

DOKUZ EYLÜL UNIVERSITY  
GRADUATE SCHOOL OF SOCIAL SCIENCES  
DEPARTMENT OF BUSINESS ADMINISTRATION  
BUSINESS ADMINISTRATION PROGRAM  
MASTER'S THESIS

INVESTOR PROTECTION IN TURKEY:  
A CLUSTER ANALYSIS

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2011

**YÜKSEK LİSANS**  
**TEZ/ PROJE ONAY SAYFASI**

2007800390

**Üniversite** : Dokuz Eylül Üniversitesi  
**Enstitü** : Sosyal Bilimler Enstitüsü  
**Adı ve Soyadı** : Atakan KÖPRÜLÜ  
**Tez Başlığı** : Investor Protection in Turkey: A Cluster Analysis

**Savunma Tarihi** : 18.04.2011  
**Danışmanı** : Yrd.Doç.Dr.Gülözar KURT GÜMÜŞ

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Atakan KÖPRÜLÜ tarafından hazırlanmış ve sunulmuş "Investor Protection in Turkey: A Cluster Analysis" başlıklı Tezi (✓) / Projesi ( ) kabul edilmiştir.

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## DECLARATION

I hereby declare that this master's thesis titled as "INVESTOR PROTECTION IN TURKEY: A CLUSTER ANALYSIS" has been written by myself without applying the help that can be contrary to academic rules and ethical conduct. I also declare that all materials benefited in this thesis consist of the mentioned resources in the reference list. I verify all these with my honour.

Date

.../.../.....

Atakan KÖPRÜLÜ

Signature

## ACKNOWLEDGEMENTS

I would like to express my deepest gratitude to my supervisor, Assist. Prof. Dr. Gülüzar Kurt Gümüő, for her guidance, advice, criticism and insight throughout the entire process and development of this thesis.

I would also like to thank TÜBİTAK- BİDEB for its valuable support with graduate scholarship, which helped me to improve myself, during my master program period.

I acknowledge my fiancée, Özge Güçlü, for her continuous support and invaluable encouragements all through this thesis. Without her help, patience, love and encouragements this thesis would have been harder.

Finally, I wish to express my deepest gratitude to my beloved family, Fatma Köprülü, Dr. Çetin Köprülü and Ayşegül Aktalay for their love, patience, belief in my talents and support they have presented all through my life.

With love, I dedicated this work to my family and fiancée. Words are incapable to explain my gratitude.

## ÖZET

Yüksek Lisans Tezi

Türkiye’de Yatırımcının Korunması:

Bir Kümeleme Analizi

Atakan KÖPRÜLÜ

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İngilizce İşletme Anabilim Dalı

İngilizce İşletme Yönetimi Programı

Bu çalışmanın amacı sık kullanılan sekiz faktör ile yatırımcının korunmasını 32 ülke arasında araştırmak ve Türkiye’nin yerini bu ülkeler arasında kümeleme analizi yardımı ile üç farklı dönem için belirlemektir. İlk dönem; Enron, Tyco ve WorldCom gibi uluslar arası skandallardan önceki dönem, 1994- 1998 yıllarını yansıtmaktadır. İkinci dönem verileri bu skandalları kapsayan dönem ve sonrasını, 1998- 2004 yıllarını içermektedir. Son dönem, güncel dönem, 1998- 2009 yıllarını yansıtmaktadır.

Çalışmada yapılan analiz iki kısımdan oluşmaktadır. Birinci kısımda, sekiz yatırımcının korunması faktörünün arasındaki ilişki, korelasyon analizi ile incelenmiştir. Analizin ikinci kısmı, tüm dönemler için 32 ülkeyi yatırımcıyı koruma seviyelerine göre K- ortalamalar kümeleme analizi ile elde edilen üç küme halinde belirtmiştir.

Çalışmanın sonuçlarına göre 32 ülke içinde Türkiye, zayıf yatırımcı korunması, yoğun ortaklık yapısı ve düşük pazar gelişim seviyesine sahiptir. Böylece bu çalışma literatürde de belirtildiği gibi Türkiye’nin gelişmekte ve Fransız yasa ailesinden olan bir ülke olduğunu onaylamaktadır. Diğer bir yandan Türkiye yatırımcıyı koruma seviyesini arttırmıştır fakat bu artış gelişmiş ülkelerin gösterdiği artış kadar tatmin edici değildir.

**Anahtar Kelimeler:** 1) Yatırımcının Korunması, 2) Kurumsal Yönetişim, 3) Ortaklık Yapısı

## **ABSTRACT**

**Master's Thesis**

**Investor Protection In Turkey:**

**A Cluster Analysis**

**Atakan KÖPRÜLÜ**

**Dokuz Eylül University**

**Graduate School of Social Sciences**

**Department of Business Administration**

**Business Administration Program**

**The main purpose of this study is to investigate the investor protection in 32 countries with commonly used investor protection proxies and determining the Turkey's place among these countries by cluster analysis for three different periods. First period reflects the early period which is before the accounting scandals such as Enron, Tyco and WorldCom; the period of 1994- 1998. Second period data consists of during and after these scandals period; the period of 1998- 2004 and the last period presents the current period; the period of 1998- 2009.**

**The analysis of the study consists of two parts. In the first part, the relation between eight investor protection proxies is examined by correlation analysis. Second part of the analysis presents the three clusters dependent on investor protection level of 32 countries for each period which obtained by K-means cluster analysis.**

**The empirical results indicate that Turkey has a low investor protection, high ownership concentration and low stock market development in the 32 countries. Thus, regarding characteristics of Turkey in literature, the results confirm that Turkey is a developing country with French- civil law origin.**

**On the other hand, Turkey improved its investor protection level through the periods, but it is not sufficient as developed countries.**

**Key Words:** 1) Investor Protection, 2) Corporate Governance, 3) Ownership Concentration

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## LIST OF ABBREVIATION

<b>ADRI</b>	: Anti Director Rights Index
<b>BCF</b>	: Bebchuk, Cohen and Ferrell
<b>CD</b>	: Code Law
<b>CE</b>	: Continental Europe
<b>CG</b>	: Corporate Governance
<b>CGM</b>	: Corporate Governance Mechanisms
<b>CM</b>	: Common Law
<b>CMBT</b>	: Capital Market Board of Turkey
<b>EC</b>	: European Commission
<b>EU</b>	: European Union
<b>GI</b>	: Governance Index
<b>GIM</b>	: Gompers, Ishii, and Metrick
<b>GDP</b>	: Gross Domestic Product
<b>GNP</b>	: Gross National Product
<b>IMF</b>	: International Monetary Fund
<b>IPO</b>	: Initial Public Offerings
<b>IRRC</b>	: Investor Responsibility Research Center
<b>ISE</b>	: Istanbul Stock Exchange
<b>ISS</b>	: Institutional Shareholder Services
<b>LLSV</b>	: La Porta, Lopez-de-Silanes, Shleifer and Vishny
<b>OECD</b>	: The Organization of Economic Cooperation and Development
<b>ROA</b>	: Return on Assets
<b>SOX</b>	: The Sarbanes-Oxley Act
<b>The U.S.</b>	: The United States
<b>The UK</b>	: The United Kingdoms

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## INTRODUCTION

During the last two decades, the financial systems began to change depending on the various accounting scandals in U.S., UK and crisis in the Asian countries. The importance of monitoring the institutions against the expropriations of the minority shareholders by managers, directors and large shareholders started to increase. Thus investor protection appeared as a crucial subject in the world.

Countries keep themselves safe from these scandals with enforcing the governance system by generating rights, regulations and laws. Investors could finance firms safely by the help of these rights which governance give them.

In the global world, changes affected the financial system of Turkey as well. Therefore, Turkish corporate governance system develops its effectiveness day by day by improving its legislation and regulations and investor protection is getting the fundamental indicator of corporate governance.

This dissertation examines the investor protection around the 32 countries and determines the Turkey's place among these countries, for the three different periods. First period reflects the early period which is before these scandals; the period of 1994- 1998. Second period data consists of during and after these scandals period; the period of 1998- 2004 and the last period presents the current period; the period of 1998- 2009.

This study gathered the commonly used eight investor protection proxies and observed their relations with each other by correlation analysis. After examining the relation, this study defined the 3 clusters for each period to present Turkey's improvement and current position in sample countries around the world with K-means cluster analysis.

There are three chapters in the study. The first and second chapter gives theoretical information about respectively the corporate governance and investor protection.

The third chapter discusses the related literature, explain the methodology and data, and give empirical results.

# **CHAPTER I**

## **CORPORATE GOVERNANCE**

Corporate Governance (CG) grew as a crucially important and multi-faced subject in the last two decades. The main purpose of CG is to reduce the principal agent problem and reflect the clear management. According to this purpose, CG is appeared as a common indicator of the economy.

The world did not handle CG as a matter of potential importance for the development of a nation's economy. Until the East Asian financial crisis in 1998, then followed closely by crises in Russia and Brazil and scandals in the U.S. and UK; CG remained practically invisible as a development policy issue (Oman, Fries, and Buitter, 2003:5). Following these scandals and crises, CG became widely used in finance literature and had a position to play a fundamental and urgent role in the economy.

### **1.1. DEFINITIONS**

The plenty of classical economists from Adam Smith (1776) to Berle and Means (1932) were interested in the separation of ownership and control, which is the agency relationship between a "principal" (investors, outsiders) and an "agent" (manager, entrepreneur, and insider). Authors focused primarily on the control of executive self- interest and the protection of shareholder interests in settings where organizational ownership and control are separated.

First of all to understand the meaning of the CG, it is required understanding the purpose of CG. That purpose determined by Oman, Fries, and Buitter (2003:6), in any country, is threefold:

- Facilitate and stimulate the performance of corporations by creating and maintaining incentives that motivate corporate insiders such as directors, officers, key employees, officers and large shareholders to maximize firms' operational efficiency, return on assets and long-term productivity growth;

- Limit insiders' misuse of power over corporate resources which are otherwise likely to result from insiders' self-serving behaviour;

- Provide the means to monitor managers' behaviour to ensure corporate accountability and provide for reasonably cost-effective protection of investors' and society's interests vis-à-vis corporate insiders.

According to La Porta et al. (2000:4), CG is; "a set of mechanisms through which outside investors protect themselves against expropriation by managers and controlling shareholders." Shleifer and Vishny (1997:737) defined the CG as dealing with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment. Gillan, Hartzell and Starks (2003:13), in their review of CG, define governance through several ways including, the system of laws, rules, and factors that manage and control operations at a company. Cadbury (1992:14) handled the CG as system by which firms are directed and controlled. Considering Oman, Fries, and Buiters (2003:6) view, CG contains the country's private and public institutions, both formal and informal, which together govern the relationship between the people who manage corporations (principals) and all others who invest resources in corporations (agents) in the country. These institutions especially comprise the country's corporate laws, securities laws, accounting rules, generally accepted business practices and prevailing business ethics.

