digit industry having the highest residual (i.e. returns net of market influence) correlation to the merging firm” (p. 371). He calculates abnormal performance as the difference between the acquiring firm’s performance using and the performance of the control firm.

He summarizes his results as follows (p. 376): “If we were to draw preliminary conclusions based only on the results for merging firms, we would be forced to conclude that the post-merger excess return experience is inconsistent with the efficient markets hypothesis. However, it would be wrong to draw conclusions based only on merging firm results, since the control firm results and the ‘paired-difference’ results must also be considered. The control firm also shows a generally negative average excess return in most post-merger time intervals. Examination of the ‘paired-difference’ results shows average excess returns that are still predominantly negative, but never significantly different from zero. Hence, we conclude that the post-merger excess return experience is consistent with the efficient markets hypothesis.” This quote indicates that Langetieg puts more weight on the control firm results.

However, it is not clear whether this second approach is preferable. After all, the first approach abstracts from industry effects. A control firm may be superfluous in this setup, since this firm is meant to abstract from

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<sup>49</sup> Terence C., Langetieg, “An Application of a Three-Factor Performance Index to Measure Stockholder Gains from Merger,” **Journal of Financial Economics**, 6: 1978, p. 365-383.

industry effects as well. Subsequent academic studies have not used a control firm this way.

Firth<sup>50</sup> analyzes bidders in 434 successful bids and 129 unsuccessful bids in the United Kingdom over the period from 1969 to 1975. Six months prior to the bid announcement are excluded from the sample where the bidder holds at least 30% of the target stock. Both bidders and targets are exchange-listed firms. Market model with a moving average method for beta estimation is used to measure the abnormal performance.

Specifically, the parameters of the model for a given month  $t$  are estimated over months  $(t-48, t-1)$ , excluding months  $(-12, +12)$  around the takeover bid month. He found that CAARs for successful bidders of only 0.001 over the 36 months following the bid announcement. It is not an economically significant return. He states that CAARs for unsuccessful bidders of 0.035 over the 36 months following bid announcement. This result states statistical significance over the first year but not over the next two years following the bid announcement.

Franks, Harris and Mayer<sup>51</sup> examine post-acquisition returns for both the United Kingdom and the United States. The authors use a sample of takeovers over the period 1955-1985, as recorded in the London Share Price Database (LSPD). The dataset covers all U.K. companies listed on the London Stock Exchange (LSE) after 1975 and about two-thirds of the companies (generally larger firms) on the LSE before 1975. The U.S. sample includes all companies that disappeared by acquisition from the University of Chicago Center for Research in Security Prices (CRSP) files over the period 1955-1984. The CRSP database covers all NYSE-listed firms since 1926 and all AMEX-listed firms since 1962. The authors calculate post-acquisition abnormal returns in four ways:

1. The market model approach, using  $a$  and  $b$  estimated over the 60-month period beginning 71 months before the announcement month.

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<sup>50</sup> Michael Firth, "Takeovers, Shareholder Returns, and the Theory of the Firm," **Quarterly Journal of Economics**, 94: 1980, p. 253.

<sup>51</sup> Agrawal and Jaffe, p. 19.

2. The market model approach, using months (+25, +60) relative to merger completion as the estimation period.

3. The return on the acquiring firm minus the return on the market

4. The capital asset pricing model.

Post-merger returns are computed relative to the month of the final bid for mergers in the U.S. and the month when the merger was unconditionally accepted in the U.K. The U.S. sample includes 127 all-cash acquisitions and 392 equity acquisitions. The U.K. sample includes 221 cash and 207 equity takeovers. For the United States, the authors shows cumulative average abnormal returns to acquirers over the first two years following all-equity takeovers to be around  $-0.18$  under methods (1), (3), and (4). All three estimates are statistically significant.

Moeller, Schlingemann and Stulz<sup>52</sup> had found that cash acquisitions of public firms by small firms have significant positive abnormal returns insignificantly different from cash acquisitions of private firms by the same firms. On the other hand they stated that acquisition of small firms have worse abnormal returns on average, this result is due to large firms and equity acquisitions. They state that there has been increasing concern in the literature that announcement returns may not be capturing the whole shareholder wealth impact of a corporate action. If that is the case, it is possible that announcement returns incorporate information differently across firm characteristics and deal types. Hence, the differences they document across firms characteristics and deal types might be artificial results due to the fact that markets are not equally efficient for all stocks. This concern would have some validity if they were to find out that the differences they document at announcement get reversed over time. To address this issue, they examine long-term returns following announcements. They find there that acquiring firms perform poorly. There is not much of a difference between large and small firms, but firms that acquire private firms have the worst long-term abnormal returns. For firms

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<sup>52</sup> Sara Moeller, Frederick P. Schlingemann and René M. Stulz, "Do Shareholders of Acquiring Firm Gain From Acquisitions?", **National Bureau of Economic Research, Working Paper**, No: 9523, February 2003, p. 22-23. (<http://www.nber.org/papers/w9523>).

that acquire private firms, there is not much of a difference between large and small firms and between the form of payment. However, when they turn to firms that acquire public firms, large firms perform worse and there is no evidence that firms paying cash have negative long-term abnormal returns.

Meggison, Morgan and Nail<sup>53</sup> find that during the initial announcement period a significant 57.4% of all acquirers experience negative excess returns (which average -0.66%). Over longer event horizons, these excess returns grow steadily more negative. The two and three-year CARs are significantly negative (at the 5% level), while all three percent positive measures are significantly less than 50% (also at the 5% level). The mean three-year CAR for their full sample is -13.07% and 57.8% of these mergers result in negative abnormal returns. Their full results are consistent with most merger performance – acquirers generally obtain significant negative abnormal returns. Their three-year CAR is -2.48% and only 51.8% of acquirers suffer negative excess returns. Shareholders of acquirers executing focus-decreasing mergers, however, suffer significant losses for every post-merger estimation period. A highly significant 64.1% of these acquirers experience negative announcement period returns (although the mean excess return, -3.22%, is insignificant), and all the one-, two-, and three-year CARs and percent positive measures reveal 16 economically and statistically significant losses for acquiring firm shareholders. Over the three-year postmerger period, focus-decreasing merger shareholders suffer significantly negative excess returns of -25.52% and 65.2% of all such acquisitions yield negative excess returns for shareholders.

Malatesta<sup>54</sup> examines 256 firms that acquired targets with asset size greater than \$10 million over the period 1969-1974. Market model is used

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<sup>53</sup> William L. Meggison, , Angele Morgan and Lance Nail, “Changes in Corporate Focus, Ownership Structure, and Long Run Merger Returns”, **SSRN Working Paper**, p.15. ([http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=250993](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=250993)).

<sup>54</sup> Paul H. Malatesta, “The Wealth Effect of Merger Activity and the Objective Functions of Merging Firms,” **Journal of Financial Economics**, 11: 1983, p. 165.

for measuring the abnormal returns. For months (+1, +12) after the merger announcement, the model's parameters are estimated from the 36 observations closest to a given month  $t$  drawn from months (+13,  $t+60$ ).

Malatesta shows cumulative average abnormal returns for acquiring firms over the periods (+1, +6) and (+7, +12) relative to the first public announcement date of the merger. Abnormal returns are significantly negative over both periods. Malatesta also looks at the subset of roughly one-half of his sample where an announcement of board or management approval of the merger appears.

While Malatesta takes the significantly negative returns following the first public announcement quite seriously, he argues that market inefficiency is an unlikely explanation for negative abnormal post-merger returns to acquiring firms. Information concerning mergers is widely disseminated. It is implausible that investors systematically misinterpret the implications of these common phenomena. Instead, he suggests the possibility that post-merger losses are mere statistical artifacts due to changes in risk parameters around the merger event.

Anup and Jeffery<sup>55</sup> states Magenheim and Mueller examine 78 NYSE/AMEX acquiring firms that completed takeovers worth at least \$15 million over the period 1976-1981. The authors classify 51 of the acquisitions as mergers and 26 as tender offers. They calculate abnormal returns from the market model, estimating the parameters  $a$  and  $b$  over one of three periods: months (-60, -4), (-36, -4) or (+13, +36) relative to the initial announcement month. For the first two estimation periods, Magenheim and Mueller states CAARs for each of the first three years subsequent to the announcement. The authors do not report statistical significance over the three-year period. However, they present  $z$ -values (standard normal) of -1.2464 and -4.9307 for performance over months (-3, +36) relative to the month of initial announcement, using the first and second estimation periods, respectively.

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<sup>55</sup> Agrawal and Jaffe, p. 18.

The authors present post-announcement returns for mergers and tender offers separately, using only the (-60, -4) estimation period. Magenheim and Mueller appear to be the first to calculate post-acquisition returns for the two types of acquisitions separately. And, like Magenheim and Mueller, subsequent researchers generally find that returns are higher after tender offers than after mergers.

Bowman, Fuller and Nain's<sup>56</sup> study is consistent with previous studies that acquirers on average have negative long-run abnormal returns, cash acquisitions outperform stock acquisitions and tender offers outperform mergers. However, they find that regardless of the method of payment, acquisitions undertaken by low-valuation acquirers outperform, while acquisitions undertaken by high-valuation acquirers underperform. Surprisingly, when the deal is a tender offer, the acquirer has positive abnormal performance regardless of the state of the market in which the offer was initiated. However, mergers undertaken by low-valuation acquirers significantly outperform, while mergers undertaken by high-valuation acquirers significantly underperform.

In the short-run, when the market is booming, acquirers obtain significantly positive abnormal returns. In the long run, however, these acquisitions have negative abnormal returns, indicating that the market gradually learns that the majority of acquisitions undertaken during high-valuation periods were poor decisions. In contrast, when stock prices are low, acquisitions provide no significant announcement reward. Yet, in the long run, acquisitions undertaken during low valuation periods earn significantly positive abnormal returns.

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<sup>56</sup> Bauwman, , Fuller and Nain, p. 5.

### **3. MERGERS AND ACQUISITIONS in TURKEY**

#### **3.1 HISTORY OF MERGERS AND ACQUISITIONS in TURKEY**

The technological development has resulted in to increase the competition and deregulation of capital markets and money markets. The multinational companies have started marketing their product in other countries such as Turkey. Most of these Turkish companies are not governed and approximately close their end of operations. So, growth for these companies becomes an unavoidable result.<sup>57</sup>

Turkish companies which are forced to grow against the development in the world do not want to lose the control of the company and make any change in the capital structure of the company. Most of them have not been governed, yet. They used to be managed by a family not by professional managers. So, for a long time the advantageous of mergers and acquisitions could difficulty attract the owners' attention of Turkish companies. It is generally encountered that mergers and acquisitions occurs in Turkey as share acquisition with group companies.

Mergers and acquisitions have started to be seen from 1950s especially in non -private and banking sector.<sup>58</sup> During this period importing new technology from abroad made the firms' to get into mergers and acquisitions. In 1980s the reason behind the mergers and acquisitions had changed its face by the influence of changed economic politics. Private sectors' mergers and acquisitions had been seen during 1980s different from 1950s.

In 1874 Bank-i Osman-i Şahane merged with Avusturya Osmanlı Bankası, in 1962 İstanbul Bankası and Emlak Kredi Bankası were the first ones.

