# OWNERSHIP STRUCTURE, CORPORATE GOVERNANCE, AND FIRM PERFORMANCE: EVIDENCE FROM TURKEY

VEDAT MİZRAHİ

BOĞAZİÇİ UNIVERSITY

2009

# OWNERSHIP STRUCTURE, CORPORATE GOVERNANCE, AND FIRM PERFORMANCE: EVIDENCE FROM TURKEY

Thesis submitted to the
Institute for Graduate Studies in the Social Sciences
in partial fulfilment of the requirements for the degree of

Ph.D.
in
Management

by
Vedat Mizrahi

Boğaziçi University
2009

Abstract

Vedat Mizrahi, "Ownership Structure, Corporate Governance, and Firm Performance: Evidence from Turkey"

Do corporate governance practices affect firm performance? Are shareholders willing to pay a premium for higher governance standards? How does the ownership structure of a firm affect its corporate governance practices and firm performance? We investigate whether differences in the quality of firm-level corporate governance affects firm performance. Constructing a broad corporate governance index for listed Turkish companies, we document positive relationship between governance scores on Tobin's Q as a measure for firm performance. We find that firms with better corporate governance scores in our model have higher firm values, which implies that firms can increase their valuations by restructuring their corporate governance standards. Our study does not find significant relationship between corporate governance scores and other performance measures like ROA and stock returns. We explain this phenomenon through the signalling effect of better corporate governance practices. We also investigate whether ownership structures are related to corporate governance practices and firm performance. We find evidence that listed companies with higher foreign ownership ratios have also higher corporate governance standards. We also document that higher foreign ownership ratio causes higher firm performance measured by Tobin's Q. Moreover, we find that listed companies with higher corporate governance scores and higher foreign ownership ratios experienced a smaller reduction in their share prices during the recent equity market crash in Turkey parallel to the global equity markets.

## Tez Özeti

Vedat Mizrahi, “Ownership Structure, Corporate Governance, and Firm Performance: Evidence from Turkey”

Kurumsal yönetişim uygulamalarının şirket performansı üzerindeki etkisi nedir? Hissedarlar daha yüksek kurumsal yönetişim standartları için bir prim ödemeyi kabul eder mi? Şirketlerin hissedarlık yapısının kurumsal yönetişim uygulamaları ve şirket performansı üzerindeki etkileri nelerdir? Bu tez şirket bazındaki kurumsal yönetişim uygulamalarının şirket performansı üzerindeki etkisini analiz etmektedir. Halka açık Türk şirketleri için oluşturulan bir kurumsal yönetişim endeksi ile şirket performansı arasında pozitif bir ilişki bulunmuştur. Yüksek kurumsal yönetişim skoruna sahip şirketlerin daha yüksek Tobin’s Q değeri olduğu saptanmıştır. Böylece şirketler yönetişim standartlarını artırarak şirket değerlerini de artırabilirler. Kurumsal yönetişim skorları ile varlıkların geri dönüşü ve hisse performansı gibi diğer performans kriterleri arasında deneysel bir ilişki bulunamamıştır. Bu durum kurumsal yönetişimin sinyal etkisi ile açıklanabilir. Bu çalışma kapsamında şirketin sahiplik yapısının yönetişim uygulamaları ve şirket performansı üzerindeki etkisi de analiz edilmiş ve yabancı sahiplik oranı yüksek şirketlerin daha yüksek kurumsal yönetişim skorları ve daha yüksek şirket değeri olduğu saptanmıştır. Ayrıca, yabancı sahiplik oranı yüksek ve kurumsal yönetişim skoru yüksek şirketlerin Istanbul Menkul Kıymetler Borsasındaki son sert düşüşü sırasında daha az değer kaybettiği bulunmuştur.

# CURRICULUM VITAE

NAME OF AUTHOR: Vedat Mizrahi
PLACE OF BIRTH: Istanbul, Turkey
DATE OF BIRTH: 11 July 1979

GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:
Boğaziçi University.
University of North Carolina at Chapel-Hill, August – December 2002, exchange student program.
Koç University.
Istanbul Technical University.

DEGREES AWARDED:
Master of Arts in Business Administration (MBA), 2003, Koç University.
Bachelor of Science in Industrial Engineering, 2001, Istanbul Technical University.

AREAS OF SPECIAL INTEREST:
Corporate governance and financial modelling

PROFESSIONAL EXPERIENCE:
Equity Research Analyst, Deutsche Securities, Istanbul, 2005-present.
Management Consultant, Deloitte Consulting, Istanbul, 2003-2005.

AWARDS AND HONORS:
Honors Degree (Ranked 1st), Master of Arts in Business Administration (MBA), 2001-2003, Koç University.
Siemens, Siemens Excellence Award, 2003.

GRANTS:

PUBLICATIONS:

ACKNOWLEDGEMENTS

I owe my deepest gratitude to my thesis advisor, Prof. Mine Uğurlu, whose encouragement, guidance and support from the initial to the final level of my study enabled me to develop an understanding of the subject. I would like to thank her for her contribution on my thesis and her support for the past two years.

I want to thank all the fifty company representatives for sharing their candid views and answers in the corporate governance survey. I am also indebted to many of my colleagues for their support and help through the data collection stage.

I am truly grateful to all members of my family for their unconditional love and support. This thesis would not have been possible unless my father Jeki called me almost every day to show his support and belief in me. I would like to thank my loving and caring mother Eti, who completed her PhD dissertation thesis last year, for being a role model for me. I am indebted to my sister Leyla for constructing the web-interface of the corporate governance survey in this study. I also thank my father in law Davit, my mother in law Doli, my sister in law İlona and my sister's husband İzzet for supporting me throughout the process.

Last but not least, I would like to thank my loving and caring wife Suzi for her unconditional love and support, sharing her knowledge in statistics and experience in thesis writing, for being my psychologist and for encouraging me all the time through my life.

I also would like to offer my regards and blessings to all of those who supported me in any respect during the completion of the project.

# DEDICATION

To my family and friends

CONTENTS

CHAPTER 1: INTRODUCTION ..... 1

CHAPTER 2: THEORETICAL BACKGROUND ..... 8

CHAPTER 3: DATA COLLECTION AND MEASUREMENT ..... 22
Sample ..... 22
Questionnaire Survey of Corporate Governance Practices ..... 24
Variables and Measures ..... 39

CHAPTER 4: RESEARCH DESIGN ..... 61
The Effect of Corporate Governance on Firm Performance ..... 61
Univariate Analysis of Ownership Structure and Corporate Governance ..... 64
The Causality between the Ownership Structure and Firm Performance ..... 66
Additional Tests on the Impact of the Recent Global Backdrop ..... 68

CHAPTER 5: EMPIRICAL RESULTS ..... 71
The Effect of Corporate Governance on Firm Performance ..... 71
Univariate Analysis of Ownership Structure and Corporate Governance ..... 81
The Causality between the Ownership Structure and Firm Performance ..... 84
Additional Tests on the Impact of the Recent Global Backdrop ..... 86

CHAPTER 6: CONCLUSION ..... 90

APPENDICES ..... 101
A: OECD's Principles of Corporate Governance ..... 101
B: Survey Questions ..... 103
C: Scoring Corporate Governance Practices ..... 112
D: Variable Definitions ..... 113

REFERENCES ..... 114

TABLES

1. Sectoral Breakdown of the Sample
2. Frequency Distribution of General Information on Respondent Firms
3. Frequency Distribution of Shareholder Rights and Disclosure of Information
4. Frequency Distribution of Effectiveness of the Board of Directors
5. Frequency Distribution of Corporate Governance Scores
6. Summary Statistics on Corporate governance indices
7. Cross-country Comparison of Corporate Governance Scores
8. Correlation Coefficients between Corporate Governance Indices
9. Summary Statistics on Performance Measures
10. Summary Statistics on Firm Characteristics
11. Mean Values of Key Variables by Industry
12. ANOVA of Key Variables between Sectors
13. ANOVA of Key Control Variables between Foreign Ownership Groups
14. ANOVA of Key Control Variables between Blockholder Ownership Groups
15. ANOVA of Key Control Variables between CGS Groups
16. Correlation Coefficients among Major Variables
17. Determinants of Corporate Governance Score (CGS)
18. The Relation between Tobin's Q and Overall Corporate Governance Index (CGS)
19. The Test for Endogeneity for the Relation between Tobin's Q and Overall Corporate Governance Index (CGS)
20. The Relation between ROA and Overall Corporate Governance Index (CGS)
21. The Relation between Stock Return and Overall Corporate Governance Index (CGS)
22. The Relation between Tobin's Q and Corporate Governance Index including Dividends (CGSd)
23. The Relation between Tobin's Q and Weighted Corporate Governance Index (CGSw)
24. The Relation between Tobin's Q and Corporate Governance Sub-indices
25. The Relation between Tobin's Q and CGS for Sub-Samples
26. ANOVA of Tobin's Q between Corporate Governance Groups
27. The Relation between Corporate Governance Scores and Foreign Ownership
28. ANOVA of CGS between Foreign Ownership Clusters
29. The Relation between Corporate Governance Scores and Blockholder Ownership
30. ANOVA between Corporate Governance Scores and Family Ownership
31. Granger Causality Test between Blockholders' Ownership and Tobin's Q
32. Granger Causality Test between Foreign Ownership and Tobin's Q
33. The Relation between Abnormal Stock Return during Market Crash and CGS
34. The Relation between Abnormal Stock Return during Market Crash and Foreign Ownership
35. The Relation between Abnormal Stock Return during Market Crash and Blockholder Ownership

# CHAPTER 1: INTRODUCTION

The evolution of corporate governance is an important area of finance research as the survival of firms depends on their ability to adapt governance structures to changes in their external environments (Kole & Lehn, 1999; Morck & Steier, 2005). However, little is known about corporate governance dynamics, especially for firms in emerging markets such as Turkey, where firms operate in deficient legal, capital markets, and accounting systems that could hinder governance change. A well-known line of research that begins with a series of papers by La Porta et al. (1999) provides evidence that countries with stronger legal protections of minority shareholders have more developed stock markets, less concentrated share ownership, and a higher value for minority shares.

Corporate Governance can be defined as a set of mechanisms to assure managers work for the best interests of shareholders and to avoid moral hazards of the management. Moral hazards can be defined as actions by management that benefit themselves but destroy investor value. According to Shleifer & Vishny (1997), corporate governance deals with how the financial supplier assures that the executives will pay them reasonable return on their investment.

An important question is whether variation within a single country in the corporate governance practices of individual firms predicts these firms' market values. If within-country, across-firm governance practices correlate with firm market value, another question arises: Do good corporate governance practices cause investors to value firms more highly? An alternate explanation is that firms adopt good governance rules to signal that the firm’s insiders intend to behave well; but the signal, not the firm’s practices, affects firm value. Another explanation involves

endogeneity – firms with high market values adopt good governance practices, so that causation runs from firm value to corporate governance, rather than vice versa. Firms with higher market values may adopt better corporate governance practices for a number of reasons. The firm's insiders may believe that these practices will further raise firm value or think that these practices will signal management quality.

There is evidence that broad measures of firm-level corporate governance predict higher share prices in various countries. This evidence comes from both single-country studies Black (2001) on Russia and Gompers, Ishii & Metrick (2003) on the U.S. as well as multi-country studies Durnev & Kim (2005) and Klapper & Love (2004). However, most prior work relies on cross-sectional data, which leaves open the possibility that endogeneity or bias due to omitted firm-level variables, explain the observed correlations.

Countries around the world are characterized by alternative corporate governance systems (Shleifer & Vishny, 1997). For example, the United Kingdom falls under the Common Law system with strongest protection of shareholders and creditors (La Porta et al., 1998) whereas Germany has relatively weaker investor protection but somewhat stronger protection of creditors. Turkey also has a different corporate governance structure, which may lead to significant differences in the performance of the firms in Turkey. Prowse (1995) suggests that such judgements are inherently subjective because of the scarce evidence on the relative performance of different corporate governance systems.

A large number of studies in the past few decades have investigated the relationship between the ownership structure and the firm performance. It has been argued that as ownership concentration increases, the incentives and the abilities of shareholders to monitor managers increase as well, meaning lower agency costs.

Our paper differs from the related research in several ways. First, we combine the research on corporate governance and firm performance and the research on ownership structure and firm performance in a single study. We empirically analyze the relationship between corporate governance, ownership structure and firm performance in a sample of publicly listed companies in Turkey controlling for firm characteristics such as size, leverage, company age, industry effects and other dummy variables. Second, we formulate a broad corporate governance index that is based on the responses to a survey of 50 listed companies in Turkey to study the effects of corporate governance on firm performance. Third, we empirically analyze if corporate governance is influenced by the ownership concentration. Fourth, we test for causality between the ownership concentration and firm performance. Lastly, we analyze whether firms with higher corporate governance scores, higher foreign ownership ratios and higher ownership concentration have experienced a smaller reduction in their share prices during the recent stock market crash.

Our survey is based on a previous study by the Asian Development Bank Institute (Nam & Nam, 2004) conducted in Indonesia, Korea, Malaysia and Thailand during July-October 2003. While we used the same sub-indices and retained most of the survey questions, we had to exclude a few irrelevant questions for the Turkish market. Our survey was conducted during March-September 2007 through a web-based questionnaire (http://cgsurvey.info/) that was answered by the company representatives –investor relations manager or chief financial officer (CFO) – of each listed company. We initially aimed 100 listed companies in the Istanbul Stock Exchange, but only 50 companies were receptive to our survey. The companies in the study are chosen from different sectors. As a result, it is possible to analyze if the relationship between corporate governance and firm performance differ from one

sector to another. We use the survey responses to construct a corporate governance index (0-100) and attach a score to each listed company. Higher scores indicate better corporate governance.

The fact that our study is based on the same survey used by Nam & Nam (2004) in Indonesia, Korea, Malaysia and Thailand enables us to evaluate cross-country variations in corporate governance practices. The mean corporate governance score (CGS) for our sample is 60.51, which is significantly higher than Thailand (59.1), Korea (50.2), Indonesia (52.5), but lower than Malaysia (73.8).

Empirical evidence presented in this study points to a strong positive relation between the overall corporate governance index and firm value measured by Tobin's Q. This result is largely consistent with the studies in other countries (Klapper & Love, 2003; Black et al., 2003; Gompers et al., 2003; Durnev & Kim, 2005; Nam & Nam, 2004) as well as the Asian Development Bank Institute's study (Nam & Nam, 2004), which uses the same methodology with our study. Unlike the significant positive relationship between corporate governance index and Tobin's Q, we find no significant evidence that better governed companies achieve higher ROA or yield better stock returns to their investors. A similar study by Ertugrul & Hedge (2005) shows significant relation between corporate governance scores and performance measures such as ROA and stock return in a larger sample of companies.

Two recurring issues in other firm-level corporate governance studies are the potential for the results to be explained by signalling and endogeneity. The results of our study show that firms signal high quality by adopting better corporate governance practices, which in turn results in higher firm value rather than a direct impact of better governance practices on the company's financial performance. We also find that the corporate governance is not an endogenous variable (firms with

higher market value adopt better corporate governance practices, so that the causation runs from firm value to corporate governance). As a result, we conclude that the causation runs from corporate governance to firm value, such that better corporate governance practices result in higher firm value. A similar firm-level corporate governance study by Black et.al. (2003) in Korea show that corporate governance is an endogenous variable.

As a robustness check for our results, we assess how using different weighting schemes to combine our corporate governance sub-indices into an overall corporate governance index affects our results, apart from using different measures of firm performance similar to the study of Black et al. (2003) in Korea. We find similar results for different corporate governance indices (CGSd and CGSw). The positive relationship between Tobin's Q and corporate governance scores prevails for the other two indices as well. The strong positive relationship between Tobin's Q and the corporate governance index does not prevail for financial institutions in our sample. However, there is a strong positive relationship for non-financial companies. We find no evidence of other industry effects when we run regression for the sub-samples such as consumer and construction sectors.

We find a positive and significant relation between the average foreign ownership ratios and corporate governance scores. We conclude that firms with higher foreign ownership engage in better corporate governance practices and therefore have higher corporate governance scores. However, the regression analysis between the corporate governance scores and blockholder ownership ratios does not yield any significant results.

We also analyze the relationship between the ownership structure and firm value. We conclude that there is a significant unidirectional causal relationship between foreign ownership and firm value (Tobin's Q), such that the causation runs from foreign ownership to firm value. The causal relationship between blockholder ownership and firm value is only significant at a 90% confidence interval and there is a unidirectional causal relationship from blockholder ownership to firm value. There is vast amount of literature on the causal relationship between blockholder ownership and firm value. Pedersen et al. (2000) find no significant causal effects either way in the United States and United Kingdom, but in continental Europe they find a negative effect of blockholder ownership on firm value and a negative effect of firm value on blockholder ownership.

The fact that our study is conducted during one of the largest global economic crisis and the stock market crash in the last century enables us to empirically analyze the relationships between stock market returns, corporate governance scores and ownership structure. We find a positive relation between CGS and abnormal stock returns during the Turkish stock market crash. Every one-point increase in CGS predicts a 2% higher abnormal stock return. We also find that firm size is a mediator variable that explains the positive relationship between CGS and abnormal stock return. We conclude that investors prefer companies with better corporate governance practices. This results in higher firm value, which in turn causes higher abnormal stock returns. The positive causal relationship enables us to conclude that listed firms with higher corporate governance scores experienced a smaller reduction in their share prices during the recent stock market crash. We also find empirical evidence that listed firms with higher foreign ownership ratios

experienced a smaller reduction in their share prices. We find no significant relationship between the blockholder ownership and abnormal stock return.

This paper is organized as follows. Chapter II reviews the literature on corporate governance and specifically the relationship between ownership structure, corporate governance and firm performance. Chapter III describes the sample, which includes our data set, how we construct our corporate index, describes the dependent, independent and control variables and shows the descriptive statistics. Chapter IV includes our research design and the hypotheses. Chapter V discusses the empirical results of the study and Chapter VI concludes the research.

# CHAPTER 2: THEORETICAL BACKGROUND

Do firms' corporate governance standards affect firm performance? Are shareholders willing to pay a premium for higher corporate governance standards? The well-known corporate scandals, such as Enron and World-Com triggered awareness of corporate governance and led clients to pressurize fund managers to incorporate corporate governance in their investment processes. This awareness resulted in a disparity between well governed and badly governed public companies. OECD (2004) defines corporate governance as:

> *Corporate governance deals with the rights and responsibilities of a company's management, its board, shareholders and various stakeholders. How well companies are run affects market confidence as well as company performance. Good corporate governance is therefore essential for companies that want access to capital and for countries that want to stimulate private sector investment. If companies are well run, they will prosper. This in turn will enable them to attract investors whose support can help to finance faster growth. Poor corporate governance on the other hand weakens a company's potential and at worst can pave the way for financial difficulties and even fraud.* (OECD, 2004)

The literature on finance explains capital markets, corporate governance and the laws and regulations related to both in an inter-related structure. The key components of legal systems for governance include investor protection for equity holders and debt holders, regulations on capital markets, bookkeeping and reporting rules and guidelines, and the enforcement of laws against fraud and expropriation.

Investor protection differs from one country to another, as Shleifer & Vishny (1997) and La Porta et al. (1997, 1998, 2000, 2002) describe. Bank-centred corporate governance is often compared with the market-based corporate governance system, in which a large number of investors provide the necessary financing through equity injection. In bank-centred systems, financial institutions play an important role for

corporate governance, while the equity holders play a more important role in market-centred systems. Common law countries like the U.S. and U.K. have market-centred systems and therefore offer strong investor protection. On the other hand, civil law countries like France offer weaker protection to minority shareholders. It is easy to classify Germany as bank-centred, because its banks influence firms through both debt and equity and its stock market is underdeveloped. In the French civil law based financial system, neither the credit market nor the stock market is well developed.

> *The international corporate governance literature implies that countries with common law, investor-friendly legal systems, effective market regulation, and transparent accounting have larger, more liquid capital markets associated with low information asymmetry. Similarly, countries with civil law systems that provide weak protection for investors, minimal capital market regulation, and transparent disclosure tend to have smaller, less liquid and less efficient capital markets.*(La Porta et al., 2000)

In theory, if the corporate governance is at the optimal level, there should not be any relationship between the corporate governance and firm performance. Any empirical study trying to find a meaningful relationship between the corporate governance and firm performance assumes that corporate governance is not set at the optimum level. While this assumption may not be directly testable, it is still used by numerous academics that aim to investigate the effects of corporate governance on firm performance (Black et al., 2003; Core et al., 1999; Durnev & Kim, 2004; Gompers et al., 2003; Larcker et al., 2004; Black, 2001; Yermack, 1996). Increased shareholder monitoring and strict laws and regulations are the results of the belief that better corporate governance practices should deliver higher firm performance and shareholder value. This theory is supported by a series of empirical studies. La Porta, Lopez-de-Silanes, Shleifer & Vishny (2002) find that better shareholder protection leads to higher valuation of corporate assets using firm-level data from 27 developed countries. Gompers, Ishii & Metrick (2003) report that firms with stronger

shareholder rights have higher market values. Klapper & Love (2003) also use firm-level data in 14 emerging equity markets and report that there is a significant positive correlation between better corporate governance and improving operating performance and higher market capitalization. Finally, Black, Jang & Kim (2003) find that corporate governance is crucial for explaining the market value of listed companies in Korea. They find that an increase in the quality of corporate governance practices result in considerable increases in Tobin's Q and the market-to-book ratio.

Most of the literature on corporate governance focuses on one aspect of corporate governance such as the ownership structure and determine its impacts on firm valuation. Hiraki et al. (2003), Sung (2003) and Chen (2001) investigate the ownership structure and firm value in China, Japan and Korea. Brunello et al. (2001) analyze executive compensation and firm value in Italy. Some researchers attempted to find a relationship between a broader corporate governance index and firm performance. For example; Gompers et al. (2003) constructed a corporate governance index to evaluate shareholders rights at the firm level. They find that higher corporate governance scores result in higher returns by taking a long position in the stock. They construct their corporate governance index in five elements: Delay, Protection, Voting, Other and State. Under these elements, there are 24 governance rules with equal weights in the index. Although this index is broad enough to include external factors; internal factors, such as the agency problem, ownership structure, board size and structure, executive compensation, disclosure and transparency are neglected (Lei & Song, 2004).

Jensen & Meckling (1976) define the principal-agent relationship as an agreement under which principals (shareholders) engage an agent (manager/director)

to perform company management on their behalf. As such, if both parties are value maximizers, it is obvious that the directors will not always act in the best interests of the shareholders. Since the relationship between the shareholders and the directors of a corporation fits the definition of a pure shareholder-director relationship, it can be concluded that the issues associated with the "separation of ownership and control" could be related to the agency problem (Jensen & Meckling, 1976).

The need for an effective corporate governance framework stems partially from the separation of ownership and control in listed companies. Corporate governance issues are fundamentally linked to the 'principal-agent problem', which exists because directors, in the absence of perfect information and efficient markets, can pursue their personal goals and destroy shareholder value (Berle & Means, 1932 as cited in Ertugrul & Ugur, 2003). Fama (1980) describes the agency problem as the director having an incentive to get more compensation, such that if management incentives are properly aligned with the shareholders interest, there will be less agency problems. Jensen & Meckling (1976) define the agency cost as the sum of expenditures for monitoring, bonding, and the residual loss. In order to minimize agency costs, directors should be monitored both externally and also internally. Abowd & Kaplan (1999) explain that compensation based on firm value such as stock options aligns director and shareholder interests. Jensen & Meckling (1976) argue that agency costs are higher for firms, in which directors does not have enough stock options or company shares. Morck et al. (1988) show that there is a relation between the ownership structure of a firm and its valuation.

A large number of studies have investigated the relationship between ownership structure and corporate performance. Academics argue that as ownership concentration increases, the incentives and the capabilities of the shareholders to

better monitor directors increase as well. On the other hand, there are studies which find that higher ownership concentration leads to adverse effects for companies such that large blockholders and directors can collaborate to maximize their personal wealth at the expense of minority shareholders (Lehman & Weigand, 2000).

Legal system and capital market regulations plays an essential role in protecting the minority investor rights. However, even for well established legal systems, the cost of enforcing the law is sometimes not affordable for minorities. However, being a blockholder does not necessarily mean controlling the company. Moreover, it would sometimes need more effort and cost to monitor the company relative to minority investors (Lei & Song, 2004).

According to Shleifer & Vishny (1986), investors can get more effective control rights if they join forces and become larger, especially in an environment where the legal protection does not give enough control rights to small investors. The most straightforward way to align cash flow and control rights of minorities is to concentrate their share holdings, meaning that one or more investors in a firm having substantial blockholder ownership. When control rights are concentrated in a small number of investors, the joint action by investors is much easier compared to a large number of investors. As a result, concentration of ownership increases legal protection of shareholder rights. The concentration of ownership can take distinct forms such as large shareholders and large creditors.

There is increasing evidence on the role of large shareholders/blockholders in exercising corporate governance. Franks and Mayer (1984) find that increasing blockholder ownership result in higher director turnover in Germany. Similarly, Kaplan & Minton (1994) and Kang & Shivdasani (1995) show that firms with blockholders are more likely to replace directors due to poor performance than the

firms without blockholders (Shleifer & Vishny, 1986). A number of empirical studies find that blockholder ownership influences better corporate management.