Following these authors, CG could be resembled as a strong shield which protects the outside investors against the insiders.

## 1.2. HISTORY OF CORPORATE GOVERNANCE

Sapovadia and Rehman (2007:1) mentioned that in corporate sector CG is as old as is civilization that's why it is a natural and integral part of the management.

Although CG is an integral part of management, it has supposed prominence in the last two decades. Such prominence has arisen because of a series of events such as the intensive privatization movement around the world, pension fund reform and the growth of private savings, the takeover wave of the 1980s, the deregulation and integration of the capital markets, the 1998 East Asia crisis, and a number of U.S. scandals and corporate failures (Becht, Bolton, and Röell, 2002:4). According to the literature, CG history dates back to Adam Smith (1776) and contemporary approach appears with Jensen and Meckling (1976).

Jensen and Meckling (1976:72) applied agency theory to the modern corporation and model the agency costs of outside equity. Thus, they formalized an idea which dates back at least as far as Adam Smith (1776): when ownership and control of corporations are not fully consistent, there is a potential for conflicts of interest between owners and controllers so they demonstrated that a manager who owns anything less than 100% of the residual cash flow rights of the firm has potential conflicts of interest with the outside shareholders. The conflicts of interest, however, combined with the inability to costlessly write perfect contracts and/or monitor the controllers, ultimately reduce the value of the firm, *ceteris paribus*. According to Denis and McConnell (2003:1), the basis for research on CG is formed with these ideas.

The publication of Jensen and Meckling (1976)'s model reproduced a productive form of research, both theoretical and empirical. Furthermore, this research once through the 1970s and 1980s was greatly focused on the governance of U.S. corporations, and U.S. based CG research goes on to spread out. As Shleifer and Vishny (1997:740) and Gibson (2003:1) indicate that, there has been only a little study done on CG outside the U.S. different from a few developed countries such as



Japan and Germany, but there is almost no empirical proof clearly comparing the quality of CG in emerging markets and developed markets.

Research on CG began to appear in countries other than the U.S. by the early 1990s. Although at first glance it is seen that the CG research is made in the major power economies such as Japan, Germany, and the UK. Recently, it is shown that the research of CG has exploded around the world for both developed and emerging markets. The result is comprehensive and still growing body of research on international corporate governance (Denis and McConnell, 2003:14).

### **1.2.1. Accounting Scandals**

Likewise CG has a well grounded history, it has been received much more attention and has become increasingly important according to the high profile scandals such as Adelphia, Enron, Tyco and WorldCom.

The high-profile corporate collapses at these important companies caused to disturb the confidence of investors. Following after these scandals, many of these companies saw their equity values fall dramatically and experienced a decline in credit ratings of their debt issues, often to junk bond status (Agrawal and Chadha, 2004:2). After these scandals, governance issues have been attracted by international organizations. For instance the International Monetary Fund (IMF) has demanded that governance improvements should be included in its debt relief program.

Furthermore, business failures and recent scandals have urged the dispute on organizations whether they are properly governed. Countries have responded to these collapses by enacting laws and regulations, which aimed at improving corporate disclosure and governance practices. One by one, many countries have changed their corporate charters and board structures. Therefore, these changes' implementations which have included new rules and procedures have charged the firms and shareholders as expected. The results of the changes in governance are reflected in

improvements in firm valuation that is why the question: “Why not all firms improve their governance?” has appeared (Chhaochharia and Laeven, 2007:22).

These scandals also illustrated with a honest reflection how the firms’ economic reality is. According to critical researchers accounting values do not produce precise representation of economic reality, but rather provide a highly challenging and partisan representation of the economic and social world (O’Connell, 2004:733). On the other hand Fan and Wong (2002:5) demand strongly that agency relation supposes that managers’ reporting policies are opportunistic, while according to market efficiency, investors should expect such behavior. Therefore, accounting numbers reported may not reflect the economic reality of the firm (Khiari, Karaa and Omri, 2007:148).

### **1.2.2. OECD**

The Organization of Economic Cooperation and Development (OECD) traces its roots to the Marshall Plan and today, 34 OECD member-countries worldwide committed to democratic government and the market economy. It provides a forum where governments can compare and exchange policy experiences, identify good practices and promote decisions and recommendations (OECD, 2009:8).

To determine better governance, OECD issued its impressive OECD Principles of Corporate Governance, tended to support member and non-member countries in their efforts to evaluate and improve the legal, institutional and regulatory framework. They established a common set of key reference points and provided a common language for discussion and criteria for implementation (Khanchel, 2007:740).

The principles of CG state that “an annual audit should be conducted by an independent, competent and qualified, auditor to provide an external and objective assurance to the board and shareholders that the financial statements fairly represent

the financial position and performance of the company in all material respects,” (OECD, 2004:54).

### **1.2.3. Sarbanes- Oxley Act**

Recent accounting scandals and business failures have urged a lively debate on how public corporations should be governed. Countries around the world have responded to these debacles by enacting new laws and regulations aimed at improving corporate disclosure and governance practices (Chhaochharia and Laeven, 2007).

The Sarbanes-Oxley Act (2002) (SOX- 2002), the most sweeping CG regulation of the last 70 years in the U.S., is a direct response to key governance failings at Enron, WorldCom and Tyco. In the aftermath of the post-boom financial scandals, congress revised significantly federal securities laws and confirmed the SOX in 2002 in the U.S. (Switzer, 2007:651). SOX- 2002 set new or improved standards for all U.S. public company boards, management and public accounting firms. This act consists of 11 titles ranging from additional corporate board responsibilities to corporate fraud and accountability.

The following sentence which is written at the beginning of the SOX- 2002 gives the purpose of the act: “to protect investors by improving the accuracy and reliability of corporate disclosures made pursuant to the securities laws, and for other purposes.”

The regulation targets primarily the kinds of misuses in earnings manipulation and financial reporting uncovered by the Enron and WorldCom failures. Its purpose is to restore confidence in company financial statements by dramatically increasing penalties for misreporting earnings performance and reducing conflicts of interest for two main groups of monitors of firms, auditors and

analysts. In addition, it provides stronger protection for “whistle-blowers” (Becht, Bolton, and Röell, 2002:66).

### **1.3. CORPORATE GOVERNANCE IN DEVELOPING COUNTRIES**

Corporate governance in developing countries is particularly important, since these countries do not have a strong, and well organized financial institution infrastructure to handle the corporate governance issues (McGee, 2008:3). Also increasingly for developing and transition economies a healthy and competitive corporate sector is fundamental for sustained and shared growth income countries. (Iskander and Chamlou, 2000:6)

In recent years CG has become an important topic in developing economies. Directors, managers and owners have started to realize that there are benefits that can increase from having a good corporate governance structure. Good corporate governance is the tool to increase firm value and makes it easier to acquire capital. Especially international investors are hesitant to invest in to corporation which does not apply to good corporate governance principles. Good CG in the company requires transparency, independent managers, and an audit committee which are separate from the organization. (McGee, 2008:3)

CG can be enforced by legislation, but it could only serve limited purpose, but good CG therefore is additional than the minimum required sticking to rules and that comes from within of managers, promoters and directors of a firm. Good Corporate Governors looks shareholders as not suppliers of fund, but ideas and direction, a monitoring agency and therefore they encourage them that they participate and perform in company meetings (Sapovadia and Rehman, 2007:1)

Several organizations have appeared in last few years to help adopt and implement good corporate governance principles. OECD, the World Bank, the International Finance Corporation, the U.S. Commerce and State Departments and

various other organizations have been forced governments and companies in Eastern Europe to adopt and implement good corporate governance principles.

The basic attributes of the Good CG is arranged by the Center for International Private Enterprise (2002:4) with a list which is at the below. This list summarizes some of the most important benefits of the good CG. These include,

- Minimizing risk;
- Excitement of performance;
- Enhanced access to capital markets;
- Improvement of marketability of goods and services;
- Advanced leadership; and
- Presenting clear management and social accountability.

### **1.3.1. Corporate Governance in Turkey**

Modern Republic of Turkey was founded in 1923 as the successor state of the Ottoman Empire. Until 1945, the substantial provider of financial assistance to private- sector development was the government as the major economic player. After 1945 a pro-market economic policy beginning to take shape, but the process continued to be marked with heavy state intervention in the economy. In fact, state involvement in the economy during the 1950s (both as producer and regulator) was higher than the 1930s. Although state involvement in the economy continued throughout the 1960s and 1970s, the inexperienced and developing private sector eventually came of age and market economy institutions acquired a new dynamic quality (Ararat and Uğur, 2003:63).

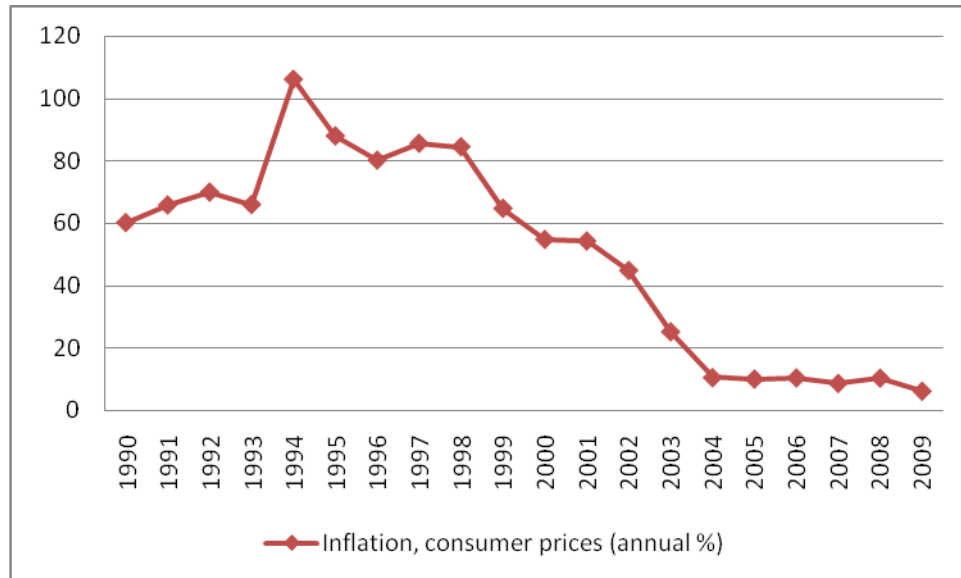
Turkey's import substitution policies were replaced by an export led growth and structural adjustment program in 1980. This program was consisting of the liberalization of capital markets, which was happened between 1980 and 1989. The Capital Market Law was enacted in 1981, this program followed by the establishment of the Capital Market Board of Turkey (CMBT) in 1982. After four years of arrangement, the Istanbul Stock Exchange (ISE) was restructured and reopened in 1986 (Santana et al., 2008:59). CMBT, ISE, and Takasbank (Settlement and Custody Bank) are the major institutions involved in Turkey's capital market. The CMBT regulates the operations of ISE (Ararat and Uğur, 2003:65).

