

**EQUITY OWNERSHIP STRUCTURE AND ITS CONSEQUENCES:
AN EMPIRICAL INVESTIGATION IN
TURKISH FIRMS**

The Institute of Economics and Social Sciences
of
Bilkent University

103704

by

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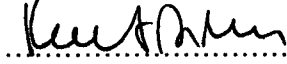
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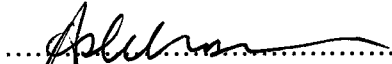
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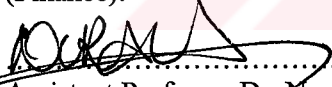
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ABSTRACT

EQUITY OWNERSHIP STRUCTURE AND ITS CONSEQUENCES: AN EMPIRICAL INVESTIGATION IN TURKISH FIRMS

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Ph.D. Dissertation in Business Administration (Finance)

Supervisor: Prof. Dr. Kürşat Aydoğan

26 November 2001

The study describes the main characteristics of ownership structure of the Turkish nonfinancial firms listed on the Istanbul Stock Exchange (ISE) and examines the impact of ownership structure on performance and risk-taking behavior of Turkish firms. Turkish corporations can be characterized as highly concentrated, family owned firms attached to a group of companies generally owned by the same family or a group of families. Ownership structure is defined along two attributes: concentration and identity of the owner(s). We conclude that there is a significant impact of ownership structure - ownership concentration and ownership mix- on both performance and risk-taking behavior of the firms in our sample. Higher concentration leads to better market performance but lower accounting performance. Family-owned firms, contrast to conglomerate affiliates, seem to have lower performance with lower risk. Government-owned firms have lower accounting, but higher market performance with higher risk.

Keywords: Ownership Structure, Corporate Governance, Performance, Risk

ÖZET

SERMAYE SAHİPLİLİK YAPISI VE SONUÇLARI: TÜRKİYE SERMAYE PİYASASINDA BİR UYGULAMA

Güner Gürsoy

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26 Kasım 2001

Bu çalışma kapsamında, İstanbul Menkul Kıymetler Borsasına kayıtlı, finansal firmalar ve holding firmaları dışında kalan firmaların sahiplilik yapısı özellikleri tanımlanmış ve sermaye sahiplilik yapısının firma performansına ve riskine olan etkileri incelenmiştir. Türk firmalarının çoğunlukla yoğunlaşmış sahiplik yapısında oldukları ve firmaların genellikle bir veya birkaç aile tarafından kontrol edildiği tespit edilmiştir. Sermaye sahiplilik yapısı iki ana alt değişken grubuyla tanımlanmıştır. Bunlar: sermaye hisselerinin yoğunluğu ve sermaye sahiplerinin nitelikleridir. Yapılan analizler neticesinde, sermaye hisseleri yoğunlaşmış firmaların muhasebe kayıtlarına dayalı performansı düşükken, sermaye piyasasındaki performanslarının yüksek olduğu yönünde bulgular elde edilmiştir. Ayrıca, aileler tarafından kontrol edilen firmaların, holding firmalarının aksine, daha düşük performans sergiledikleri ve nispeten daha az riskli oldukları belirlenmiştir. Devlet tarafından kontrol edilen firmaların ise muhasebe kayıtlarına dayalı düşük performanslarının yanı sıra, sermaye piyasasında çok daha iyi bir performans sergiledikleri tespit edilmiştir.

Anahtar Kelimeler: Stratejik Yönetim, Firma Performansı, Risk

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CHAPTER – I

INTRODUCTION

1.1. BACKGROUND

The history of western developed countries shows that in the early times, entrepreneurs who discovered market niches, invested their capital by bearing related risk, and evidently collected the rewards. Eventually, growth in firms became tremendous and owner managers felt themselves obliged to separate management and control, by assuming that agents would follow their best interests. This state of affairs caused a new and long-lasting conflict between capital providers and their agents. Berle and Means (1932) defined this conflict as *agency conflict* in their book “The Modern Corporation and Private Property.” Firms centered on capital providers are transformed to quasi-public corporations, with their tremendous size and their reliance on the public market for capital, by accepting the roles and powers of all corporate stakeholders. This transformation process introduced a new term called “governance.” OECD looks at the term from the systems approach and defines it as a system by which business corporations are directed and controlled. Berle and Means (1991), on the other hand, call governance as an integrating term of guiding and controlling systems in an organization. In the literature, governance may be used as a synonym for management; however, there is a difference between the two terms.

According to Tricker (1984) management is concerned with the running of a business operation efficiently and effectively, but governance is concerned with the higher level activities of giving overall guidance to the company, supervising the managerial actions, and satisfying the demands of accountability.

Corporate governance issues have been attracting considerable interests of academicians as well as practitioners from diverse disciplines since the early 1990s. The consequences of the equity ownership structure have become a key issue in understanding the effectiveness of alternative corporate governance mechanisms. In the light of massive privatization efforts in former Eastern block countries, as well as the experiences of the developed economies of USA, Japan and Western Europe, researchers face vast amount of data to test various corporate governance issues brought out by the theory. When we examine the firms in different countries, they show significant variations with respect to their ownership structures. With public offerings of equity through IPOs, direct foreign investment and a large public sector in the economy, the Turkish market offers a very rich combination of corporate governance schemes to be compared. Moreover, privatization of publicly owned companies is still being debated on the basis of the impact of ownership mix on performance. A related issue surfaces with respect to the method of privatization. The merits of a public offering of equity which leads to a more diffused ownership and private placement through block sales that result in a concentrated ownership are another controversy to be resolved. Hence, we shall address ownership structure issues in the Turkish market in order to shed some light on this debate.

The literature on corporate governance provides us with several testable hypotheses as well as empirical evidence from different countries. The theoretical debate focuses on agency relationship. Separation of ownership and management gives rise to a conflict of interest between owners and managers as their agents. Jensen and Meckling (1976) explore the costs of agency relationship on the corporation. They claim that there exist governance mechanisms, by which this conflict can be resolved to a certain extent. This assertion indicates that, a governance scheme is likely to affect a firm's performance. Fama (1980) argues that a well functioning managerial labor market will impose the necessary discipline on managers. Likewise, markets for corporate control, if they function properly, are expected to serve as an incentive for managers to act in the best interest of owners (e.g. Jensen and Ruback, (1983); Martin and McConnell, (1991)). Grossman and Hart (1982), on the other hand, point out that if ownership is widely dispersed, no individual shareholder will have the incentive to monitor managers since each will regard the potential benefit from a takeover to be too small to justify the cost of monitoring. Shliefer and Vishny (1986) point out that the benefit of ownership concentration is enhancing the functions of takeover market.

Large equity ownership may impose potential costs on the company as well. Lack of diversification on the part of a large shareholder will expose him to unnecessarily high risks. As he controls the strategic decisions of the firm, he may pass up some profitable projects on the basis of total risk, rather than merely evaluating the projects in terms of their systematic risk. Large equity ownership may have some direct costs on other stakeholders in the firm, most notably, the minority

shareholders and employees. Large shareholders can divert funds for their own personal benefits in the form of special (hidden) dividends and preferential deals with their other businesses. On the other hand, Shliefer and Vishny (1986) argue that large shareholders have the capability of monitoring and controlling the managerial activities. Thereby, they are liable to contribute to corporate performance. The overall impact of large shareholders seems to be ambiguous. Actually, there are both theoretical and empirical studies suggesting a quadratic shaped relationship between the level of ownership and firm performance (e.g. Stulz, (1988); McConnell and Servaes, (1990)). At lower levels of ownership concentration, companies benefit from resolution of the agency problem, however, as the share of large owner increases potential costs take over, surpassing the benefits.

1.2. OBJECTIVE

The premise of this study is to explore the impact of ownership structure, if any, on the performance and risk taking behavior of Turkish non-financial companies listed on Istanbul Stock Exchange (ISE), by providing a description of ownership structure in Turkish listed firms and comparing the findings with those of other countries. Ownership structure is defined along two dimensions: ownership concentration and ownership mix. The former refers to the percentage of shares owned by majority shareholder(s) while the latter is related to the identity of the major shareholder. Basically, two groups of variables are employed to measure performance: accounting based and market based. Accounting-based variables of performance measure are return on equity (*ROE*) and return on total assets (*ROA*). Price to earnings ratio (*P/E*), market to book value (*MBV*), and stock returns are the

market-based variables of performance. Total risk and market risk are considered to be risk proxies in our cross sectional analyses.

In order to investigate the impact of ownership structure on a firm's performance and risk-taking behavior, we use Dunning's (1993) paradigm. Dunning suggests that firms have specific advantages as well as disadvantages based on their ownership structures. The ownership structure based advantages are stated as “... privileged possession of intangible assets ...”, the exploitation of which creates firm value. Dunning (1993) discriminates between asset advantages and transaction costs, minimizing advantages of those that “.... arise from the ability of the firm to coordinate multiple and geographically dispersed value-added activities and to capture the gains of risk diversification ...”. We focus on cross-sectional differences in ownership structures to better understand the impact of agency conflicts on corporate performance and risk-taking behavior.

For empirical testing, we examine the following research questions in this study.

- a. What are the distinct characteristics of the ownership structure of Turkish listed firms?
- b. What are the differences between the characteristics of the ownership structures of Turkish listed firms and those of other countries?
- c. Does the ownership structure have any significant impact on the performance of Turkish listed firms?

- d. Does the ownership structure have any significant impact on the risk taking behavior of Turkish listed firms?

To construct the data sample we started with all non-financial Turkish firms listed on Istanbul Stock Exchange (ISE) between 1992 and 1998. We consider survivorship bias as defined by Banz et al. (1986) while constructing our data sample. For the survivorship bias, we did not exclude the firms delisted between the years of 1992 and 1998. Most (73 percent) of these companies are ranked among the largest 500 manufacturing companies compiled by Istanbul Chamber of Commerce. Transportation and service corporations in our sample are clearly comparable in size with the largest 500. Hence, it would not be wrong to label our sample as the largest companies in Turkey with public ownership. This creates an inevitable inherent bias in our sample.

1.3. SUMMARY OF FINDINGS

When the ownership structure characteristics of Turkish listed firms are examined, the findings indicate that most of the Turkish firms have concentrated ownership structure, and families have significant involvement in the corporate governance systems of the firms. Cross ownership and pyramidal structures are not unusual, especially in the conglomerate affiliates. On the other hand, we have witnessed decreasing involvement of the government and a slightly increasing foreign partnership in the ownership structures of Turkish firms.

In 32 percent of the sample, average percentage of total shares held by outside dispersed shareholders is less than one percent. On the other hand, when we examine

the concentration levels of the Turkish listed firms, we found that the average share of the largest owner is 43 percent and the mean value of the cumulative shares held by the largest three shareholders is 62 percent. Most Turkish firms in our sample have a complex network of ownership. When a firm is owned by both the parent company and its affiliates, we define this ownership structure type as pyramidal ownership structure. By using this pyramidal ownership structure, we calculated cash flow right(s) of the ultimate controlling owner(s) by considering both direct ownership and indirect ownership via the shares of the parent company and its affiliates. These figures provide sufficient evidence that most of the Turkish firms have a concentrated ownership structure and only a small percentage of shares are held by dispersed and unorganized investors.

In terms of ownership mix, the Turkish corporations in our sample group are mostly family-owned firms attached to a group of companies generally owned by the same family or a group of families. The group usually includes a bank, which does not have significant equity ownership in member firms. Some of the large groups are well-diversified conglomerates sometimes with pyramidal structures. Others are usually vertically integrated companies in the same line of business. Although professional managers run these companies, family members are actively involved in strategic as well as daily decisions. The close ties between managers and the largest controlling shareholder group –mainly family members with an average of 74 percent in Turkish Market– substantially reduce information asymmetries and agency conflicts common to American firms. The dominance of families is not surprising, since government and families have become the locomotives of development since

the foundation of the Turkish Republic. Joint ventures with foreign firms are not uncommon. Some of the largest companies are government owned monopolies.

We have also identified 30 percent of companies in our sample as member firms in one of the distinct conglomerates. Obviously, there have to be some advantages of the conglomerate form of ownership. It is clear that conglomerates enable their owners to diversify when there are no other possible diversification alternatives in the underdeveloped capital markets. Also, member firms in a conglomerate generally pool their funds for more efficient allocation within the group. To the extent that the financial system lacks operational efficiency due to high transaction costs and taxes, local optimization of resource allocation within a group would make sense.

In the light of the results of the cross sectional analyses, we conclude in favor of the existence of the significant impact of ownership structure on both corporate performance and risk taking behavior of Turkish listed firms. Specifically, as the concentration in ownership increases, we experience lower accounting-based performance, and higher market-based performance. This is consistent with the findings reported in other emerging markets such as China (Xu and Wang, (1997)) and Czech Republic (Claessens, (1997)).

When the effect of the ownership mix is considered, we observe the dominant effect of family ownership, and government ownership in the Turkish market. While firms with foreign ownership display better accounting performance; government-owned firms tend to have higher market performance but lower accounting

performance. In contrast, family-owned firms seem to show lower market performance.

Concerning the risk-taking behavior of our sample of companies, our results reveal that highly concentrated firms have higher risks as suggested by a larger standard deviation of monthly stock returns. Government-owned firms and widely held firms with dispersed ownership in our sample display higher market risk. Family-owned firms, on the other hand, have a lower market risk.

The overall findings in this dissertation are consistent with the empirical findings in the literature in general. While we observe concentration of ownership as a significant determinant of corporate governance mechanisms, identity of controlling owners also seem to have a vital role in the performance-ownership relationship. Hence we conclude that ownership structure has a significant impact on both performance and risk-taking behavior of Turkish listed firms.

1.4. ORGANIZATION OF THE STUDY

The study is organized as follows: Chapter I discusses the background and research questions. Related literature on corporate governance and ownership structure are summarized in Chapter II.

Chapter III addresses the description of ownership structure of Turkish listed firms between 1992 and 1998. We provide some insights into the corporate governance schemes in Turkey and describe our sample of companies in terms of their ownership characteristics by comparing findings with those of other countries.

Industry, size, and country based comparisons of Turkish firms' ownership structure characteristics are also explored in this chapter.

Chapter IV presents the cross-sectional analyses to explore the consequences of the ownership structure in the Turkish listed firms. The impact of ownership structure on performance and risk-taking behavior of Turkish firms is elaborated upon in this chapter.

Chapter V includes the conclusions of the research and recommendations for the further studies.



CHAPTER – II

CONCEPTUAL CONTEXT

2.1. INTRODUCTION

This chapter establishes theoretical framework for the research theme of the relationship between ownership structure and risk-taking and performance. This issue attracts considerable amount of interests from various interest groups. Main reason of the attraction comes from the transformation processes of corporations. In the 20th century, corporations have experienced profound changes, when their way of doing business is considered. In the light of those changes, new concepts are discussed in the literature beginning from the book titled “The Modern Corporation and Private Property” by Berle and Means (1932). We will try to explain those concepts, which are mainly related to our research topic.

In this chapter we will begin examining the transformation process of a corporation and eventually end up with the evidence found in the literature related to the relationship between ownership structure, and risk-taking and performance. With this approach, we intend to cover all related studies conducted so far and establish a theoretical framework for the research.

This chapter is organized as follows: Section 1 discusses the transformation process of a modern corporation and its definition. Definitions of the terms and

related topics of corporate governance are summarized in Section 2. Section 3 addresses agency theory and its implications. While Section 4 discusses corporate control issues, corporate risk is discussed in Section 5. Finally, in Section 6, we examine the evidence found in the literature related to the relationship between ownership structure and risk-taking and performance.

2.2. MODERN CORPORATION

When we look at the history, we witness significant changes in corporations and their structures. Beginning in the 17th century, we witness entrepreneurial capitalism, in which firms are owned and controlled by owner-managers. In the 19th century, professional managers took control, but firms were owned by non-managers. In the information age of 20th century, firms were controlled by professionals but they were mostly owned –especially in Europe– by financial institutions.

The major change in corporations occurred in the 19th century. Berle and Means (1932) first define this change as the “separation of ownership and control.” The separation of ownership and control of firms has generated an enormous amount of literature since the publication of Berle and Means’ *The Modern Corporation and Private Property*. When we examine the neoclassical theory, we encounter a firm definition in the context of production-function setup. As Holl (1975) states, in the neoclassical theory, the *owner (risk bearer)* and the *manager (risk taker)* is the same person. In Alchian and Demsetz (1972) treatment of the classical capitalist firm, turns critically on the existence of technological nonseparabilities. The vertical

integration assumption of Grossman and Hart (1982) claims that firm managers are also the owners.

Jensen and Meckling (1976) examine the consequences of diluting a one-hundred-percent equity position in an entrepreneurial firm. Their main interest is on the “diffuse ownership” of the modern corporation. In the light of changes in corporations, Jensen (1986) defines Modern Corporations as large, complex, and diffusely owned entities. Finally, Williamson (1988) views the Modern Corporation as a series of separately financed investment projects. Because of the differences in the view of academics, we encounter different definitions of firms. We combine those definitions in a single one, as “firm is a large, complex, diffusely owned entity, with its defined and separately financed investment projects.”

Berle and Means (1932 and 1991) examine diversification of ownership from the perspective of the modern corporation and explain the phenomenon with the agency theory. They state that the interests of the directors and managers might diverge from those of the owners of the firm. Therefore, we observe a shift in the power and control rights at the expense of shareholders. Managers are supposedly responsible for considering shareholders’ best interests with the highest priority; however, this might not always be the case. Demsetz et al. (1985) summarize their concerns as “... in a world in which self-interest plays a significant role in economic behavior, it is foolish to believe that owners of valuable resources systematically relinquish control to managers who are not guided to serve their interest.”

2.2.1. Goal Discrepancy

Separation of ownership and management causes a decline in the influential power of shareholders on management. Pike et al. (1986) claim that, managers' increasing concerns for their own welfare rather than that of their shareholders' leads them to adopt *low-risk-survival* strategies and satisfactory decision behavior. This conflict is also studied by Jensen and Meckling (1976). All of the arguments support the Berle and Means' (1991) hypothesis of "*diffuse ownership structures adversely affect corporate performance.*"

The literature indicates that the functions and responsibilities of both the risk taker and the risk bearer are distinct from each other and there is a high possibility of goal and interest conflicts among them. This hypothesis claims that, these goal and interest conflicts end up with different performance levels, by keeping other factors constant. Holl (1975) argues that, performance of owner controlled firms differs significantly from managerially controlled firms. It is not uncommon to observe different outcomes when firms have adverse goals and interest priorities.

Managers are expected to concentrate their efforts on maximizing shareholders equity. However, when we consider Pike et al.'s (1986) study on the importance of managerial goals as summarized in Table 1, we witness inconsistencies between the goals of managers and owners. Downs et al. (1999), state the long-term value of the nondiversifiable, firm-specific human capital of managers may be maximized by ensuring the survival of the firm rather than seeking to maximize the value of the firm. Thus, managers may tend to act in a risk-averse manner even if this is not in the best interests of shareholders.

Table 1 The importance of goals (Pike et al. (1986))

Objectives of a firm	Importance %
Maximize Percentage return on assets	58.0
Maximize earnings per share	43.8
Target share of market	18.3
Maximize share price	17.9
Target earnings per share growth rate	12.3
Other	1.0

Prentice et al. (1993) explain the source of the goal conflicts between managers and shareholders with the following justifications.

- Managers are risk averse, because they have more to lose from failure, and unlike shareholders they cannot diversify their risk across a range of investments,
- Managers will reach decisions that are acceptable to organizational group,
- Managers will tend to pursue growth policies.

As can be seen by the listed justifications, managers and owners have, as expected, different incentive structures caused by their different goals and risk types and levels. Both managers and owners will try to take required actions to maximize their welfare by optimizing their goals and constraining their risk levels. As a consequence of the trade off between these conflicting efforts, we observe different levels of performance outcomes.

2.2.2. Quasi-Public Corporation

Corporations can be classified into several categories based on their main characteristics. The main classification categories are public and private

corporations. Berle and Means (1991) define the *quasi-public corporation* (not private) as the one in which ownership and control of a corporation is separated through expanded ownership. Since the corporation is owned by a large group of people, even if they do not even know each other, the corporation becomes quasi-public. For example, consider a corporation in which the largest shareholder owns only 7 percent of the corporation. The main characteristics of a quasi-public corporation are:

- tremendous size,
- reliance on the public market for capital.

Separation of ownership from management may cause a power shift from owners to delegated managers. This notion needs to be questioned carefully. This question may even be more meaningful for different types of corporations. With this respect, we intend to focus on different classes of corporations with different ownership structures.

Berle and Means (1991) define the new aspect of the corporation as a means, where the wealth of innumerable individuals has been concentrated into huge aggregates and whereby control over this wealth has been surrendered to a unified direction. Within this evolving corporation context, there exists an attraction, which draws wealth together into aggregates of constantly increasing size, at the same time throwing control into the hands of fewer and fewer people. The trend of increasing concentration, increasing dispersion of stock ownership, and increasing separation of ownership and control, is apparent and no limit is as yet in sight. As property has been gathered under the corporate system, and as control has been increasingly

concentrated, the power of this control has steadily widened. American Telephone and Telegraph Company (AT&T), perhaps the most advanced development of the corporate system in the world, with assets of almost five billion dollars, 454,000 employees, and 567,694 stockholders. This company may indeed be called an economic empire bounded by no geographical limits, but held together by centralized control. It can be seen in the AT&T ownership structure, that the largest shareholder is reported to own less than one percent of the company's stock. In these types of organizations, you do not need to own more than 50 percent of the equity in order to gain the control of the organization. In case of the Standard Oil Company of Indiana, a minority interest of 14.5 percent has proved sufficient for the control of the corporation (Berle and Means (1991)).

2.3. CORPORATE GOVERNANCE

2.3.1. Introduction

OECD defines corporate governance in a broader sense, as a system by which business corporations are directed and controlled. Berle and Means (1991) call governance as an integrating term of guiding and controlling systems in an organization. On the other hand, Schleifer and Vishny (1997) describe corporate governance in terms of the financial aspects as the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment. Corporate governance is defined by Wong, (1989) as a process by which incorporated companies are governed. Corporate governance is taken in this study as an integrating term of *directing and controlling system* in an organization and it entails

strategic and long-term focus. In the literature governance may be used as a synonym for management, however, there is a difference between the two terms, “*management*” and “*governance*.” According to Tricker (1984) management is concerned with the running of a business operation efficiently and effectively, but governance is concerned with the higher level activities of giving overall direction to the company, supervising the executive actions of management, and satisfying the demands of accountability.

Kimberly and Zajac (1988) examine governance relationships and conclude that performance depends on the articulation and implementation of appropriate strategies, on the symbolic and substantive contributions of executive leadership, and on the informed and competent exercise of corporate governance. Their taxonomy report, as summarized in Figure 1, shows interest relationships between them. Figure 1 indicates that governance has an effect on performance in two ways; a direct impact and indirect influence via leadership.

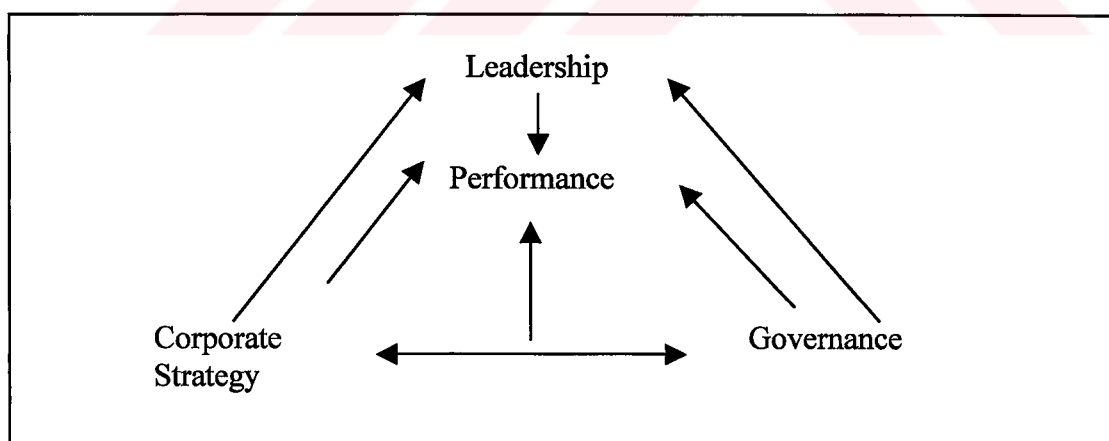


Figure 1 Governance Relationships (Kimberly and Zajac (1988))

Twenty nine different countries including Turkey have agreed upon and signed a memorandum of understanding to promote an improved corporate governance

environment and accepted OECD principles of corporate governance as a point of reference. The principles mainly cover five basic aspects of corporate governance.

These are:

- The rights of shareholders
- The equitable treatment of shareholders
- The role of stakeholders
- Disclosure and transparency
- The responsibilities of the board.

Reflections of “good” governance are studied by Felton et al. (1996) and they conclude that,

- a company with good governance will perform better over time, leading to higher stock prices,
- good governance will reduce risk,
- the recent increase in attention to governance is a fad. As this group sees it, the stock of a well-governed company may be worth more simply because governance is such a hot topic these days.

2.3.2. Corporate Governance Perspectives

Separation of ownership and management increased the importance of the “good governance.” With this respect, Keasey et al. (1997) classify corporate governance issues with the following four different perspectives.

2.3.2.1. *The Principal-Agent Model (Finance Model)*

This model claims that the managerial labor market, capital markets, and corporate control solve the puzzle of interest conflicts between shareholders and managers as explained by Hart (1995). On the other hand, Keasey et al. (1997) clarify the model by claiming that profit-maximizing behavior of firms is a sufficient condition for Paretian social welfare maximization. This model plays an important role in the study, for that reason, it will later be discussed in detail.

2.3.2.2. *The Myopic Market Model*

The myopic market model argues that the market is fundamentally flawed by an excessive concern with short-term performance. This model contends that shareholder welfare is not synonymous with share price maximization; because markets tend to systematically undervalue long-term expenditures such as research and development, and capital investments.

2.3.2.3. *The Abuse of Executive Power*

The status quo leaves excess power in the hands of senior management and thus might be damaging to shareholders at the points where interest conflicts arise. In order to decrease the abuse of executive power, some safety measures need to be taken; such as a time limitation for chief executive officers, independent nomination of non-executive directors, etc.

2.3.2.4. *The Stakeholder Model*

The stakeholder model asserts that objective function of the firm should be defined in a wider sense by including not only the well-being of shareholders but also other stakeholders such as customers, employees, suppliers, etc. When we consider corporate governance in a broader sense, we witness the deep involvement of stakeholders to protect their best interests, sometimes at the expense of other stakeholders. This fact is at the core of the unending conflicts between the involved stakeholders.

2.3.3. Stakeholders

Corporate governance provides a general direction to the management, and is influenced by different inside or outside interest groups. All of these interest groups will be called as stakeholders. These are:

- Shareholders
 - Large shareholders
 - Minority shareholders
- Board of Directors
- Managers
- Government
- Creditors
- Employees
- Unions
- Customers
- Suppliers

Executives and directors take the responsibilities of management. On the other hand, the board of directors and general meetings of shareholders, as a supreme power, play major roles in the corporate governance world.

The board of directors and board of trustees are by definition responsible for the overall conduct of the corporation. Their legal and fiduciary responsibilities at least imply some interests in corporate strategy and executive leadership. As Kimberly et al. (1988) state, the CEO serves at the pleasure of the board; it is the board's responsibility to hire, evaluate, and fire the CEO.

Shareholders as a whole are defined as the supreme power source in a corporation, since they have the voting rights to determine the board of directors, who will control and give guidance to management. Thus, shareholders are at the center of corporate governance. They select the board of directors as their representatives who presumably protect their best interests. However, the power of shareholders is limited to their proportionate level of shares. The *one-share-one-vote* system gives certain privileges to those large shareholders. We need to examine the question of whether the interests of large shareholders are more important than those of small shareholders.

On the other hand, the managers of a firm rent their human capital to the firm and the rental rates for their human capital are determined by the managerial labor market, based on the success or failure of the firm. Shareholders have the option of reducing the risk by diversifying their investments. However, managers do not have that many diversification opportunities. For that reason, they tend to be more risk-averse compared to shareholders.

The government is another key player in the corporate governance environment. The main responsibility of a government is to arrange a corporate governance environment via rules and regulations. Protection of minority shareholder rights and elimination of managerial power abuse are some responsibilities of the governments. In addition to the regulatory role of the governments, sometimes we see it on owner lists of the corporations. When the performance of those government owned or controlled firms are questioned, Megginson et al. (1994) provide us evidence that government-controlled or owned firms are less efficient than privately owned firms. The lower performances of the government-owned firms are mainly caused by the existing differences between economic necessities and political expectations.

In the limited liability world, the firm is the debtor, not the shareholders. On the other hand, the creditors of the corporation have a claim to its assets before the shareholders. These limited liability conditions motivate creditors to take some safety measures in order to make sure that they will receive their loans back. With this perspective, creditors play an important role as a control mechanism to discipline managers.

2.3.4. Governance Structures

Williamson (1988) claims that there are similarities between corporate finance and vertical integration. Corporate finance decisions to use debt or equity to support individual investment projects are closely akin to the vertical integration decision to make or buy individual components or subassemblies. He argues that rather than regarding debt and equity as financial instruments, they should be

regarded as governance structures. He proposes “*dequity*” as a new governance structure that combines the best properties of debt and equity. Governance properties of equity are:

- bearing a residual-claimant status to the firm in both earnings and asset-liquidation respects,
- contracting for the duration of the life of the firm,
- creating a board of directors.

When equity and debt is considered, we observe that debt has added controls and better assurance properties compared to equity. This makes equity much more forgiving than debt. For that reason, governance structures associated with equity are much more disturbing and are akin to administration. However, governance structures associated with debt are very market-like. On the other hand, debt is a comparatively simple governance structure, because of its lower setup costs. Another governance attribute of debt is the influence of bankers on management in order to insure the survivability of the firm.

Williamson (1988) defines the *puzzle of “selective intervention”* as the discriminating use of debt and equity. Debt is a governance structure that works out of rules and is well suited to projects where the assets are highly redeployable. Equity, on the other hand, is a governance structure that allows discretion and is used for projects where assets are less redeployable. Asset redeployability is the one of the main determinants of project risk, since the redeployability level determines the flexibility of the investment. For example, consider a defense-related investment: Defense related investment projects are not usually flexible enough to transform

production to commercial products. After the decrease in American defense budget in real terms, the American defense industry firms felt threatened. Large defense industry firms such as Martin Marietta and Lockheed chose to merge in order to be more powerful and competitive in a shrinking market. Some of them focused on increasing their share of commercial products. The main incentive for these efforts is to decrease and differentiate business risk. Williamson (1988) suggests debt to solve this puzzle as a new financial instrument or governance structure. Debt includes all of the constraining features of debt to which benefits are ascribed. When, however, these constraints get in the way of value maximizing activities, the board of directors can suspend the constraints, thereby permitting the corporation to implement value-maximizing plan. The constraints are thus the norm from which selective relief is permitted.

2.3.5. Financial System Governance

Keasey et al. (1997) propose four types of financial governance systems created with two dimensions of financial institution involvement and governance orientation. The first dimension of a financial institution refers to the role of the financial institution like banks, pension funds, etc. in corporate governance. It can be either low involvement as in American firms, or high involvement as in Japanese firms. The other dimension explains the governance orientation; individualistic versus collective perspectives. Individualistic orientation indicates that individuals act independently in governing firms, as opposed to the coordination of governance activities as in collective orientation. As a result, we end up with four types of governance systems as summarized in Figure 2.

		Governance Orientation	
		Individual	Collective
Financial Institution Involvement	Low	Typical American Firms 1	Collective Strategy Firms with low institutional involvement (Cooperatives, Employee owned firms) 2
	High	3 Japanese Independent Firms American firms with a high level of institutional involvement	4 Japanese Keiretsu Firms

Figure 2 Types of Financial Governance Systems in America and Japan (Keasey et. al. (1997))

2.4. AGENCY THEORY

The agency theory examines the relationship between a *principal* (a person interested in delegating responsibility for a set of decision problems) and an *agent* (a person acting on behalf of the principal for which he is paid a fee). This agency relationship is one of the oldest and most common codified modes of social interactions (Ross, (1973)). The problem with the agency system is the possibility of conflict of interest between the owners and management of a firm. Agency problems are not unique to corporations and prevail whenever there is a separation of ownership and control. Eisenhardt (1989) summarizes agency theory basics as reported in Table 2.

Table 2 Agency Theory Overview (Eisenhardt, (1989))

<i>Key Idea</i>	Principal-agent relationships should reflect efficient organization of information and risk-bearing costs.
<i>Unit of Analysis</i>	Contract between principal and agent
<i>Human Assumptions</i>	Self-interest Bounded rationality Risk aversion
<i>Organizational Assumptions</i>	Partial goal conflict among participants Efficiency as the effectiveness criterion Information asymmetry between principal and agent
<i>Informational Assumptions</i>	Information as a purchasable commodity
<i>Contracting Problems</i>	Agency (moral hazard and adverse selection) Risk sharing
<i>Problem Domain</i>	Relationships in which the principal and agent have partly differing goals and risk preferences (e.g., compensation, regulation, leadership, impression, management, whistle-blowing, vertical integration, transfer pricing)

Agency theory provides a unique, realistic, and empirically testable perspective on the problems of cooperative effort. The domain of the agency theory, as defined by Eisenhardt (1989), is a relationship that mirrors the basic agency structure of a principal and an agent that both are engaged in cooperative behavior, but have different goals and differing attitudes toward risk. The trend towards professionalism in corporate management forces owners to delegate their authority, with an assumption that the agents will make the “right” decisions in their best interests. In order to feel comfortable, owners are eager to implement proper governance mechanisms. However, there is sufficient evidence in the literature that there is a gap between the wealth created by the professional managers and the wealth that would have been created if owners were in charge. This gap is the leading incentive for study in this area and it is hypothesized that this gap is the main driver of different performance and risk levels of corporations with different ownership structures.

Jensen and Meckling (1976) state that an agency problem occurs when cooperating parties have different goals and division of labor. The root of the problem prevails when agents do not follow and protect the interests of those who delegate (owners). Eisenhardt (1989) states that agency problem arises when; (1) the desires or goals of the principal and agent conflict and (2) it is difficult or expensive for the principal to verify what the agent is actually doing.

Even though agency theory mainly focuses on the interest conflicts between principal and agent, we encounter different versions of the conflict in the literature. Jensen and Meckling (1976) identify two types of conflict: (1) conflicts between shareholders and managers and (2) conflicts between debt holders and equity holders. On the other hand, Gomes (1989) argues, by referring to recent empirical evidence in many countries, that the agency problem is not the traditional agency problem between management and shareholders, but rather the agency problem between controlling and minority shareholders.

2.4.1. Agency Costs or Ex-post Costs

Jensen and Meckling (1976) claim that a principal can limit divergences from his interest by establishing appropriate incentives for the agent and by incurring *monitoring costs* designed to limit the deviant activities of the agent. Sometimes the principal will pay the agent to expend resources (*bonding costs*) to guarantee that he will not take actions that would harm the principal. This ensures that the principal will be compensated if the agent does not take such actions. It is generally impossible for the principal or the agent, at zero cost, to ensure that agent will make

optimal decisions, from the principal's point of view. As a result, there will be some divergence between the agent's decisions and those decisions, which might have been made by the principal, so as to maximize his welfare. Jensen and Meckling (1976) call the dollar equivalent of this reduction as welfare residual loss. The *agency costs* are the sum of the three following factors.

- The monitoring expenditures,
- The bonding expenditures,
- The residual loss.

Transaction-Cost Economics (TCE) is mainly concerned with the governance of contractual relations and it was first introduced in the literature by Ronald Coase (1937). The classic transaction-cost problem is *Coase Problem (Vertical Integration)*, which tries to describe when firms produce for their own needs (integrate backward, forward, or laterally) and when they procure from the market. Coase argued that transaction-cost differences between markets and hierarchies were principally responsible for the decision to use markets for some transactions and hierarchical forms of organization for others. On the other hand, *Berle and Means's problem (the separation of ownership and control)* explains agency theory. While TCE traces its origin to vertical integration, Agency Theory (AT) was originally concerned with corporate control. Both theories work out of a managerial discretion setup. TCE regards the firm as a governance structure and AT considers it as a nexus of contracts. Comparison of Agency Theory (AT) and Transaction-Cost Economics (TCE) are summarized in Table 3 by Eisenhardt, (1989).

Table 3 Comparison of Agency Theory (AT) and Transaction-Cost Economics (TCE).

	<i>AT</i>	<i>TCE</i>
<i>Unit of analysis</i>	<i>Individual</i>	<i>Transaction</i>
<i>Focal dimension</i>	<i>?</i>	<i>Asset specificity</i>
<i>Focal cost concern</i>	<i>Residual loss</i>	<i>Maladaptation</i>
<i>Contractual focus</i>	<i>Ex-ante alignment</i>	<i>Ex-post governance</i>

Williamson (1988) states in his article that TCE emphasizes ex-post costs.

These costs include:

- the maladaptation costs incurred when transactions drift out of alignment
- the haggling costs incurred if bilateral efforts are made to correct ex-post misalignments
- the setup and running costs associated with the governance structure
- the bonding costs of effecting secure commitments.

Maladaptation costs occur only in an intertemporal, incomplete contracting context. Williamson (1988) asserts that reducing these costs through judicious choice of governance structure (market, hierarchy, or a hybrid), rather than merely realigning incentives and pricing them out, is the distinctive TCE orientation.

Ang et al. (2000) examine agency cost and ownership structure relationships in their study. They consider the impact of managerial (insider) ownership on agency cost. Against their null hypothesis that agency costs are independent of the ownership and control structure, they conclude that agency cost is;

- significantly higher when an outsider rather than an insider manages the firm,
- inversely related to the manager's ownership share,
- increasing with the number of non-manager shareholders,
- lower with greater monitoring by banks.

2.4.2. Positivist School of Thought

As Eisenhardt (1989) summarizes, the positivist school identifies various contract alternatives, and tries to determine which contract is the most efficient under varying levels of outcome uncertainty, risk aversion, information asymmetry, and other related factors. Jensen and Meckling (1976) explore the ownership structures of the corporations, including how equity ownership by managers aligns managers' interests with those of owners. Fama (1980) discusses the role of efficient capital and labor markets as information mechanisms that are used to control the self-serving behavior of top executives. Fama and Jensen (1983) describe the role of the board of directors as an information system that the stockholders within large corporations could use to monitor the opportunism of top executives. The entire positivist stream tried to describe the possible governance mechanisms that might solve the agency problem. Jensen (1983) classifies the *governance mechanisms*, suggested by *positivist school of thought*, that solve the agency problem into two broad propositions. These are:

- When the contract between the principal and agent is outcome based, the agent is more likely to behave in the interests of the principal.
- When the principal has information to verify agent behavior, the agent is more likely to behave in the interests of the principal.

2.4.3. Principal-Agent School of Thought

Complement to the positivist school of thought, the *principal-agent school of thought* has emerged. Principal-agent literature has focused on determining the

optimal contract, behavior versus outcome, between the principal and the agent. The simple model assumes goal conflict between a principal and an agent who is more risk averse than the principal.

Agency theory is used to analyze the strategic relationship between the CEO and his business unit managers. Kimberly et al. (1988) offer an alternative framework with two dimensions: *information asymmetry* and *lack of goal congruence*. Information asymmetry refers to the extent to which the principal, by virtue of his knowledge of the local environment, monitors the agent's activity. This position typically creates an informational advantage in favor of agents. Goal congruence refers to the extent to which the agent acting in his own interest is likely to seek outcomes, which are different from those desired by the principal.

2.5. CORPORATE CONTROL

Corporate control is one of the major functions of corporate governance. When we examine the key players responsible for monitoring the governance of firms, we encounter owners, managers, public authorities, and financial institutions. Owners – institutional investors, banks, other firms, individuals, and families – have the ultimate power of deciding on board members, selecting the managers, approving corporate strategy etc. However, owners use their ultimate power by delegating to board of directors. On the other hand, managers who are guided and controlled by the board of directors are responsible for corporate performance. They have the right to formulate corporate strategy, select and implement projects. In addition to owners, public authorities and financial institutions rigorously monitor the activities of

managers. Given this intense and multi-echelon control environment, managers do not have any other choice but behave in a risk-averse manner.