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<sup>57</sup> Sumer and Pernsteiner, p. 228.

<sup>58</sup> Akay, p. 32.

Akay states that mergers and acquisitions in Turkey have been made in order to escape the firms from financial distress especially in banking sector. The advantageous of tax regulations has attracted the managers' of the firms' which have net loss in their income statements. Pemko Profilo Elektirk Motorları ve Kompresör A.Ş. and Peg Profilo Elektrikli Gereçler San. A.Ş. is given as an example of merging firms for the reason of financial distress. During 1980s foreign investors and Turkish private firms had merged with the liberalization of financial markets.

In a developed capital market, the managements of the firms are shareholders while families are the board of directors in Turkish capital market<sup>59</sup>. The investment banks emphasis on the regulations, clearness and stability should encourage the competitive and the growth of the capital market.

Ineffective regulatory control over banks was one of the factors that led to Turkey's recent economic crisis. The Turkish government has been focusing on corruption and has introduced a number of regulations to prevent any similar problems<sup>60</sup>.

The share capital of the firms and banks mentioned above different from the developed capital markets forces the mergers and acquisition to be unreasonable events in Turkey<sup>61</sup>. Professional managers unlike in Turkey look for the rational criteria for the mergers and acquisitions. So, a Turkish bank's managements (a family or government or a holding managing by a family) does not want to share the management of that profitable sectors (especially profitable during high interest rate paid to government bonds).

Historically, most M&A transactions in Turkey have been structured as straightforward stock purchases between private parties. However, securities laws are becoming increasingly relevant as more and more listed

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<sup>59</sup> "Birleşmeler için zaman şart", **Activeline**, Eylül 2001, p. 2.

<sup>60</sup> "Foreigners poised to invest in local banks," **International Financial Law Review**, London: Mar 2005, p. 1.

<sup>61</sup> Serdar Sümer, "Banka birleşmeleri", **Active**, Şubat – Mart, 1999, p. 5.

companies are getting involved in M&A transactions. There have been almost no hostile takeovers in Turkey to date, mainly because most companies have floated less than a majority of their shares, but mandatory tender offers following changes of control in listed companies have become common<sup>62</sup>.

Merger and acquisition are regulated by Capital Market Board communiqués, Competition Board and Turkish Commercial Law. Capital Market Board regulations are related to the investors while the Competition Board regulates the market power of the merging firms.

Mergers and acquisitions in Turkey are mainly governed by the Turkish Commercial Code and the Turkish Code of Obligations. However, these codes, dating back to 1957 and 1926 respectively and amended from time to time, were not specifically enacted to regulate M&A transactions, and do not provide detailed regulations for complicated transactions. As in most countries, an M&A transaction in Turkey requires the knowledge and evaluation of several legal disciplines, including banking and finance, competition law, tax law and labour law. Furthermore, certain sectors are subject to special provisions with respect to mergers or acquisitions. For instance, the Banking Law sets out certain limits regarding the transfer of a bank's shares.

The Capital Market Board provides disclosures about the publicly held companies' events which affect the investors' decisions. These disclosures are not detailed as well as in developed countries. Furthermore, Corporate Governance Guide is published by the CMB to encourage the listed companies to accommodate the principles of good governance.

The statistical data archived for mergers and acquisitions have not been constituted by the governmental department related to that area.

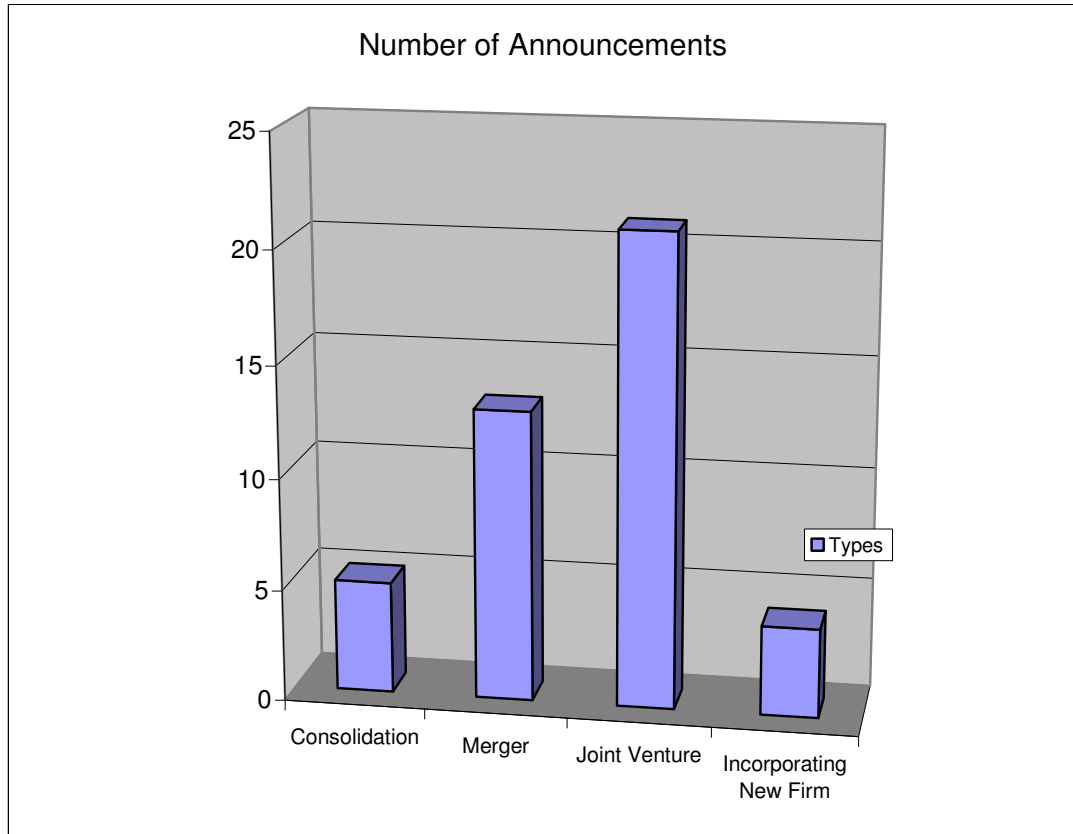
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<sup>62</sup> "M&A backing vogue in 2005," **International Financial Law Review**. London: Mar 2005, p.1.

The news of the 333 shares publicized by the Istanbul Stock Exchange have been researched for the announcements of mergers and acquisitions. According to that research we have founded 250 acquisition announcements and 43 merger announcements from 1997 to 2005. Generally, Turkish corporations merge or acquire other companies which have significant control over the other one. According to International Financial Reporting Standards (IFRS), parties are considered to be related if one party has the ability to control the other party or exercise significant influence over the other party in making the financial and operating decisions. For the purpose of these financial statements shareholders are referred to as related parties. Related parties also include individuals that are principle owners, management and members of the Group's Board of Directors and their families.

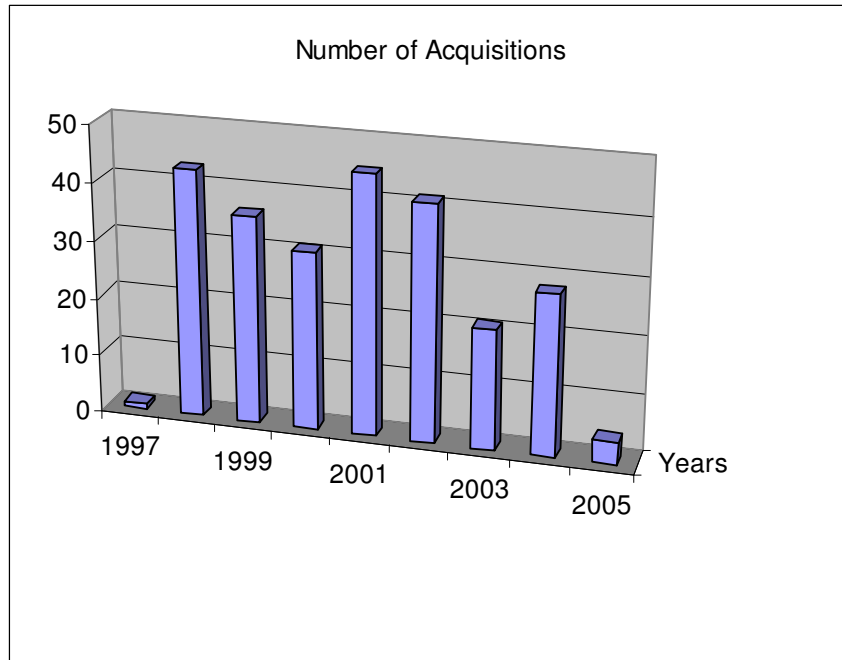
Figure 1 describes the 43 announcements excluding acquisitions. These 43 announcements include 5 consolidation, 13 mergers, 21 joint ventures and 4 incorporating new firm. Consolidation, joint ventures and incorporating new firm had been appreciated as merger announcements.

**Figure 1**  
**Number and Type of Merger Announcements during 1997 – 2005**



**Figure 2**

**Number of Acquisition Announcement during 1997 - 2005**



Historically, most M&A transactions in Turkey have been structured as straightforward stock purchases between private parties. However, securities laws are becoming increasingly relevant as more and more listed companies are getting involved in M&A transactions. There have been almost no hostile takeovers in Turkey to date, mainly because most companies have floated less than a majority of their shares, but mandatory tender offers following changes of control in listed companies have become common<sup>63</sup>.

**3.2 MOTIVES OF MERGERS AND ACQUISITIONS in TURKEY**

Mergers and Acquisitions are made by the firms which are in financial distress as a motive.

<sup>63</sup> "M&A backing vogue in 2005", p.1.

Mergers and Acquisitions are encountered much more in banking sector and public firms. Especially, the basic motive of mergers among banks was to escape financial distress<sup>64</sup>. Meanwhile, these merging companies should not change the structure of markets. So, they are subject to some communiqués, laws, charters and etc.

Market competition is regulated in Turkey by the Law on the Protection of Competition enacted on December 7 1994. The regulatory authority is the Competition Authority and the decision-making body is the Competition Board. The Law has three pillars:

1. agreements, decisions and practices preventing, distorting or restricting competition in markets for goods and services;
2. abuse of dominance by the undertakings dominant in the market;  
and
3. the control of mergers and acquisitions that could lead to the creation or strengthening of a dominant position.

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<sup>64</sup> Sumer and Pernsteiner, p. 204.

**Table 2**

**Application Number of Mergers and Acquisition to the Competition Board**

<b>5.11.1997- 31.12.2003</b>		<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>TOTAL</b>
Competition Violate	Application	22	177	220	255	213	265	406	1558
	Concluding	9	44	306	262	211	217	303	1352
M & A	Application	8	59	80	103	82	115	113	560
	Concluding	5	52	76	101	88	102	107	531
Exemption/Negative Fixing	Application	0	245	44	41	42	35	51	458
	Concluding	0	12	64	23	52	35	38	224
<b>TOTAL</b>	<b>Application</b>	<b>30</b>	<b>481</b>	<b>344</b>	<b>399</b>	<b>337</b>	<b>415</b>	<b>570</b>	<b>2576</b>
	<b>Concluding</b>	<b>14</b>	<b>108</b>	<b>446</b>	<b>386</b>	<b>351</b>	<b>354</b>	<b>448</b>	<b>2107</b>

*Resource: The Competition Board*

In 1997, the Competition Board published communiqué about mergers and acquisitions which are subject to permission to control the firms not to destroy competition among them. This communiqué determines which mergers and acquisitions are required to be permitted. From 1997 to recent years the Competition Board records the statistics about mergers and acquisitions which have applied.