As shown in Figure 1, between 1990 and 2000, Turkey experienced economic crises, during which time the inflation rate averaged 75 percent. Following the long-awaited European Union (EU) decision donated official candidate status in 1999, Turkey's liquidity crisis forced the government to sign a major stabilization program with a stand-by IMF agreement at the end of 1999 and beginning of 2000.

At the end of 2000, because of liquidity problems, outright fraud, and the related loan issues, Turkey was hit by a banking crisis and with subsequent agreements signed in 2001 and 2004 the IMF continued to support Turkey's reforms. Prior to 2001, a long period of macroeconomic instability had decreased the probability of introducing CG reforms in Turkey. Since 2001, the EU and the IMF both remained strong anchors for reform, which included restructuring the banking sector at a cost of U.S. \$43 billion (Santana et al., 2008:59). In Figure 2, it is easy to see the changes of the credit which charged from IMF between years 2001 to 2009.

The Turkish Corporate Governance Association was established in 2003. Its mission is to increase awareness by training the various corporate players on how to enable good CG based on existing principles.

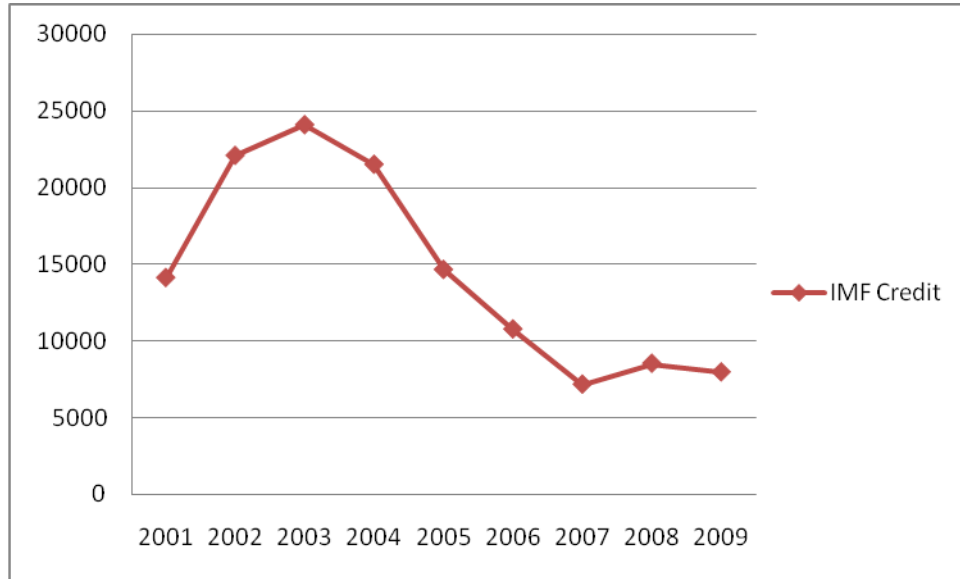
**Figure 1: Inflation, Consumer Prices (annual %) (Turkey)**



**Source:** The official website of World Bank  
(<http://www.worldbank.org/data>)

In 2004, recognizing the reform's success, the European Commission (EC) recommended that the EU starts negotiations of the accession with Turkey. The prospect of a sustainable, stable economy encouraged the government to continue with public-sector reforms, focusing on accountability, transparency (leading to improvements in the audit capacity and framework), and efficient regulations (especially about tax). Accomplishing the ongoing structural reforms in the public sector, CMBT initiated and improved the governance standards of listed companies in stock exchange (Santana et al., 2008:59).

**Figure 2: Use of IMF Credit (in millions \$) (Turkey)**



**Source:** The official website of World Bank  
(<http://www.worldbank.org/data>)

The OECD (2003) points out the changes in corporate organizations have led to changes in the Turkish corporate law. CMBT built a committee including experts from ISE and Turkish Corporate Governance Forum and in June 2003, issued the “Corporate Governance Principles of Turkey” (Durukan, Özkan, and Dalkılıç, 2009:3).

The Turkish parliament voted on the new Turkish Commercial Code on January, 2011 to replace the old version. The new commercial code aims to increase the degree of investor protection with enforce the Turkish legislation and bring the Turkish legislation in line with EU legislation. Furthermore, the audit is become prevalent with new commercial code.



### 1.3.2. Characteristics of Turkey

There are several factors to define the CG atmosphere of a country, for instance, the general conditions of a particular country, the level of stock market development and individual company practices. Additionally, the factors of a country in general are also economic status, financial conditions, level of competition, banking system, level of development of property rights and similar factors (CMBT, 2003). Evrim Mandacı and Kurt Gümüş (2010) defined the good CG with the combination of the protection of the rights of investors and proper ownership concentration.

Turkey is developing an equity culture country. The majority of listed companies are controlled by a single family as the controlling shareholder, which gives many protections for minority shareholders ineffective. The Turkish corporate sector is dominated by family-controlled, complex company groups, usually comprising both publicly held and privately held companies. Pyramidal structures and concentrated ownership are common and there is often a high degree of cross-ownership within the groups. In the companies, controlling shareholders (insiders) often hold shares with nomination privileges or multiple voting rights (The Institute of International Finance, Inc., 2005)

Yurtoğlu (2000:195) summarized the characteristics of the Turkish corporate governance system. First, few Turkish companies are traded on ISE. Although the number of traded companies increases from 80 at the end of 1986 to 274 in 1998 and 315 in 2009<sup>1</sup>, as shown in Figure 3, the market capitalization is around 10-14% of the GDP over this period, at a level which is quite low even in comparison to “insider system” countries which in, the majority of the firms are operated by families who organize a large number of companies under a pyramidal ownership structure. Second as Evrim Mandacı and Kurt Gümüş (2010:57) found, listed Turkish

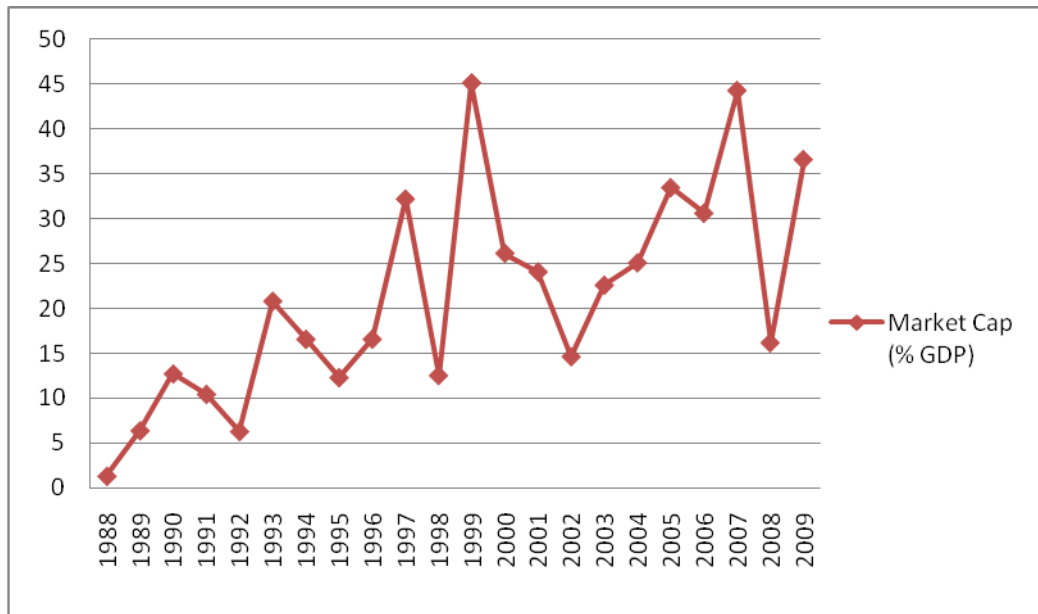
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<sup>1</sup> <http://www.ise.org/Home.aspx> (12.10.2010)

companies exhibit highly concentrated and centralized ownership concentration. Families, directly or indirectly, own more than 75% of all companies and keep the majority control. The separation of ownership and control is principally achieved through pyramidal or complex ownership structures and by building coalitions with other families or foreign firms. Third, an active market for corporate control does not exist given the limited openness and the concentrated ownership of the typical traded company.

In addition to Yurtoğlu (2000:195), Durukan, Özkan, and Dalkılıç (2009:1) confirmed the characteristics of the Turkish corporate governance system as concentrated ownership, pyramidal structures, family owned companies, being bank-based and low investor protection.

**Figure 3: Market Capitalization (%GDP) (Turkey)**



**Source:** The official website of World Bank  
(<http://www.worldbank.org/data>).

Furthermore, according to Ararat and Uğur (2003:71), low liquidity, high volatility, high cost of capital and limited new capital formation can be written as the characteristics of the Turkish capital market.

#### **1.4. CORPORATE GOVERNANCE MECHANISMS**

Denis and McConnell (2003:1) explained CG as the system of mechanisms - both institutional and market-based- that induce the self interested controllers of a company to make decisions that increase the value of the company to its owners.

In addition to Denis and McConnell (2003:5)'s view, Corporate Governance Mechanisms (CGM) are ways to take care of the agency problems between managers and shareholders and between controlling shareholders and minority shareholders. Purpose of CG is to guarantee that minority shareholders' rights are not captured, managers' actions are monitored, and poorly performing managers are replaced. According to the analysis of CGM, the researches for U.S. firms are more common and they look at an extensive range of mechanisms than rising literature on emerging markets has yet taken on. Among them; ownership structure, institutional investor activism, hostile takeovers and executive compensation schemes are common topics (Gibson, 2003:3).

CGM changes largely around the world. Especially firms in the U.S. and the UK significantly depend on legal protection of investors. Large investors are less common, except the ownership structure is concentrated irregularly in the takeover process. In much of Continental Europe (CE) as well as in Japan, there is less dependence on detailed legal protections, and more dependence on large investors and banks. In the rest of the world, ownership is typically heavily concentrated in families, with a few large outside investors and banks (Shleifer and Vishny, 1997:768).

### **1.4.1. Internal and External Control Mechanisms**

As most of authors, Denis and McConnell (2003:1) emphasize that CGM has been widely studied in the U.S. can be extensively described as being either internal or external to the firm. Furthermore, Jensen and Meckling (1976) outlines four basic categories of individual CGM (i) legal and regulatory mechanisms (ii) internal control mechanisms (iii) external control mechanisms (iv) product market competition; in literature generally mechanisms can be classified into two broad categories; internal and external governance mechanisms.