Each firm desires to have “adequate” control on their operations. Claessens (1997) claims that firms with a more concentrated ownership have presumably better corporate governance at a higher price and therefore better corporate control. It seems that ownership structure may be a significant factor in explaining (relative) share prices. Claessens (1997) reports that the higher the equity shares of the strategic owners and the lower the dispersion of ownership, the higher the price. Does it mean better corporate governance?

Control is not only dependent on the fraction of shares but also the distribution of the shares between other owners. This can be restated as dependence on corporate ownership structure. For example, it is possible that a very small fraction of shares e.g., 10 percent could have effective control in a case where shares are widely distributed among the firm’s remaining shareholders.

Bethel et al. (1998) find evidence supporting the theory that the market for corporate control plays an important role in limiting agency costs in American corporations. The market for corporate control moderates the degree to which managers can pursue their own interests at the shareholders’ expense. All of those arguments provide us with evidence that corporate control is the core of corporate governance functions.

2.5.1. Corporate Classification

Corporations can be classified based on the kinds of the controls they implement. The categorization of corporations as summarized in Figure 3 is taken from Cubbin and Leech (1983).

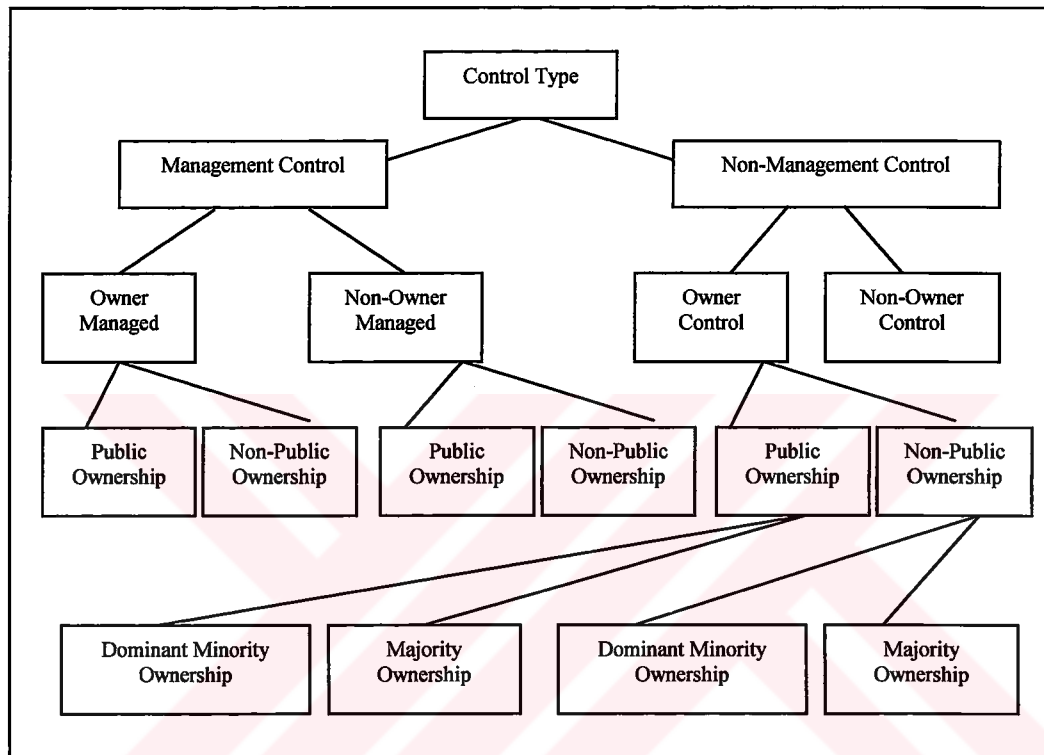


Figure 3 Type of Corporations (Cubbin and Leech (1983))

The main classification depends on whether managers have the right to control the firm or not. If it is a managerially controlled firm, then either the owner is the manager or non-owners run the firm. In either case, we are talking about public and non-public ownership. In the owner manager case, we witness family ownership, multinational franchising, and partnerships. If it is a non-owner managed public firm, then the shares of largest shareholder is less than 5 percent, and firm is diffusely owned. In the other cases of non-public ownership, the government, cooperatives, and foundations have full control of the power.

In the non-management controlled firms, either owners or non-owners control the firm. In owner controlled public and non-public firms, we witness either a dominant minority ownership or majority ownership. In any case, there might be family ownership, foundation ownership, cross ownership, or institutional ownership.

2.5.2. Role of the Board

Shivdasani (1993) examines the characteristics of the boards of directors and the ownership structure of firms that receive hostile takeover bids. He concludes that both characteristics of the board of directors and the ownership structure are significant determinants of the likelihood that a firm is a target for hostile takeover attempts. The author claims that there are three factors that can contribute to the imperfect control of managerial actions. These are:

- The board of directors,
- The structure of equity ownership,
- The characteristics of the management team.

The board of directors is a key internal corporate governance mechanism. This is the process by which management is monitored by outside directors. However, Shivdasani (1993) states that board become ineffective when agency costs are high. Ownership structure is another important internal governance mechanism. Significantly, large shareholders can monitor managerial actions in three ways as claimed by the author. These are:

- Informal negotiations,
- Acquisition of the firm,

- Facilitating third-party takeovers.

However, *unorganized atomistic shareholders* do not have sufficient power to control and influence management. The final factor is the management characteristics. Shivdasani (1993) emphasizes that increased ownership by managers gives them incentives to maximize shareholder wealth because of the goal congruence principle.

2.5.3. Role of Shareholders

Actually, shareholders are not left powerless in corporate governance; they have the ultimate power but are relatively slow in response to management preservation. Shareholders can be classified based on their expectations and their stake in the firm. Equity holders might not have any incentive to interfere with corporate policies. On the other hand, large shareholders are highly motivated to influence, and sometimes manipulate, corporate policies, because of their stakes in the firm. Shareholder-initiated proxy proposals on corporate governance issues became popular in the late 1980s. These proposals are categorized by Karpoff et al., (1996) into the following groups:

a. External Corporate Control Market Issues: Proposals to put to shareholder vote or repeal a poison pill, put to shareholder vote or terminate a standstill agreement, opt out of a state antitakeover law, eliminate a fair price provision or reduce a fair price super-majority level, ban greenmail, repeal or require shareholder approval for antitakeover devices, reduce the vote required for shareholder action by

written consent, lower a super-majority level required for merger agreements, or require a shareholder vote on a targeted share placement.

b. Internal Corporate Control Issues: Proposals to require confidential voting, require cumulative voting, eliminate a classified board, provide shareholders equal access to proxy materials, restore shareholders' right to call meetings or propose charter amendments, or require one-share-one-vote rules.

c. Compensation Related Issues: Proposals to place limits on executive pay or requirements that directors own company stocks, proposals involving compensation of senior officers and directors.

d. Other Miscellaneous Issues: Proposals calling for shareholder ratification of auditors, change in shareholder meeting times or locations, establishing a shareholder advisory or monitoring committee, and limits on outside directors' terms.

2.5.4. Role of Large-Block Shareholders and Institutions

Large shareholders play a significant role in the corporate governance process. Because they have a quite amount of stake on the firm and they may not easily diversify their risk, they are the first who will be affected from the changes in corporate policies and corporate performance. For that reason, they are highly motivated to control and guide managerial activities. Sometimes they may tend to manipulate corporate strategy and policies for their own benefits. Most of the time, we encounter those large shareholders represented in the board of directors.

Fama and Jensen (1983) investigate various ways in which managers that own enough stock to dominate board of directors could expropriate or consume corporate wealth. Large-block shareholder could pay himself an excessive salary,

negotiate 'sweetheart' deals with other companies they control, invest in negative NPV projects, or simply withdraw corporate funds. Jensen and Meckling (1976), on the other hand, explain how the interests of managers and shareholders become increasingly aligned as the percentage managerial ownership interest increases. Shleifer and Vishny (1986) develop a model in which a large-block shareholder monitors but does not participate in a firm's management.

Holderness et al. (1988) conclude that majority shareholders are usually directly involved in firm management. However, it is questionable whether large-block ownership in general is motivated primarily as a means to expropriate or consume corporate wealth. Authors suggest that benefits associated with managerial large-block holdings often motivate concentrated ownership.

Maug (1998) investigates the hypothesis that a liquid stock market reduces large shareholders' incentives to monitor and concludes that liquid stock markets are beneficial because they make corporate governance more effective. Large shareholders face a free-rider problem since they bear the costs of monitoring alone, whereas all the small shareholders benefit from the monitoring efforts. Maug (1988) explains that large shareholders tend to have significant bias towards intervention in managerial activities as derived by the motivations of the *lock-in-effect* and *liquidity effect*. Since large shareholders have significant stake on returns, they feel more incentives to intervene corporate affairs (*lock-in-effect*). If a larger fraction of the total shares is owned by a few shareholders, then fewer shares are held by other shareholders. Because of that, market becomes less liquid for that type of shares (*liquidity effect*).

Institutions are other significant key players in the corporate control market. Based on their expectations and interests they tend to apply different levels of management control mechanisms. Pound (1988) explains three reasons for the institutions' incentives to intervene in corporate governance. These are:

- *The efficient monitoring hypothesis*: Institutional shareholders are more informed and able to monitor management at lower cost than small shareholders.
- *The strategic alignment hypothesis*: Institutional shareholders and board may make mutually advantageous co-operations.
- *The conflict of interest hypothesis*: Institutional shareholders may have business relationships with the firm, which make them less willing to intervene in corporate governance.

Empirical analysis of the relationship between institutional shareholders and performance provided conflicting findings. Keasey et al. (1997) explain this inconsistency in findings as complex web of interrelationships existing between the various ownership interests.

2.5.5. Control Tools or Methods

Before mentioning about the control tools and methods, we need to define the source of the control. Stakeholders gain their property right from their positions and belongings. This notion is stated by Cooter et al. (1988) as the legal conception of property is that of bundle of rights over resources that the owner is free to exercise and whose exercise is protected from interference from others. Control rights of different stakeholders, which are critical for the purpose of corporate governance are:

Equity holders:

- Voting rights (to select board of directors, to fire and hire managers etc.)
- Right to acquire information about the firm,
- Right to delay bankruptcy proceedings,
- Right to sue managers for breach of duty,
- Right to sell or liquidate the firm.

Debt holders:

- Right to start bankruptcy proceedings,
- Right to acquire information about the firm,
- Priority covenants,
- Covenants requiring the firm to keep a specified leverage level,
- Transfer of debt,
- Right to receive rents and amortization in accordance with the terms of debt contract.

Berle and Means (1991) study the concept of control for corporations. In their definition, board of directors perform critical corporate control role. When they examine the board selection process, they define the following selection methods:

- complete ownership of the common stock
- majority control
- legal devices
- minority control
- management control

Each of the selection methods has its advantages and disadvantages. If the board is selected by the way of majority control, then we may easily argue that board will prioritize the interest of majority group at the expense of small shareholders. However, in minority control selection method, it is highly likely that we may encounter power games and compromises.

They also stressed that the interests of those in “control” differ from the profit-maximizing desires of the other owners, and as these interests move further apart, the control will ultimately lie in the hands of management.

Keasey et al. (1997) examine corporate monitoring and control mechanisms. On behalf of shareholders, board of directors has to monitor and control management in order to align the interests of all sides. They list monitoring and control mechanisms as:

- the market for corporate control (hostile takeover bids)
- the managerial labor market
- shareholder activism
- debt bonding
- incentive mechanisms
- changes in the board composition

2.5.6. Governance Defensive Tactics

If interests of target shareholders and managers deviate significantly during the corporate control contest, managers might exploit several defensive tactics as suggested by Keasey et al. (1997). These are:

a. Dual-class Recapitalization: Shares with limited voting rights are exchanged for common equity shares leading to an increase its voting power of insiders. This allows managers to increase their voting power without increasing their equity shares.

b. Elimination of Cumulative Voting: Cumulative voting entitles a shareholder to cast all votes for a single director instead of distributing among the other candidates. By elimination of cumulative voting, managers impede changes in corporate control

c. Anti-takeover Amendments: It is also known as shark repellents and categorized into three groups. These are supermajority voting provisions, staggered board of directors, fair price amendments.

d. Targeted Share Repurchases and Standstill Agreements: Targeted share repurchases and standstill agreements (greenmail) occur when a target firm buys back a block of shares from a potential bidder.

e. Litigation: Charges against bidding firms can be used to frustrate takeover bids. It creates pressure on bidding firms and increases the takeover period.

f. Poison Pills: Poison pills grant special rights and privileges to target shareholders in the event of possible control change. There are five variants of the poison pill: preferred stock rights, flip-over plan, flip-in plans, back-end rights plans, and voting plans.

g. Golden Parachute: Golden parachute are provisions in an employment contract which, pays a specified amount of monetary compensation to senior executives in the event of displacement following a corporate control contest.

h. Defensive Corporate Restructuring: Corporate restructuring may be used as a defensive response to hostile takeovers. As Scholes and Wolfson (1990) states leveraged cash-outs may be used to consolidate ownership in parties who are perceived to be affiliated with the existing management.

2.6. CORPORATE RISK

2.6.1. Risk Measurement

The owners of the firm have a put option on the firm's assets with a strike price equal to the value of the firm's liabilities. Option pricing comparative statistics demonstrates that the value of the put option is greater for more risky firms. (Downs et al., 1999) Many economic provisions that involve problems of risk sharing and incentives may be described in terms of the principal and agent relationship.

Risk is the key factor in virtually all investment decisions with return. For that reason, identification, measurement, and diversification of risk as much as possible are central theme in decision-making process. Different forms of risk can be defined but the followings are suggested by Pike et al., (1986) as essential while making investment decisions:

a. Business Risk: The variability in operating earnings before interest and tax (EBIT). It mainly depends on its operating leverage, which is the proportion of fixed costs to variable costs.

b. Financial Risk: This is driven by use of debt. Financial leverage increases by taking more debt, and causing to incur more fixed interest expenses and increasing volatility in earnings.

c. Project Risk: This is caused by the variability in expected cash flows from investment projects. The greater the instability and uncertainty of markets, and the less the redeployability of assets, the greater the project risk.

d. Portfolio Risk: This is variability in shareholders' returns. Portfolio risk can be controlled to some extent by considering different combinations of investment tools.

Pike et al. (1986) apply Capital Asset Pricing Model (CAPM) to capital budgeting decisions. They claim that firms should view investment projects as a portfolio of projects. For that reason individual project Betas as market sensitivity indexes are required to be estimated. It is assumed that rational investor should prefer maximum return for a given risk level, and vice versa. Authors define corporate Beta as the weighted average Beta of all projects if company is financed completely by equity. The market value of an investment project can be found by estimating the discounted expected cash flows throughout its life. However, it should be noted that, risk and returns of investment projects are independent from each other. Because of this risk independence, each project's risk must be assessed separately.

2.6.2. Risk and Governance

Stulz (1996) claims that by reducing risks that are outside the control of managers, modern risk management also can make firm performance a less noisy measure of managers' quality and hence make ownership more useful for solving the agency problem between managers and shareholders. This study provides evidence to establish a bridge between the risk management and corporate governance process.

Saunders et al. (1990) study the relationship between risk taking attitudes of banking firms and their corporate governance structures. This is an interesting implication, although it is applied to a specific industrial sector and corporate governance structure measurement system is somehow different from the one defined in this study. Their main focus is on the difference in risk taking attitudes between managerially controlled banks and stockholder-controlled banks.

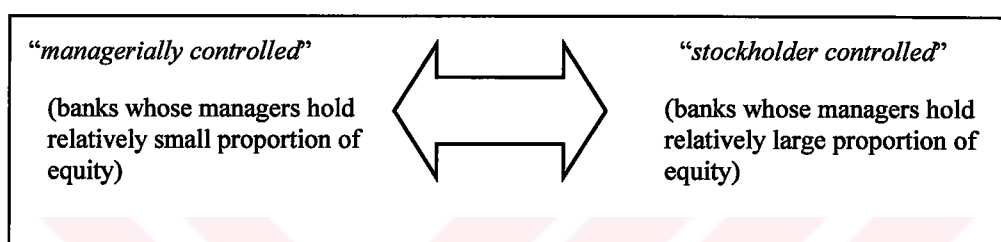


Figure 4 Governance Structure and Risk

Risk of the bank is defined in the model by incorporating the variables of bank ownership structure, financial leverage, operating leverage, and size. They claim that their model is different from Demsetz and Lehn's (1985) model that considers risk as exogenous and ownership structure as endogenous factor. However, their model considers risk as an endogenous decision of the bank especially in the short term. It is judged that risk is being influenced by corporate governance mechanisms. Their model utilizes Lev's (1974) conclusion that highly leveraged firms tend to exhibit greater stock return variance. The same insight is applied to operating leverage concept. Authors used cross-section time series regression for 38 bank holding companies over the 8-year period in an empirical study and find some support for both hypotheses. They find the following three variables as significant and positive at 1 percent level:

- total return risk,
- unsystematic risk with short term rates,
- unsystematic risk with long-term rates.

Galai and Masulis (1976) note that, limited liability stockholders; prefer increasing risk by increasing leverage. However, as Kane (1985) and Benston et al. (1986) state, the risk taking behavior of bank managers depend on the degree to which their best interests or preferences are tied to those value-maximizing stockholders.

2.7. OWNERSHIP STRUCTURE

2.7.1. Definitions and Measurement

Ownership structure definition of Xu and Wang (1997) is used in this study. They define ownership structure as ownership concentration and ownership mix. In the literature, most of the academicians use ownership concentration as a proxy for ownership structure.

2.7.1.1. *Ownership Concentration*

Corporate ownership concentration is measured with different variables in the literature. Share distribution among the shareholders provides a measurement system for ownership concentration and it has several forms as stated in the literature. These are;

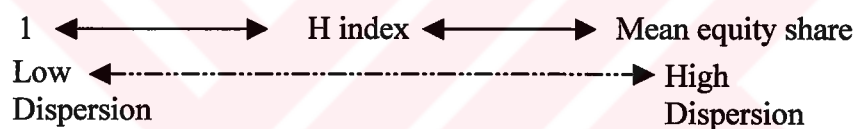
- Percentage of outstanding common shares owned by the largest shareholder. Being,

- Financial Institutions,
- Nonfinancial corporations,
- Family members,
- Individuals,
- Other Agents,
- Percentage of outstanding common shares owned by the top three shareholders,
- Percentage of outstanding common shares owned by the top five shareholders,
- Percentage of outstanding common shares owned by the top ten shareholders,
- Percentage of outstanding common shares owned by the top fifteen shareholders,
- Cumulative percentage ownership of other atomistic shareholders,
- Herfindahl Index,

Percentage of outstanding common shares owned by the top shareholders is an indicator of the level of dispersion and degree of large shareholders in the mix. This measure also provides evidence whether shareholders are concentrated or diffused. If the percentage of outstanding common shares owned by the “n” large shareholders is relatively high, it can be concluded that this corporation is governed by a countable number of large shareholders, and they have high stake on the corporation. These large shareholders will have much more influence on investment decisions and managerial policies, than those of diffusely owned corporations.

Percentage ownership of other agents gives an insight about the distribution of minority shares. If this value is relatively high, then it can be a sign of the presence of diffused ownership.

Demsetz and Lehn (1985) and Claessens (1997) measure the degree of ownership concentration with Herfindahl index. Herfindahl Index is defined as a sum of squared percentage of ownership shares controlled by each shareholder. For that reason, this index can take a value between the ranges of mean-equity-share-held and one. If a firm is owned by a single owner, then its Herfindahl index becomes one. On the other hand if ownership is exactly equally distributed among all shareholders, Herfindahl index will be the mean equity share held.



2.7.1.2. *Ownership Mix*

Ownership concentration may not itself cover all characteristics of ownership structure. While ownership structure is only concerned with the share distribution characteristics among the shareholders, ownership mix captures the identity of shareholders. Ownership mix variables may be defined with some of the following variables.

- *Foreign ownership*: Foreign owners that have a stake on the company, carry shares of the firm, and might be involved in corporate affairs.
- *Government ownership*: The governance characteristics of government-controlled firms differ compared to private ones.
- *Affiliation to a conglomerate*: Conglomerates have a tendency to affect their affiliates.

- *Family control*: Family controlled firms have distinctive differences in governance processes compared to others.
- *Cross ownership*: If a firm is owned by other firms and at the same time firm owns the shares of the owner firms, it gets very complicated to find an answer to the question of “who really owns that firm.”
- *Dispersed ownership*: If a firm is owned by small atomistic shareholders and it is difficult to determine dominantly controlling a single person or a group, then it can be defined as a dispersed firm.
- *Bank ownership*: Bank owned firm might have differences in its nature compared to others.
- *Global Firm*: Firms operating in the global arena might have differences in their governance systems.
- *High-Tech Firm*: Firms using highly sophisticated and at the edge of technical machinery and equipments might have different systems.
- *Managerial ownership*: We witness the effects of managerial ownership in the literature. For that reason managerially owned firms need to be categorized.
- *Manager in the board*: In some firms management is represented in the board and CEO is a member of the board. This might change the nature of control mechanisms.

2.7.2. Ownership Structure Factors

Ownership structure is one of the most important determinants of the corporate governance environment. When we question the factors affecting ownership structure, we find answers in the literature. Demtsetz and Lehn (1985) state three general forces affecting ownership structure. These are:

- Value maximizing size of the firm,
- Profit potential from exercising more effective control,
- Systematic regulation that imposes constraints on the scope and impact of shareholder decisions.

In addition to those stated above, Prowse (1992) claims additional factors affecting ownership structure of a firm. His list includes the following factors in addition to Demsetz and Lehn (1985).

- Risk Aversion of management
- Cost of Capital
- Leverage
- Instability of the firm's environment (measured by profit volatility)
- Managerial behavior

2.7.3. Ownership Structure and Corporate Performance

Corporate performance measurement has attracted significant attention from academicians. Different performance measurement systems are suggested in the literature and performance is often measured from the owner's point of view. The frequently used measures are return on assets, return on equity, economic profit, Tobin's Q, and adjusted market returns. These measures can be classified into two main subgroups: (1) market based and (2) accounting based measures. While market based measures are concerned with expectations regarding the entire future of the firm, accounting based measures merely rely on historical data.

Besides measurement systems, a group of academicians focused on investigating relationship between ownership structure and performance. These studies can be classified in a number of ways. Major classifications are summarized below.

2.7.3.1. *Incentive Alignment Argument*

The main sources of the agency dilemma are delegation of authority and information asymmetry. Since owners feel themselves obliged to use professionals in the managerial positions, they need to be sure that their property rights and ownership interests are going to be protected by those agents. However, most of the times they are not perfectly informed on their firms' operations and investments. In order to solve or at least minimize agency conflicts, owners investigate incentive mechanisms, which help to align the goals of both principals and agents. Perfect incentive case is full ownership or complete residual payment. Since, this does not always seem feasible; agency cost will not be a coincidence in the corporate life. When we examine the literature we find evidence provided by Holderness et al. (1999) that managerial ownership of publicly traded firms is on average higher today than earlier in the century. Lower volatility and greater hedging opportunities associated with the development of financial markets appear to be important factors explaining the increase in managerial ownership.

Jensen and Meckling (1976) suggest that more equity ownership by the manager may increase corporate performance because it means better alignment of the monetary incentives between the manager and other equity owners. This argument is supported also by Stulz (1988) from a takeover perspective.

Hart and Holmström (1997) consider cases between principals and agents. It is assumed that all role players are perfectly rational and pursue utility maximization and managers are much more risk averse than shareholders. They suggest that if there is a significant and positive correlation between the manager effort and the

profit of the firm, and then it is a good idea to make the salary of the manager an increasing function of the firm's profit. As a result, higher efforts of managers will create higher profits and higher salaries. This scheme will be efficient if the manager's loss in utility from increased effort is less than the gain in utility from increased salary and if the shareholder's gains in profits are higher than the loss from increased salary payments.

2.7.3.2. *Takeover Premium Argument*

Corporate control contest is not uncommon in the corporate life. Proxy fights against replacing managers, or takeover battles in order to gain ownership and at the same time, control of the firm are just a few examples. Managers play a key role in the takeover battles. Since manager has perfect information on all aspects of the target firm, his attitude towards takeover may affect the outcome of the battle. Stulz (1988) examines this phenomenon and concludes that more equity ownership by the manager may increase corporate performance. Since managers of these firms are more capable of opposing a takeover threat from the market for corporate control, the raiders in this market will have to pay higher takeover premiums.

2.7.3.3. *Managerial Entrenchment Argument*

Increased managerial ownership to align the goals of both agents and principals might create its own problems. Morck, Shleifer and Vishny (1988) explain that more equity ownership by the manager may decrease corporate performance because managers with large ownership stakes may be so powerful that they do not have to consider other stakeholders' interest. Managers might also be so wealthy that they no

longer intend to maximize profit but get more utility from maximizing market share or technological leadership etc.

Managers are under the influence of owners, financial institutions, public authorities, managerial labor market, and other stakeholders. Their main self-interest lies in the protection and improvement of their current positions. For that reason, they will tend to be reluctant to invest risky projects even though those projects are preferable to the owners. Therefore, managers entrench themselves against the incidences of risking their positions.

Agrawal and Mandelker (1987) conduct an event-study on US listed firms that announced adoption of antitakeover charter amendments to check for simultaneous effect of type of amendment and percentages of institutional ownership by including interaction terms. They conclude that managers can entrench themselves using anti-takeover provisions instead of stock ownership. Cumulative abnormal return (CAR) decreases significantly with the adoption of antitakeover amendments. CAR increases for increasing institutional ownership, concentration of institutional ownership, and ownership by 5 percent block holders. However, no evidence of a difference in CAR for different levels of insider ownership is found by the authors.

2.7.3.4. *Cost of Capital Argument*

Increased concentration is expected to increase corporate performance in the worlds of rationales. However, ownership concentration has advantages as well as disadvantages and at some point, disadvantages may overcome the benefits.

Fama and Jensen (1983) claim that increased ownership concentration (any kind of owner) decreases corporate performance because it raises the firm's cost of

capital as a result of decreased market liquidity or decreased diversification opportunities on behalf of the investor.

On the other hand, Demsetz and Lehn (1985) investigate ownership concentration and performance relation by using data of large US firms, for the time period of 1976-80. They conduct OLS regression and find that performance by accounting return is insignificantly decreasing with ownership by 5 or 20 largest shareholders or the Herfindahl index. Authors conclude that ownership by 5 or 20 largest shareholders (or Herfindahl or ownership by family and individuals or institutional investors) increases significantly by standard error of market return.

Loderer and Martin (1997) examine the relationship between ownership structure and performance. They measure performance with Tobin's Q as defined by market value of equity plus book value of long and short term debt to book value of assets; and six-day's cumulative abnormal return (CAR). In two separate OLS regressions with market value of equity, performance variables of Tobin's Q and CAR are significantly increasing with the insider ownership. Regression analysis reveals that, inside ownership increases significantly with CAR, and CAR decreases significantly with inside ownership. Further, inside ownership decreases significantly with Tobin's Q, and Tobin's Q decreases insignificantly with inside ownership.

2.7.3.5. Monitor and Influence Argument

There is an information asymmetry between the principals and agents. If owners are dispersed, unorganized, and atomistic, they may hesitate to gather sufficient amount of information because of the information costs involved. Cost of

gathering information will far exceed the benefit from that specific information piece. However, large shareholders and institutions have significant amount of stake on corporate performance, for that reason they will tend to incur information costs. This argument is also supported by Shliefer and Vishny (1986, and 1997) stating that large owners or block owners may be more capable of monitoring and controlling the management thereby perhaps contributing to corporate performance.

Barclay and Holderness (1991) also conduct an event study to examine the relationship between performance and large equity shareholders. They find that there is significant and positive relationship between performance and announcement of outsider's acquisition of a large equity position, but only persistent if takeover or other corporate restructuring follows.

Agrawal and Knoeber (1996), study large US firms in order to detect any relationships between ownership structure and performance. They measure performance with Tobin's Q which is defined as sum of market value of stock, preferred stock and debt to book value of assets and conclude that Tobin's Q decreases significantly with outside board members, leverage, and corporate control activity. Performance increases significantly with insider ownership. Shareholdings by block holders and institutional investors increase significantly by corporate control activity. Institutional ownership decreases significantly with block holder ownership and vice versa. Leverage increases significantly with insider ownership and outside board membership but not vice versa. Years of CEO employment decreases significantly with institutional and block holder ownership, but not vice versa.

These arguments provide evidence that agency conflict is not necessarily between managers and owners but it may also reveal itself between large and minority shareholders. Justification for that argument lies in the conflicting interests and expectations of the two groups. Block shareholders have a significant stake on corporate performance and they do not prefer risking that. For that reason, large shareholders generally occupy a place on the board of directors and they will tend to influence the firm's decision process in favor of their own interests.

Small shareholders can diversify their investments and can easily buy and sell their possessions. This flexibility of small shareholders decreases their risk and at the same time, their incentive to monitor and influence corporate policies. Strickland, Wiles, and Zenner (1996) conduct an event study on the effect of monitoring actions by small shareholders. They find evidence that united small shareholder activism enhances shareholder value.

When managers of large firms hold significant equity stakes, the question of these managers' remuneration becomes less important since the majority of their income would come from their equity stakes, (Mehran (1995)). For that reason, a decrease in the agency conflict between managers and shareholders is expected.

2.7.3.6. *Nonlinearity Argument*

Stultz (1988) presents a formal model that predicts a roof shaped relation between managerial ownership and performance. The model is integrating the takeover premium argument and the entrenchment argument into a single theory.

McConnell and Servaes (1990) examine roof shaped relation by using NYSE or AMEX data. They use two performance measures of Tobin's Q and return on assets

(ROA). Tobin's Q is defined by market value of stock, preferred stock and debt to replacement value of assets. Ownership structure is measured by insider stock ownership of managers and directors, institutional ownership, and share of block holders. They find that both measures of profitability is significantly increasing with ownership by managers and directors, and this relation is roof-shaped with a performance peak for 69 percent ownership in 1976 and 41 percent in 1986. Hubbard and Palia (1995) also find similar evidence of a roof-shaped relation between performance and ownership structure. According to McConnell and Servaes (1990) performance increases significantly with institutional ownership, but no measure of block holder ownership seems to have any effect. By using new data sample, McConnell and Servaes, (1995) conduct another study and reproduced the similar results of their 1990 study. The only difference in the findings is that Tobin's Q now is significantly increasing with block holder ownership. For all sample periods the relation between Tobin's Q and all ownership variables is insignificant for high-growth firms and significantly positive and roof-shaped for low-growth firms.

Keasey, Short and Watson (1994) examine UK firms and test for roof-shaped relation by squaring board ownership and use piecewise linear regression. They discovered that performance is significantly increasing with board ownership and this relation is significantly roof-shaped. This is also confirmed using piecewise linear regression. Performance also increases if directors are represented in other firm's boards.

Cho (1998) conducts OLS regression with the large US firms in 1991 to test for non-monotonic relation by piecewise linear regression and fix the breakpoints by a grid search technique that maximizes significance and two stage least squares regression to estimate three equations with ownership, performance, and investment as the dependent variables. He concludes from two separate OLS regressions that Tobin's Q and capital expenditure is significantly increasing for inside ownership in the range of 0 to 7 percent and significantly decreasing in the range of 7 to 38 percent. He argues that inside ownership determines investment, which in turn determines performance, which in turn determines inside ownership.

Holderness, Kroszner, and Sheehan (1999) explore the relationship between ownership and performance by measuring performance with Tobin's Q as defined by the ratio of market value of stock, and book value of debt to book value of assets. They find that profitability is significantly increasing for management ownership in the range of 0 to 5 percent and significantly decreasing in the range of 5 to 25 percent in the 1935 sample and for the 1995 sample. Tobin's Q is significantly increasing for management ownership in the range of 0 to 5 percent by controlling size. Hermalin and Weisback (1991) find that performance increases significantly with CEO ownership in the range of 0 to 1 percent and decreases significantly in the range of 1 to 5 percent.

2.8. SUMMARY

The theoretical debate focuses on agency relationship. Separation of ownership and management gives rise to a conflict of interest between owners and managers as their agents. Jensen and Meckling (1976) explore the costs of agency relationship on

the corporation. They claim that there exist governance mechanisms by which this conflict can be resolved to a certain extent. This assertion indicates that, governance scheme is likely to affect a firm's performance. Fama (1980) argues that a well functioning managerial labor market will impose the necessary discipline on managers. Likewise, markets for corporate control, if they function properly, are expected to serve as an incentive for managers to act in the best interest of owners (e.g. Jensen and Ruback, 1983; Martin and McConnell, 1991). Grossman and Hart (1982), on the other hand, point out that if ownership is widely dispersed, no individual shareholder will have the incentive to monitor managers since each will regard the potential benefit from a takeover to be too small to justify the cost of monitoring. Shliefer and Vishny (1986) points out the benefits of ownership concentration in enhancing the functioning of takeover market.

Large equity ownership may impose potential costs on the company too. Lack of diversification on the part of a large shareholder will expose him to unnecessarily high risks. As he controls the strategic decisions of the firm, he may pass up some profitable projects on the basis of total risk, rather than merely evaluating the projects in terms of their systematic risk. Large equity ownership may have some direct costs on other stakeholders in the firm, most notably, the minority shareholders and employees. Large shareholders can divert funds for their own personal benefits in the form of special (hidden) dividends and preferential deals with their other businesses. On the other hand, Shliefer and Vishny (1986) argue that large shareholders have the capability of monitoring and controlling the managerial activities. Thereby, they are liable to contribute to corporate performance. The overall impact of large

shareholders seems to be ambiguous. Actually, there are both theoretical and empirical studies suggesting a quadratic shaped relationship between level of ownership and firm performance (e.g. Stulz, 1988; McConnel and Servaes, 1990). At lower levels of ownership concentration, companies benefit from resolution of the agency problem, however, as the share of large owner increases potential costs take over, surpassing the benefits.



CHAPTER – III

OWNERSHIP STRUCTURE IN TURKEY

3.1. INTRODUCTION

The last quarter of the 20th century has been referred to as a decade of significant developments in Turkish corporate life, with a considerable degree of positive and promising economic changes. As a part of the overall liberalization process, beginning in the 1980s in the financial markets, capital markets are organized by a new regulatory framework, setting the stage for effective and healthy functioning of the markets. Since there have been large restructurings in Turkey in the past two decades, we have witnessed consequences of the steps taken.

In the past two decades, as a result of radical restructurings in the economic conditions of Turkey, as well as financial markets, we have observed an emergence of the privatization of corporate ownership. Corporate owners began discovering the benefits of raising equity through public offerings. Debt financing during that time frame had a very high cost because of high inflation and risk premiums. On the other hand, small investors recognized the stock market as a promising investment tool resulting in considerable gains. As a consequence of an increased equity selling efforts, and an increased number of small investors that invested in stock markets, we observed significant changes in the ownership structure of Turkish firms.

This increasing trend is also supported by regulations after 13 years. The recent legislation on minority rights that was enacted in December 1999, the Law No. 4487, brought in a set of amendments to the Capital Market Law. According to the Turkish Commercial Law, minority shareholders are granted rights to protect themselves against larger shareholders. Before this regulation, Turkish Commercial Law defined minority shareholders as shareholders representing minimum of 10 percent of the capital stock. With the new provision, minority rights are now granted to the shareholders with 5 percent of the paid in capital. The legal framework of the capital markets in Turkey is based on the Capital Market Law (CML) enacted in 1981, amended in 1992 and 1999. Although the existence of the Stock Exchange dates back to the foundation of the Republic, its present state of functioning is based on the regulations enacted after 1983. After the launching of the relevant regulation in 1985, the exchange began operating under the name of Istanbul Stock Exchange in 1986. (ISE Brochure, 1999)

In addition to legal and financial arrangements, the transfer from indirect to direct private share ownership of formerly government-owned enterprises gained significant momentum during this period. Privatization programs turn out to be one of the required steps for the membership to the European Union.

Because of new regulations, the increased interest of small investors, and ongoing privatization programs, the total volume of issues of new stocks increased substantially between 1986 and 2000. The number of corporations that realized initial public offerings (IPOs) which had been increasing in the past years mainly depends on general economic conditions. 37 corporations made initial public

offerings (IPOs) and collected 2.7 billion US dollars in 2000. However, in 1999, only 10 corporations made initial public offerings and collected 86 million US dollars.

Although the Istanbul Stock Exchange was affected by the national crisis in 1994 and global crisis in 1998, it is a growing emerging stock market. The total trading volume increased to 178,997 million US dollars in 2000 from 13 million US dollars in 1986. The number of companies whose shares are traded increased to 316 in 2000 from 80 in 1986. The total market capitalization reached to 70 billion US dollars in 2000. The numbers of firms listed on the ISE and trading volume of the ISE from 1986 to 2000 are presented in Figure 5 and 6 respectively.

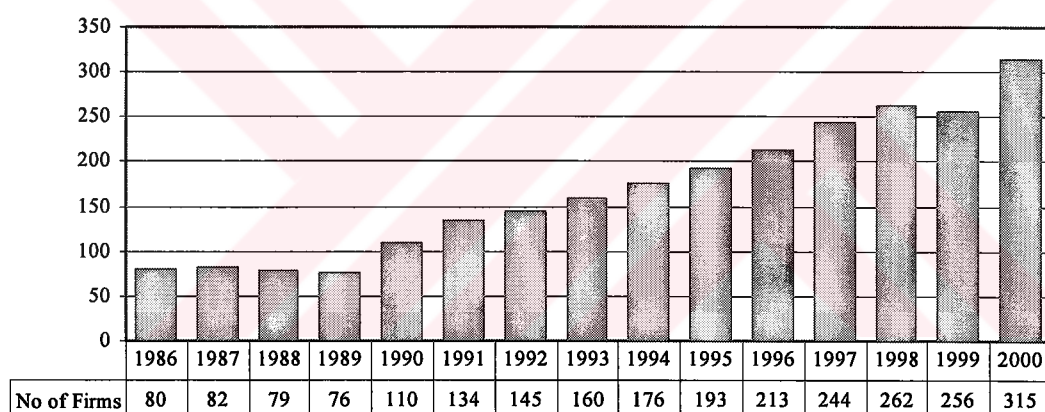


Figure 5 Number of Firms Listed on Istanbul Stock Exchange

The literature on ownership structure provides us with significant evidence on the international differences in country ownership structures as documented by Pedersen and Thomsen (1997), Charkham (1994), Porter (1992), Prowse (1995), Roe (1991, 1994), and Walter (1993). Turkey is classified as an emerging market because of its developing and promising nature. Emerging markets are differentiated from developed markets by their heterogeneous nature and inherent dynamics. They are

markets characterized by high volatility and high average returns. It has been shown that they are not integrated into the developed markets of the world as evidenced by very low correlation with the rest of the world and among themselves (Bekaert et al., 1998). Most of the studies in the literature on ownership structure focus on developed mature markets. In this chapter, we intend to determine the main ownership structural characteristics of Turkish firms and compare the findings with those of other countries.

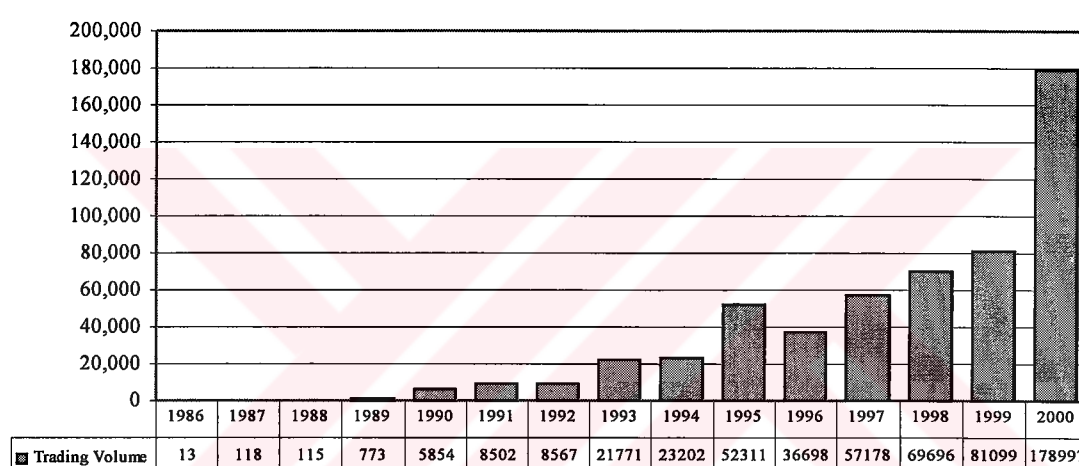


Figure 6 Trading Volume of Istanbul Stock Exchange in Million \$.