The data given above explain us an upward trend from 1997 to 2003. And the expectation about the trend of mergers and acquisition is to increase in the following years because of these motives;

- Economies of Scale
- To increase competition among firms
- To survive against financial crisis<sup>65</sup>
- Expansion operating area
- Exchange inefficient management
- Decrease research and development expenses

Tax is also considered as another motive. Acquisition of assets of target company generally enables the purchaser to avoid the exposure to the risk of any historic tax and commercial liabilities. The proceeds from the asset transfer are considered as a part of commercial income of the seller company.

Through the share acquisition, the shareholders of the target company directly acquire the proceeds of the share transfer. This capital gain generated by the shareholders is, in principle, taxable under Turkish Income Tax Law. In a share purchase, there is no VAT liability regarding the share transfer transaction.

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<sup>65</sup> Sumer and Pernsteiner, p. 204.

In an asset purchase, the transfer of the assets would be the subject to VAT at the general rate of 18% over the purchase value of the assets. The applicable VAT rates are 1%, 8% and 18% currently, depending on the nature of the assets<sup>66</sup>.

To encourage mergers and acquisitions and thereby the restructuring of companies in Turkey, certain tax advantages to merging companies have been regulated under the relevant tax regulations. The banking crisis in 2001 has prompted the Banking Regulation and Supervision Agency (BRSA) to encourage restructuring of the banking system and strengthen the financial structure of banks by setting out certain benefits in its regulations for merging banks under the Regulation on the Merger and Acquisition of Banks (the Regulation)<sup>67</sup>.

The Regulation grants that, if the merging banks both have licence/authority to accept deposits, (a) upon a decision of the BRSA board, the Turkish Central Bank, during the merger and/or acquisition process, may make refunds from the deposit reserves that had been deposited by the merging banks with the Central Bank or may postpone their obligations to make such deposits with the Central Bank; and (b) the BRSA may reduce the savings deposit insurance premium payment obligation of the new merged bank by half, for two years after the announcement of the approval to the merger in the Official Gazette.

In addition to this, pursuant to the Corporate Tax Law, profits arising from merger transactions are exempted from corporate tax, provided that the relevant procedures under the Corporate Tax Law are complied with. Also, the profits arising from spin-off and share exchange transactions do not give rise to taxation of capital gains provided that the stipulated conditions are fulfilled.

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<sup>66</sup> PriceWaterHouseCoopers, **Mergers and Acquisitions**, Turkey, December 2004. p. 7-8.

<sup>67</sup> "Turkey", **International Financial Law Review**, London: April 2005, p.1.

Transactions regarding spin-off are fully exempt from stamp taxes. Additionally, several stamp tax exceptions are identified with regard to transactions deriving from acquisitions; such as the stamp exception regarding capital increases. Mergers, acquisitions, and spin-off of joint stock corporations are free from any charges. Banks can also benefit from these general exemptions available under the relevant tax legislation.

In the Corporate Tax Law there are provisional articles stating that: (i) the previous year's deductible losses of the dissolved entity in a merger transaction, as reflected in the last balance sheet, can be deducted from the new merged entity's corporate income to the extent no deferral is made for more than five years; and (ii) certain agreements/documents signed in relation to a merger transaction would be exempt from stamp tax obligation. This exemption was available until the end of 2004; however, the government previously extended the term of this exemption.

Being subject to strict regulatory requirements recently, Turkish banks started to restructure their assets and to seek strong partners who will assist them to grow in a more competitive and regulated environment. Coupled with the effect of recent promising economic and political developments in Turkey and the growth potential of the Turkish banking sector, it seems that Turkish banks and their shareholders will be able to pull off large transactions in 2005. According to a report prepared by the BRSA dated October 2003, the total asset value of merging banks was about \$26.5 billion. It is expected that this number will increase considerably taking into account the recent positive trend. Therefore, tax and benefits in merger transactions will be of special interest to parties while negotiating and discussing restructuring and merger models.

The significant motives inference from the research are the followings; stronger financial structure, increasing productivity, lowering costs, increasing gross profits, sales growth, being industry leader, marketing, lowering risk level, integration of production process, reaching

the global competition power, synergy, the more effective management and the effects of international finance corporations.

*a- Mergers and Acquisitions According to The Competition Board*

The purpose of Competition Board is to provide the protection of competition by ensuring necessary regulation, supervision and the prevention of abuse of dominant position by these enterprises which are dominant in the market and the agreements, decisions and practices which prevent, restrict or distort competition within the markets for goods and services.<sup>68</sup>

The Law on The Protection of Competition numbered 4054 published in Official Gazette No: 22140 dated 13 December 1994, defined unlawful and prohibited Mergers and Acquisitions as;

“Merger or two or more enterprise and acquisition, except acquisition by way of inheritance, by enterprise or by a person, of another enterprise, either by acquisition of all or part of its assets or securities or other means by which that person or enterprise acquiring a controlling power in that enterprise concerned, which creates or strengthens the dominant position of one or more enterprises as a result of which competition is significantly impeded in the market for goods and services in the whole or part of the territory of the state, is unlawful and prohibited.<sup>69</sup>

According to the definition given above, the Competition Board describes mergers and acquisitions;

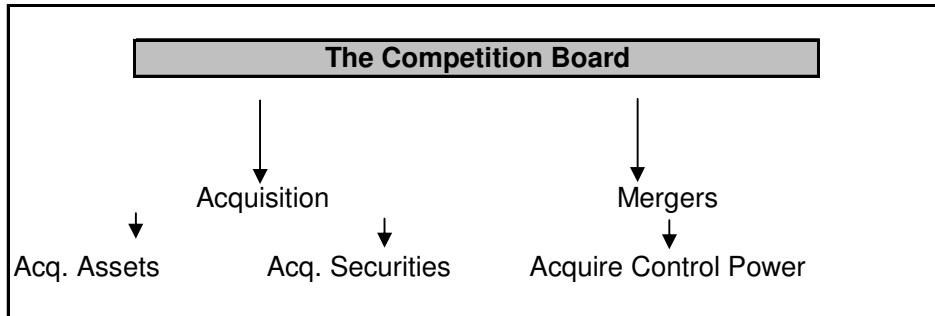
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<sup>68</sup> The Competition Board, **Law on The Protection of Competition**, Law No:4054,1994,p.1.

<sup>69</sup> The Competition Board. p.4.

**Table 3**

**The Competition Board Classification of Mergers and Acquisition**



Under the Communiqué, a merger or an acquisition will be subject to the permission of the Turkish Competition Board if it exceeds the market share and turnover thresholds determined by the provisions of the Communiqué<sup>70</sup>.

Market competition is regulated in Turkey by the Law on the Protection of Competition enacted on December 7 1994 (the Law). The regulatory authority is the Competition Authority (the Authority) and the decision-making body is the Competition Board (the Board). The Law has three pillars: (i) agreements, decisions and practices preventing, distorting or restricting competition in markets for goods and services; (ii) abuse of dominance by the undertakings dominant in the market; and (iii) the control of mergers and acquisitions that could lead to the creation or strengthening of a dominant position<sup>71</sup>.

Article 3 of the Law defines a dominant position. A dominant position is created when one or more undertakings in a particular market use their position in that market to determine economic parameters such as price,

<sup>70</sup> “International mergers and acquisitions subject to the permission of Turkish Competition Board”, **International Financial Law Review**, London: May 2001, Vol. 20, Iss. 5, p. 75.

<sup>71</sup> “With great power comes great responsibility”, **International Financial Law Review**, London: Mar 2005, p.1.

supply, the amount of production and distribution, by acting independently of their competitors and customers.

The dominant position test can be conducted by using different criteria. The main criterion is the market share. Market share cannot by itself give a definite indication of dominance but can give a presumption of dominance. A company may have a large market share for a limited time without being dominant. The market share must be considered together with the length of time for which the company held the critical market share.

Even when the market share gives a presumption of dominance, other factors that could constitute barriers to entry in the market must also be considered. Barriers to entry into the market can be statutory regulations and national legal systems, the requirement of superior technology to be able to compete in a market, the vertical integration and well-developed distribution systems of the firms already present in the market, the product differentiation with brand names attracting the customer, and the conduct of the company in the relevant market.

The listing above is not exhaustive and it is widely recognized that there can be diverse indications of dominance. One final element that should nevertheless be mentioned is the internal correspondence of the company that is alleged to be dominant. Indeed, if the internal correspondence of the company confirms the allegation of dominance then this may be a material evidence for the alleged dominance.

The first stage in determining whether an undertaking is dominant is to determine the relevant product market, based on the interchangeability and substitutability of products. Where products are regarded as interchangeable or substitutable from a consumer's standpoint, they are considered to belong to the same product market. Interchangeability is measured on the basis of the intended use of the products, the price of the

products and their physical characteristics. Once the relevant product market is defined, the relevant geographical market can be analyzed.

Pursuant to the relevant provisions of the Communiqué, the market share/turnover is calculated by adding together the respective market shares/turnovers of the undertakings belonging to the same group in the relevant product market in Turkey (or a substantial part of it).

While calculating the turnover, even if an undertaking does not have any corporate presence in Turkey, its sales to Turkey must also be taken into consideration with respect to the relevant product market. In its evaluation as to whether or not a merger or an acquisition is subject to its permission, the Board further evaluates whether the acquisition creates or strengthens a dominant position in the relevant product market in Turkey.

In a decision regarding the acquisition of the elastin business of Tangkook Synthetic Fibres (Tangkook) by El Dupont de Nemours (Du Pont), the Board decided that, although the parties did not have any production facilities in Turkey in the relevant product market, since the Turkish market was affected by the export of the relevant products manufactured by the producers from third countries, the acquisition fell under the scope of Law No. 4054 and the Communiqué. The Board further decided that the acquisition of Tangkook's elastin business by Du Pont was an acquisition subject to its permission since the exports of the parties in the relevant product market exceeded the market share threshold set forth in the Communiqué.

In light of the above, as well as other similar decisions by the Board, it appears that many of the worldwide mergers and acquisitions would continue to fall under the scope of the Communiqué and would be subject to the Board's permission.

As discussed above, The Turkish Competition Authority, established pursuant to the Law on Protection of Competition dated December 7 1994 (Competition Law), is the enforcement agency responsible for the implementation and preparation of the Competition Law and legislation in Turkey.

With a view to achieving the economic integration sought by the Customs Union, Turkey's legislation in the field of competition is being made compatible with that of the EU, which envisages a notification system for mergers and acquisitions. Nevertheless, the Competition Board has not yet issued any guidelines similar in substance to those issued by the EU Commission, and Turkey has not yet adopted the latest amendments in the EU legislation regarding the separation of cooperative/concentrative joint ventures.