The internal mechanisms of primary interest are the board of directors and the equity ownership structure of the firm. The primary external mechanisms are the external market for corporate control (the takeover market) and the legal/regulatory system (Cremers and Nair, 2005:6).

To summarize the internal and external mechanisms, the best known two subjects which this study examined; ownership structure and legal protection are examples of the respectively internal and external mechanisms. Each has been subject of much public interest and extensive academic research.

## **1.5. INDICES AND MEASUREMENTS OF CORPORATE GOVERNANCE**

There are various measurement methods of CG in the literature. The best known among them are the indexes by Gompers, Ishii, and Metrick (2003) and Bebchuk, Cohen and Ferrell (2004) who are remembered with initials of their names respectively “GIM” and “BCF”.

Gompers, Ishii, and Metrick (2003:16) constructed “Governance Index (GI)” with using the incidence of 24 governance rules to proxy for the level of shareholder

rights at about 1500 large firms during the 1990s and showed that more democratic firms are more valuable. This study has drawn widespread attention from the media, academia and investors and academic researchers have used GIM in new studies (Khanchel, 2007:741; Jiraporn, et al. 2006:952). This governance index is examined on the basis of how many CG provisions exist that restrict shareholder rights, with a higher index indicating weaker shareholder rights.

Bebchuk, Cohen and Ferrell (2004) created an entrenchment index based on six provisions underlying GI, and found it to fully drive the Gompers, Ishii, and Metrick (2003) valuation results. Both GI and the entrenchment index are based on Investor Responsibility Research Center (IRRC) data that is comprised of anti-takeover measures, focusing on external governance (Cremers and Nair, 2005:8).

Most of authors have followed the Gompers, Ishii, and Metrick (2003)'s GI. It is constructed as follows: for every firm, Gompers, Ishii, and Metrick (2003) add one point for every provision that restricts shareholder rights (increases managerial power). This index has the advantage of being transparent and easily reproducible. It does not require any judgments about the efficiency or wealth effects of any of these provisions; Gompers, Ishii, and Metrick (2003) consider only the impact on the balance of power (Khanchel, 2007:743).

Gillan, Hartzell and Starks (2003:7) constructed their own GI with focusing on each firm's board of directors, corporate by law and charter provisions, ownership, state of incorporation, and firm characteristics from 1997 to 2000, which shares a large set of common components with Gompers, Ishii, and Metrick (2003)'s GI.

Klock, Mansi and Maxwell (2005:2) added new approach to the literature and examined the relation between Gompers, Ishii, and Metrick (2003) GI and firm value from an alternative view, namely that of bondholders. Chava, Dierker, and Livdan (2004) analyzes the relationship between firm-level CG measured by the GI of Gompers, Ishii, and Metrick (2003:2) and the cost of bank loans issued to publicly traded firms.

Brown and Caylor (2006:410) created broad summary measure of CG; Gov-Score for U.S. firms from the Institutional Shareholder Services (ISS) database with using 1868 firms based on 51 internal and external CG provisions provided by ISS as of February 1, 2003. They provided researchers with an alternative measure of governance to GI with three distinct advantages: (1) broader in scope of governance, (2) covers more firms, and (3) more dynamic, reflecting recent changes in the CG environment.

Bris, Brisley, and Cabolis (2008:229) started with the country level indices of shareholder rights and accounting standards from La Porta et al. (1998) to calculate the industry-specific CG indices. These indices describe the initial CG environment of target and acquirer in a cross-border merger and hence can be used to describe the potential for change in environment caused by an acquisition. Results are robust to using alternative measures of governance quality, such as the modified shareholder index of Pagano and Volpin (2005:1005), and Rule of Law Index by the World Bank, both of which are time varying.

Khanchel (2007:741) has constructed four indices using a simple linear ranking of publicly available governance variables that summarize the governance structure: one for the board of directors, another for the board committees, a third for the audit committee, and an overall or total index. The indices are used to test whether firm behaviour influences CG quality. Results show that ownership structure, investment opportunities, soft capital, external financing needs and firm size explain some of the variation in governance ratings.

Bhagat and Bolton (2008:258) have made four additional contributions to the literature with considering seven different governance measures instead of a single measure of CG.

Klapper and Love (2004:3) constructed CG indices using information produced by the Credit Lyonnais Securities Asia for a list of 25 emerging economies. The survey used by Klapper and Love (2004:7) has a total of 57 yes or no questions. They are classified into the following seven categories: discipline, transparency, independence, accountability, responsibility, fairness, and social awareness.

Bauer, Günster and Otten (2004) use CG ratings for companies included in the FTSE Euro top 300. Following the approach of Gompers, Ishii, and Metrick (2003) they build portfolios consisting of well-governed and weakly governed companies and compare their performance.

Black, Jang and Kim (2006) constructed a GI (0~100) for 526 companies. The index consist of six sub indices for shareholder rights, board of directors in general, outside directors, audit committee and internal auditor, disclosure to investors, and ownership parity.

Khiari, Karaa and Omri (2007)'s approach has the advantage to integrate all information provided by firms on their governance systems, to take into account the interaction between governance mechanisms and to integrate performance as a reference of governance quality. In order to construct a GI for 320 American firms belonging to the Fortune 500, they tried to exceed the limits adopting an appropriate econometric approach based on the stochastic frontier analysis.

## **CHAPTER II**

### **INVESTOR PROTECTION**

Because of the expropriation of minority shareholders and creditors by the controlling shareholders is extensive, investor protection turns out to be crucial in many countries. When outside investors finance firms, they face a risk, and sometimes near certainty, that the returns on their investments will never be made visible because the controlling shareholders or managers expropriate them (La Porta et al., 2000:4).

Investors may include suppliers of equity finance (shareholders), suppliers of debt finance (creditors), suppliers of relatively firm-specific human capital (employees) and suppliers of other tangible and intangible assets that corporations may use to operate and grow (OECD, 2004:46).

Dargenidou, McLeay and Raonic (2007:249) defined shareholders as the residual claimants on the income stream generated by companies and thus are more exposed either to the distraction of corporate resources or to decisions that are not value-maximizing.

The subject mainly related with protecting outsiders (minority shareholders, non- controlling shareholders) from insiders' (controlling shareholders, large shareholders, managers, directors) expropriation or discretion with the help of the rights, regulations and laws. When investors finance firms, they typically receive certain rights or powers, which are generally protected by the enforcement of laws and regulations. Some of these rights include disclosure and accounting rules to help investors with the information they need to exercise other rights. Protected rights of shareholders include; to receive dividends on a pro-rata conditions, to vote for directors, to participate in shareholders' meetings, to subscribe to new issues of securities to the same conditions as the insiders, to sue directors or the majority in the last few decades investor protection turns out to be crucial, almost in all countries, suspected expropriation, to call an extraordinary shareholders' meetings, etc..



Legislation to protect creditors largely deal with insolvency and restructuring process, and include measures, the creditors back into the possession guarantees to protect their seniority, and to make it more difficult for firms to seek court protection in restructuring (La Porta et al., 2000:4).

## **2.1. THE CONCEPT OF INVESTOR PROTECTION**

Investor protection is defined as the protection of outside investors by the enforcement of regulations and laws (Shleifer and Wolfenzon, 2002:3) or as a key institutional factor affecting firm policy choices such as shareholder voting rights and financial system policies (Shleifer and Vishny 1997:741; La Porta et al. 2000:5).

If the firm is lack of investor protection, insiders can steal a firm's profits by manipulating accounting numbers. For instance, insiders can use their financial reporting discretion to (1) overstate earnings and hide unfavorable earnings realizations (i.e., losses) that would prompt outsider interference, and (2) understate earnings in years of good performance by creating reserves for future periods, effectively making reported earnings less variable than the firm's true economic performance (Leuz, Nanda and Wysocki, 2003:506). Hence, according to La Porta et al. (2000:7), investors should understand the differences in laws and the effectiveness of investors' enforcement across countries in order to protect their rights and make sure that the returns on their investments will not be expropriated by the insiders.

As well as investors should aware of the systems which protect them, minority shareholders require the right to be treated in the same way as the more influential shareholders in dividend policies and in access to new security issues by the firm. The significant but non-controlling shareholders need the right to have their votes counted and respected. Even the large creditors must be able to capture and liquidate collateral, or to reorganize the firm. Without an ability to enforce their rights, investors could give up with nothing even if they have claims to a significant fraction of the firm's capital (La Porta et al., 1999:5).

## **2.1.1. Benefits of Investor Protection**

### **2.1.1.1. Financial markets**

The concept of financial market development is one of the fundamental predictions arising from the investor protection literature (Newman, Patterson, and Smith, 2005:290). Investor protection encourages the development of financial markets. When investors are protected from expropriation, they pay more for securities, making it more attractive for entrepreneurs to issue these securities (La Porta et al. 1999:13).

Countries that protect shareholders have more valuable stock markets, larger numbers of listed securities per capita, and a higher rate of initial public offering (IPO) activity than do the unprotective countries (La Porta et al. 1997:1139).

### **2.1.1.2. Real Economy**

Investor protection influences the real economy (La Porta et al. 1999:14). Also according to Boonlert-U-Thai, Meek, and Nabar (2006:333), country-level legal institutions are crucial elements in explaining capital market development. For example, high investor protection supports financial development and can accelerate economic growth by (1) enhancing saving, (2) channeling these savings into real investment and thereby foster capital accumulation, and (3) allowing capital to flow toward the more productive uses, and thus improve the efficiency of resource allocation (Beck, Levine and Loayza, 2000:7).

## 2.2. LEGAL ORIGINS

According to the investor protection literature commercial legal systems of most countries developed from relatively few “legal families”, including the English (common law), the French, and the German, the latter two derived from the Roman Law. In the 19th century, these systems evolved throughout the world through conquest, colonization, and voluntary adoption. Firstly two characteristics appeared French and English legal origins. England and its former colonies, including the U.S., Canada, Australia, New Zealand, and many countries in Africa and South East Asia, have ended up with the common law system. Napoleon conquered countries which are France and many countries, are part of the French civil law tradition. French civil law also extends to the former French, Dutch, Belgian, and Spanish colonies, including Latin America. German civil law tradition includes Germany, Germanic countries in Europe, and a number of countries in East Asia. The Scandinavian countries are from their own tradition (La Porta et al., 2000:8).

How well legal rules protect outside investors varies systematically across legal origins. Coffee (1999:24) and Black (2000:37) agreed that protection under the legal origin is complementary to protection under securities law. Furthermore, La Porta et al. (1998:1113) discussed a set of key legal rules protecting shareholders and creditors and documented the prevalence of these rules in 49 countries around the world. They also gathered these rules into shareholder (anti- director) and creditor rights indices for each country, and considered several measure of legal enforcement, such as the efficiency of the judicial system and a measure of the quality of accounting standards among countries under common-law origin and civil-law origin (French, German and Scandinavian-origin). They used these variables as proxies for the stance of the law toward investor protection to measure the variation of legal rules and the quality of enforcement across countries and across legal families (La Porta et al., 2000:7).