Table 4 presents a visual comparison of the ISE with the world stock exchanges. The various stock exchanges are compared on the basis of the number of companies listed, market capitalization, and trading values, for 2000. The table clearly shows that the ISE is a small, developing exchange with promising trading values.

Turkey has a liberal foreign exchange regime, with a convertible currency. There are no restrictions on foreign portfolio investors trading in the Turkish securities markets. Decree No. 32, passed in August 1989, removes all restrictions

on overseas institutional and individual investment in securities listed on the ISE. Hence, the Turkish stock and bond markets are open to foreign investors, without any restrictions on the taking back of capital and profits. Decree No. 32 also allows Turkish citizens to buy foreign securities. (ISE Brochure, 1999) These laws attract direct and indirect foreign investors to the ISE. In our study, we will mainly focus on foreigners who have direct investments in Turkish firms to establish long-term partnerships.

Table 4 Comparison of World Stock Exchanges in 2000 (US\$ Million)

<i>Exchange</i>	<i>No of Firms Listed</i>	<i>Market Capitalization (Million USD)</i>	<i>Total Share Trading (Million USD)</i>
Amex	649	82,717.40	945,390.70
Canadian Venture	2598	9,413.57	10,882.33
Mexico	177	125,203.85	45,768.38
Nasdaq	4734	3,597,085.87	19,798,799.25
NYSE	2862	11,534,612.90	11,060,046.00
Toronto	1421	770,116.26	636,535.29
Athens	310	107,499.18	94,162.67
Copenhagen	235	111,818.51	102,636.12
Deutsche Borse	989	1,270,243.17	2,119,784.71
Euronext Amsterdam	392	640,456.30	678,763.67
Euronext Paris	966	1,446,634.12	1,064,866.03
Helsinki	158	293,634.74	208,326.09
ISE	316	69,658.92	178,997.59
Italy	297	768,363.36	1,019,625.27
Johannesburg	606	131,321.00	77,446.07
Lisbon	110	60,680.50	54,896.64
London	2374	2,612,230.21	4,558,662.93
Stockholm	311	328,339.04	485,288.34
Tel-Aviv	665	65,337.46	28,538.48
Warsaw	225	31,428.61	19,305.44
Australian	1406	372,794.35	226,484.89
Hong Kong	790	623,397.74	376,664.05
Jakarta	286	26,812.50	15,109.27
Tokyo	2096	3,193,934.44	2,315,501.78
Korea	702	148,361.20	556,246.30
Taiwan	531	247,596.88	986,271.71

The increasing diversity of corporate control, and the emergence of more varied types of ownership structure, motivate us to reflect on recent developments in corporate governance and their implications for our understanding of economics of the processes involved. In order to describe the ownership structure picture of the Turkish non-financial firms listed on Istanbul Stock Exchange, we will use ISE's yearbooks between 1992 and 1998 as well as its electronic database.

Banks, leasing companies, investment companies, holding companies, and insurance firms are excluded from the data set. Investment companies are closed-end mutual funds that invest in a portfolio of securities and Holding companies invest only in member firms of a conglomerate. Hence, our sample consists of non-financial corporations listed on Istanbul Stock Exchange from 1992 to 1998. Most (73 percent) of these companies are ranked among the largest 500 manufacturing companies in Turkey, based on the list compiled by Istanbul Chamber of Commerce. Transportation and service corporations in our sample are clearly comparable in size with the largest 500. Hence, it would not be wrong to label our sample as the largest companies in Turkey with public ownership.

We define ownership structure along two dimensions: ownership concentration and ownership mix. Ownership concentration refers to the distribution of the shares owned by a certain number of individuals, institutions, or families. Ownership mix, on the other hand, is related to the presence of certain institutions or groups, such as government or foreign partners, among the shareholders. These two categories incorporate both the influence power of the shareholders, as well as, the identity of owners and their unique incentive mechanisms and preferences.

3.2. OWNERSHIP CONCENTRATION

3.2.1. Introduction

Ownership concentration intends to measure the influencing power of the shareholders on management. Ownership concentration variables are defined as the distribution of shares among the shareholders. In this study, we measure ownership concentration with the following four variables. These measures are:

- Percentage of shares owned by the largest shareholder (LSH1)
- Total percentages of shares owned by the largest three shareholders (LSH3)
- Cumulative percentage of shares held by other diffused shareholders (OTHER)
- Cash flow right(s) of the ultimate controlling owner(s) (CASH)

By examining the concentration measures, we intend to determine the ownership concentration characteristics of the Turkish firms. Each ownership concentration measure will be defined and examined in detail in the following sections.

3.2.2. Largest Shareholder (LSH1)

The ownership concentration measure LSH1 reflects the percentage of the shares held by the largest single shareholder. This measure provides an insight

regarding the concentration level of a firm. When we examine the descriptive statistics of the percentage share of the largest shareholder (LSH1) as presented in Table 5, we observe considerably large values in the central tendency measures. Mean of the percentage share of the largest shareholder (LSH1) in our sample is 43 percent and median of the variable is 40 percent. These values provide evidence in favor of the concentrated ownership nature of Turkish firms. The percentage of the sample firms whose largest shareholder owns more than 30 percent of the shares is approximately 70 percent. This implies that large shareholders are dominant in the governance systems of the Turkish firms. In Chapter IV we will look closely at the impact of large shareholders dominance in a firm's governance and try to identify the possible conflicts between majority and minority shareholders.

Table 5 Summary Statistics of Percentage Share of the Largest Shareholder

LSH1			
<i>Mean</i>			
43.46			
<i>Std. Error of Mean</i>			
0.64			
<i>Median</i>			
40.07			
<i>Std. Deviation</i>			
21.16			
<i>Skewness</i>			
0.57			
<i>Kurtosis</i>			
-0.03			
<i>Minimum</i>			
0.52			
<i>Maximum</i>			
99.30			
<i>Percentiles</i>			
10%	19.43	60%	46.24
20%	26.00	70%	51.00
30%	30.96	75%	54.42
40%	35.00	80%	60.00
50%	40.07	90%	74.91

When we examine the yearly descriptive statistics of percentage share of the largest owner (LSH1) as documented in Table 6, we do not observe any significant deviations from the mean. Even though there is a slightly decreasing trend in the

mean of the yearly LSH1 values, between 1992 and 1998, it does not seem to be statistically significant.

Table 6 Yearly Descriptive Statistics of LSH1

<i>LSH1</i>	<i>1992</i>	<i>1993</i>	<i>1994</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>
<i>No. Of Firms</i>	105	121	136	154	175	194	194
<i>Mean</i>	45.47	44.14	42.49	42.47	42.20	43.73	44.30
<i>Change in Mean</i>		-3%	-4%	-0.1%	-1%	4%	1%
<i>Median</i>	40.00	39.41	37.70	40.00	40.05	41.35	42.04
<i>Change in Median</i>		-1%	-4%	6%	0.1%	3%	2%
<i>Std. Deviation</i>	22.36	21.98	21.31	21.06	20.68	20.98	20.77
<i>Skewness</i>	0.92	0.83	0.83	0.54	0.50	0.33	0.29
<i>Kurtosis</i>	0.04	0.03	0.31	0.00	-0.03	-0.17	-0.19
<i>Minimum</i>	12.60	4.11	1.61	0.52	1.11	1.00	1.00
<i>Maximum</i>	99.24	99.30	98.20	98.20	98.17	98.17	98.17

We have created two main categories for the percentage share of the largest shareholder (LSH1), with a cut point of 50 percent, to examine the diverse characteristics of ownership concentration. With this approach, it is intended to uncover the concentrated nature of the listed Turkish firms. When we examine the yearly percentages in each category presented in Table 7, we do not observe any significant change. On average, in 66 percent of our sample firms, largest shareholder owns more than 50 percent of his firm.

Table 7 Yearly Changes in the Percentages of LSH1 Categories.

	<i>1992</i>	<i>1993</i>	<i>1994</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>	<i>AVG</i>
<i>No. Of Firms</i>	105	121	136	154	175	194	194	
<i>LSH1<50</i>	30.76	30.23	30.12	29.73	29.80	31.07	31.09	30.42
		-2%	-0.4%	-1%	0.2%	4%	0.1%	
<i>LSH1>50</i>	68.43	67.63	66.70	64.75	64.24	65.67	64.84	65.78
		-1%	-1%	-3%	-1%	2%	-1%	

The main characteristics of the percentage share of the largest shareholder (LSH1) variable are examined by conducting independent sample t tests. The results of the t tests are presented in Table 8.

Table 8 Mean Comparison of Percentage Share of the Largest Shareholder
Figures in the body of table are t-statistics and variable mean values of each class. K
stands for 1,000 \$.

	<i>LSH1<50%</i>	<i>LSH1>50%</i>	<i>t-stats</i>
Book Value of Equity (TA)	93,801 K	144,852	-3.62**
Return on Assets (ROA)	7.25	7.66	-0.65
Return on Equity (ROE)	13.39	14.79	-0.82
Price to Earnings (P/E)	23.01	21.35	0.77
Market to Book Value (MBV)	5.39	5.38	0.02
Gross Profit Margin	33.68	34.93	-0.68
Net Profit Margin	10.61	8.76	1.17
Growth in Gross Sales	100.91	296.77	-1.36
Net Profit Growth Rate	270.14	301.64	-0.16
Total Asset Growth Rate	105.29	100.38	0.71
Shareholders Equity Growth Rate	132.71	192.83	-0.95
S/T liability to L/T Liability	77.43	79.96	-1.96**
L/T Bank Debt to TA	0.10	0.07	3.65**
S/T Liability to TA	0.41	0.45	-3.60**
S/T Bank Debt to TA	0.15	0.18	-2.76**
L/T Liability to TA	0.13	0.12	1.90**
Total Fixed Assets to TA	0.32	0.29	2.87**
Mach. Plant & Equip. To TA	0.40	0.34	3.31**
Investment in Process to TA	0.05	0.04	2.06**
R&D to TA	0.01	0.01	0.60
Mrkt. Sell. & Dist. Exp. to TA	0.05	0.06	-1.01
L/T Investments to TA	0.08	0.08	0.04

Size is an important characteristic of the sample firms as reflected in the LSH1 categories. Concentrated firms are mainly large firms. Firms whose LSH1 is more than 50 percent, are significantly larger than those of less concentrated firms. Besides size, we also compare the means of the ratios listed in Table 8 to reveal characteristics of the sample firms. When the leverage characteristics are examined we find ample evidence. Short-term liability to long-term liability, short-term liability to total assets and long-term liability to total assets ratios are significant. Those ratios indicate that firms with LSH1 more than 50 percent have higher short-term liabilities but lower long-term liabilities. When the debt preferences of those firms with a sole powerful owner are examined, we witness the dominance of the short-term debt. On the other hand, concentrated firms have significantly lower

investment ratios (Total Fixed Assets to Total Assets, Machinery, Plant and Equipment to Total Assets and Investment in Process to Total Assets).

In sum, concentrated firms with LSH1 more than 50 percent are large in size and mostly short-term oriented in their debt preferences with relatively lower investment attitudes.

3.2.3. Cumulative Shares of the Largest Three Shareholders (LSH3)

Cumulative percentage of shares held by the largest 'n' number of shareholders is commonly used as an ownership concentration measure in the literature. However, based on the market characteristics, different authors include different 'n' number of largest shareholders. For example, Demsetz and Lehn (1985) and Prowse (1992) used the percentage of shares held by the largest ten shareholders as a proxy for the concentration of ownership control and power.

We select cumulative percentage of shares held by the largest three shareholders. We believe that it better captures the dimensions of ownership concentration compared to the others, when the Turkish market characteristics are taken into consideration. When we examine the median percentage share of the largest shareholder (LSH1) on the ISE, it is approximately 40 percent and this figure increases to 64 percent when the largest three shareholders' (LSH3) median shares are taken into account. On the other hand, the median share of the other diffused shareholders is 29 percent. On average, shares of the largest three shareholders and other diffused shareholders add up to 93 percent. This is a noteworthy amount, which enables us to explore the consequences of the ownership structure of Turkish

firms listed on the ISE. By using the largest three-shareholder measure, we only exclude 7 percent of the shareholders from the analyses.

Table 9 Summary Statistics of cumulative percentage shares of the largest three shareholders (LSH3)

				LSH3
<i>Mean</i>				62.128
<i>Std. Error of Mean</i>				0.581
<i>Median</i>				64.000
<i>Std. Deviation</i>				19.071
<i>Skewness</i>				-0.724
<i>Kurtosis</i>				0.799
<i>Minimum</i>				0.820
<i>Maximum</i>				99.300
<i>Percentiles</i>				
10%	36.80	60%	67.45	
20%	50.50	70%	72.20	
30%	55.14	75%	75.00	
40%	59.29	80%	78.09	
50%	64.00	90%	84.65	

When we examine the distribution of the cumulative shares of the largest three shareholders (LSH3), we witness the concentrated nature of Turkish firms. Mean value of LSH3 is 62 percent, which does not leave any doubt about the concentrated ownership nature of our sample. When we explore the changes in the mean values of LSH3 between 1992 and 1998, we do not observe any significant deviations in year-to-year values.

Table 10 Yearly Descriptive Statistics of cumulative percentage shares of the largest three shareholders (LSH3)

<i>LSH3</i>	1992	1993	1994	1995	1996	1997	1998
<i>No. of Firms</i>	105	121	136	154	175	194	194
<i>Mean</i>	65.47	63.78	61.84	61.02	60.29	61.95	62.20
<i>Change in Mean</i>		-3%	-3%	-1%	-1%	3%	0.1%
<i>Median</i>	65.40	64.11	62.13	61.70	61.67	64.91	65.03
<i>Change in Median</i>		-2%	-3%	-1%	0.1%	5%	0.1%
<i>Std. Deviation</i>	19.91	18.06	18.15	18.74	18.81	19.87	19.50
<i>Skewness</i>	-0.317	-0.537	-0.459	-0.718	-0.748	-0.975	-0.993
<i>Kurtosis</i>	-0.479	0.723	0.733	0.846	0.941	1.122	1.165
<i>Minimum</i>	14.00	4.11	4.27	0.82	1.11	1.0	1.0
<i>Maximum</i>	99.24	99.30	98.20	98.20	98.23	98.17	98.17

In those concentrated firms, only the three largest shareholders are enough to decide on critical issues. If the largest three shareholders belong to the same family, than it becomes more threatening to the powerless, minority shareholders. It may not be surprising to witness possible conflicts between minority and majority shareholders in that type of firms.

In order to examine various size and financial characteristics, we create two groups for classification based on LSH3 variable. In the first group, we divide the overall firms into two subgroups. Those firms whose cumulative shares belonging to the largest three shareholders (LSH3) are more than 50 percent constitute the first group while others make up the second group, referred to as widely held firms. On average 18.5 percent of the sample firms can be categorized as widely held firms, 81.5 percent of them are concentrated firms. Yearly changes as listed in Table 11 do not show significant variations, indicating that there has been only a minor change in the ownership structure of the sample firms during our sample period. In 82 percent of the sample firms, only three shareholders are enough to decide on the future of firms. If this were the case, then it would not be surprising to observe the effects of large shareholders on the corporate governance system.

Table 11 Yearly Changes in the Percentages of LSH3 Categories.

	1992	1993	1994	1995	1996	1997	1998	AVG
<i>No. of Firms</i>	105	121	136	154	175	194	194	
<i>LSH3<50</i>	19.05	14.88	18.38	20.13	20.57	19.59	16.49	18.5
		-21.9%	24%	10%	2%	-4.8%	-16%	
<i>LSH3>50</i>	80.95	85.12	81.62	79.87	79.43	80.41	83.51	81.5
		5%	-4%	-2%	-1%	1.2%	4%	

In the second group, we define three subgroups. On average, we ignore 7 percent of the sample firms as described above. For that reason, we accept 7 percent

of our sample firms as our error zone and create a new subgroup between concentrated and widely held firms. With this approach, we intend to capture the internal dynamics of each class. We again do not observe any significant deviations in the ownership concentrations of the sample firms. However, the concentrated nature of ownership structures is robust in the two groups of classification. 82 percent of the sample firms have the largest three shareholders whose shares are more than 50 percent. This figure drops to 66 percent when we consider those largest three shareholders whose shares are more than 57 percent, but still it is a considerable amount to support for previous findings.

Table 12 Yearly Changes in the Percentages of LSH3 Categories.

	1992	1993	1994	1995	1996	1997	1998	Avg.
<i>No. of Firms</i>	105	121	136	154	175	194	194	
<i>LSH3<43%</i>	15.24	11.57	13.24	14.29	14.86	13.92	12.89	13.7
		-24%	14%	8%	4%	-6%	-7%	
<i>43%<LSH3<57%</i>	19.05	19.01	22.79	20.78	22.86	17.53	18.56	20.0
		-0.2%	20%	-9%	10%	-23%	6%	
<i>LSH3>57%</i>	65.71	69.42	63.97	64.94	62.29	68.57	68.56	66.3
		6%	-8%	2%	-4%	10%	-0.02%	

The Independent-Samples t-test is conducted to compare the means of two groups of cases. Ideally, for this test, the subjects are randomly assigned to two groups, so that any difference in response is due to the treatment and not to other factors. T-tests were conducted for both groups by comparing the characteristics of the concentrated and widely held firms in the sample. The results of the t-tests are reported in Tables 13 and 14. The results provide insightful evidence on the different characteristics of the concentrated and widely held firms.

When the size variable is considered, we can assert that concentrated firms are large in size. Debt structure characteristics are also examined and it is found that concentrated firms prefer to use more short-term debt. On the other hand, significant

long-term bank loans to total assets ratio shows that concentrated firms use lower long term bank loans than widely held firms.

Table 13 Mean Comparison of Percentage Shares of the Largest Three Shareholders
Figures in the body of table are t-statistics and variable mean values of each class. K stands for 1,000 \$.

	<i>LSH3<50%</i>	<i>LSH3>50%</i>	<i>t-stats</i>
Book Value of Equity (TA)	60,023.72 K	124,602.19 K	-3.69**
Return on Assets (ROA)	8.82	7.08	2.20**
Return on Equity (ROE)	14.26	13.83	0.20
Price to Earnings (P/E)	20.23	22.91	-1.01
Market to Book Value (MBV)	5.11	5.45	-0.60
Gross Profit Margin	32.68	34.48	-0.80
Net Profit Margin	14.29	8.93	2.74**
Growth in Gross Sales	109.68	187.54	-0.44
Net Profit Growth Rate	241.62	291.02	-0.21
Total Asset Growth Rate	116.28	100.52	1.84*
Shareholders Equity Growth Rate	121.68	162.50	-0.52
S/T liability to L/T Liability	78.20	78.39	-0.12
L/T Bank Debt to TA	0.11	0.09	2.04**
S/T Liability to TA	0.38	0.43	-3.87**
S/T Bank Debt to TA	0.17	0.16	0.69
L/T Liability to TA	0.11	0.13	-1.73
Mach. Plant & Equip. to TA	0.40	0.38	0.98
Investment in Process to TA	0.06	0.04	1.53
Total Fixed Assets to TA	0.33	0.31	1.43
R&D to TA	0.00	0.01	-1.41
Mrkt. Sell. & Dist. Exp. to TA	0.04	0.06	-1.79*
L/T Investments to TA	0.08	0.08	-0.07

The investment attitude of the firms can be captured with the ratios of total fixed assets to total assets, machinery, plant, and equipment to total assets, marketing, selling, and distribution expenses to total assets, investment in process to total assets and research and development expenses to total assets. Among those, only marketing, selling, and distribution expenses to total assets ratio is significantly higher in the concentrated firms.

When the profitability levels of the concentrated firms are examined, we witness significantly lower return on assets (ROA) and net profit margin ratios. This fact suggests that profitability of the concentrated firms is not as good as those of widely held firms.

Table 14 Mean Comparison of Percentage Shares of the Largest Three Shareholder

Figures in the body of table are t-statistics and variable mean values of each class. K stands for 1,000 \$.

	<i>LSH3<43%</i>	<i>LSH3>57%</i>	<i>t-stats</i>
Book Value of Equity (TA)	65,973.40 K	122,983.04 K	-2.95**
Return on Assets (ROA)	10.04	7.11	3.11**
Return on Equity (ROE)	16.99	13.35	1.45
Price to Earnings (P/E)	20.19	22.94	-0.86
Market to Book Value (MBV)	5.11	5.09	0.03
Gross Profit Margin	32.87	34.51	-0.59
Net Profit Margin	14.16	7.86	3.50**
Growth in Gross Sales	102.58	208.73	-0.46
Net Profit Growth Rate	136.17	272.32	-0.48
Total Asset Growth Rate	114.22	99.06	1.45
Shareholders Equity Growth Rate	116.09	173.68	-0.57
S/T liability to L/T Liability	76.96	78.71	-0.95
L/T Bank Debt to TA	0.11	0.09	2.07**
S/T Liability to TA	0.36	0.44	-4.87**
S/T Bank Debt to TA	0.14	0.16	-1.30
L/T Liability to TA	0.12	0.13	-1.11
Mach. Plant & Equip. to TA	0.39	0.37	0.82
Investment in Process to TA	0.06	0.04	2.01**
Total Fixed Assets to TA	0.34	0.31	2.26**
R&D to TA	0.00	0.01	-1.65
Mrkt. Sell. & Dist. Exp. to TA	0.03	0.06	-1.92*
L/T Investments to TA	0.09	0.07	0.80

The t-test results of the LSH3 with three categories as listed in Table 14 support the findings of the one with two categories in Table 13. In addition to those significant variables, investment in process to total assets ratio is also significant. This ratio reveals that concentrated firms have lower investment attitudes.

3.2.4. Percentage Shares of Diffused Shareholders (OTHER)

Diffused and anonymous minority shareholders that are less organized and powerless than large shareholders are measured with the variable of OTHER. Shareholders whose shares are less than 1 percent are taken into consideration with this measure. When the firms in our sample are examined, the mean of the percentage of diffused shareholders is found to be 32 percent (median value is 29 percent) as reported in Table 15.

Table 15 Summary Statistics of Percentage Shares of Diffused Shareholders (OTHER)

			OTHER
Mean			31.86
Std. Error of Mean			0.56
Median			28.84
Std. Deviation			18.52
Skewness			1.13
Kurtosis			1.694
Minimum			0.700
Maximum			99.150
Percentiles			
10%	14.00	60%	33.60
20%	16.18	70%	38.71
30%	20.00	75%	41.95
40%	24.46	80%	45.02
50%	28.84	90%	52.95

The results of the central tendency measures indicate that diffused owners are mostly powerless in the governance system of our sample firms. Firms controlled by diffused owners who own more than 50 percent of the shares make up only 12 percent of the sample firms. We can claim, on average, that the large shareholders mainly control 88 percent of the sample firms. Those diffused shareholders whose total shares reach up to 70 percent control only 4.25 percent of the sample firms.

Table 16 Yearly Descriptive Statistics of OTHER

	1992	1993	1994	1995	1996	1997	1998
<i>No. of Firms</i>	105	121	136	154	175	194	194
<i>Mean</i>	30.626	29.952	31.198	32.102	33.238	32.818	31.809
<i>Change in Mean</i>		-2%	4%	3%	4%	-1%	-3%
<i>Median</i>	27.000	28.140	29.000	29.110	30.840	28.570	27.975
<i>Change in Median</i>		4%	3%	0.1%	6%	-7%	-2%
<i>Std. Deviation</i>	19.666	18.050	17.973	18.038	18.183	19.318	18.508
<i>Skewness</i>	0.630	0.957	0.914	1.152	1.244	1.366	1.397
<i>Kurtosis</i>	-0.164	1.305	1.339	2.054	2.265	2.080	2.334
<i>Minimum</i>	0.760	0.700	1.800	1.800	1.770	1.830	1.830
<i>Maximum</i>	86.000	95.890	95.730	99.150	98.890	99.000	99.000

When the changes in the central tendency measures of OTHER as listed in Table 16, are examined, we do not witness any significant changes. This trend

implies that the power of the small, diffused shareholders does not vary through the selected time frame, and it seems that ownership structure remains stable.

We have also created two types of categories to explore the main characteristics of the concentrated and widely held firms. In the first category, we define the cut off point as 50 percent, and divide the sample firms into two groups. In the second category, we divide the sample firms into three groups with the cut off points of 43 percent and 57 percent. Yearly changes of the two categories are presented in Tables 17 and 18. When we consider the case in which OTHER is more than 50 percent, only 12 percent of our sample firms fall in this category. This level drops to 8 percent when the firms with more than 57 percent OTHER are taken into account. Clearly more than 75 percent of our sample firms have concentrated ownership structures.

Table 17 Yearly Changes in the Percentages of two OTHER Categories.

	1992	1993	1994	1995	1996	1997	1998	AVG
<i>No. of Firms</i>	105	121	136	154	175	194	194	
OTHER<50%	86.67	89.26	88.24	87.66	87.43	86.60	89.18	87.9
		2.99%	-1.14%	-0.65%	-0.27%	-0.95%	2.98%	
OTHER>50%	13.33	10.74	11.76	12.34	12.57	13.40	10.82	12.1
		-19.42%	9.50%	4.87%	1.89%	6.61%	-19.23%	

Table 18 Yearly Changes in the Percentages of three OTHER Categories.

	1992	1993	1994	1995	1996	1997	1998	AVG
<i>No. of Firms</i>	105	121	136	154	175	194	194	
OTHER <43%	71.43	79.34	75.74	76.62	74.86	76.29	78.87	76.4
		11.07%	-4.54%	1.17%	-2.31%	1.91%	3.38%	
43%< OTHER <57%	17.14	14.05	17.65	16.88	17.71	14.43	12.89	15.7
		-18.04%	25.61%	-4.33%	4.92%	-18.52%	-10.71%	
OTHER>57%	11.43	6.61	6.62	6.49	7.43	9.28	8.25	8.0
		-42%	0.2%	-2%	14%	25%	-11%	

T-tests were conducted in order to detect differences in the main characteristics of the level of diffused ownership (OTHER) in our sample firms. For that reason, two types of classifications are designed as explained in the previous

section. T-test results of both classes are similar, providing similar evidence for the characteristics of the diffused ownership as documented in Tables 19 and 20.

Firms with diffused ownership are relatively smaller firms when compared to concentrated firms. This finding is consistent with the previous ownership concentration variables. Concentrated feature of the sample firms may be explained with the historical trend in the Turkish corporations. When we examine the firms listed on Istanbul Stock Exchange, we face an inherent bias in favor of large firms. Government and families are the dominant owner groups in the corporate history. With the ongoing privatization programs, the involvement of government is decreasing while the families are defending their positions. For that reason, it is not surprising to witness diffused ownership in smaller firms. These firms are generally new business enterprises, which gather the contribution of variety of investors. Most of the time, families do not tolerate losing the control of their firms, and we do not expect to witness any takeover battles in that type of firms. However, we expect to see proxy fights in some widely held firms where there are no dominant ownership groups that hold more than 50 percent of the shares.

When the capital structures of the widely held firms are examined, we witness higher leverage levels than in concentrated firms. Their debt levels (short-term liability to total assets and long-term liability to total assets) are significantly lower in the widely held firms. On the other hand, widely held firms tend to have higher ROA and net profit margin ratios, indicating higher profitability levels.

Table 19 Mean Comparison of Percentage Shares of Diffused Shareholders
Figures in the body of table are t-statistics and variable mean values of each class. K stands for 1,000 \$.

	OTHER<50%	OTHER >50%	t-stats
Book Value of Equity (TA)	119,459.94 K	63,221.73 K	2.69**
Return on Assets (ROA)	7.15	9.22	-2.20**
Return on Equity (ROE)	13.93	13.72	0.08
Price to Earnings (P/E)	22.60	20.97	0.51
Market to Book Value (MBV)	5.51	4.53	1.47
Gross Profit Margin	34.33	32.72	0.60
Net Profit Margin	9.36	14.15	-2.04**
Growth in Gross Sales	181.92	107.75	0.35
Net Profit Growth Rate	282.09	279.03	0.01
Total Asset Growth Rate	103.82	101.06	0.27
Shareholders Equity Growth Rate	161.96	103.39	0.63
L/T Bank Debt to TA	0.09	0.10	-0.57
S/T liability to L/T Liability	78.09	80.29	-1.15
S/T Liability to TA	0.43	0.37	3.33**
S/T Bank Debt to TA	0.16	0.15	0.53
L/T Liability to TA	0.13	0.10	2.96**
Mach. Plant & Equip. to TA	0.38	0.40	-0.95
Investment in Process to TA	0.05	0.06	-1.42
Total Fixed Assets to TA	0.31	0.33	-1.43
R&D to TA	0.01	0.00	1.24
Mrkt. Sell. & Dist. Exp. to TA	0.06	0.03	2.20**
L/T Investments to TA	0.09	0.08	0.35

Table 20 Mean Comparison of Percentage Shares of Diffused Shareholders

Figures in the body of table are t-statistics and variable mean values of each class. K

	OTHER<43%	OTHER>57%	t-stats
Book Value of Equity (TA)	116,816.05 K	58,719.63 K	2.42**
Return on Assets (ROA)	7.01	9.97	-2.54**
Return on Equity (ROE)	13.28	16.68	-1.11
Price to Earnings (P/E)	22.59	22.11	0.12
Market to Book Value (MBV)	5.36	3.99	1.80*
S/T liability to L/T Liability	78.46	79.50	-0.44
Gross Profit Margin	34.85	31.44	0.97
Net Profit Margin	8.44	12.22	-1.68
Growth in Gross Sales	193.73	101.99	0.31
Net Profit Growth Rate	295.00	72.49	0.59
Total Asset Growth Rate	100.26	93.10	0.93
Shareholders Equity Growth Rate	165.09	101.19	0.50
Total Fixed Assets to TA	0.31	0.36	-2.87**
L/T Bank Debt to TA	0.09	0.08	0.47
Mach. Plant & Equip. to TA	0.38	0.40	-0.81
Investment in Process to TA	0.04	0.06	-1.45
S/T Liability to TA	0.44	0.35	3.95**
S/T Bank Debt to TA	0.16	0.15	0.95
L/T Liability to TA	0.13	0.09	3.45**
R&D to TA	0.01	0.00	1.36
Mrkt. Sell. & Dist. Exp. to TA	0.06	0.03	1.99**
L/T Investments to TA	0.07	0.08	-0.56

Investment ratios reveal contradictory results. When marketing, selling and distribution expenses to total assets are lower in widely held firms, total fixed assets to total assets ratio shows opposite relationship. By considering the findings, in sum, we can assert that widely held firms are smaller in size and have higher leverage, and lower profitability ratios.

3.2.5. Cash Flow Right(s) of the Ultimate Controlling Owner(s) (CASH)

When we need to classify corporations based on their control uniqueness, ownership concentration will give us insight. In order to make this classification much clearer we need to determine the voting power of the controlling shareholder and cash flow right(s) of the ultimate owner(s). The largest shareholder stakes will help us to define the voting power of the controlling stakeholder(s). In the one-share-one-vote system, it is generally accepted that those who own more than 50 percent of the shares have the right to control the firm and are dominant in the decision-making process. Furthermore, we also need to measure the cash flow right(s) of the ultimate owner(s) as defined by Yurtoglu (2000). Most of the Turkish firms have complex network of ownership. In the presence of a pyramidal ownership structure, we calculate cash flow right(s) of the ultimate controlling owner(s) by considering both direct ownership and indirect ownership via the shares of the parent company.

In order to explain the pyramidal and complex network of ownership structures, consider the case of *Koç Holding*, a holding company, and *Arçelik*, a manufacturer of consumer durables, owned by Koç family. The controlling family owns and controls the majority stake of 65.52 percent of *Koç Holding*, and 10.55

percent of the shares of *Arçelik*. Given that *Koç Holding Co.* holds 38.25 percent of shares in *Arçelik*, cash flow rights of the controlling family in that company is 35.61 percent $[(0.6552 \times 0.3825) + 0.1055]$.

The summary statistics of the cash flow right(s) of the ultimate controlling owner(s) variable are calculated and the results are presented in Table 21. The mean of the cash flow right(s) of the ultimate controlling owner(s) of the sample firms is 61 percent. This figure is very close to the mean of the cumulative shares of the largest three shareholders (LSH3). This finding indicates that on average cash flow rights and voting rights of the sample firms are comparable. In the overall evaluation, the mean value of 61 percent is significant to conclude in favor of the concentrated nature of the Turkish firms. In support of this claim, 75 percent of the sample firms have a cash flow right(s) of the ultimate controlling owner(s) of more than 50 percent. When the yearly descriptive statistics of cash flow right(s) of the ultimate controlling owner(s) are examined, we do not encounter any significant changes between 1992 and 1998.

Table 21 Summary Statistics of Cash Flow Right(s) of the Ultimate Controlling Owner(s)

CASH			
<i>Mean</i>			
61.179			
<i>Std. Error of Mean</i>			
0.577			
<i>Median</i>			
61.79			
<i>Std. Deviation</i>			
18.947			
<i>Skewness</i>			
-0.45			
<i>Kurtosis</i>			
0.297			
<i>Minimum</i>			
1.00			
<i>Maximum</i>			
99.80			
<i>Percentiles</i>			
10%	37.50	60%	66.89
20%	48.02	70%	72.57
30%	51.96	75%	75.00
40%	55.78	80%	78.59
50%	61.79	90%	84.80

Table 22 Yearly Descriptive Statistics of Cash Flow Right(s) of the Ultimate Controlling Owner(s)

<i>CASH</i>	1992	1993	1994	1995	1996	1997	1998
<i>No. of Firms</i>	105	121	136	154	175	194	194
<i>Mean</i>	61.016	62.567	60.087	61.560	62.024	60.354	60.933
<i>Change in Mean</i>		3%	-4%	2%	1%	-3%	1%
<i>Median</i>	58.530	60.710	58.790	63.270	63.095	62.735	63.190
<i>Change in Median</i>		4%	-3%	8%	-0.1%	-1%	1%
<i>Std. Deviation</i>	20.205	18.717	18.630	18.579	17.799	19.776	19.246
<i>Skewness</i>	0.018	-0.227	-0.325	-0.430	-0.566	-0.666	-0.635
<i>Kurtosis</i>	-0.704	-0.062	0.353	0.297	0.985	0.498	0.478
<i>Minimum</i>	14.00	4.11	5.19	1.0	1.0	1.0	1.0
<i>Maximum</i>	99.24	99.30	98.20	99.80	99.80	99.80	99.80

We again created two categories with different cut off points. In the first category, we defined the cut off point as 50 percent and establish two groups. In the second category, cut off points were determined as 43 percent and 57 percent by taking into consideration the 7 percent error of data gathering process. Yearly changes in each category are documented respectively in Tables 23 and 24.

Firms with cash flow rights more than 50 percent, make up 78 percent of our sample firms. This value drops to 58 percent in the second category where the cut off points are 43 and 57 percent.

T-tests were performed to reveal the differences between concentrated and diffused cash flow right(s) of the ultimate controlling owner(s). T-test results of both groups of the cash flow right(s) of the ultimate controlling owner(s) (CASH) are presented in Tables 25 and 26.

Table 23 Yearly Changes in the Percentages of two CASH Categories.

	1992	1993	1994	1995	1996	1997	1998	<i>AVG</i>
<i>No. of Firms</i>	105	121	136	154	175	194	194	
<i>CASH<50</i>	23.81	21.49	25.74	20.78	17.24	22.68	23.20	22.00
		-9.8%	19.8%	-19.3%	-17%	31.6%	2.3%	
<i>CASH>50</i>	76.19	78.51	74.26	79.22	82.76	77.32	76.80	78.00
		3.1%	-5.4%	6.7%	4.5%	-6.6%	-0.7%	

Table 24 Yearly Changes in the Percentages of three CASH Categories.

	1992	1993	1994	1995	1996	1997	1998	AVG
<i>No. of Firms</i>	105	121	136	154	175	194	194	
<i>CASH<43%</i>	21.90	11.57	13.97	12.99	11.49	15.46	14.95	14.4
		-47%	21%	-7%	-11%	35%	-3%	
<i>43%<CASH<57%</i>	26.67	30.58	32.35	29.22	28.16	25.28	25.26	27.9
		15%	6%	-10%	-4%	-10%	-0.08%	
<i>CASH>57%</i>	51.43	57.85	53.68	57.79	60.34	59.28	59.79	57.7
		12%	-7%	8%	4%	-2%	1%	

When the t-test results are examined, we encounter mixed findings for the size variable. Size is significant in the two category model but not in the three category model. On the other hand, results of the capital structure variables are consistent with those of LSH3 and OTHER. Firms with concentrated cash flow right(s) of the ultimate controlling owner(s) have higher debt levels as measured by short-term liability to total assets, long-term liability to total assets and short-term bank loans to total assets ratio. Considering the profitability levels, firms with concentrated cash flow right(s) of the ultimate controlling owner(s) have significantly higher gross profit margin, but lower ROA.

Firms with higher CASH values have lower investment ratios of total fixed assets to total assets and machinery, plant, and equipment to total assets. This shows the lower investment attitude of those firms. In summary, firms with concentrated cash flow rights have higher leverage, and lower investment attitudes.

Table 25 Mean Comparison of the two CASH categories.

Figures in the body of table are t-statistics and variable mean values of each class.

	CASH<50%	CASH >50%	t-stats
Book Value of Equity (TA)	90,134.64	119,078.89	-2.57**
Return on Assets (ROA)	7.61	7.36	0.35
Return on Equity (ROE)	12.89	14.25	-0.68
Price to Earnings (P/E)	22.22	22.46	-0.09
Market to Book Value (MBV)	5.28	5.40	-0.22
Gross Profit Margin	31.05	35.00	-1.84*
Net Profit Margin	11.84	9.44	1.29
Growth in Gross Sales	100.92	192.84	-0.54
Net Profit Growth Rate	181.51	311.81	-0.58
Total Asset Growth Rate	107.38	102.56	0.59
Shareholders Equity Growth Rate	107.33	167.82	-0.82
L/T Bank Debt to TA	0.09	0.09	-0.17
S/T liability to L/T Liability	78.20	78.39	-0.13
S/T Liability to TA	0.37	0.44	-4.89**
S/T Bank Debt to TA	0.13	0.17	-2.50**
L/T Liability to TA	0.11	0.13	-1.93*
Mach. Plant & Equip. to TA	0.43	0.37	3.36**
Investment in Process to TA	0.06	0.04	1.67
Total Fixed Assets to TA	0.35	0.30	3.94**
R&D to TA	0.00	0.01	-1.24
Mrkt. Sell. & Dist. Exp. to TA	0.04	0.05	-1.48
L/T Investments to TA	0.08	0.09	-0.17

Table 26 Mean Comparison of the three CASH categories.

Figures in the body of table are t-statistics and variable mean values of each class.

	CASH<43%	CASH>57%	t-stats
Book Value of Equity (TA)	97,899.25	120,295.24	-1.56
Return on Assets (ROA)	8.80	6.94	2.01**
Return on Equity (ROE)	14.99	13.16	0.73
Price to Earnings (P/E)	24.21	22.71	0.44
Market to Book Value (MBV)	5.87	5.05	1.35
Gross Profit Margin	30.91	35.50	-1.57
Net Profit Margin	10.31	7.84	1.29
Growth in Gross Sales	96.74	225.94	-0.52
Net Profit Growth Rate	49.20	364.74	-0.98
Total Asset Growth Rate	109.52	102.30	0.65
Shareholders Equity Growth Rate	111.60	186.36	-0.69
L/T Bank Debt to TA	0.09	0.09	0.01
S/T liability to L/T Liability	76.72	78.17	-0.76
S/T Liability to TA	0.37	0.44	-4.16**
S/T Bank Debt to TA	0.13	0.17	-2.55**
L/T Liability to TA	0.12	0.13	-1.72*
Mach. Plant & Equip. to TA	0.41	0.37	1.75*
Investment in Process to TA	0.06	0.04	2.31**
Total Fixed Assets to TA	0.34	0.31	2.22**
R&D to TA	0.00	0.01	-1.09
Mrkt. Sell. & Dist. Exp. to TA	0.04	0.05	-1.24
L/T Investments to TA	0.09	0.06	1.62

3.3. OWNERSHIP MIX

3.3.1. Introduction

Ownership mix measures are intended to capture the other illustrative aspects of the ownership structure phenomenon that cannot be explained only by the ownership concentration variables. In addition to the influencing power of shareholders, the identity of the owners needs to be considered for the categorization of ownership structure. Noticeably, each ownership identity class will have common goals and interests. These common goals and interests will generate similar incentive mechanisms, which will guide them to act in predetermined ways.