Blockholders was found to affect executive compensation (Holderness and Sheehan, 1988; Mehran, 1995), executive turnover (Denis, Denis & Sarin, 1997), corporate diversification and asset restructuring (Hoskisson, Johnson and Moesl, 1994; Denis & Sarin, 1999). Lins (2002) investigates whether management ownership structures and large non-management blockholders are related to firm value across a sample of 1,433 firms in 18 emerging markets. He finds that when a management group's control rights exceed its cash flow rights, firm value is lower and this relationship is more pronounced in countries with low shareholder protection. They also find that large non-management control rights blockholdings are positively related to firm value. Pedersen et al. (2000) study the direction of causality between blockholder ownership and firm value in United States and Europe. They examine the causal relationship between blockholder ownership (measured by the total percentage of shares controlled by large shareholders) and firm value (measured by Tobin's Q). Using Granger causality tests, they find no significant causal effects either way in the United States and United Kingdom, but in continental Europe they find a negative effect of blockholder ownership on firm value and a negative effect of firm value on blockholder ownership.

Large creditors (financial institutions) are also potentially active shareholders. Similar to the blockholders, they have substantial investments in the firms and they expect returns on their investments. Moreover, they are more powerful than the equity holders due to their control rights in the event of a default. As a result, large creditors also have strong cash flow rights and they also have the power to interfere in the key decisions of a company. Although there has been a great

deal of academic discussion on corporate governance by large creditors, the empirical evidence for their role remains limited. Kaplan and Minton (1994) and Kang and Shivdasani (1995) find that management turnover due to poor performance increases in firms that have a principal banking relationship compared to the firms that does not have such a relationship in a firm-level study conducted in Japan (Shleifer & Vishny, 1986).

Large shareholders and large creditors' role in corporate governance brings the debate on debt vs. equity as a means for solving agency problems. One of the key differences between equity and debt holders of a firm is that equity holders are not promised any payments in return for their financial investment in the firm, although they often receive dividends at the discretion of the board of directors (BoD). Unlike the debt holders, individual shareholders do not have any claim to specific assets of the firm as well. This is one of the primary reasons why cost of equity is higher than the cost of debt for a company. In addition to some relatively weak legal protections, the only principal right that the equity holder get is the voting right. Because the equity holders have voting power, they have the ability to extract some payments from the company in the form of dividends. Debt is also easier to value as there is a fairly certain pay-off stream and there is usually abundant collateral. Debt holders only need to worry about the value of the collateral and not about the total value of a firm, as equity holders would need to (Shleifer & Vishny, 1986). As a result, the choice between equity vs. debt is critical for minimizing the agency costs.

In addition to the ownership structure and the corporate control, the Board of Directors (BoD) plays an influential role in corporate governance since it stands as a bridge between the shareholders and the management. Board members are elected by the shareholders to work as their representatives and to monitor the management, its

strategy and the operations. However, they are also agents with different motives. Therefore, incentives that are given to the BoD are important for their monitoring performance. It is also believed that BoDs dominated by independent members are more effective. Numerous studies have investigated the role of BoDs, particularly its responsibilities and its composition, and found no concrete evidence regarding its impact on firm performance (Borokhovich et al., 1996, Agrawal & Knoeber, 1996).

The number of independent members in the BoD is also a concern, because outsiders are more effective in monitoring activities (Hermalin & Weisbach, 2003). On the other hand, Fich & Shivdasani (2004) report that independent directors involved in other businesses cannot effectively monitor the directors and this results in weaker corporate governance practices. Vafeas (2003) finds that senior directors are more likely to nominate the board committees and senior director participation in the compensation committee is associated with higher CEO remuneration. Core et al. (1999) argue that directors may become less effective as they grow older. He also finds that board members serving on a number BoDs are less effective.

CEO/Chairman of the BoD duality is another important corporate governance issue. While Jensen (1993) argues that CEO and chairman roles should be separated, Brickley, Coles & Jarrell (1997) find evidence that costs of separating these roles outweigh the benefits. They also find no significant evidence that separating CEO and Chairman Roles improves firm performance.

Vafeas (2000) find that incentive plans for directors has no meaningful impact on firm performance. However, the composition of the board may influence firm performance as Prevost et al. (2002) find a positive correlation between the two. Unlike board composition, there is evidence that board size and firm value are negatively correlated. Eisenberg et al. (1998) report a negative relationship between

board size and the profitability of small to medium sized companies. Yermack (1996) also finds a negative relationship between the board size and firm value, indicating that smaller boards are more effective than the larger ones due to coordination and communication problems.

An appropriate remuneration package for the executives is vital in order to align management incentives with firm objectives. It is very difficult to measure the effectiveness of executive compensation. A popular view is that there is an insignificant relationship between the executive compensation and the market value of a company. This approach contrasts with the widespread view on executive compensation and share price relationship, particularly with the arguments of Jensen & Murphy (1990), who states that there is a lack of pay-performance sensitivity in compensation packages. Jensen & Meckling (1976) argue that an increase in the director's ownership in the firm leads to better alignment of incentives, which would result in better firm performance. Separately, Perry (1999) finds that when directors are incentivized, the CEO turnover increases after poor performance. He also concludes that incentive compensation increases the level of monitoring by the BoD. These results indicate that equity compensation for directors is also an essential determinant of strong corporate governance.

There is also a massive amount of literature on the relationship between corporate governance and firm performance. The key questions asked in these studies are whether good corporate governance cause investors to attach higher values to better governed companies or whether the firms with higher valuations compared to their peers adopt better corporate governance practices. According to the agency theory, better corporate governance should lead to higher firm value

and/or better long-term performance as the company directors or managers are more efficiently controlled and agency costs are minimized.

Most of the empirical research on the relationship between corporate governance and the firm performance or valuation concentrates on unique aspects of corporate governance, such as board structure, executive compensation or disclosure and transparency. Millstein & MacAvoy (1998) and Bhagat & Black (2002) investigate the relationship between BoD structure and firm performance, while Bhagat, Carey, and Elson (1999) study the link between independent director compensation and firm performance.

A large number of studies in the past few decades investigated the relationship between the ownership structure and the firm performance. Hiraki et al. (2003) and Sung (2003) investigated the ownership structure and market value in China, Japan and Korea. Some academics argue that as ownership concentration increases, the incentives and the abilities of shareholders to monitor managers increase as well, meaning lower agency costs. Lins (2002) investigates whether management ownership structures and large blockholders are related to firm value across a sample of 1,433 firms in 18 emerging markets. He finds that when a management group's control rights exceed its cash flow rights, firm values are lower and higher blockholder ownership ratios result in higher firm value. Both of these outcomes are more pronounced in countries with weaker laws and regulations for investor protection.

There is also evidence that broad measures of firm-level corporate governance practices predict higher share prices in some countries. This evidence comes from both single-country studies such as Black's (2001) study on Russia and Gompers, Ishii & Metrick's (2003) study on the U.S. market as well as multi-country

studies like the ones by Durnev & Kim (2005) and Klapper & Love (2004). Most of the earlier empirical studies on the relationship between corporate governance and firm performance rely on cross-sectional data. Durnev & Kim (2002) report that higher scores on both the CLSA corporate governance index and the S&P transparency and disclosure index predict higher firm valuation for a sample of 859 firms in 27 countries. Klapper & Love (2002) also find similar results for the CLSA index for a sample of 495 large firms in 25 countries.

The empirical studies on the relationship between corporate governance, ownership structure and firm performance in Turkey are few. A recent firm-level corporate governance study by Gunay (2007) compares the firms with stockholder governance models and the stakeholder governance models based on their financial performances. Gunay (2007) constructs a broad corporate governance index (CGI) by coding the transcribed in-depth interviews with the corporate governors of industrial companies in Turkey. He finds that firms, which are dominated by the stakeholder governance model do not carry more financial burden than the firms dominated by the stockholder governance model. Gunay's (2007) empirical findings also show that firms that give importance to "corporate social responsibility" do not carry additional financial burden. His empirical findings suggest that corporate social performance rather than corporate social responsibility is more valid for governors in Turkey as they perceive stakeholders such as the environment and society as irrelevant.

The empirical studies in emerging countries including Turkey are more concerned with the overall quality of corporate governance rather than with any particular practices of governance and mainly limited within the boundaries of the legal framework. For example, Black (2000) finds that good governance practices

are strongly correlated with higher firm value for a sample of 17 Russian companies. While some of the earlier studies focused on official corporate governance indices mainly based on general legal rules of corporate governance, there is increasing usage of self-constructed corporate governance indices in the recent literature. Gompers et al. (2003) construct a corporate governance index to evaluate shareholder rights at the firm level. He finds that higher index score yields higher returns by taking a long position on a better governed firm. Bai, Liu, Lu, Song and Zhang (2004) construct an index to reflect overall level of corporate governance practice for the listed companies in China. The categories in their index are ownership structure, board structure, disclosure and transparency, market for corporate control and the legal framework. They find that better corporate governance leads to higher firm value and that investors are willing to pay a premium for better governed firms.

Campos, Newell, and Wilson (2002) cite similar results on this relationship. Their sample constitutes 188 companies in six emerging countries (India, Korea, Malaysia, Mexico, Taipei, China and Turkey). Each company was rated along 15 elements (dispersed ownership, transparent ownership, one share/one vote, anti-takeover defences, meeting notification, board size, outside directors, independent directors, written board guidelines, board committees, disclosure, accounting standards, independent audit, board disclosure and timely disclosure) of good corporate governance derived from the OECD Principles of Corporate Governance (see Appendix A). They find that there is a significant positive relationship between corporate governance practices and market values of the companies even after controlling for firm characteristics. They conclude that a firm could expect a 10 to 12

percent increase in its market valuation by moving from worst to best on any one of the 15 elements of corporate governance.

Black, Jang & Kim (2003) report evidence that corporate governance is an important factor in explaining the market value of listed companies in Korea. They construct a corporate governance index (0-100) for 526 companies based primarily on responses to a survey of all listed companies in the Korea Stock Exchange. Their index is based on six sub-indices: i) shareholder rights, ii) board of directors, iii) outside directors, iv) audit committee and internal audit, v) disclosure to shareholders and vi) ownership parity. They find that a moderate 10 point increase in corporate governance index predicts a 5% increase in Tobin's Q and a 14% increase in market-to-book ratio.

Similarly, Nam & Nam (2004) use a self-constructed corporate governance index to empirically show the positive impact of good corporate governance on firm valuation and performance in Asian countries. They conducted a firm-level questionnaire survey to 307 listed companies in four countries (Indonesia, Korea, Malaysia and Thailand) particularly hit by the Asian financial crisis. The survey in this study pays particular attention to actual corporate governance practices at the micro level rather than to the laws and regulations governing them and does not restrict itself to the framework of the OECD principles. The survey's results were used to examine the three main subjects; shareholders' rights and the effectiveness of boards, linkage between the quality of corporate governance and firm performance, and stakeholders' potential role. Corporate governance scores based on the survey show that Malaysian firms are better than the companies in other three countries. Corporate governance seems to be better in larger firms, and a more effective board of directors was observed in firms that have substantial foreign ownership and have

professional managers as their CEOs. The study also shows that stock market performance is higher for better governed companies in Indonesia, Korea and Thailand. Improving the scores for board effectiveness or overall corporate governance practices from the median to the highest quartile is associated with a 13-15% increase in firm's market value.

Two important issues that frequently occur in the studies the relationship between corporate governance practices and firm performance are signalling and endogeneity. Firms may signal high quality by adopting good corporate governance practices and this signal may affect the firm value rather than the corporate governance practices. Firm-level corporate governance may be endogenous in the sense that firms with higher market value may choose good corporate governance practices, so that the causation runs from firm value to corporate governance, rather than the opposite. There is evidence of endogeneity in firm-level corporate governance studies. Bhagat and Black (2002) report evidence of a negative correlation between board independence and measures of firm performance. However, they also find that firms that perform poorly increase the independence of the Board of Directors. After controlling for the endogenous effect of performance on board structure, the negative correlation weakens. Durnev and Kim (2002) develop a simple model, in which a firm's choice of corporate governance is endogenously related to its investment opportunities, desire for external financing and ownership by the controlling shareholder.

# CHAPTER 3: DATA COLLECTION AND MEASUREMENT

## Sample

### Sources and Scope of Data

We identify a time period of four years (2005-2008) and construct a sample of 50 listed companies in the Istanbul Stock Exchange to analyze the relationship between corporate governance, firm performance and the ownership structure. We gather data for the 50 companies that responded to our corporate governance survey. Additionally, we use a panel data for six years (2003-2008) and 80 listed companies in the Istanbul Stock Exchange to study the relationship between the ownership structure and firm performance. We focus on the listed companies in ISE-100 index and choose the companies that existed and have available information during the six year period in order to construct a complete panel data.

All financial data (income statement, balance sheet, financial ratios, ownership structure) and stock market data (stock prices, free float, trading volumes, and foreign ownership ratios) for the companies are collected from the Istanbul Stock Exchange (ISE) database (www.imkb.gov.tr) as well as from the annual reports of the companies. We classify firms into nine sectors; financial services (banking and insurance), holdings, commodity (oil&gas, metals, etc.), consumer goods (autos, white goods, etc.), consumer services, healthcare, media, telecoms and construction.

Table 1. Sectoral Breakdown of the Sample

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Commodity | 6 | 12.00 | 12.00 |
| Construction | 9 | 18.00 | 30.00 |
| Consumer goods | 7 | 14.00 | 44.00 |
| Consumer services | 7 | 14.00 | 58.00 |
| Financial services | 9 | 18.00 | 76.00 |
| Healthcare | 2 | 4.00 | 80.00 |
| Holding | 5 | 10.00 | 90.00 |
| Media | 2 | 4.00 | 94.00 |
| Telecoms | 3 | 6.00 | 100.00 |

Companies in our sample are chosen from a wide variety of sectors. As a result, it is possible to analyze if the relationship between corporate governance and firm performance differ from one sector to another. Corporate governance data, which is our primary data, was extracted through surveys. Our survey was conducted during September 2007 - June 2008 through a web-based questionnaire (http://cgsurvey.info) and the surveys were answered by the company representatives – investor relations manager or chief financial officer (CFO) – of each listed company. The response rate to the survey was only 50%.

We initially aimed the largest 100 listed companies in the Istanbul Stock Exchange, but only 50 companies were receptive to our survey. While this shows how primitive the corporate governance practices in Turkey are compared to developed markets, it also creates a limitation to our study as the most poorly governed companies are probably not included in our sample. We use the survey responses to construct a corporate governance index (0-100) and attach a corporate governance score (CGS) to each listed company. Higher scores indicate better corporate governance.

We use SPSS software for descriptive statistics, correlations between variables, linear regression analysis and ANOVA. Due to the limitations of SPSS software, we use EViews software for the granger causality tests in this study.

## Questionnaire Survey of Corporate Governance Practices

The corporate governance survey in this study was conducted in Istanbul for the most part during September 2007 - June 2008 through a web-based questionnaire (http://cgsurvey.info/) and the surveys were answered by the company representatives – investor relations manager or chief financial officer (CFO) – of each listed company (see Appendix B for the survey questions). Although we initially sent out the web-based questionnaire to 100 listed companies, we could only get 50 responses (a 50% response rate).

Our survey is based on a previous study by the Asian Development Bank Institute (Nam & Nam, 2004) conducted in Indonesia, Korea, Malaysia and Thailand between July-October 2003. We opt to use this survey due to a number of reasons. First, this survey pays particular attention to actual corporate governance practices at the micro level rather than to the laws and regulations governing them and it does not restrict itself to the framework of the OECD principles, which is based primarily on shareholder rights. Second, we believe that the corporate governance practices and the structure of the markets in Asian countries are similar to those in Turkey. Most companies are either controlled or a part of a family and similar corporate governance issues arise in both Turkey and the Asian countries. They have their *chaebols* and Turkey has its *holdings*.

In this study, two different sets of questions were prepared for the survey. One set collected factual information and was to be answered by investor

relationship managers and CFOs and included general information about the firm and questions on shareholders' rights and information disclosure, effectiveness of the board of directors and human resources. This information was supplemented by questions about the regulatory frameworks related to shareholders' rights and board of directors and commissioners in each country. The other set of questions comprised an opinion survey to be answered by executive and independent directors and gathered general information about the firm, the effectiveness of the board of directors and the role of stakeholders. In our study, we only used the first set of questions (excluding the factual questions on human resources) as we were not able to get any response from the executive and independent directors for the opinion survey. Opinion survey was not used in calculating the overall corporate governance score in the Asian Development Bank Institute's study. We excluded the questions on human resources as those questions were not used in constructing the corporate governance index. While we used the same sub-indices and retained most of the survey questions, we had to exclude a few irrelevant questions for the Turkish market. We excluded the question on the company's accounting standards as all of the Turkish companies are using the same accounting standards and the answer to that question would not make a difference. We also excluded two questions on the independence of the audit committee as the practices asked in these questions were not conducted by any Turkish company. The rest of the questions used in calculating the corporate governance scores are the same as the Asian Development Bank Institute's study. We used the same methodology to calculate the corporate governance score for each company. Below we summarize the responses to the corporate governance survey in comparison with the Asian Development Bank

Institute's survey results in four Asian countries (Thailand, Korea, Indonesia and Malaysia).

Table 2. Frequency Distribution of General Information on Respondent Firms

| | | Countries | | | | |
|---|---|---|---|---|---|---|
| Questions | Responses | TUR | THA | KOR | INO | MAL |
| Number of firms responded | | 50 | 61 | 111 | 66 | 69 |
| 1. Ownership & control structure | Concentrated ownership/control | 33 | 33 | 72 | 42 | 46 |
| | Concentrated control | 1 | 5 | 28 | 4 | 3 |
| | Collective control | 14 | 13 | 1 | 13 | 4 |
| | Diffuse ownership | 1 | 9 | 7 | 4 | 16 |
| | Others | 1 | 1 | 3 | 3 | 0 |
| 2. Stand-alone or part of a business group or holding company? | Stand-alone firm | 14 | 32 | 74 | 31 | 24 |
| | Family group firm | 2 | 7 | 21 | 10 | 3 |
| | Non-family group firm | 7 | 5 | 8 | 9 | 5 |
| | Part of family holding company | 23 | 9 | 7 | 13 | 13 |
| | Part of non-family holding company | 4 | 8 | 1 | 3 | 24 |
| 3. Owned and controlled by the government? | No | 47 | 54 | 104 | 64 | 45 |
| | Substantially owned/controlled | 1 | 1 | 3 | 0 | 9 |
| | Partly owned with little control | 2 | 3 | 2 | 2 | 13 |
| | Others | 0 | 1 | 1 | 0 | 2 |
| 4. Owned and controlled by foreign firms? | Little owned | 21 | 27 | 73 | 39 | 42 |
| | Substantially owned/controlled | 9 | 11 | 2 | 17 | 4 |
| | Substantially owned with little control | 20 | 14 | 33 | 3 | 8 |
| | Others | 0 | 9 | 2 | 7 | 15 |
| 5. Relation of CEO with the largest shareholder | Founder | 4 | 11 | 20 | 17 | 5 |
| | Founder's family | 4 | 13 | 44 | 22 | 17 |
| | Professional manager | 42 | 31 | 43 | 26 | 44 |
| | Others | 0 | 5 | 4 | 1 | 3 |
| 6. Major creditor bank: its ownership & control structure | Mainly government-owned | 0 | 15 | 49 | 12 | 2 |
| | Belong to the same business group | 8 | 5 | 1 | 3 | 7 |
| | Belong to a different business group | 14 | 24 | 8 | 22 | 51 |
| | Owned/controlled by foreign banks | 26 | 4 | 12 | 22 | 2 |
| | Owned by small shareholders | 2 | 6 | 33 | 0 | 3 |
| | Others | 0 | 0 | 3 | 2 | 0 |
| 7. Have a labor union? | Yes | 27 | 12 | 73 | 52 | 25 |
| | No | 23 | 49 | 38 | 13 | 37 |

Notes: 1. TUR, THA, KOR, INO, and MAL indicates Turkey, Thailand, Korea, Indonesia and Malaysia, respectively.
2. Responses for THA, KOR, INO and MAL are taken from Asian Development Bank Institute's (Nam & Nam, 2004) study for comparison

Table 2 shows the ownership and other characteristics of the firms that participated in our survey. Much like the four Asian economies in the table below, diffuse ownership is rare in Turkey, accounting for only 2% of the sample. In all economies presented in Table 2, the ownership is concentrated, meaning that blockholders'

ownership is high. In our sample, the average share of the blockholders is 64%. Stand-alone firms constitute 28% of our sample, where as this ratio was higher in the four Asian countries presented in Asian Development Bank Institute's study (Nam & Nam, 2004). In Turkey, half of the sample is tied to a family, either a subsidiary or the parent company of a family owned enterprise. As a result of the privatisations in the past four years, the number of government controlled companies in the Istanbul Stock Exchange decreased significantly. This can be clearly seen in our sample as 94% of the companies are not owned and controlled by the government.

The foreign ownership has also increased in the past economic boom (2002-2007) period through portfolio investments and also FDI (foreign direct investment). While only 18% of our sample is owned and controlled by foreign firms, 40% is substantially owned but not controlled by foreigners. In this study, we also empirically analyze whether higher blockholder ownership or foreign ownership have an impact on either corporate governance practices and/or company performance. The foreign ownership ratio in Turkey is relatively higher than the Asian countries presented in the table. CEO/Chairman duality is one of the most important topics of corporate governance literature. Accordingly, the widely accepted rule is that the Chairman of BoD and CEO roles should be separated in order to enhance internal monitoring mechanisms. It is also common in US that the chairman position is undertaken by an independent director. However, in Turkey the founder of the company or someone from the same family takes the chairman role and especially in smaller private companies, the founder also takes the CEO role. In our sample, 84% of the companies employ a professional CEO. This ratio is higher than the Asian countries presented in Table 2. The CEOs of almost 60% of the

Indonesian and Korean firms are either the founder or members of the founder's family.

Separately, we also look at the CEO age and the number of years the CEO is working for the company. CEO age and tenure are the two factual questions we included to our survey, which do not exist in the Asian Development Bank Institute's survey. The mean CEO age in our sample is 52 with a 7 year standard deviation. The average number of years worked for the company is 6 years with a range of one to 20 years. Table 2 also shows that the major creditor banks of sample firms have diverse ownership and control structures, but ownership by a different business group or banks owned and controlled by foreign banks constitute 80% of the sample. Most of the large banks in Turkey have been acquired by an international bank in the past couple of years. While foreign ownership would increase corporate control mechanisms by the banks, banks are already acting efficiently under the supervision of the Banking Regulation and Supervision Agency (BRSA). BRSA's mission is to provide the confidence and stability in the financial markets, to bring competition power to the financial system, to ensure active operating of the credit system, to safeguard the rights and benefits of depositors, to take necessary measures in order to ensure the institutions subject to supervision operate healthy and orderly in a market discipline.

Table 3 presents the frequency table for the survey questions under the shareholder rights and disclosure of information element of our corporate governance index. Accordingly, unlike Asian countries Turkish companies does not seem to fully observe the one share/one vote rule as 32% of our sample has different class of shares with different voting rights. Most of the Turkish companies bought back founder shares in the past couple of years, which was historically a common practice.

However, some companies still have shares with higher voting rights held by controlling shareholders. There are also golden shares in the companies that have been privatised by the government or in which the government is still a shareholder. After its approval by the Parliament, the new commercial code will not allow golden shares and will also limit certain types of shares' voting right by a maximum of 15 votes. This would increase the protection of minority rights. The minorities in Turkey either domestic or foreign have to attend the shareholders' meeting (Annual General Assembly) to vote or they should use a proxy as most of the companies do not allow voting by mail. 94% of the Turkish companies in our sample allow other people to serve as proxies. Although shareholders are given adequate info on the shareholders' meeting agenda and adequate time for asking questions or raising issues, the related-party transactions are not fully discussed at these meetings. Minorities are not always aware of the director candidates ahead of the meeting and they cannot always nominate candidates.