According to the research of legal origin by La Porta et al. (1998:1113), common law countries have the strongest protection of outside investors -both shareholders and creditors- whereas French civil law countries have the weakest protection. German civil law countries are in the middle and Scandinavian origin countries are similar to the German civil law countries. When considering the legal origin with the law enforcement perspective, there are important differences between countries in the legal enforcement as well. The quality of enforcement has several elements, from the efficiency of the judiciary to the quality of accounting standards. Unlike legal rules themselves, which do not appear to depend on the level of economic development, the quality of enforcement is higher in richer countries. But with considering the level of per capita income constant and legal origin matters: French legal origin countries have the weakest quality of law enforcement of the four legal traditions. Because legal origins are highly correlated with the law, and because of legal families originated much before the financial markets have developed, it is not expected that laws were written primarily in response to market pressures (La Porta et al., 1999:7).

To extent the study, La Porta et al. (2000a:2) examined whether legal origin and investor protection reduce agency problems by investigating the relation between legal origin, investor protection, and dividend policies around the world using two different agency models to understand how legal institutions protect investors. Based on samples obtained from 33 countries, they found that common law countries with better investor protection pay higher dividends than civil law countries with weaker investor protection. This result suggests that strong legal investor protection provides minority shareholders legal rights to force the firms to pay dividends. Therefore, when investor protection is well, minority shareholders have greater legal rights and also dividend payouts will be higher.

### **2.3. THE ROLE OF LEGAL PROTECTION**

In order to study how legal investor protection limits expropriation against minority shareholders, we need to understand what is effective legal protection of investors.

The concept of legal protection of investors in a country is an important determinant of the development of its financial markets (La Porta et al., 1997:1132; La Porta et al., 1998:1114). If laws are protective of outside investors and well conducted, investors are willing to finance firms, and financial markets are both broader and more valuable (La Porta et al., 2002:1147). Shleifer and Vishny (1997:774) agreed that legal investor protection, providing minority shareholders legal powers through legal protection laws, help reducing agency problems by limiting expropriations against minority shareholders.

La Porta et al. (2000:7) indicated that, with a different legal authority, investors which are protected by rules come from different sources, including company, security, bankruptcy, takeover, and competition laws, but also from stock exchange regulations and accounting standards. Enforcement of laws is as important as their contents. In most countries, laws and regulations are enforced in part by market regulators, courts, and by market participants themselves. All outside investors, whether large or small, shareholders or creditors, need to have their rights protected. In the absence of effectively enforced rights, the insiders would not have much of a reason to repay the creditors or to distribute profits to minority shareholders, and external financing mechanisms would tend to break down. Furthermore, outside investors could think that more of the firm's profits would get paid to them as dividends or interest when outside investors, both shareholders and creditors well protected and it enables outside investors to pay more for financial assets, equity and debts confidently. If the firm has strong investor protection, the entrepreneur cannot expropriate as much as he wants in the firms (La Porta et al., 2002:1147).

Following La Porta et al. (2002:1148), strong legal protection of investors is associated with higher valuation of corporate assets. They interpreted this as support for the expropriation of wealth of minority shareholders as well as the role of the law in limiting such expropriation. Also according to Choi (2005) higher investor rights may thus interpreted as less risk to investor and by limiting expropriation, assuming all other things are equal, the risk of investments decreases.

In response to insiders' incentive to acquire private control benefits and to hide these actions, corporate outsiders are motivated to design contracts that confer to them rights to discipline insiders. However, outsiders must rely on the legal system to enforce these contracts (La Porta et al., 1998:1126). The legal system protects the property rights of investors by enacting and enforcing laws that enable the firm to contract with outside investors. For instance, shareholders are paid dividends because they can vote to replace the firms' managers and directors, and creditors are repaid because the law enables them to repossess the firms' assets in case of default. Consistent with this view, La Porta et al. (2002) showed that higher dividend payouts are associated with stronger minority shareholder protection. Nenova (2000:348) found that the size of voting premia, which are an estimate for private control benefits, are negatively associated with stronger outsider protection and legal enforcement (Leuz, Nanda and Wysocki, 2003:507).

The impacts of legal origin and investor protection do not restrict to dividend policies. Many prior researches have examined the effects of legal investor protection on different areas. For example, La Porta et al. (1997:1149) emphasized that when legal institutions are strong, investors and creditors realize that their rights to get back returns on their investments are well protected; therefore, they are more willing to invest. It is easier for firms operating in countries with strong legal investor protection to raise external financing either by issuing equity or obtaining debts. They found that countries with weaker legal investor protection have smaller and narrower capital markets than countries with better legal investor protection (Olivia, 2004). Staying on the same line of study, La Porta et al. (2002:1148) examined the impact of legal investor protection on corporate valuation. They anticipated that better legal investor protection is associated with higher valuation of

corporate assets. By comparing legal investor protection (measured by the law origin and anti-director rights index), corporate valuations (measured by Tobin's Q) and the sales growth rates, they concluded that corporate valuations are significantly higher for common law countries with higher anti-director rights. Olivia (2004) showed that strong legal investor protection limit controlling shareholders' abilities to expropriate against outside investors.

Among all prior studies examining the effects of investor protection, the underlying crucial theme is that legal investor protection reduces the opportunity of expropriations or private benefit extractions by controlling shareholders against outside investors.

## **2.4. LITERATURE REVIEW**

The new literature on the importance of investor protection subject begins with La Porta, Lopez-de-Silanes, Shleifer and Vishny (LLSV). They brought various studies about investor protection, ownership concentration and CG in finance literature.

La Porta et al. investigated in their (1999a) study; the determinants of the quality of government in a large cross section of countries. They measured the government performance by using proxies for interventionism, public sector efficiency, quality of public good provision, government size, and political freedom. The data show that the quality of the governments varies systematically across the countries. The results pointed that rich nations have better governments than poor ones, ethno linguistically homogenous countries have better government than the heterogeneous ones. Common law countries have better government than French civil law or socialist law countries. In fact these results forced the legal origin view for the literature. Ownership structure is prior lectures which La Porta, Lopez-de-Silanes and Shleifer (1998) studied to observe the investor protection. They displayed data on ownership structure of large corporations in 27 wealth economies

and found different results than that suggested by Berle and Means (1932). The result of 27 countries observations suggests that the excellence of investor protection, which measured either by the Anti Director Rights Index (ADRI) or by legal origin, is a strong and healthy determinant of the incidence of the widely held firms. Also this measure is a better predictor of ownership concentration and still used by varies of authors. La Porta et al. (1997) is the best known and used article for the investor protection literature, they observed 49 countries to determine the legal determinants of finance and ADRI which has been used almost in 100 published studies as measure of investor protection. They used three measures of equity finance; ratio of stock market capitalization to Gross National Product (GNP) in 1994, the number of listed domestic companies in each country relative to its population, the number of IPOs of shares in each country relative to the population. The results showed that the legal environment matters for the size and extent of a country's capital markets. The civil law and particularly French civil law countries have both the lowest investor protection and the least developed capital markets. They found that the quality of shareholder rights and the quality of law enforcement are positively related to market capitalization over GNP, number of listed firms per capita and number of IPOs per capita across countries. In their (2000) study, they claimed the more fruitful way to understand CG and its reform is legal approach. They paid attention to the importance of the legal protection. Not leaving alone the financial market, on the contrary financial markets need some protection of outside investors, whether buy courts, government agencies, or market participants themselves. With the (1998) paper, they examined investor protection, the quality of enforcement laws which are governing investor protection, and ownership concentration. The study began the shareholder rights with company laws and observes the investor protection in 49 countries as (1997) paper. They suggested three detailed conclusions which are more popular in the investor protection literature. First one is the countries whose legal origin in the common law tradition protects the minority shareholders' rights better than the countries whose legal origin in the civil low especially French-civil-law countries. Second one is the law enforcement; law enforcement is strong in the common law countries, also weak in the French-civil-law countries. The last one is the ownership concentration, accounting standards and investor protection measures



are related with a lower concentration of ownership, showing that concentration is indeed a reaction to poor investor protection. They measured the performance of the large firms in 27 wealth economies to observe the investor protection in (2002). This study used ADRI and legal origins of countries to measure the investor protection and use Tobin's Q to measure the performance. Findings showed that weak investor protection is penalized with low valuations. This paper supports the investor protection's importance above the firms' performance and its role in shaping corporate finance.

Slavova (1999) extended the La Porta et al. (1997)'s work to 21 formerly communist countries of Eastern Europe and the former Soviet Union. Rather than looking directly at the laws, she used a survey to ask local legal professionals what specific rules are in place and how they are enforced. Her work confirms the analysis of LLSV on the general relationship between shareholder protection and stock market development and the detailed assessment of Glaeser, Johnson and Shleifer (2001) on Poland and the Czech Republic. For post-communist countries, privatization has proved much more effective where capital markets have also developed at least to some extent (Johnson and Shleifer, 2001).

Djankov et al. (2006) presented a new measure of legal protection of minority shareholders against expropriation by corporate insiders: the anti-self-dealing index. This index could be thought as the continuation of ADRI. This study is calculated in 72 countries based on the legal rules in 2003 and data are based on answers to a questionnaire completed by lawyers. The other importance of this study is Djankov et al. (2006) presented the revisited ADRI. They investigated the relation between anti self dealing index and stock market development. To measure stock market development they used five indicators; the first variable is the ratio of stock market capitalization to GDP. The second is the number of domestic publicly-traded firms in each country to its population. The third is the value of IPO in each country relative to its GDP, the fourth one is the (median) premium paid for control in corporate control transactions and the last one is the ownership concentration. The proxies 1, 2, 3 and 5 are common variables to measure the investor protection. With regression and correlation analysis, they found the strong relation with anti self dealing index

and stock market development variables. That's why the paper suggested that anti self dealing index is a good indicator of investor protection.

The last update was made by Spamann (2008) to the ADRI (La Porta et al., 1997). By the help of local lawyers, he corrected the values of the ADRI with an improved data collection method.

CG is the important aspect of investor protection. Most of CG studies emphasize the relation between investor protection, ownership structure and CG. Shleifer and Vishny (1997) analyzed CG by considering the significance of investor protection and ownership concentration in corporate governance systems around the world. In this paper they discussed that legal protection of investor rights is one fundamental element of CG. They argued that successful corporate governance systems, such as those of the U.S., Germany, and Japan separate themselves from governance systems in most other countries, which provide limited investor protection, and have concentrated on ownership structure.