A merger or an acquisition will be subject to the permission of the Competition Board if it exceeds certain thresholds based on the combined market share and overall turnover of the companies involved. Accordingly, a merger or an acquisition will be subject to the permission of the Competition Authority if: either the overall market share (in the relevant market in Turkey or in a part of it) of the relevant parties involved is more than 25%; or even if their market share is less than 25%, their overall turnover is more than YTL 25 million (\$18.5 million).

Bank mergers and acquisitions are not subject to the relevant provisions of competition law, provided the sum of the assets of the banks concerned does not exceed 20% of the banking sector.

Mergers and acquisitions are becoming trendy again in the international markets.

*b- Mergers and Acquisitions According to Turkish Commercial Law*

Merger is defined by the act of Turkish Commercial Law numbered 146. two or more than two enterprises come together to merge their operations under a new firm. The three elements of mergers are as follows;

- 1- Merging the assets
- 2- To abrogate the acquiring firm without liquidation
- 3- To give share of acquiring firm or a new founded firm to the shareholder of acquiring firm against its assets to be acquired.

The act of Turkish Commercial Law regulates the two types of mergers;

- Acquisition: All assets and liabilities of at least one corporation are acquired by another corporation and the acquired firm is abrogated.
- Incorporating New Firm: at least two corporations are put together to form a new corporation.

Merger and acquisitions are regulated by Turkish Commercial Law. Furthermore, mergers of bank are regulated by the Law of Bank and cooperation's mergers by the Cooperative Law<sup>72</sup>.

The act of 146 and 151 taken from Italian Commercial Law are first regulation about mergers in Turkish Commercial Law. Companies with share capital are arranged by the act of 451. and 452. Furthermore, drafts of a new Commercial Code and a new Code of Obligations have been prepared. The new obligations are expected to strengthen the legal environment for mergers and acquisitions.

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<sup>72</sup> Yusuf Ziyaeddin Sönmez , “Halka Açık Anonim Ortaklıkların Birleşmesinden Doğan Sorunlar”, **Yeterlilik Etüdü**, Ankara, 2000, p. 5.

*c- Mergers and Acquisitions According to Capital Market Board*

Another regulation has been made by the Capital Market Board of Turkey about mergers and acquisitions. The Capital Market Board published the Communiqué, Serial: I No: 31 and giving the definitions of merger and acquisition as *Incorporating New Firm* and *Acquisition*.

Acquisition is determined as acquiring entire assets and liabilities of at least one corporation, except by way of inheritance, giving shares of acquiring firms' shareholders to acquired shareholders and the legal entities of the corporation not to be dissolved.

Incorporating new firm is also defined as, two or more than two firms except by way of inheritance are merged to form entirely new firm by dissolving their legal entities with all assets liabilities and giving new firms shares to original (old) two firms shareholders at the rate of exchange<sup>73</sup>.

The authorization of Capital Market Board about regulating merger and acquisitions of publicly held companies is not restricted only announcements to public, expanded to prevent the rights of small investors.

The Board has brought into force some regulations by using that authority. The Communiqué on Principles Regarding Registration With Capital Market Board and Sale of Shares, Serial: I No: 26 article 12 determines that in mergers and acquisitions realized within the framework of the provisions of Turkish commercial Code and Corporation Tax Law, if one of the parties is a publicly held corporation, the shares to be issued due to merger should be registered with the Board.

Other Communiqués related mergers and acquisitions of publicly held companies are Serial: X No: 16 for auditing principles Serial: XI No: 3 for interim financial reporting principles Serial: XII No: 1.

The capital increase becomes an important issue.

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<sup>73</sup> Sermaye Piyasası Kurulu , “Birleşme İşlemlerine İlişkin Esaslar”, Seri: I No: 31, p. 56/2

- *The Amount of Capital to Be Achieved by Acquisition*

By using equity method, the amount of capital to be raised by the acquisition is calculated as follows;

Equity of Acquiring Firm	:	A
Equity of Acquired Firm / Firms	:	B
Paid in Capital of Acquiring Firm	:	C
Merging Rate	:	$\frac{A}{A+B} = D$
Capital to be Achieved	:	$\frac{C}{D}$
Changing Rate	:	$\frac{(C/D) - \text{Old Capital of Acquiring Firm}}{\text{Paid in Capital of Acquired Firm}}$

- *The Amount of Capital to Be Achieved by Incorporating New Firm*

By using equity method, the amount of capital to be raised by the acquisition is calculated as follows;

Capital to Be Achieved	:	Capital except investment in associates
New Shares	:	Capital to Be Achieved * Merging Rate
Changing Rate	:	New Shares / Equity except investment in associates

The right to grant exemptions from legal obligations by the CMB; improvement of the current legislation relating to mergers; introduction of a deadline to the share capital increase process under the authorized capital system; expansion of disclosure requirements; prevention of voting rights of shareholders who fail to comply with mandatory tender offer rules; introduction of rules allowing a listed company to acquire its own shares; easing the incorporation process of investment companies; abolishment of limitations about founders of investment funds; permitting the establishment of stock markets as public or private legal entities; improvement of the efficiency of penalties imposed; and right to cease powers of directors and managers of listed companies are the amendments that might be introduced to the Capital Market Law in the near future<sup>74</sup>.

*d- Summary of Recent Legislative Changes*

Subsequent to enactment of Law 4875 on foreign direct investments, procedural permitting requirements that were once asked of foreign investors have been abolished. Transfer of shares or incorporation of companies with foreign share capital is no longer subject to the approval of the Foreign Investment General Directorate (FIGD).

Foreign investors are free to send back their profits outside Turkey and, subject to certain limited restrictions, to acquire immovable property or rights in rem in Turkey. Alternative argument resolutions systems may be chosen for any commercial disputes arising from foreign investors transactions in Turkey. No FIGD notice or approval is required to make changes to the articles of association, the purpose and scope, or the capital structure of a Turkish company with foreign partners, as was the rule under the previous law.

To enhance the equal treatment of foreign and domestic investors, which has been the principle since the 1950s, Law 4875 allows foreigners to form any type of company permitted under the Commercial Code, rather

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<sup>74</sup> “M&A backing vogue in 2005”, p.1.

than limiting them to joint-stock corporations and limited liability partnerships. Incorporation of certain companies is subject to the permission of the Ministry of Industry and Commerce, such as banks, private financial institutions, insurance companies, factoring companies, holdings, publicly held companies, free zone incorporators and operators and companies engaged in general retailing business.

#### *Due diligence*

Due diligence work can either be extensive or limited depending on the agreement between the parties. The conduct of the parties during the due diligence period can be important in the context of pre-contractual liability should a final agreement not be reached.

Parties to an M&A transaction may find it useful to examine public records such as the trade registries and/or the land registries as a preliminary study, to independently verify that the target is in good standing and to learn of any restrictions on the target's immovable assets.

#### *Private agreements*

All possible options for acquisitions could be listed as asset transfer, business transfer and share transfer under limit of the Commercial Code. Most of the terms and conditions in acquisition transactions tend to be governed by the actual contractual arrangements in the sale-and-purchase agreement among the parties.

#### *Voluntary tender offers*

Before starting a voluntary tender offer, the party who offers must first enter into a brokerage agreement with a bank or an intermediary institution that will organize the offering.

Subsequently, the offering party must file, among other things, an information form with the CMB, together with the brokerage agreement for the approval of the voluntary tender offer by the CMB. The period during

which the tender offer can remain open is a maximum of 30 days and a minimum of 15 days.

#### *Mandatory tender offers*

If any party or parties acting together, directly or indirectly, through a block sale or series of sales, or by any other means, acquires 25% or more of the share capital and voting rights or control of the management of a publicly owned company, regardless of the specific amount of share capital, then the acquiring party is obliged to make a tender offer to the remaining shareholders to purchase their shares. In addition, any party that owns between 25% and 50% of the share capital and voting rights of a company increase such ratio by 10% or more in any given 12 month period, it is obliged to make a tender offer. Under certain circumstances, the CMB is authorized to grant an exemption from the tender offer.

#### *Mergers and spin-offs*

Under Turkish Law, mergers can only be realized between companies that have the same legal form. In other words both companies should be joint-stock corporations. If these companies legal form are not the same, then one of the companies must convert its legal form to match that of the company with which it is planning to merge.

Under the Turkish Commercial Code system, either: an acquiring company must take over a target company, including its assets and debts in their entirety; or two or more companies must be transferred into a new corporation along with all their assets and debts.

The acquiring company will be the successor of the target company and, as the surviving entity, will own all of the assets including contracts, permits, licenses, incentives, and will be liable for all of the target company's obligations after the registration of the merger with the relevant trade registry and shareholders' approval of the target company.

There are additional procedural requirements for mergers imposed by the capital markets legislation, if at least one of the merging entities is a public company.

There are several steps to effect a merger transaction must be completed. These steps could be listed as adopting resolutions approving the merger, obtaining expert reports, and executing a merger agreement.

The Commercial Code has not regulated clearly the spin-offs however, a communiqué has been issued on the principles to be applied to partial division of limited liability partnerships and joint-stock companies.

#### *Joint ventures*

Turkish local companies are attractive for many international companies to enter into a joint-venture relationship. For this purpose, a joint-stock corporation or limited liability partnership are established by the partners or entering into a contractual relationship without establishing a company can be chosen by the partners.

In a joint-venture relationship involving a corporate vehicle, special attention must be paid to clearly defining the relationship between the parties in the shareholders agreement as to whether or not a general partnership is also established between the parties in addition to the joint-venture company.

#### *Asset transactions*

The transaction of assets can be preferred by the investors, especially when the selling company is not in good financial standing or is faced with organizational problems. Asset transactions could help the purchaser to eliminate unwanted liabilities, while obtaining the benefits from sale of the assets. In most cases, licenses, permits and incentives related to the sold assets will not be transferred automatically to the buyer and the buyer will

be required to reapply for them. However, with respect to the assignment and transfer of receivables, the debtor's consent is not required.

Under Turkish law, if all or a large part of an ongoing business is transferred, the seller and the buyer continue to be jointly liable against the creditors for the debts of the transferred business for two years from the date of the transfer. After two years, the transferee will be solely liable against the creditors.

Accordingly, the purchaser may not always be able to eliminate unwanted liabilities by not purchasing the shares of a company that is not in good financial standing, but rather entering into an asset transfer transaction.

### *Delisting*

Listed companies might wish to voluntarily delist to avoid certain regulatory requirements for listed entities. Although the relevant legislation sets out detailed rules for stock markets to de-list non-complying companies, the rules for voluntary delisting are not detailed.

In general, to be delisted companies should meet the following criteria: the listed company should exit from the Istanbul Stock Exchange; the company's articles of association should be amended and the issued capital system should be adopted instead of the registered capital system; and the company should keep the number of its shareholders under 200 for two years.

The CMB approves requests for delisting only if all the requirements are fulfilled. The third requirement is the most difficult requirement because reducing the shareholder number below 200 and keeping it that way for a period of two years will not always be possible.