Table 3. Frequency Distribution of Shareholder Rights and Disclosure of Information

| | | Countries | | | | |
|---|---|---|---|---|---|---|
| Questions | Responses | TUR | THA | KOR | INO | MAL |
| 1. One-share one-vote | No deviation | 34 | 59 | 95 | 66 | 39 |
| rule observed? | Different class of shares | 16 | 2 | 14 | 0 | 28 |
| 2.1 Voting by mail | Yes | 22 | 12 | 34 | 25 | 42 |
| allowed? | No | 28 | 46 | 74 | 39 | 27 |
| 2.2 Can anybody serve | Yes | 47 | 60 | 101 | 25 | 65 |
| as a proxy? | No | 3 | 0 | 8 | 39 | 4 |
| 3.1 Adequate info on | Strongly agree | 37 | 38 | 46 | 51 | 46 |
| agenda items of | Agree | 10 | 23 | 54 | 15 | 23 |
| shareholders' meeting? | Neither agree nor disagree | 3 | 0 | 10 | 0 | 0 |
| | Disagree | 0 | 0 | 1 | 0 | 0 |
| | Strongly disagree | 0 | 0 | 0 | 0 | 0 |
| 3.2 Adequate time for | Strongly agree | 34 | 44 | 47 | 43 | 46 |
| asking questions and | Agree | 12 | 17 | 51 | 22 | 23 |
| placing issues at | Neither agree nor disagree | 4 | 0 | 12 | 1 | 0 |
| shareholders' meeting? | Disagree | 0 | 0 | 0 | 0 | 0 |
| | Strongly disagree | 0 | 0 | 0 | 0 | 0 |
| 3.3 Priority | Strongly agree | 31 | 25 | 60 | 31 | 45 |
| subscription right | Agree | 15 | 24 | 41 | 31 | 22 |
| adequately protected? | Neither agree nor disagree | 4 | 8 | 7 | 4 | 2 |
| | Disagree | 0 | 0 | 0 | 0 | 0 |
| | Strongly disagree | 0 | 1 | 0 | 0 | 0 |
| 3.4 Related-party | Strongly agree | 22 | 24 | 45 | 29 | 39 |
| transactions fully | Agree | 16 | 28 | 35 | 34 | 30 |
| discussed? | Neither agree nor disagree | 9 | 5 | 24 | 2 | 0 |
| | Disagree | 3 | 4 | 3 | 0 | 0 |
| | Strongly disagree | 0 | 0 | 0 | 1 | 0 |
| 3.5 Not difficult to | Strongly agree | 35 | 22 | 55 | 32 | 44 |
| know the extent of | Agree | 7 | 29 | 42 | 31 | 24 |
| voting right control by | Neither agree nor disagree | 2 | 5 | 9 | 2 | 1 |
| major shareholders? | Disagree | 5 | 1 | 3 | 0 | 0 |
| | Strongly disagree | 1 | 2 | 0 | 1 | 0 |
| 4.1 Prior disclosure of | Always/Yes | 21 | 49 | 102 | 49 | 64 |
| director candidates? | Often | 9 | | | | |
| | Sometimes | 6 | | | | |
| | Rarely | 4 | | | | |
| | Never/No | 10 | 12 | 8 | 17 | 5 |
| 4.2 Can minority | Always/Yes | 14 | 50 | 60 | 57 | 54 |
| shareholders nominate | Often | 5 | | | | |
| director candidates? | Sometimes | 8 | | | | |
| | Rarely | 12 | | | | |
| | Never/No | 11 | 11 | 49 | 9 | 12 |
| 4.3 Director candidates | Sometimes | 5 | 0 | 1 | 9 | 7 |
| proposed by management | Rarely | 16 | 30 | 41 | 37 | 31 |
| can be rejected? | Never | 29 | 31 | 67 | 20 | 29 |
| 5.1 Length of | Less than 30 minutes | 1 | 12 | 22 | 1 | 5 |
| shareholders' meeting | 30-60 minutes | 14 | 31 | 64 | 42 | 13 |
| | 1-2 hours | 31 | 16 | 9 | 20 | 38 |
| | Over 3 hours | 4 | 2 | 16 | 3 | 11 |
| 5.2 Number of | Up to 25 | 19 | 2 | 16 | 37 | 0 |
| shareholders attending | 25-75 | 22 | 48 | 56 | 27 | 15 |
| | more than 75 | 9 | 8 | 34 | 2 | 41 |

Table 3. Frequency Distribution of Shareholder Rights and Disclosure of Information (cont.)

| | | Countries | | | | |
|---|---|---|---|---|---|---|
| Questions | Responses | TUR | THA | KOR | INO | MAL |
| 6.1 Self-dealing, related-party transactions | Web | 31 | 10 | 19 | 1 | 7 |
| | Report to regulatory agencies (RR) | 49 | 50 | 100 | 51 | 60 |
| | Annual report (AR) | 32 | 51 | 51 | 45 | 66 |
| | No disclosure | 0 | 3 | 1 | 1 | 0 |
| 6.2 Directors' selling or buying shares of their company | Web | 15 | 4 | 17 | 0 | 11 |
| | Report to regulatory agencies (RR) | 46 | 55 | 100 | 23 | 66 |
| | Annual report (AR) | 20 | 29 | 41 | 49 | 65 |
| | No disclosure | 4 | 0 | 2 | 15 | 0 |
| 6.3 Resume or background of directors | Web | 31 | 12 | 22 | 9 | 54 |
| | Report to regulatory agencies (RR) | 32 | 44 | 82 | 45 | 48 |
| | Annual report (AR) | 11 | 51 | 55 | 23 | 69 |
| | No disclosure | 13 | 1 | 6 | 5 | 0 |
| 6.4 Directors remuneration | Web | 3 | 8 | 14 | 2 | 8 |
| | Report to regulatory agencies (RR) | 17 | 40 | 68 | 45 | 45 |
| | Annual report (AR) | 4 | 56 | 69 | 15 | 69 |
| | No disclosure | 31 | 0 | 2 | 15 | 0 |
| 6.5 Fees paid to external auditors, advisors & other related parties | Web | 9 | 4 | 8 | 0 | 4 |
| | Report to regulatory agencies (RR) | 23 | 35 | 57 | 20 | 43 |
| | Annual report (AR) | 12 | 39 | 61 | 7 | 67 |
| | No disclosure | 26 | 9 | 11 | 42 | 2 |
| 6.6 Policies on risk management | Web | 22 | 7 | 7 | 1 | 19 |
| | Report to regulatory agencies (RR) | 36 | 33 | 39 | 52 | 30 |
| | Annual report (AR) | 21 | 48 | 44 | 22 | 69 |
| | No disclosure | 12 | 4 | 37 | 6 | 0 |
| 6.7 Significant changes in ownership | Web | 38 | 11 | 24 | 6 | 19 |
| | Report to regulatory agencies (RR) | 48 | 49 | 99 | 52 | 66 |
| | Annual report (AR) | 37 | 45 | 53 | 54 | 63 |
| | No disclosure | 2 | 2 | 4 | 3 | 0 |
| 6.8 Governance structures and policies | Web | 38 | 13 | 10 | 4 | 17 |
| | Report to regulatory agencies (RR) | 47 | 38 | 51 | 58 | 33 |
| | Annual report (AR) | 30 | 44 | 37 | 21 | 68 |
| | No disclosure | 3 | 6 | 32 | 4 | 0 |
| 7.1 Disclose annual reports? | Yes | 50 | 7 | 111 | 61 | 29 |
| | No | 0 | 49 | 0 | 5 | 49 |
| 7.2 Disclose quarterly financial statements? | Yes | 50 | 57 | 111 | 64 | 68 |
| | No | 0 | 0 | 0 | 2 | 1 |
| 7.3 Company web-site informative both in local language and English? | Informative in both languages | 43 | 35 | 57 | 30 | 64 |
| | Limited information in English | 5 | 6 | 24 | 7 | 0 |
| | Informative, but none in English | 1 | 2 | 23 | 3 | 0 |
| | Not informative, none in English | 1 | 3 | 6 | 6 | 0 |
| | No web-site | 0 | 15 | 1 | 20 | 5 |

Notes: 1. TUR, THA, KOR, INO, and MAL indicates Turkey, Thailand, Korea, Indonesia and Malaysia, respectively.
2. Responses for THA, KOR, INO and MAL are taken from Asian Development Bank Institute's (Nam & Nam, 2004) study for comparison

Shareholders in Turkey seem to be protected in relation to priority subscription rights in cases of share issues. In the selection of directors, cumulative voting is not acknowledged yet in Turkey. As such, we excluded that question from our survey. Much like in the Asian countries, most firms in Turkey responded positively about the transparency of voting right control by major shareholders. Minority shareholders in Turkey are protected by mandatory tender offers when anyone acquires a controlling stake in a company or a stake above 25%. However, if a company's general assembly decides to apply for an exemption from the mandatory tender offer, then the exemption is usually granted by the Capital Markets Board. The general assembly can apply for an exemption if two thirds of the vote base (67%) agrees with it. The Capital Markets Board (CMB) is planning to increase this threshold to 75%.

Table 3 shows that attendance to the shareholders' meetings in Turkey is not as high as in the Asian countries, as only 18% of the shareholders' meetings are attended by more than 75 shareholders. 70% of shareholders' meetings in Turkey run longer than an hour, while the percentage stands at 23% in Korea, 30% in Thailand and 35% in Indonesia.

Disclosure of corporate information in Turkey seems to be relatively good for such information as self-dealing or related-party transactions, significant changes in ownership, directors' trading of their company shares, resumes of directors, policies on risk management and corporate governance structures and policies. However, the disclosure on directors' remuneration and fees paid to external auditors, advisors and other related parties is less common. Most of the companies in Turkey seem to disclose corporate information to the regulatory agency (Capital Markets Board), but the disclosure in annual reports and corporate web-sites is relatively weak. As per the CMB's regulations, all listed corporations are entitled to issue annual reports and

also quarterly financial statements. The use of web sites for information disclosure is common for Turkish companies as 86% of our sample has informative web sites both in Turkish and English. This is relatively rare for the Indonesian companies. All of the Korean companies in Asian Development Bank Institute's (ADBI) study and 93% of the Malaysian sample firms have web sites, while 30% of the Indonesian and 25% of the Thai firms do not.

Table 4 summarizes the frequency table for the survey questions under the effectiveness of the BoD element of our corporate governance index. Unlike the Asian countries, 74% of Turkish companies have either 7 or 9 directors in their BoD. The size of boards in Asian countries differs widely. The median board size is around 12 in Thailand, 8-10 in Malaysia, 6-7 in Korea and 4 in Indonesia, where as it is 8 for Turkey. There is no universal agreement on the optimum size of a board of directors. A large number of members represent a challenge in terms of using them effectively and/or having any kind of meaningful individual participation. According to the Corporate Library's study, the average board size is 9.2 members, and most boards range from 3 to 31 members. In this survey, we treated 9 members as the optimum board size.

Table 4. Frequency Distribution of Effectiveness of the Board of Directors

| | | Countries | | | | |
|---|---|---|---|---|---|---|
| Questions | Responses | TUR | THA | KOR | INO | MAL |
| 1. Board size and composition | | | | | | |
| 1.1 Board size | 1 - 3 | 0 | 0 | 6 | 30 | 2 |
| | 4 - 5 | 8 | 2 | 37 | 23 | 2 |
| | 6 - 7 | 18 | 3 | 32 | 11 | 14 |
| | 8 - 10 | 19 | 15 | 31 | 1 | 34 |
| | 11 - 13 | 5 | 19 | 3 | 1 | 11 |
| | 14 - 16 | 0 | 17 | 2 | 0 | 3 |
| | 17 and more | 0 | 4 | 0 | 0 | 1 |
| 1.2 Share of | 25% and above | 13 | 42 | 99 | 65 | 65 |
| independent directors | 10% to 25% | 13 | 0 | 0 | 0 | 0 |
| | otherwise | 24 | 17 | 2 | 1 | 3 |
| 1.3 Foreign nationals | Yes | 24 | 36 | 10 | 22 | 15 |
| on the board? | No | 26 | 25 | 101 | 44 | 52 |
| 1.4 Is CEO also board | Yes | 8 | 11 | 103 | 0 | 8 |
| Chairman? | No | 42 | 50 | 8 | 66 | 59 |
| 2. Independent directors and board independence | | | | | | |
| 2.1 Independent | Always | 2 | 0 | 0 | 0 | 0 |
| directors meeting | Often | 6 | 19 | 7 | 5 | 19 |
| without management? | Sometimes | 7 | 21 | 23 | 36 | 34 |
| | Rarely | 6 | 9 | 53 | 18 | 8 |
| | Never | 29 | 12 | 28 | 7 | 8 |
| 2.2 Independent | Always | 3 | 0 | 0 | 0 | 0 |
| directors having some | Often | 6 | 8 | 0 | 2 | 10 |
| influence in setting | Sometimes | 9 | 23 | 23 | 39 | 26 |
| board meeting agenda? | Rarely | 8 | 18 | 64 | 16 | 25 |
| | Never | 24 | 12 | 24 | 9 | 8 |
| 2.3 Independent | Always | 12 | 0 | 0 | 0 | 0 |
| directors actively | Often | 9 | 53 | 47 | 25 | 64 |
| participating in board | Sometimes | 6 | 7 | 41 | 34 | 4 |
| discussions? | Rarely | 3 | 1 | 21 | 3 | 1 |
| | Never | 20 | 0 | 1 | 4 | 0 |
| 3. Term of | 1 - 3 years | 31 | 58 | 107 | 39 | 54 |
| independent directors | More than 3 years | 19 | 2 | 1 | 27 | 4 |
| 4. Board committees and the proportion of independent directors | | | | | | |
| 4.1 Audit committee | 50% and above | 15 | 34 | 23 | 5 | 54 |
| | 25% to 49% | 3 | 18 | 1 | 47 | 12 |
| | less than 25% | 30 | 0 | 0 | 0 | 0 |
| | No audit committee | 2 | 1 | 83 | 10 | 0 |
| 4.2 Compensation | 50% and above | 3 | 5 | 1 | 0 | 46 |
| committee | 25% to 49% | 1 | 12 | 1 | 2 | 13 |
| | less than 25% | 16 | 0 | 0 | 0 | 0 |
| | No compensation committee | 30 | 38 | 104 | 64 | 7 |
| 4.3 Nomination | 50% and above | 2 | 2 | 19 | 0 | 50 |
| committee | 25% to 49% | 1 | 6 | 5 | 2 | 11 |
| | less than 25% | 17 | 0 | 0 | 0 | 0 |
| | No nomination committee | 30 | 51 | 81 | 64 | 5 |
| 5. Effectiveness and independence of audit committees | | | | | | |
| 5.1 Have accounting or | Yes | 46 | 60 | 28 | 55 | 69 |
| finance specialists? | No | 4 | 1 | 2 | 1 | 0 |
| 5.2 Chaired by | Yes | 14 | 59 | 26 | 56 | 69 |
| independent director? | No | 36 | 2 | 5 | 0 | 0 |

Table 4. Frequency Distribution of Effectiveness of the Board of Directors (cont.)

| | | Countries | | | | |
|---|---|---|---|---|---|---|
| Questions | Responses | TUR | THA | KOR | INO | MAL |
| 5.3 Minutes recorded? | Yes | 44 | 60 | 27 | 51 | 68 |
| | No | 6 | 0 | 3 | 5 | 0 |
| 6. Evaluation and compensation of CEO | | | | | | |
| 6.1 Evaluate CEO performance? | Always | 27 | 20 | 20 | 32 | 51 |
| | Often | 4 | 0 | 0 | 0 | 0 |
| | Sometimes | 4 | 10 | 20 | 20 | 14 |
| | Rarely | 3 | 7 | 20 | 6 | 3 |
| | Never | 12 | 23 | 44 | 8 | 0 |
| 6.2 Review of CEO compensation? | Always | 19 | 22 | 18 | 29 | 48 |
| | Often | 8 | 0 | 0 | 0 | 0 |
| | Sometimes | 6 | 10 | 22 | 19 | 17 |
| | Rarely | 13 | 9 | 25 | 10 | 3 |
| | Never | 4 | 18 | 38 | 8 | 0 |
| 6.3 CEO given a stock option? | Substantially | 0 | 3 | 4 | 4 | 26 |
| | Some | 9 | 5 | 10 | 5 | 29 |
| | None | 41 | 52 | 88 | 55 | 12 |
| 7.1 Frequency of board meetings per year | 2-3 times | 2 | 3 | 1 | 31 | 3 |
| | 4-5 Times | 11 | 29 | 8 | 24 | 28 |
| | 6-7 times | 15 | 12 | 18 | 4 | 16 |
| | 8 times or more | 22 | 17 | 82 | 7 | 20 |
| 7.2 Board meeting attendance rate | 90-100% | 30 | 23 | 54 | 19 | 48 |
| | 80-90% | 13 | 22 | 23 | 27 | 19 |
| | 70-80% | 4 | 11 | 22 | 16 | 1 |
| | 60-70% | 2 | 3 | 10 | 4 | 0 |
| | 50-60% | 1 | 1 | 0 | 0 | 0 |
| 8. Formal mechanism for evaluating director performance? | Yes, and effective | 21 | 5 | 20 | 4 | 53 |
| | Yes, but ineffective | 0 | 3 | 15 | 11 | 5 |
| | No formal mechanism | 29 | 53 | 76 | 51 | 11 |
| 9. Education/training provided for the directors on the BoD? | Always | 3 | 12 | 23 | 0 | 43 |
| | Often | 9 | | | | |
| | Sometimes | 10 | 42 | 77 | 35 | 26 |
| | Rarely | 14 | | | | |
| | Never | 14 | 7 | 11 | 31 | 0 |
| 10. Contact person for outside directors? | Yes | 27 | 45 | 45 | 23 | 64 |
| | No | 23 | 16 | 66 | 43 | 4 |

Notes: 1. TUR, THA, KOR, INO, and MAL indicates Turkey, Thailand, Korea, Indonesia and Malaysia, respectively.
2. Responses for THA, KOR, INO and MAL are taken from Asian Development Bank Institute's (Nam & Nam, 2004) study for comparison

A key attribute of an effective board is that it is comprised of a majority of independent directors. An independent director is someone who has never worked at the company, is not related to any of the key employees and has never worked for a major supplier, customer or service provider, such as lawyers, accountants, consultants, investment bankers, etc. The larger the number of independent board members the better. This makes the board more independent and allows it to provide

a higher level of corporate governance to shareholders. In Turkey, the independent director concept is not as common as in the Asian countries. More than 74% of the companies in our sample have less than two independent board members. Additionally, some of the independent directors are retired CEOs or a relative when that person is actually an insider with conflicts of interest. With increased mergers and acquisitions in the capital markets in the past couple of years, foreign ownership in listed companies increased significantly. This resulted in increasing number of foreign nationals in the board of directors. 48% of the companies in our sample have foreign nationals in their boards. The observed behaviour of independent directors indicates that the Turkish independent directors are far less independent than those in the Asian countries in the ADBI's study. While 62% of the Indonesian firms, 52.77% of the Malaysian firms and 51-66% of the Thai firms respond positively to the questions whether independent board members meet without management to discuss corporate matters and alter or add to board meeting agendas, such positive responses accounted for only 4-24% of the Turkish firms in our sample.

The typical term of independent directors is one to three years for 62% of the Turkish companies in our sample. A relatively short term of service of independent directors may also encourage them to perform better.

There are four important board committees: executive, audit, compensation and nominating. The executive committee, is made up of a small number of board members that are readily accessible and easily convened, to decide on urgent matters subject to board consideration, such as a quarterly meeting. The audit committee works with the auditors to make sure that the financial books are correct and that there are no conflicts of interest between the auditors and the other consulting firms employed by the company. The compensation committee is responsible for setting

the remuneration of top management. The nominating committee is responsible for nominating people to the board. The nomination process should aim to bring on people with independence and a skill set currently lacking on the board.

Audit committees are common in Turkey much like the Asian countries discussed above. However, the independent members are in the minority in most of these audit committees. Although 96% of the Turkish companies in our sample have audit committees, only 30% of the companies have more than 50% independent members in the committee. Most of the audit committees have someone with accounting and finance expertise. The survey results in Asian countries show that virtually all the Malaysian and Thai boards and 84% of the Indonesian boards have audit committees, in sharp contrast with 22% of the Korean board of directors. Compensation and nomination committees are less frequent in Turkey with 60% of the sample not having such committees.

Like Malaysian boards, Turkish boards are relatively active in evaluating CEO performance and compensation compared to the other Asian countries (Thailand, Indonesia and Korea). 70% of the Turkish companies in our sample undertake this task “as a routine” or “sometimes”, in contrast with 50-54% of the Thai firms and a little less than 40% of the Korean firms. Over 80% of the surveyed firms in Malaysia give their CEO a stock option, while 13-14% do so in the other Asian companies. Stock options are not allowed in Turkey due to current legal structure. Stock options will be allowed after the implementation of the new commercial code. Currently, some firms tie CEO compensation to company profitability and stock market performance. However, only 18% of the Turkish firms surveyed align CEO compensation with company objectives and give bonuses to incentivize the CEOs.

Board meetings in Turkey are more frequent than the ones in Asian countries. The survey results reveal that 96% of the Turkish companies have more than four board meetings per annum. Board meeting attendance is also fairly high in Turkey; with 94% of the surveyed firms have an attendance rate of more than 80%. This ratio is 100% for Malaysian firms, 75% for Thai firms and 70% in Indonesia and Korea.

More than 60% of the Malaysian firms actively provide their directors with education or training opportunities while this ratio is about 20% for Turkish, Korean and Thai firms. A formal mechanism for evaluating directors' performance does not seem to be operating effectively in 58% of the firms in Turkey. Contact personnel are designated to support outside directors in 54% of the Turkish firms, while it is higher in Malaysian and Thai firms with 94% and 74% respective shares in the ADBI's study.

## Variables and Measures

### Structure and Definition of Corporate Governance Variables

Each study we reviewed under the Theoretical Background Chapter had its own way of constructing corporate governance score depending on the authors' views on corporate governance practices and the degree of deviation among the firms surveyed in each study. For example, the corporate governance rankings that Black (2000) uses are based on eight corporate governance elements with different weights: disclosure and transparency, dilution through share issuance, asset stripping and transfer pricing, dilution through a merger or restructuring, bankruptcy, limits on foreign ownership, management attitude toward shareholders and registrar risk. Klapper and Love's (2002) survey has a total 57 questions categorised in seven corporate governance elements, namely as discipline, transparency, independence, accountability, responsibility, fairness, and social awareness. Each category has a weight of 15% except for the social awareness, which has a 10% weight.

As indicated by Nam & Nam (2004), opinion surveys of professional investors may provide some guidance on the construction of corporate governance surveys. McKinsey & Company's (2002) survey respondents say that for corporations, timely and broad disclosure is the highest priority, followed by independent boards, effective board practices, and performance-related compensation for directors and management. We would like to note that these preferences may also change from one country to another as each country has a different level of corporate governance. In a developed country, disclosure and

transparency standards might be met by most of the corporations and hence, may not be the highest priority for the investors.

> *Scoring the quality of corporate governance is subjective and can be controversial. Some may argue whether or not a certain corporate governance element should be included, how much weight should be assigned and what scores should be given to responses to each individual question. However, as our survey includes a number of questions on each corporate governance element and aggregate scores are based on a large number of questions, the problem of subjectivity in scoring is likely to be mitigated to a certain extent.* (Nam & Nam, 2004)

However, we note that the subjectivity in corporate governance scores based on survey responses and also scoring are the limitations of our study. Appendix C presents specific questions included in scoring by category, weights given to survey questions, and scores for responses to individual questions.

In order to overcome these limitations, we describe a number of robustness checks of our results. First, we assess how using different weighting schemes to combine our corporate governance sub-indices into an overall corporate governance index affects our results. Second, we consider how using other measure of firm performance as described in the next section affects our results. We construct three alternative corporate governance indices in order to check the robustness of our results. The first overall corporate governance index (CGS) assigns equal weights to the two major sub-indices described below. The second overall corporate governance index (CGSd) includes a dividend dummy and assigns 10% weight for dividend paying companies and equal weights to the sub-indices. The third corporate governance measure (CGSw) assigns different weights to the sub-indices.

In our survey, we have two broad corporate governance elements, shareholders' rights and disclosure of information (SD) and the effectiveness of the board of directors (EB). Under these two main elements, we have three sub-elements

each. SD is grouped into three categories, namely as effective participation in decision making (EP), election of directors and other shareholder rights (DI) and disclosure & transparency (DT). The questions in the survey are grouped into these categories and weights for individual questions are given so that each category's full score is 100. To obtain the aggregate score for SD, the scores for EP, DI and DT are simply averaged. EB is also grouped into three categories; board composition and independence (CI), functions of the board and its committees (BF), and access to information, general support for directors & executive compensation (IS). EB is calculated by assigning 40% weight for CI and BF and 20% weight for IS. We attached a lower weight to IS due to fewer practices and regulations on this subject within the Turkish context.

$$SD = 1/3 * EP + 1/3 * DI + 1/3 * DT$$

$$EB = 0.4 * CI + 0.4 * BF + 0.2 * IS$$

Without any information about which scores might be more important, the overall corporate governance score (CGS) is calculated by taking the simple average of SD and EB.

$$CGS = 0.5 * SD + 0.5 * EB$$

As the survey does not include any questions on the dividends or the return to shareholders, we included a dividend dummy to our corporate governance index. If a company distributed cash dividends at least three times on an annual basis in the past four years, we attached 100 points and otherwise 0 points to that company. The overall corporate governance score with dividends (CGSd) is calculated by assigning 45% weight to SD and EB, each; and 10% for the dividend dummy.

$$CGSd = 0.45 * SD + 0.45 * EB + 0.10 * Dividend\ dummy\ (100\ or\ O)$$

We also attempted to search for the "right" weights from the estimation of firm performance (measured by the median of Tobin's Q for the past four years) with the various elements of corporate governance scores. The equation that maximizes the correlation coefficient between the firm performance and corporate governance scores indicates that 6% weight should be assigned to EP, 23% to DI, 28% to CI, 43% to BF and zero weight to DT and IS. As such, we calculate CGSw (weighted average of some of the corporate governance elements) using these respective weights.

$$CGSw = 0.06 * EP + 0.23 * DI + 0.43 * BF + 0.28 * CI$$

We also calculate Cronbach's measure of reliability (internal consistency) for the corporate governance index (CGS) we constructed using the corporate governance elements mentioned above. Cronbach's alpha was high enough (0.685; 0.729 based on standardized items) to accept that the variable structure (six variables: EP, DI, DT, CI, BF, IS) in our self-constructed corporate governance index does not require another measure[1]. As a result, we use our corporate governance index (CGS) as a one factor structure to measure the level of corporate governance in our sample. Below we describe the corporate governance elements used in our survey and corporate governance index in detail.