Dargenidou, McLeay, and Raonic (2007) investigated the relationship between corporate ownership, CG and investor protection on the incorporation of current value shocks for the period between 1993-1998 by using a cross-sectional fixed year effects regression as supported by the F- test. Results suggest that CG performances substitute for the lack of investor protection and vice versa.

Klapper and Love (2004) investigated the differences in firm-level governance mechanisms, their relationship with the country-level legal environment, and the correlations between governance and performance in 25 countries. This paper used questionnaire to measure the CG around the world and used three country level measures of legal efficacy; judicial efficiency, ADRI and legality. Tobin's Q and Return on Assets (ROA) are used to measure the performance. This study found that firms in countries with low legal systems have a mean of lower governance rankings and also low investor protection, good governance is positively correlated with market valuation and operating performance so high investor protection. Furthermore, Gompers, Ishii, and Metrick (2003) constructed a "Governance Index" with 24 governance rules to proxy for the level of shareholder rights at about 1500

large firms during the 1990s. This study found that firms with stronger investor protection have higher firm value, higher profits, higher sales growth, lower capital expenditures, and made fewer corporate acquisitions.

Lemmon and Lins (2003) studied the effect of ownership structure on firm value during the East Asian financial crisis for the 1995-1996 periods. After multivariate and regression analysis, findings showed that ownership concentration plays important role in determining whether insiders expropriate minority shareholders.

Krishnamurti, Sevic and Sevic (2003) examined ownership-control structure, firm-level governance and country-level legal protection available to external suppliers of capital. Using with post-crisis data, study presented a strong country effect in governance. High control firms in countries with low investor protection have lower firm-level governance scores in general, also firm-level governance is not related to firm value as measured by Tobin's Q.

Yurtoğlu (2000) described the relationship between the ownership concentration and firm performance in Turkey. This study focused on ownership changes over the 1987-1997 periods. The findings showed that ownership is highly concentrated in Turkey, families being the dominant shareholders. Concentrated ownership and pyramidal structures have a negative effect on performance as reflected in lower return on assets, market to book ratios and dividend payments. Poor investor protection is a possible source of ownership concentration in Turkey as suggested by La Porta, Lopez-de-Silanes and Shleifer (1998).

Boubakri, Cosset, and Guedhami (2005) observed the function of the ownership structure and investor protection in post privatization CG in 26 emerging market countries over the period 1980-1997. Findings showed that ownership concentration is significantly and positively related to the post privatization firm performance. Following that, higher levels of institutional ownership in countries with relatively poor investor protection (civil law countries) compared to countries with a better investor protection (common law countries).

Qu (2004) analyzed the ownership concentration among the 49 countries in a 10-year period (1992–2002). After controlling for firm-level determinants such as size, auditing practice, return rate and with multivariable regression analysis, results showed that ownership concentration is significantly lower in countries with more developed stock market and more effective investor protection.

Shleifer and Wolfenzon (2002) presented different model to measure investor protection, they combined the elements of Becker (1976) “crime and punishment” framework into a corporate finance environment of Jensen and Meckling (1976). They analyzed the entrepreneur’s decision and the market equilibrium. This different measurement’s results are consistent with the studies which observe relations between investor protection and corporate finance. The results show that investor protection is related with; high value of stock market (La Porta et al., 1997); a higher number of listed firms (La Porta et al., 1997); larger listed firms in terms of their sales or assets (Kumar, Rajan and Zingales, 1999); higher valuation of listed firms relative to their assets (La Porta et al., 2002); greater dividend payouts (La Porta et al., 2000a); lower concentration of ownership and control (La Porta et al., 1999); lower private benefits of control (Nenova, 2003); and higher correlation between investment opportunities and actual investments (Wurgler, 2000).

Leuz, Nanda and Wysocki (2003) and Boonlert-U-Thai, Meek, and Nabar (2006) examined the relation between the investor protection and earnings management. Leuz, Nanda and Wysocki (2003) studied over the period in 1990-1999 to the 31 countries. Investor protection is measured with 9 proxies. The earnings management is used as performance indicator. Firstly cluster analysis is applied to divide the countries according to their investor protection proxies than with multiple regression analysis the study examine the relation between the investor protection and earnings management. According to results earnings management is negatively associated with the quality of minority shareholder rights and legal enforcement after controlling for other important factors such as mandated disclosure standards and other disclosure incentives across countries. Boonlert-U-Thai, Meek, and Nabar (2006) improved the Leuz, Nanda and Wysocki (2003)’s study with investigating the effects of investor protection on four accounting-based earnings attributes (accruals

quality, earnings persistence, earnings predictability, and earnings smoothness). This study operates eight institutional characteristics; ADRI, efficiency of the judicial system, rule of law, corruption index, ratio of the stock market capitalization held by minorities to gross domestic product, ratio of the number of domestic firms to the population, ratio of the number of IPOs of equity to the population, and ownership concentration to measure the investor protection. K-means cluster analysis, regression analysis and correlation analysis was used to determine the relation between the variables. The results, based on K-means cluster analysis between institutional characteristics and earnings attributes, are mixed and these results imply that conclusions about the impact of institutional characteristics on earnings quality depend on how earnings quality is measured.

Chhabra, Ferris, Sen (2007) examined the relation between investor protection, capital markets and firm valuation over the period July 2002 to December (2002). To measure the effect of investor protection to firm value, they used 2 factors; the liquidity of equity and the level of return demanded by equity investors. This study estimated three different measures of investor protection; the first is the country's common or civil law origin, second one is the ADRI and the third measure is the judicial efficiency. Multivariate analysis was used to analysis data and results show that lower levels of investor protection reduce the liquidity of the firm's shares, while simultaneously producing a higher cost of equity capital.

Brockman and Chung (2003) investigated the relation between investor protection and firm liquidity. The data covering the period from May, 1996 to August, 1997. Regression and matched-sample results showed that firm liquidity is significantly affected by investor protection.

## **CHAPTER III**

### **DATA AND METHODOLOGY**

#### **3.1. METHODOLOGY**

This study aims at analyzing Turkey's place based on its investor protection proxies around the world. The study has two stages; the first stage is to determine the investor protection proxies and observing the relationship between the proxies. The second stage is defining the clusters for 3 different periods (1994-1998; 1998-2004 and 1998-2009) to present Turkey's improvement and current position in sample countries around the world with cluster analysis.

In literature there are various types of techniques to measure the investor protection based on country or firm level. This study chose four most commonly used indicators and investor protection level measured with aggregating these common measurements proxies; ADRI, law enforcement, the efficiency of the equity market and ownership concentration.

##### **3.1.1. Anti Director Rights Index**

ADRI are widely accepted investor protection measurement index which is generated by La Porta et al. (1997) and, used in over a hundred published studies. ADRI measures how strongly the legal system favors minority shareholders against managers or dominant shareholders in the corporate decision making process, including the voting process (La Porta et al., 1997:1136) and this index captures the aggregate rights of minority shareholders (Leuz, Nanda and Wysocki, 2003:518). This index is formed by adding one when;

1. The country allows shareholders to mail their proxy vote to the firm,
2. Shareholders are not required to deposit their shares prior to the general shareholders' meeting,
3. Cumulative voting or proportional representation of minorities in the board of directors is allowed,
4. An oppressed-minorities mechanism is in place,
5. The minimum percentage of share capital that entitles a shareholder to call for an extraordinary shareholders' meeting is less than or equal to 10% (the sample median), or
6. Shareholders have preemptive rights that can be waived only by shareholders' vote.

The index ranges from zero to six, with higher scores implying stronger anti-director rights and better investor-protection (La Porta et al., 1997:1134; Boonlert-U-Thai, Meek, and Nabar, 2006:334).

### **3.1.2. Law Enforcement**

La Porta et al. (1997:1140) used the law enforcement measure to assess the law and order tradition in the country. According to law enforcement measure, the paper used the “rule of law” variable and found that the countries with lower scores of rule of law are low for investor protection. Leuz, Nanda and Wysocki (2003:518) and Boonlert-U-Thai, Meek, and Nabar (2006:334) measured the investor protection with the law enforcement. They used this method considering the mean score across three variables, each ranging from zero to ten; an index of the efficiency of a country’s legal system, an index of the rule of law in a country, and the level of corruption in a country.

La Porta et al. (1998:1140) used law enforcement measure with five proxies: efficiency of the judicial system, rule of law, corruption, risk of expropriation by the government, and likelihood of contract repudiation by the government. Results show that richer countries have higher quality of law enforcement and French-civil law countries' score lower on every single measure than the common-law countries do.

This paper used efficiency of the judicial system, rule of law, and corruption index proxies as law enforcement measures, based on Boonlert-U-Thai, Meek, and Nabar (2006) and Leuz, Nanda and Wysocki (2003). Law enforcement is a good indicator to measure investor protection as well as corporate governance (Kaufmann, Kraay, and Mastruzzi, 2009). To observe the governance Kaufmann, Kraay, and Mastruzzi every year publish working paper named as "Governance Matters". Kaufmann, Kraay, and Mastruzzi (2009) calculate six governance indicators; Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption with current data. The indicators are based on several hundred individual variables measuring perceptions of governance and from these indicators, "Rule of Law", and "Control of Corruption" are the proxies which this paper used.

### **3.1.2.1. Efficiency of the Judicial System**

Assessment of the efficiency and integrity of the legal environment (judicial system) with considering how it affects business, especially to the foreign firms (La Porta et al., 2004:10). The index ranges from zero to 10, with higher scores implying greater legal enforcement and better investor-protection (Boonlert-U-Thai, Meek, and Nabar, 2006:334).



### **3.1.2.2. Rule of Law**

Kaufmann, Kraay, and Mastruzzi (2009:6) explain the rule of law as: “capturing perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.” This estimate ranges from -2.5 to 2.5, with higher scores implying greater legal enforcement and better investor protection.

### **3.1.2.3. Control of Corruption**

Kaufmann, Kraay, and Mastruzzi (2009:6) defines the Control of Corruption as: “Capturing perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.” Corruption is an index measuring the exercise of public power for private gain (Boonlert-U-Thai, Meek, and Nabar, 2006:335). According to Kaufmann, Kraay, and Mastruzzi (2009:15) paper, the index ranges from -2.5 to 2.5, with higher scores implying greater legal enforcement and better investor protection.

### **3.1.3. The Efficiency of the Equity Market**

The efficiency of the equity market indicator includes several proxies to measure investor protection. La Porta et al. (1997:1133) used three measures of equity finance. They looked at the ratio of stock market capitalization to GNP, the number of listed domestic firms in each country relative to its population and IPOs of

shares in each country relative to the population La Porta et al. (1997:1137, 2002:1158) found that the score of the anti- director rights predicts stock market development across countries and also their results show that civil law, and particularly French civil law, countries, have both the weakest investor protection and the least developed capital markets, compared to common law countries.