## **4. RESEARCH of ANNOUNCEMENT EFFECT in ISTANBUL STOCK EXCHANGE**

### **4.1 LITERATURE REVIEW**

The empirical literature provides a variety of approaches to the study of mergers and acquisitions including;

- studies that use stock market data to determine the welfare effects of the transactions;
- the accounting / finance performance measures of firms before and after the mergers and acquisitions;
- studies of one or several mergers using a mixture of stock market returns, executive interviews, financial ratios and pre-mergers and post-merger accounting analysis;
- studies of one or several mergers in a particular industry using econometric techniques to identify the changes in the market price, output;
- studies of the effect of leveraged buy-outs on labor, investments and other factors of interest<sup>75</sup>

Also multiple regression analysis and event study methodology are used for measuring the effect of announcement of mergers and acquisitions.

Two commonly used event windows are the three days immediately surrounding the merger announcement – that is, from one day before to one day of the announcement – and a longer window beginning several days prior to the announcement and ending at the close of the merger. Several recent long – term event studies measure negative abnormal returns over the three to five years following merger completion.

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<sup>75</sup>Paul A. Pautler, p. 52.

There are a number of methodological concerns with long – term event studies. The basic concern stems from all the tests of long – term abnormal performance being joint tests of stock market efficiency and a model of market equilibrium.

Three – year expected returns can easily range from 30 percent to 65 percent, depending on the model used, making it very difficult to determine whether an abnormal return of 15 percent is statistically significant.

An additional statistical concern with many long – term event studies is that the test statistics assume that abnormal returns are independent across firms. However, major corporate actions like merger are not random events, and thus event samples are unlikely to consist of independent observations.

The long- run literature on abnormal stock price performance has added to the profession’s knowledge of market efficiency and empirical asset pricing. Given the serious methodological concerns with long – run empirical literature as outlined above these methods are not appreciate to be implemented in an emerging market.

It is tried to observe a ratio excluding the effects of stock market index. In an emerging market, these methodological effects are much more important to reach the true results. So, it had been expanded three day event window three day prior to announcement and limited twelve months after the announcement in order to reduce the statistical concerns mentioned above. And prices are divided to index for avoiding the effects of index on merging or acquiring firms’ prices.

$$\frac{(- 3) \text{ day price}}{\text{index}_{-3\text{days}}} , \frac{\text{Announcement price}}{\text{index}_{\text{Announcementday}}} , \dots\dots \frac{(+ 360) \text{ day price}}{\text{index}_{+360\text{days}}}$$

Any significance between the dates determined during the twelve months after and three days prior announcement had been tried to measure. It had not been aimed to compare index returns to merger returns because of these statistical returns concerns.

The independent variable had been determined as announcement price / index (announcement day) and independent variables as price / index which are determined during the period. Event window study was used for one year. First of all, a few recent studies on mergers and acquisition using event window studies would be discussed.

Moeller, Schlingemann and Stulz<sup>76</sup> use event study methodology. Abnormal returns are calculated using market model benchmark returns. To estimate that abnormal return, they use standard event study methodology, following Brown and Warner<sup>77</sup> (1985). Abnormal returns are calculated using market model benchmark returns with the equally weighted index returns. The parameters for the market model are estimated over the (-205, -6) day interval.

Andrade, Mitchell and Stafford<sup>78</sup> stated that the three day - window is one of two most commonly used event windows for merger studies. The other one starts before the announcement and ends with the completion of the merger (long - run).

Gregor, Mark and Erick expanded the event window beginning 20 days prior to the merger announcement and end on the mergers closing dates. In addition, he also presents returns for the combined entity subsequent to the merger. He shows cumulative average abnormal returns 12 (CAARs) of -0.014 over the 40 months following merger completion, clearly an economically insignificant drop. While no t-statistics over the 40-month period are provided, Mandelker shows statistically insignificant

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<sup>76</sup> Moeller, Schlingemann and Stulz, p. 7.

<sup>77</sup> S.J. Brown and J. B. Warner, "Using Daily Stock Returns, The Case of Event Studies", **Journal of Financial Economics** 14, 1985, p.11.

<sup>78</sup> Andrade, Mitchell and Stafford, p. 109.

abnormal returns over the first 10 months and the first 20 months following merger completion.

Mandelker<sup>79</sup> uses 60 months data before the month t for measuring beta. The beta for month t is measured using data from months (t- 30, t-1) and (t+1, t+30).

Malatesta<sup>80</sup> uses a market model, for months (+1, +12) after the merger announcement. The 36 observations are used to estimate the parameters.

Dodd and Ruback<sup>81</sup> examine stock return performance both before and after tender offers. The model used for measuring the abnormal returns is market model. The study measures the post-acquisition performance of acquirers over two periods, months (+1, +12) and (+13, +60), relative to the first public announcement of the bid.

Langetieg's<sup>82</sup> study uses data for measuring returns over three intervals (months (+1, +12), (+13, +24), and (+25, +70)) after the merger.

Francis<sup>83</sup> defines that the event study methodology identifies an event that has occurred in a firm's life, isolate the event from all others, and measure its impacts on share price. Francis uses the event window methodology which each stock's abnormal returns were estimated was - 30 days to +30 days (that is 30 days prior to and 30 days after each announcement).

Richard<sup>84</sup> defines market reaction as follows;

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<sup>79</sup> Mandelker, p.326.

<sup>80</sup> Malatesta, p. 166.

<sup>81</sup> Dodd and Ruback, p.363.

<sup>82</sup> Langetieg, p. 376.

<sup>83</sup> Francis A. Kwansa, " Acquisitions, Shareholder Wealth and the Lodging Sector: 1980-1990", **International Journal of Contemporary Hospitality Management**, Vol 6, No:6, 1994, p.18-19.

<sup>84</sup> Richard J. Rosen, "Merger Momentum and Investor Sentiment: The Stock Market Reaction to Merger Announcements", **Journal of Business**, November 2003, p. 10.

Market reaction = f (merger activity, market momentum, bidder-specific merger activity, bidder-specific stock momentum, deal-specific and bidder control variables)

Richard uses the five day cumulative abnormal announcement return (days -2....., +1) for short run market reaction. A hot stock market leads to better announcement return, according to Richard.

According to Bouwman, Fuller and Nain<sup>85</sup> in the short run, when stock prices are high, the market welcomes acquisitions and acquirers earn significantly positive returns. In the long run however, these acquisitions have negative abnormal returns, indicating that the market gradually learns the majority of acquisitions undertaken during high valuations periods were poor decisions. Furthermore, they use event study methodology (three day event window) and portfolio approach in the long run.

Clayton and Qian<sup>86</sup> calculate the ex-date abnormal returns using the market model over a 230 – day period ending 20 days before the ex-date.

Gary W. Emery and Jeannette A. Switzer<sup>87</sup> uses standard event – study methods to measure the actual market reactions to acquisition announcements and also used windows of (-1,+2), (-5,+5) and (-30,+30).

Mitchell, Pulvino and Stafford<sup>88</sup> uses cumulative abnormal returns measured using a one – factor model. They had estimated market model parameters over a 50 – day window beginning 21 days after the merger close.

Magenheim and Mueller calculate abnormal returns from the market model which determines the parameters one of three periods: months (-60, -4), (-36, -4) or (+13, +36) relative to the initial announcement month.

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<sup>85</sup> Bouwman, Fuller and Nain, p. 6.

<sup>86</sup> Matthew J. Clayton and Yiming Qian, “Wealth Gains from Tracking Stocks: Long-Run Performance and Ex-Date Returns” **Financial Management**, Autumn 2004, 33, 3, p. 95

<sup>87</sup> Emery W. Gary and Jeanette A. Switzer, “Expected Market Reaction and Choice of Method Payment of Acquisitions”, **Financial Management**, Tampa: Winter 1999, Vol.28, p. 75.

<sup>88</sup> Mitchell, Pulvino and Stafford, p. 33.

Leeth and Barg<sup>89</sup> uses event study methods to calculate abnormal returns. They measure abnormal returns relative to two dates; i) the month the acquisition is first announced to the general public and, ii) the month the acquisition is formally completed.

Han, Suk and Sung<sup>90</sup> use event study (day - 20 through 0 and day - 20 through day 20). They also check for multicollinearity among explanatory variables. They found support that bidders tend to overpay to complete acquisitions and the information effect of the method of payment is empirically supported.

Agrawal and Jaffe<sup>91</sup> states that Dodd and Ruback<sup>92</sup> measures the post - acquisition performance of acquirers over two periods months (+1, +2) and (+13, +60), relative to the first public announcement of the bid. They found that a sample of 124 NYSE firms making successful tender offers and 48 NYSE firms making unsuccessful tender offers over the period from 1958 to 1976. Abnormal returns are calculated from market model.

#### **4.2 RESEARCH and DATA METHODOLOGY**

The aim of the research is to find any significant date before or after the merger and acquisition announcement dates. First of all, the announcement dates of mergers and acquisitions had to be determined. Because there is no statistical data obtained from any governmental institute about the mergers and acquisitions announcement dates. The bulletins of Istanbul Stock Exchange had been searched from 1997 to 2005 to find any announcement dates. Also, the Competition Board publishes the mergers and acquisitions which subject to permission of that board. 250 acquisition announcement dates and 43 merger announcement dates had been found. As the results show us that announcement of acquisition are

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<sup>89</sup> John D. Leeth and J. Rody Barg, "The impact of Takeovers on Shareholder Wealth During The 1920s Merger Wave", **Journal of Financial and Quantitative Analysis**, Vol. 35, No:2, June 2000, p. 222.

<sup>90</sup> Ki C. Han, David Y. Suk and Hyun Mo Sung, "The Evidence of Bidders' Overpayment in Takeovers: The Valuation Ratios Approach", **The Financial Review**, May 1998, 33,2; p. 65.

<sup>91</sup> Anup Agrawal and Jeffery F. Jaffe, "The Post merger Performance Puzzle", December 1999, p. 12. ([http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=199671](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=199671)).

<sup>92</sup> Dodd and Ruback, p.363.

much more than the merger announcements. So, the announcement of joint venture, consolidation and incorporating new firm had been evaluated as merger announcements. During that period, 5 consolidations, 13 mergers, 21 joint ventures and 4 incorporating new firms had been obtained. One of our condition is the merging parties should be quoted in Istanbul Stock Exchange. After listing all acquisition and merger announcement dates, the announcement dates of merging parties confirming our conditions had been determined. According to the dates of mergers and acquisitions, the index price (ISE -100) had been found at these dates. Index price of ISE -100 were used to constitute a ratio excluding the effect of index on the stock price.

Recent studies show us that market factors influence the reaction to a merger or acquisition announcement. Rosen<sup>93</sup> found that if investors expect a board range of mergers to create synergies, then they react positively to merger announcements. Rosen finds evidence of momentum in merger markets. When the market has been reacting favorably to merger announcements, it tends to continue to do so. As outlined above, Richard defines merger activity as a function of market reaction. There may be any correlation between the market reaction, recent market conditions and merger momentum. In order to eliminate the effects of market momentum to merger and acquisition announcement a ratio had been calculated by dividing the price to index price on that day<sup>94</sup>.