Shareholders' Rights and Disclosure of Information (SD)

The corporate governance framework views shareholders as the *principal*, as the objective of the management is to maximize the wealth of the shareholders. Although shareholders appoint a board of directors to guide and monitor the

[1] The minimum reliability level for Cronbach's alpha is 0.6 (Nunnally, 1967)

management or in other words *agents*, they also have rights to directly monitor their firms. Shareholders basic rights include access to relevant corporate information on a timely and regular basis, voting at the general assembly (shareholder meetings) and appointing board members (OECD, 1999). In Turkey, most of the corporations are owned by families very much like the corporations in Asian countries. In our sample, 50% of the companies (25) are owned and controlled by large families. In family-owned corporations, the corporate management usually consists of controlling owners, who try to maximize their own wealth, often at the expense of minority shareholders. As a result, the focus of shareholders' role in the governance of these types of enterprises should be providing minorities with effective mechanisms for protecting their interests. This survey pays particular attention to the effective protection of the minority rights and is mainly concerned with effective participation in decision making (EP), election of directors and other shareholder rights (DI) and with the information disclosure and transparency (DT).

Effective Participation in Decision Making (EP)

All shareholders have the right to participate and vote at the shareholders' meetings. Even if shareholders can not physically attend the meetings, they should be able to participate through proxies or my mail. All shareholders in a given share class should be treated in the same way. Minority shareholders could play an active role in the voting process. All shareholders should have access to adequate information about the agenda items and could be able to raise issues, make comments and ask questions. As a result, the number of shareholders in a general assembly and the length of the meeting might yield some information about the effectiveness of these meetings.

Election of Directors and Other Shareholder Rights (DI)

The important rights for the protection of minority shareholders are their pre-emptive rights, approval of related-party transactions, mandatory bid requirements and dissenter rights. Pre-emptive rights or the subscription rights are the rights of current shareholders to maintain their percentage of ownership in a company through buying a proportional number of shares of any future common stock issuance. A mandatory bid requirement or a mandatory tender offer obliges any shareholder obtaining a controlling stake in a company or exceeding 25% ownership threshold, to tender for the remaining shares in the company at the highest price of the recently acquired shares. Both pre-emptive rights and the mandatory tender offer are currently regulated and controlled by the Capital Markets Board in Turkey. However, the shareholders do not have dissenter rights (appraisal rights) in the current legal framework. Dissenters' rights are shareholders' rights to have the company redeem all the shares they own if they did not vote in favour of a merger, a sale or exchange of most of the company's assets. The company cannot buy its own shares and hold treasury stock. With the new commercial code drafted by the Turkish Parliament, the companies would be able to hold up to 10% of its own shares and the dissenters' rights will be introduced. Apart from these rights, minorities should be able to inspect a firm's accounting books, corporate affairs and property. The most important right is to select the agents or the board members, particularly independent directors. As such, important issues are whether shareholders are fully informed about the candidates for the BoD, whether they can nominate other candidates and

whether cumulative voting is permissible, whereby minorities act as a group to elect their candidate.

Disclosure and Transparency (DT)

Disclosure and transparency induce corporations to better protect investors and thus enhance investor confidence in the capital markets. Disclosure should be timely, accurate and informative. Any activities that could act against the minority interests should be disclosed. While financial reports and annual reports are disclosed on a periodic basis, time sensitive information lie directors' buying and selling shares in the company should be disclosed without a delay. All of this information should also be reported to the Capital Markets Board. The use of internet could facilitate timely and cost-effective information dissemination (Nam & Nam, 2004).

Effectiveness of the Board of Directors (EB)

The Board of Directors (BoD) is one of the key corporate governance mechanisms that the shareholders delegate the monitoring of the agents. In Anglo-American model, the board's major objective is maximizing the value of the firm or the interests of all shareholders. However in Turkey, like in most Asian countries, directors, mostly chosen by controlling shareholders dominate boards. Thus, these boards in family-based enterprises tend to serve primarily the interests of controlling families rather than all of the shareholders (Nam & Nam, 2004). With regards to the effectiveness of the board of directors, our survey is mainly concerned with board composition and independence (CI), functions of the board and its committees (BF) and support for directors and director compensation (IS).

Board Composition and Independence (CI)

Board size and composition are the two important determinants of board effectiveness. The board size should be large enough to secure sufficient expertise on the board, but not so large to prevent productive discussion and decision making. A substantial share of BoD should consist of outside/independent directors. The chairman of the BoD should be someone other than the CEO in order to increase independency of the board. Last but not least, the boards should include foreigners as listed companies have numerous foreign institutional shareholders (Nam & Nam, 2004).

Functions of the Board and Board Committees (BF)

The BoD's specific functions are setting long-term corporate strategies, selecting, monitoring and replacing the CEO, reviewing the remuneration of executives and directors, overseeing potential conflicts of interest, ensuring the integrity of financial reporting, the proper disclosure of information and the effectiveness of various governance practices (OECD, 1999). How much time and effort directors devote to board meetings may also be an important indicator of board effectiveness. Certain board functions are often better performed by board committees such as audit, compensation and nomination committees. As such, the independence and the effectiveness of these committees are also very important (Nam & Nam, 2004).

Access to Information, General Support for Directors & Executive Compensation (IS)

For the BoD and the board committees to function properly, they must have access to relevant information. The independent directors should be able to meet with the

company's management and employees, have access to accounting books and other business records. Corporations should designate a contact person to provide support to outside directors. Directors should be adequately compensated and the compensation packages should include company shares and/or stock options in order to better align their interest with the shareholders' interests (Nam & Nam, 2004).

Table 5. Frequency Distribution of Corporate Governance Scores

| | CGS | CGSd | CGSw | SD | EB | |
|---|---|---|---|---|---|---|
| 90-100 | | | 1 | 3 | | |
| 80-90 | 2 | 1 | 3 | 5 | | |
| 70-80 | 8 | 6 | 7 | 17 | 1 | |
| 60-70 | 16 | 22 | 18 | 18 | 5 | |
| 50-60 | 13 | 10 | 11 | 5 | 8 | |
| 40-50 | 9 | 8 | 7 | 2 | 9 | |
| 30-40 | 2 | 3 | 2 | | 16 | |
| 20-30 | | | 1 | | 6 | |
| 10-20 | | | | | 5 | |
| 0-10 | | | | | | |
| | EP | DI | DT | CI | BF | IS |
| 90-100 | 8 | 3 | 2 | 1 | 1 | |
| 80-90 | 8 | 8 | 17 | 4 | 2 | |
| 70-80 | 13 | 10 | 20 | 4 | 7 | 4 |
| 60-70 | 5 | 7 | 8 | 9 | 18 | 10 |
| 50-60 | 8 | 15 | 2 | 4 | 9 | 3 |
| 40-50 | 4 | 4 | 1 | 10 | 10 | 3 |
| 30-40 | 2 | 3 | | 5 | 1 | 9 |
| 20-30 | 2 | | | 5 | 1 | 5 |
| 10-20 | | | | 7 | 1 | 3 |
| 0-10 | | | | | | 13 |

Table 6. Summary Statistics on Corporate governance indices

| | N | Median | Mean | | Std. Deviation |
|---|---|---|---|---|---|
| | Statistic | Statistic | Statistic | Std. Error | Statistic |
| Effective participation in decision making (EP) | 50 | 71.88 | 69.63 | 2.71 | 19.18 |
| Election of directors and other rights of shareholders (DI) | 50 | 64.59 | 65.50 | 2.32 | 16.43 |
| Disclosure and transparency (DT) | 50 | 77.82 | 76.34 | 1.41 | 9.95 |
| Board composition and independence (CI) | 50 | 49.98 | 49.03 | 3.16 | 22.36 |
| Functions of the board and the activities of board committees (BF) | 50 | 60.94 | 59.71 | 2.07 | 14.62 |
| Access to information, general support and compensation (IS) | 50 | 31.25 | 35.13 | 3.73 | 26.36 |
| Shareholder rights and Disclosure of information (SD) | 50 | 70.24 | 70.49 | 1.59 | 11.22 |
| Effectiveness of the BoD (EB) | 50 | 49.72 | 50.52 | 2.14 | 15.13 |
| Corporate governance score (equal-weight) (CGS) | 50 | 61.01 | 60.51 | 1.62 | 11.44 |
| Corporate governance score (equal-weight with dividend dummy) (CGSd) | 50 | 62.34 | 60.46 | 1.66 | 11.74 |
| Corporate governance score (weighted) (CGSw) | 50 | 57.93 | 58.61 | 1.82 | 12.90 |

Table 5 and 6 present the summary statistics for corporate governance scores for main indices (CGS, CGSd and CGSw) and sub-indices (SD, EB, etc.). The mean corporate governance score (CGS) for our sample is 60.51 with a range of 34.15 (minimum) to 86.49 (maximum). The overall corporate governance score for Turkish firms in our study is higher than the average scores for Thailand (59.1), Korea (50.2) and Indonesia (52.5), but lower than Malaysia (73.8) in Asian Development Bank Institute's study. In terms of shareholder rights and disclosure (SD), Turkish firms in our sample have also better practices than Thailand, Korea and Indonesia. However, the mean score for the effectiveness of the board of directors (EB) is lower than both Thailand and Malaysia.

Table 7. Cross-country Comparison of Corporate Governance Scores

| | | Mean score | | |
|---|---|---|---|---|
| Country | N | CGS | SD | EB |
| Thailand* | 61 | 59.10 | 66.80 | 51.40 |
| Korea* | 111 | 50.20 | 63.90 | 36.60 |
| Indonesia* | 66 | 52.50 | 66.20 | 38.80 |
| Malaysia* | 69 | 73.80 | 75.80 | 71.80 |
| Turkey | 50 | 60.51 | 70.49 | 50.52 |

* Results from Asian Development Bank Institute's study (Nam & Nam, 2004)

We also calculate two other corporate governance scores, one including a dividend dummy (CGSd) and the other one with weighted average of some of the components of shareholder rights (SD) and board effectiveness (EB). The mean scores for these indices are 60.46 and 58.61, respectively. Turkish companies in our sample achieve the highest scores in the disclosure and transparency (DT) sub-index as most of the companies try to comply with the disclosure and transparency regulations. The lowest mean score is in the access to information, general support and compensation (IS) sub-index. Turkish companies mostly do not disclose CEO and outside director remuneration and do not incentivize the upper management through stock options or other incentive systems. As evidenced in Table 8, only the board composition and independence (CI) sub-index is not correlated with the other sub-indices, while the rest of the sub-indices are significantly positively correlated.

Table 8. Correlation Coefficients between Corporate Governance Indices

| | EP | DI | DT | CI | BF | IS | SD | EB | CGS | CGSd | CGSw |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EP | 1.000 | | | | | | | | | | |
| DI | 0.196 | 1.000 | | | | | | | | | |
| DT | 0.463** | 0.292* | 1.000 | | | | | | | | |
| CI | 0.132 | 0.109 | 0.100 | 1.000 | | | | | | | |
| BF | 0.449** | 0.394** | 0.401** | 0.478** | 1.000 | | | | | | |
| IS | 0.334* | 0.446** | 0.405** | 0.144 | 0.379** | 1.000 | | | | | |
| SD | 0.803** | 0.686** | 0.702** | 0.158 | 0.567** | 0.528** | 1.000 | | | | |
| EB | 0.368** | 0.372** | 0.355* | 0.826** | 0.801** | 0.580** | 0.496** | 1.000 | | | |
| CGS | 0.637** | 0.583** | 0.579** | 0.624** | 0.808** | 0.643** | 0.819** | 0.905** | 1.000 | | |
| CGSd | 0.643** | 0.566** | 0.544** | 0.425** | 0.756** | 0.668** | 0.803** | 0.776** | 0.907** | 1.000 | |
| CGSw | 0.430** | 0.552** | 0.371** | 0.764** | 0.877** | 0.414** | 0.624** | 0.935** | 0.925** | 0.798** | 1.000 |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

## Structure and Definition of Performance Measures (Variables)

In order to assess the impact of the strength of corporate governance mechanisms on firm performance, we regress three measures of future operating performance (ROA, Tobin's Q, and Stock Return) on corporate governance scores and control variables

(Ertugrul & Hegde, 2005). These performance variables are our main dependent variables. Since no consensus exists in the literature on the use of a reliable performance measure, we believe that these three measures would reflect the firm performance in a robust way.

All of the performance variables are calculated for each fiscal year between 2005 and 2008 and the average values are used for the regression analyses. We used geometric mean for ROA and stock return and median for Tobin's Q values. Return on Assets (ROA) is a purely accounting-based measure and gives an idea as to how well the company is able to use its assets to generate earnings. It is calculated by dividing the company's annual net income before interest expenses net of income tax savings by the average book value of its total assets at the beginning and ending of each year, and ROA is displayed as a percentage:

*Return on Assets (ROA) = (Net income + Net interest expense net of income tax savings) / Average book value of total assets*

The second performance measure, Tobin's Q (Q Ratio), is a hybrid one. It is calculated as the market value of a firm's assets divided by the replacement value of the firm's assets. In the empirical literature, Tobin's Q, the market value of debt plus the market value of equity divided by the replacement cost of all assets, has been used as a major indicator of firms' performance. Since few of the Turkish stock companies issue debt securities, it is almost impossible to estimate the market value of the companies' debt. As such, we simply use year-end book value of total debt. We measure Tobin's Q by dividing the sum of market value of equity and the book value of debt by the book value of total assets:

*Tobin's Q = (Market capitalization + Book value of debt) / Book value of total assets*

The third performance measure is the stock return, which is a capital market based performance measure. The stock return is calculated as the annual growth in the stock price of a listed company. Stock return is considered to be a purely forward looking benchmark. To investigate the relationship between corporate governance and stock returns, we used the geometric mean annual returns over the period from 2005 to 2008 (4 years). Note that some firms in our sample have gone public during the sample period. In those cases, we use the available data since the first year of trading. All of the performance measures are calculated for each fiscal year between 2005 and 2008 and the average values are used. Average return on assets (ROA) in Table 8 is the geometric mean of the ROA in the past four years. The average ROA of the companies in our sample varies between negative 4% and 25% and the mean ROA of our sample is 7.9%. Average stock return the geometric average of the annual stock returns in the past four years. The range for average stock return is negative 34% and positive 39% for our sample. We use the median of the Tobin's Q values in the past four years. The mean Tobin's Q of our sample is 0.9926, while the range is between 0.27 and 3.40.

Table 9. Summary Statistics on Performance Measures

| | Average ROA | Average Stock Return | Tobins Q |
|---|---|---|---|
| Valid | 50 | 50 | 50 |
| Missing | 0 | 0 | 0 |
| Mean | 0.0790 | -0.0266 | 0.9926 |
| Median | 0.0600 | -0.0550 | 0.9450 |
| Std. Deviation | 0.0593 | 0.1748 | 0.5198 |
| Variance | 0.004 | 0.031 | 0.270 |
| Skewness | 0.804 | 0.372 | 2.149 |
| Kurtosis | 0.356 | -0.417 | 8.355 |
| Range | 0.29 | 0.73 | 3.13 |
| Minimum | -0.04 | -0.34 | 0.27 |
| Maximum | 0.25 | 0.39 | 3.40 |

## Structure and Definition of Control Variables

Prior studies show that firm size and leverage are two important determinants of company performance. Therefore, we have to control for these variables while assessing corporate governance characteristics' effect on company performance. We use the book value of total assets of a company as a proxy for firm size and take the natural logarithm of this variable to account for inherent skewness. The leverage variable used in our study is calculated by dividing the book value of total debt by the book value of total assets. Note that the regression for stock returns includes market value of the equity (in logs) instead of the book value of total assets. Other control variables we use in our study are: company age (in natural logarithm, denoted in number of years), the number of years a company is listed in the Istanbul Stock Exchange (in natural logarithm), debt ratio (book value of debt divided by book value of total assets), a dummy variable if the firm is a part of MSCI-Turkey index, a dummy variable if the firm distributes cash dividends ("1" if the company distributed cash dividends at least three years in the past four years, "0" if otherwise), a dummy variable if the firm is controlled by families, a dummy variable if the firm has a concentrated ownership with total blockholders' share higher than 65% (median blockholders' share of our sample), the foreign ownership ratio and total blockholders' ownership ratio denoted by the total shareholdings of each shareholder that owns more than 5% stake in the company. The foreign ownership ratio includes only the foreign portfolio investors. Foreign controlling shareholders are treated as blockholders. We also use a dummy variable for foreign ownership ratio and group it into three categories; the first group constitutes the companies with low foreign ownership ratios up to 33%, the second group includes the ones between 33% and

66% foreign ownership and the last group includes the companies with the highest foreign ownership ratios. The three groups have 11, 27 and 12 companies and they take the values “1”, “2”, and “3”, respectively.

We construct a dummy variable for the corporate governance scores as well. We divided corporate governance scores into three groups. The first group includes 14 companies with corporate governance scores between zero and 55. This group is denoted as the group of companies with poor corporate governance practices. The second group has 26 companies with mediocre corporate governance scores between 55 and 70 and the third group has the highest corporate governance scores above 70 and there are 10 companies in this group. The first group takes the value of “1” and the others take the values “2” and “3”, respectively.

We control for different sectors represented in our study. We classify our sample into nine sectors: financial services (banking and insurance), holdings, commodity (oil& gas, metals, etc.), consumer goods (autos, white goods, etc.), consumer services, healthcare, media, telecoms and construction.

Table 10 present the summary statistics for firm characteristics. The range of the company age in our sample is 8-84 with a median of 43 years. Although there are recently listed companies in the sample, there are also some companies that are listed for 22 years, since the establishment of the Istanbul Stock Exchange (ISE). The median number of years listed in the ISE is 12.5 years. The average foreign ownership percentage of our sample is 51%. Firms with substantial foreign ownership and a professional manager as CEO are strongly associated with the effectiveness of the board of directors (based on factual information). Foreign owners generally demand a higher quality of corporate governance, while

professional managers might be less resistant to introducing better corporate governance than family managers.

Table 10. Summary Statistics on Firm Characteristics

| | N | Mean | Median | Std. dev. | Variance | Min. | Max. |
|---|---|---|---|---|---|---|---|
| Company age | 50 | 42.34 | 43.00 | 20.53 | 421.70 | 8 | 84 |
| Number of years listed | 50 | 12.18 | 12.50 | 6.13 | 37.54 | 1 | 22 |
| Foreign ownership | 50 | 0.51 | 0.53 | 0.22 | 0.05 | 0.05 | 0.86 |
| Blockholder's share | 50 | 0.64 | 0.65 | 0.15 | 0.02 | 0.15 | 0.94 |
| Firm size_1 (ln(Total Assets)) | 50 | 7.50 | 7.38 | 1.81 | 3.26 | 3.76 | 11.1 |
| Firm size_2 (ln(Market Cap)) | 50 | 6.96 | 6.97 | 1.47 | 2.15 | 3.72 | 9.55 |
| Debt to Assets | 50 | 0.22 | 0.16 | 0.23 | 0.05 | 0 | 0.87 |
| Dividend Dummy | 50 | 0.60 | 1.00 | 0.50 | 0.25 | 0 | 1 |
| MSCI Dummy | 50 | 0.36 | 0.00 | 0.48 | 0.24 | 0 | 1 |

Turkish companies' ownership structure is concentrated with an average blockholders' share of 64%. 60% of the firms in our sample pay regular cash dividends and 36% of the companies are included in the MSCI index. We argue that companies that are included in the MSCI index are more visible to foreign institutional investors and therefore these companies' stock market performance might be higher than the companies that are not included in the MSCI index. Due to limited number of companies in this study, we grouped these into nine sectors. Construction and financial services sectors are the most represented sectors in this study with 18% share each.

Table 11. Mean Values of Key Variables by Industry

| Sector | N | | Avg. ROA | Avg. stock return | Tobins Q | Foreign own. | Block holder's share | CGS | Firm size | Debt to Assets |
|---|---|---|---|---|---|---|---|---|---|---|
| Commodity | 6 | Mean | 0.1300 | 0.0517 | 0.7400 | 0.3900 | 0.5700 | 54.68 | 7.5833 | 0.1183 |
| | | Std. dev. | 0.0684 | 0.0993 | 0.2763 | 0.2542 | 0.1921 | 7.64 | 1.2424 | 0.0722 |
| Construction | 9 | Mean | 0.1011 | -0.0244 | 0.9178 | 0.4756 | 0.6289 | 52.39 | 6.7111 | 0.0900 |
| | | Std. dev. | 0.0586 | 0.1412 | 0.2228 | 0.2180 | 0.1298 | 9.79 | 1.1950 | 0.0875 |
| Consumer | 7 | Mean | 0.0857 | -0.1157 | 1.0886 | 0.6171 | 0.7157 | 65.84 | 7.4871 | 0.2057 |
| Goods | | Std. dev. | 0.0447 | 0.1172 | 0.3623 | 0.1128 | 0.0824 | 9.02 | 0.6077 | 0.0952 |
| Consumer | 7 | Mean | 0.0786 | 0.0514 | 1.4643 | 0.5257 | 0.5429 | 64.25 | 6.3186 | 0.2829 |
| Services | | Std. dev. | 0.0505 | 0.2364 | 0.9178 | 0.1672 | 0.1329 | 9.54 | 1.5925 | 0.2332 |
| Financial | 9 | Mean | 0.0178 | 0.0467 | 0.8189 | 0.5256 | 0.6900 | 67.66 | 8.8578 | 0.4411 |
| Services | | Std. dev. | 0.0249 | 0.1312 | 0.2805 | 0.2873 | 0.1441 | 11.55 | 2.3825 | 0.4213 |
| Healthcare | 2 | Mean | 0.0550 | 0.1050 | 1.2200 | 0.3850 | 0.8000 | 46.85 | 6.3600 | 0.1350 |
| | | Std. dev. | 0.0212 | 0.4031 | 1.0182 | 0.1909 | 0.0424 | 12.30 | 1.1455 | 0.0919 |
| Holding | 5 | Mean | 0.0420 | -0.1340 | 0.5820 | 0.5060 | 0.5660 | 59.52 | 8.5960 | 0.1840 |
| | | Std. dev. | 0.0217 | 0.0994 | 0.2852 | 0.1547 | 0.2396 | 11.10 | 2.2693 | 0.0826 |
| Media | 2 | Mean | 0.0700 | -0.3300 | 1.3400 | 0.8100 | 0.6150 | 65.21 | 7.3200 | 0.2650 |
| | | Std. dev. | 0.0141 | 0.0141 | 0.0707 | 0.0141 | 0.0212 | 14.11 | 0.6223 | 0.1485 |
| Telecoms | 3 | Mean | 0.1633 | -0.0900 | 1.2200 | 0.4300 | 0.7267 | 61.47 | 7.4233 | 0.1167 |
| | | Std. dev. | 0.0404 | 0.1709 | 0.6902 | 0.3820 | 0.1097 | 14.63 | 2.7266 | 0.0551 |
| Total | 50 | Mean | 0.0790 | -0.0266 | 0.9926 | 0.5112 | 0.6388 | 60.51 | 7.4974 | 0.2196 |
| | | Std. dev. | 0.0593 | 0.1748 | 0.5198 | 0.2233 | 0.1532 | 11.44 | 1.8061 | 0.2344 |

Table 11 shows the mean values of key variables by industry. Holdings (conglomerates) have the lowest Tobin's Q values in our sample. As holdings' market values reflect only the value of the respective stakes in their subsidiaries although they consolidate all of their subsidiaries' assets, their Tobin's Q values are understated. In our sample, consumer services, media, telecom and healthcare companies have the highest Tobin's Q values. However, the same argument is not true for average return on assets. Telecoms, commodity and construction companies achieved the highest return on assets in our sample. In terms of stock performance, healthcare sector is the leading sector with a geometric mean return of 10.5% between 2005 and 2008. Financial services, consumer goods and services have the

highest average corporate governance scores. The largest companies in our sample are in the financial services sector and holdings.

Table 12. ANOVA of Key Variables between Sectors

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Avg. ROA * Sector | Between Groups | 0.0878 | 7 | 0.013 | 2.965 | 0.013** |
| | Within Groups | 0.1777 | 42 | 0.004 | | |
| | Total | 0.2654 | 49 | | | |
| Avg. stock return * Sector | Between Groups | 0.3740 | 7 | 0.053 | 1.999 | 0.078* |
| | Within Groups | 1.1225 | 42 | 0.027 | | |
| | Total | 1.4965 | 49 | | | |
| Tobins Q * Sector | Between Groups | 3.1755 | 7 | 0.454 | 1.893 | 0.095* |
| | Within Groups | 10.0634 | 42 | 0.240 | | |
| | Total | 13.2390 | 49 | | | |
| Foreign ownership * Sector | Between Groups | 0.3825 | 7 | 0.055 | 1.114 | 0.373 |
| | Within Groups | 2.0610 | 42 | 0.049 | | |
| | Total | 2.4435 | 49 | | | |
| Blockholder's share * Sector | Between Groups | 0.1569 | 7 | 0.022 | 0.948 | 0.481 |
| | Within Groups | 0.9928 | 42 | 0.024 | | |
| | Total | 1.1497 | 49 | | | |
| CGS * Sector | Between Groups | 1969.73 | 7 | 281.390 | 2.662 | 0.02** |
| | Within Groups | 4439.49 | 42 | 105.702 | | |
| | Total | 6409.22 | 49 | | | |
| Firm size * Sector | Between Groups | 35.91 | 7 | 5.131 | 1.739 | 0.126 |
| | Within Groups | 123.93 | 42 | 2.951 | | |
| | Total | 159.84 | 49 | | | |
| Debt to Assets * Sector | Between Groups | 0.7194 | 7 | 0.103 | 2.188 | 0.055* |
| | Within Groups | 1.9726 | 42 | 0.047 | | |
| | Total | 2.6920 | 49 | | | |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

Table 12 shows that average return on assets and corporate governance scores of the companies in different sectors are statistically different from each other at a 95% confidence interval. However, we find sectoral differences between average stock return, Tobin's Q and the debt ratio at only 90% confidence interval. The sector variable might help explain the relationship between corporate governance and firm

performance. In the next Chapter, we analyze the relationship between corporate governance and firm performance controlling for the sectors. As shown in Table 13, we find evidence that foreigners prefer investing in larger companies and also the ones that are included in the MSCI index.