Thomsen and Pedersen (2000) state that maximization of the economic profits can only be defined as the main goal when markets are complete. However, even owners, based on their interests and incentives may sacrifice profit maximization goal for different preferences such as risk avoidance, time profile of expected cash flow etc.

We have attempted to differentiate owner identity groups based on their commonalities and define them as ownership mix variables. These owner identity measures are:

- Conglomerate affiliation (CONG)
- Family ownership (FAM)
- Group ownership (CFAM)
- Foreign ownership (FRGN)
- Government ownership (GOV)

- Cross ownership (CROSS)
- Dispersed ownership (DISP)

Thomsen and Pedersen (2000) conclude in their study that each ownership category has different objectives with implications for corporate strategy and performance. Before examining the consequences of the ownership structures, we need to map the ownership structure characteristics of the firms in our sample with respect to identity characteristics. In the following sections we will examine the characteristics of each ownership mix group in our sample firms.

3.3.2. Conglomerate Affiliation (CONG)

The *conglomerate affiliation (CONG)* variable defines whether a firm is a member of a conglomerate or not. A conglomerate creates an integral link between its affiliates. This link provides some advantages, like knowledge curve and knowledge transfer, and efficient use of critical inputs. However, Kester (1992) reports that the cost of the advantages of conglomerates is loss of flexibility, and the risk of deficient mutual monitoring. This unique ownership structure creates its own incentives and dynamics, which are expected to be reflected in its unique decision-making processes. Conglomerate affiliates are likely to be in the backward or forward integration chain of the other member firms. Each conglomerate has an incentive to embody a bank in order to finance their own affiliates. These equity and debt financing options within the conglomerate are expected to be reflected in corporate behavior. Conglomerate affiliates tend to internalize their transactions with the providers of critical input, which makes sense under conditions of high asset

specificity and transaction frequency. (Williamson, 1985) All of those justifications lead us to include the conglomerate affiliation variable into our analyses.

Ownership structure can be defined as a pyramid if it has an ultimate controlling owner, and there is at least one company between a firm and the ultimate owner in the chain of voting rights. When we examine the ownership structure of conglomerate affiliates in our sample firms, we observe a pyramidal ownership structure. Most of the conglomerates in Turkey use the pyramidal structure in order to keep control of their affiliates.

Conglomerate affiliates seem to have decreased between 1992 and 1998 as documented in Table 27. This decrease is caused by either a real decrease of the involvement of the conglomerates or new firms listed on Istanbul Stock Exchange between 1992 and 1998 that are not conglomerate affiliates. Conglomerate affiliates decreased from 33 percent to 27 percent in a seven-year period with a declining rate of 18 percent. On the other hand, non-conglomerate affiliates rose to 73 percent from 67 percent during the analysis period.

Table 27 Yearly Percentages of Conglomerate Affiliation (CONG)
CONG (1): conglomerate affiliates and CONG (0): the other firms.

	1992	1993	1994	1995	1996	1997	1998	AVG
No. of Firms	105	121	136	154	175	194	194	
CONG(0)	66.67	68.60	69.85	69.48	70.86	72.68	72.71	70.5
ΔCONG(0)		3%	2%	-1%	2%	3%	0.1%	
CONG(1)	33.33	31.40	30.15	30.52	29.14	27.32	27.34	29.5
ΔCONG(1)		-6%	-4%	1%	-5%	-6%	0.1%	

T-tests were conducted to discover the main characteristics of conglomerates and results are reported in Table 28. The results of the t-tests do not reveal detailed insights regarding the nature of the conglomerate affiliates. The t-tests do reveal,

however, that price to earnings and market to book value ratios are significantly higher for the conglomerate affiliates. Stock prices of conglomerate firms are higher than those of other firms even though they have similar earnings patterns. Furthermore, market to book values of the conglomerate affiliates is significantly higher than those of non-conglomerate firms at a given level of book value. This fact shows that market performance of the firms is better than their profitability ratios. On the other hand, higher marketing, selling, and distribution expenses to total assets ratio in conglomerate affiliates is an indication of higher investment levels. Those conglomerate affiliates seem to use less short-term bank loans in their debt structures.

Table 28 Mean Comparison of Conglomerate Affiliation (CONG)
CONG (1): conglomerate affiliates and CONG (0): the others. K stands for 1,000 \$.

	CONG(0)	CONG(1)	t-stats
LSH3	60.93	64.99	-3.20**
OTHER	33.53	27.87	4.63**
CASH	61.85	58.91	2.33**
Book Value of Equity (TA)	112,157.20	113,768.7	-0.11
Return on Assets (ROA)	7.33	7.56	-0.34
Return on Equity (ROE)	13.12	15.77	-1.46
Price to Earnings (P/E)	19.86	28.21	-3.72**
Market to Book Value (MBV)	4.83	6.59	-3.71**
Gross Profit Margin	34.49	33.34	0.61
Net Profit Margin	10.51	8.64	1.13
Growth in Gross Sales	203.46	105.53	0.65
Net Profit Growth Rate	198.56	465.30	-1.34
Total Asset Growth Rate	104.11	102.11	0.28
Shareholders Equity Growth Rate	174.41	111.55	0.96
L/T Bank Debt to TA	0.09	0.10	-1.14
S/T liability to L/T Liability	78.65	77.69	0.71
S/T Liability to TA	0.43	0.41	1.56
S/T Bank Debt to TA	0.17	0.13	3.99**
L/T Liability to TA	0.12	0.13	-1.01
Mach. Plant & Equip. to TA	0.38	0.38	-0.31
Investment in Process to TA	0.05	0.04	0.74
Total Fixed Assets to TA	0.31	0.30	0.77
R&D to TA	0.01	0.01	-0.80
Mrkt. Sell. & Dist. Exp. to TA	0.04	0.07	-2.76**
L/T Investments to TA	0.08	0.09	-0.69

3.3.3. Family Ownership (FAM)

The *family ownership (FAM)* variable captures the attributes of a firm that is controlled by a family or a group of families. There is a small distinction between conglomerate affiliation and family ownership. Even though families control most of the conglomerates in Turkey, we differentiate them in terms of their economic power and business diversification levels. This difference is mainly caused by the varying economic power and size of those two groups. Family ownership (FAM) is mostly associated with a double role for the family as owners and managers of a firm. With this respect, family ownership may also be regarded as managerial ownership. Since families tend to have intense firm specific investments in human capital, they will tend to be reluctant to relinquish control. Family owned firms are not expected to have any kind of strong support, which can be seen in conglomerates. The dual role of family members may lead them to have different goals and interests and, as a result, different incentive mechanisms emerge. Moreover, family members have a higher stake on the firm based on their total commitments and historical links with it. All of those characteristics of the family ownership are expected to be reflected in corporate performance.

Family ownership has an increasing trend between 1992 and 1998. The percentage of firms with family ownership rose to 49 percent in 1998 from 36 percent in 1992. The main reason for this increasing trend is the new firms joining the ISE are mainly family-owned firms. Families seem to have discovered that selling equity for financing their projects.

The t-test results, as reported in Table 30, reveal the characteristics of family ownership. Family-owned firms are smaller firms compared to the others with the statistically significant t-statistics (significance level of 0.05). Most of the conglomerate affiliates are mainly controlled by a family or a group of families, but those firms are relatively large in size and conglomerates have relatively lower business risk associated with the diversified business firms within the same conglomerate. Conversely, family-controlled firms are not big enough to institutionalize and do not attain financial resources as easily as conglomerate affiliates. This fact is reflected on the lower performance measures of ROA, P/E and MBV of family-owned firms.

Table 29 Yearly Percentages of Family Ownership (FAM)

FAM (1): family-owned firms and FAM (0): the other firms.

	1992	1993	1994	1995	1996	1997	1998	AVG
No. of Firms	105	121	136	154	175	194	194	
FAM(0)	63.81	59.50	56.62	55.84	54.29	51.55	51.03	55.2
Δ FAM(0)		-7%	-5%	-1%	-3%	-5%	-1%	
FAM(1)	36.19	40.50	43.38	44.16	45.71	48.45	48.97	44.8
Δ FAM(1)		12%	7%	2%	4%	6%	1%	

Marketing, selling and distribution expenses to total assets and long-term investments to total assets are significantly lower in the family-owned firms. This fact suggests that family-owned firms follow lower level of investment policies compared to other firms. Families may be reluctant to invest in new projects because of their risk-averse attitude.

When the debt policies of the family-owned firms in our sample are examined, we witness the tendency of using short-term debt. Family-owned firms have higher short-term liabilities and short-term bank loans to total assets and.

Profitability levels are inferior in the family-owned firms as reflected in the lower ROA ratios.

Table 30 Mean Comparison of Family Ownership
FAM (1): conglomerate affiliates and FAM (0): the others. K stands for 1000 \$.

	FAM(0)	FAM(1)	t-stats
LSH3	63.62	60.29	2.87**
OTHER	31.77	31.98	-0.19
CASH	59.11	63.31	-3.64**
Book Value of Equity (TA)	158,618.74 K	55,886.76 K	7.66**
Return on Assets (ROA)	8.08	6.54	2.50**
Return on Equity (ROE)	15.03	12.49	1.53
Price to Earnings (P/E)	24.83	19.36	2.62**
Market to Book Value (MBV)	5.93	4.62	2.91**
Gross Profit Margin	35.25	32.63	1.47
Net Profit Margin	9.98	9.87	0.07
Growth in Gross Sales	222.44	104.44	0.84
Net Profit Growth Rate	263.31	306.93	-0.23
Total Asset Growth Rate	101.55	106.13	-0.67
Shareholders Equity Growth Rate	104.77	223.34	-1.93*
L/T Bank Debt to TA	0.09	0.09	-0.88
S/T liability to L/T Liability	77.08	80.06	-2.38**
S/T Liability to TA	0.40	0.45	-4.59**
S/T Bank Debt to TA	0.12	0.20	-7.67**
L/T Liability to TA	0.13	0.12	1.24
Mach. Plant & Equip. to TA	0.39	0.36	1.71
Investment in Process to TA	0.05	0.05	-0.09
Total Fixed Assets to TA	0.32	0.30	1.36
R&D to TA	0.01	0.00	1.18
Mrkt. Sell. & Dist. Exp. to TA	0.06	0.04	2.55**
L/T Investments to TA	0.10	0.07	2.28**

3.3.4. Group Ownership (CFAM)

Even though there is a distinction between family ownership and conglomerate affiliation, inclusion of both sides in a new group, which has similar type of incentives, may help us to capture different aspects of the characteristics. CFAM variable is defined by inclusion of both CONG and FAM firms into a new pool. With the classification of group ownership (CFAM), we intend to differentiate firms operating under the control of a family or a group of families without considering size, diversification, and institutionalization level of a firm. The cumulative percentages of firms with group ownership are 74.5 percent on average.

This figure shows a slightly increasing trend from 1992 to 1998. This increasing trend is largely derived from the increasing initial public offerings (IPO) preferences of the family-owned firms.

Table 31 Yearly Percentages of Group Ownership

CFAM (1): conglomerate affiliates and family-owned firms and CFAM (0): the other firms.

	1992	1993	1994	1995	1996	1997	1998	AVG
No. of Firms	105	121	136	154	175	194	194	
CFAM(0)	30.48	28.10	26.47	25.32	24.57	23.71	23.20	25.50
ΔCFAM(0)		-8%	-6%	-4%	-3%	-4%	-2%	
CFAM(1)	69.52	71.90	73.53	74.68	75.43	76.29	76.80	74.50
ΔCFAM(1)		3%	2%	2%	1%	1%	1%	

When the t-test results of the group ownership, as presented in Table 32, are examined, we witness similar findings to family ownership (FAM). This fact shows dominance of the family-owned firms in this categorization.

Table 32 Mean Comparison of Group Ownership

CFAM (1): conglomerate affiliates and family-owned firms and CFAM (0): the others. K stands for 1,000 \$.

	CFAM(0)	CFAM(1)	t-stats
LSH3	62.19	62.11	0.06
OTHER	36.15	36.15	4.49**
CASH	59.44	61.51	-1.56
Book Value of Equity (TA)	211,667.46 K	78,758.11 K	8.75**
Return on Assets (ROA)	8.72	6.94	2.54**
Return on Equity (ROE)	14.22	13.80	0.22
Price to Earnings (P/E)	20.87	22.91	-0.84
Market to Book Value (MBV)	5.14	5.48	-0.67
Gross Profit Margin	37.53	32.91	2.32**
Net Profit Margin	11.55	9.35	1.27
Growth in Gross Sales	361.04	104.81	1.63
Net Profit Growth Rate	26.05	373.76	-1.66
Total Asset Growth Rate	101.23	104.29	-0.40
Shareholders Equity Growth Rate	96.81	175.70	-1.14
L/T Bank Debt to TA	0.08	0.10	-2.04**
S/T liability to L/T Liability	76.30	79.09	-1.97*
S/T Liability to TA	0.39	0.43	-3.59**
S/T Bank Debt to TA	0.12	0.17	-4.64**
L/T Liability to TA	0.13	0.12	0.46
Mach. Plant & Equip. to TA	0.40	0.37	1.58
Investment in Process to TA	0.05	0.05	0.74
Total Fixed Assets to TA	0.33	0.30	2.44**
R&D to TA	0.01	0.01	0.12
Mrkt. Sell. & Dist. Exp. to TA	0.05	0.05	0.01
L/T Investments to TA	0.10	0.08	1.52

Firms with group ownership (CFAM) are also small firms when compared with the other firms. Even though, conglomerate affiliates (CONG) are categorized as large firms, family-owned (FAM) firms are relatively smaller.

Firms under this categorization are experiencing higher short-term liability, short-term bank loans and long-term bank loans. In the overall evaluation of the test results, we can claim that CFAM is not revealing us insightful information to describe ownership structure characteristics.

3.3.5. Foreign Ownership (FRGN)

The *foreign ownership (FRGN)* variable measures the stake of foreign ownership within the company. We try to differentiate between foreign owners and foreign investors by considering the magnitude of their investments. It is believed that the higher the magnitude of their investments, the more incentives these investors are likely to have to participate in corporate governance. For that reason, foreign investors that own more than 10 percent of all shares are taken into account and considered as foreign partners. The cutoff point of 10 percent is used because (1) it provides a significant threshold of votes; and (2) CMB the mandates disclosure of 10 percent of ownership stakes.

Foreign investors have an increasing interest in the Istanbul Stock Exchange. When we examine the realized net foreign direct investments by years, as presented in Figure 7, we observe an increasing trend until 1991 and after then relatively stable nature. Foreign investment values were 125 million US dollars in 1992, and reached its maximum level of 783 million US dollars in 1991.

The percentage of the firms with foreign partners is, on average, 17 percent. We observe a relatively stable trend in the increasing percentages of the firms with foreign partners. Foreign owner percentages are sensitive to changes in general and country specific macro economic conditions. On the other hand, foreign partners are long-term investors unlike foreign portfolio investors who are generally first to leave the sinking ship. The percentage of the foreign owners in Turkish firms is relative low compared to other European countries. For example, as reported by Pederson and Thomsen (1997), the percentage of complete foreign ownership (foreigners own more than 50% of equity) is 61 percent in Belgium, 45 percent in Spain, and 38 percent in Austria; whereas, in Turkey complete foreign ownership is only 4 percent.

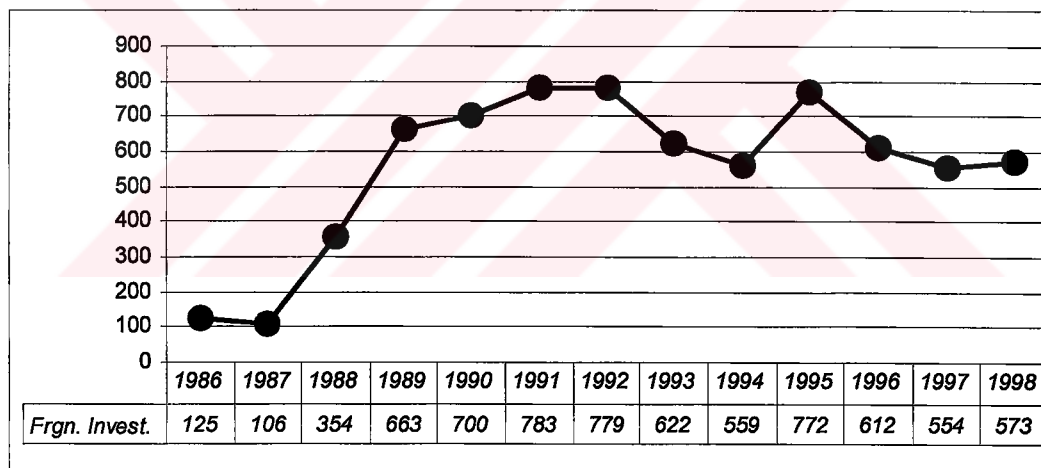


Figure 7 Realized Net Foreign Direct Investments by Years (In Millions of Dollars)

Table 33 Yearly Percentages of Foreign Ownership
FRGN (1): firms with foreign owners and FRGN (0): the other firms.

	1992	1993	1994	1995	1996	1997	1998	AVG
No. of Firms	105	121	136	154	175	194	194	
FRGN(0)	82.86	84.30	82.35	82.47	83.43	81.96	81.44	82.60
ΔFRGN(0)		2%	-2%	0.1%	1%	-2%	-1%	
FRGN(1)	17.14	15.70	17.65	17.53	16.57	18.04	18.56	17.40
ΔFRGN(1)		-8%	12%	-1%	-5%	9%	3%	

Independent sample t-tests were conducted by including all control variables to detect significant differences between firms with foreign partners and the other firms. The results of the t-tests are reported in Table 34. Firms with foreign ownership are larger in size.

Accounting-based performance measures of return on assets (ROA) and return on equity (ROE) as well as the market-based performance measure of market to book value (MBV) ratios are higher in the firms with foreign ownership (FRGN).

Those firms with foreign ownership (FRGN) tend to use less long-term bank loans and have lower long-term liabilities. This may be caused by the general macro economic conditions of Turkey and high inflation experienced between 1992 and 1998.

Table 34 Mean Comparison of Foreign Ownership
FRGN (1): firms with foreign owners and FRGN (0): the others. K stands for 1,000 \$.

	FRGN(0)	FRGN(1)	t-stats
LSH3	59.97	72.37	-8.36**
OTHER	33.72	23.06	7.35**
CASH	61.77	57.25	2.98**
Book Value of Equity (TA)	108,707.80 K	131,230.90 K	-1.81*
Return on Assets (ROA)	6.79	10.28	-4.34**
Return on Equity (ROE)	12.88	18.70	-2.69**
Price to Earnings (P/E)	22.34	22.70	-0.13
Market to Book Value (MBV)	5.13	6.56	-2.45**
Gross Profit Margin	34.56	32.03	1.07
Net Profit Margin	9.72	10.99	-0.63
Growth in Gross Sales	188.77	93.17	0.51
Net Profit Growth Rate	314.14	119.05	0.79
Total Asset Growth Rate	105.71	92.31	1.49
Shareholders Equity Growth Rate	163.43	111.59	0.63
L/T Bank Debt to TA	0.10	0.06	3.12**
S/T liability to L/T Liability	78.04	79.89	-1.12
S/T Liability to TA	0.42	0.43	-0.23
S/T Bank Debt to TA	0.16	0.15	1.28
L/T Liability to TA	0.13	0.11	2.24**
Mach. Plant & Equip. to TA	0.38	0.37	0.42
Investment in Process to TA	0.05	0.03	3.05**
Total Fixed Assets to TA	0.32	0.28	2.93**
R&D to TA	0.01	0.01	-1.10
Mrkt. Sell. & Dist. Exp. to TA	0.04	0.09	-3.87**
L/T Investments to TA	0.08	0.13	-2.34**

Investment variables reveal contradictory results. When total fixed assets to total assets and investment in process to total assets ratios are significantly lower in the firms with foreign ownership, marketing, selling and distribution expenses and long-term investments to total assets are higher in these firms.

3.3.6. Government Ownership (GOV)

The *government ownership (GOV)* variable intends to capture the characteristics of government-controlled firms. Government ownership defines whether a firm is controlled by government agencies or not. We do not include private firms in which government agencies own a small percentage of shares (less than 50%) and therefore are not among the controlling shareholders.

Government-owned or controlled firms are mainly under the influence of politicians. Economic realities may not coincide with the political expectations and interests. This claim is supported with the findings of Shepherd (1989). Government authorities that are under the influence of politicians may disregard economic necessities at the expense of public and other owners. As it is commonly believed, government control has its own dynamics and preferences, which might differ drastically from the privately owned firms. Megginson et al. (1994) asserts that government-owned firms are less efficient than privately owned firms. These differences are expected to shed some light on corporate behavior.

When we examine the yearly mean values of government ownership (GOV) percentages, we observe a consistently decreasing trend. Although government ownership (GOV) percentage was 10 percent in 1992, this value had dropped to 6

percent in 1998. The ongoing privatization programs in Turkey can explain this decreasing trend.

Table 35 Yearly Percentages of Government Ownership
GOV (1): government-owned firms and GOV (0): the other firms.

	1992	1993	1994	1995	1996	1997	1998	AVG
No. of Firms	105	121	136	154	175	194	194	
GOV(0)	89.52	91.74	92.65	92.86	92.57	93.81	93.81	92.7
ΔGOV(0)		2%	1%	0.2%	-0.3%	1%	0%	
GOV(1)	10.48	8.26	7.35	7.14	7.43	6.19	6.19	7.3
ΔGOV(1)		-21%	-11%	-3%	4%	-17%	0%	

When the independent sample t-test results, as presented in Table 36, are examined, we observe fruitful findings of government versus non-government firm characteristics. As expected, government-owned firms are large in size, as reflected in the size variable book value of equity (TA). Most of those firms are among the largest business enterprises listed on Istanbul Stock Exchange.

Table 36 Mean Comparison of Government Ownership
GOV (1): government-owned firms and GOV (0): the others. K stands for 1,000 \$.

	GOV(0)	GOV(1)	t-stats
LSH3	61.12	74.85	-5.68**
OTHER	32.50	32.5	3.73**
CASH	59.86	75.18	-6.24**
Book Value of Equity (TA)	79,680.13 K	529,746.11 K	-4.57**
Return on Assets (ROA)	7.69	3.71	3.40**
Return on Equity (ROE)	14.77	3.03	3.74**
Price to Earnings (P/E)	22.23	25.00	-0.64
Market to Book Value (MBV)	5.33	6.04	-0.87
Gross Profit Margin	34.72	27.31	2.28**
Net Profit Margin	10.40	4.50	2.08**
Growth in Gross Sales	178.99	103.12	0.30
Net Profit Growth Rate	326.22	-223.95	1.63
Total Asset Growth Rate	104.85	87.95	1.38
Shareholders Equity Growth Rate	160.89	85.77	0.67
L/T Bank Debt to TA	0.09	0.10	-0.92
S/T liability to L/T Liability	79.16	68.84	4.51**
S/T Liability to TA	0.42	0.40	1.16
S/T Bank Debt to TA	0.17	0.07	4.16**
L/T Liability to TA	0.12	0.18	-4.14**
Total Fixed Assets to TA	0.31	0.39	-3.79**
Mach. Plant & Equip. to TA	0.38	0.44	-1.86*
Investment in Process to TA	0.05	0.07	-1.97*
R&D to TA	0.01	0.00	0.56
Mrkt. Sell. & Dist. Exp. to TA	0.05	0.02	2.16**
L/T Investments to TA	0.09	0.05	1.64

When the debt structures of government-owned firms are examined, we find that government-owned firms tend to have more long-term liabilities to total assets and less short-term bank loans to total assets. Less short-term liability to long-term liability ratio also supports that.

Government-owned firms have comparatively lower ROA, ROE, gross and net profit margins. This is an indication of lower performance of the government-owned or controlled firms but we need to examine it in detail.

Machinery, plant and equipment to total assets, investment in progress to total assets, and total fixed assets to total assets of government-owned firms are significantly higher compared to other firms. However, marketing, selling and distribution expenses to total assets ratio is lower. All of these variables are indicators of the investment attitude of a firm. By considering the higher values of those listed variables, we can claim that government-owned firms have relatively better investment attitudes when compared to other firms.

3.3.7. Cross Ownership (CROSS)

The cross ownership (CROSS) variable is used in order to determine the firms with complex ownership networks. It is not uncommon to encounter the name of another firm in the list of owners of a public corporation. This ownership relationship becomes more confusing when the owned firm owns some percentage of the shares of his owner firm. We say that there is cross-shareholding by sample firm A in its control chain if A owns any shares in its controlling shareholder or in the companies along that chain of control. For example, firm A is owned by firm B and, at the same time, firm B carries some percentage shares of firm A. It gets very

complicated when more than three firms are involved in this sort of ownership structure. It becomes difficult to find an answer to the question, “Who really owns that firm?”

Cross ownership is not so common in our sample firms. Only 28 percent of our sample firms have cross ownership (CROSS) with a decreasing trend. Although cross ownership (CROSS) in our sample was 35 percent in 1992, it dropped to 25 percent in 1998. 72 percent of the sample conglomerate firms have a cross ownership structure. Conglomerate governance systems use cross ownership to transfer financial resources from one affiliate to another via block equity transfers. By way of internal fund transfers, conglomerate governance systems meet the fund requirements within the conglomerate by keeping control of the firms within the conglomerate. 77 percent of the firms with cross ownership (CROSS) are affiliates of a distinct conglomerate. On the other hand, none of those firms are government-owned and only 3 percent is dispersedly owned. 87 percent of the firms with cross ownership (CROSS) have LSH3 values more than 50 percent. These findings lead us to conclude that concentrated firms use cross ownership (CROSS) as a governance system to control their affiliates and at the same time transfer equity between their affiliates.

Table 37 Yearly Percentages of Cross Ownership
CROSS (1): firms with cross ownership and CROSS (0): the other firms.

	1992	1993	1994	1995	1996	1997	1998	AVG
No. of Firms	105	121	136	154	175	194	194	
CROSS(0)	64.76	69.42	70.59	72.08	74.86	74.74	75.26	72.4
ΔCROSS(0)		7%	2%	2%	4%	-0.2%	1%	
CROSS(1)	35.24	30.58	29.41	27.92	25.14	25.26	24.74	27.6
ΔCROSS(1)		-13%	-4%	-5%	-10%	0.5%	-2%	

When we examine the differences of the main characteristics of the firms with cross ownership (CROSS), we do not uncover insightful results. Firms with cross ownership (CROSS) have significantly higher price to earnings (PE) ratio. This fact indicates that market optimistically appraises the potential of those firms and rewards them with relatively higher stock prices. Firms with cross ownership seem to have more long-term liability, long-term bank loans and less short-term bank loans. When the investment attitudes of those firms are examined we can suspect higher investment attitudes, since these firms have higher machinery, plant and equipment to total assets ratio.

Table 38 Mean Comparison of Cross Ownership
CROSS (1): firms with cross ownership and CROSS (0): the others. K stands for 1,000 \$.

	CROSS(0)	CROSS(1)	t-stats
LSH3	61.82	62.94	-0.86
OTHER	33.00	28.88	3.29**
CASH	61.89	58.60	2.56**
Book Value of Equity (TA)	118,385.10 K	97,554.60 K	1.85*
Return on Assets (ROA)	7.57	6.94	0.92
Return on Equity (ROE)	13.74	14.36	-0.33
Price to Earnings (P/E)	20.30	27.77	-3.24**
Market to Book Value (MBV)	5.16	5.93	-1.57
S/T liability to L/T Liability	78.22	78.69	-0.34
Gross Profit Margin	34.13	34.17	-0.02
Net Profit Margin	10.53	8.47	1.22
Growth in Gross Sales	201.15	105.65	0.63
Net Profit Growth Rate	202.82	469.74	-1.32
Total Asset Growth Rate	104.88	100.17	0.64
Shareholders Equity Growth Rate	171.13	115.93	0.83
Total Fixed Assets to TA	0.31	0.32	-1.30
L/T Bank Debt to TA	0.09	0.10	-2.15**
Mach. Plant & Equip. to TA	0.37	0.41	-2.39**
Investment in Process to TA	0.05	0.05	-0.50
S/T Liability to TA	0.43	0.41	1.29
S/T Bank Debt to TA	0.17	0.14	2.17**
L/T Liability to TA	0.12	0.14	-2.05**
R&D to TA	0.01	0.01	-1.58
Mrkt. Sell. & Dist. Exp. to TA	0.05	0.06	-1.39
L/T Investments to TA	0.08	0.08	0.06

3.3.8. Dispersed Ownership (DISP)

The dispersed ownership (DISP) variable categorizes firms, which are owned by dispersed, atomistic shareholders. In this case, neither a single person nor group has the privilege to control the firm. Diffused ownership gives significant power into the hands of managers, whose interests may not coincide with the interests of other stakeholders. Pension fund firms constitute an example for this type of a categorization. Firms operating in this type of category have some disadvantage. It may not be easy for this type of a firm to find cheap financing alternatives without losing control when compared to a conglomerate affiliate. Besides, this type of a firm does not have the privilege of transferring expertise from other firms like conglomerate affiliates. It is also challenging for those firms with cross ownership (CROSS) to create vertical integration. However, those firms are much more flexible and responsive to changing conditions.

When we examine the yearly percentages of the dispersed firms, we do not observe a dramatic change through time. Even though there are slight ups and downs, the maximum change does not exceed 1.37 percent.

Table 39 Yearly Percentages of Dispersed Ownership
DISP (1): dispersed firms and DISP (0): the other firms.

	1992	1993	1994	1995	1996	1997	1998	AVG
No. of Firms	105	121	136	154	175	194	194	
DISP(0)	87.62	87.60	88.97	88.31	88.57	88.14	87.63	88.1
ΔDISP(0)		-0.02%	2%	-1%	0.1%	-0.5%	-1%	
DISP(1)	12.38	12.40	11.03	11.69	11.43	11.86	12.37	11.9
ΔDISP(1)		0.1%	-11%	6%	-2%	3.7%	4%	

Independent sample t-tests were conducted to reveal the main characteristics of firms with dispersed ownership (DISP). Widely held firms are significantly

smaller in size. When the performance measures are examined, we find that dispersed firms tend to have higher accounting-based performance as measured with the return on assets ratio (ROA), but a lower market-based performance as measured with the market to book value (MBV). On the other hand, the gross and net profit margins of dispersed firms are significantly higher when compared to other firms. Firms in this category have significantly lower leverage levels as measured by the debt to total assets ratios listed in Table 40. Investment attitudes of these firms can be defined as poor, since long-term investments to total assets and total fixed assets to total assets are significantly lower.

Table 40 Mean Comparison of Dispersed Ownership
DISP (1): dispersed firms and DISP (0): the others. K stands for 1,000 \$.

	DISP(0)	DISP(1)	t-stats
LSH3	64.13	47.28	9.78**
OTHER	29.39	50.24	-12.84**
CASH	62.79	47.62	8.80**
Book Value of Equity (TA)	117,474.45 K	76,655.20 K	4.00**
Return on Assets (ROA)	7.03	10.11	-3.26**
Return on Equity (ROE)	13.57	16.41	-1.12
Price to Earnings (P/E)	22.90	18.88	1.26
Market to Book Value (MBV)	5.62	3.64	2.90**
Gross Profit Margin	32.65	45.44	-4.73**
Net Profit Margin	9.08	16.45	-3.10**
Growth in Gross Sales	103.96	687.72	-2.73**
Net Profit Growth Rate	297.97	159.82	0.48
Total Asset Growth Rate	101.69	116.91	-1.46
Shareholders Equity Growth Rate	163.17	92.14	0.75
L/T Bank Debt to TA	0.09	0.07	2.22**
S/T liability to L/T Liability	78.20	79.54	-0.69
S/T Liability to TA	0.43	0.34	5.08**
S/T Bank Debt to TA	0.17	0.12	2.71**
L/T Liability to TA	0.13	0.10	2.42**
Total Fixed Assets to TA	0.31	0.35	-2.50**
Mach. Plant & Equip. to TA	0.38	0.41	-1.08
Investment in Process to TA	0.05	0.05	-0.82
R&D to TA	0.01	0.00	1.34
Mrkt. Sell. & Dist. Exp. to TA	0.05	0.04	0.81
L/T Investments to TA	0.08	0.11	-1.92*

3.4. SIZE EFFECT

Since, ownership structure appears to be related with firm size, this relationship is further elaborated in our analyses while examining the consequences of ownership structure. Demsetz and Lehn (1985) find that ownership concentration and firm size, measured by the market value of equity are inversely related. Prowse (1992) defines size of the firms as a determinant of ownership concentration. He justifies his claim with cost of capital and risk arguments. The larger the firm, the greater will be the cost of acquiring a fraction of ownership. Moreover, the risk-aversion of large shareholders causes an increase in their ownership stakes at lower, risk-compensating prices. We define size with the book value of equity in our sample firms in order to control for the effects of leverage.

Table 41 Descriptive Statistics of Book Value as Size Proxy (in 1000 \$.)

	1992	1993	1994	1995	1996	1997	1998
No. of Firms	105	121	136	154	175	194	194
Mean	138,251	149,442	109,200	117,964	118,850	85,113	95,888
Std. Err. Mean	25,901	28,058	20,515	19,561	16,222	11,087	12,590
Median	53,585	68,219	46,225	54,889	55,836	43,604	50,487
Std. Deviation	265,407	308,641	239,251	242,752	214,607	154,430	175,371
Skewness	3.94	4.56	4.93	5.19	4.97	5.11	5.49
Std. Err. Skew.	0.24	0.22	0.21	0.20	0.18	0.17	0.17
Kurtosis	16.99	23.46	25.96	29.59	29.03	30.98	37.97
Std.Err.Kurtosis	0.47	0.44	0.41	0.39	0.37	0.35	0.35
Minimum	2,272	2,259	1,739	2,938	3,437	2,217	2,667
Percentiles 10	8,783	9,685	8,088	11,937	12,465	9,192	10,792
20	14,815	17,970	16,500	18,675	21,033	15,146	16,342
30	26,166	31,754	25,954	26,509	31,274	21,617	25,335
40	40,624	46,204	34,508	43,370	44,887	30,306	34,261
50	53,585	68,219	46,225	54,889	55,836	43,604	50,487
60	74,714	85,784	61,390	71,138	83,119	54,289	59,049
70	94,560	114,489	80,638	93,725	102,704	71,102	77,733
80	180,571	154,152	108,519	133,761	143,144	101,961	114,320
90	253,196	255,670	188,838	221,202	248,527	182,642	214,989

When the descriptive statistics of book value of equity is examined, we observe significant yearly changes. These changes are mainly caused by the high inflation

experienced between 1992 and 1998. On the other hand, we have statistical evidence that there is a significant deviation from the normal distribution.

In order to detect differences in the ownership structure variables we conducted independent sample t-tests with respect to size categories. We have divided the pooled data into three equal groups, after sorting with respect to size proxy of market value. We only consider the two extreme groups and eliminate the group between those two. With this approach, we can detect the size effect on ownership structure better. Results of the t-tests are reported in Table 42.

The means of the ownership structure variables are compared and t statistics provide us evidence to interpret the results. When the ownership concentration variables are examined all variables but cash flow right(s) of the ultimate controlling owner(s) (CASH) are significantly different in the two size categories. Large firms have higher ownership concentration as reflected in percentage share of the largest shareholder (LSH1) and cumulative percentage shares of the largest three shareholders (LSH3). This finding is supported with the inverse relation of the percentage share of diffused shareholders (OTHER). Large firms have relatively low OTHER values. It would not be misleading to conclude that large Turkish firms are mostly concentrated. This finding is inconsistent with the finding of Demsetz and Lehn (1985).

Table 42 Mean Comparison of Size

	Small Firms	Large Firms	t-stats
Percentage Share of the Largest Shareholder (LSH1)	41.266	45.664	-3.43**
Cumulative Shares of the Largest Three Shareholders (LSH3)	59.252	65.009	-5.01**
Percentage Shares of Diffused Shareholders (OTHER)	34.821	28.901	5.32**
Cash Flow Right(s) of the Ultimate Owner(s) (CASH)	59.925	62.044	-1.84*
Conglomerate Affiliation (CONG)	24.6%	34.3%	-3.51**
Family Ownership (FAM)	50.6%	39.0%	3.85**
Group Ownership (CFAM)	75.7%	73.3%	0.92
Foreign Ownership (FRGN)	9.8%	25.0%	-6.73**
Cross Ownership (CROSS)	25.2%	30.1%	-1.79
Government Ownership (GOV)	5.7%	8.9%	-1.99**
Dispersed Ownership (DISP)	13.1%	10.6%	1.31

In addition to ownership concentration measures, we also examined the ownership mix variables in order to capture the big picture on ownership structure. All ownership mix variables except cross ownership (CROSS) and dispersed ownership (DISP) are significantly different in the two size groups. The percentage of the firms with conglomerate affiliation (CONG), foreign ownership (FRGN), and government ownership (GOV) are significantly higher in large firms when compared to smaller firms. On the other hand, the percentage of family ownership (FAM) and group ownership (CFAM) are higher in small firms. By considering these results, we can assert that, on average, conglomerate affiliates, firms with foreign partners and government-controlled firms are large firms. Conversely, family-owned firms are relatively smaller firms.

By considering both the ownership concentration and the ownership mix results, we can conclude that size is significantly and positively related to ownership structure variables. For that reason, we will use size variable as a control variable in the statistical analyses.

3.5. INDUSTRY EFFECT

The literature on ownership structure documents that it differs across industries. The existence of industry effects is confirmed by Demsetz and Lehn (1985) and Zeckouser and Pound (1990). Commonalities within the industrial firms lead them to have similar preferences and dynamics as well as governance systems. With this respect, we examined the ownership structure differences of our sample firms in 13 distinct sectors. Industrial sectors are determined by the classification of Istanbul Stock Exchange. Note that, we have already excluded banks, insurance companies, leasing and factoring companies, holdings, and investment companies from our sample. Industrial sectors for our sample are listed in Table 43.

Table 43 Sectors in Istanbul Stock Exchange and Number of Firms		
Code	Industrial Sectors	No. of Firms
1	The Fabricated Metal Products and Machinery Equipment	30
2	Basic Metal Industries	12
3	Non Metallic Mineral Products Sector	28
4	Chemicals Petroleum, Rubber, and Plastic Products	23
5	Paper and Paper Products, Printing and Publishing	11
6	Wood Products	2
7	Textile Apparel and Leather	34
8	Food, Beverage, and Tobacco	25
9	Transportation	3
10	Hotels and Restaurant	4
11	Retail Trade	7
12	Wholesale	3
13	Electricity, Gas, and Water	3

3.5.1. Ownership Concentration

Ownership concentration is defined with the four variables. These are percentage share of the largest shareholder (LSH1), cumulative percentage shares of the largest three shareholders (LSH3), percentage shares of diffused shareholders (OTHER), and cash flow right(s) of the ultimate controlling owner(s) (CASH). Our

sample firms are categorized with respect to the selected sectors and ownership concentration variables of each sector are graphed in Figure 8.

When we examine the sectors' ownership concentration measures, we observe significant differences among them. Based on the findings of Figure 8, the transportation sector (sector 9) has the highest percentage share of the largest shareholder (LSH1), cumulative percentage shares of the largest three shareholders (LSH3), and cash flow right(s) of the ultimate controlling owner(s) (CASH) and the lowest percentage share of diffused shareholders (OTHER). We can conclude that firms in the transportation sector are the most concentrated ones in our sample firms between 1992 and 1998. The sectors of chemicals, petroleum, rubber, and plastic products (sector 4) and fabricated metal products and machinery equipment (sector 1) follow the transportation sector. Those two sectors are the second in the concentration listing. On the other hand, the wholesale sector (sector 12) has the highest percentage share of diffused shareholders (OTHER) among the other sectors and lowest cumulative percentage shares of the largest three shareholders (LSH3) and cash flow right(s) of the ultimate controlling owner(s) (CASH).