### **4.3 FINDINGS**

The announcement dates of mergers and acquisitions had been analyzed separately. The price of stocks to index prices (ISE – 100) were divided at each announcement dates. The ratios are calculated for mergers and acquisitions and the following statistics are obtained;

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<sup>93</sup> Rosen, p.29

<sup>94</sup> Crocker H. Liu, “Investment Principles and Analysis I”, Revised July 2002, p.4, ([http://pages.stern.nyu.edu/~cliu/ip\\_mugaug01.pdf](http://pages.stern.nyu.edu/~cliu/ip_mugaug01.pdf)).

Crocker uses this ratio  $\text{price} / \text{index}$ , whether the stock price out performing the market. According to him its an indicator of continued momentum strong (weak) industries get stronger (weaker).

The intercept and independent variables are as follows for acquisition announcement;

**Table 4**  
**Multiple Regression Equation of Acquisition Announcements**

	<b>Coefficients</b>	<b>Standard Error</b>
Intercept	0,00001	0,00005
(-) 3 Days	0,00003	0,00008
(+) 3 Days	0,94916	0,06254
(+) 10 Days	-0,03848	0,06404
(+) 90 Days	0,09601	0,02848
(+) 1Year	0,01383	0,01135

Significant at 5% level.

The multiple regression analysis summaries the individual equation components with corresponding error margins.

$$\text{Date of announcements} = 0.00*(-) 3 \text{ Days} + 0.95*(+) 3 \text{ Days} + - 0.04*(+) 10 \text{ Days} + 0.10*(+) 90 \text{ Days} + 0.01*(+) 1\text{Year} + 0.00 (+/- 0.00)$$

The sum of these error margins will differ to the overall standard error of the equation due to the offsetting effect between the components. The full regression equation is displayed above.

Independent analysis shows us a simple linear regression analysis of each of the independent variables against the dependent variable. R Squared measure the strength of the linear relationship between the date of announcement and other dates determined at the beginning of the analysis.

**Table 5**  
**Simple Linear Regression Analysis of Each Independent Variable of Acquisition Announcements**

<b>Independent Analysis</b>		
R Squared	Gradient	Intercept
0.0012	0.0005	0.0034
0.9966	1.0201	0.0000
0.9887	0.9737	0.0001
0.9517	1.0033	0.0005
0.8635	0.6694	0.0015

Significant at 5% level.

Independent analysis displays a simple linear regression analysis of each of the independent variables against the dependent variable. The independent R squared results here are useful for determining which independent variable included in the analysis. The R squared below than 50% indicates a weak relationship. As seen above, the results tell us that the strongest relationship is second variables called (+) 3 days. The weakest relationship is between (-) 3 days and the announcement day. This result may be related to asymmetric information between the bondholder and stockholders. At that point of view, financing an acquisition is an important issue for the measure of asymmetric information in Istanbul Stock Exchange. Here it is not known if the acquisition was financed by cash or stock or mixed. Asymmetric information (Myers - Majluf – 1984) states that issuing stock signals overvaluation and leads to price a correction.

The Durbin-Watson statistic is as measure of the correlation between the sequential (adjacent) residuals. Regression analysis assumes that the residuals (errors) are independent of each other. Also the autocorrelation of the stock prices is tested; D-W is employed to each independent variable as a function of time.

**Table 6**  
**Autocorrelation Test for Acquisition Announcements**

	<b>DW-Statistics</b>	<b>Adjusted R-Squared against other Independent</b>
(-) 3 Days	2.030219	(1.97)%
(+) 3 Days	1.8380461	99.03%
(+) 10 Days	1.8245323	99.17%
(+) 90 Days	1.7921962	95.82%
(+) 1Year	1.9664263	86.21%

Significant at 5% level.

D-W statistic is equal to 2.19721 and Critical D-W Values: Lower ( $D_L$ ) =1.57; Upper ( $D_U$ ) =1.78 Therefore no autocorrelation detected at 95% confidence. Previous measurement does not influence the outcome of the successive observations. R Squared is equal to 0.9972 and % 99.72 of the change in date of announcement can be explained by the change in the five independent variables.

Ideally, the  $X_i$  variables in a regression equation are uncorrelated with each other; each variable contains a unique piece of information about Y. Multicollinearity is a problem of degree. When the correlations among the independent variables are minor, the effects of multicollinearity may not be serious.

This tests each of the independent variables for multicollinearity, by running an adjusted r-squared analysis against all other independent variables. Those independent variables with a high level of multicollinearity should be omitted from the analysis (as a rule of thumb, higher than 90% indicates high multicollinearity).

The matrix below can help to determine which independent variables are highly correlated based on a simple linear equation.

(+) 3 days has strongest relationship and the multicollinearity is 99%, 94% and 86% for the independent variables in the following order; (+) 10 days, (+) 90 days and (+) 1 year. That results state multicollinearity decreases while the period is longer. This is also consistent with our expectation that (+) 3 days may influence the (+) 10 days. But there is no correlation between the (+) 3 days and (+) 1 year. Because as a rule of thumb, higher than 90% states high multicollinearity. The market reaction may be related to the initial market reaction ((+) 3 days). It is subject to another test for deciding the relationship between the initial market reaction and subsequent market reaction.

**Table 7**

**Multicollinearity of Independent Variables of Acquisition Announcements**

Auto Correlation	Tests for Multicollinearity between Independent Variables						
	D <sub>t</sub> = 1.57 D <sub>u</sub> = 1.78	Adjusted R-Squared against other Independent	Independent R-Square Matrix				
DW-Stat							
2.03	-1.97%	100%	0%	0%	0%	0%	(-) 3 Days
1.84	99.03%	0%	100%	99%	94%	86%	(+) 3 Days
1.82	99.17%	0%	99%	100%	95%	84%	(+) 10 Days
1.79	95.82%	0%	94%	95%	100%	87%	(+) 90 Days
1.97	86.21%	0%	86%	84%	87%	100%	(+) 1Year
			(-) 3 Days	(+) 3 Days	(+) 10 Days	(+) 90 Days	(+) 1Year

Significant at 5% level

The regression results for merger announcements are summarized as follows;

**Table 8**  
**Multiple Regression Equation of Merger Announcements**

	Coefficients	Standard Error
Intercept	0.000	0.000
(-) 3 Days	1.115	0.112
(+) 3 Days	-0.186	0.170
(+) 10 Days	0.042	0.065
(+) 90 Days	0.001	0.013
(+) 1Year	0.014	0.016

Significant at 5% level.

**Date of announcements** = 1.11\*(-) 3 Days + -0.19\*(+) 3 Days + 0.04\*(+) 10 Days + 0.00\*(+) 90 Days + 0.01\*(+) 1Year + 0.00 (+/- 0.00)

**Table 9**  
**Simple Linear Regression Analysis of Each Independent Variable of Merger Announcements**

Independent Analysis		
R Squared	Gradient	Intercept
0.999818	0.980631	0.000002
0.996707	0.984012	0.000030
0.981483	0.949112	0.000124
0.806760	1.043109	0.000330
0.800039	1.562057	0.000105

Significant at 5% level.

A simple linear regression analysis of each independent variable is applied against the dependent variable. The independent R squared guide us which independent variable excluded from the analysis. The R squared below than 50% indicates a weak relationship. As seen above, the results tell us that the strongest relationship is first variables called (-) 3 days.

The independent variable (-) 3 days has explanatory power on the regression model.

The Durbin-Watson statistic is also employed for the merger announcements for determining the autocorrelation between the residuals. Critical values based on the number of observations are given below;

**Table 10**  
**Autocorrelation Test for Merger Announcements**

	<b>DW-Statistics</b>	<b>Adjusted R-Squared against other Independent</b>
(-) 3 Days	2.361845	0.999059
(+) 3 Days	2.336705	0.999584
(+) 10 Days	2.237201	0.997307
(+) 90 Days	2.186033	0.897772
(+) 1Year	2.360167	0.854139

Significant at 5% level.

D-W equals 1.98, Critical D-W Values Lower ( $D_L$ ) =0.86; Upper ( $D_U$ ) =1.94 Therefore no autocorrelation detected at 95% confidence. R Squared is equal to 0.9988 and % 99.88 of the change in date of announcement can be explained by the change in the five independent variables.

In a merger deal multicollinearity is encountered between (-) 3 days, (+) 3 days and (+) 10 days. That may result, particularly for small and moderate sample size, in lack of statistical significance of individual independent variables while the overall model may be strongly significant. It had also been analyzed 11 announcement days and 22 observations for merger deals. So, multicollinearity may result in wrong signs and magnitudes of regression coefficient estimates, and consequently in incorrect conclusions about relationship between the independent and dependent variable. But the results of merger announcements regressed by using these data have to be given.

**Table 11**  
**Multicollinearity of Independent Variables of Merger Announcements**

Auto Correlation	Tests for Multicollinearity between Independent Variables						
	D <sub>t</sub> = 0.86 D <sub>u</sub> = 1.94	Adjusted R-Squared against other Independent	Independent R-Square Matrix				
DW-Stat							
2.36	99.91%	100%	100%	98%	81%	80%	(-) 3 Days
2.34	99.96%	100%	100%	99%	83%	82%	(+) 3 Days
2.24	99.73%	98%	99%	100%	87%	84%	(+) 10 Days
2.19	89.78%	81%	83%	87%	100%	86%	(+) 90 Days
2.36	85.41%	80%	82%	84%	86%	100%	(+) 1Year
		(-) 3 Days	(+) 3 Days	(+) 10 Days	(+) 90 Days	(+) 1Year	

Significant at 5% level.

The acquisition announcements had also been calculated as mid term and long term. Mid term is defined as 90 days after the acquisition announcements and long term is between 90 – 365 days after the acquisition announcements.

**Table 12**  
**Multiple Regression Equation of Acquisition Announcements as Mid and Long Term**

	<b>Coefficients</b>	<b>Standard Error</b>
Intercept	0,00008	0,00005
(-) 3 Days	0,00003	0,00009
Mid term	0,92771	0,01554
Long term	0,06132	0,01296

The results show us that there is no autocorrelation between the residuals at 95% confidence level. Durbin – Watson statistic is 2,02602 and Critical Values: Lower ( $D_L$ ) = 1.61, Upper ( $D_U$ ) = 1.74.

**Table 13**  
**Autocorrelation Test for Acquisition Announcements as Mid and Long Term**

	<b>DW-Statistics</b>	<b>Adjusted R-Squared against other Independent</b>
(-) 3 Days	2,030219026	-0,01%
Mid term	1,838046091	93,50%
Long term	1,792196195	93,49%

According to the independent analysis R square of (-) 3 days is below than 50% and states the weakest relationship.

**Table 14**

**Simple Linear Regression Analysis of Each Independent Variable of Acquisition Announcements as Mid and Long Term**

<b>Independent Analysis</b>		
<b>R Squared</b>	<b>Gradient</b>	<b>Intercept</b>
0,0012	0,0005	0,0034
0,9921	0,9959	0,0000
0,8722	0,7793	0,0012

And multicollinearity is tested between the independent variables. Multicollinearity is 86% between the mid term and (-) 3 days. Therefore no multicollinearity is detected between the independent variables while the dependent variables are classified as mid and long term.