Table 13. ANOVA of Key Control Variables between Foreign Ownership Groups

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Company age | Between Groups | 0.4926 | 2 | 0.246 | 0.633 | 0.535 |
| | Within Groups | 18.2735 | 47 | 0.389 | | |
| | Total | 18.7661 | 49 | | | |
| Number of years listed | Between Groups | 2.1302 | 2 | 1.065 | 1.394 | 0.258 |
| | Within Groups | 35.9051 | 47 | 0.764 | | |
| | Total | 38.0353 | 49 | | | |
| Firm size - Ln(assets) | Between Groups | 36.5536 | 2 | 18.277 | 6.967 | 0.002*** |
| | Within Groups | 123.2899 | 47 | 2.623 | | |
| | Total | 159.8436 | 49 | | | |
| Firm size - Ln(Mcap) | Between Groups | 34.9835 | 2 | 17.492 | 11.652 | 0.000*** |
| | Within Groups | 70.5534 | 47 | 1.501 | | |
| | Total | 105.5369 | 49 | | | |
| Dividend Dummy | Between Groups | 0.5042 | 2 | 0.252 | 1.031 | 0.365 |
| | Within Groups | 11.4958 | 47 | 0.245 | | |
| | Total | 12.0000 | 49 | | | |
| Debt to Assets | Between Groups | 0.23 | 2 | 0.117 | 2.230 | 0.119 |
| | Within Groups | 2.46 | 47 | 0.052 | | |
| | Total | 2.69 | 49 | | | |
| MSCI Dummy | Between Groups | 3.99 | 2 | 1.994 | 11.034 | 0.000*** |
| | Within Groups | 8.49 | 47 | 0.181 | | |
| | Total | 12.48 | 49 | | | |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

Table 14 presents that there is no significant difference between the average values of the control variables used in this study for blockholder ownership groups. We find no evidence of a relationship with the ownership concentration of a company and variables such as firm size, debt ratio, company age, the number of years listed, dividend dummy and the MSCI dummy.

Table 14. ANOVA of Key Control Variables between Blockholder Ownership Groups

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Company age | Between Groups | 0.8960 | 1 | 0.896 | 2.407 | 0.127 |
| | Within Groups | 17.8700 | 48 | 0.372 | | |
| | Total | 18.7661 | 49 | | | |
| Number of years listed | Between Groups | 0.5991 | 1 | 0.599 | 0.768 | 0.385 |
| | Within Groups | 37.4362 | 48 | 0.780 | | |
| | Total | 38.0353 | 49 | | | |
| Firm size - Ln(assets) | Between Groups | 8.1131 | 1 | 8.113 | 2.567 | 0.116 |
| | Within Groups | 151.7304 | 48 | 3.161 | | |
| | Total | 159.8436 | 49 | | | |
| Firm size - Ln(Mcap) | Between Groups | 3.4562 | 1 | 3.456 | 1.625 | 0.209 |
| | Within Groups | 102.0807 | 48 | 2.127 | | |
| | Total | 105.5369 | 49 | | | |
| Dividend Dummy | Between Groups | 0.0288 | 1 | 0.029 | 0.116 | 0.735 |
| | Within Groups | 11.9712 | 48 | 0.249 | | |
| | Total | 12.0000 | 49 | | | |
| Debt to Assets | Between Groups | 0.10 | 1 | 0.102 | 1.895 | 0.175 |
| | Within Groups | 2.59 | 48 | 0.054 | | |
| | Total | 2.69 | 49 | | | |
| MSCI Dummy | Between Groups | 0.02 | 1 | 0.018 | 0.071 | 0.791 |
| | Within Groups | 12.46 | 48 | 0.260 | | |
| | Total | 12.48 | 49 | | | |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

The ANOVA of the key control variables used in this study between corporate governance groups reveal that the mean values for firm size, debt ratio and MSCI dummy variables are significantly different across corporate governance groups. In the next chapter, we test whether these relationships affect the relationship between corporate governance and firm performance. These variables may be moderating variables that strengthen the relationship between CGS and performance measures.

Table 15. ANOVA of Key Control Variables between CGS Groups

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Company age | Between Groups | 0.2169 | 2 | 0.108 | 0.275 | 0.761 |
| | Within Groups | 18.5491 | 47 | 0.395 | | |
| | Total | 18.7661 | 49 | | | |
| Number of years listed | Between Groups | 1.2380 | 2 | 0.619 | 0.791 | 0.459 |
| | Within Groups | 36.7973 | 47 | 0.783 | | |
| | Total | 38.0353 | 49 | | | |
| Ln(assets) | Between Groups | 41.4817 | 2 | 20.741 | 8.236 | 0.000*** |
| | Within Groups | 118.3618 | 47 | 2.518 | | |
| | Total | 159.8436 | 49 | | | |
| Ln(Mcap) | Between Groups | 35.3959 | 2 | 17.698 | 11.859 | 0.000*** |
| | Within Groups | 70.1410 | 47 | 1.492 | | |
| | Total | 105.5369 | 49 | | | |
| Dividend Dummy | Between Groups | 0.2154 | 2 | 0.108 | 0.430 | 0.653 |
| | Within Groups | 11.7846 | 47 | 0.251 | | |
| | Total | 12.0000 | 49 | | | |
| Debt to Assets | Between Groups | 0.91 | 2 | 0.457 | 12.072 | 0.000*** |
| | Within Groups | 1.78 | 47 | 0.038 | | |
| | Total | 2.69 | 49 | | | |
| MSCI Dummy | Between Groups | 4.19 | 2 | 2.095 | 11.877 | 0.000*** |
| | Within Groups | 8.29 | 47 | 0.176 | | |
| | Total | 12.48 | 49 | | | |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

Table 16. Correlation Coefficients among Major Variables

| | CGS | Foreign own. | Block holder's share | Avg. ROA | Avg. stock return | Tobins Q | Firm size - Assets | Firm size - Mcap | Debt to Assets |
|---|---|---|---|---|---|---|---|---|---|
| CGS | 1.000 | | | | | | | | |
| Foreign own. | 0.586** | 1.000 | | | | | | | |
| Blockholder's share | 0.066 | 0.073 | 1.000 | | | | | | |
| Avg. ROA | -0.191 | -0.042 | -0.134 | 1.000 | | | | | |
| Avg. stock return | -0.007 | -0.154 | 0.040 | 0.161 | 1.000 | | | | |
| Tobins Q | 0.339* | 0.243 | -0.090 | 0.314* | 0.364** | 1.000 | | | |
| Ln(assets) | 0.487** | 0.482** | 0.221 | -0.236 | -0.128 | -0.158 | 1.000 | | |
| Ln(Mcap) | 0.556** | 0.613** | 0.232 | -0.043 | -0.060 | 0.137 | 0.927** | 1.000 | |
| Debt to Assets | 0.487** | 0.245 | 0.075 | -0.399** | -0.124 | 0.113 | 0.540** | 0.444** | 1.000 |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 16 summarizes the correlation coefficients among variables representing firm performance, corporate governance scores and firm characteristics. Among the performance variables, we only find a significant and positive correlation between Tobin's Q and corporate governance scores. We also find a significant positive correlation between firm size and corporate governance scores. As firm grow in size, their governance practices also improve. There is a positive correlation between debt ratio and firm size and also a positive correlation between debt ratio and corporate governance scores. We conclude that as firms grow larger, they have better access to financial markets and therefore can get larger debt financing with better terms. The positive correlation between debt ratio and the corporate governance scores imply that financial institutions play an important role in monitoring the management and minimizing the agency costs. The debt ratio has a significant negative relationship with ROA while no relation with Tobin's Q. As expected, the negative association of debt and firm value is consistent with the pecking order theory. This finding is consistent with similar studies such as *Jong et al.*'s (2002) study on the relationship between the corporate governance and the firm performance in three countries, Belgium, Netherlands and United Kingdom.

# CHAPTER 4: RESEARCH DESIGN

## The Effect of Corporate Governance on Firm Performance

As indicated by Nam & Nam (2004), firm-level corporate governance practices may be viewed as endogenous. The directors in control of a firm may make deliberate choices in such a way as to maximize their own objectives or in other words to maximize their personal or family wealth by taking advantage of the weak laws and regulations and of their poor enforcement. Given the endogenous nature of corporate governance practices, the relationship between the quality of governance and firm performance may be analyzed better in a simultaneous system rather than separately. Our main hypotheses in this study are:

*Hypothesis 1: Those firms with high corporate governance scores tend to have higher performances relative to those with low corporate governance scores.*

*Hypothesis 2: Those firms with higher market values adopt better corporate governance practices.*

The descriptive statistics in Chapter 3 show that there are significant differences among corporate governance characteristics as well as firm performances in the sample of companies within the scope of this study. In order to assess the impact of the strength of governance mechanisms on firm performance, we run a regression analysis on three measures of firm performance (ROA, Tobin's Q and stock return) on the corporate governance scores and other firm characteristics. Accordingly, we estimate the following basic regression model:

$$Y_i = \alpha + \beta\ Gov_i + \gamma\ X_i + e_i$$

where $Y_i$ is one of the performance measures (ROA, Tobin's Q and stock return), $Gov_i$ is one of the governance scores (CGS, CGSd and CGSw), $X_i$ is a vector of control variables and $e_i$ is the error term. The control variables used in our regression analyses are firm size, leverage, the number of years since listing, company age, foreign ownership, blockholder ownership and dummy variables for dividends, MSCI-Turkey index, family control and different industries. A positive coefficient on governance scores, which is significant at a 95% confidence interval, will indicate that better governed companies have better performance.

In order to test for the endogeneity of corporate governance scores (CGS), we follow the two-step procedure suggested by Wooldridge (2000). Black, Jang and Kim (2003) use the same procedure in a firm-level corporate governance study in Korea. First, we run a regression on the possible endogenous variable, the corporate governance index on all exogenous variables used in this study. The residual from this first-stage regression is the portion of the corporate governance index that is not predicted by the control variables and therefore, it is potentially endogenous. We include the residual from the first-stage regression as an independent variable to the regression analysis on firm performance, in which corporate governance index and control variables are other independent variables. A significant coefficient on the residual would imply that the corporate governance index is endogenous. A positive (negative) coefficient on the residual would imply that the dependent variable (firm value) predicts a higher (lower) corporate governance score, and therefore the regression coefficients are upward (downward) biased.

In order to test whether companies with higher average corporate governance scores also have higher performance, we cluster corporate governance scores into three groups. The first group includes 14 companies with corporate governance

scores between zero and 55. This group is denoted as the group of companies with poor corporate governance practices. The second group has 26 companies with mediocre corporate governance scores between 55 and 70 and the third group has the highest corporate governance scores above 70 and there are 10 companies in this group. The first group takes the value of "1" and the others take the values "2" and "3", respectively. As described in the descriptive statistics, the mean corporate governance score of our sample is 60.51 within the range of 34.15 and 86.49.

This study aims to find out if there is a significant difference between these groups in a relationship between corporate governance and firm performance. We use a univariate analysis, where the performance measure is the dependent variable, the corporate governance group is the random factor and the significant control variables used in our basic regression model are covariates. We test if there is a significant difference in the performance measures between corporate governance groups.

## Univariate Analysis of Ownership Structure and Corporate Governance

Extending the arguments above, we may also expect the market to assess the same level of corporate governance differently depending on the companies' ownership and control structure. For example; if the investors suspect that the controlling owners can find ways to maximize their own interests at the expense of minority shareholders, they are likely to discount the value of measured corporate governance regardless of how good the company's corporate governance practices are. Smaller shareholders can join their forces and become blockholders to better monitor the company's corporate governance practices and therefore minimize agency costs. Shleifer and Vishny (1986) find that large shareholders may help reduce the free-rider problem of small investors, and hence are value-increasing. There is a presumption that large shareholders have stronger incentive to maximize the value of shareholders because they would benefit from this the most. This is called the incentive alignment hypothesis introduced by Zeckhouser & Pound (1990). On the other hand, blockholders above a certain level may have benefits of control at the expense of minority shareholders (Barclay & Holderness, 1989). As a result, the fact that a large number of companies in Turkey are owned and controlled by family blockholders might result in an insignificant relationship between the ownership structure and the level of corporate governance. Therefore, we also analyze whether family owned and controlled companies have weaker corporate governance practices. Foreign ownership is also an important indicator for corporate governance practices. Foreign owners generally demand a higher quality of corporate governance in order to protect their rights as well as the minority rights.

In this study, we empirically analyze if the level of blockholder ownership and foreign ownership have an impact on the level of corporate governance through simple regression analysis between the two and also an analysis of variance (ANOVA) between different groups. The dependent variable is the corporate governance measure (CGS) and the random variables are blockholder ownership ratio (denoted by the total shareholdings of blockholders that own more than 5% share in a company) and foreign ownership ratio. The control variables used in the regression analyses are firm size, leverage, the number of years since listing, company age, and dummy variables for dividends and MSCI-Turkey index.

We cluster blockholder ownership ratio into two groups. The first group has a value of "0" and includes 26 companies that have less than 65% blockholder share. The second group takes the value of "1" and includes 24 companies with higher than 65% blockholder ownership. Foreign ownership ratios are grouped into three categories; the first group constitutes the companies with low foreign ownership up to 33%, the second group includes the ones between 33% and 66% foreign ownership and the last group includes the companies with the highest foreign ownership ratios. The three groups have 11, 27 and 12 companies and they take the values "1", "2", and "3", respectively. Our hypotheses are:

*Hypothesis 3: Firms with higher foreign ownership engage in better corporate governance practices and therefore have higher corporate governance scores.*

*Hypothesis 4: Firm-level corporate governance practices are influenced by the ownership concentration of the firm.*

Apart from these two univariate analysis, we also test for the differences in corporate governance practices between family owned companies and others. We use a dummy variable for family control and assign the value of "1" to the companies

that are owned and controlled by families and "0" for the other companies. There are 25 companies in each group in our sample. We run a one-way ANOVA between the corporate governance measures and this dummy variable.

*Hypothesis 5: Companies owned and controlled by families have weaker corporate governance practices than the companies not related to a family.*

## The Causality between the Ownership Structure and Firm Performance

After analyzing the relationship between corporate governance and firm performance and corporate governance and ownership structure, we examine the causal relationship between ownership structure and firm performance. Within the scope of this study, we focus on blockholder ownership and foreign ownership. Our hypotheses are:

*Hypothesis 6: There is a unidirectional causal relationship between blockholder ownership and firm value (the incentive alignment hypothesis).*

*Hypothesis 7: There is a unidirectional causal relationship between foreign ownership and firm value.*

We use Granger Causality Test to analyze if there is a causal relationship between the ownership structure and firm performance. We run two separate granger causality tests on our panel data. Since we do not use corporate governance scores as a variable in these tests, we increase the size of our sample to 80 listed companies. The Granger procedure and our use of random time and firm effects filter out the firm-specific heterogeneity that may influence both ownership structure and firm value.

The first granger causality test is between blockholders' ownership and firm performance. We use blockholders' ownership ratio and Tobin's Q (as a measure for

firm performance) for the six year period between 2003 and 2008. As described in the "Sample Chapter", blockholders' ownership ratio is calculated as the total ownership ratio of the shareholders that have more than 5% stake in the company. We assume that such large owners are likely to be consulted on strategic issues (Holderness, 2001) and thereby influence the company's stock market performance. As the blockholders' ownership ratio does not change at all for some of the companies in our sample, we exclude these companies from the panel data. This elimination decreases the size of our sample to 56 companies for the first granger causality test.

The second granger causality test is between average foreign ownership ratios and Tobin's Q. Foreign ownership ratios change on a daily basis according to daily trading activities. We use average foreign ownership ratios for each company and for each year. As there is a variation in foreign ownership ratios between years, we do not exclude any companies from our sample.

According to granger causality, if blockholders' ownership "granger-causes" firm performance, then past values of blockholders' ownership should contain information that helps predict firm performance above and beyond the information contained in past values of firm performance alone. Granger causality's mathematical formulation is based on linear regression modelling of stochastic processes. The model to conduct the first granger causality test is:

$$(1)\ Q_t = \alpha_1 + \beta_1 B_{(t-1)} + \beta_2 Q_{(t-1)} + \varepsilon_{1t}$$

$$(2)\ B_t = \alpha_2 + \beta_3 B_{(t-1)} + \beta_4 Q_{(t-1)} + \varepsilon_{2t}$$

where $Q_t$ is the year-end Tobin's Q for the year t and $B_t$ is the year-end blockholders' ownership ratio for the year t. The $\alpha$'s and $\beta$'s are the parameters (coefficients) of the

regression models and $\varepsilon_{1t}$ and $\varepsilon_{2t}$ are uncorrelated error terms. We use one-year lagged values of blockholders' ownership and Tobin's Q. In these regression models if $\beta_1 \neq 0$, $\beta_4 = 0$ we infer unidirectional B to Q. In this case, including B as a predictor for Q will increase explained variance. If $\beta_1 = 0$, $\beta_4 \neq 0$, we infer unidirectional causality from Q to B and if $\beta_1 \neq 0$, $\beta_4 \neq 0$, we infer bi-directional causality between Q and B. Our first null hypothesis is:

$H_0$: $\beta_1 = \beta_4 = 0$

The model to conduct the second granger causality test is:

*(1)* $Q_t = \alpha_1 + \beta_1 F_{(t-1)} + \beta_2 Q_{(t-1)} + \varepsilon_{1t}$

*(2)* $F_t = \alpha_2 + \beta_3 F_{(t-1)} + \beta_4 Q_{(t-1)} + \varepsilon_{2t}$

where $Q_t$ is the year-end Tobin's Q for the year t and $F_t$ is the average foreign ownership ratio for the year t. We use one-year lagged values of blockholders' ownership and Tobin's Q. The null hypothesis is:

$H_0$: $\beta_1 = \beta_4 = 0$

If the coefficients are statistically different from zero at a 95% confidence interval, we will be able reject the null hypotheses and conclude that there are causal relationships between the variables. The granger causality test will be able to tell us which variable has a significant impact on the other variable and also predict the direction of the relationship. If we cannot reject the null hypotheses, we will conclude that there is not a causal relationship between the variables.

## Additional Tests on the Impact of the Recent Global Backdrop

After analyzing the relationship between corporate governance, firm performance and the ownership structure, we also test for the impact of the recent global backdrop

on listed companies' stock market performances. Our aim is to see whether firms with higher corporate governance scores, higher foreign ownership ratios and higher ownership concentration have experienced a smaller reduction in their share prices. In order to test these relationships we run a simple regression where the dependent variable is the abnormal stock return during the recent stock market crash. The stock returns are calculated during the period between 16 October 2007 and 20 November 2008, the peak and the bottom of the ISE-100 index. ISE-100 index declined 62.88% during this period. Independent variables in our regression analyses are corporate governance scores, foreign ownership ratios and blockholders' share, respectively. We also control for firm size, leverage, company age, the number of years since IPO and dummy variables for dividends and the MSCI-Index. We use the values for 2008 rather than average values for independent and control variables. Abnormal returns are calculated as follows:

*Abnormal returns* ($\varepsilon_j$) = $r_j - (a_j + \beta_j * R_m)$

where;

$r_j$ = *The return of stock j during the*

$a_j$ = *The intercept of the linear relationship between the return of stock j and the return of the ISE-100 index*

$\beta_j$ = *The slope of the linear relationship between the return of stock j and the returns of the ISE-100 index*

$R_m$ = *The return of the ISE-100 index between 16 October 2007 and 20 November 2008 (-62.88%)*

We test the following hypotheses:

*Hypothesis 8: During the recent global backdrop in equity markets, listed firms with higher corporate governance scores experienced a smaller reduction in their share prices.*

*Hypothesis 9: During the recent global backdrop in equity markets, listed firms with higher foreign ownership ratios experienced a smaller reduction in their share prices.*

*Hypothesis 10: During the recent global backdrop in equity markets, listed firms with higher blockholder ownership ratios experienced a smaller reduction in their share prices.*

# CHAPTER 5: EMPIRICAL RESULTS

## The Effect of Corporate Governance on Firm Performance

On the basis of the analytical framework described in the research design section, the regression results are presented and evaluated on the determinants of corporate governance quality and the relationship between corporate governance quality and firm performance. Table 17 presents the regression results showing which factors determine the quality of corporate governance. Various corporate governance scores (CGS, CGSd and CGSw) were analyzed as dependent variables including the scores for Shareholder Rights and Disclosure of Information (SD) and Effectiveness of the BoD (EB) sub-indices. The results show that the debt ratio has a positive relationship with the overall corporate governance indices at a 99% confidence interval. The dummy variable for concentrated ownership is statistically significant at a 95% confidence interval for CGS, CGSd and SD. The regression coefficient of this variable is negative, meaning that firms with concentrated ownership tend to have weaker corporate governance practices in Turkey. For example; cumulative voting for small shareholders is not allowed in Turkey.

Table 17. Determinants of Corporate Governance Score (CGS)

| CG Score used | CGS | CGSd | CGSw | SD | EB |
|---|---|---|---|---|---|
| (Constant) | 40.43*** | 34.50*** | 41.32*** | 36.18*** | 44.68** |
| Company age | -2.68 | -2.38 | -1.01 | -2.95 | -2.40 |
| Number of years listed | -0.61 | 0.36 | -1.10 | 0.56 | -1.79 |
| Average foreign ownership | 14.65 | 17.58 | 15.97 | 8.95 | 20.36 |
| Blockholders' share | 27.11* | 28.04* | 25.13 | 33.92** | 20.30 |
| Firm size-Assets | 0.37 | -0.41 | -0.57 | -0.79 | 1.53 |
| Firm size-Mcap | 0.42 | 0.92 | 0.61 | 3.41 | -2.57 |
| Dummy (dividend) | 0.60 | 8.28*** | -1.81 | 0.69 | 0.50 |
| Debt/Assets | 19.26*** | 20.01*** | 25.16*** | 13.42* | 25.10** |
| Dummy (MSCI) | 4.45 | 3.25 | 5.03 | 1.16 | 7.75 |
| Dummy (Foreign ownership) | -1.53 | -1.82 | -2.74 | 0.52 | -3.57 |
| Dummy (Concentrated ownership) | -10.73** | -10.14** | -10.11* | -11.03** | -10.43 |
| Dummy (Family ownership & control) | 4.18 | 2.18 | 5.42 | -0.14 | 8.51** |
| $R^2$ | 0.628 | 0.631 | 0.528 | 0.556 | 0.498 |
| Adj. $R^2$ | 0.507 | 0.512 | 0.375 | 0.411 | 0.335 |
| Significance of F | 0.00*** | 0.00*** | 0.002*** | 0.001*** | 0.004*** |
| # of observations | 50 | 50 | 50 | 50 | 50 |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

Table 18 shows that there is a significant (at 95% confidence interval) positive relationship between the corporate governance scores (CGS) and firm value measured by Tobin's Q. The significant coefficient of 0.015 on CGS implies that every 10 point improvement in CGS predicts a 0.15 point increase in the company's Tobin's Q. The median Tobin's Q of our sample is 0.99. As a result, we conclude that a 10-point increase in CGS would predict a 15% increase in firm value. Firm size is a moderating variable that strengthens the relationship between CGS and Tobin's Q. Firm size tends to be negatively associated with Tobin's Q, which indicates that the market calls for a higher level of corporate governance for larger firms. Debt dependence is significant at a 95% confidence interval and has a positive impact on firm value when corporate governance score is not included in the regression analysis. We conclude that market calls for better corporate governance practices from firms with high leverage. Foreign ownership has a positive relation with the firm performance at a 95% confidence interval. Foreign owners generally demand a higher quality of corporate governance in order to protect their rights as

well as the minority rights. The MSCI dummy variable also has a positive relationship with the firm performance, which decreases CGS' significance in the regression analysis, meaning that MSCI dummy is a mediator variable. Companies with better corporate governance practices are likely to be included in the MSCI index and the companies in the MSCI index have higher market values than the ones that are not included. Although the relationship is not significant at a 90% confidence interval, the dummy variable for firms controlled by families has a negative correlation with Tobin's Q and it implies that the market calls for stronger corporate governance practices from the companies owned and controlled by families in Turkey.