In the overall evaluation, LSH3 and CASH variables are in harmony but LSH1 variable show significant deviations from LSH3 and CASH concentration measures. On the other hand, OTHER variable is also synchronized with those two concentration measures.

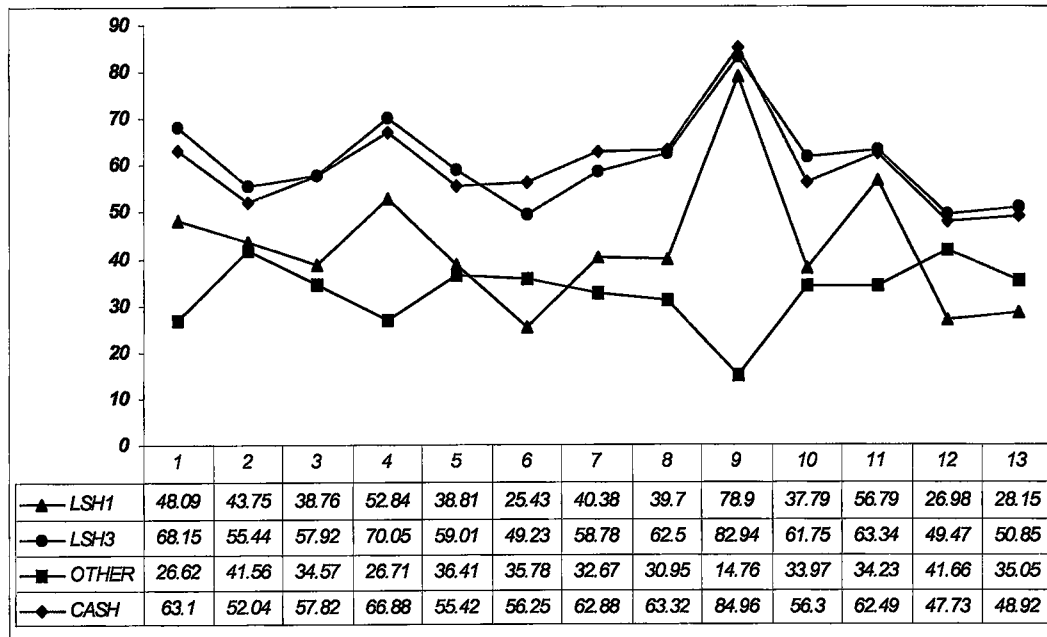


Figure 8 Ownership Concentration Measures by Sectors

Sector Codes are 1:The Fabricated Metal Products and Machinery Equipment; 2:Basic Metal Industries; 3:Non Metallic Mineral Products Sector; 4:Chemicals Petroleum, Rubber, and Plastic Products; 5:Paper and Paper Products, Printing and Publishing; 6:Wood Products; 7:Textile Apparel and Leather; 8:Food, Beverage, and Tobacco; 9:Transportation 10:Hotels and Restaurant; 11:Retail Trade; 12:Wholesale; 13:Electricity, Gas, and Water

Table 44 Mean of the Selected Ownership Concentration Variables of the Sectors.
LSH3: Cumulative percentage shares of the largest three shareholders, OTHER: Cumulative percentage shares of diffused shareholders, LOST: Percentage of shares uncovered in the analyses.

SECTOR	LSH3	OTHER	SUM	LOST
Fab. Metal Prod.	68.15	26.62	94.77	5.23
Basic Metal Ind.	55.44	41.56	97.00	3.00
Mineral Prod.	57.92	34.57	92.49	7.51
Chem.Oil and Plastic	70.05	26.71	96.76	3.24
Paper Prod.	59.01	36.41	95.42	4.58
Wood Prod.	49.23	35.78	85.01	14.99
Textile	58.78	32.67	91.45	8.55
Food	62.50	30.95	93.45	6.55
Transportation	82.94	14.76	97.70	2.30
Hotels	61.75	33.97	95.72	4.28
Retail Trade	63.34	34.23	97.57	2.43
Wholesale	49.47	41.66	91.13	8.87
Utilities	50.85	35.05	85.90	14.10
Avg.	60.73	32.69	93.41	6.59

In the Table 44, we document selected ownership concentration variables to detect deficiencies in the data definition process. We selected cumulative percentage shares of the largest three shareholders (LSH3) and percentage share of diffused shareholders (OTHER) as our main ownership concentration variables. LSH3 is an indicator of concentration and OTHER is an indicator of the diffuseness of ownership. In theory, the summation of those two variables should add up to 100 percent, but it is not in practice. For example, in our data definition we could not uncover 6.59 percent of the shareholders. However, this deviation takes its highest levels in the sectors of wood products (sector 6) and electricity, gas, and water (sector 13), with the values of 15 percent and 14 percent respectively. This means that largest three shareholders are not so powerful in those sectors. This fact is also supported with the lowest LSH1 values of 25 percent and 28 percent in the wood products (sector 6) and electricity, gas, and water (sector 13) respectively.

3.5.2. Ownership Mix

Ownership structure is defined by both ownership concentration and ownership mix variables. In order to detect the structural differences of ownership in thirteen selected sectors of the ISE, we will also examine ownership mix variables for each sector.

The percentage of conglomerate affiliates (CONG) is highest in the wholesale industry (sector 12). 82 percent of the sample firms operating in the wholesale sector are conglomerate affiliates. This significant value shows that most of the wholesale sector firms are controlled by conglomerates. Following the wholesale sector, the sector of electricity, gas, and water (sector 13) has the second highest conglomerate

affiliates with a percentage of 70 percent. On the other hand, conglomerates do not have any affiliates operating in the transportation sector (sector 9). The second least presence of the conglomerate affiliates is in the textile, apparel and leather sector (sector 7). It seems that distinct conglomerates do not prefer to invest in textile industry and leave them to other investor groups.

When the percentages of family ownership (FAM) in sectors are examined, we find that sector of textile, apparel and leather (sector 7) has the highest percentages of family ownership (FAM). Investments in the textile industry are small, when compared to the other sectors. For that reason, it will be easier for a family or a group of families to invest in this sector. The second largest sector of the family involvement is the sector of hotels and restaurant (sector 10) with a percentage of 63 percent. We did not, however, discover any firm with family ownership (FAM) in the wholesale sector, which is mainly controlled by the distinct conglomerates.

Table 45 Ownership Mix Variables for Sectors.

<i>Sectors</i>	<i>CONG</i>	<i>FAM</i>	<i>CFAM</i>	<i>FRGN</i>	<i>CROSS</i>	<i>GOV</i>	<i>DISP</i>
Fabricated Metal Prod.	32.20	46.89	79.10	31.64	28.81	4.52	38.89
Basic Metal Industry	19.44	29.17	48.61	18.06	19.44	12.50	31.79
Mineral Products	16.18	27.75	43.93	20.23	18.50	13.29	4.83
Chem.Oil and Plastic	31.72	37.93	69.66	27.59	24.14	19.31	10.00
Paper Products	51.43	38.57	90.00	14.29	27.14	0.00	0.00
Wood Products	50.00	50.00	100.00	0.00	50.00	0.00	12.28
Textile	10.53	77.78	88.30	0.00	20.47	0.00	3.79
Food	43.18	44.70	90.15	15.15	47.73	1.52	0.00
Transportation	0.00	18.75	18.75	37.50	0.00	43.75	0.00
Hotels	36.84	63.16	100.00	2.63	36.84	0.00	5.88
Retail Trade	38.24	50.00	88.24	0.00	0.00	5.88	17.65
Wholesale	82.35	0.00	82.35	41.18	82.35	0.00	0.00
Utilities	70.00	30.00	100.00	0.00	70.00	0.00	0.00

Group ownership (CFAM) is defined as the merging of two ownership identity groups of conglomerate affiliation (CONG) and family ownership (FAM). When the CFAM percentages are examined three sectors are fully occupied by the

conglomerate affiliates and family-owned firms. These sectors are wood products (sector 6), hotels and restaurants (sector 10), and electricity, gas, and water (sector 13). The transportation sector has the lowest group ownership (CFAM) with a value of 19 percent.

It seems that foreign investors mostly prefer firms operating in the wholesale sector. Note that conglomerates are also dominant in this sector. On the contrary, as second choice, foreign investors prefer transportation sector. Interestingly, there is no single conglomerate affiliate operating in this sector. It seems reasonable, however, to invest in the transportation sector, since this sector entails intense international aspects like air transportation. On the other hand, we do not observe any foreign partners in the sectors of wood products (sector 6), textile, apparel and leather (sector 7), retail trade (sector 11) and electricity, gas, and water (sector 13).

Cross ownership (CROSS) structure is mainly used for controlling conglomerate affiliates as a governance mechanism. With this respect, cross ownership (CROSS) has a significant correlation (0.854) with the conglomerate affiliation (CONG) listing. This claim is also supported with the similar ranking of the two sectors. The wholesale sector (sector 12) has the highest cross ownership (CROSS) and the sector of electricity, gas, and water (sector 13) the second highest as in the conglomerate affiliation (CONG). On the other hand, the sectors of transportation (sector 9) and retail trade (sector 11) have no firms with cross ownership (CROSS).

Government ownership (GOV) has the highest level in the transportation sector with a percentage of 44 percent. When we examine the results presented in

Table 45, we witness supportive findings in favor of the ongoing privatization programs. The government is not operating six out of thirteen sectors. These sectors are textile, apparel and leather (sector 7), paper and paper products, printing and publishing (sector 5), wood products (sector 6), hotels and restaurants (sector 10), wholesale (sector 12) and electricity, gas, and water (sector 13).

Dispersed ownership (DISP) is not very common among the firms listed on Istanbul Stock Exchange. For example, the largest sector of dispersed ownership (DISP) is the fabricated metal products and machinery equipment (sector 1) with the mean value of 39 percent. We do not encounter dispersed ownership (DISP) in five of the thirteen sectors. These sectors are paper and paper products, printing and publishing (sector 5), food, beverage, and tobacco (sector 8), transportation (sector 9), wholesale (sector 12) and electricity, gas, and water (sector 13).

3.6. OWNERSHIP STRUCTURES IN DIFFERENT COUNTRIES

When we examine the literature on ownership structure we find considerable international differences as documented by Pedersen and Thomsen (1997), Charkham (1994), Porter (1992), Prowse (1995), Roe (1991, 1994), and Walter (1993). The literature suggests that ownership structure is highly dependent on regulation, macro economic conditions, corporate history and culture, dominance of prevailing institutions, maturity level of financial system, and politics. In addition to those criteria, Pederson and Thomsen (1997) also claim that a large and liquid stock market is in principle consistent with significant ownership concentration, since presumably the costs of capital would be lower in such markets.

Pederson and Thomsen (1997) hypothesize and explain the differences in ownership structure with a historical and geographical difference perspective. Safarian (1966), for example, examines foreign multinationals in Canada, including a study of the ownership shares of foreign (mainly U.S.) parent companies. Vernon (1971), on the other hand, discusses the ambiguous attempts by host nations to control foreign multinationals. Turner (1971, pp. 172-89) reports how European governments reacted to the rise of U.S. foreign direct investment. Capitalization and industrialization levels, as well as the privatization and nationalization processes of the countries mainly cause the differences in their ownership structure patterns.

Ownership categories of the hundred largest companies in twelve European nations are reported by Pedersen and Thomsen (1997). The comparison of the ownership structure characteristics of Turkey with those of European countries is reported in Table 46.

When we examine the percentages of ownership structure variables presented in Table 46, we can make comparisons. Great Britain can be characterized as the first domain of personal capitalism in the Europe. The percentage of the firms where no single owner owns more than 20 percent of the company's shares is 61 percent. This dispersion rate of shares is very high among the European countries. The dispersion rate in Turkey is only 19 percent. Thus, Turkey is much more concentrated than Great Britain, but less concentrated than Germany, Belgium, Spain, Norway, and Sweden, Italy and Austria. Another concentration measure, dominant ownership, is defined by Pedersen and Thomsen (1997) as one owner (person, family, company) owning a sizeable (voting) share ($20\% < \text{share} < 50\%$) of

the company. Turkey is the leader in the Europe in this category. Sweden and Germany follow Turkey with mean percentage of 30 percent firms with a single powerful shareholder.

Table 46 Ownership Structure of European Countries vs. Turkey.

(DISP) Dispersed Ownership: No single owner owns more than 20% of the company's shares.

(DMNT) Dominant Ownership: One owner (person, family, company) owns a sizeable (voting) share (20% < share < 50%) of the company. (FAM) Family Ownership: One person or a family owns a (voting) majority of the company. They include in this category

foundation (trust) ownership because it reflects the will of a personal founder and often gives the family (heirs) some degree of control. (GOV) Government Ownership: The (local or national) government owns a (voting) majority of the company. (FRGN) Foreign Ownership:

A foreign multinational (MNE) owns a (voting) majority of the company. (COOP)

Cooperatives: The company is registered as a cooperative or (in a few cases) majority owned by a group of cooperatives. (Pedersen and Thomsen (1997))

	<i>DISP</i>	<i>DMNT</i>	<i>FAM</i>	<i>FRGN</i>	<i>COOP</i>	<i>GOV</i>
<i>Austria</i>	0%	7%	25%	38%	10%	20%
<i>Belgium</i>	4%	20%	6%	61%	3%	6%
<i>Denmark</i>	10%	9%	30%	23%	17%	11%
<i>Finland</i>	12%	25%	23%	11%	10%	19%
<i>France</i>	16%	28%	15%	16%	3%	22%
<i>Germany</i>	9%	30%	26%	22%	3%	10%
<i>Great Britain</i>	61%	11%	6%	18%	1%	3%
<i>Italy</i>	0%	22%	20%	29%	0%	29%
<i>Netherlands</i>	23%	16%	7%	34%	13%	7%
<i>Norway</i>	6%	14%	29%	19%	19%	13%
<i>Spain</i>	6%	22%	8%	45%	5%	14%
<i>Sweden</i>	4%	31%	18%	14%	12%	21%
<i>European Average</i>	13%	20%	18%	28%	8%	15%
<i>Turkey</i>	19%	58%	45%	4%	NA	7%

Family Ownership is as defined whether one person or a family owns a (voting) majority of the company or not. Family has some degree of control in this type of firms. European average of family ownership (FAM) is 18 percent but this value is 45 percent in Turkey. This finding leads us to declare the dominance of families in the governance systems of the Turkish firms. Denmark and Norway follow Turkey with the mean percentages of 30 percent and 29 percent respectively. Great Britain, Belgium, and Netherlands have the lowest family involvement in their firms' governance systems.

Pedersen and Thomsen (1997) define foreign ownership as a foreign multinational owning a (voting) majority of the company. Even though we define foreign ownership (FRGN) as foreign partnership, which controls at least 10 percent of the shares, our average is at the lower bounds in the Europe. When we define foreign ownership (FRGN) as the full control by foreigners, this percentage drops to 4 percent. On the other hand, foreigners in Belgium control 61 percent of the firms. Spain follows Belgium with a percentage share of 45 percent.

Government ownership is defined as the (local or national) government owning a (voting) majority of the company. In Europe, 15 percent of the firms are controlled by governments or their agencies. In our sample, the government controls only 7 percent of the firms. However, this value increases to 29 percent in Italy, 22 percent in France, and 21 percent in Sweden.

The ownership structure of European firms are examined and compared with Turkish firms. Dominant ownership identity groups are summarized in Table 47. We can define Turkish firms with their high ownership concentration levels and heavy involvement of family ownership (FAM) in their governance systems.

When we examine the studies of rich countries with developed stock markets, we witness more significant concentration of ownership in Germany (Franks and Mayer (1994), Gorton and Schmid (1996)), Japan (Prowse (1992), Berglof and Perotti (1994)), Italy (Barca (1995)), and the seven OECD countries (European Corporate Governance Network (1997)). In developing economies, ownership is also heavily concentrated (La Porta et al. (1998)). Findings suggest that, in many countries, large corporations have large shareholders, and these shareholders are

active in corporate governance (e.g., Kang and Shivdasani (1995), Yafeh and Yosha (1996)). This is in contrast to the Berle and Means idea that managers are unaccountable.

Table 47 Ownership Structures in Europe

<i>Country</i>	<i>Dominant Characteristic(s)</i>
<i>Great Britain</i>	Dispersed ownership (DISP)
<i>Netherlands</i>	Dispersed ownership (DISP)
<i>Belgium</i>	Foreign ownership (FRGN)
<i>Spain</i>	Foreign ownership (FRGN)
<i>France</i>	Government ownership (GOV) Conglomerate affiliation (CONG)
<i>Italy</i>	Government ownership (GOV)
<i>Denmark</i>	Family ownership (FAM) Cooperatives
<i>Austria</i>	Government ownership (GOV) Foreign ownership (FRGN)
<i>Germany</i>	Dominance of Banks and Family ownership (FAM)
<i>Norway</i>	Government ownership (GOV)
<i>Finland</i>	Government ownership (GOV)
<i>Sweden</i>	Dominance of Banks and Conglomerate affiliation (CONG)

La Porta et al. (1999) examine the identities of the ultimate owners of the capital and of the voting rights of large corporations in 27 wealthy economies in their study. In their empirical work, they find that the Berle and Means corporation is quite rare for some definitions of control. The German model of bank control through equity is not common either. Instead, controlling shareholders, usually government or families, are dominant in most large companies. These stakeholders have significant control rights in firms in excess of their cash flow rights, largely through the use of pyramids, but they also participate in management. The results suggest that the incentives and opportunities of controlling shareholders originate corporate policies, which benefit and expropriate the minority shareholders.

La Porta et al. (1999) document that in countries with poor protection of minorities, concentration of ownership is common. In such countries, controlling shareholders would do everything to keep control because losing control involuntarily may be costly in terms of surrendering the private benefits of control.

Table 48 Ownership Structure Around the World
Table values are gathered from the study of La Porta et al. (1999). Authors focus on only large and medium firms of 27 countries. A company is classified as widely held if there is no controlling shareholder; family controlled if controlling shareholders belong to a family; government controlled if the (domestic or foreign) state is the controlling shareholder.

	<i>Widely Held</i>	<i>Family Controlled</i>	<i>Government Controlled</i>
<i>Large Firms (World)</i>	36%	30%	18%
<i>Medium Firms (World)</i>	24%	45%	15%
<i>Large Firms (Turkey)</i>	12%	69%	11%
<i>Medium Firms (Turkey)</i>	11%	79%	6%

La Porta et al. (1999) focused on the data of medium and large firms in 27 countries and their results are presented in Table 48. 36 percent of world firms as stated by La Porta et al. (1999) are widely held and only 12 percent of our large sample firms can be defined in the same way. Even though the percentage of widely held firms in medium firms declines by 12 percent, in the Turkish sample, this value drops only 1 percent. However, we observe a similar pattern in the family ownership (FAM). When the world family ownership (FAM) level is 30 percent in large firms, this jumps to 45 percent in medium sized firms. In Turkish firms, we observe that family ownership (FAM) percentages are 69 percent and 79 percent for large and medium firms respectively. The government ownership (GOV) average worldwide is 18 percent in large firms and 15 percent in medium firms. On the other hand, government ownership (GOV) percentages are 11 percent and 6 percent respectively in Turkey. This fact indicates that most of the government owned firms are large.

Indeed, the magnitude of government ownership (GOV) among the largest companies would be even higher if we could include non-ISE firms that are under this category, and do not trade publicly.

La Porta et al. (1999) conclude with a surprise that by far the dominant form of controlling ownership in the world is not that by banks and other corporations, but rather by families.

3.7. CONCLUSIONS

While a number of studies have identified striking international differences in ownership structures, the purpose of this chapter is to describe the characteristics of the ownership structures of Turkish firms and compare findings with those of other countries. For that reason, data of non-financial Turkish firms between 1992 and 1998 were gathered and examined.

The Istanbul Stock Exchange is the only stock exchange in Turkey and its changing nature is described. In the last two decades Turkey has been experiencing significant improvements, and these changes are reflected in the ownership structures of Turkish firms.

To describe the ownership structure of Turkish firms, we focused on ownership structure variables, which are categorized into two main groups; ownership concentration and ownership mix variables. Ownership concentration variables of LSH1, LSH3, OTHER and CASH measure the dispersion of shares among the shareholders. In addition to those ownership concentration variables, the following ownership mix variables are defined as: conglomerate affiliation (CONG), family

ownership (FAM), government ownership (GOV), foreign ownership (FRGN), cross ownership (CROSS), and dispersed ownership (DISP).

When we interpret the findings of ownership concentration variables, the ownership structure of Turkish firms can easily be defined as “highly concentrated” with the mean values of ownership concentration as graphed in Figure 9. The mean of LSH1 (43 percent) and the mean of LSH3 (62 percent) reveal the concentrated nature of the sample firms. This finding is also supported, and consistent with the findings of Ugurlu (1998) and Yurtoglu (2000). The average percentage of diffused and small investors is only 32 percent. When we compare the dispersed ownership (defined as no single owner owning more than 20 percent of the company's shares) of Turkey with those of other countries, we witness significant differences. While the dispersed ownership average is 19 percent in Turkey, this value is 61 percent in Great Britain, 23 percent in Netherlands, and 4 percent in Belgium and Sweden. As it can be understood from the comparison of the concentration (dispersion) levels, there are significant variations in the ownership concentration values from country to country.

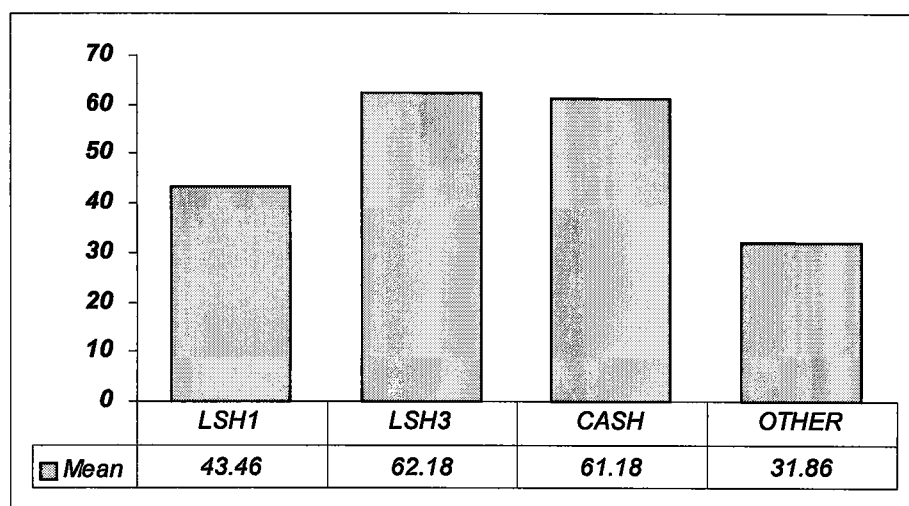


Figure 9 Mean Values of Ownership Concentration Variables

In addition to ownership concentration measures, we also examined the ownership mix variables in order to detect the differences in the identity of controlling owner(s). Owner identities reflect the unique characteristics on the preferences and incentive mechanisms of the ultimate controlling owner(s). According to these findings, as summarized in Figure 10, family ownership (FAM) is dominant in Turkish firms. If we consider that most of the conglomerates are controlled by families, then we can assess the impact of family ownership (FAM) on the corporate world much better. This finding is not surprising, since government and families become the locomotives of the developments from the founding of the Turkish Republic. When we compare the share of families in an average Turkish firm with those of other countries, it would not be misleading to conclude that most of the Turkish firms are either owned or controlled by a family or a group of families. Family ownership (FAM) in Europe ranges from 6 percent to 30 percent. Denmark has the highest family ownership (FAM) with the average of 30 percent; Belgium and Great Britain have the lowest family ownership (FAM) with 6 percent.

On the foreign ownership (FRGN) side, Turkey does not have as high averages as in the family ownership (FAM) in Europe. While the European average of full foreign ownership (FRGN) is 28 percent, 17 percent of Turkish firms have at least 10 percent of their equity provided by their foreign partners. When we examine the full ownership case, then this value drops to 4 percent. It seems that Turkey is not an attractive country for foreign direct investors.

Government ownership (GOV), with an average of 7.3 percent, is relatively lower in Turkey when compared to the European average of 15 percent. Italy takes

the leading role in government ownership (GOV) in Europe with an average of 29 percent. However, non-publicly traded government-owned Turkish firms should not be overlooked. The decreasing trend in government involvement seems to be sign of ongoing privatization programs; however.

Cross ownership is a governance mechanism mostly in conglomerate affiliates. Conglomerates prefer to keep control of their affiliates with cross ownership as well as pyramidal ownership structure. We ignored pyramidal ownership structure in our analyses since conglomerates mostly create their pyramidal ownership structure with their banks or investment companies. We only included non-financial firms in our analyses. Even though we do not have numerical values on pyramidal ownership structure, it is considerable factor, especially in conglomerates.

Firms without any distinct owner(s) are grouped under dispersed ownership (DISP). Only 11 percent of our sample firms fall into this category. This finding is consistent with the concentrated nature of Turkish firms.

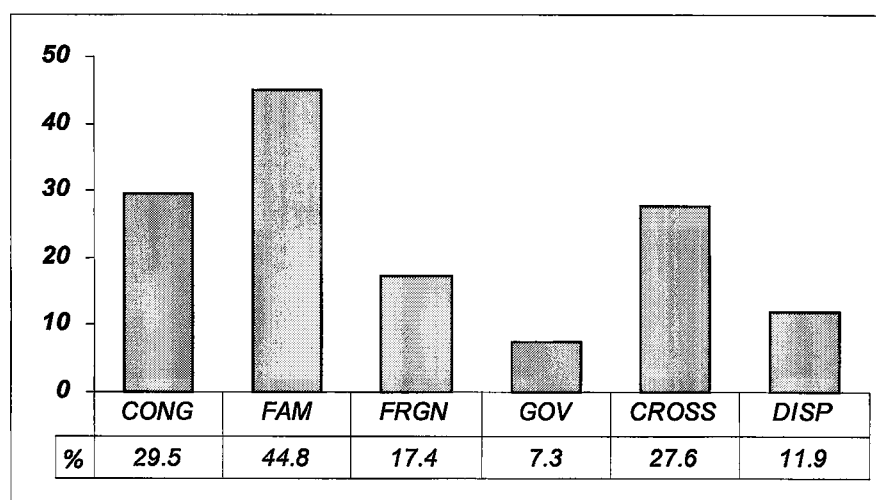


Figure 10 Ownership Mix Variables

We also examined the differences in ownership structures of the thirteen industrial sectors. As claimed by Demsetz and Lehn (1985) and Zeckouser and Pound (1990), there are significant differences in the ownership structures of each industrial sector. Commonalities within the industrial firms lead them to have similar preferences and dynamics as well as governance systems.

When the size effect on ownership structure was examined, we found that size is significantly and positively related to ownership concentration. Turkish stock market is quite young. Therefore, we still observe traditional types of ownership (family owned mostly) in Istanbul Stock Exchange (ISE) listed firms. This conclusion is inconsistent to both Demsetz and Lehn (1985) and Prowse (1992). On the other hand, Kettler (1997) also found positive relationship between size and ownership concentration in East Germany. We doubt that developing countries show significant bias to the size of the firms and mostly, bigger firms in those countries have a concentrated nature. Further research into this area is required to resolve this doubt.

In sum, Turkish firms are mostly concentrated, and families have significant involvement in the corporate governance systems of the firms. Cross ownership and pyramidal structures are not unusual, especially in the conglomerate affiliates. On the other hand, we witness a decreasing involvement of the government and slightly increasing foreign partners in the ownership structures of Turkish firms.

CHAPTER – IV

EQUITY OWNERSHIP STRUCTURE, RISK-TAKING, AND PERFORMANCE

4.1. INTRODUCTION

This chapter examines the impact of ownership structure on corporate performance as well as the risk-taking behavior of Turkish firms listed on the Istanbul Stock Exchange (ISE). Following Jensen and Meckling (1976), interest in the relation between corporate performance and the distribution of shares among the shareholders has attracted the attention of many academics and practitioners. Studies that explore these relationships revealed adequate evidence in favor of the phenomenon and now it is commonly believed that ownership structure has important implications on corporate performance and risk-taking behavior. However, those studies mainly focus on developed markets because of data availability and market related concerns. In addition to that, performance and ownership structure measures used in the literature show significant variations.

The main contribution of this study is to explore the consequences of ownership structure in Turkey as an emerging market by using a combined measurement system and compare the findings with those of previous studies in different settings. As Hun et al. (1999) claim, each country needs to be examined

individually, since each country has her own characteristics and dynamics. In this respect, we believe that analyses conducted with the Turkish data may provide us with different insights on the consequences of ownership structure.

We define combined measurement system by including both ownership concentration and ownership mix measures. With this measurement system, we believe that we will be able to take into account all aspects of ownership structure. Most of the studies mainly focus on insider (managerial) ownership structure. These studies do not include both the dispersion of shareholder stakes and the identity of owners at the same time. By using the combined integrated ownership structure measures, we will examine their impacts on accounting and market performance measures as well as risk measures in order to reveal the relationships between performance, risk and ownership structure.

Emerging markets are differentiated from developed markets with respect to their heterogeneous nature and inherent dynamics. These are the markets characterized by high volatility and high average returns. It has been shown that they are not integrated with the developed markets in the World as evidenced by very low correlation with the rest of the World and among themselves (Bekaert et. al., 1998). In this respect, we hypothesize that impact of ownership structure on corporate performance in Turkey as an emerging market may differ from the developed markets.

4.2. DATA

To test our hypotheses, we use the ISE's yearbooks and electronic database containing information on ownership structures of nonfinancial Turkish firms listed

on the Istanbul Stock Exchange between 1992 and 1998. Because of the increasing number of firms listed on the Istanbul Stock Exchange (ISE), the number of firms included in the sample increases each year. The number of firms in our sample is 106 in 1992; it increases to 194 in 1998. Most of the firms (73%) listed on the ISE are among the largest 500 companies compiled by the Istanbul Chamber of Commerce. Banks, leasing companies, investment companies, holding companies, and insurance firms were excluded from the data set. Investment companies are closed-end mutual funds that invest in a portfolio of securities and holding companies invest only in member firms of a conglomerate. Some of the required data was obtained from the ISE's electronic database, which can be downloaded from its web page (www.imkb.gov.tr). The on-line database was selected on purpose in order to eliminate inconsistencies in the data set, which, otherwise, would be a problem with the ISE yearbook data. However, the ISE yearbook data was mainly used for the ownership structure measures due to the unavailability of ownership information on electronic medium.

4.2.1. Ownership Structure Variables

Ownership structure is defined by the two broad groups of variables as defined in Chapter III. These are ownership concentration and ownership mix variables. These measures will try to capture different dimensions of ownership structure. Those two categories of measures incorporate both the influence power of shareholders as well as identity of owners with their unique preferences and incentive mechanisms.

4.2.1.1 Ownership Concentration Variables

Ownership concentration variables reflect the influence power of shareholders on management as measured by the distribution of shares among the shareholders. Ownership concentration variables are:

- Total shares of the largest three shareholders (LSH3)
- Cumulative percentage of shares held by other diffused shareholders (OTHER)
- Cash flow right(s) of the ultimate controlling owner(s) (CASH)

We selected the cumulative percentage shares of the largest three shareholders (LSH3) and the cumulative percentage of shares held by other diffused shareholders (OTHER) as our main measures of ownership concentration. As explained in Chapter III, market characteristics lead us to focus on only the three largest shareholders. With these selected variables, we only disregard, on average, 7% of the shareholders from our consideration. This makes up our error zone in the variable definition process.

When we examined the seven year pooled data, summary statistics of the selected ownership concentration variables are presented in Table 49. Turkish listed firms can easily be defined as highly concentrated firms.

Table 49 Descriptive Statistics of the Concentration Variables.

(%)	Mean	Median	Std. Dev.	Min	Max
LSH3	62.13	64.00	19.07	0.82	99.30
OTHER	31.86	28.84	18.52	0.70	99.15
CASH	61.18	61.79	18.95	1.00	99.80

4.2.1.2 Ownership Mix Variables

Ownership mix measures intend to capture the distinct characteristics of the identity of the controlling owner(s). Main motivation in including ownership mix into our analyses is to explore the consequences of their unique preferences and incentive mechanisms. Owner identity groups are defined by considering their commonalities. The following ownership mix variables are defined as binary variables:

- The conglomerate affiliation (CONG) variable defines whether a firm is a member of a conglomerate or not.
- The family ownership (FAM) variable captures the attributes of a firm that is controlled by a family or a group of families. Family ownership (FAM) is mostly associated with a double role for the family as owners and managers of a firm. With this respect, family ownership may also be regarded as managerial ownership.
- The group ownership (CFAM) variable combines both the variables of CONG and FAM. With this approach, it is intended to differentiate between the firms that have family and/or conglomerate involvement with the others.
- The foreign ownership (FRGN) variable measures the stake of foreign ownership within the company. Direct foreign investments that are more than 10% of all shares are taken into account and considered as foreign partnership.
- The government ownership (GOV) defines whether a firm is controlled by government agencies or not. We do not include the private firms in which a small percentage of shares are retained by government agencies where the government is not the controlling shareholder.
- The cross ownership (CROSS) variable is defined as firms with complex ownership networks. It is not uncommon to encounter the name of another firm in the list of owners of a public corporation. In this kind of ownership, the owned firm may own some percentage of the shares of his owner firm.
- The dispersed ownership (DISP) variable categorizes the firms, which are owned by dispersed atomistic shareholders. In this case, neither a single

person nor a group has the privilege to control firms with dispersed ownership.

When the sample data is examined, we end up with material percentages for the ownership mix variables as reported in Table 50. While the percentages of the conglomerate affiliates are decreasing through years, family ownership (FAM) is in an increasing trend. This is mainly caused by the increasing number of firms listed on the ISE and new firms joining the stock market which are mostly family-owned firms. We observe significant decline in the government ownership (GOV) and stable foreign ownership (FRGN) in our sample period. With regard to cross ownership (CROSS), we witness a declining trend. This is caused by either a real decline in the cross ownership or that most of the new comers do not fall into this classification.

Table 50 Yearly Ownership Mix Variable Percentages

(%)	1992	1993	1994	1995	1996	1997	1998	Avg.
CONG	33.3	31.4	30.1	30.5	29.1	27.3	27.3	29.9
FAM	36.2	40.5	43.4	44.2	45.7	48.5	49.0	43.9
CFAM	69.5	71.9	73.5	74.7	75.4	76.3	76.8	74.0
FRGN	17.1	15.7	17.6	17.5	16.6	18.0	18.6	17.3
CROSS	35.2	30.6	29.4	27.9	25.1	25.3	24.7	28.3
GOV	10.5	8.3	7.4	7.1	7.4	6.2	6.2	7.6
DISP	12.4	12.4	11.0	11.7	11.4	11.9	12.4	11.9

4.2.2. Control Variables

To arrange the experimental settings of the econometric analysis, we investigated the literature and examined the data sample for control variables. Corporate ownership structures are found to be influenced by nationality (Pederson and Thomsen (1997)) and industry effects (Pederson and Thomsen (1998)). It is claimed that both nationality and industry factors may influence corporate

performance either in a direct or indirect manner. An alternative control measure is asserted by Jensen (1989) as capital structure.

Debt structure determines creditors' power of influence on the corporate decision-making processes. Jensen and Meckling (1976) claim that a manager's capital structure decisions based on the agency cost of debt against the agency cost of equity vary across the firms. Williamson (1988) combines the discriminating use of equity and debt in his term of "dequity." He differentiates the use of dequity, based on the asset redeployability. He asserts that debt is well suited to highly redeployable asset investments, while equity is preferred for less redeployable projects.

The size effect is common and inevitable in corporate performance. Constand et al. (1998) report firm size as one of the determinants of ownership structure and claim that as firm size increases, the cost of control increases, resulting in a decreasing ownership concentration. When we examine the size of the sample firms, we observe that firms listed on Istanbul Stock Exchange are relatively large. This creates an inherent bias in the data sample.

In this study, we will use size and leverage as control variables. As it can easily be seen in Table 51, there are significant correlations between performance measures and control variables of size and leverage. Size is defined with the natural logarithm of book value of equity and leverage with debt to total assets ratio. The natural logarithm of total assets is calculated in order to normalize the size variable. In addition to those, we will also control market risk BETA in the market based performance models. BETA is calculated by using three-year monthly stock return data.

Table 51 Cross-Correlation Analyses of the Control Variables.
Figures in the body of the table are Pearson's correlation coefficients with their significance levels. "***" stands for significance at the 0.01 level.

	<i>Size</i>	<i>Leverage</i>
<i>ROA</i>	0.120 (0.000)**	-0.252 (0.000)**
<i>ROE</i>	0.083 (0.007)**	-0.411 (0.000)**
<i>P/E</i>	-0.084 (0.010)**	0.049 (0.131)
<i>MBV</i>	0.197 (0.000)**	0.243 (0.000)**
<i>RETURN</i>	-0.123 (0.000)**	0.091 (0.004)**

4.2.3. Performance Variables

Corporate performance is at the core of the managerial activities and can be best defined as the yield of the managerial efforts. Corporate performance is measured with the two categories of variables. The first category of measurements intends to capture the accounting-based performance of the firms. However, measures based on historical figures are not sufficient to integrate the current and future potential of the firm. For that reason, the second category, market-based performance has been taken into account. These categories of performance measures are explained in detail in the following sections.

4.2.3.1 Accounting-Based Measures

Accounting-based performance measures are defined by return on total assets (ROA) and return on equity (ROE) ratios. The return on total assets (ROA) ratio is calculated by dividing net profit by total assets. This ratio demonstrates the rate of net return on total assets. Profitability must be considered separately according to the source of funding. In addition to that, the return on equity (ROE) ratio is calculated by dividing profit before taxes by total equity. This measure indicates the profits

earned on the company's total equity. The return on equity ratio inherently captures the firm's operating profit margin, asset turnover, interest burden, tax burden and leverage characteristics. This kind of decomposition of ROE is known as the Du Pont system in the literature. ROE is one of the accounting ratios used to measure management's effectiveness to reward the management.

Accounting-based measures that depend on historical data reveal some insights. However, historical data may not be a good indicator for the future performance potential. Therefore, we also include the market-based performance measures in order to create a comprehensive performance measurement system.

4.2.3.2 Market-Based Measures

Because of the possible deficiencies in the accounting-based performance measures, we also include market-based performance measures. These measures are the price to earnings ratio (P/E), market to book value (MBV) and stock returns. The price-to-earnings ratio is calculated by dividing a company's market value at the end of year to the year-end net profit. This ratio is regarded as the relationship between the price of a share and the return on investment obtained by dividing the share price by the earnings. In order to deal with the numerical problems inherent in the definition of P/E ratio, we chose to discard the observations with negative P/E values.

Market-to-book value (MBV) ratio is another performance indicator. This ratio is the proportion of the company's market value to the company's resources at their book values. A low market-to-book ratio is often regarded as a safety measure, and

some investors prefer to eliminate the stocks with high market-to-book ratio from their portfolios.

The effect of ownership structure on corporate performance is also examined by using several stock return measures. When we examine the stock return and ownership structure relationship in the literature, we observe that block ownership and managerial ownership have significant effects on a firm's performance. (Jensen and Meckling (1976); Stulz (1988); Agrawal and Mandelker (1987); Demsetz and Lehn (1985); Shliefer and Vishny (1986, and 1997)) We will explore the relationship between ownership structure and stock returns by considering the return measures of:

- Average monthly stock returns in 12 months (RET12)
- Average monthly stock returns in 24 months (RET24)
- Abnormal average monthly stock returns in a year (ABRET)
- Average 3-month cumulative stock returns in a year (RET3)
- Average 6-month cumulative stock returns in a year (RET6)

Average monthly stock return in 12 months (RET12) is calculated by taking the average value of the monthly stock returns at a given year. RET24 is calculated by taking the average value of the monthly stock returns of both given year and the following year. With an additional return measure of ABRET (abnormal stock return), we remove market effect from the individual stock returns by subtracting monthly market returns from the related monthly stock returns. Abnormal stock return (ABRET_i) of firm i is calculated by averaging monthly values of the difference between monthly stock returns (R_i) and monthly market returns (MR_i) in a year.

$$ABRET_{it} = [\sum (R_{it} - MR_{it})] \div 12$$

We calculate three and six month cumulative stock returns (RET3 and RET6) in a year with the following equation by including observations with no overlapping return horizons. Hence, when we work with three-month ahead returns (RET3), we choose the monthly observations in January, April, July, and October of every year in the sample. Similarly, we pick January and July for six-month ahead returns (RET6). We then take the average of the return measures of RET3 and RET6 within a year time frame.

$$RET_{t,t+j} = AVG \left[\frac{I_{t+j} - I_t}{I_t} \right] \quad \text{for } j = 3 \text{ and } 6$$

4.2.4. Risk Variables

Almost all assets bear some type of risk. In this study the level of risk taking by the corporation will be measured by the two risk measures. These are total risk and market risk.