**Table 15**

**Multicollinearity of Independent Variables of Acquisition Announcement as Mid and Long Term**

Auto Correlation	Tests for Multicollinearity between Independent Variables				
$D_t = 1.61$	Adjusted R-Squared against other Indep	Independent R-Square Matrix			
$D_u = 1.74$					
DW-Stat					
2,03	-0,01%	100%	0%	0%	(-) 3 Days
1,84	93,50%	0%	100%	86%	Mid term
1,79	93,49%	0%	86%	100%	Long term
		(-) 3 Days	Mid term	Long term	

Significant at 5% level.

## 5. CONCLUSION

This research examined the any significant day before and / or after the announcement day during 1997–2005 in Istanbul Stock Exchange. This is also related to market response to announcement of mergers and acquisitions.

To explain any significance between these days it is looked to stock prices and index prices. When the market has been favorably reacting to merger announcements, it tends to continue to do so. Similarly, merger and acquisition during hot stock market tend to get a better reaction from the market than those announced in a cold market. So, the market momentum on the stock prices had first been eliminated by dividing the stock prices to index prices.

The regression results refer that (+) 3 day is significant for acquisitions announcement. "t statistic" is equal to 15,2. After the acquisition is announced, investors react quickly and the demand curve is upward stream. There is significant evidence that when the market learns arbitrageurs want to gain and sell these stocks from overvalued prices. At (+) 10 days the coefficient becomes negative (-0,038) and supports that arbitrageurs have gained and all information is available. From (-) 3 days to (+) 10 days the prices goes peak and then come down. In the mid term the expectation is that the price would be normally and there would no more abnormal gain. t statistic is 3,371 at (+) 90 days. It may say that abnormal returns decrease in the mid and long term and also considered whether there is insider trading. But (-) 3 days t statistic is 0,340 and it is not significant in the analysis. So, there is no abnormal return to be gained before the acquisition announcement. It can not be said that the result of acquisition announcement states the performance extrapolation which says that bidder is mispriced (overvalued) after the acquisitions. After the announcement of acquisitions the price is overvalued in (+) 3 days. But in the long run the trend is down – ward.

In an acquisition deal the acquirer share price increases in short term (+) 3 days while decreasing in the mid term (+) 90 days. But after the one year from the announcements the shareholders wealth increase the level of (+) 3 days prices. On behalf of the acquired shareholders the share price of acquired firms increases at the announcement date and shareholders wealth increase in the long term. It may be said that the shareholders gain from an acquisition transaction on average. The short run reaction to an acquisition announcement is not reversed over the next one year.

In a merger deal, the significant day is (-) 3 days. t statistic is also high and equals to 9,937. Our analysis is also significant for merger announcements in Istanbul Stock Exchange. R square adjusted states that 99,98 % of the change in dependant variable (date of announcement) can be explained by the change in the five independent variables. But the significance is at (-) 3 days and that result make us to consider on whether there is insider trading for merger announcement.

On the other hand, managerial hubris becomes an important factor for merger announcement in Istanbul Stock Exchange. Because, an overvalued stock price means much more gain for managers. As known from literature, the managers tend use stock finance when the stock prices are high. From that point of view, our data can not permit us to interpret the results as discussed above. It had also been found 11 merger announcements in Istanbul Stock Exchange appropriate the research's criteria during 1997 – 2005. The analysis includes 6 variable (1 dependent 5 independent) and 22 observations. The insufficient data may result in misstatement interpretation. In the mid and long term the results fit to expectation that abnormal return is reduced.

Furthermore, significant evidence had been found that for the sample of mergers studied in this paper, negative announcement period ((+) 3 days) is due to downward price pressure caused by merger arbitrage selling of stocks.

Another remark of the regression results for merger deals, a merger announcement may depend on the recent merger history of the overall market. Because independent variable (-) 3 days is significant in our analysis. The market reaction to merger may positively correlate with the response to other mergers in the recent past and the price runs up before the announcement day. As known from finance literature that neoclassic theory states shocks as sources of merger momentum leading to correlated announcement returns. These correlated announcements may lead the stock price to reach peak at (-) 3 days. But in this analysis it is not searched any merger momentum before announcement and rational shareholders are assumed to react immediately to the new information. The results also supports the theory and three days after the announcement, the new information has become known by investors and some of them has changed their position by short selling the stocks of merged firm to earn short run abnormal return.

On the behalf of the shareholders wealth, the announcement of merger increases the shareholders of merging firms in the long run. Before merger announcements the share price of merging firms increases. But it should be remembered the lack of merger announcements while interpreting the results of merger announcements.

### **FURTHER RECOMMENDATION**

In this research, it is not detailed that financing decisions during the year before a takeover play an important role in explaining the merger and acquisition gains.

The relation between the bidders's financing decisions in the period before the mergers and acquisitions and subsequent gains is not specifically analyzed. Knowing the firm's financing decisions before the announcement may be a significant factor in explaining returns on mergers and acquisitions. According to the pecking-order theory, a firm's financing choice is determined by its relative costs of raising funds.

Tax is also another factor to be discussed for the choice of payment. As known from the Income Tax Law, in a share purchase, there is no VAT liability regarding the share transfer transaction. In an asset purchase, the transfer of the assets would be the subject to VAT at the general rate of 18% over the purchase value of the assets. So, any signaling attempted through share purchase will be viewed by investors as even more credible than asset purchase.

So, the legislation environment should be considered as a proxy for determining the mergers and acquisition value or the market reaction on the announcements. To the extent that the trend towards globalization in the world has dramatically increased merger and acquisition flows from some countries to others, there is a need for competition laws that make up for the pervasive effects of the global market on some countries to be argued. The laws about mergers and acquisitions for example anti-competitive law, tax legislation and etc. may directly affect the volume and frequency of mergers and acquisitions.

Announcement effect on the stock price may also differ depending on the size of merging firm. Abnormal returns would be compared for similar deals across large and small acquirers and then use multivariate regressions to analysis the size effect on the stock price.

It has also been emphasized the number of merger announcements and its difficulties giving us to interpret the regression results. 11 merger announcements may not be enough to give the true interpretation.

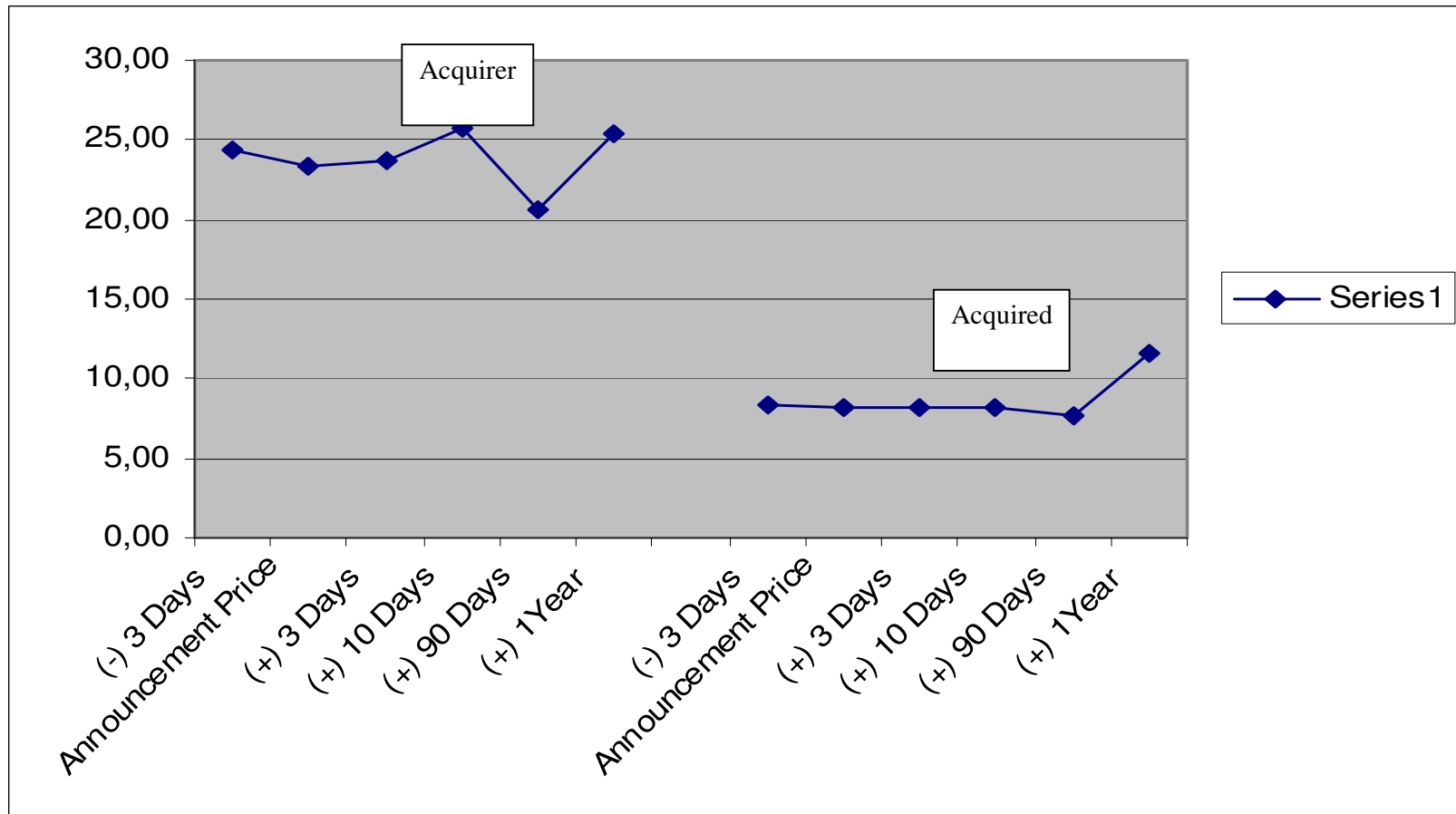
This research contributes to the debate on the need for market reaction of mergers and acquisition announcements. However, some important extensions deserve further research. Regulatory environments, size effect and financing decision should be added to the analysis. Therefore, it would be interesting to analyze what affect the stock prices while announcing the mergers and acquisitions.