Table 18. The Relation between Tobin's Q and Overall Corporate Governance Index (CGS)

| | Tobin's Q | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| (Constant) | 0.060 | 0.857 | 1.038* | 1.657** | 1.817*** | 2.390*** |
| CGS | 0.015** | 0.022*** | 0.016* | 0.011 | 0.014 | |
| Firm size - Ln(assets) | | -0.123** | -0.145*** | -0.228*** | -0.224*** | -0.235*** |
| Ln (years of listing) | | -0.016 | -0.046 | 0.018 | 0.071 | 0.063 |
| Ln (company age) | | -0.083 | -0.044 | -0.063 | -0.083 | -0.121 |
| Debt/Assets | | 0.293 | 0.358 | 0.548 | 0.644 | 0.912** |
| Average foreign ownership | | | 0.584 | 0.302 | 1.626** | 1.841** |
| Blockholders' share | | | -0.086 | -0.011 | 0.025 | 0.408 |
| Dummy (dividend) | | | | 0.115 | 0.141 | 0.151 |
| Dummy (MSCI) | | | | 0.428** | 0.512** | 0.578*** |
| Dummy (Foreign ownership) | | | | | -0.473* | -0.497* |
| Dummy (Concentrated own.) | | | | | 0.003 | -0.148 |
| Dummy (Family ownership) | | | | | -0.123 | -0.064 |
| $R^2$ | 0.115 | 0.271 | 0.306 | 0.401 | 0.468 | 0.433 |
| Adj. $R^2$ | 0.096 | 0.188 | 0.190 | 0.266 | 0.296 | 0.269 |
| $R^2$ change | 0.115 | 0.156 | 0.035 | 0.095 | 0.067 | -0.035 |
| Significance of F | 0.016** | 0.013** | 0.023** | 0.008*** | 0.01*** | 0.013** |
| # of observations | 50 | 50 | 50 | 50 | 50 | 50 |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

In Table 19, we test for the endogeneity of corporate governance. In the regression model below, we include the residuals from the first-stage regression (Table 17) on corporate governance scores including all exogenous variables used in this study.

The coefficient of the residual item is insignificant, which implies that the corporate governance is not endogenous. As a result, we accept our first hypothesis that firm with higher corporate governance scores perform better and reject our second hypothesis that higher valued firms adopt better corporate governance practices.

Table 19. The Test for Endogeneity for the Relation between Tobin's Q and Overall Corporate Governance Index (CGS)

| | Tobin's Q | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| (Constant) | -0.110 | 0.219 | 0.567 | 2.31** | 2.420 |
| CGS | 0.018** | 0.033*** | 0.026 | -0.001 | |
| Unstandardized Residual | -0.01 | -0.021 | -0.013 | 0.015 | 0.014 |
| Firm size - Ln(assets) | | -0.144*** | -0.149*** | -0.240*** | -0.244 |
| Ln (years of listing) | | -0.014 | -0.034 | 0.017 | 0.066 |
| Ln (company age) | | -0.044 | -0.031 | -0.080 | -0.118 |
| Debt/Assets | | 0.081 | 0.193 | 0.751 | 0.929 |
| Average foreign ownership | | | 0.343 | 0.524 | 1.848 |
| Blockholders' share | | | -0.087 | 0.007 | 0.405 |
| Dummy (dividend) | | | | 0.116 | 0.152 |
| Dummy (MSCI) | | | | 0.582** | 0.594 |
| Dummy (Foreign ownership) | | | | | -0.496 |
| Dummy (Concentrated ownership) | | | | | -0.143 |
| Dummy (Family ownership & control) | | | | | -0.069 |
| $R^2$ | 0.121 | 0.307 | 0.315 | 0.408 | 0.468 |
| Adj. $R^2$ | 0.084 | 0.210 | 0.181 | 0.257 | 0.296 |
| $R^2$ change | 0.121 | 0.186 | 0.008 | 0.093 | 0.060 |
| Significance of F | 0.048** | 0.011** | 0.035** | 0.013** | 0.01*** |
| # of observations | 50 | 50 | 50 | 50 | 50 |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

Tables 20 and 21 show summary statistics for regressions of ROA and average stock return on our overall corporate governance index (CGS). Unlike the significant positive correlation between CGS and Tobin's Q, we find no significant evidence that better governed companies achieve higher ROA or yield better stock returns to their investors. The regression models on ROA are not significant. Debt ratio is negatively correlated with ROA, which is consistent with the pecking order theory.

Although the dividend dummy and the years of listing have significant coefficients, the regression models on average stock return are also not significant. We conclude that the corporate governance scores and other exogenous variables cannot explain the variation in stock returns. The dividend dummy is positively correlated with the stock return, implying that investors reward dividend-paying companies.

Table 20. The Relation between ROA and Overall Corporate Governance Index (CGS)

| | Return on Assets (ROA) | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| (Constant) | 0.139*** | 0.122* | 0.146* | 0.158* | 0.208** | 0.191*** |
| CGS | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |
| Firm size - Ln(assets) | | 0.000 | 0.000 | -0.004 | -0.004 | -0.004 |
| Ln (years of listing) | | -0.005 | -0.010 | -0.005 | -0.002 | -0.002 |
| Ln (company age) | | -0.002 | 0.005 | 0.004 | 0.003 | 0.004 |
| Debt/Assets | | -0.100** | -0.101** | -0.134** | -0.075 | -0.082* |
| Average foreign ownership | | | 0.036 | 0.017 | 0.153 | 0.147 |
| Blockholders' share | | | -0.054 | -0.054 | -0.103 | -0.114 |
| Dummy (dividend) | | | | 0.026 | 0.027 | 0.027 |
| Dummy (MSCI) | | | | 0.012 | 0.019 | 0.017 |
| Dummy (Foreign ownership) | | | | | -0.059* | 0.020 |
| Dummy (Concentrated ownership) | | | | | 0.015 | 0.018 |
| Dummy (Family ownership & control) | | | | | 0.019 | -0.059* |
| $R^2$ | 0.036 | 0.167 | 0.191 | 0.236 | 0.325 | 0.322 |
| Adj. $R^2$ | 0.016 | 0.072 | 0.056 | 0.064 | 0.105 | 0.126 |
| $R^2$ change | 0.036 | 0.130 | 0.024 | 0.045 | 0.089 | -0.003 |
| Significance of F | 0.185 | 0.141 | 0.226 | 0.234 | 0.175 | 0.126 |
| # of observations | 50 | 50 | 50 | 50 | 50 | 50 |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

Table 21. The Relation between Stock Return and Overall Corporate Governance Index (CGS)

| | Average Stock Return | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| (Constant) | -0.020 | -0.360 | -0.439* | -0.291 | -0.328 | -0.201 |
| CGS | 0.000 | 0.003 | 0.005 | 0.004 | 0.003 | |
| Firm size - Ln(assets) | | -0.018 | -0.004 | -0.039 | -0.044 | -0.041 |
| Ln (years of listing) | | 0.030 | 0.041 | 0.061* | 0.075** | 0.073** |
| Ln (company age) | | 0.072 | 0.057 | 0.051 | 0.034 | 0.026 |
| Debt/Assets | | -0.150 | -0.169 | -0.074 | 0.027 | 0.089 |
| Average foreign ownership | | | -0.223 | -0.266* | 0.006 | 0.050 |
| Blockholders' share | | | 0.031 | 0.060 | 0.402 | 0.486 |
| Dummy (dividend) | | | | 0.095* | 0.111* | 0.113* |
| Dummy (MSCI) | | | | 0.098 | 0.093 | 0.107 |
| Dummy (Foreign ownership) | | | | | -0.083 | -0.087 |
| Dummy (Concentrated ownership) | | | | | -0.118 | -0.152 |
| Dummy (Family ownership & control) | | | | | -0.062 | -0.049 |
| $R^2$ | 0.000 | 0.124 | 0.164 | 0.243 | 0.307 | 0.291 |
| Adj. $R^2$ | -0.021 | 0.024 | 0.025 | 0.073 | 0.082 | 0.086 |
| $R^2$ change | 0.000 | 0.124 | 0.040 | 0.079 | 0.064 | -0.016 |
| Significance of F | 0.961 | 0.307 | 0.337 | 0.208 | 0.225 | 0.204 |
| # of observations | 50 | 50 | 50 | 50 | 50 | 50 |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

Tables 22 and 23 show summary statistics for the regression analysis between Tobin's Q and other corporate governance indices (CGSd and CGSw). We included other measures for the quality of corporate governance as a robustness check. We found similar results for different corporate governance indices as they all rely on the same set of qualitative data with different weightings. The positive relationship between Tobin's Q and corporate governance scores prevails for the other indices as well.

Table 22. The Relation between Tobin's Q and Corporate Governance Index including Dividends(CGSd)

| | Tobin's Q | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| (Constant) | 0.008 | 0.890 | 1.036* | 1.643*** | 1.881*** | 2.390*** |
| CGSd | 0.016*** | 0.022*** | 0.018** | 0.013 | 0.014 | |
| Firm size - Ln(assets) | | -0.130*** | -0.147*** | -0.225*** | -0.238*** | -0.235*** |
| Ln (years of listing) | | -0.018 | -0.046 | 0.009 | 0.057 | 0.063 |
| Ln (company age) | | -0.088 | -0.047 | -0.062 | -0.086 | -0.121 |
| Debt/Assets | | 0.448 | 0.460 | 0.518 | 0.630 | 0.912** |
| Average foreign ownership | | | 0.490 | 0.267 | 1.568** | 1.841** |
| Blockholders' share | | | -0.131 | -0.037 | 0.000 | 0.408 |
| Dummy (dividend) | | | | 0.016 | 0.030 | 0.151 |
| Dummy (MSCI) | | | | 0.484** | 0.525 | 0.578*** |
| Dummy (Foreign ownership) | | | | | -0.466* | -0.497* |
| Dummy (Concentrated ownership) | | | | | -0.002 | -0.148 |
| Dummy (Family ownership & control) | | | | | -0.096 | -0.064 |
| $R^2$ | 0.135 | 0.305 | 0.330 | 0.410 | 0.471 | 0.433 |
| Adj. $R^2$ | 0.117 | 0.226 | 0.218 | 0.277 | 0.299 | 0.269 |
| $R^2$ change | 0.135 | 0.170 | 0.025 | 0.080 | 0.061 | -0.038 |
| Significance of F | 0.009*** | 0.005*** | 0.013** | 0.007*** | 0.009*** | 0.013** |
| # of observations | 50 | 50 | 50 | 50 | 50 | 50 |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

Table 23. The Relation between Tobin's Q and Weighted Corporate Governance Index (CGSw)

| | Tobin's Q | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| (Constant) | 0.206 | 1.159** | 1.257** | 1.773*** | 1.956*** | 2.390*** |
| CGSw | 0.013** | 0.017** | 0.012* | 0.009 | 0.010 | |
| Firm size - Ln(assets) | | -0.093* | -0.130** | -0.221*** | -0.233*** | -0.235*** |
| Ln (years of listing) | | -0.012 | -0.048 | 0.022 | 0.074 | 0.063 |
| Ln (company age) | | -0.131 | -0.070 | -0.081 | -0.110 | -0.121 |
| Debt/Assets | | 0.240 | 0.326 | 0.527 | 0.654 | 0.912** |
| Average foreign ownership | | | 0.702* | 0.346 | 1.665** | 1.841** |
| Blockholders' share | | | -0.089 | -0.012 | 0.145 | 0.408 |
| Dummy (dividend) | | | | 0.136 | 0.167 | 0.151 |
| Dummy (MSCI) | | | | 0.493** | 0.523** | 0.578*** |
| Dummy (Foreign ownership) | | | | | -0.466* | -0.497* |
| Dummy (Concentrated ownership) | | | | | -0.043 | -0.148 |
| Dummy (Family ownership & control) | | | | | 0.121 | -0.064 |
| $R^2$ | 0.111 | 0.237 | 0.293 | 0.400 | 0.464 | 0.433 |
| Adj. $R^2$ | 0.092 | 0.150 | 0.175 | 0.265 | 0.290 | 0.269 |
| $R^2$ change | 0.111 | 0.126 | 0.056 | 0.107 | 0.064 | -0.031 |
| Significance of F | 0.018** | 0.031** | 0.032** | 0.009*** | 0.011** | 0.013** |
| # of observations | 50 | 50 | 50 | 50 | 50 | 50 |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

In Table 24, we present regressions of Tobin's Q on different corporate governance indices and major sub-indices while controlling for firm size, debt ratio, average

foreign ownership and the MSCI dummy, the main control variables that has a significant relationship with Tobin's Q. The regression analysis in Table 24 shows that both sub-indices have a positive relation with the firm value measured by Tobin's Q. Similar to the regression results between the overall corporate governance index (CGS) and Tobin's Q, firm size acts as a moderating variable that strengthens the relationship, whereas the MSCI dummy variable acts as a mediator variable which explains the positive relationship between the sub-indices and firm value. Firm size has a negative relationship with the firm value, which indicates that the market calls for a higher level of corporate governance for larger firms.

Table 24. The Relation between Tobin's Q and Corporate Governance Sub-indices

| | Tobin's Q | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| (Constant) | -0.020 | 0.181 | 1.331** | 0.502* | 0.956*** | 1.934*** |
| SD | 0.014** | 0.025*** | 0.014* | | | |
| EB | | | | 0.010** | 0.013*** | 0.003 |
| Firm size - Ln(assets) | | -0.126*** | -0.249*** | | -0.084** | -0.234*** |
| Debt/Assets | | | 0.503 | | | 0.509 |
| Average foreign ownership | | | 0.340 | | | 0.52 |
| Dummy (MSCI) | | | 0.514*** | | | 0.562*** |
| $R^2$ | 0.096 | 0.235 | 0.409 | 0.080 | 0.155 | 0.362 |
| Adj. $R^2$ | 0.077 | 0.203 | 0.342 | 0.061 | 0.119 | 0.290 |
| $R^2$ change | 0.096 | 0.139 | 0.174 | 0.080 | 0.075 | 0.207 |
| Significance of F | 0.028** | 0.002*** | 0.000*** | 0.047** | 0.019** | 0.001*** |
| # of observations | 50 | 50 | 50 | 50 | 50 | 50 |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

Although our sample size is small, we controlled for industry effects. Table 25 shows that the strong positive relationship between Tobin's Q and the corporate governance score does not prevail for financial institutions. This result may be due to the small sample size for financial institutions in our study. However, there is a positive relationship between the corporate governance scores and firm values of non-financial companies. We find no evidence of other industry effects when we run regression for the sub-samples such as consumer and construction companies. We

also find evidence that the relation between corporate governance practices and firm value is higher for larger firms as investors seek and reward better corporate governance practices highly in larger firms. For the same level of improvement in firm value, larger firms have to improve their corporate governance practices more than the small firms. Supporting our earlier argument on the negative effect of firm size on corporate governance, we find that firm size has a negative relation with firm value in large firms. However, the same argument does not prevail for smaller firms. Again, the mediating effect of the MSCI dummy is visible for small firms but not for large firms, because all of the large firms are included in the MSCI index.

Table 25. The Relation between Tobin's Q and CGS for Sub-Samples

| | Tobin's Q | | | | | |
|---|---|---|---|---|---|---|
| | Financials | Non-Financials | Consumers | Construction | Large firms | Small firms |
| (Constant) | 0.686 | 1.929*** | 3.989* | -0.133 | 1.005 | 0.982 |
| CGS | 0.009 | 0.013 | 0.013 | -0.014 | 0.010 | 0.014 |
| Firm size - Ln(assets) | -0.101 | -0.280*** | -0.439** | 0.243 | -0.163** | -0.153 |
| Debt/Assets | 0.761 | -0.317 | -1.667 | -1.935 | 0.366 | 0.810 |
| Average foreign ownership | -0.083 | 0.299 | -1.295 | 0.916 | 0.448 | 0.067 |
| Dummy (MSCI) | 0.227 | 0.635*** | 1.099* | -0.371 | 0.431 | 0.877** |
| $R^2$ | 0.921 | 0.443 | 0.657 | 0.564 | 0.508 | 0.403 |
| Adj. $R^2$ | 0.788 | 0.363 | 0.443 | -0.163 | 0.379 | 0.246 |
| Significance of F | 0.071* | 0.001*** | 0.077* | 0.626 | 0.013** | 0.062* |
| # of observations | 9 | 41 | 14 | 9 | 25 | 25 |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

The analysis of variance (ANOVA) of Tobin's Q between corporate governance groups yields supportive results for our hypothesis. When we cluster corporate governance scores into three groups, we find significant results to conclude that corporate governance groups are different from each other with respect to their impact on firm value. Dunnett's test shows that CGS group 1 is statistically different from CGS group 3. The mean Tobin's Q measure increases with better corporate governance practices, implying a positive correlation between the two. The mean

Tobin's Q for the third group is 59% higher than that of the first group, which includes companies that have weak corporate governance practices. As a result, we conclude that those firms with high corporate governance scores tend to have higher performances relative to those with low corporate governance scores.

Table 26. ANOVA of Tobin's Q between Corporate Governance Groups

| | | | Tobin's Q | |
|---|---|---|---|---|
| CGS_Group | CGS score | Frequency | Mean | Std. Deviation |
| 1 | 0-55 | 14 | 0.795 | 0.269 |
| 2 | 55-70 | 26 | 0.994 | 0.631 |
| 3 | 70-100 | 10 | 1.267 | 0.342 |
| Total | 0-100 | 50 | 0.993 | 0.520 |

Tests of Between-Subjects Effects

Dependent Variable: Tobin's Q

| Source | Type III Sum of Sq. | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Intercept | 7.397 | 1 | 7.397 | 39.141 | 0.000 |
| Firm size - Ln(assets) | 3.718 | 1 | 3.718 | 19.963 | 0.000 |
| Debt/Assets | 0.201 | 1 | 0.201 | 1.077 | 0.305 |
| Average foreign ownership | 0.256 | 1 | 0.256 | 1.377 | 0.247 |
| Dummy (MSCI) | 1.322 | 1 | 1.322 | 7.098 | 0.011 |
| CGS_Group | 0.503 | 2 | 1.445 | 1.350 | 0.270 |

Multiple Comparisons

| Dunnett t (2-sided)[a] | (I) CGS_Group | (J) CGS_Group | Mean Diff. (I-J) | Std. Error | Sig. |
|---|---|---|---|---|---|
| Tobins Q | 1 | 3 | -0.472* | 0.209 | 0.049 |
| | 2 | 3 | -0.274 | 0.188 | 0.242 |
| Ln(assets) | 1 | 3 | -2.657* | 0.657 | 0.000 |
| | 2 | 3 | -1.397 | 0.591 | 0.039 |
| Debt to Assets | 1 | 3 | -0.360* | 0.081 | 0.000 |
| | 2 | 3 | -0.322* | 0.072 | 0.000 |
| Foreign ownership | 1 | 3 | -0.330* | 0.081 | 0.000 |
| | 2 | 3 | -0.143 | 0.072 | 0.092 |
| MSCI Dummy | 1 | 3 | -0.829* | 0.174 | 0.000 |
| | 2 | 3 | -0.362* | 0.156 | 0.044 |

*. The mean difference is significant at the 5% level.

a. Dunnett t-tests treat one group as a control, and compare all other groups against it.

Univariate Analysis of Ownership Structure and Corporate Governance

Foreign ownership is also an important indicator for corporate governance practices. Foreign owners generally demand a higher quality of corporate governance in order to protect their rights as well as the minority rights. In order to assess the impact of foreign ownership on the level corporate governance, we run a basic regression analysis controlling for company age, years of listing, firm size, debt ratio and the dummy variables for dividends and MSCI index. Table 27 shows that there is a significant (at 99% confidence interval) positive relationship between the average foreign ownership ratios and corporate governance scores. Average foreign ownership seems to explain 34.3% of the variation in corporate governance scores. The regression model including the control variables predicts a 1.83-point increase in corporate governance score for every 10% increase in foreign ownership ratios. We conclude that firms with higher foreign ownership engage in better corporate governance practices and therefore have higher corporate governance scores.

Table 27. The Relation between Corporate Governance Scores and Foreign Ownership

| | CGS | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| (Constant) | 45.17*** | 44.947*** | 47.022** | 53.127*** | 59.728*** |
| Average foreign ownership | 29.998*** | 31.263*** | 23.262*** | 18.328** | |
| Ln (company age) | | 1.252 | -1.600 | -1.606 | -2.960 |
| Ln (years of listing) | | -2.184 | -1.218 | -0.443 | 0.697 |
| Firm size - Ln(assets) | | | 0.891 | -0.260 | 0.048 |
| Debt/Assets | | | 15.468** | 15.342** | 16.796** |
| Dummy (dividend) | | | | -0.03 | 1.106 |
| Dummy (MSCI) | | | | 7.015* | 10.662*** |
| $R^2$ | 0.343 | 0.367 | 0.493 | 0.531 | 0.455 |
| Adj. $R^2$ | 0.329 | 0.326 | 0.436 | 0.452 | 0.379 |
| $R^2$ change | 0.343 | 0.024 | 0.126 | 0.038 | -0.076 |
| Significance of F | 0.000* | 0.000* | 0.000* | 0.000* | 0.000* |
| # of observations | 50 | 50 | 50 | 50 | 50 |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

Table 28 presents the summary statistics of ANOVA between corporate governance scores and foreign ownership clusters. The ANOVA analysis yields significant results that support our hypothesis. As a result, hypothesis 3 is accepted. The mean corporate governance scores for each foreign ownership group are significantly different from the other groups. We conclude that the higher the foreign ownership ratio, the higher the mean corporate governance score is.

Table 28. ANOVA of CGS between Foreign Ownership Clusters

| | | | CGS | |
|---|---|---|---|---|
| Foreign ownership groups | Foreign ownership | Frequency | Mean | Std. Deviation |
| 1 | 0-33% | 11 | 49.595 | 8.115 |
| 2 | 34%-66% | 27 | 61.108 | 9.537 |
| 3 | 67%-100% | 12 | 69.149 | 10.312 |
| Total | | 50 | 60.505 | 11.437 |

Tests of Between-Subjects Effects

Dependent Variable: CGS

| Source | Type III Sum of Sq. | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Intercept | 5068.571 | 1 | 5068.571 | 63.679 | 0.000 |
| Firm size - Ln(assets) | 20.160 | 1 | 20.160 | 0.281 | 0.599 |
| Debt/Assets | 317.015 | 1 | 317.015 | 4.422 | 0.041 |
| Dummy (dividend) | 0.102 | 1 | 0.102 | 0.001 | 0.970 |
| Dummy (MSCI) | 333.416 | 1 | 333.416 | 4.651 | 0.037 |
| Foreign ownership groups | 536.098 | 2 | 268.049 | 3.739 | 0.032 |

Multiple Comparisons

| | (I) For. Own. Group | (J) For. Own. Group | Mean Diff. (I-J) | Std. Error | Sig. |
|---|---|---|---|---|---|
| Tukey HSD | 1 | 2 | -11.5136* | 3.379 | 0.004 |
| | | 3 | -19.55462* | 3.943 | 0.000 |
| | 2 | 1 | 11.5136* | 3.379 | 0.004 |
| | | 3 | -8.04102* | 3.328 | 0.046 |
| | 3 | 1 | 19.55462* | 3.943 | 0.000 |
| | | 2 | 8.04102* | 3.328 | 0.046 |
| Dunnett t (2-sided)[a] | 2 | 1 | 11.5136* | 3.379 | 0.003 |
| | 3 | 1 | 19.55462* | 3.943 | 0.000 |

*. The mean difference is significant at the 5% level.

a. Dunnett t-tests treat one group as a control, and compare all other groups against it.

The regression analysis between the corporate governance scores and blockholder ownership ratios does not yield any significant results. As a result, we cannot reject the null hypothesis that firm-level corporate governance practices are not influenced by the ownership concentration of the firm. Table 29 shows that blockholder ownership can only explain 0.4% of the variation in corporate governance score. The analysis of variance (ANOVA) analysis also shows that there is not a significant difference between the corporate governance scores of the companies with concentrated ownership (with higher than 65% blockholder share) and the ones that have more diffuse ownership structures (with lower than 65% blockholder share). Therefore, we reject hypothesis number four.

Table 29. The Relation between Corporate Governance Scores and Blockholder Ownership

| | CGS | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| (Constant) | 57.38*** | 58.788*** | 52.229*** | 59.016*** | 59.728*** |
| Blockholders' share | 4.892 | 4.305 | 1.540 | 2.609 | |
| Ln (company age) | | 0.109 | -3.786 | -3.212 | -2.960 |
| Ln (years of listing) | | -0.634 | -0.203 | 0.839 | 0.697 |
| Firm size - Ln(assets) | | | 2.369** | -0.008 | 0.048 |
| Debt/Assets | | | 16.306** | 17.031** | 16.796** |
| Dummy (dividend) | | | | 1.07 | 1.106 |
| Dummy (MSCI) | | | | 10.718*** | 10.662*** |
| $R^2$ | 0.004 | 0.006 | 0.346 | 0.456 | 0.455 |
| Adj. $R^2$ | -0.016 | -0.058 | 0.272 | 0.365 | 0.379 |
| $R^2$ change | 0.004 | 0.002 | 0.340 | 0.110 | -0.001 |
| Significance of F | 0.651 | 0.960 | 0.002*** | 0.000*** | 0.000*** |
| # of observations | 50 | 50 | 50 | 50 | 50 |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

In Table 30, we also test for the differences in corporate governance practices between family owned companies and others. We find a statistically significant (99% confidence interval) difference between the corporate governance scores of family owned companies and others. Family owned companies' mean corporate governance score (CGS) is 8.4 points or 14.9% higher than the CGS of other companies. We

conclude that companies owned and controlled by families have better corporate governance practices than the companies not related to a family and thus, reject hypothesis number five.