Market Risk (BETA): Since the prediction of the general macro economic conditions with certainty is almost impossible, investors need to bear some levels of risk. The risk that remains even after extensive diversification is called *market risk*. This kind of risk is also called *systematic risk* or *nondiversifiable risk*. Risk depends on exposure to macroeconomic events and is defined as the sensitivity of a stock's return to fluctuations in market returns and is commonly known as BETA. BETA is calculated as the regression coefficient in a time series regression of three-year monthly stock returns on the return on Istanbul Stock Exchange Index respectively.

Total Risk (STDEV): Total risk is defined as the probability distribution of the expected future returns. The tighter the probability distribution, the smaller is the

risk. The standard deviation of the returns measures the probability of not having the expected return. Total risk is defined as the standard deviation of the monthly stock returns for a three-year time period.

To calculate *STDEV* and *BETA*, we employ monthly returns over the three-year period prior to the time period in which other measurements are taken. Descriptive statistics of the risk measures of market risk *BETA* and total risk of *STDEV* are reported in the Table 52.

Table 52 Descriptive Statistics of the Risk Measures.

	Mean	Median	Std. Dev.	Min.	Max.
Market Risk (BETA)	0.916	0.923	0.433	-0.891	2.041
Total Risk (STDEV)	0.266	0.248	0.084	.0202	.6143

4.3. METHODOLOGY

4.3.1. Performance Models

We first investigated the impact of ownership structure on a firm's performance. Here, we used a multivariate regression approach, explicitly controlling other factors known to be important in determining a firm's performance. Control variables are defined as size (*SIZE*), leverage (*LEV*) and market risk (*BETA*) by considering the previous studies in the literature and the characteristics of the data sample.

Two groups of variables are employed to measure corporate performance; accounting and market-based measures. Accounting-based performance measures are the return on equity (*ROE*) and return on total assets (*ROA*). Market-to-book value ratio (*MBV*), price-to-earnings ratio (*P/E*) and stock returns (*RET*) are the market value variables of performance. Since the data entails a seven-year period,

performance variables (*ROA, ROE, MBV, P/E, RET*) and control variables (*SIZE, LEV and BETA*) are pooled.

Ownership structure is regarded as an endogenous variable in this study as hypothesized by Demsetz (1983). It is reasonable to assume ownership structure as an endogenous variable. When we examined the changes in ownership structures, we observed quite a stable nature. For the empirical testing, we calculated the change in both performance and ownership concentration measures and conducted cross-correlation analysis. As it can easily be seen in Table 53, there is no significant correlation between the changes in both performance and ownership concentration variables. This fact provides evidence that ownership structures do not adjust quickly to changing economic conditions.

Table 53 Cross Correlation Analyses Between Changes in the Ownership Concentration and Performance Measures.

Figures in the body of the table are Pearson's correlation coefficients with their significance levels. "***" stands for significance at the 0.01 level.

	$\Delta SH3$	$\Delta OTHER$
ΔROA	-0.049 (0.140)	0.036 (0.279)
ΔROE	-0.077 (0.022)	0.047 (0.156)
ΔEP	-0.019 (0.603)	-0.001 (0.970)
ΔMBV	0.006 (0.847)	-0.016 (0.643)

On the other hand, we also examined the possible endogeneity problem with leverage and ownership concentration measures. For that reason, we calculated the changes in both leverage and ownership concentration measures and conducted a cross correlation analyses and reported the results in Table 54. There are significant correlations between the levels of leverage and ownership concentration measures.

The results of the correlation analyses between leverage and ownership concentration measures are reported in Table 55.

Table 54 Correlation Analyses Between the Changes in Leverage and Ownership Concentration Measures.

Figures in the body of the table are Pearson's correlation coefficients with their significance levels. "***" stands for significance at the 0.01 level.

	<i>ΔLSH3</i>	<i>ΔOTHER</i>
<i>ΔLEV</i>	0.065 (0.115)	-0.066 (0.071)

Table 55 Correlation Analyses Between Leverage and Ownership Concentration Measures.

Figures in the body of the table are Pearson's correlation coefficients with their significance levels. "***" stands for significance at the 0.01 level.

	<i>LSH3</i>	<i>OTHER</i>
<i>LEV</i>	0.108 (0.000)**	-0.126 (0.000)**

Instead of the changes, we focused on the levels of the selected variables. When we examine the correlation coefficients between the changes in both leverage (LEV) and ownership concentration measures, we do not find any significant correlation values. However, when the results of the cross-correlation analyses on the levels of leverage (LEV), and ownership concentration measures are considered, we find all correlation coefficients are significant at the 0.01 significance level. These results lead us to include leverage as a control variable, and accept that there is no endogeneity problem between leverage and ownership concentration measures. Even if there is no impact of leverage on ownership concentration measures, (in our case leverage is significantly correlated with ownership concentration measures) there might be in the multivariate case, because of the likely interactions with the other variables included in the model.

For empirical testing, we propose the following hypotheses in this study. By controlling size and leverage, which have significant correlation coefficients with the

performance measures, we will try to examine the impact of both ownership concentration and ownership mix on corporate performance.

Hypothesis I: Corporate performance is a function of ownership concentration and, consequently, increased concentration results in an increase in performance.

$$Performance_{it} = f(Size_{it}, Leverage_{it}, Ownership\ Concentration_{it})$$

Hypothesis II: Ownership identity with its own incentive mechanisms affects corporate performance.

$$Performance_{it} = f(Size_{it}, Leverage_{it}, Ownership\ Mix_{it})$$

The hypothesis that ownership concentration influences performance (H1) is tested by regressing an ownership variable on a performance variable in the presence of control variables within a multiple regression model:

$$PER_{it} = \beta_0 + \beta_1 LEV_{it} + \beta_2 SIZE_{it} + \beta_3 CON_{it} + \varepsilon_{it} \quad (1)$$

Where, *PER* is one of the performance variables of *ROA*, *ROE*, *MBV*, *P/E* or *RET*; *SIZE* and *LEV* variables are the two control variables to denote firm size, measured as the natural log of total assets, and leverage, measured as the ratio of debt to total assets, respectively. In addition to those, we also include market risk BETA into market based performance models as an additional control variable.

Ownership concentration variables, *CON*, are *LSH3*, *OTHER* or *CASH*. In the above model, β_i 's are the parameters and ε_{it} the error term. The model is estimated for each relevant combination of explanatory and dependent variables.

We also investigated the impact of ownership mix on a firm's performance. In particular, we were interested to see if affiliation with a conglomerate (CONG), family ownership (FAM), group ownership (CFAM), foreign ownership (FRGN), government ownership (GOV), cross ownership (CROSS), and dispersed ownership (DISP) are related to performance.

In the literature, there is evidence on the role played by institutional investors in monitoring corporate decisions, thereby, affecting performance. For example, Smith (1996) finds institutional investors in the US, with or without seats on the board, monitor companies to improve their performance. Similarly, Gorton and Schmid (1996) provide evidence of stronger operating results by German corporations owned by banks. Two types of institutional investors with a potential for monitoring show up in large Turkish corporations. They are foreign investors and the government. Foreign ownership is usually the result of direct investment in a joint venture. Government-owned firms are also available and they are subject to privatization programs. In addition to those dominating ownership identities, we will also consider other ownership identities of conglomerate affiliation (CONG), family ownership (FAM), group ownership (CFAM), cross ownership (CROSS), and dispersed ownership (DISP).

To test the hypothesis that ownership mix has an impact on performance, we regressed performance variables defined earlier on ownership mix dummies one at a time. We controlled for size, leverage and beta as before. The following model is estimated:

$$PER_{it} = \beta_0 + \beta_1 LEV_{it} + \beta_2 SIZE_{it} + \beta_3 MIX_{it} + \varepsilon_{it} \quad (2)$$

Where, MIX_{it} as a dummy variable takes a value of "1" for a particular type of ownership mix, "0" otherwise. Ownership mix types are conglomerate affiliation (*CONG*), family ownership (*FAM*), group ownership (*CFAM*), government ownership (*GOV*), foreign ownership (*FRGN*), and cross ownership (*CROSS*). Other terms in the model (2) are the same as before. Hence, we run the above model for each relevant combination of ownership mix and performance variables.

Since our sample consists of time series – cross sectional pooled data, we corrected OLS estimations by using GMM methodology. Problems that are likely to be encountered in pooled data are generally resolved by applying a Generalized Method of Moments (GMM). GMM utilizes Newey and West (1987) methodology in correcting both heteroskedasticity and autocorrelation. GMM will not correct for cross-sectional dependence, leading to underestimation of standard errors. One could employ Fama-MacBeth method to overcome this problem, however with only 7 annual observations this is not feasible.

4.3.2. Risk Models

It is hypothesized in the study that ownership structure plays an important role in determining the level of risk taking by the corporation. Ownership structure determines the governance mechanisms, which in turn derives corporate policies, and controls the implementation processes. This strategic guidance should have some sort of impact on a firm's risk taking behavior.

Changes in both ownership concentration and risk measures were calculated and analyzed to test the endogeneity. Considering the results of the cross correlation analysis that are presented in Table 56, we can consider ownership structure as an

endogenous variable. As it can easily be seen from the results, there are not any significant correlations between the changes in risk and changes in ownership concentration variables. This fact leads us to conclude that ownership structures do not adjust quickly to changing risk conditions.

Table 56 Correlation Analysis Among the Changes in the Risk Measures.
Figures in the body of the table are Pearson's correlation coefficients with their significance levels. "***" stands for significance at the 0.01 level.

	$\Delta SH3$	$\Delta OTHER$
$\Delta BETA$	-0.004 (0.903)	0.022 (0.519)
$\Delta STDEV$	0.001 (0.980)	-0.030 (0.368)

For empirical testing, we propose the following hypotheses in this study. By controlling size and leverage, which are significantly correlated with risk measures, we will try to uncover the effects of both ownership concentration and ownership identity on corporate risk taking behavior.

Hypothesis III: Corporate risk is a function of the ownership concentration and increased concentration causes a decline in risk.

$$Risk_{it} = f(Size_{it}, Leverage_{it}, Ownership\ Concentration_{it})$$

Hypothesis IV: Ownership identity with its own incentive mechanisms affects corporate risk.

$$Risk_{it} = f(Size_{it}, Leverage_{it}, Ownership\ Mix_{it})$$

We employed capital market measurements such as total risk (STDEV) and market risk (BETA) of equity for risk taking behavior. Hence, for ownership concentration and ownership mix, we use the same right hand side variables as in the models (1) and (2) with the risk measures as the dependent variable of the model.

$$RISK_{it} = \beta_0 + \beta_1 LEV_{it} + \beta_2 SIZE_{it} + \beta_3 CON_{it} + \varepsilon_{it} \quad (3)$$

$$RISK_{it} = \beta_0 + \beta_1 LEV_{it} + \beta_2 SIZE_{it} + \beta_3 MIX_{it} + \varepsilon_{it} \quad (4)$$

The variable *RISK* in the above models is either the standard deviation of monthly returns (STDEV) of the common stock of firm *i*, or the beta coefficient of the stock (BETA) estimated by the market model, both over the three-year period. Explanatory variables are the same as before. Endogeneity concerns are identical as in the performance models. The Generalized Method of Moments (GMM) technique is also applied to risk models to deal with the potential problems of heteroskedasticity and autocorrelation.

4.4. OWNERSHIP STRUCTURE AND PERFORMANCE

Corporate performance measurement and estimation methodologies are critical for investors, managers, and other stakeholders of the firm. Policy makers are eager to take actions to increase corporate performance. In this manner, including policy makers, all stakeholders are willing to know the factors affecting performance in order to manipulate and monitor. The most critical of those factors is the governance mechanisms, which are mainly determined by ownership structure.

In the modern capitalist arena, owners delegate their authority to professional managers assuming that they will protect their best interests. The separation of ownership and control introduces us to a new conflict between managers and owners –agency conflict–. To solve this puzzle, owners tend to build varying mechanisms to align the conflicting interests of the two groups. Also, managers try to decrease their

human capital risk by applying entrenchment policies. Obviously, the efforts of the two groups are likely to affect – either in a positive or negative way – performance.

When we have full ownership of a single owner, this is the perfect incentive case where we do not observe any type of agency cost and interest conflicts. However, in the modern corporate ownership structure, we do not observe that kind of perfectionism, at least in large companies. When we examine the literature, we encounter six arguments that explain the impact of ownership structure on performance. As examined thoroughly in Chapter 2, these arguments are:

- Incentive alignment argument
- Takeover premium argument
- Managerial entrenchment argument
- Cost of capital argument
- Monitor and influence argument
- Nonlinearity argument

In this literature review, we found that most of the ownership structure related studies are concerned with the insider (managerial) ownership. (Agrawal and Knoeber (1996), Chen et. al. (1993), Cubbin and Leech (1986), Demsetz (1986), Hermalin and Weisback (1991), Holderness et. al. (1999), Jarrel and Poulsen (1988), Keasey et. al. (1994), McConnell and Servaes (1995)). All of those authors report significant relationship between insider (managerial) ownership and corporate performance. Some of those authors claim that the relationship between insider (managerial) ownership and performance is not linear. The findings of Stultz (1990), McConnell Servaes (1990), Hubbard and Palia (1995), Keasey et al. (1994), Morc, Shlleifer and Vishny (1988) and Holderness et al. (1999) provide significant evidence

that there is a roof-shaped nonlinear relationship between insider (managerial) ownership and corporate performance. This fact indicates that up to a certain point, insider (managerial) ownership contributes to corporate performance, but beyond that, managers choose to entrench themselves in order to protect their positions. This decline in the corporate performance can be explained as the efforts of risk-averse managers seeking to decrease their human capital risk.

Large block equity holders took second stage among the ownership structure literature. (Agrawal and Knoeber (1996), Barclay and Holderness (1991), Cubbin and Leech (1986), Denis and Denis (1994), Holderness and Sheehan (1985), Lodere and Martin (1997), McConnell and Servaes (1995) and Pedersen and Thomsen (1999)) The interests of large block holders may be in conflict with those of other stakeholders. This interest conflict leads large block holders to abuse their voting power and manipulate managerial decision-making for their own benefit. Large block holders also have sufficient power to discipline managers to decrease agency cost, causing an increase in corporate performance. Most of the authors found that the profitability of those firms with large block holders is relatively higher than the profitability of those with dispersed ownership. In contrast, McConnell and Servaes (1995) could not find any impact of large block holders on performance. There are obviously conflicting results considering the impact of large block ownership.

When the association between ownership concentration and performance is examined, Berle and Means (1932) and Cubbin and Leech (1983) report a positive relationship. However, Demsetz (1983) hypothesizes that ownership structure is endogenously determined by balancing the costs and benefits. In favor of this

hypothesis, Demsetz and Lehn (1985) and Holderness and Sheehan (1988) present their findings, that there is no significant relationship between ownership concentration and performance. In contrast to those findings, Lloyd, Hand, and Modani (1987), Leech and Leahy (1991) find positive ownership concentration effect on performance. Thus, conflicting findings are not uncommon in the literature regarding the impact of block ownership.

4.4.1. Accounting-Based Performance

Accounting-based performance measures reflect the historical performance of the firms. Even though these measures are criticized on the grounds that they are far from reflecting future performance potentials, they are mainly based on accounting figures, which are audited by independent agencies.

Accounting-based performance will be measured with the proxies of Return on Total Assets (ROA) and return on equity (ROE) ratios. Tobin's Q performance measure is not studied because of ongoing measurement debate. As **nder (1998) mentioned in her study, there is not a sound methodology to define the market value of the replacement cost of assets in Turkey. Thus, suggested ways of measuring Tobin's Q are approximations.

4.4.1.1 Characteristics of the Accounting-Based Performance Measures

When we examine the time series characteristics of the accounting-based performance measures of ROA and ROE, we observe slightly increasing linear trends in both measures having the peak values in 1994. Descriptive statistics for the accounting-based performance variables of ROA and ROE is presented in Table 57.

Table 57 Descriptive Statistics of the Accounting-Based Performance Variables.

(%)	Mean	Median	Std. Dev.	Min	Max
ROA	7.32	6.06	10.06	-42.97	87.78
ROE	15.55	14.23	26.87	-192.21	94.01

In Table 58, yearly mean values and changes in performance measures ROA and ROE are documented.

Table 58 Yearly Mean Values of Accounting-Based Performance Measures and their Changes.

	1992	1993	1994	1995	1996	1997	1998	Avg.
ROA	5.228	5.937	8.745	7.326	6.841	8.059	8.030	7.32
Δ ROA		14%	47%	-16%	-7%	18%	-0.4%	9%
ROE	11.162	9.395	16.748	12.330	15.107	14.242	14.544	15.55
Δ ROE		-16%	78%	-26%	23%	-6%	2%	9%

As it can be seen, we observe slightly increasing trend in both performance measures with a yearly average of 9%. These slightly increasing trends do not provide any strong evidence in favor of a long-term increase in the profitability levels of the sample firms. Although we witness slightly increasing mean values in the accounting-based performance measures, we also experience increasing level of dispersion.

4.4.1.2 Ownership Structure and Accounting-Based Performance

The relationship between ownership concentration variables (LSH3, OTHER, and CASH) and accounting-based performance measures (ROA and ROE) is examined by conducting multivariate OLS regression analyses with the model (1) and model (2), by correcting heteroskedasticity and autocorrelation with the GMM methodology.

4.4.1.2.1 Return on Asset (ROA)

As a general guide to the profitability of a firm, analysts often look at the ratio of income to total assets. Higher ROA ratio implies the efficient use of assets. A high return on total assets ratio may indicate that profits are above their long-run equilibrium level. However, ROA has its limitations since ROA is based on the accounting data and the book values are defined based on their original cost (less depreciation). Therefore, high ROA may also indicate that given the same profit level, assets have been heavily depreciated. Because of this controversial nature of ROA ratio, the interpretation of the ratio needs to be handled with care.

We first test the impact of ownership structure on ROA by using model (1) and model (2) for the relevant combinations of ownership structure proxies. In addition to control variables of size and leverage, we include independent variables one at a time in regression analyses. These independent variables can be categorized into two main groups: ownership concentration and ownership mix variables.

The correlation analyses with the performance proxy ROA and ownership structure measures are conducted and results are reported in Table 59. When we examine the correlation values, we observe that performance proxy ROA is associated with all of the ownership concentration variables and most of the ownership mix variables.

Table 59 Correlation Analysis of ROA

Figures in the body of the table are coefficient estimates; significance values are reported respectively in parentheses. “***” denotes statistical significance at the 0.05 level.

<i>Size</i>	<i>Lev</i>	<i>Lsh3</i>	<i>Other</i>	<i>Cash</i>	<i>Cong</i>	<i>Fam</i>	<i>Cfam</i>	<i>Frgn</i>	<i>Cross</i>	<i>Gov</i>	<i>Disp</i>
0.118	-0.408	-0.116	0.088	-0.097	0.012	-0.081	-0.082	0.133	-0.028	-0.101	0.102
(0.000)**	(0.000)**	(0.000)**	(0.004)**	(0.001)**	(0.692)	(0.008)**	(0.007)**	(0.000)**	(0.362)	(0.001)**	(0.001)**

4.4.1.2.1.1 Ownership concentration

Ownership concentration proxies of LSH3, OTHER and CASH variables are regressed one by one against ROA by controlling size and leverage variables. The regressions test the relationship between various measures of ownership concentration and profitability. Test results of the model (1) are reported in Table 60 with the coefficients and related t-statistics, R-square and F-test values.

When the overall performance of the model (1) is examined, we experience higher R-square values as well as significant F-test statistics at the 0.01 significance level.

Considering the results documented in Table 60, control variable debt to total assets ratio (LEV) is significant at the 0.05 level. Significant inverse relationship between leverage and ROA indicates that leverage does not contribute to corporate performance and increased leverage causes a decline in a firm's profitability level. This inverse effect of leverage may occur because of higher interest expenses accrued in times of high inflation. Control variable size is also significant and its coefficient carries positive sign. From the profitability perspective, we can claim that larger firms with lower debt to total assets ratios seem to perform better. However, it should not be disregarded that this ratio is mainly concerned with accounting profits. Note that accounting values are severely influenced by the inflation rates as well as accounting methods used. Since Turkey has been experiencing high inflation during the selected time period, we expect to see distortions in accounting values.

When we examine the relationship between ownership concentration variables and performance proxy ROA, we detect significant impact of LSH3. The other concentration measures are insignificant but signs of their coefficients are consistent.

The findings indicate an inverse relationship between ownership concentration and accounting-based performance measure ROA. Considering this result, we can claim that widely-held large firms have higher ROA ratios. This finding is consistent with the findings of Önder (1998).

Table 60 ROA and Ownership Concentration

Figures in the body of the table are coefficient estimates; t-values are reported respectively in parentheses. “***” denotes statistical significance at the 0.05 level, and “*” specifies 0.10 significance level.

<i>Constant</i>	<i>Lev</i>	<i>Size</i>	<i>Lsh3</i>	<i>Other</i>	<i>Cash</i>	<i>R²</i>	<i>F-Test</i>
9.118 (2.27)**	-0.198 (-8.00)**	0.762 (3.19)**	-0.039 (-1.83)*			0.188	81.965
6.144 (1.54)	-0.200 (-8.10)**	0.748 (3.10)**		0.028 (1.35)		0.185	80.59
8.870 (2.18)**	-0.198 (-8.07)**	0.732 (3.04)**			-0.028 (-1.41)	0.185	80.163

Since Istanbul Stock Exchange mainly consists of concentrated family and/or conglomerate controlled firms, we suspect that the real agency problem in Turkey is not between managers and owners but between minority and large shareholders. In the given governance structures of the Turkish firms, owners – families – have close ties and controlling power over the firm management and most of the time, managers are selected from the family members. It is thought that large shareholders have a tendency to abuse their voting power and manipulate decision-making processes in favor of their interests at the expense of other shareholders. Lower accounting-based profitability levels might be due to the high taxes in Turkey. These findings increase our doubt on the existence of agency conflict between majority and minority shareholders.

4.4.1.2.1.2 Ownership mix

The relationship between ROA and ownership mix variables is examined with the model (2). Separate regressions are conducted by including each ownership mix variable one at a time after controlling size and leverage. The results of the multivariate OLS regression analyses are reported in Table 61.

Table 61 ROA and Ownership Mix

Figures in the body of the table are coefficient estimates; t-values are reported respectively in parentheses. “***” denotes statistical significance at the 0.05 level.

<i>Const.</i>	<i>Lev</i>	<i>Size</i>	<i>Cong</i>	<i>Fam</i>	<i>Cfam</i>	<i>Frqn</i>	<i>Cross</i>	<i>Gov</i>	<i>Disp</i>	<i>R²</i>	<i>F-Test</i>
7.880 (2.01)**	-0.203 (-8.24)**	0.707 (2.86)**	-0.124 (-0.14)							0.183	79.239
8.327 (2.10)**	-0.202 (-7.92)**	0.686 (2.76)**		-0.532 (-0.62)						0.183	79.58
8.699 (2.21)**	-0.202 (-7.93)**	0.688 (2.79)**			-0.870 (-0.78)					0.184	79.974
8.641 (2.23)**	-0.201 (-8.26)**	0.616 (2.58)**				2.689 (1.91)*				0.193	84.653
8.039 (2.04)**	-0.203 (-8.25)**	0.704 (2.88)**					-0.584 (-0.65)			0.183	79.58
6.718 (1.77)*	-0.201 (-8.29)**	0.791 (3.32)**						-3.893 (-2.56)**		0.193	84.623
7.632 (1.92)*	-0.201 (-7.81)**	0.706 (2.88)**							0.797 (0.59)	0.183	79.563

When the results of ownership mix models are examined, we witness foreign ownership (FRGN) and government ownership (GOV) as significant ownership mix variables. Significant positive impact of foreign ownership (FRGN) on profitability measure ROA shows that firms with foreign partners have relatively higher profitability levels than the other firms. This incident shows that foreign investors either prefer firms with better performance or exert their influence to align the conflicting interests with major stakeholders. It is more likely that, high stakes of the foreign owners require them to establish or at least influence governance mechanisms to protect their investments and long-term interests. On the other hand, government ownership (GOV) is not beneficial for the firm. As expected, government-owned

firms do not operate as efficiently as the privately owned firms. This is mainly caused by the undesirable differences between the political expectations and economic necessities. When we consider the OLS regression test results, we can claim that firms with foreign partners tend to operate efficiently contrary to government-owned firms. When being a part of a group either a conglomerate or a family is examined, we do not observe any significant difference in profitability.

4.4.1.2.2 Return on Equity (ROE)

ROE ratio is a measure of profitability, which focuses on the return on shareholder's equity. It is often used to evaluate management's effectiveness. In this section, we will investigate the impact of ownership concentration and ownership mix on performance proxy ROE by conducting multivariate OLS regression analyses with models (1) and (2).

Bivariate correlation analyses are conducted with ROE and ownership structure variables to get an insight about the associations between the variables on hand. Correlation results provided in Table 62 reveal significant linear associations between ROE and the ownership structure variables of LSH3, OTHER, CASH, FRGN, and GOV.

Table 62 Correlation Analysis of ROE

Figures in the body of the table are coefficient estimates; significance values are reported respectively in parentheses. "***" denotes statistical significance at the 0.05 level.

<i>Size</i>	<i>Lev</i>	<i>Lsh3</i>	<i>Other</i>	<i>Cash</i>	<i>Cong</i>	<i>Fam</i>	<i>Cfam</i>	<i>Frgn</i>	<i>Cross</i>	<i>Gov</i>	<i>Disp</i>
0.082	-0.252	-0.133	0.101	-0.104	0.036	-0.043	-0.012	0.078	-0.039	-0.099	0.040
(0.007)**	(-0.001)**	(-0.001)**	(0.001)**	(0.001)**	(0.243)	(0.154)	(0.686)	(0.011)**	(0.205)	(0.001)**	(0.193)

4.4.1.2.2.1 Ownership concentration

The impact of ownership concentration on performance measure of ROE is examined with the model (1). The results of the regression analyses are reported in

Table 63 with the coefficients, related t-statistics, overall R-square, and F-test values. Given the results presented in Table 63, test results of the ROE model are similar to those of the ROA model.

Control variable leverage (LEV) is significant at 0.05 level providing similar results with the ROA model. Leverage is inversely related to ROE, indicating that increased debt level triggers a decline in the corporate profits. It is highly likely that this inverse relationship is the result of high interest expenses incurred during the sample period. This finding is in harmony with the Myers's (1984) suggestion that managers have a pecking order in which retained earnings presents the first choice, followed by debt financing then equity. Size is also significant at the 0.01 significance level. These findings indicate that large firms with lower debt levels tend to have better profitability levels.

Table 63 ROE and Ownership Concentration

Figures in the body of the table are coefficient estimates; t-values are reported respectively in parentheses. "***" denotes statistical significance at the 0.05 level, and "*" specifies 0.10 significance level.

<i>Constant</i>	<i>Lev</i>	<i>Size</i>	<i>Lsh3</i>	<i>Other</i>	<i>Cash</i>	<i>R²</i>	<i>F-Test</i>
16.376 (1.11)	-0.320 (-3.56)**	1.528 (1.90)*	-0.132 (-2.04)**			0.078	29.921
6.136 (0.45)	-0.326 (-3.62)**	1.482 (1.82)*		0.097 (1.63)		0.074	28.226
14.785 (0.99)	-0.322 (-3.55)**	1.407 (1.72)*			-0.075 (-1.20)	0.072	27.261

Regression analyses of the ownership concentration models yield significant coefficients for cumulative percentage shares of the largest three shareholders (LSH3) variable. Multivariate OLS regression test results show that ownership concentration is associated with lower performance. This finding is consistent with the ROA models. By considering the overall results we can claim that widely-held large firms with lower debt levels tend to have better accounting performance as

measured with ROE. This can be interpreted that concentrated firms may be investing negative net present value projects. ROE should increase with leverage as long as internal rate of return of projects undertaken are higher than cost of debt.

4.4.1.2.2.2 Ownership mix

The relationships between ownership identity groups and performance measure ROE are investigated with the model (2) and results of the regression analyses are reported in Table 64.

Table 64 ROE and Ownership Mix

Figures in the body of the table are coefficient estimates; t-values are reported respectively in parentheses. "***" denotes statistical significance at the 0.05 level.

<i>Const.</i>	<i>Lev</i>	<i>Size</i>	<i>Cong</i>	<i>Fam</i>	<i>Cfam</i>	<i>Frqn</i>	<i>Cross</i>	<i>Gov</i>	<i>Disp</i>	<i>R²</i>	<i>F-Test</i>
11.867 (0.84)	-0.336 (-3.72)**	1.303 (1.54)	2.129 (0.88)							0.07	27.05
12.868 (0.93)	-0.335 (-3.67)**	1.302 (1.57)		-0.937 (-0.43)						0.07	26.59
11.052 (0.83)	-0.344 (-3.70)**	1.352 (1.65)			1.093 (0.35)					0.07	26.60
13.401 (0.93)	-0.334 (-3.69)**	1.185 (1.37)				4.521 (1.26)				0.07	28.12
11.927 (0.84)	-0.337 (-3.72)**	1.333 (1.58)					0.552 (0.22)			0.07	26.51
8.815 (0.69)	-0.329 (-3.70)**	1.581 (2.12)**						-11.896 (-1.97)**		0.08	31.88
12.332 (0.86)	-0.339 (-3.74)**	1.333 (1.58)							-0.873 (-0.33)	0.07	26.52

When we examine the relationship between ownership mix and accounting based performance variables we find the dominant impact of government ownership (GOV). The results are consistent with the results of the ROA models. On the other hand, we cannot find any significant effect of conglomerate affiliation (CONG), family ownership (FAM) and foreign ownership (FRGN).

Government ownership (GOV) is inversely associated with the accounting-based performance measures. It seems that governance systems of the government-owned or controlled firms do not lead to managerial efficiency. Hence, it is not

surprising to witness lower performance of those firms, given that economic necessities mostly take the second priority after the political expectations.

4.4.1.3 Summary of Accounting Performance Relationships

With the multivariate OLS regression analyses, we test the impact of ownership concentration and ownership mix variables on accounting-based performance measures. In connection with the findings documented in the previous sections, it will not be misleading to conclude that ownership structure is strongly related to accounting-based performance. However, we witness ambiguous findings regarding performance and ownership structure relationship in the literature. Demsetz and Lehn (1985) and Holderness and Sheehan (1988) found the relationship between ownership concentration and accounting profitability to be insignificant. Alternatively, recent studies of Gedajlovic and Shapiro (1998) and Pedersen and Thomsen (1999) identify the impact of ownership structure on performance as significant.

Taken from the leverage (LEV) perspective, we witness significant inverse relationship between leverage and accounting-based performance measures. Increasing leverage levels end up with the lower profitability levels of our sample firms. High nominal interest expenses accrued by the high inflation rates seem to be one of the bases for the lower profitability levels. This finding is consistent with the Myers's (1984) pecking order theory.

Considering the results of ownership concentration variables, we can claim that increase in the ownership concentration leads a decline in the profitability levels of

the sample firms. Negative sign of LSH3 supports this conclusion. This finding is consistent with the findings of Önder (1998).

In order to determine the owner identities that exhibit differences in the profitability level of the firms, model (2) is estimated with the dummy variables of conglomerate affiliation (CONG), family ownership (FAM), group ownership (CFAM), foreign ownership (FRGN), government ownership (GOV), dispersed ownership (DISP), and cross ownership (CROSS). Among those ownership mix variables, we witness government ownership (GOV) and foreign ownership (FRGN) as significant ones.

Foreign ownership (FRGN) has a positive significant relationship with the accounting-based performance measure ROA. This finding indicates that foreign investors either select better performers to invest or revise governance mechanisms of those firms to discipline managers and align the conflicting interests of the main stakeholders. In either case, foreign ownership (FRGN) is associated with the higher return generation through efficient utilization of the corporate resources.

Government ownership (GOV) is the second significant ownership mix variable that affects corporate performance. Unlike foreign ownership (FRGN), government ownership (GOV) has an inverse relationship with both accounting-based performance measures. This fact justifies the ongoing privatization programs. Almost all of the government-owned firms are in the list of privatization programs. Main reason for this inverse relationship can be explained with the existing conflict between economic necessities and political expectations.

4.4.2. Market-Based Performance

It turns out that even accounting-based performance measures provide insightful information; those measures are not adequate to reflect all aspects of corporate performance. When we examine the literature, we encounter contradictory results on the relationship between corporate performance and ownership structure. We seek to investigate the relationship between the performance and ownership structure in Turkey by including two groups of performance measures. Performance measures used so far in this study are all accounting ratios, which may not reflect the market's assessment of a firm.

For that reason, we will also include market-based performance measures into our analyses in order to have a comprehensive performance measurement system. We identify those measures as market to book value (MBV) ratio, price to earnings (P/E) ratio and stock returns (RET).

4.4.2.1 Characteristics of the Market-Based Performance Measures

Market-based performance measures are market to book value (MBV), price to earnings (P/E) ratio and stock returns (RET). It is accepted that those measures, which are proxies for exposure to underlying risk factors are rationally priced in the market (market efficiency assumption). Moreover, as Berk (1995) claims, because of the relationship between price and return, ratios, which include price, are expected to be related to stock returns.

Impact of ownership structure on the market-based performance measures is examined thoroughly in the following sections. These measures, which reflect market assessments, are determined by the expectations on a firm's future

performance potential. As market efficiency theory indicates, market determines firm's stock price by appraising all relevant and ascertainable information including the expectations. Even though, there are imperfections in the market, these variables are still legitimate and unbiased proxies for a firm's performance.

Table 65 Descriptive Statistics of the Market-Based Performance Variables

	<i>Mean</i>	<i>Median</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
P/E	24.93	13.30	32.17	0.35	377.45
MBV	4.84	3.73	6.85	0.26	89.16
RET12	6.92	6.04	9.01	-14.15	96.21

In Table 65 we provide descriptive statistics of the selected market-based performance variables. Only RET12 is reported as a proxy for the return measures used in the analyses.

When the results presented in Table 66 are examined, we witness a slightly increasing trend in both P/E and MBV ratio levels with a mean value of 12% and 11% respectively. This shows us that the nature of the Turkish stock market seems to have minor changes throughout our analysis period.

Table 66 Yearly Mean Values of Market-Based Performance Measures.

	<i>1992</i>	<i>1993</i>	<i>1994</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>	<i>Avg.</i>
MBV	3.455	4.284	6.674	4.264	4.678	5.303	5.180	4.834
Δ MBV		24%	56%	-36%	10%	13%	-2%	11%
P/E	18.184	16.910	23.430	25.882	28.320	28.131	33.655	24.930
Δ P/E		-7%	39%	10%	9%	-1%	20%	12%
RET12	6.847	5.820	7.086	7.463	6.925	7.282	7.025	6.921
Δ RET12		-15%	22%	5%	-7%	5%	-4%	1%

When the Table 66 is examined, it can be seen that stock returns are volatile during the analysis period. These figures also reflect the crisis in stock markets between 1992 and 1998. For example, in 1994, Turkey experienced significant turmoil in financial markets and this unpleasant incident is reflected in all of the market-based performance measures.

4.4.2.2 Ownership Structure and Performance

In connection with the evidence provided in the literature, it is commonly accepted that there is a significant relationship between ownership structure and market-based performance. For example, findings documented by Thomsen and Pedersen (2000) in their recently published article support this argument. However, this relationship has not been investigated thoroughly in the Turkish market. This section is designed to investigate the impacts of ownership structure on market performance of the sample firms.

4.4.2.2.1 Market to Book Value (MBV) Ratio

Market to book value (MBV) ratio is one of the commonly accepted explanatory proxies that have significant positive effect on expected returns. Beaver and Ryan (1993) document that the MBV ratio is a function of current and lagged changes in market value. Fama and French (1992) suggest that one dimension of stock risks is proxied by MBV ratio. This ratio reflects the market's assessments and is an indicator of the relative prospects of the firm. Therefore, Fama and French claim that firms with low MBV ratios (a low stock price relative to book value) have low earnings relative to other firms. In their article, Fama and French (1995) introduce MBV ratio as a corporate distress indicator. They report in their findings that firms with low MBV ratios are among the candidates for being persistently distressed. Conversely, high MBV ratios are associated with sustained strong profitability. Fama and French (1995) also show that MBV ratio is more reliable measure than P/E ratio. In this context, impact of ownership structure on corporate performance is questioned. To examine this proposition, we estimate model (1) and (2) with the market-based performance proxy of MBV.

Table 67 Correlation Analysis of MBV

Figures in the body of the table are coefficient estimates; significance values are reported respectively in parentheses. “***” denotes statistical significance at the 0.05 level.

<i>Size</i>	<i>Lev</i>	<i>Lsh3</i>	<i>Other</i>	<i>Cash</i>	<i>Cong</i>	<i>Frqn</i>	<i>Cross</i>	<i>Fam</i>	<i>Gov</i>	<i>Disp</i>	<i>Cfam</i>
0.092	0.155	0.033	-0.056	0.029	0.090	0.045	0.041	-0.065	0.024	-0.068	0.018
(0.003)**	(0.000)**	(0.285)	(0.065)	(0.347)	(0.003)**	(0.138)	(0.179)	(0.032)**	(0.429)	(0.026)**	(0.553)

Cross-correlation analyses of the MBV ratio with the ownership structure variables are conducted and findings are listed in Table 67. In connection with the results presented in Table 67, both control variables of size and leverage are significantly correlated with the dependent variable MBV. Among the independent variables, conglomerate affiliation (CONG), family ownership (FAM) and dispersed ownership (DISP) are significantly correlated with MBV.

4.4.2.2.1.1 Ownership Concentration

Ownership concentration and performance association is examined with model (1) and findings of the model are presented in Table 68. When the market value measure market-to-book (MBV) ratio is employed as a market-based performance proxy, the model has a slightly lower explanatory power although F-value is significant at 0.01 level. Coefficients of both control variables leverage and size carry positive signs, and both of them are significant at the 0.05 significance level. Increasing leverage leads an increase in the market performance of the sample firms. As Fama and French (1995) claims, increased MBV ratio implies decreasing level of distress with increasing return expectations.

Table 68 MBV and Ownership Concentration.

Figures in the body of the table are coefficient estimates; t-values are reported respectively in parentheses. "***" denotes statistical significance at the 0.05 level.

<i>Constant</i>	<i>Lev</i>	<i>Size</i>	<i>Beta</i>	<i>Lsh3</i>	<i>Other</i>	<i>Cash</i>	<i>R²</i>	<i>F-Test</i>
-12.716 (-2.94)**	0.104 (4.06)**	1.003 (3.70)**	-0.153 (-0.16)	-0.039 (-1.98)**			0.122	25.88
-14.653 (-2.92)**	0.099 (4.08)**	0.961 (3.60)**	-0.193 (-0.20)		0.014 (0.80)		0.114	24.076
-12.504 (-3.02)**	0.103 (3.93)**	0.986 (3.63)**	-0.234 (-0.26)			-0.037 (-1.58)	0.12	25.578

Ownership concentration measure of cumulative percentage shares of the largest three shareholders (LSH3) has a significant impact on market-based performance. It seems that ownership concentration does not yield higher market performance. However, we need to examine other market-based performance measures in order to derive any conclusions.

4.4.2.2.1.2 Ownership Mix

To develop more generalized insights into the effect of ownership structure on performance, we expand the domain of the study into seven ownership identity groups. We adopt a regression approach to investigate the relationships between MBV and ownership identity by applying model (2). Leverage and size, as control variables, are significant and both carry positive signs as consistent with the results of the ownership concentration models. Significant positive relationships of leverage and size with MBV ratio indicate that the market favorably appreciates large firms with higher leverage. Additional control variable BETA, conversely, does not show any significant influence on MBV ratio.