Boonlert-U-Thai, Meek, and Nabar (2006:335) and Leuz, Nanda and Wysocki (2003:518) used the ratio of the stock market capitalization held by minorities to gross domestic product; the ratio of the number of domestic firms listed in a given country to its population; the ratio of equity issued by newly listed firms in a given country to its gross domestic product to determine the importance of equity market and to measure the investor protection. They found that the countries which have strong legal enforcement also have larger stock markets.

In this paper we used ratio of the stock market capitalization to gross domestic product (Market Cap/ GDP), the number of domestic firms listed in a given country to its population (Domestic firms/ pop) and the ratio of equity issued by newly listed firms in a given country to its gross domestic product (IPOs/ GDP) to define the efficiency of the equity market.

#### **3.1.3.1. The Stock Market Capitalization to GDP**

This study uses average of the ratio of stock market capitalization to gross domestic product to measure the importance of the equity market in each country. Higher values indicate a greater importance of the stock market and better investor protection (Boonlert-U-Thai, Meek, and Nabar, 2006:335; Leuz, Nanda and Wysocki 2003:518).

### **3.1.3.2. The Number of Domestic Firms to Population**

This study uses the average ratio of the number of domestic firms listed in a given country to its population to measure the importance of the equity market in each country. Higher values indicate a greater importance of the stock market and better investor protection (Boonlert-U-Thai, Meek, and Nabar, 2006:335; Leuz, Nanda and Wysocki, 2003:518).

### **3.1.3.3. The Ratio of Equity Issued By Newly Listed Firms to GDP**

This study uses the average ratio of the equity issued by newly listed firms in a given country to its gross domestic product to measure the importance of the equity market in each country. Higher values indicate greater importance of the stock market and better investor protection (Boonlert-U-Thai, Meek, and Nabar, 2006:335; Leuz, Nanda and Wysocki, 2003:518).

### **3.1.4. Ownership Concentration**

Ownership concentration has the same popularity to measure the investor protection as the ADRI. For ownership concentration there are various studies which explore the relationship between the investor protection and ownership concentration. La Porta, Lopez-de-Silanes and Shleifer (1998:7) explored ownership concentration by looking at the average percentage of common shares owned by the three largest shareholders in the ten largest nonfinancial, privately owned domestic firms in a given country and found that companies in countries with poor investor protection have more concentrated ownership. Boubakri, Cosset, and Guedhami

(2005:20) found that the positive effect of ownership concentration on firm performance matters more in countries with weak investor protection also mentioned about the ownership concentration is an effective internal mechanism of corporate governance.

Boonlert-U-Thai, Meek, and Nabar (2006) and Leuz, Nanda and Wysocki (2003) used the ownership concentration to measure the investor protection and found that the countries which have strong legal enforcement have also low ownership concentration and vice versa. As a result, lower values of ownership correspond to better investor-protection.

After gathering data of proxies for the investor protection measurement, firstly the study used the correlation matrix to observe the relation between the investor protection proxies. Then in order to determine the current position of Turkey based on its investor protection level around the world, K-means cluster analysis was used based on the studies of MacQueen (1967), Leuz, Nanda and Wysocki (2003) and Boonlert-U-Thai, Meek, and Nabar (2006).

According to previous studies, Boonlert-U-Thai, Meek, and Nabar (2006) and Leuz, Nanda and Wysocki (2003) investigated their studies with using K-means cluster analysis to characterize the sample countries based on the investor protection proxies into three distinct clusters.

Based on George and Mallery (2003), a correlation is often called bivariate correlation to designate a simple correlation between two variables, as opposed to relationships among more than two variables. A correlation is also frequently called the Pearson product-moment correlation or the Pearson  $r$ . Karl S. Pearson is credited with the formula from which these correlations are computed. Although the Pearson  $r$  is predicated on the assumption that two variables involved are approximately normally distributed, the formula often performs well even when assumptions of normality are violated or when one of the variables is discrete. Ideally, when variables are not normally distributed, the Spearman correlations are available.

### 3.1.5. Cluster Analysis

Cluster analysis is a generic name for a variety of mathematical methods, numbering in the hundreds that can be used to find out which objects in a set are similar. Romesburg (2004:2) exemplified the cluster analyses with pebbles; “If we gathered a set of pebbles from a stream shore, noted their attributes of size, shape, and color, and sorted similar pebbles into the same piles, we would be physically performing a cluster analysis. Each pile of similar pebbles would be a cluster”. Mathematical methods of cluster analysis perform this mathematically. Instead of sorting real objects, these methods sort objects described as data. Objects with similar descriptions are mathematically gathered into the same cluster. For a variety of research objectives, the researchers need to find out which objects in a set are similar and different. The best known research objective is the production of classifications. One reason that cluster analysis is so useful is that researchers in all areas need to make and revise classifications constantly. Classifications are essential building blocks in all fields of research (Romesburg, 2004:2).

SPSS has three different procedures that can be used to cluster data: hierarchical cluster analysis, k-means cluster, and two-step cluster. This study used k-means cluster analysis which is one of the simplest unsupervised learning algorithms that solves the clustering problem by classifying a given data set into a certain number of clusters.

The K-means method is designed to partition two-way, two-mode data (that is, N objects each having measurements on P variables) into K classes ( $C_1, C_2, \dots, C_K$ ) where  $C_k$  is the set of  $n_k$  objects in cluster k, and K is given. If  $X_{N \times P} = \{x_{ij}\}_{N \times P}$  denotes the N \* P data matrix, the K-means method constructs these partitions so that the squared Euclidean distance between the row vector for any object and the centroid vector of its respective cluster is at least as small as the distances to the centroids of the remaining clusters (Steinley, 2006:107).

K-means cluster analysis is the most common nonhierarchical, partitioning technique (MacQueen, 1967; Steinley and Brusco, 2008:77) and K-means clustering tries to minimize the within - cluster sums - of squares error, finding clusters that are externally isolated and internally cohesive. Moreover, the K-means procedure has been found to have good cluster recovery qualities (Steinley, 2006:6; Steinley and Brusco, 2008:77).

When Boonlert-U-Thai, Meek, and Nabar (2006:339) and Leuz, Nanda and Wysocki (2003:519) performed the K-means cluster analysis, they standardized the investor-protection proxies to Z-scores. The Z-score method addresses the differential scale of the original variables by transforming the variables to have unit variance; however, the Z-score method places no specific restrictions on the ranges of the transformed variables. An important aspect to notice about the Z standardization is that the larger the variance of a variable, the larger the value of its divisor in the standardization process (Steinley and Brusco, 2008:82). Z-Score standardization ( $Z^1$ ) is estimated with following formula;

$$Z^1_{ij} = \frac{x_{ij} - \mu_{X_j}}{\sigma_{X_j}}$$

In respect of Steinley and Brusco (2008:82), the recommended method of standardizing variables in cluster analysis is by the “Range Standardization” and contrary to Boonlert-U-Thai, Meek and Nabar (2006) and Leuz, Nanda and Wysocki (2003), this study used “Range Standardization ( $Z^2$ )” instead of usual “Z-score”. Milligan and Cooper (1988) concluded that standardizing by the range (instead of the usual Z-score) was the most effective method. The Range Standardization procedure fixes all the transformed variables to have a range of unity but does not place any restrictions on the variances of the transformed variables. “Range Standardization” is computed as;

$$Z_{ij}^2 = \frac{x_{ij}}{R(x_j)}$$

Where;

$$R(x_j) = \max(x_j) - \min(x_j)$$

To analyze data, correlation, and build cluster analysis; PASW Statistics (SPSS) data analysis software is used in this study.

### **3.2. VARIABLES AND DATA**

Gathering data and to choose the variables are the crucial part of this study. There are many studies about investor protection and in these studies investor protection is observed with various indicators. In this paper, investor protection is measured by four indicators and these indicators include eight institutional characteristics from La Porta et al. (1997, 1998 and 2004) and Kaufmann, Kraay, and Mastruzzi (2009) and define them as investor protection proxies (Boonlert-U-Thai, Meek, and Nabar, 2006 and Leuz, Nanda and Wysocki, 2003). These are; (1) Anti-director rights, (2) Efficiency of the judicial system, (3) Rule of law, (4) Corruption index, (5) Ratio of the stock market capitalization to gross domestic product, (6) Ratio of the number of domestic firms to the population, (7) Ratio of the number of IPOs of equity to the population, and (8) Ownership concentration. The proxies 2, 3, and 4 are used by La Porta et al. (1998) to measure the level of legal enforcement across the countries. La Porta et al. (1998), La Porta, Lopez-de-Silanes and Shleifer (2004), and Leuz, Nanda and Wysocki (2003) also use proxies 5, 6, and 7 to measure the importance of stock markets across countries. This study considers these proxies individually and uses them to characterize the analyzed countries into three distinct

clusters using K-means cluster analysis as Boonlert-U-Thai, Meek, and Nabar (2006) and Leuz, Nanda and Wysocki (2003).

Data used in investigation were obtained from different sources and for three different periods. Since CG and investor protection have been received much more attention according to the scandals especially Adelphia, Enron and WorldCom, following these scandals, the countries revisited significantly their laws to protect their investors. That is why this study considered three different periods to analyze and carefully chose the periods to reflect the periods' own conditions. First period is based on La Porta et al. (1998), the period of 1994-1998. This time is before the big scandals such as Enron, WorldCom and Tyco. After these scandals U.S. published new acts (SOX 2002) and take precautions to prevent these scandals occur again. Hence to determine the second period, this study considered the period of 1998-2004 as Boonlert-U-Thai, Meek, and Nabar (2006). So the balances of the world start to change with this act and second period gave the chance to view the changes in the world. Then the third period of this study reflects the current period, improvement of the world and today's conditions with the period of 1998- 2009. The study arranged the periods at the chronological order to emphasize the differences between the periods.

This study starts with La Porta et al. (1998)'s 49 countries as a sample to perform research. La Porta et al. (1998)'s sample covers 49 countries from Europe, North and South America, Africa, Asia, and Australia including Turkey. There were no socialist or "transition" economies in the sample. There are many published research used La Porta et al. (1998)'s 49 countries as a sample. Leuz, Nanda and Wysocki (2003) and Boonlert-U-Thai, Meek, and Nabar (2006) began with the 49 countries in La Porta et al.'s (1998) sample and eliminates countries with fewer than 200 firm-year observations to compute each of the firm-level variables in the analysis. These elimination results in a final sample of 57,610 firm-year observations drawn from 31 countries. Turkey is not within these 31 countries. This study added Turkey into Leuz, Nanda and Wysocki (2003) and Boonlert-U-Thai, Meek, and Nabar (2006)'s 31 countries and used 32 countries as a sample. Using the Leuz, Nanda and Wysocki (2003) and Boonlert-U-Thai, Meek, and Nabar (2006)'s sample



prevented the complication when the study compared the clusters with previous years and studies. The aim to add Turkey into these countries is to determine the Turkey's position in these countries based on investor protection levels and observe the changes in 1998 to 2009 periods. These countries' legal origins and legal traditions are retrieved from the La Porta et al. (1998), La Porta et al. (2000), Leuz, Nanda and Wysocki (2003) and Boonlert-U-Thai, Meek, and Nabar (2006).