Table 30. ANOVA between Corporate Governance Scores and Family Ownership

| | | | CGS | | |
|---|---|---|---|---|---|
| Family ownership | | Frequency | Mean | Std. Deviation | |
| 0 | No | 25 | 56.295 | 11.334 | |
| 1 | Yes | 25 | 64.715 | 10.083 | |
| Total | | 50 | 60.505 | 11.437 | |
| | Sum of Sq. | df | Mean Square | F | Sig. |
| Between Groups | 886.121 | 1 | 886.121 | 7.701 | 0.008*** |
| Within Groups | 5523.094 | 48 | 115.064 | | |
| Total | 6409.215 | 49 | | | |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

## The Causality between the Ownership Structure and Firm Performance

In order to assess the causality between ownership structure and firm performance, we run two granger causality tests. The first granger causality test is between blockholders' ownership ratio and firm performance measured by Tobin's Q. We use panel data for the two variables for the six-year period between 2003 and 2008. Our panel data for the first test includes 56 listed companies.

Table 31. Granger Causality Test between Blockholders' Ownership and Tobin's Q

| Pair wise Granger Causality Tests | Obs | F-statistic | Probability |
|---|---|---|---|
| Null Hypothesis: | | | |
| B does not Granger Cause Q | 160 | 2.89129 | **0.09104*** |
| Q does not Granger Cause B | | 0.01278 | 0.91013 |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

Table 31 shows that our null hypothesis that blockholders' ownership does not granger cause Tobin's Q is rejected at a 90% confidence interval. However, we

cannot reject the null hypothesis that firm performance does not granger cause blockholders' ownership. We conclude that there is a unidirectional causal relationship between blockholder ownership and firm performance at a 90% confidence interval. An increase in blockholders' ownership ratio predicts an increase in firm performance.

Table 32. Granger Causality Test between Foreign Ownership and Tobin's Q

| Pair wise Granger Causality Tests | Obs | F-statistic | Probability |
|---|---|---|---|
| Null Hypothesis:<br>F does not Granger Cause Q | 400 | 619427 | **0.01323*** ** |
| Q does not Granger Cause F | | 0.99722 | 0.31859 |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

Table 32 shows that the null hypothesis that foreign ownership does not granger cause Tobin's Q is rejected at a 98% confidence interval. However, we cannot reject the null hypothesis that firm performance does not granger cause foreign ownership. We conclude that there is a unidirectional causal relationship between foreign ownership and firm performance at a 98% confidence interval and accept hypothesis number seven. An increase in foreign ownership ratio predicts an increase in firm performance. However, firm performance cannot predict an increase in foreign ownership.

## Additional Tests on the Impact of the Recent Global Backdrop

After analyzing the relationship between corporate governance, firm performance and the ownership structure, we also test for the impact of the recent global backdrop on listed companies' stock market performances. Our aim is to see whether firms with higher corporate governance scores, higher foreign ownership ratios and higher ownership concentration have experienced a smaller reduction in their share prices. In order to test these relationships we run a simple regression where the dependent variable is the abnormal stock return during the recent stock market crash. In Table 33, we test our eighth hypothesis that during the recent stock market crash, listed firms with higher corporate governance scores experienced a smaller reduction in their share prices. The regression analysis between the corporate governance scores (CGS) and the abnormal stock return during the equity market crash yields a significant (at 99% confidence interval) positive relationship between the two. Every one point increase in CGS predicts a 2% higher abnormal stock return. However, when we control for other factors, we find that firm size also has a significant positive correlation with the abnormal stock return and the correlation coefficient of CGS becomes no longer statistically different from zero. As a result, we conclude that firm size is a mediator variable that explains the positive relation between CGS and abnormal stock return. Investors prefer companies with better corporate governance practices. This results in higher firm value, which in turn causes higher stock returns. The positive causal relationship enables us to conclude that listed firms with higher corporate governance scores experienced a smaller reduction in their share prices or in other words achieved higher abnormal returns.

Table 33. The Relation between Abnormal Stock Return during Market Crash and CGS

| | Abnormal stock return during equity market crash | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| (Constant) | -1.321*** | -1.583*** | -1.945*** | -2.116*** | -1.867*** | -1.424*** |
| CGS | 0.02*** | 0.006 | 0.007 | 0.009 | 0.01* | |
| Firm size - Ln(Mcap) -2008 | | 0.144*** | 0.129*** | 0.205*** | 0.221*** | 0.233*** |
| Debt/Assets - 2008 | | 0.399 | 0.312 | 0.185 | 0.247 | 0.339 |
| Ln (years of listing) | | | -0.023 | -0.056 | -0.081 | -0.076 |
| Ln (company age) | | | 0.128 | 0.109 | 0.145 | 0.130 |
| Dummy (dividend) - 2008 | | | | -0.179 | -0.152 | -0.167 |
| Dummy (MSCI) - 2008 | | | | -0.240 | -0.237 | -0.175 |
| Average foreign ownership - 2008 | | | | | -0.200 | -0.063 |
| Blockholders' share - 2008 | | | | | -0.676* | -0.659* |
| $R^2$ | 0.227 | 0.457 | 0.477 | 0.528 | 0.567 | 0.534 |
| Adj. $R^2$ | 0.211 | 0.421 | 0.417 | 0.449 | 0.470 | 0.443 |
| $R^2$ change | 0.227 | 0.230 | 0.020 | 0.051 | 0.039 | -0.033 |
| Significance of F | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** |
| # of observations | 50 | 50 | 50 | 50 | 50 | 50 |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

Table 34 runs a similar regression analysis between average foreign ownership ratios of the companies in our sample with the abnormal stock return during the recent equity market crash. The regression analysis shows that there is a positive relationship between abnormal stock return and foreign ownership at a 95% confidence interval. Firm size measured by the market capitalization of the firm is a complete mediator variable that explains the positive correlation between our main dependent and independent variables. We find that during the recent sell-off in the equity markets, listed firms with higher foreign ownership ratios experienced a smaller reduction in their share prices. According to the simple regression model below, every 10% increase in foreign ownership predicts 6.5% higher abnormal stock returns.

Table 34. The Relation between Abnormal Stock Return during Market Crash and Foreign Ownership

| | Abnormal stock return during equity market crash | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| (Constant) | -0.44*** | -1.38*** | -1.623*** | -1.694*** | -1.264*** | -1.424*** |
| Foreign ownership | 0.65** | -0.076 | -0.006 | 0.158 | 0.873 | |
| Firm size - Ln(Mcap) -2008 | | 0.168*** | 0.155*** | 0.215*** | 0.235*** | 0.233*** |
| Debt/Assets - 2008 | | 0.466* | 0.410 | 0.275 | 0.389 | 0.339 |
| Ln (years of listing) | | | -0.020 | -0.059 | -0.123 | -0.076 |
| Ln (company age) | | | 0.101 | 0.094 | 0.123 | 0.130 |
| Dummy (dividend) - 2008 | | | | -0.195 | -0.181 | -0.167 |
| Dummy (MSCI) - 2008 | | | | -0.190 | -0.207 | -0.175 |
| Average foreign ownership - 2008 | | | | | -0.771 | -0.063 |
| Blockholders' share - 2008 | | | | | -0.85** | -0.659* |
| $R^2$ | 0.092 | 0.445 | 0.457 | 0.502 | 0.562 | 0.534 |
| Adj. $R^2$ | 0.073 | 0.409 | 0.396 | 0.419 | 0.464 | 0.443 |
| $R^2$ change | 0.092 | 0.353 | 0.012 | 0.045 | 0.060 | -0.028 |
| Significance of F | 0.032** | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** |
| # of observations | 50 | 50 | 50 | 50 | 50 | 50 |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

In order to test our hypothesis that listed firms with higher blockholder ownership ratios experienced a smaller reduction in their share prices during the recent equity market crash, we run the simple regression analysis shown in Table 35. We find no significant relationship between the blockholder ownership and abnormal stock return. Firm size is the only control variable that has a positive significant relationship with the abnormal stock return, indicating that investors preferred larger firms during the recent equity market crash.

Table 35. The Relation between Abnormal Stock Return during Market Crash and Blockholder Ownership

| | Abnormal stock return during equity market crash | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| (Constant) | -0.194 | -1.163*** | -1.413*** | -1.463*** | -1.483*** | -1.424*** |
| Blockholder ownership | 0.135 | -0.460 | -0.65* | -0.644* | 20.846 | |
| Firm size - Ln(Mcap) -2008 | | 0.17*** | 0.163*** | 0.231*** | 0.23*** | 0.233*** |
| Debt/Assets - 2008 | | 0.517** | 0.432* | 0.329 | 0.304 | 0.339 |
| Ln (years of listing) | | | -0.049 | -0.077 | -0.067 | -0.076 |
| Ln (company age) | | | 0.159 | 0.137 | 0.121 | 0.130 |
| Dummy (dividend) - 2008 | | | | -0.170 | -0.141 | -0.167 |
| Dummy (MSCI) - 2008 | | | | -0.187 | -0.185 | -0.175 |
| Average foreign ownership - 2008 | | | | | -0.006 | -0.063 |
| Blockholders' share - 2008 | | | | | -21.401 | -0.659* |
| $R^2$ | 0.002 | 0.464 | 0.493 | 0.533 | 0.546 | 0.534 |
| Adj. $R^2$ | -0.019 | 0.429 | 0.435 | 0.455 | 0.444 | 0.443 |
| $R^2$ change | 0.002 | 0.462 | 0.029 | 0.040 | 0.013 | -0.012 |
| Significance of F | 0.766 | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** |
| # of observations | 50 | 50 | 50 | 50 | 50 | 50 |

Note: ***, **, and * indicate being statistically significant at a 1%, 5% and 10% level, respectively.

# CHAPTER 6: CONCLUSION

In this study, we empirically analyze the relationships between the ownership structure, corporate governance and firm performance with a firm-level study. We use qualitative data extracted from a survey, which was previously used by the Asian Development Bank institute, to construct a broad corporate governance index (0-100) for 50 listed companies on the Istanbul Stock Exchange. The fact that the same survey was used by Nam & Nam (2004) in Indonesia, Korea, Malaysia and Thailand enables us to evaluate cross-country variations in corporate governance practices.

The survey results shed light on the firm-level corporate governance practices and ownership structure in the largest publicly listed companies in Turkey. Much like the four Asian economies in Asian Development Bank Institute's study (Nam & Nam, 2004), diffuse ownership is rare in Turkey. However, the foreign ownership in Turkey is higher than the Asian countries. Although the number of M&A activities increased dramatically between 2003 and 2007, most of the companies are still in ties with a family or family controlled holding company. This results in higher ownership concentration ratios for the Turkish companies. The corporate governance scores are measured by the qualitative answers to our survey. The mean corporate governance score (CGS) for our sample is 60.51, which is significantly higher than Thailand (59.1), Korea (50.2), Indonesia (52.5), but lower than Malaysia (73.8). In terms of shareholder rights and disclosure (SD), Turkish firms in our sample have also better practices than Thailand, Korea and Indonesia. However, the mean score for the effectiveness of the board of directors (EB) is lower than both Thailand and Malaysia.

CEO/Chairman duality is one of the most important topics of corporate governance literature. While Jensen (1993) argues that CEO and chairman roles should be separated, Brickley, Coles & Jarrell (1997) find evidence that costs of separating these roles outweigh the benefits. In our sample, 84% of the companies employ a professional CEO, which is higher than the Asian countries in Nam & Nam's (2004) study. Unlike Asian countries, Turkish companies does not seem to fully observe the one share/one vote rule as 32% of our sample has different class of shares with different voting rights. Disclosure of corporate information in Turkey seems to be relatively good for such information as self-dealing or related-party transactions, significant changes in ownership, directors' trading of their company shares, resumes of directors, policies on risk management and corporate governance structures and policies. However, the disclosure on directors' remuneration and fees paid to external auditors, advisors and other related parties is less common.

There is evidence that the board size and firm value are negatively correlated. Eisenberg et al. (1998) report a negative relationship between the board size and the profitability of small to medium sized companies. While our study focuses on a broader corporate governance definition, board size is included as an important aspect for the effectiveness of the board of directors. Unlike the Asian countries, 74% of Turkish companies have either 7 or 9 directors in their BoD. The size of boards in Asian countries differs widely. The median board size is around 11-13 in Thailand, 8-10 in Malaysia, 6-7 in Korea and 3-5 in Indonesia, where as it is 7-9 for Turkey. There is no universal agreement on the optimum size of a board of directors. A large number of members represent a challenge in terms of using them effectively and/or having any kind of meaningful individual participation. According to the

Corporate Library's study, the average board size is 9.2 members, and most boards range from 3 to 31 members.

A key attribute of an effective board is that it is comprised of a majority of independent directors. Hermalin & Weisbach (2003) find that independent directors are more effective in monitoring activities. In Turkey, the independent director concept is not as common as in the Asian countries. More than 74% of the companies in our sample have less than two independent board members. Additionally, some of the independent directors are retired CEOs or a relative when that person is actually an insider with conflicts of interest. The observed behaviour of independent directors indicates that the Turkish independent directors are far less independent than those in the Asian countries in the ADBI's study. Like Malaysian boards, Turkish boards are relatively active in evaluating CEO performance and compensation compared to the other Asian countries (Thailand, Indonesia and Korea). 70% of the Turkish companies in our sample undertake this task "as a routine" or "sometimes", in contrast with 50-54% of the Thai firms and a little less than 40% of the Korean firms. Over 80% of the surveyed firms in Malaysia give their CEO a stock option, while 13-14% do so in the other Asian companies. Stock options are not allowed in Turkey due to the current legal structure.

Empirical evidence presented in this study points to a strong positive relation between the overall corporate governance index and firm value measured by Tobin's Q. This result is largely consistent with the studies in other countries (Klapper & Love, 2003; Black et al., 2003; Gompers et al., 2003; Durnev & Kim, 2005; Nam & Nam, 2004) as well as the Asian Development Bank Institute's study (Nam & Nam, 2004), which uses the same methodology with our study. We find that firm size is moderating variable that strengthens the relationship between corporate governance

scores and Tobin's Q. Firm size tends to be negatively associated with Tobin's Q, which indicates that the market calls for a higher level of corporate governance for larger firms. This finding is also consistent with Nam & Nam's (2004) findings. Leverage has a highly significant positive impact on firm value when corporate governance is not included as an independent variable. We conclude that market calls for better corporate governance practices from firms with high leverage. Foreign ownership has a positive relation with the firm performance at a 95% confidence interval. Foreign owners generally demand a higher quality of corporate governance in order to protect their rights as well as the minority rights. The MSCI dummy variable also has a positive relationship with the firm performance, which decreases CGS' significance in the regression analysis, meaning that MSCI dummy is a mediator variable. Companies with better corporate governance practices are likely to be included in the MSCI index and the companies in the MSCI index have higher market values than the ones that are not included. This is consistent with Black et al.'s (2005) findings in a firm-level corporate governance study in Russia. They find that firms included in MSCI index have higher valuations, consistent with the idea that they are more visible and enjoy better analyst coverage.

Unlike the significant positive relationship between corporate governance index and Tobin's Q, we find no significant evidence that better governed companies achieve higher ROA or yield better stock returns to their investors. A similar study by Ertugrul & Hedge (2005) shows significant relation between corporate governance scores and performance measures such as ROA and stock return. Their study uses Gompers et al. (2003) governance index for 1414 firms and find significant positive relation between corporate governance index and both ROA and

stock return. Their findings suggest that every 1% increase in corporate governance score leads to 0.1277% increase in ROA and 0.6711% increase in stock returns.

ROA is a pure accounting based measure of firm performance and significantly affected by firm characteristics such as firm size and debt ratio. ROA is a backward looking performance measure. However, it is prone to manipulation by management and usually do not reflect investment in intangible assets. This distorts the performance comparisons across firms with differing degrees of intangible assets. We relate the insignificant relationship between corporate governance index and average stock returns to stock market specific issues and other firm characteristics that have higher impact on investor interest. Turkish equity market is a top-down market where the stock returns are highly correlated with the overall stock market returns. The average beta of our sample is 0.87, implying significant correlation with the stock market index. The fact that our stock return data includes a boom and a bust period also distorts the impact of exogenous variables on stock returns. The variation in average stock returns is partially explained by the dividend dummy, which indicates that investors reward dividend-paying companies.

Two recurring issues in other firm-level corporate governance studies are the potential for the results to be explained by signalling and endogeneity. The results of our study show that firms signal high quality by adopting better corporate governance practices, which in turn results in higher firm value rather than a direct impact of better governance practices on the company's financial performance. We arrive at this conclusion as we find a strong positive relation between corporate governance index and Tobin's Q, but no significant relationship with the ROA.

We also find that the corporate governance is not an endogenous variable (firms with higher market value adopt better corporate governance practices, so that the causation runs from firm value to corporate governance). As a result, we conclude that the causation runs from corporate governance to firm value, such that better corporate governance practices result in higher firm value. A similar firm-level corporate governance study by Black et.al. (2003) in Korea shows that corporate governance is an endogenous variable and the endogenous component of corporate governance is negatively correlated with the error term for Tobin's Q, suggesting that the coefficients are downward biased.

As a robustness check for our results, we assess how using different weighting schemes to combine our corporate governance sub-indices into an overall corporate governance index affects our results, apart from using different measures of firm performance similar to the study of Black et al. (2003) in Korea. We find similar results for different corporate governance indices (CGSd and CGSw). The positive relationship between Tobin's Q and corporate governance scores prevails for the other two indices as well.

The strong positive relationship between Tobin's Q and the corporate governance index does not prevail for financial institutions in our sample. However, there is a strong positive relationship for non-financial companies. We find no evidence of other industry effects when we run regression for the sub-samples such as consumer and construction companies. We also find evidence that the relation between corporate governance practices and firm value is higher for larger firms as investors seek and reward better corporate governance practices highly in larger firms. For the same level of improvement in firm value, larger firms have to improve their corporate governance practices more than the small firms. Supporting our

earlier argument on the negative effect of firm size on corporate governance, we find that firm size has a negative relation with firm value in large firms. However, the same argument does not prevail for smaller firms. The mediating effect of the MSCI dummy is visible for small firms but not for large firms, because all of the large firms are included in the MSCI index.

We find a positive and significant relation between the average foreign ownership ratios and corporate governance scores. We conclude that firms with higher foreign ownership engage in better corporate governance practices and therefore have higher corporate governance scores. Foreign owners generally demand a higher quality of corporate governance in order to protect their rights as well as the minority rights.

However, the regression analysis between the corporate governance scores and blockholder ownership ratios does not yield any significant results. We conclude that higher ownership concentration does not necessarily imply better corporate governance practices. In theory, the most straightforward way to align cash flow and control rights of minorities is to concentrate their share holdings. When control rights are concentrated in a small number of investors, the joint action by investors is much easier compared to a large number of investors. As a result, concentration of ownership increases legal protection of shareholder rights. Although there is empirical evidence on the relationship between ownership concentration and certain corporate governance elements, the impact on overall corporate governance and firm value is still uncertain and our study also fails to find any significant evidence.

Our study also sheds some light on the corporate governance practices by family owned corporations in Turkey. We find that companies owned and controlled by families have better corporate governance practices than the companies not

related to a family. While this holds true for our sample, which includes largest family owned companies and their listed parent holdings, it may not be true for smaller, non-listed family owned companies. Family owners are likely to take actions that would maximize their own utilities and these actions might be at the expense of minority shareholder rights.

Lastly, we analyze the relationship between the ownership structure and firm value. We conclude that there is a significant unidirectional causal relationship between foreign ownership and firm value (Tobin's Q), such that the causation runs from foreign ownership to firm value. An increase in foreign ownership ratio predicts an increase in firm value. The causal relationship between blockholder ownership and firm value is only significant at a 90% confidence interval and there is a unidirectional causal relationship from blockholder ownership to firm value. There is vast amount of literature on the causal relationship between blockholder ownership and firm value. Pedersen et al. (2000) find no significant causal effects either way in the United States and United Kingdom, but in continental Europe they find a negative effect of blockholder ownership on firm value and a negative effect of firm value on blockholder ownership. Lins (2002) finds that firm values are lower, when a management group's control rights exceed its cash flow rights. They also find that large non-management control rights blockholdings are positively related to firm value.

The empirical analyses between ownership structure, corporate governance and firm performance yield important results within the Turkish context. Similar studies were conducted in other emerging markets such as Russia and Korea. While most of these studies focus on either the relationship between corporate governance and firm performance or the relationship between ownership structure and firm

value, our study combines these under the same research and shows empirical evidence specific to Turkey within this context.

The fact that our study is conducted during one of the largest global economic crisis and the stock market crash in the last century enables us to empirically analyze the relationships between stock market returns, corporate governance scores and ownership structure. Our aim in this study is to see whether firms with higher corporate governance scores, higher foreign ownership ratios and higher ownership concentration have experienced a smaller reduction in their share prices during the recent stock market crash. We find a positive relation between corporate governance index (CGS) and abnormal stock returns during the Turkish stock market crash. Every one-point increase in corporate governance index predicts a 2% higher abnormal stock return. We also find that firm size is a mediator variable that explains the positive relationship between corporate governance index and abnormal stock return. We conclude that investors prefer companies with better corporate governance practices during the down trends in the equity market. This results in higher firm value measured by the market capitalization, which in turn causes higher abnormal stock returns. The positive causal relationship enables us to conclude that listed firms with higher corporate governance scores experienced a smaller reduction in their share prices during the recent stock market crash.

We also find empirical evidence that listed firms with higher foreign ownership ratios experienced a smaller reduction in their share prices. Every 10-percentage point increase in foreign ownership ratios predicts 6.5% higher abnormal stock returns. We find no significant relationship between the blockholder ownership and abnormal stock return. Firm size is the only control variable that has a positive

significant relationship with the abnormal stock return, indicating that investors preferred larger firms during the recent equity market crash.

Cautions are needed in interpreting the results of our study. First, this study is conducted using a sub-sample of listed Turkish companies. We initially aimed 100 listed companies in the Istanbul Stock Exchange, but only 50 companies were receptive to our corporate governance survey. Our study suffers unavoidably from a sample selection bias. Therefore, the results need to be evaluated with caution as they apply only to large and medium sized companies. Second, as the respondents to our survey are the company representatives, the problem of subjectivity arises, which is another limitation of our study. The company representatives may be biased in giving the answers to our survey.

We believe that extending the sample of this study by including all the listed companies in the Istanbul Stock Exchange could eliminate the sample selection bias. We believe that our study could form a sound basis for further research on firm-level corporate governance studies in Turkey. A larger sample would also enable the researcher to evaluate industry effects better. Further research could also include unlisted companies in the sample, which would enable the researcher to compare the results between listed and unlisted companies. While the corporate governance index in this study mainly focuses on shareholder rights and effectiveness of the board of directors, the ever expanding definition of corporate governance includes other stakeholders such as suppliers, consumers and financial institutions. Social responsibility is also an important corporate governance element not included within the scope of this study. We believe that a broader corporate governance index including the rights of these other stakeholders could be formulated in further research. In this study, we find no evidence of a relationship between corporate

governance scores and stock return as a performance variable. However, there is a significant relationship between corporate governance scores and abnormal stock returns during the recent equity market crash. The impact of corporate governance on stock performance may be asymmetric such that investors see companies with better corporate governance practices as defensive during the down trends in the equity markets but do not attach a premium to such companies when the equity markets are in an uptrend. We believe the investigation of the asymmetric affect of corporate governance on stock performance could be the basis for further research.

# APPENDICES

## A: OECD's Principles of Corporate Governance[2]

I. Ensuring the Basis for an Effective Corporate Governance Framework

The corporate governance framework should promote transparent and efficient markets, be consistent with the rule of law and clearly articulate the division of responsibilities among different supervisory, regulatory and enforcement authorities.

II. The Rights of Shareholders and Key Ownership Functions

The corporate governance framework should protect and facilitate the exercise of shareholders' rights.

III. The Equitable Treatment of Shareholders

The corporate governance framework should ensure the equitable treatment of all shareholders, including minority and foreign shareholders. All shareholders should have the opportunity to obtain effective redress for violation of their rights.

IV. The Role of Stakeholders in Corporate Governance

The corporate governance framework should recognise the rights of stakeholders established by law or through mutual agreements and encourage active co-operation between corporations and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises.

V. Disclosure and Transparency

[2] OECD Principles of Corporate Governance, 2004.

The corporate governance framework should ensure that timely and accurate disclosure is made on all material matters regarding the corporation, including the financial situation, performance, ownership, and governance of the company.

VI. The Responsibilities of the Board

The corporate governance framework should ensure the strategic guidance of the company, the effective monitoring of management by the board, and the board's accountability to the company and the shareholders.

B: Survey Questions

Questionnaire Survey on Corporate Governance Practices

*To the respondents*

Thank you very much for your willingness to join this survey. The survey is being conducted by the Management Department of Bogazici University as a part of a PhD Dissertation Thesis with a view to understanding corporate governance practices across Turkey at the firm level.

The survey is asking questions on the practices in your firm, regardless of the laws and regulations. Your accurate and frank response is very important for the reliability of our research.

The results will be used only for academic research purposes and be presented only in aggregate without being revealed by individual firms.

To be answered by investor relations or any officer in charge of governance matters (shareholder relations, public disclosure, assisting outside directors, etc.)