Table 69 MBV and Ownership Mix

“***” denotes statistical significance at the 0.05 level, while “**” refers to 0.10 significance level.

<i>Const.</i>	<i>Lev</i>	<i>Size</i>	<i>Beta</i>	<i>Cong</i>	<i>Fam</i>	<i>Cfam</i>	<i>Frqn</i>	<i>Cross</i>	<i>Gov</i>	<i>Disp</i>	<i>R²</i>	<i>F-Test</i>
-14.113 (-3.05)**	0.096 (4.23)**	0.920 (3.72)**	-0.083 (-0.09)	1.752 (1.91)*							0.125	26.824
-12.876 (-2.98)**	0.099 (4.16)**	0.909 (3.72)**	-0.276 (-0.29)		-1.082 (-1.50)						0.118	24.965
-14.413 (-2.98)**	0.095 (4.19)**	0.943 (3.69)**	-0.016 (-0.02)			0.759 (1.11)					0.115	24.286
-13.548 (-3.05)**	0.097 (4.15)**	0.920 (3.65)**	-0.136 (-0.14)				0.326 (0.27)				0.113	23.869
-13.976 (-2.96)**	0.096 (4.17)**	0.940 (3.68)**	-0.117 (-0.12)					0.586 (0.64)			0.114	24.131
-13.887 (-2.97)**	0.098 (4.11)**	0.946 (3.66)**	-0.100 (-0.10)						-0.636 (-0.54)		0.114	23.949
-13.382 (-2.95)**	0.094 (4.03)**	0.927 (3.68)**	-0.078 (-0.08)							-0.771 (-1.57)	0.114	24.067

When the model (2) is estimated with the inclusion of ownership mix variables individually, we can recognize only one significant ownership identity variable CONG. Significant positive conglomerate affiliation (CONG) provides insightful information regarding the ownership mix and market-based performance relationship. We observe positive contribution of conglomerate affiliation (CONG) to market performance. Since a conglomerate affiliate has a privilege to use the advantages of operating under a distinct conglomerate –namely, resource allocation– it is not surprising to witness the positive impact of conglomerate affiliation (CONG) on corporate performance. Besides, control mechanisms created by the institutionalized conglomerates, in support of the managerial incentive mechanisms oblige managers to be effective and efficient. These arrangements in a conglomerate affiliate’s governance system, unsurprisingly, increase the market performance. Market appreciates the advantage of operating under a distinct conglomerate and rewards the common stock prices of those conglomerate affiliates. Operating as a part of a distinct conglomerate tends to increase the market expectations on the firm’s

earnings patterns. Since an institutionalized governance system of a distinct conglomerate will not let one of its affiliates to be a poor performer, market risk of those firms are influenced by this market's optimistic assessment. Even if a conglomerate affiliate shows danger signs in its performance measures, conglomerate governance mechanisms will not hesitate to take required corrective actions. In the overall evaluation, we can conclude that large conglomerate affiliates tend to have higher market performance.

4.4.2.2 Price to Earnings (P/E) Ratio

Price to earnings (P/E) ratio is selected as a measure of market performance since it has been a popular measure in the literature that helps investors to shape their investment strategies. Given the findings presented in the literature, by Basu (1983), Goodman and Peavey (1986), and Jaffe, Keim, and Westerfield (1989) we have sufficient amount of evidence to conclude that low P/E investment strategies generate abnormal returns. In 1992, Fama and French contribute to those findings by reporting significant positive relation between P/E and abnormal returns. Rationale to low P/E strategies is offered as “Higgledy Piggledy Growth” by Fuller, Huberts, and Levinson (1992). Authors claim that future earnings growth cannot be forecasted at all. With this assumption, they assert that low P/E strategies should provide above normal returns since, prices are only a function of future earnings growth. They justify their reasoning by associating P/E ratio with the distribution of future earnings changes. If one invests in low P/E stocks, he will pay relatively less for the same distribution of future earnings change. Because of the problems that have been

encountered such as near zero earnings and negative earnings figures, observations with negative values are discarded from the analyses.

Considering the result of correlation analysis documented in Table 70, we can list the significantly correlated variables with P/E ratio as size, conglomerate affiliation (CONG), family ownership (FAM), cross ownership (CROSS), and dispersed ownership (DISP).

When we look at the issue from the ownership structure perspective, P/E related recent studies report positive impact of ownership concentration. Among these studies, Zeckhouser and Pound (1990) document that the P/E ratio increases with ownership concentration in easily monitored industries where owners may affect performance. In this section, we will examine the impact of ownership structure on market performance proxy P/E with the utilization of ownership concentration and ownership mix models.

Table 70 Correlation Analysis of P/E

Figures in the body of the table are coefficient estimates; significance values are reported respectively in parentheses. “***” denotes statistical significance at the 0.05 level.

<i>Size</i>	<i>Lev</i>	<i>Lsh3</i>	<i>Other</i>	<i>Cash</i>	<i>Cong</i>	<i>Fam</i>	<i>Cfam</i>	<i>Frqn</i>	<i>Cross</i>	<i>Gov</i>	<i>Disp</i>
0.141	-0.013	-0.034	0.038	0.003	-0.082	0.080	0.005	-0.052	-0.102	-0.043	0.067
(0.001)**	(0.683)	(0.285)	(0.244)	(0.937)	(0.011)**	(0.013)**	(0.872)	(0.106)	(0.002)**	(0.186)	(0.037)**

4.4.2.2.2.1 Ownership Concentration

Model (1) with the inclusion of BETA as an additional control variable is used with P/E as the performance variable to test the relationship between ownership concentration and market performance. In consideration of the regression results presented in Table 71, we conclude that market performance proxy P/E is related to ownership concentration at the significance level of 0.10. With regard to the control variables, both leverage and size are significant with their positive and negative signs

respectively. There is an inverse relationship between size and P/E ratio, as consistent with the literature. It seems that large firms tend to have lower market prices even though they have similar earnings patterns with the smaller ones. Negative sign of the size variable is in harmony with the size anomaly commonly known in the literature.

Among the ownership concentration measures, cumulative percentage share of the largest three shareholders (LSH3) is significant at the 0.10 significance level. The significant ownership concentration measure consistently indicates that concentrated ownership is associated with higher market performance. Even though, we witness an inverse relationship between ownership concentration and accounting-based performance, market performance proxy P/E increases with the concentrated ownership. This can also be due to manipulation of large shareholders, but it needs to be investigated in detail.

Table 71 P/E and Ownership Concentration.

Figures in the body of the table are coefficient estimates; t-values are reported respectively in parentheses. “***” denotes statistical significance at the 0.05 level, while “*” refers to 0.10 significance level.

<i>Constant</i>	<i>Lev</i>	<i>Size</i>	<i>Beta</i>	<i>Lsh3</i>	<i>Other</i>	<i>Cash</i>	<i>R²</i>	<i>F-Test</i>
44.693 (3.00)**	0.194 (2.14)**	-2.572 (-2.11)**	1.393 (0.31)	0.124 (1.67)*			0.027	4.873
53.753 (3.03)**	0.194 (2.22)**	-2.523 (-2.05)**	1.836 (0.39)		-0.092 (-1.05)		0.025	4.507
45.911 (3.16)**	0.204 (2.20)**	-2.412 (-2.00)**	1.614 (0.35)			0.054 (0.59)	0.024	4.291

Positive coefficient of LSH3 indicates that increase in ownership concentration causes an increase in the P/E ratio. Stock prices of concentrated firms tend to be higher when compared to those of dispersed firms, even if they have the same earnings levels.

4.4.2.2.2 Ownership Mix

The relationship between ownership mix and market-based performance proxy P/E ratio is investigated with the model (2) with the inclusion of BETA as an additional control variable. The regression analyses are conducted to detect whether ownership identity groups have any significant differences as reflected in a firm's market performance. Both size and leverage as control variables are significant and their signs are consistent with the ownership concentration model. Smaller firms with higher debt to total assets ratio tend to have higher stock prices.

Relationship between ownership mix variables and market-based performance measure of P/E is examined with the model (2) by including ownership mix variables individually. Taken from this respect, significant ownership mix variables are conglomerate affiliation (CONG), and cross ownership (CROSS) with positive signs, and family ownership (FAM) with a negative sign.

Table 72 P/E and Ownership Mix

Figures in the body of the table are coefficient estimates; t-values are reported respectively in parentheses. An “***” denotes statistical significance at the 0.05 level, while “*” refers to 0.10 significance level.

Const.	Lev	Size	Beta	Cong	Fam	Cfam	Frqn	Cross	Gov	Disp	R ²	F-Test
45.836 (3.03)**	0.199 (2.29)**	-2.380 (-2.05)**	1.736 (0.39)	7.576 (1.98)**							0.033	6.091
51.357 (3.30)**	0.221 (2.54)**	-2.433 (-2.09)**	0.673 (0.15)		-5.902 (-2.12)**						0.03	5.362
46.251 (3.02)**	0.201 (2.26)**	-2.331 (-2.00)**	1.788 (0.39)			1.734 (0.54)					0.018	4.244
48.383 (3.16)**	0.207 (2.35)**	-2.408 (-2.04)**	1.504 (0.33)				1.520 (0.46)				0.023	4.211
43.944 (2.96)**	0.199 (2.31)**	-2.222 (-1.95)*	1.674 (0.37)**					6.496 (1.69)*			0.031	5.538
48.380 (3.10)**	0.205 (2.30)**	-2.384 (-2.02)**	1.301 (0.29)						2.586 (0.41)		0.023	4.229
48.713 (3.09)**	0.194 (2.13)**	-2.359 (-2.01)**	1.668 (0.37)							-2.303 (-0.58)	0.024	4.241

Market prices of the sample conglomerate affiliates are higher than those of the family-owned sample firms.. This finding is also consistent with the results of MBV performance proxy.

Cross ownership (CROSS), which is frequently observed in conglomerate affiliates show similar results of conglomerate affiliation (CONG). Most of the conglomerates utilize cross ownership (CROSS) as a governance mechanism to keep control of their affiliates. This fact is reflected on the relationship between ownership mix and performance. When the results of the multivariate regression analyses are examined, we conclude that firms with complex networks of ownership relationships have lower P/E.

4.4.2.2.3 Stock Returns

We extend the analysis by including stock returns into our study since stock returns are mainly determined by the market on the basis of the investors' assessments and they are good indicator of a firm's market performance. Holl (1977) examines the return on stocks of owner or manager controlled firms. He reports that owner-controlled firms are significantly more profitable than management-controlled firms. When we examine the literature, we find significant positive relationship between insider (managerial) ownership and stock returns. This relationship is explained by the incentive alignment argument in the literature. As a governance mechanism, owners try to align and protect their interests by allowing manager to hold some portion of shares with some restrictions. Stulz (1988), Hermalin and Weisback (1991), Holderness et al. (1999), Hubbard and Palia (1995), and Keasey et al. (1994) are among the authors that conclude in favor of a roof shaped relationship

between ownership structure and corporate performance. This fact indicates that insider ownership is useful to some extent and aligns the interests of the conflicting sides, beyond that point; it decreases performance because of the increased entrenchment incentives of the managers. Holderness and Sheehan (1985) and Barclay and Holderness (1991) examine the effect of ownership structure on abnormal stock returns. These authors document that large shareholders are associated with significant abnormal stock returns. Since short-term stock returns are too volatile to be used as a reliable measure of a firm's performance, long-term returns may well capture that phenomenon. In order to cover the comprehensive effect of ownership structure on corporate performance, several return measures are used. We explore the relationship between ownership structure and stock returns by including return measures of:

- Average monthly stock return in 12 months (RET12)
- Average monthly stock return in 24 months (RET24)
- Abnormal average monthly stock return in a year (ABRET)
- Average cumulative 3-month stock return in a year (RET3)
- Average cumulative 6-month stock return in a year (RET6)

Average monthly stock return in 12 months (RET12) is calculated by taking the average value of the monthly stock returns in a given year. We intend to define a reliable measure of a firm's performance by decreasing volatility with the central tendency measure of mean. We also consider the average of the stock returns in 24 months (RET24). By including RET24 into our return measure basket, we intend to capture the dynamics of the relationship between ownership structure and stock

returns in a moderately longer time horizon. In order to remove market effect from stock returns we also calculated abnormal stock returns (ABRET) by subtracting monthly market returns from the monthly stock returns. Average three and six month cumulative returns (RET3 and RET6) in a year are computed assuming that cumulative returns may better capture the relationship between stock returns and ownership structure. As return measurement periods in successive months overlap, we select only those observations with no overlapping return horizons. Hence, when we work with three-month ahead returns (RET3), we choose the monthly observations in January, April, July, and October of every year in the sample. Similarly, we pick January and July for six-month ahead returns (RET6). We then take the average of the return measures of RET3 and RET6 within a year time frame.

Descriptive statistics of the return measures are reported in Table 73. Note that volatility of both RET12 and RET24 return measures are lower than the others. Stock return and ownership structure relation is examined with models (1) and (2) with the inclusion of market risk of BETA as an additional control variable.

Table 73 Descriptive Statistics of Return Measures

<i>%</i>	<i>Mean</i>	<i>Median</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
<i>RET12</i>	6.964	6.039	9.007	-14.146	96.206
<i>RET24</i>	4.936	4.784	3.968	-14.108	19.340
<i>ABRET</i>	1.180	0.543	7.277	-30.203	90.963
<i>RET3</i>	23.072	18.948	32.160	-38.467	327.133
<i>RET6</i>	60.502	42.817	84.052	-70.633	1106.880

4.4.2.2.3.1 Ownership Concentration

We adopt model (1) with the inclusion of market risk as an additional control variable to explore the effect of a firm's ownership structure on its stock returns. Accordingly, we define five separate stock return measures in order to capture the different dimensions of the phenomenon. Results of the analyses are presented in

Table 74. When we examine the regression results, we encounter size as a significant control variable. Size is negatively related to stock return measures indicating that small firms have higher stock returns. As cited in the literature, this inverse relationship between size and stock returns is known as size anomaly.

As regards to the ownership concentration measures, cumulative percentage shares of the largest three shareholders (LSH3) and cash flow right(s) of the ultimate controlling owner(s) (CASH) variables consistently carry significant positive coefficient values in each model. These results are also supported with the significant negative coefficients of the cumulative percentage shares held by diffused shareholders (OTHER) variable. These findings show that increase in the ownership concentration leads an increase in the stock returns. As listed on Table 49, we observe the concentrated nature of the cash flow right(s) of the ultimate controlling owner(s) with the mean value of 61.2%. We will not be mistaken by claiming that managers tend to be concerned with the interests of the ultimate controlling owner(s) instead of diffused small stockholders. This fact is also intuitively realistic. When we consider the managerial compensation systems, we find that most of the companies use managerial incentive mechanisms to motivate managers to align the interests of the main stakeholders. In the concentrated firms, we find the dominant representation of large shareholders in the board of directors. Since board of directors will determine the level and type of the managerial compensation system, it is likely that managers will be eager to satisfy the expectations of those large shareholders. Naturally, small and unorganized shareholders will be the first to pay the price in this governance system. In sum, we conclude that stock returns are positively related to ownership concentration measures, indicating that increase in

ownership concentration contributes to stock returns. Small concentrated firms tend to have higher stock returns.

Table 74 Stock Returns and Ownership Concentration

Figures in the body of the table are coefficient estimates; t-values are reported respectively in parentheses. Statistical significance level 0.05 is denoted with "***" and 0.10 significance level is marked with "**".

	Constant	Lev	Size	Beta	Lsh3	Other	Cash	R ²	F-test
RET12	18.045 (6.88)**	0.029 (1.95)*	-0.949 (-6.20)**	0.935 (1.20)	0.019 (1.23)			0.037	7.331
	20.428 (7.82)**	0.028 (1.90)*	-0.973 (-6.39)**	1.043 (1.35)		-0.027 (-1.78)*		0.037	7.647
	17.379 (6.68)**	0.026 (1.73)*	-0.965 (-6.44)**	1.027 (1.32)			0.036 (2.31)**	0.039	8.106
RET24	10.577 (6.72)**	0.005 (0.54)	-0.455 (-4.68)**	0.461 (1.21)	0.014 (1.59)			0.036	6.647
	12.114 (7.20)**	0.004 (0.50)	-0.464 (-4.71)	0.541 (1.43)		-0.018 (-1.95)*		0.033	7.069
	10.426 (6.69)**	0.004 (0.48)	-0.446 (-4.62)**	0.503 (1.32)			0.015 (1.67)*	0.036	6.673
ABRET	4.411 (1.99)**	0.015 (1.28)	-0.217 (-1.72)*	-0.410 (-0.65)	0.006 (0.56)			0.007	1.357
	5.282 (2.44)**	0.015 (1.26)	-0.228 (-1.80)*	-0.369 (-0.59)		-0.010 (-0.88)		0.007	1.442
	3.757 (1.72)*	0.012 (1.02)	-0.241 (-1.94)*	-0.343 (-0.55)			0.024 (2.19)**	0.011	2.161
RET3	61.023 (6.27)**	0.098 (1.81)*	-3.648 (-6.41)**	6.514 (2.51)**	0.099 (1.73)*			0.044	9.133
	72.278 (7.81)**	0.095 (1.77)*	-3.729 (-6.57)**	6.988 (2.71)**		-0.127 (-2.23)**		0.046	9.519
	58.787 (5.99)**	0.086 (1.61)*	-3.663 (-6.47)**	6.836 (2.64)**			0.147 (2.53)**	0.048	9.943
RET6	72.736 (2.75)**	0.333 (2.38)**	-3.154 (-2.13)**	3.931 (0.60)	0.255 (1.82)*			0.013	2.705
	96.419 (3.86)**	0.334 (2.41)**	-3.198 (-2.17)**	4.815 (0.75)		-0.249 (-1.81)*		0.013	2.639
	67.391 (2.53)**	0.304 (2.19)**	-3.178 (-2.16)**	4.725 (0.73)			0.367 (2.60)**	0.016	3.312

4.4.2.2.3.2 Ownership Mix

It is hypothesized that ownership identity has important implications on the corporate governance structures, which eventually influence corporate performance. To test the relationship between ownership mix and performance, multivariate OLS regression models (2) will be used with the selection of stock returns as a market performance proxy. Market risk measure of BETA is also incorporated into the

model in order to control all relevant dominant factors for analyzing the effects of ownership mix on stock returns.

Several measures of stock returns will be included into our analyses to capture the various nature of the proxy. Each stock return measure is included individually into the model and results are reported in separate tables. In the Table 75, the results of the first stock return measure of RET12 is reported. Regression results show that group ownership (CFAM) and government ownership (GOV) variables are significantly and positively related to RET12. This fact implies that stocks of the government-owned firms in the sample are performing comparatively better than the others. This incident can be justified by either higher expectations of market on government-owned firms because of the ongoing privatization programs. Interestingly, firms which are controlled by either a conglomerate or a family have relatively lower stock returns. Both control variables of leverage and size are significant and carry positive and negative coefficients respectively. When we consider the results of the OLS multivariate regression tests, we can assert that small government-owned firms with higher debt levels tend to have higher stock returns as measured with RET12.

In the second run, we replace RET12 (average monthly stock returns in 12 months) with RET24 (average monthly stock returns in 24 months) as stock return measure. We expect to see the impact of ownership mix on stock returns in relatively longer periods. Considering the regression results of RET24 presented in Table 76, we observe family ownership (FAM), group ownership (CFAM), and government ownership (GOV) ownership mix variables as the significant ones.

Table 75 Stock Returns (RET12) and Ownership Mix

Figures in the body of the table are coefficient estimates; t-values are reported respectively in parentheses. Statistical significance level 0.05 is denoted with “***” and 0.10 significance level is marked with “**”.

<i>Const.</i>	<i>Lev</i>	<i>Size</i>	<i>Beta</i>	<i>Cong</i>	<i>Fam</i>	<i>Cfam</i>	<i>Frgn</i>	<i>Cross</i>	<i>Gov</i>	<i>Disp</i>	<i>R²</i>	<i>F-test</i>
18.673 (7.21)**	0.032 (2.11)**	-0.913 (-5.85)**	0.927 (1.19)	-0.456 (-0.91)							0.034	7.148
19.117 (7.38)**	0.033 (2.24)**	-0.931 (-5.98)**	0.817 (1.03)		-0.786 (-1.55)						0.036	7.407
20.067 (7.36)**	0.033 (2.27)**	-0.942 (-6.09)**	0.704 (0.86)			-1.512 (-2.10)**					0.039	8.189
18.713 (6.97)**	0.032 (2.14)**	-0.932 (-5.61)**	0.938 (1.20)				0.452 (0.52)				0.034	7.104
18.929 (7.24)**	0.032 (2.13)**	-0.927 (-5.90)**	0.924 (1.19)					-0.671 (-1.34)			0.035	7.286
19.634 (7.97)**	0.029 (1.99)**	-0.984 (-6.76)**	0.738 (0.93)						3.235 (3.35)**		0.044	9.239
18.769 (7.20)**	0.029 (1.92)**	-0.919 (-5.88)**	0.981 (1.25)							-0.664 (-0.90)	0.034	7.144

Average monthly stock returns (RET24) of the family-owned and group-owned sample firms are significantly lower than those of other firms. It seems that market does not appreciate the potentials of the family and group owned firms. It is thought that market does not have confidence on those firms, since they are controlled and governed by mutual interest groups, namely families. It is highly likely that there will be interest conflicts between those interest groups and minority shareholders. When we consider the governance mechanisms of family owned firms, we do not observe institutionalization but intense influence of families. Since families are highly involved in even daily decision-making, it seems that, market is suspicious about the protection of investors' rights in those firms. Obviously, this fact reveals negative coefficient for the family ownership (FAM) variable in our ownership mix model. This finding supports our belief that the real agency conflict in Turkey is between majority and minority shareholders not managers and shareholders.

Table 76 Stock Returns (RET24) and Ownership Mix

Figures in the body of the table are coefficient estimates; t-values are reported respectively in parentheses. Statistical significance level 0.05 is denoted with "***" and 0.10 significance level is marked with "**".

<i>Const.</i>	<i>Lev</i>	<i>Size</i>	<i>Beta</i>	<i>Cong</i>	<i>Fam</i>	<i>Cfam</i>	<i>Frqn</i>	<i>Cross</i>	<i>Gov</i>	<i>Disp</i>	<i>R²</i>	<i>F-Test</i>
10.788 (6.88)**	0.006 (0.77)	-0.427 (-4.32)**	0.478 (1.25)	0.352 (1.19)							0.033	6.127
11.637 (7.53)**	0.008 (1.00)	-0.449 (-4.71)**	0.347 (0.89)		-0.861 (-2.79)**						0.043	8.058
11.60 (7.37)**	0.01 (0.92)	-0.44 (-4.55)**	0.36 (0.90)			-0.66 (-1.93)*					0.037	6.862
10.935 (6.93)**	0.006 (0.77)	-0.430 (-4.29)**	0.474 (1.23)				0.137 (0.36)				0.031	5.804
10.787 (6.88)**	0.006 (0.75)	-0.421 (-4.27)**	0.470 (1.23)					0.168 (0.58)			0.032	5.848
11.641 (7.62)**	0.004 (0.58)	-0.469 (-5.01)**	0.327 (0.84)						1.727 (3.12)**		0.047	8.854
10.912 (6.94)**	0.006 (0.70)	-0.425 (-4.31)**	0.479 (1.23)							-0.119 (-0.30)	0.031	5.788

Significant government ownership (GOV) coefficient supports the findings of the RET12 model. Government-owned firms have higher stock returns as measured with RET24. It will not be erroneous to accept the positive impact of government ownership (GOV) on stock returns.

The impact of ownership mix on stock returns is also examined by considering the abnormal stock returns. Abnormal stock return (ABRET) is calculated as the average of the difference between monthly stock return and market return in a year. With this approach, it is intended to examine relationship between stock returns and ownership mix variables by removing the market influence. ABRET is regressed with the ownership mix variables separately by controlling size, leverage, and market risk. Results are presented in Table 77. Entire performance of the ABRET regression models is the lowest among the analyses conducted so far. We find that government ownership (GOV) and dispersed ownership (DISP) are significantly related to abnormal returns (ABRET). This finding is consistent with the findings of both

RET12 and RET24. Government ownership (GOV) has a dominant positive impact on all stock return measures. Furthermore, we observe the negative impact of dispersed ownership (DISP). Firms without any dominant owners have significantly lower abnormal returns compared to the other firms.

Table 77 Stock Returns (ABRET) and Ownership Mix

Figures in the body of the table are coefficient estimates; t-values are reported respectively in parentheses. Statistical significance level 0.05 is denoted with "***" and 0.10 significance level is marked with "*".

<i>Const.</i>	<i>Lev</i>	<i>Size</i>	<i>Beta</i>	<i>Cong</i>	<i>Fam</i>	<i>Cfam</i>	<i>Frqn</i>	<i>Cross</i>	<i>Gov</i>	<i>Disp</i>	<i>R²</i>	<i>F-Test</i>
4.753 (2.17)**	0.016 (1.34)	-0.203 (-1.59)	-0.419 (-0.67)	-0.620 (-1.44)							0.008	1.668
4.744 (2.12)**	0.017 (1.41)	-0.210 (-1.63)*	-0.444 (-0.70)		-0.217 (-0.49)						0.007	1.347
5.545 (2.29)**	0.023 (1.49)	-0.222 (-1.71)*	-0.562 (-0.86)			-0.974 (-1.54)					0.01	2.08
4.665 (2.05)**	0.016 (1.37)	-0.214 (-1.57)	-0.409 (-0.65)				0.207 (0.26)				0.007	1.326
4.938 (2.22)**	0.016 (1.38)	-0.216 (-1.67)*	-0.419 (-0.67)					-0.636 (-1.50)			0.008	1.679
5.457 (2.59)**	0.014 (1.19)	-0.261 (-2.14)**	-0.565 (-0.89)						2.573 (3.48)**		0.017	3.565
4.932 (2.25)**	0.013 (1.08)	-0.215 (-1.67)*	-0.338 (-0.53)							-0.945 (-1.66)*	0.008	1.699

In addition to stock return measures discussed above, we also consider the average cumulative return of each stock in a three-month (RET3) and six-month (RET6) period in a year respectively.

Each stock return measure is regressed on ownership mix variables in model (2). According to the results presented in the Table 78, we witness the dominance of the government ownership (GOV) as consistent with the other return measures. Firms under the control of a family or any group have relatively lower returns than the other firms. This finding is also supported with the findings of the other return measures.

Table 78 Cumulative Stock Returns (RET3 and RET6) and Ownership Mix
Figures in the body of the table are coefficient estimates; t-values are reported respectively in parentheses. Statistical significance level 0.05 is denoted with “***” and 0.10 significance level is marked with “**”.

Const.	Lev	Size	Beta	Cong	Fam	Cfam	Frqn	Cross	Gov	Disp	R ²	F-Test
PANEL A: $RET3_{it} = \beta_0 + \beta_1 LEV_{it} + \beta_2 SIZE_{it} + \beta_3 BETA_{it} + \beta_4 MIX_{it} + \varepsilon_{it}$												
63.645 (6.71)**	0.112 (2.08)**	-3.464 (-5.78)**	6.442 (2.46)**	0.234 (0.13)							0.041	8.419
66.350 (7.04)**	0.118 (2.21)**	-3.538 (-5.97)**	5.971 (2.25)**		-3.616 (-1.96)*						0.044	9.086
67.953 (6.86)**	0.122 (2.20)**	-3.531 (-5.96)**	5.852 (2.16)**			-4.233 (-1.69)*					0.044	9.182
64.565 (6.63)**	0.113 (2.10)**	-3.554 (-5.60)**	6.525 (2.47)**				2.185 (0.70)				0.041	8.565
64.377 (6.82)**	0.112 (2.08)**	-3.484 (-5.81)**	6.430 (2.46)**					-1.184 (-0.66)			0.041	8.484
67.297 (7.39)**	0.103 (1.93)*	-3.689 (-6.60)**	5.809 (2.17)**						10.487 (2.61)**		0.049	10.354
64.545 (6.82)**	0.105 (1.90)*	-3.484 (-5.84)**	6.624 (2.51)**							-2.292 (-0.89)	0.041	8.538
PANEL B: $RET6_{it} = \beta_0 + \beta_1 LEV_{it} + \beta_2 SIZE_{it} + \beta_3 BETA_{it} + \beta_4 MIX_{it} + \varepsilon_{it}$												
79.526 (3.05)**	0.367 (2.60)**	-2.680 (-1.74)*	3.746 (0.57)	0.439 (0.08)							0.010	2.109
85.997 (3.29)**	0.382 (2.71)**	-2.856 (-1.85)*	2.613 (0.40)		-8.697 (-1.79)*						0.013	2.595
89.792 (3.13)**	0.382 (2.71)**	-2.831 (-1.81)*	2.344 (0.34)			-10.121 (-1.45)					0.013	2.659
80.608 (3.04)**	0.368 (2.63)**	-2.779 (-1.69)*	3.836 (0.57)				2.456 (0.24)				0.011	2.131
83.007 (3.22)**	0.370 (2.62)**	-2.779 (-1.79)*	3.691 (0.56)					-5.964 (-1.31)			0.012	2.323
88.637 (3.47)**	0.343 (2.44)**	-3.243 (-2.18)**	2.156 (0.32)						26.324 (2.64)**		0.018	3.644
81.436 (3.15)**	0.352 (2.41)**	-2.722 (-1.77)*	4.135 (0.62)							-4.911 (-0.78)	0.011	2.178

4.4.2.2.3.3 Summary on Stock Return Effects

The relationship between ownership structure and stock return performance is examined in this section. Considering the results of the multivariate OLS regression analyses with the inclusion of ownership structure variables separately, we can conclude that ownership structure of the sample firms is significantly related to stock returns. Stock returns are defined with five different measures in order to capture the different natures of the stock return dynamics. In the ownership concentration models, all ownership concentration variables are found as statistically significant. The results of the OLS regression analyses indicate the same conclusion that

ownership concentration is related to higher stock returns. The positive impact of the cumulative percentage shares of the largest three shareholders (LSH3) and cash flow right(s) of the ultimate controlling owner(s) (CASH) can be justified by the interest protection efforts of the large shareholders who have considerable privileges and influence on corporate governance systems. It is found that, neither the voting nor cash flow rights of the block holders do affect stock returns. As Shleifer and Vishny (1986) point out, with their influence on management, large shareholders may impose governance mechanisms which motivate managers to follow their own interests not those of dispersed shareholders. This finding also implies that managers tend to violate their legal duty of loyalty to shareholders, especially small shareholders who are anonymous and diffused.

When the results of the ownership mix models are examined, we observe the robust impact of government ownership (GOV). It is found that government-owned firms have consistently and statistically significantly higher stock returns when the results of all stock return measures are considered. Shleifer and Vishny (1997) define government ownership (GOV) as an example of concentrated control without any cash flow rights. From this point of view, the inefficiency of the government-owned firms is not that surprising. Even though there are inefficiencies in the government-owned firm, surprisingly we witness high stock returns. The positive influence of government ownership (GOV) can be justified either by the higher expectations caused by ongoing privatization programs, or high market risk of the government-owned firms in the sample.

In addition to those independent variables, control variable leverage (LEV) provides consistent positive effect on stock returns while we observe negative impact

of size variable. It will not be misleading to conclude that concentrated smaller firms with higher debt levels tend to have higher market performance akin to government-owned firms.

4.4.2.3 Summary of Market Performance Effects

In this section, we investigated the impact of ownership structure on market performance. It will not be misleading to conclude that ownership structure has a significant impact on market performance.

When the results of ownership concentration models are examined, we witness conflicting findings. All market based performance variables except MBV ratio provide consistent results. Those variables show positive relationship between ownership concentration and market-based performance. However, significant negative coefficient of cumulative percentage shares of the largest three shareholders (LSH3) in the MBV model leads us to define MBV anomaly. One possible cause of the MBV anomaly might be the higher book values of those concentrated sample firms. Beyond that, six out of seven variables indicate positive relationship between ownership concentration and market-based performance. Among those variables P/E, RET3, and RET6 carry significant positive coefficients. Consistently, insignificant RET12, RET24, and ABRET variables have also positive coefficients. The positive relationship between ownership concentration and market-based performance is strongly supported by both the significant positive coefficients of CASH and the significant negative coefficients of OTHER.

The positive effect of cash flow right(s) of the ultimate controlling owner(s) (CASH) is supported with the negative impact of percentage share of diffused

shareholders (OTHER). These results indicate that concentrated ownership is positively related to high market performance. Widely held firms yield relatively lower market performance. We claim that large owners contribute to market performance of the concentrated firms in the sample. Even though there is ambiguity in the literature, we witness beneficiary role of block holders in Istanbul Stock Exchange.

The findings of the ownership mix models reveal the dominant positive impact of government ownership (GOV) on all market-based performance measures. Although, we observe lower accounting performance in government-owned firms as consistent with the literature, we detect positive impact on market performance. It is thought that this is caused by the ongoing privatization programs. All government-owned firms in our sample are subject to privatization programs. Expectations of the market with respect to the timing and method of privatization may play a role in the valuation of those companies.

We also observe the advantages of being a conglomerate affiliate as well as the disadvantages of family ownership which are reflected in the models' coefficients. Since conglomerates bring certain advantages in efficient allocation of resources within the group, market rewards the common stocks of conglomerate affiliates. Conversely, family-owned firms may be open to family power abuse at the expense of small shareholders, and this seems to deriving lower market performance.

4.4.3. Concluding Remarks on Performance and Ownership Structure

We first investigated the impact of ownership structure on a firm's performance. Basically, two groups of variables are employed to measure

performance: accounting and market based. Accounting-based variables of performance measure are return on equity (*ROE*) and return on total assets (*ROA*). Price to earnings ratio (*P/E*), market to book value (*MBV*) and stock returns are the market-based variables of performance.

In the literature, we witness variety of proxies used to measure ownership structure phenomenon. We include all those proxies into two main groups: ownership concentration and ownership mix variables. Ownership concentration (*CON*) is defined with three related measures: (1) cumulative percentage shares of the largest three shareholders (*LSH3*), (2) cumulative percentage of shares held by the stockholders, who are anonymous, diffused and relatively less powerful in the one-share-one-vote system and those with shares less than 1% (*OTHER*), and (3) cash flow right(s) of the ultimate controlling owner(s) (*CASH*).

The impact of ownership mix on firm performance is examined with the inclusion of ownership mix variables of foreign ownership (*FRGN*), government ownership (*GOV*), cross ownership (*CROSS*), dispersed ownership (*DISP*), family ownership (*FAM*), group ownership (*CFAM*), and affiliation to a conglomerate (*CONG*). In the literature, there is evidence on the role played by institutional investors in monitoring corporate decisions, thereby affecting performance. For example, Smith (1996) finds institutional investors in the US, with or without seats on the board, monitor companies so as to improve their performance. Similarly, Gorton and Schmid (1996) provide evidence on stronger operating results by German corporations owned by banks.

We find out significant impact of both ownership concentration and ownership mix on a firm's performance. Among the ownership concentration variables

percentage share of diffused shareholders (OTHER) with a negative sign and cumulative shares held by the largest three shareholders (LSH3) and cash flow right(s) of the ultimate controlling owner(s) (CASH) with positive signs are robustly significant in most of the ownership concentration models. Specifically, as the concentration in ownership increases, we experience lower accounting-based performance, and higher market-based performance. This might be caused by the less window dressing done by the concentrated firms. This is consistent with the findings reported in other emerging markets such as China (Xu and Wang, 1997) and Czech Republic (Claessens, 1997).

In addition to the influencing power of shareholders, identity of the owners is considered for the categorization of ownership structure. Noticeably, each ownership identity class will have common goals and interests. These common goals and interests will generate the same type of incentive mechanisms which will guide them to act in some certain formats of actions. Two types of institutional investors with a potential for monitoring stand out in large Turkish corporations. They are the foreign investors and the government. Foreign ownership is usually the result of direct investment in a joint venture. Portfolio investments by foreign investors are hard to keep track of unless their share exceeds 10%. Even then, foreign shareholders do not get involved in monitoring corporate decisions. On the government side, 7.6% of our sample is owned by the government. Almost all of those government-owned firms are subject to privatization program. Those with less than 50% government ownership have already been privatized. Others have offered shares to the public, but

the government still controls the management. However, they, too, are targeted for further privatization by either public offering or private placement of their shares.

When the effects of ownership mix variables are considered, we observe the impact of conglomerate affiliation (CONG), family ownership (FAM), foreign ownership (FRGN), and government ownership (GOV) in Istanbul Stock Exchange.

While firms with foreign ownership display better accounting performance, government-owned firms tend to have higher market performance with lower accounting performance. On the other hand, family-owned firms seem to have relatively lower market performance compared to conglomerate affiliates. Beneficial contributions of conglomerates are witnessed as reflected in higher market performance indicators. This implies that distinct conglomerates in Turkey create their own governance systems that reward managerial effectiveness reflected in corporate profitability levels. On the other hand, lower market performance of those family owned or controlled firms reflects unfavorable impact of family ownership (FAM). Even though government owned or controlled firms experience lower accounting performance, those firms consistently have higher market performance. This may be caused by the high expectations on the ongoing privatization program.

4.5. OWNERSHIP STRUCTURE AND RISK

4.5.1. Introduction

The relationship between ownership structure and performance is examined in the previous sections. Since performance and risk are twin brothers, in this part of the chapter, we will examine whether the concentration of ownership and ownership

mix have any impact on the risk taking behavior of the Turkish non-financial companies listed on Istanbul Stock Exchange.

The owners of the firm have a call option on the firm's assets with a strike price equal to the value of the firm's liabilities. Option pricing comparative statistics demonstrates that the value of the call option is greater for more risky firms. (Downs et al., 1999) Many economic provisions that involve problems of risk sharing and incentives may be described in terms of the principal and agent relationship. Agency Theory is defined by Eisenhardt (1989) as its relationships that mirror the basic agency structure of a principal and its agent that are both engaged in cooperative behavior, but have different goals and differing attitudes toward risk. Problem domain of the agency theory lies in the relationships in which the principal and agent have partly differing goals and risk preferences (e.g., compensation, regulation, leadership, impression, management, whistle-blowing, vertical integration, transfer pricing).

Managers and owners have intrinsically different risk preferences, because of the contradictory diversification opportunities of the risk endured by each side. As Holl (1975) states, in the neoclassical theory, the owner (*risk bearer*) and the manager (*risk taker*) is the same person. However, after the separation of ownership and control of the firm in the 19th century, we begin to discuss the agency conflict, which is mainly caused by different incentive systems of the stakeholders. Pike et al. (1986) explain this confrontation with the justification that managers' increasing concern on their own welfare rather than that of their shareholders' lead them to adopt *low-risk-survival* strategies and satisfying decision behavior. Shareholders have an option of reducing the risk by diversifying their investments. Managers are

risk averse, because they have more to lose from failure, and unlike shareholders they cannot diversify their risk across a range of investments.

When the literature beginning from the publication of Berle and Means' *The Modern Corporation and Private Property* (1932) is examined, all stakeholders concentrated their effort to find a way to decrease the agency conflict and align the conflicting interests of the main stakeholders. With this motivation, stakeholders are mainly concerned with the corporate governance systems in order to find the best governance mechanisms that minimize likely agency conflicts. Reflections of "good" governance are studied by Felton et al. (1996) and concluded that good governance will reduce risk. However, the definition of "good" governance system varies from corporation to corporation, and country to country. There are some guidelines but there is not a single pill that cures all illnesses.

On the other hand, debt is defined as a governance structure that works out of rules and is well suited to projects where the assets are highly redeployable. Equity, on the other hand, is another governance structure that allows discretion and is used for projects where assets are less redeployable. Asset redeployability is the one of the main drivers of the project risk, since redeployability level determines flexibility of the investment.

It is hypothesized in this study that ownership structure plays an important role in determining the level of risk taking by the corporation. Owners and managers generally have differing risk preferences. Agency theory predicts that managers, who have invested their non-diversifiable human capital in the firm, are going to pass up risky projects that are desirable from the perspective of a diversified stockholder. Owners tend to take relatively higher risks than managers. For example, Saunders et

al. (1990) state that owner controlled banks exhibit higher risk taking behavior than manager controlled banks. On the other hand, viewing the common stock of a firm as a call option, stockholders have the incentive to take higher risks at the expense of creditors if the latter cannot monitor shareholders. Downs et al. (1999) examined the managerial ownership and risk taking relation and concluded that there is a significant positive relation between managerial ownership and risk. By giving managers an ownership stake, risk preferences of managers can be altered in order to align the conflicting interests of managers and owners.