**APPENDIX****Number Merger & Acquisition Announcements during 1997 – 2005 (Used in Analysis)**

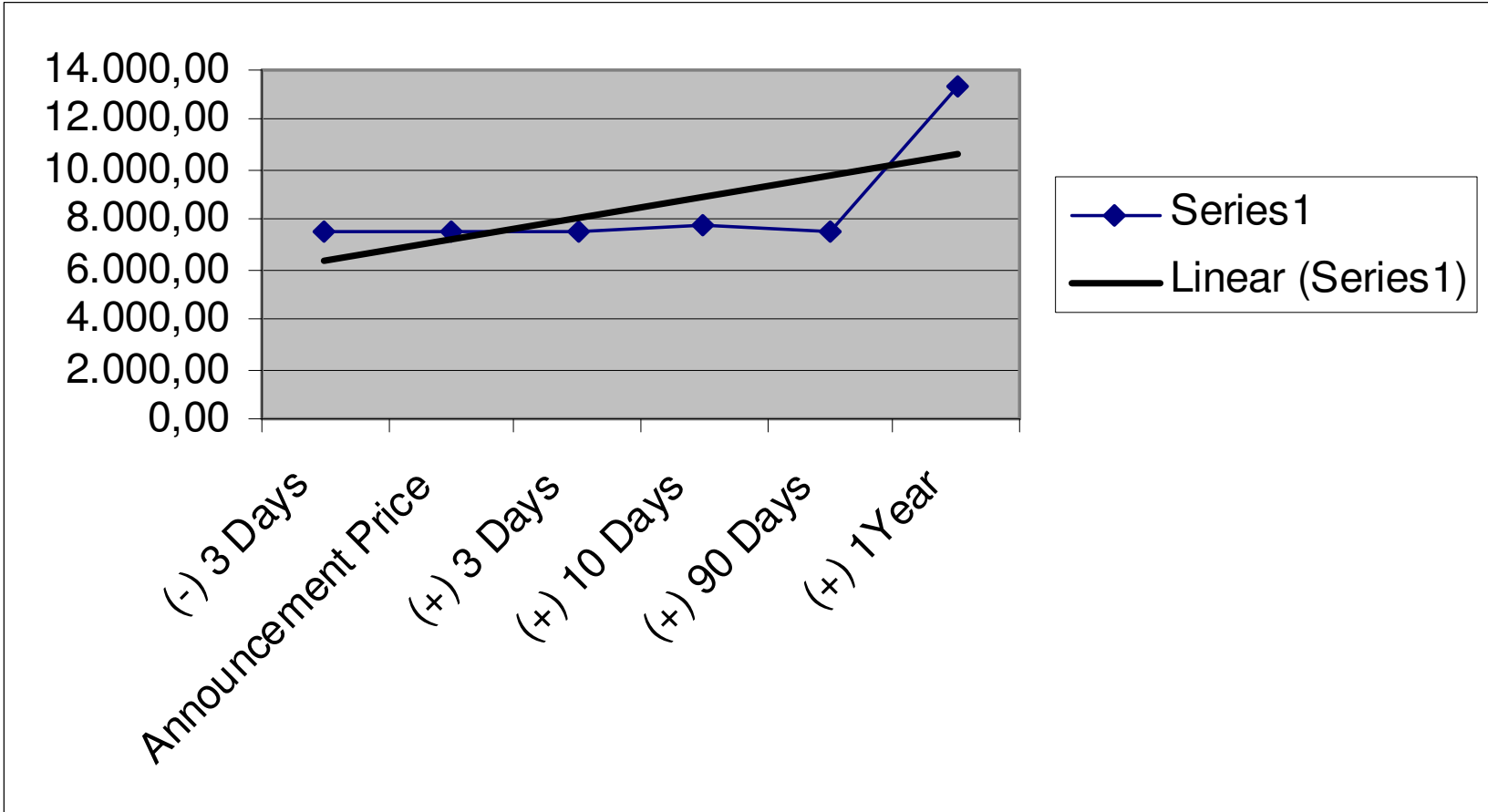
<b>Years</b>	<b>Acquisition Numbers</b>	<b>Merger Numbers</b>	<b>Total</b>
1997	1	--	1
1998	14	2	16
1999	8	5	13
2000	3	1	4
2001	11	--	11
2002	6	3	9
2003	1	--	1
2004	2	--	2
2005	8	--	8
<b>Total</b>	54	11	65

*The table describes the number of mergers and acquisitions used in the analysis.*

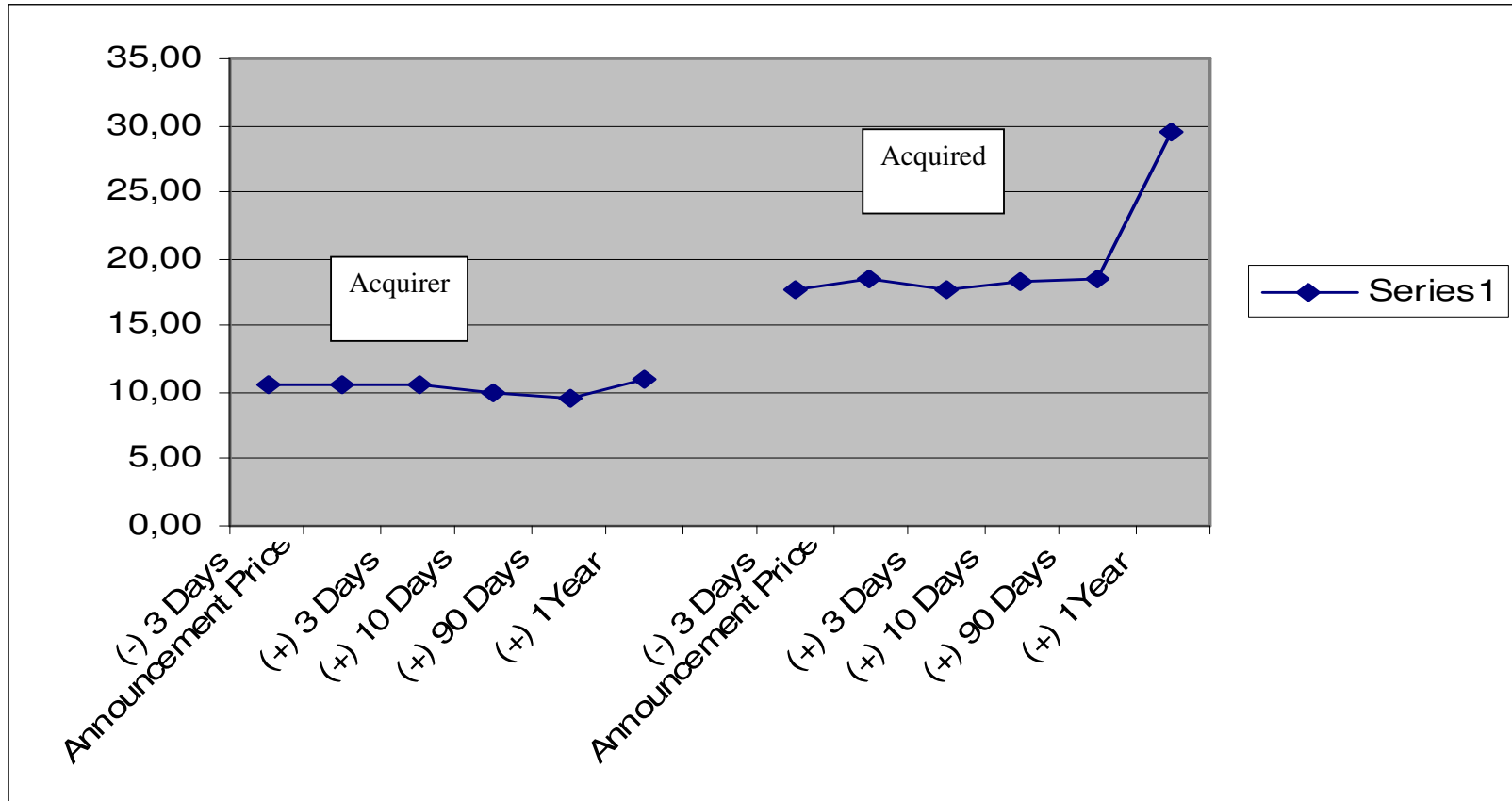
Average of merger announcement



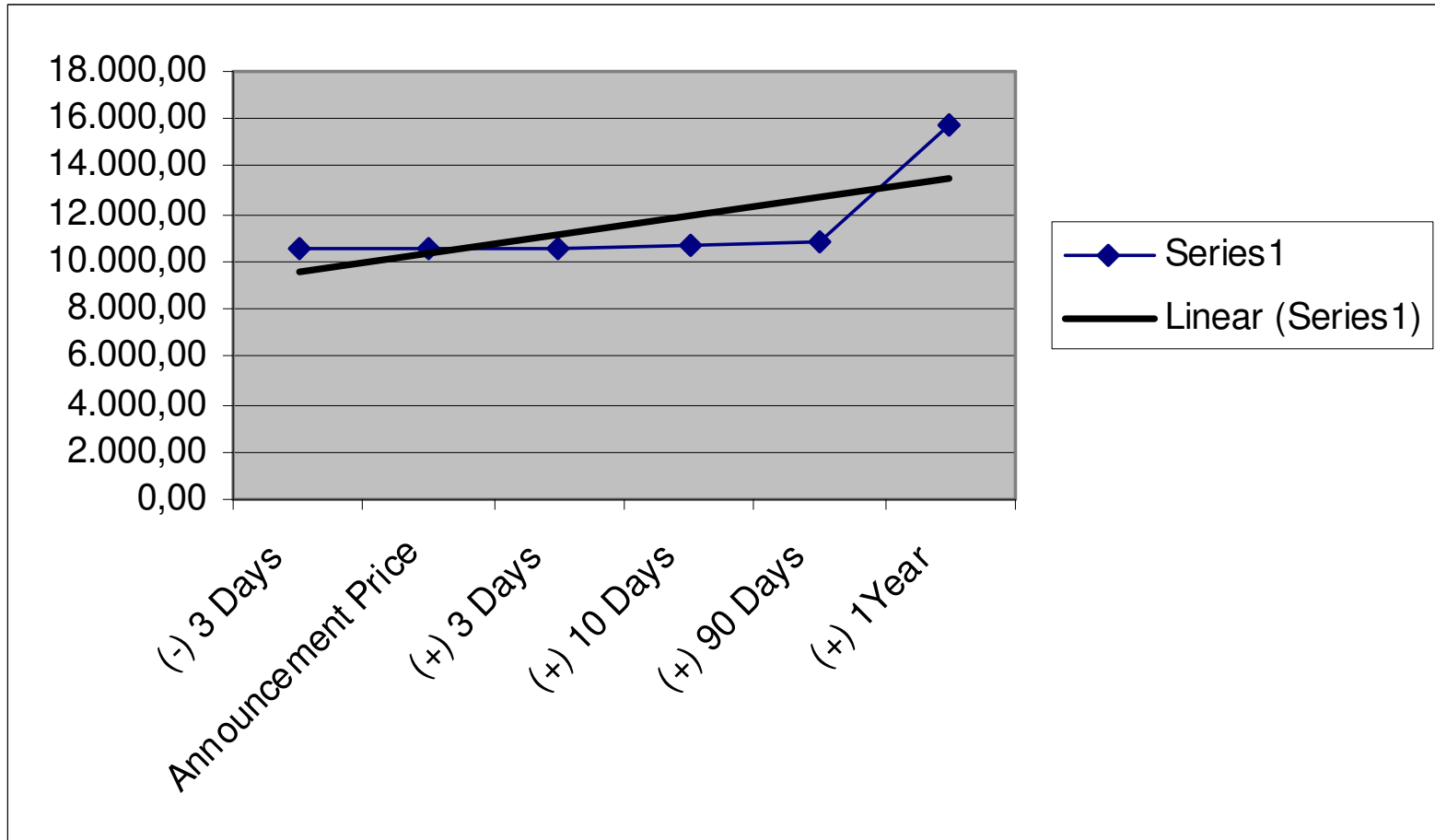
Average of merger index



Average of acquisition announcement



Average of acquisition index



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