I. General Information on the Firm and Respondent

1. How do you describe the ownership and control structure of the firm? Check one only.

*A) The largest shareholder has a substantial voting right (over 30-40%, including that of companies he controls) and effectively controls the firm*

*B) The largest shareholder effectively controls the firm even though his voting is far less than 30-40%*

*C) Two or more large shareholders collectively control the firm*

*D) Ownership is fairly diffuse with no controlling shareholder, and the management is not directly controlled by shareholders*

*E) Other:  Please describe:*

2. What type is your company? Check one only.

*A) Stand-alone company*

*B) Subsidiary of a family-based business group*

*C) Subsidiary of a business group not controlled by families*

*D) Parent firm of a family-based holding company*

*E) Subsidiary of a family-based holding company*

*F) Parent firm of a holding company not controlled by families*

*G) Subsidiary of a holding company not controlled by families*

3. Is the firm wholly or partially owned and controlled by the government?

*A) Not controlled by the government*

*B) Yes, substantially owned and controlled by the government*

*C) Partially owned, but not much controlled by the government*

4. Is the firm wholly or partially owned and controlled by foreigners (foreign firms)?

*A) Little owned by foreign investors*

*B) Yes, substantially owned and controlled by foreigners (foreign firms)*

*C) Substantially owned, but not controlled by foreigners (foreign firms)*

5. What relation does the CEO have with the founder or the largest shareholder?

*A) Founder him/herself*

*B) Founder's family member*

*C) Professional manager*

6. How old is the CEO?

7. How many years in this position?

8. What is the ownership/control structure of the biggest creditor bank of your firm?

*A) Mainly government-owned*

*B) Belong to the same business group as the firm's*

*C) Belong to a business group not related with the firm*

*D) Mainly owned and controlled by a foreign financial institution(s)*

*E) Owned by small shareholders (no controlling owner)*

9. Does your firm have a labour union(s)? *(A) Yes (B) No*

II. Shareholder Rights and Disclosure Information

10. Is there any deviation from the one-share one-vote rule in your company?

*A) No*

*B) Yes, there are different classes of shares with different voting rights*

11. How easy is it for your shareholders to participate in voting at the shareholders' meeting?

a) Is voting by mail allowed? *(A) Yes (B) No*

b) Can anybody serve as a proxy? *(A) Yes (B) No*

Please choose the appropriate statement or express the extent to which you agree or disagree on the given statement by choosing (circling) one of the following:

| | |
|---|---|
| SA | Strongly Agree |
| A | Agree |
| N/N | Neither agree nor disagree (or no opinion) |
| D | Disagree |
| SD | Strongly Disagree |

12. Do you agree with the following statements for your firm?

a) Shareholders are provided with adequate information on the agenda items of the shareholders' meeting

b) Adequate time is given for asking questions and placing issues at the shareholders' meeting

c) Shareholders' priority subscription right in the issuance of shares is adequately protected in the company's articles of incorporation or in the process of shareholder approval

d) Related-party transactions are fully discussed with adequate information at the shareholders' meeting

e) It is not difficult to know how much equity ownership the major shareholders control (including the equity shares of companies they control)

13. What is the role of shareholders in practice in nominating candidates and electing outside directors of your firm?

a) Are director candidates disclosed before the shareholders' meeting?

*Always* *Often* *Sometimes* *Rarely* *Never*

b) Can minority shareholders nominate candidates at the shareholders' meeting or prior to the meeting

*Always* *Often* *Sometimes* *Rarely* *Never*

c) Would it be possible for the director candidates proposed by the management of your firm to fail to be elected at the shareholders' meeting?

*Always* *Often* *Sometimes* *Rarely* *Never*

14. Information about the latest annual shareholders' meeting?

a) How long did the last annual shareholders' meeting last?

*A) Less than 30 minutes*

*B) 30-60 minutes*

*C) 1-2 hours*

*D) 2-3 hours*

*E) Over 3 hours*

b) How many shareholders attended the meeting? *( ) persons*

15. Does your firm disclose the following information? If yes, by what means?

(More than one choice can be selected)

Web: company's web page

AR: annual report

RR: report to the Capital Markets Board

No: no disclosure

a) Related-party transactions *A) Web B) RR C) AR D) No*

b) Directors' selling or buying shares in their company *A) Web B) RR C) AR D) No*

c) Resumes/backgrounds of directors *A) Web B) RR C) AR D) No*

d) Compensation schemes of directors *A) Web B) RR C) AR D) No*

e) Fees paid to external auditors, advisors, and related parties

*A) Web B) RR C) AR D) No*

f) Policies on risk management *A) Web B) RR C) AR D) No*

g) Significant changes in ownership *A) Web B) RR C) AR D) No*

h) Explicit corporate governance rules and vision *A) Web B) RR C) AR D) No*

16. How timely and informative are the disclosures?

a) Does your firm disclose annual reports? *(A) Yes (B) No*

b) Does your firm disclose quarterly financial statements? *(A) Yes (B) No*

c) Does your firm have a web-site? Is it also in English?

A) Available and very informative both in Turkish and English

B) Web-site informative in Turkish, but limited information in English

C) Web-site informative in Turkish, but no English web-site

D) Web-site available only in Turkish and not very informative

E) No web site yet

III. Effectiveness of the Board of Directors

17. How is your board composed?

a) How many directors does your Board have in total? *( )*

*persons*

b) How many independent directors does your Board have? *( ) persons*

c) Are there any foreign nationals on your Board? *(A) Yes (B) No*

d) Does the CEO of your firm also serve as the Board Chairman? *(A) Yes (B) No*

18. How prevalent are the following practices?

a) Independent directors meeting formally or informally without management to discuss corporate matters

*Always* *Often* *Sometimes* *Rarely* *Never*

b) Independent directors altering or adding the board meeting agenda set by the CEO

*Always* *Often* *Sometimes* *Rarely* *Never*

c) Independent directors participating actively in board discussions

*Always* *Often* *Sometimes* *Rarely* *Never*

19. What is the typical term of independent directors? ( ) years

20. Does your Board have the following committees? What proportion of the committee members are independent directors (%)?

a) Audit Committee *(A) Yes; ( ) %* *(B) No*

b) Compensation Committee *(A) Yes; ( ) %* *(B) No*

c) Nomination Committee *(A) Yes; ( ) %* *(B) No*

21. (If you have an audit committee) How effective and independent is your audit committee?

a) Does it have someone with accounting/finance expertise? *(A) Yes (B) No*

b) Is it chaired by an independent director? *(A) Yes (B) No*

c) Are minutes recorded for each audit committee meeting? *(A) Yes (B) No*

22. How is the CEO evaluated and compensated?

a) Does your Board or compensation committee formally evaluate the CEO's performance?

*Always Often Sometimes Rarely Never*

b) How about the review of CEO compensation?

*Always Often Sometimes Rarely Never*

c) Is the CEO given a stock option?

*(A) Substantially (B) Some (C) None*

23. How much time and effort did directors devote to board meetings last year?

a) How many board meetings were held last year?

*(A) 2-3 times (B) 4-5 Times (C) 6-7 times (D) 8 times or more*

b) What was the average attendance rate for Board meetings?

*(A) 90-100% (B) 80-90% (C) 70-80% (D) 60-70% (E) 50-60%*

24. Is there any formal mechanism for evaluating the performance of directors?

*(A) Yes (B) No*

25. Does the company provide any education or training opportunities for directors beyond what is mandatory?

*Always Often Sometimes Rarely Never*

26. Is a contact person designated for the support of outside directors?

*(A) Yes (B) No*

27. Name of the company & ISE Ticker

28. Sector

29. Title of the Respondent

30. Number of years working for the firm

31. Year of establishment of the firm

32. For how many years is the firm listed in ISE

---- END OF SURVEY ----

## C: Scoring Corporate Governance Practices

| Question Number | Weight (%) | Score by Response |
|---|---|---|
| Shareholder Rights and Disclosure of Information (SD) | | |
| *Effective participation in decision making (EP)* | | |
| 10 | 25.0% | A (100), B (0) |
| 11-a | 12.5% | A (100), B (0) |
| 11-b | 12.5% | A (100), B (0) |
| 12-a | 12.5% | SA (100), A (75), N/N (50), D (25), SD (0) |
| 12-b | 12.5% | SA (100), A (75), N/N (50), D (25), SD (0) |
| 14-a | 12.5% | A (0), B (25), C (50), D (75), E (100) |
| 14-b | 12.5% | Up to 25 (0), 25-75 (50), more than 75 (100) |
| *Election of directors and other rights of shareholders (DI)* | | |
| 12-c to 12-e | 16.7% | SA (100), A (75), N/N (50), D (25), SD (0) |
| 13-a to 13-c | 16.7% | A (100), O (75), S (50), R (25), N (0) |
| *Disclosure and transparency (DT)* | | |
| 15-a to 15-h | 6.3% | Add (A (40), B(30), C(30)), D (0) |
| 16-a | 16.7% | A (100), B (0) |
| 16-b | 16.7% | A (100), B (0) |
| 16-c | 16.7% | A (100), B (75), C (50), D (25), E (0) |
| Effectiveness of the Board of Directors (EB) | | |
| *Board composition and independence (CI)* | | |
| 17-a | 10.7% | 8-10 (100), 6-7 or 11-13 (67), 4-5 or 14-16 (33) |
| 17-b | 10.7% | (17-b/17.a)>= 0.5 (100), 0.5>( )>0.25 (50), otherwise (0) |
| 17-c | 10.7% | Yes (100), No (0) |
| 17-d | 10.7% | Yes (0), No (100) |
| 18-a to 18-c | 14.3% | A (100), O (75), S (50), R (25), N (0) |
| 19 | 14.3% | 1-3 (100), above 3 (0) |
| *Functions of the board and the activities of board committees (BF)* | | |
| 20-a to 20-c | 8.3% | A > 75% (100), 0.75>A>0.25 (70), A<0.5 (40), B (0) |
| 21-a to 21-c | 8.3% | A (100), B (0) |
| 22-a | 12.5% | A (100), O (75), S (50), R (25), N (0) |
| 22-b | 12.5% | A (100), O (75), S (50), R (25), N (0) |
| 23-a | 12.5% | A (0), B (50), C (100), D (100) |
| 23-b | 12.5% | A (0), B (25), C (50), D (75), E (100) |
| *Access to information, general support, and director compensation (IS)* | | |
| 22-c | 25.0% | A (100), B (50), C (0) |
| 24 | 25.0% | A (100), B (50), C (0) |
| 25 | 25.0% | A (100), B (50), C (0) |
| 26 | 25.0% | A (100), B (0) |

# D: Variable Definitions

| Variables | Definition | Source |
|---|---|---|
| Corporate governance variables | | |
| CGS | Corporate governance score (equal-weight) = (SD + EB)/2 | CG Survey |
| CGSd | Corporate governance score (equal-weight with dividend dummy) = 0.45*SD + 0.45*EB + 0.10*dividend dummy (100 or 0) | CG Survey |
| CGSw | Corporate governance score (weighted) = 0.06 * EP + 0.23 * DI + 0.43 * BF + 0.28 * CI | CG Survey |
| SD | Shareholder rights and Disclosure of information = 1/3 * EP + 1/3 * DI + 1/3 * DT | CG Survey |
| EB | Effectiveness of the BoD = 0.4 * CI + 0.4 * BF + 0.2 * IS | CG Survey |
| EP | Effective participation in decision making | CG Survey |
| DI | Election of directors and other rights of shareholders | CG Survey |
| DT | Disclosure and transparency | CG Survey |
| CI | Board composition and independence | CG Survey |
| BF | Functions of the board and the activities of board committees | CG Survey |
| IS | Access to information, general support and compensation | CG Survey |
| **Performance measures** | | |
| ROA | Return on Assets = (Net income + Net interest expense net of income tax savings) / Average book value of total assets | Istanbul Stock Exchange |
| Tobin's Q | Tobin's Q = (Market capitalisation + Book value of debt) / Book value of total assets | Istanbul Stock Exchange |
| Stock return | Annual stock return (%) | Istanbul Stock Exchange |
| **Control variables** | | |
| Firm size_1 | ln (Book value of total assets) | Istanbul Stock Exchange |
| Firm size_2 | ln (Market capitalization) | Istanbul Stock Exchange |
| Leverage | Debt ratio = Book value of total debt / Book value of total assets | Istanbul Stock Exchange |
| Company age | ln (number years since establishment of the company) | Survey |
| Number of years listed | ln (the number of years the company listed in the Istanbul Stock Exchange) | Survey |
| MSCI dummy | = 1 if the company was a part of MSCI-Turkey index for the past four years, 0 if otherwise | Deutsche Bank database |
| Dividend dummy | = 1 if the company distributed cash dividends at least three years in the past four years, 0 if otherwise | Istanbul Stock Exchange |
| Blockholders' ownership % | The total ownership ratio of the blockholders who own more than a 5% stake in the company | Annual Report |
| Concentrated ownership dummy | = 1 if the blockholders' ownership is higher than 65%, 0 if otherwise | Annual Report |
| Foreign ownership % | The total ownership ratio of the foreign institutional investors in a company | Foreks |
| Foreign ownership dummy | = 1 if foreign ownership is less than 33%, 2 if foreign ownership is higher than 33% and less than 66%, 3 if foreign ownership is higher than 66% | Foreks |
| Family ownership dummy | = 1 if the company is owned and controlled by families, o if otherwise | Survey |

REFERENCES


Abowd, John M., Kaplan, David S., 1999, *Executive Compensation: Six Questions That Need Answering*, Journal of Economic Perspectives 13(4), 145-168.

Agrawal, A. and C. Knoeber, 1996, *Firm performance and mechanisms to control agency problems between managers and shareholders*, Journal of Financial and Quantitative Analysis 31, 377-397.

Allen, F., Gale, D., 2000, *Comparing Financial Systems*. MIT Press: Cambridge, MA.

Ang, J. S., Cole, R.A, Lin, W. J., 2000, *Agency Costs and Ownership Structure*, Journal of Finance 55, 81-106.

Ararat, Melsa, Ugur, Mehmet, 2003, *Corporate Governance in Turkey: An Overview and Some Policy Recommendations*, Corporate Governance: The International Journal of Business in Society 3, 58-75.

Barclay, Michael J., and Holderness, Clifford G., 1991, *Negotiated Block Trades and Corporate Control*, The Journal of Finance 46(3), Fiftieth Anniversary Meeting, 861-878.

Barclay, Michael J., and Holderness, Clifford G., 1989, *Private Benefits from Control of Public Corporations*, The Journal of Financial Economics 25(2), 371-395.

Beasley, M., 1996, *An Empirical Analysis of the Relation Between the Board of Director Composition and Financial Statement Fraud*, The Accounting Review 71, 443-465.

Bebchuk, Lucian Arye, 1994, *Efficient and Inefficient Sales of Corporate Control*, The Quarterly Journal of Economics 109(4), 957-993.

Bebchuk, L.A., Roe M.J., 1999, *A Theory of Path Dependence in Corporate Ownership and Governance*, Stanford Law Review 52, 127-169.

Berle, A., Means, G., 1932, *The Modern Corporation and Private Property*, Mc Millan, New York.

Bhagat, S., Black B., 2002, *The Non-Correlation Between Board Independence and Long-Term Firm Performance*, Journal of Corporation Law 27, 231-273.

Black, Bernard S., 2001, *The Corporate Governance Behaviour and Market Value of Russian Firms*, Emerging Markets Review 2, 89-108.

Black, Bernard S., Hasung Jang, and Woochan Kim, 2005, *Predicting Firms' Corporate Governance Choices: Evidence from Korea*, Journal of Corporate Finance, forthcoming, working paper at http://ssrn.com/abstract=428662.

Black Bernard S., Jang, H. and Kim, W., 2006, *Does Corporate Governance Affect Firms' Market Values? Evidence from Korea*, Journal of Law, Economics, and Organization, Vol. 22, No. 2, Fall 2006.

Black Bernard S., Love, Inessa and Rachinsky, Andrei, 2005, *Corporate Governance and Firms' Market Values: Time Series Evidence from Russia*, European Corporate Governance Institute, Working paper.

Borokhovich, K., R. Parrino and T. Trapani, 1996, *Outside directors and CEO selection*, Journal of Financial and Quantitative Analysis 31, 337-355.

Brickley, J., Coles, J., Jarrell, G., 1997, *Leadership Structure: Separating the CEO and Chairman of the Board*, Journal of Corporate Finance 3, 189-220.

Brown, D.L., and Caylor, M.L, 2004, *Corporate Governance and Firm Performance*, Georgia State University Working paper.

Brunello, Giorgio, Graziano, Clara, and Parigi, Bruno, 2001, *Executive Compensation and Firm Performance in Italy*, International Journal of Industrial Organization 19(1-2), 133-161.

Campos, Carlos E., Newell, Roberto E., and Wilson, Gregory, Winter 2002, *Corporate Governance Develops in Emerging Markets*, McKinsey on Finance.

Chen, Jian, 2001, *Ownership Structure as Corporate Governance Mechanism: Evidence from Chinese Listed Companies*, Economics of Planning 34(1-2), 53-72.

Claessens, Stijin, Djankov Simeon, and Lang, Larry H.P., 2000, *The separation of ownership and control in East Asian Corporations*, Journal of Financial Economics 58(1-2), 81-112.

CLSA, 2001, *CG Watch: Corporate Governance in Emerging Markets*.

Core, J. E., Holthausen, W. R., Larcker, D. F., 1999, *Corporate Governance, Chief Executive Officer Compensation, and Firm Performance*, Journal of Financial Economics 51, 371-406.

Core, John E., Guay, Wayne R. and Rusticus, Tjomme O., 2004, *Does Weak Governance Cause Weak Stock Returns? An Examination of Firm Operating Performance and Analysts' Expectations*, Northwestern University - Kellogg School of Management, Working paper.

Denis, D. and D. Denis, 1995, *Performance changes following top management*

*dismissals*, Journal of Finance 50, 1029-1057.

Demsetz, H. and B. Villalonga, 2001, *Ownership structure and corporate performance*, Journal of Corporate Finance 7, 209-233.

Demsetz, Harold, and Lehn, Kenneth, 1985, *The Structure of Corporate Ownership: Causes and Consequences*, Journal of Political Economy 93(6), 1155-77.

Drobetz, Wolfgang, Schillhofer, Andreas and Zimmermann, Heinz, 2003, *Corporate Governance and Expected Stock Returns: Evidence from Germany,* ECGI - Finance Working Paper No. 11/2003.

Durnev, A., and Kim E. H., 2003, *To Steal or Not to Steal: Firm Attributes, Legal Environment, and Valuation*, Journal of Finance, forthcoming.

Eisenberg, Theodore, Sundgren, Stefan, and Wells, Martin T, 1998, *Larger Board Size and Decreasing Firm Value in Small Firms*, The Journal of Financial Economics 48(1), 35-54.

Ertugrul, Mine, Hegde, Shantaram, 2005, *Corporate Governance Scores and Firm Performance*, Working paper.

Fama, Eugene F., 1980, *Agency Problems and the Theory of the Firm*, The Journal of Political Economy, 288-307.

Fama, E. F., French, K. R., 1997, *Industry Costs of Equity*, Journal of Financial Economics 43, 153-193.

Fama, E. and M. Jensen, 1983, *Separation of ownership and control*, Journal of Law and Economics 26, 301-325.

Gompers, P., Ishii, J., and Metrick A., 2003, *Corporate Governance and Equity Prices*, Quarterly Journal of Economics 118, 107-155.

Hermalin, B., Weisbach, M., 2003, *Boards of Directors as an Endogenously Determined Institution: A Survey of Economic Literature*, Federal Reserve Bank of New York Economic Policy Review.

Hiraki, Takato, Inoue, H., Ito, A., Kuroki F., and Masuda, H., 2002, *Corporate Governance and Firm Value in Japan: Evidence from 1985 to 1998*, Pacific Basin Finance Journal 11(3), 239-265.

Jandik, Tomas, Rennie, Craig G., 2005, *The Evolution of Corporate Governance and Firm Performance in Emerging Markets: The Case of Sellier and Bellot*, European Corporate Governance Institute, Finance Working Paper 59.

Jensen, M., 1986, *Agency Costs of Free Cash Flow, Corporate Finance and Takeovers*, American Economic Review 76, 323-329.

Jensen M., and Meckling W., 1976, *Theory of the Firm: Managerial Behaviour, Agency Costs, and Ownership Structure*, Journal of Financial Economics 3, 305-360.

Jensen, Michael C., Murphy, Kevin J., 1990, *Performance Pay and Top-Management Incentives*, The Journal of Political Economy 98(2), 225-264.

Jong, Abe de, Gispert, C., Kabir, R., and Rennebong Luc, 2002, *International Corporate Governance and Firm Performance: An Empirical Analysis*, Erasmus University, Working paper.

Klein, A., 1998, *Firm Performance and Board Committee Structure*, Journal of Law and Economics, 41, 275-303.

Klapper, L. F., Love I., 2003, *Corporate Governance, Investor Protection and Performance in Emerging Markets*, Journal of Corporate Finance.

Kole, S.R., Lehn, K., 1999, *Deregulation and Adaptation of Governance Structure: The Case of U.S. Airline Industry*, Journal of Financial Economics 52, 89-117.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R., 1997, *Legal Determinants of External Finance*, Journal of Finance 52, 1131-1150.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R., 1998, *Law and Finance*, Journal of Political Economy 106, 1113-1155.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., 1999, *Corporate Ownership around the World*, Journal of Finance 54, 471-517.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R., 1999, *The Quality of Government*, Journal of Law, Economics and Organization 15, 222-279.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R., 1999, *Investor Protection and Corporate Valuation*, NBER Working Paper 7403.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R., 2000, *Agency Problems and Dividend Policies around the World*, Journal of Finance 55, 1-33.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R., 1999, *Investor Protection and Corporate Governance*, National Bureau of Economic Research (NBER) Working paper.

Larcker, D.F, Richardson, S.A, Tuna, I., 2004, *Does Corporate Governance Really Matter?*, University of Pennsylvania Working paper.

Lehman, E. and J. Weigand, 2000, *Does the Governed Corporation Perform Better?*

*Governance Structures and Corporate Performance in Germany*, European Finance Review 4, 157-195.

Lei, Adrian C.H., Song, Frank M., 2004, *Corporate Governance and Firm Valuations: Evidence from Hong Kong*, School of Economics and Finance, the University of Hong Kong Working paper.

Lins, Karl V., 2002, *Equity Ownership and Firm Value in Emerging Markets*, University of Utah - Department of Finance Working paper.

Manne, Henry G., 1965, *Mergers and the Market for Corporate Control*, The Journal of Political Economy 73(2), 110-120.

Morck, R., A. Shleifer and R. Vishny, 1988, *Management Ownership and Market Valuation: An Empirical Analysis*, Journal of Financial Economics 20, 293-315.

Morck, R., Steier, L., 2005. *The Global History of Corporate Governance: An Introduction*, NBER Working Paper No. W11062.

Nam, S., Nam, Il Chong, 2004. *Corporate Governance in Asia: Recent Evidence from Indonesia, Republic of Korea, Malaysia, and Thailand*, Asian Development Bank Institute.

OECD, 2004, *Principles of Corporate Governance*.

Pedersen, T., Thomsen, Steen and Kvist, Hans K., 2001, *The Direction of Causality Between Blockholder Ownership and Firm Value: US and EU Evidence*, Department of International Economics and Management, Copenhagen Business School Working Paper.

Perry, T., 2000, *Incentive Compensation for Outside Directors and CEO Turnover*, Presented at Tuck-JFE Contemporary Corporate Governance Conference.

Prevost, Andrew K., Rao, Ramesh P. and Hossian, Mahmud, 2002, *Determinants of Board Composition in New Zealand: A Simultaneous Equations Approach*, Journal of Empirical Finance 9(4) 373-397.

Prowse, S., 1995, *Corporate Governance in an International Perspective: A Survey of Corporate Control Mechanisms among Large Firms in the US, UK, Japan and Germany*, Financial Markets, Institutions & Instruments 4(1), 1-63.

Shleifer, A. and R. Vishny, 1997, *A survey of corporate governance*, Journal of Finance 52, 737-783.

Shleifer, Andrei, and Vishny, Robert W., 1986, *Large Shareholders and Corporate Control*, The Journal of Political Economy 94(3), 461-488.

Singh, M, and Davidson, W.N., 2003, *Agency Costs, Ownership Structure, and*

*Corporate Governance Mechanisms*, Journal of Banking and Finance 27, 793-816.

Sung, Wook Joh, 2003, *Corporate Governance and Firm Profitability: Evidence from Korea Before the Economic Crisis*, Journal of Financial Economics 68(2), 287-322.

Vafeas, Nikos, 2000, *Operating Performance around the Adoption of Director Incentive Plans*, Economics Letters 68(2), 185-190.

Vafeas, N., 2003, *Length of Board Tenure and Outside Director Independence*, Journal of Business Finance and Accounting 30, 1043-1064.

Varis, M., Kucukcolak, A., Erdogan, O., Ozer, L., 2001, *Sermaye Piyasalarında Kurumsal Yönetim İlkeleri*, İMKB Dergisi 19.

Xu, X., and Yan Wang, 1997, *Ownership Structure, Corporate Governance, and Firms' Performance: The Case of Chinese Stock Companies*, Amherst College and The World Bank.

Yermack, D., 1996, *Higher Market Valuation of Companies with a Small Board of Directors*, Journal of Financial Economics 40, 185-211.

Zingales, Luigi, 1995, *Insider Ownership and the Decision to Go Public*, The Review of Economics Studies 62(3), 425-448.