4.5.2. Risk and Ownership Concentration

We investigate whether ownership concentration is related to risk-taking behavior of our sample companies. We estimate model (3) with standard deviation of monthly returns (*STDEV*) and market model beta (*BETA*) as dependent variables and the same set of explanatory variables. To calculate *STDEV* and *BETA*, we employ monthly returns over the three-year period prior to the time period in which other measurements are taken.

Results of the multivariate OLS regressions, as summarized in Table 79, indicate that risk models with *BETA* and *STDEV* as the capital market risk and total market risk measures are significantly related to ownership concentration measures. As regards to R-square and F-test values, we witness slightly better model estimates than the previous models including performance variables. According to the results, market risk, and total risk measures are significantly related to ownership concentration measures but in an opposite direction. While *LSH3* lacks significance, percentage of shares held by diffused shareholders (*OTHER*) carries a positive sign in

the market risk model. This is in sharp contrast with the models where *STDEV* is the dependent variable. Here, percentage of shares owned by largest three shareholders, *LSH3*, is positively related to total risk whereas coefficient for *OTHER* is negative and significant. Hence, we observe that firms with concentrated ownership have higher total risk and lower market risk than companies with diffused ownership. If we bear in mind that firms with diffused ownership are usually run by professional managers with little or no interest in the firm, lower total risk can be explained in terms of risk-averse managers who cannot diversify their human capital. Moreover, presence of large shareholders is expected to increase the incentive to take higher risk by those shareholders at the expense of creditors. Significant positive coefficient for ownership concentration (*LSH3*) is consistent with this argument as well. It is also interesting to note that both control variables *SIZE* and *LEV* have expected signs in the *STDEV* models. Larger firms have less total risk and higher leverage. *BETA* models, however, have counterintuitive signs, especially for leverage.

Table 79 Risk and Ownership Concentration

Figures in the body of the table are coefficient estimates; t-values are reported respectively in parentheses. Statistical significance level 0.05 is denoted with "***" and 0.10 significance level is marked with "**".

	<i>Constant</i>	<i>Lev</i>	<i>Size</i>	<i>Lsh3</i>	<i>Other</i>	<i>Cash</i>	<i>R</i> ²	<i>F-Test</i>
BETA	0.231 (1.28)	-0.001 (-1.65)*	0.050 (4.42)**	-0.001 (-0.12)			0.047	13.423
	0.074 (0.36)	-0.001 (-1.33)	0.054 (4.80)**		0.002 (2.12)**		0.056	16.095
	0.275 (1.49)	-0.001 (-1.41)	0.052 (4.68)**			-0.001 (-1.36)	0.051	14.527
STDEV	0.390 (10.49)**	0.001 (2.99)**	-0.012 (-5.59)**	0.001 (2.13)**			0.088	29.193
	0.438 (11.36)**	0.001 (3.02)**	-0.012 (-5.63)**		-0.001 (-2.37)**		0.09	29.719
	0.392 (10.59)**	0.001 (3.01)**	-0.012 (-5.39)**			0.001 (1.58)	0.084	27.488

4.5.3. Risk and Ownership Mix

Finally, we consider the role of ownership identity as it relates to risk taking. It is hypothesized that different ownership groups with their unique incentive mechanisms and preferences, should have different risk attitudes. For that purpose, we estimate model (4) that incorporates all ownership mix dummies sequentially.

As before, *RISK* in the above model is either standard deviation (*STDEV*) of three-year monthly returns of the common stock of firm *i*, or beta coefficient (*BETA*) of the stock estimated by the market model, considering three-year monthly stock returns. Explanatory variables are the same as before.

Results of the multivariate OLS regression analyses are presented in Table 80. As with models involving ownership mix, family ownership (FAM), group ownership (CFAM), government ownership (GOV), and dispersed ownership (DISP) variables have significant coefficients in the capital market risk model.

Both family ownership (FAM), and being part of a group (CFAM) variables are negatively related to market and total risk. These results indicate that family ownership (FAM) or operating as a part of a group (CFAM) decreases market risk. Family-owned firm is either managed by a family member or a manager who has close ties with the family. This causes an alignment in the risk preferences of managers and owners, leading to a decrease in a firm's market risk. Firms that are not operating under any group are considered as relatively more risky firms. This makes sense, because those firms do not have any chance of using corporate resources as well as advantage of vertical integration possibilities. These findings are consistent with the performance relationships.

Table 80 Risk and Ownership Mix

Figures in the body of the table are coefficient estimates; t-values are reported respectively in parentheses. Statistical significance level 0.05 is denoted with "***" and 0.10 significance level is marked with "**".

Const.	Lev	Size	Cong	Fam	Cfam	Frqn	Cross	Gov	Disp	R ²	F-Test
PANEL A: $BETA_{it} = \beta_0 + \beta_1 LEV_{it} + \beta_2 SIZE_{it} + \beta_3 MIX_{it} + \varepsilon_{it}$											
0.229 (1.26)	-0.001 (-1.71)*	0.050 (4.58)**	-0.007 (-0.19)							0.048	13.435
0.300 (1.67)*	-0.001 (-1.53)	0.047 (4.43)**		-0.104 (-2.50)**						0.062	17.801
0.352 (2.03)**	0.001 (-1.51)	0.051 (4.54)**			-0.132 (-3.28)**					0.067	19.367
0.220 (1.20)	-0.002 (-1.72)*	0.051 (4.53)**				-0.018 (-0.38)				0.048	13.488
0.232 (1.26)	-0.001 (-1.709)*	0.050 (4.55)**					-0.008 (-0.18)			0.048	13.435
0.269 (1.53)	-0.002 (-1.84)*	0.047 (4.39)**						0.125 (1.79)*		0.055	15.531
0.179 (0.98)	-0.001 (-1.26)	0.051 (4.66)**							0.126 (2.51)**	0.057	16.234
PANEL B: $STDEV_{it} = \beta_0 + \beta_1 LEV_{it} + \beta_2 SIZE_{it} + \beta_3 MIX_{it} + \varepsilon_{it}$											
0.407 (11.03)**	0.001 (3.39)**	-0.011 (-5.12)**	-0.012 (-1.60)							0.082	26.868
0.406 (11.09)**	0.001 (3.45)**	-0.011 (-5.22)**		-0.002 (-0.28)						0.077	25.312
0.421 (11.49)**	0.001 (3.62)**	-0.012 (-5.44)**			-0.022 (-2.08)**					0.085	28.073
0.402 (10.91)**	0.001 (3.41)**	-0.011 (-5.05)**				-0.004 (-0.48)				0.078	25.391
0.409 (11.09)**	0.001 (3.43)**	-0.011 (-5.23)**					-0.011 (-1.55)			0.081	26.668
0.422 (12.19)**	0.001 (3.31)**	-0.013 (-6.23)**						0.052 (4.65)**		0.104	34.948
0.404 (10.85)**	0.001 (3.35)**	-0.011 (-5.12)**							-0.001 (-0.06)	0.077	25.261

Since government ownership (GOV) is positively related to market risk *BETA*, government-controlled firms are considered as relatively high-risky firms in the market. This finding is consistent with the relatively higher market-based performance of the government-owned firms in the sample. Hence, the profile of firms with government held shares can be described as large enterprises with high risk and high P/E ratio. Drawbacks of government ownership as a corporate governance system are well known in the literature. They would help explain why these companies have lower accounting based performance measures. Yet, high risk despite their large size deserves further explanation. In our opinion, the ambiguities

as to the timing and method of privatization of government shares in those firms add to the return variability. It is not uncommon to read or hear about conflicting news on if or when a government-owned company is going to be privatized. Method of privatization is also a subject of market gossip. It makes a huge difference whether a large company is going to be sold by a public offering of equity or privately placing its majority shares as a block sale. Amidst all the uncertainties, fluctuation in these shares is not at all surprising.

Firms without any distinct ultimate owners (DISP) are mainly managed by professional managers. It is not uncommon to encounter agency conflicts in the firms with dispersed ownership. This argument is supported with the significant positive relation between dispersed ownership (DISP) and market risk BETA. Dispersed-firms are rated in the market as relatively high risky firms. This fact is also implicitly indicates the importance of the regulatory role of large shareholders. Since there is no single controlling or governing authority in those widely held firms, it is not surprising to witness the disadvantageous implications of the likely agency conflicts between managers and shareholders.

4.5.4. Concluding Remarks on Risk and Ownership Structure

Owners and managers generally have differing risk preferences. Agency theory predicts that managers, who have invested their non-diversifiable human capital in the firm, are going to pass up risky projects that are desirable from the perspective of a diversified stockholder. To the extent that they can diversify, owners tend to take relatively higher risks than managers. It is expected to observe different risk preferences between owner-controlled and manager-controlled firms. On the

other hand, viewing the common stock of a firm as a call option, stockholders have the incentive to take higher risks at the expense of creditors if the latter cannot monitor shareholders.

When we examine the relationship between ownership structure and risk-taking behavior of the sample firms, we find sufficient evidence to conclude that ownership structure has a significant impact on risk-taking behavior. Consistently, whereas cumulative share owned by largest three shareholders, *LSH3*, is positively related to total risk, *OTHER* carries negative coefficient. Therefore, we witness that widely-held firms have relatively higher market risk compared to concentrated companies. On the other hand, concentrated firms have higher total risk than widely held firms. If we recall that diffusely owned firms are mostly run by professional managers without any major stake in the firm, lower total risk can be explained in terms of risk-averse managers who cannot diversify their human capital. Besides, presence of large shareholders is expected to increase the incentive to take higher risk by those shareholders at the expense of creditors.

Diverse governance systems are mainly determined by different owner identity groups. Since each owner identity group has its own homogenous expectations and interests, owners will create mechanisms, which make up a governance system to protect their interests. Obviously, it is expected that this setup will be reflected in risk-taking behaviors.

We observe lower risk in firms with family ownership (FAM), supposedly initiated by an achievable alignment with the risk preferences of managers and owners. It is not surprising to observe risk alignment, since family-owned firm is either managed by a family member or a manager who has close ties with the family.

Government ownership (GOV) is positively related to market risk BETA. This finding is consistent with the positive impact of government ownership (GOV) on stock return measures. Government-owned firms are rated as risky firms in the market. It is thought that the ambiguities as to the timing and method of privatization of government shares in those firms increase return variability. Those evidences convince us to conclude that ownership structure has a significant impact on risk-taking behavior of Turkish firms.

4.6. CONCLUSIONS

In this chapter, we investigate the impact of ownership structure on both performance and risk-taking behavior of Turkish firms listed on Istanbul Stock Exchange (ISE). We define ownership structure along two dimensions: ownership concentration and ownership mix. Those two categories incorporate both the influence power of shareholders as well as the identity of owners with their unique incentive mechanisms and preferences. Ownership concentration is defined as cumulative percentage shares of the largest three shareholders (LSH3), percentage share of diffused shareholders (OTHER), and cash flow right(s) of the ultimate controlling owner(s) (CASH). To develop more generalized insights into the impact of ownership structure on firm performance, we expand the domain into the six major ownership identity groups defined as ownership mix variable. These ownership mix measures refer to the type of shareholders defined by their commonalities. Hence, we identify ownership identities (mix) as conglomerate affiliation (CONG), family ownership (FAM), group ownership (CFAM), government ownership (GOV), foreign ownership (FRGN), dispersed ownership

(DISP), and cross ownership (CROSS). In our empirical models, ownership mix variables are taken as dummy variables. We also employ control variables to account for differences in firm size, leverage, and market risk BETA.

When the overall results of the OLS regression models are examined, we can conclude that ownership structure is significantly related to both accounting and market performance of Turkish listed firms. In the literature, agency conflict is defined in several ways. It can be seen as a conflict between managers and shareholders or between majority and minority shareholders. In Turkey, we mostly observe the latter. Since, most of the Turkish listed firms have a concentrated nature and dominantly controlled by families, we suspect and find evidence that there is an agency conflict between majority and minority shareholders. In some cases, we observe the positive impact of large shareholders, and in some cases opposite.

When the findings of the models are examined, we find significant relationship between the ownership concentration and corporate performance. Findings show that increase in the ownership concentration causes a decline in the accounting-based performance but increase in the market-based performance levels of our sample firms. This conclusion is consistent with the findings reported in other emerging markets such as China (Xu and Wang, 1997) and Czech Republic (Claessens, 1997). Less window dressing incentives of the concentrated firms might cause that incident.

When the impact of ownership mix variables on performance is examined, we witness the beneficial contribution of conglomerate affiliation (CONG) as well as foreign ownership (FRGN) to accounting-based performance. On the other hand, we

only observe the positive impact of government ownership (GOV) and conglomerate affiliation (CONG) on market-based performance.

Concerning the risk-taking behavior of our sample of companies, our results reveal that highly concentrated and less diffused firms have lower market risk as suggested by lower BETA. We witness that the dominance of large shareholders in the corporate governance systems to protect their high stakes on the firms. Most of the concentrated firms are either part of a conglomerate or a family. In those firms large shareholders will try to incorporate their financial resources to deal with any possible risks. Low market risk can be explained in terms of the presence of large shareholders that are expected to decrease the bankruptcy risk.

It is highly expected to observe the impacts of different owner identity groups on risk-taking behavior. Since each owner identity group has its own homogenous priorities and interests, owners will create mechanisms, which make up a governance system to protect their interests. We observe lower market risk in firms with family ownership (FAM), supposedly initiated by an achievable alignment with the risk preferences of managers and owners. On the other hand, government-owned firms and widely held firms in our sample display higher risk, although they are larger on the average.

The overall findings in this chapter are consistent with the empirical findings in the literature in general. While we observe concentration of ownership as a significant determinant of corporate governance mechanism, identity of controlling owners also seem to have a vital role in performance-ownership relationship. In sum,

we conclude that ownership structure has significant implications on both performance and risk-taking behavior of Turkish listed firms.



CHAPTER – V

CONCLUSIONS

5.1. SUMMARY

5.1.1. Introduction

In conjunction with the massive privatization efforts in former Eastern block countries as well as experiences of developed countries, emerging markets like Turkey has been experiencing significant improvements in the financial markets as well as business environment during the last two decades. As a consequence of liberalization and globalization trends, corporate governance systems are having utmost importance in the world along with Turkey. It is not surprising to observe remarkable interests of practitioners and academicians from the various disciplines on corporate governance issues because of their vital consequences. Corporate governance is taken as an integrating term of *directing and controlling system* in an organization and it entails strategic and long-term focus. Disciplines of strategic management, economics, finance, and law are some of the major disciplines that concern with the corporate governance issues. Since, boundaries of corporate governance issues have vast extensions; we only focus on the consequences of equity

ownership structure to understand the effectiveness of alternative corporate governance systems.

Separation of ownership and management gives rise to a conflict of interest between owners and managers as their agents. Jensen and Meckling (1976) explore the costs of agency relationship on the corporation. Separation of ownership and management causes a decline in the influential power of shareholders on management. It is assumed that managers would follow the best interests of owners but against the expectations, this is not the case in real life scenarios. Hence, this fact causes an unending conflict between agents and principals. When the origins of the dispute and incentive mechanisms of the conflicting sides are examined, this outcome is not surprising. This claim can be justified that; (1) managers are mostly risk-averse compared to owners, because they have more to lose from failure, and unlike shareholders they cannot diversify their risk across a range of investments, (2) managers will reach decisions that are acceptable to organizational group, (3) managers will pursue survival policies where owners prefer profit maximization policies, (4) owners have a tendency of investing in risky projects, because of their diversified and easily transferable investments unlike managers. As Downs et al. (1999) states the long-term value of the nondiversifiable, firm-specific human capital of managers may be maximized by ensuring the survival of the firm rather than seeking to maximize the value of the firm. Thus, managers may tend to act in a risk-averse manner even if this is not in the best interests of shareholders.

Moreover, lack of diversification on the part of a large shareholder will expose him to unnecessarily high risks. Thus, large shareholders feel themselves

obliged to intervene corporate governance issues in order to protect their best interests sometimes at the expense of minority shareholders. Separation of ownership and control decreases the power of shareholders. As a result, we witness power games among managers, large shareholders, minority shareholders, and institutional investors as well as other stakeholders in the corporate governance arena. It is not surprising to observe variety of reflections of different corporate governance structures on corporate behavior as well as corporate performance and risk-taking.

Ownership structure is one of the most dominant factors that shape the corporate governance system of a firm. Policies and strategies determined by a firm's governance system derive the corporate performance and its risk-taking behavior. Consequently, ownership structure has a moderating role in a firm's performance and risk-taking behavior through its impact on corporate strategies and policies regarding growth, diversification, capital investment, research and development, and financing decisions. (Hill and Snell (1988); Gedajlovic (1993); Bethel and Liebeskind (1993); Bathala, Moon and Rao (1994)) Goals and priorities of firms may change as their ownership structures change because of the incentive mechanisms and preferences of the dominant owner group(s) in their corporate governance systems. Thus, ownership structure may affect performance and risk-taking behavior indirectly through its impact on corporate governance system that shapes corporate strategies.

5.1.2. Research Questions

The main contribution of this study is to explore the ownership structure characteristics of nonfinancial Turkish listed firms, and investigate the consequences of ownership structure in Turkey by using integrated measurement systems and compare findings with those of other countries. As Hun et al. (1999) claims, each country needs to be examined individually, since each country has her own characteristics and dynamics. Istanbul Stock Exchange is an emerging market with its high volatility and high average returns. It has been shown that emerging markets are not integrated to the developed markets of the World as evidenced by very low correlation with the rest of the World and among themselves (Bekaert et al., 1998). When we examine the literature, we mostly observe studies conducted on developed markets because of data availability and market related concerns. However, we hardly find any studies on emerging markets, which investigate the consequences of ownership structure. In this study, we intend to determine the main ownership structure characteristics of the nonfinancial Turkish firms and compare the findings with those of other countries. For empirical testing, we examine the following research questions in this study.

- a. What are the distinct characteristics of the ownership structures of Turkish listed firms?
- b. What are the differences between the characteristics of ownership structures of Turkish listed firms and those of other countries?
- c. Does ownership structure have any significant impact on performance?

- d. Does ownership structure have any significant impact on risk-taking behavior?

5.1.3. Data

Data sample consists of all Turkish listed nonfinancial firms from a wide range of industries mostly including the firms (73 percent of all) among the largest 500 manufacturing companies compiled by Istanbul Chamber of Industry. Banks, leasing companies, investment companies, holding companies, and insurance firms are excluded from the data set. The observation time is between 1992 and 1998. The number of companies included increases each year. The data is obtained from Istanbul Stock Exchange database.

We define ownership structure along two dimensions: ownership concentration and ownership mix. Ownership concentration refers to the distribution of the shares owned by a certain number of individuals, institutions, or families. Ownership mix, on the other hand, is related to the presence of certain institutions or groups such as government or foreign partners among the shareholders. These two categories of measures incorporate both the influence power of shareholders as well as identity of owners with their unique incentive mechanisms and preferences. Ownership concentration variables are cumulative percentage shares of the largest three shareholders (LSH3), cumulative percentage of shares held by diffuse shareholders (OTHER), and cash flow right(s) of the ultimate controlling owner(s) (CASH). In addition to those ownership concentration variables, ownership mix variables are defined as conglomerate affiliation (CONG), family ownership (FAM), group

ownership (CFAM), government ownership (GOV), foreign ownership (FRGN), cross ownership (CROSS), and dispersed ownership (DISP).

Corporate performance is measured with the two categories of variables. The first category of measurements intends to capture the accounting-based performance of the firms with the proxies of return on assets (ROA), and return on equity (ROE) ratios. Since, accounting-based performance measures are based on historical data, they may not be sufficient to integrate current and future potential of the firm. For that reason, with the second category, market-based performance was taken into account with the proxies of price to earnings ratio (P/E), market to book value (MBV) and stock returns. In addition to performance, risk-taking behavior of Turkish listed firms is represented with the proxies of total risk (STDEV) and market risk (BETA) measures.

5.2. FINDINGS

5.2.1. Ownership Structure Characteristics of Turkish Firms

The first primary research question of our study is to determine the main characteristics of the Turkish listed firms' ownership structures and compare the findings with those of other countries. Concentrated ownership is a dominant characteristic of a Turkish firm. This fact comes from the historical roots of the firms. Since, most of the firms are exploring the benefits of equity financing lately, they prefer selling some portion of their equity without relinquishing the control. For that reason, most of the firms have concentrated ownership structure. On average 43

percent of the shares are owned by a single owner and this value increases to 62 percent when we consider three largest shareholders. On the other hand, cumulative shares of the dispersed minority shareholders who own less than 1 percent of the shares make up only 32 percent on average. This finding is consistent with the findings of Yurtoglu (2000).

When the historical development of the Turkish corporations is examined, we observe the dominance of the government in the business life since the foundation of the Republic. Families also began to take part in business life with their limited capital. Beginning from the early 1980s, Turkey preferred liberalization policies in her economy. Based on the changes in the policies, we witness considerable improvements in the economy and financial markets. 1980s are primarily the rebirth of Istanbul Stock Exchange although its existence dates back to the foundation of the Turkish Republic. The significant changes in the economy began to shape the ownership structure of a Turkish firm. We observe significant increases in the number of listed firms as well as trading volume of Istanbul Stock Exchange. Controlling ultimate owners have learnt to utilize equity as a new capital source by opening their firms to public trade. Even though families transform their firms into publicly traded firms, they design governance mechanisms to keep control of the firms at their hands. Families control 74 percent of the overall Turkish listed firms. 30 percent of the listed firms are operating under the umbrella of a conglomerate, which is controlled or owned by a family or a group of families. Those are relatively more institutionalized and run by the professional managers. On the other hand, 44 percent of the listed firms are directly controlled by a family or a group of families.

Cross ownership and pyramidal ownership structures help ultimate owners to keep control of their public firms. Cross ownership with an average percentage of 28 percent, is especially common in conglomerate affiliates, which are mainly controlled by distinct families. In this setup, it is not surprising to see the dominance of the families in the Turkish corporate governance scene. When we look at the issue from the government side, trends in privatization and globalization tend to limit the role of government in business life. Decrease in the involvement of government is reflected in the decreasing ownership percentages in the publicly traded government-owned firms. Unfortunately, Turkey is not good at attracting foreign capital. There is a slightly increasing trend in foreign ownership in the ownership structures of the nonfinancial Turkish listed firms. Only 17 percent of the listed firms have foreign partners who own more than 10 percent of the firm's equity. When we compare foreign direct investment in Turkey with Europe and the World, the picture is not as encouraging as expected. When we redefine foreign ownership as full control by foreigners, Turkish foreign ownership rate drops to 4 percent. However this figure is 61 percent in Belgium and 45 percent in Spain.

When the results of the descriptive data analyses as presented in Chapter III are examined, we can conclude that Turkish firms are mostly concentrated, and families have significant involvement in the corporate governance systems of the firms. Cross ownership and pyramidal structures are not unusual, especially in the conglomerate affiliates. On the other hand, we witness decreasing involvement of the government and slightly increasing foreign partnership in the ownership structures of Turkish firms.

When the impact of size on ownership structure is examined, we found that size is significantly and positively related to ownership concentration. This conclusion is inconsistent with the findings of Demsetz and Lehn (1985) and Prowse (1992). On the other hand, Kettler (1997) also found positive relationship between size and ownership concentration in East Germany. We doubt that developing countries show significant bias on the size of the firms and mostly, bigger firms in those countries have concentrated nature, but it needs to be examined further.

We also examine the differences in ownership structures of thirteen industrial sectors. As claimed by Demsetz and Lehn (1985) and Zeckouser and Pound (1990), there are significant differences in the ownership structures of each industrial sector. Commonalities within the industrial firms lead them to have similar preferences and dynamics in terms of governance systems. When the industrial differences are examined, we find that transportation sector has the highest concentration in the ownership structure. This is followed by chemicals, petroleum, rubber and plastic products sector. Those sectors are the ones that require significant amount of capital to run the business. In those sectors, we observe the dominance of government and foreign ownership. On the other hand, wholesale and basic metal industries are the ones with the lowest ownership concentration. Family ownership and foreign ownership is common in the wholesale sector. As expected, we also observe the intensity of the cross ownership in this sector, because of the high involvement of the conglomerates. As regards to those results, our findings support the industrial differences of ownership structure as literature provides consistent evidence.

5.2.2. Ownership Structure and Corporate Performance

The empirical evidence regarding the impact of ownership structure on corporate performance provides controversial findings. Most of the studies are mainly focused on managerial (insider) ownership, which is specifically designed to resolve agency conflict as a governance mechanism. (Agrawal and Knoeber (1996), Chen et. al. (1993), Cubbin and Leech (1986), Demsetz (1986), Hermalin and Weisback (1991), Holderness et. al. (1999), Jarrel and Poulsen (1988), Keasey et. al. (1994), McConnell and Servaes (1995)). However, we believe that only managerial ownership is not sufficient to cover all aspects of a firm's ownership structure. With this respect, we define ownership structure by considering two groups of variables as explained in the data section.

When the association between ownership concentration and performance is examined, Berle and Means (1932) and Cubbin and Leech (1983) report positive relation. However, Demsetz (1983) hypothesizes that ownership structure is endogenously determined by the balancing costs and benefits. In favor of this hypothesis, Demsetz and Lehn (1985) and Holderness and Sheehan (1988) present their findings that there is no significant relationship between ownership concentration and performance. In contrast to those findings, Lloyd, Hand, and Modani (1987), Leech and Leahy (1991) find positive ownership concentration effect on performance. Thus, conflicting findings are not uncommon in the literature regarding the impact of ownership structure. Main reasons for those diverse findings are different ownership structure measurement systems used in the literature and country specific differences.

In the literature, there is evidence on the role played by institutional investors in monitoring corporate decisions, thereby affecting performance. For example, Smith (1996) finds institutional investors in the US, with or without seats on the board, monitor companies so as to improve their performance. Similarly, Gorton and Schmid (1996) provide evidence on stronger operating results by German corporations owned by banks. For that reason, the impact of ownership structure on firm performance is examined with the inclusion of ownership mix variables.

5.2.2.1 Ownership Concentration and Performance

Hypothesis that ownership concentration influences performance (H1) is tested by regressing an ownership variable on a performance variable in the presence of control variables within a multiple regression model (1). By conducting multivariate OLS regression analyses, we test the impact of ownership concentration of a firm on accounting and market performance. Findings of the ownership concentration and performance models are summarized in Table 81.

Table 81 Summary of the Ownership Concentration and Performance Models

Figures in the body of the table are the significant t-statistics in the regression models. Statistical significance level 0.05 is denoted with "***" and 0.10 significance level is marked with "**".

	LSH3	OTHER	CASH
<i>Panel A: Accounting Performance</i>			
ROA	(-1.83)*		
ROE	(-2.04)**		
<i>Panel B: Market Performance</i>			
MBV	(-1.98)**		
P/E	(1.67)*		
RET12		(-1.78)*	(2.31)**
RET24		(-1.95)**	(1.67)*
ABRET			(2.19)**
RET3	(1.73)*	(-2.23)**	(2.53)**
RET6	(1.82)*	(-1.81)*	(2.60)**

We experience negative coefficients for the LSH3 variable in the accounting performance models consistently. Considering the results of ownership concentration variables, we can claim that increase in the ownership concentration leads decline in the accounting profitability levels of the sample firms. This finding is consistent with the findings of Önder (1998).

When the results of the market performance models are examined we witness positive effects of LSH3 and CASH supported with the negative impact of OTHER. However, MBV model gives us contradictory findings. It is believed that the MBV anomaly is mainly caused by the high book values of the concentrated firms in contrast to widely held firms. These results indicate that concentrated ownership is positively related to higher market performance. Stocks of the concentrated firms have relatively higher market prices compared to those firms who have similar earnings patterns.

Leverage as a control variable is inversely related to accounting performance while we observe positive contribution to market based performance. The other control variables of size and market risk are insignificant in the concentration models.

We witness ambiguous findings regarding performance and ownership structure relationship in the literature. Demsetz and Lehn (1985) and Holderness and Sheehan (1988) found the relationship between ownership concentration and accounting profitability to be insignificant. On the other hand, recent studies of Gedajlovic and Shapiro (1998) and Pedersen and Thomsen (1999) identify the impact of ownership structure on performance as significant. Even though, there is

ambiguity in the literature, we witness beneficiary role of concentrated ownership especially on market-based performance in Turkey. In sum, we conclude that as the concentration in ownership increases, we experience lower accounting-based performance, and higher market performance. This might be caused by less window dressing by the concentrated firms.

This is consistent with the findings reported in other emerging markets such as China (Xu and Wang, 1997) and Czech Republic (Claessens, 1997).

5.2.2.2 Ownership Mix and Performance

In addition to the influencing power of shareholders, identity of the owners is also considered for the categorization of ownership structure. Noticeably, each ownership identity class will have common goals and interests. These common goals and interests will generate same type of incentive mechanisms, which may guide them to act in some certain formats of actions.

To test the hypothesis that ownership mix has an impact on performance, we regress performance variables defined earlier on ownership mix dummies one at a time. We control for size, leverage and market risk beta as before. Findings of the ownership mix and performance models are summarized in Table 82.

When the effects of ownership mix variables are considered, we observe the dominant effect of family ownership (FAM), and government ownership (GOV) in the Istanbul Stock Exchange.

The positive coefficients of conglomerate affiliation (CONG) in the market performance models of P/E and MBV reflect the benefits of operating as a

conglomerate affiliate. This finding implies that distinct conglomerates in Turkey tend to create their own governance systems that reward managerial effectiveness reflected in market performances. On the other hand, we witness quite the opposite consequences with respect to another ownership measure namely family ownership (FAM). Family ownership (FAM) has a significantly negative impact on market performance. It seems that market does not have confidence on those family owned or controlled firms. This may be caused by the possible tendency that owner managers abuse their power at the expense of minority shareholders.

Table 82 Summary of the Ownership Mix and Performance Models

Figures in the body of the table are the significant t-statistics in the regression models. Statistical significance level 0.05 is denoted with “***” and 0.10 significance level is marked with “**”.

	<i>CONG</i>	<i>FAM</i>	<i>CFAM</i>	<i>FRGN</i>	<i>CROSS</i>	<i>GOV</i>	<i>DISP</i>
<i>Panel A: Accounting Performance</i>							
ROA				(1.91)*		(-2.56)**	
ROE						(-1.97)**	
<i>Panel B: Market Performance</i>							
MBV	(1.91)*						
P/E	(1.98)**	(-2.12)**			(1.69)*		
RET12		(-2.10)**			(3.35)**		
RET24		(-2.79)**	(-1.93)*			(3.12)**	
ABRET						(3.48)**	(-1.66)*
RET3		(-1.96)**	(-1.69)*			(2.61)**	
RET6		(-1.79)*				(2.64)**	

Two types of institutional investors with a potential for monitoring stand out in large Turkish corporations. They are the foreign investors and the government. Foreign ownership (FRGN) is usually the result of direct investment in a joint venture. Portfolio investments by foreign investors are hard to keep track of unless their share exceeds 10 percent. Even then, foreign shareholders may not get involved in monitoring corporate decisions. On the government side, on average, the government owns 7.6 percent of our sample firms. Almost all of those government-owned firms are subject to privatization program. Those with less than 50 percent

government ownership have already been privatized. Others have offered shares to the public, but the government still controls the management. However, they, too, are targeted for further privatization by either public offering or private placement of their shares.

While firms with foreign ownership display better accounting performance, government-owned firms tend to have higher market performance but lower accounting performance. Expectations of the market on government owned or controlled firms with respect to the timing and method of privatization may play a role in the valuation of those companies. Firms with foreign partners seem to have governance mechanisms that reward accounting performance but not market performance.

Dispersed ownership (DISP) and cross ownership (CROSS) are providing weak evidence for the type of relationships between ownership concentration and performance. Firms with dispersed ownership (DISP) yield lower abnormal returns. Besides, cross ownership (CROSS) contributes to increases in the stock prices of the firms with mixed networks of ownership structure, compared to the other firms with similar earnings patterns.

In connection with the findings documented, it will not be misleading to conclude that ownership structure is significantly related to accounting and market performance of the Turkish listed firms.

5.2.3. Ownership Structure and Risk

The owners of the firm have a call option on the firm's assets with a strike price equal to the value of the firm's liabilities. Option pricing comparative statistics

demonstrates that the value of the call option is greater for more risky firms. (Downs et al., 1999) Many economic provisions that involve problems of risk sharing and incentives may be described in terms of the principal and agent relationship. It is generally accepted that manager of a firm is risk-averse or at most risk-neutral but definitely not risk-lover because of his undiversifiable human capital investment. Agrawal and Mandelker (1987) and Saunders, Strock, and Travlos (1990) claim that managers may become more risk averse as their nonhuman wealth investment in the firm increases. Lee, Mayers, and Smith (1997) document in their study that managers with higher levels of stock ownership have stronger incentives to increase risk-taking behavior of the firm. When we look at the issue from the entrenchment theory as defined by Morck, Shleifer, and Vishny (1988), managers tend to protect their firm-specific benefits at the expense of shareholders. This behavior might also contribute to managers becoming more risk-averse with higher levels of equity ownership. These claims support the roof-shaped relation between managerial (insider) ownership and corporate performance. Evidence provided by the previous studies indicates that managerial ownership may contribute corporate performance to a certain point, but beyond that, we observe the negative effect of it. In this study, we extend the definition of ownership structure from managerial ownership to much more comprehensive ownership structure measurement system.

Impact of ownership structure is examined by considering two groups of variables, noticeably ownership concentration, and ownership mix. Conclusions regarding each ownership structure groups are discussed in detail in the following sections.

It is hypothesized in the study that ownership structure has an impact on risk-taking behavior of the nonfinancial Turkish listed firms. Ownership structure determines the governance mechanisms, which in turn defines corporate strategies and policies. This strategic guidance and control process is expected to have an impact on a firm's risk-taking behavior.

Risk is measured with the two proxies. These are total risk as quantified with standard deviation of monthly returns (*STDEV*) of the common stock of firm *i*, and market risk, beta coefficient of the stock (*BETA*), estimated by the market model, both over the three-year period. Endogeneity concerns are identical as in the performance models. Generalized Method of Moments (GMM) technique is also applied to risk models to deal with the potential problems of heteroskedasticity and autocorrelation.

5.2.3.1 Ownership Concentration and Risk

We investigate whether ownership concentration is related to risk-taking behavior of our sample companies. We estimate model (3) with standard deviation of monthly returns (*STDEV*) and market model beta (*BETA*) as dependent variables and the same set of explanatory variables. Regressions test the relationship between various measures of ownership concentration and risk proxies by controlling both leverage and firm size. Findings of the ownership concentration and risk models are summarized in Table 83.

When we examine the results of the regression analyses, conflicting findings prevail. We find that firms with concentrated ownership have higher total risk but lower market risk compared to widely held companies. If we bear in mind that

widely held firms are usually run by professional managers who have conflicting interests and goals with the shareholders, lower total risk can be explained in terms of risk-averse managers who cannot diversify their human capital. Moreover, presence of large shareholders is expected to increase the incentive to take higher risk by those shareholders at the expense of creditors. Significant positive coefficient for ownership concentration (*LSH3*) is consistent with this argument as well. It is also interesting to note that both control variables *SIZE* and *LEV* have expected signs in the *STDEV* models. Larger firms have less total risk and higher leverage.

Table 83 Ownership Concentration and Risk
 Figures in the body of the table are the significant t-statistics in the regression models. Statistical significance level 0.05 is denoted with "***" and 0.10 significance level is marked with "**".

	LSH3	OTHER	CASH
BETA		(2.12)**	
STDEV	(2.13)**	(-2.37)**	

5.2.3.2 Ownership Mix and Risk

Different ownership identity groups are expected to have similar preferences, incentive mechanisms, and risk attitudes. To uncover the reflections of the different risk preferences, we use the ownership mix models. Hence, for ownership mix, we use the same right hand side variables as in the previous model with the risk measures as the dependent variable of the model. Findings of the ownership mix and risk models are summarized in Table 84.

Multivariate OLS regression analyses indicate that ownership mix variables do not show any significant variations in the total risk model. On the other hand, market risk model provides insightful information regarding different risk preferences of ownership identity groups.

Both family ownership (FAM) and group ownership (CFAM) variables are negatively related to market risk. These results indicate that family ownership (FAM) is associated with lower market risk. Family-owned firm is managed by either a family member or a manager who has close ties with the family. This causes an alignment with the risk preferences of managers and owners, leading a decrease in a firm's market risk. Firms that are not operating under any group are considered as risky firms. This makes sense, because, those firms do not have any chance of using corporate resources as well as advantage of vertical integration possibilities. These findings are consistent with the performance relationships.

Table 84 Ownership Mix and Risk

Figures in the body of the table are the significant t-statistics in the regression models. Statistical significance level 0.05 is denoted with "***" and 0.10 significance level is marked with "*".

	<i>CONG</i>	<i>FAM</i>	<i>CFAM</i>	<i>FRGN</i>	<i>CROSS</i>	<i>GOV</i>	<i>DISP</i>
BETA		(-2.50)**	(-3.28)**			(1.79)*	(2.51)**
STDEV			(-2.08)**			(4.65)**	

Both government ownership (GOV) and dispersed ownership (DISP) are positively related to market risk beta. Hence, the profile of firms with government held shares can be described as large enterprises with high market risk. Drawbacks of government ownership as a corporate governance system are well known in the literature. They would help explain why these companies command a low earnings multiple. Yet, high risk despite their large size deserves further explanation. In our opinion, the ambiguities as to the timing and method of privatization of government shares in those firms add to the return variability. It is not uncommon to read or hear about conflicting news on if or when a government-owned company is going to be privatized. Method of privatization is also a subject of market gossip. It makes a huge difference whether a large company is going to be sold by a public offering of

equity or privately placing its majority shares as a block sale. Amidst all the uncertainties, fluctuation in these shares is not at all surprising.

Firms without any distinct ultimate owners (DISP) are mainly managed by professional managers. It is not uncommon to encounter agency conflicts in those widely held firms. This argument is supported with the significant positive relation between dispersed ownership (DISP) and market risk BETA. Dispersed-firms are rated in the market as relatively high risky firms.

5.3. FINAL REMARKS

In this study, we explore the ownership structure characteristics of the Turkish listed firms and examine the consequences of ownership structure on both corporate performance and risk-taking behavior.

We conclude that Turkish listed firms are mostly concentrated family-owned or controlled firms attached to a group of companies generally owned by the same family or a group of families. Some of the very largest companies are government owned monopolies. Although professional managers run these companies, family members are highly actively involved in strategic as well as daily decisions. However, we lately began to observe less and less involvement of the government and slightly increasing foreign ownership percentages in the firm's ownership structure. It is not uncommon to witness cross ownership and pyramidal ownership structure in Turkish listed firms. Firms within the same industrial sector show similar characteristics, which diversify significantly between other industrial sectors.

In sum, we conclude that ownership structure with its subgroups of ownership concentration and ownership mix variables; have a significant impact on both corporate performance and risk-taking behavior.

As the concentration in ownership increases, we experience lower accounting-based performance, and higher market-based performance. This is consistent with the findings reported in other emerging markets such as China (Xu and Wang, (1997)) and Czech Republic (Claessens, (1997)). The conclusion of higher concentration leads to lower accounting performance is also supported by the findings of Önder (1998).

When the effect of ownership mix is considered, we observe the dominant effect of family ownership, and government ownership in the Turkish market. While firms with foreign ownership display better accounting performance, government-owned firms tend to have higher market performance with higher risk. On the other hand, family-owned firms seem to have lower accounting and market performance with lower market risk.

5.4. RECOMMENDATIONS FOR FUTURE RESEARCH

The following research questions might serve as a basis for further studies in this area of research:

- What types of patterns exist for ownership structure variables in the emerging markets and developed markets?
- Are there any commonalities within the emerging markets and developed markets regarding ownership structure characteristics?

- Are there any significant differences between emerging markets and developed markets regarding ownership structure characteristics?
- What are the consequences of ownership structure in emerging markets and are those findings consistent and applicable to all emerging markets?
- What are the differences and similarities in the consequences of ownership structure between emerging and developed countries?
- Among the ownership mix variables, conglomerate affiliation is the most complex governance mechanism. While the market rewards this mechanism, is this form of ownership economically efficient?



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