ADRI is the investor protection index which is firstly calculated by La Porta et al. (1998). There are 3 available data for ADRI across countries. First one is La Porta et al. (1998)'s, second one is the data which Djankov et al. (2006) revisited ADRI. The last one is the current one which is revisited by Spamann (2008). This study used current ADRI data which is revisited by Spamann (2008) for the current period, when Spamann (2008) revisited the ADRI, he put out of Indonesia that is why Indonesia's ADRI data is obtained from La Porta et al. (1998). Also to compare the studies and display improvement, this study used La Porta et al. (1998)'s ADRI for the other two periods (La Porta et al. (1998)'s ADRI data was used by various published studies till the current ADRI data revised by Djankov et al. (2006) and Spamann (2008)).

La Porta et al. (2000), Leuz, Nanda and Wysocki (2003) and Boonlert-U-Thai, Meek, and Nabar (2006) used efficiency of the judicial system data from La Porta (1998). Because of the lack of current data, this data retrieved from La Porta (1998) for three periods as various academic studies.

To gather the rule of law and corruption index data across the countries, the study used the current version of the "Governance Matters" by Kaufmann, Kraay, and Mastruzzi (2009). To determine the first period; the data obtained from the average index of the years 1998 and 2000 from the Kaufmann, Kraay, and Mastruzzi (2009). For the second period, the study used Boonlert-U-Thai, Meek, and Nabar (2006)'s rule of law and corruption index data for 31 countries and Turkey's rule of law and corruption index data in 2000 is retrieved from the Kaufmann, Kraay, and Mastruzzi (2009) for second period. The current period data was obtained from the average index of the years 2008 and 2009 from the Kaufmann, Kraay, and Mastruzzi (2009).

The ratio of the stock market capitalization to gross domestic product values for the first two periods is calculated differently from the current period. La Porta et al. (1997:1135) calculated this ratio as the stock market capitalization held by minorities to gross national product for 1994 and explained as: “The stock market capitalization held by minorities is computed as the product of the aggregate stock market capitalization and the average percentage of common shares not owned by the top three shareholders in the ten largest non-financial, privately owned domestic firms in a given country”. Also Boonlert-U-Thai, Meek, and Nabar (2006) and Leuz, Nanda and Wysocki (2003) used this proxy with applied into different periods in their studies. They retrieved the data from the La Porta, Lopez-de-Silanes and Shleifer (2004), so the data is for the period 1996-2000. Djankov et al. (2006) studied the stock market capitalization to gross domestic product for the period 1999-2003 to measure the stock market efficiency. Based on Djankov et al. (2006), this study calculate the current period, with using the average of the ratio of stock market capitalization to gross domestic product for the period 2008 (because of the lack of some countries’ market capitalization data-as Netherland- in world bank for the 2009 period, the study used the period of 2008 data. Stock market capitalization (year 2008) and Gross Domestic Product (GDP) (year 2008) data are obtained from World Bank for 31 countries (World Bank does not have the Taiwan’s data; hence the study obtained the data for Taiwan from the world federation exchange (WFE) web site).

To estimate the ratio of the number of domestic firms to the population (in millions) for related countries, the number of domestic firms and the population of related countries data is retrieved from the World bank for 31 countries for the 2009 (current period) and as the same for stock market capitalization data the study obtained Taiwan’s year 2009 data from world federation exchange web site. The first period data gathered from La Porta et al. (1997) for the period 1994 and the second period data gathered from the Boonlert-U-Thai, Meek, and Nabar (2006) for the period 1996-2000 (because of the lack of Turkey data in Boonlert-U-Thai, Meek, and Nabar (2006), this study obtained Turkey’s data for period 1996-2000 from World Bank).

To gather the ratio of the number of IPOs of equity (in thousands) to the population (in millions) for three periods, this study put account La Porta et al. (1997, 2004) and Djankov et al. (2006). For the first period; La Porta et al. (1997) between the period of July 1995 to June, 1996; the second period data is retrieved from Boonlert-U-Thai, Meek, and Nabar (2006) the period of 1996-2000 and the current period data gathered from the La Porta, Lopez-de-Silanes and Shleifer (2004) also Djankov et al. (2006) used the same data, between the years 1996-2000. In this study for the current period, the number of IPOs of equity data was found from various sources as world federation exchange web site and the countries' own stock exchange web sites but cause of the proxy is not just the number of the IPO as well as the number of equity issued by IPOs, the study faced with the lack of the data, 3 countries did not issued any IPO in 2009 (Austria, Singapore and South Africa), 2 countries data is not available (Mexico and Switzerland) and 3 countries which named Nordic countries (Denmark, Finland and Sweden) have not separate data (because of the Nordic countries use one private exchange named Nasdaq OMX Nordic and this data could obtain for one value named Nordic), the sample decreased to 24 countries with this current data. On account of decrease the confidence of the sample with 24 countries this proxy is measured with the data from La Porta, Lopez-de-Silanes and Shleifer (2004).

Spamann (2008), Djankov et al. (2006), Boonlert-U-Thai, Meek, and Nabar (2006), La Porta, Lopez-de-Silanes and Shleifer (2004), Leuz, Nanda and Wysocki (2003) and various authors used ownership concentration around the world from La Porta et al. (1998). That is why for all periods -include current period- , the study obtained this data from La Porta et al. (1998) as above authors.

Legal origins are the legal determiner of investor protection, and in finance literature they are the common view to analyze the countries' investor protection level. That is why this study used legal origin to give extensive analysis. Legal origin and legal tradition of the related countries, whether they are common law (CM) countries or code law (CD) countries, are retrieved from the La Porta et al. (1997, 1998).

Appendix 1, 2 and 3 provides mean institutional characteristics of each sample country for the period respectively; 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> (current) periods.

### **3.2.1. Limitations**

There were some limitations that affect the results of analysis and constrain the generalization of the findings. Especially gathering data was demanding period, because of the data unavailability. There were 8 proxies, two of them; ownership concentration and efficiency of the judicial system data are not available for current period that is why as many studies in literature, this study used the ownership concentration and efficiency of the judicial system data from La Porta et al. (1998). That is why all periods are beginning with 1998. At future studies these periods could restrict with definite borders and they could be separate from each other. Also in this paper we gathered data for different periods from different sources. These sources gathered data with similar methods and when we gathered data for periods we took care of collecting data with the similar methods of related sources to eliminate the unsuitability of the data.

### **3.3. EMPIRICAL RESULTS**

This chapter is dedicated to show the empirical results of the dissertation. First of all, the correlation analysis results are given in order to comprehend the relationship between investor protection proxies. After determine the relationships and the directions of this relation, the results of the cluster analysis based on three different periods are given.

### 3.3.1. Correlation Analysis

This study used 2 correlation techniques; Pearson r and Spearman rho correlations. The analysis was made by PASW Statistics (SPSS) 18 data analysis software. When entering data into program, two tailed option was chosen to determine the directions and relationships between the variables. According to the period of time which data gathered from, correlation analysis was made for three different periods. The results of the analysis are given in one table and this table includes the Pearson correlation (at the upper half of the table), Spearman correlation (at the lower half of the table), variables and three periods. When defining the correlation values, to identify the result of test of significance value, \*, \*\*, and \*\*\* was used. \*, \*\*, and \*\*\* respectively mean 10% significance, 5% significance, and 1% significance. The results are given in Table1.

Table1 presents correlations among the institutional variables. High values of the first seven institutional variables are indicative of strong investor-protection, and this study expected these variables to be positively correlated. Also, high values of ownership concentration indicate weak protection, and hence this study expected negative correlation between this variable and the others. The results reported in Table1 show that the correlation coefficients between institutional variables have the expected signs.

Table 1 indicates correlation coefficients of these 8 proxies. Each cell corresponds to the value of correlation coefficients between two proxies and related period.

When variables are normally distributed, generally Pearson correlation analysis is used and when they are not normally distributed, literature suggests Spearman correlation to observe the relationship. In this study both correlation matrixes are shown in Table 1. Hence the extended results could be obtained from these two correlation matrix.

**Table 1: Correlation coefficients <sup>JK</sup> of country-year correlation matrix of institutional characteristics for 3 different period**

Variables	Period	Anti Director Rights	Efficiency of Judicial System	Rule of Law	Corruption Index	Market Cap / GDP	Domestic firms/ pop	IPOs / GDP	Ownership Concentration
<b>Anti Director Rights</b>	1st Period (1998)		0,258	0,118	0,127	0,577***	0,436**	0,530***	-0,394**
	2nd Period (2006)		0,258	0,177	0,203	0,464***	0,493***	0,211	-0,394**
	Current Period (2009)		0,049	0,175	0,182	0,118	0,086	-0,087	-0,290*
<b>Efficiency of Judicial System</b>	1st Period (1998)	0,288*		0,823***	0,692***	0,23	0,587***	0,538***	-0,438***
	2nd Period (2006)	0,288*		0,883***	0,859***	0,577***	0,563***	0,406**	-0,438***
	Current Period (2009)	-0,078		0,864***	0,844***	0,243	0,251	0,393**	-0,438***
<b>Rule of Law</b>	1st Period (1998)	0,077	0,818***		0,717***	0,008	0,418**	0,339*	-0,528***
	2nd Period (2006)	0,143	0,867***		0,967***	0,524***	0,547***	0,41**	-0,483***
	Current Period (2009)	0,022	0,857***		0,961***	0,163	0,292*	0,407**	-0,522***
<b>Corruption Index</b>	1st Period (1998)	0,137	0,626***	0,663***		-0,013	0,432**	0,258	-0,294*
	2nd Period (2006)	0,201	0,845***	0,947***		0,526***	0,556***	0,428***	-0,435***
	Current Period (2009)	0,068	0,836***	0,948***		0,209	0,317*	0,304*	-0,424**
<b>Market Cap / GDP</b>	1st Period (1998)	0,610***	0,357**	0,084	0,012		0,498	0,429**	-0,249
	2nd Period (2006)	0,484***	0,660***	0,540***	0,586***		0,535***	0,573***	-0,49**
	Current Period (2009)	0,334*	0,458***	0,245	0,321*		-0,071	0,367**	0,023
<b>Domestic firms/ pop</b>	1st Period (1998)	0,485***	0,744***	0,541***	0,543***	0,564***		0,846***	-0,174
	2nd Period (2006)	0,506***	0,753***	0,709***	0,707***	0,702***		0,54***	-0,172
	Current Period (2009)	0,165	0,533***	0,649***	0,652***	0,348**		0,049	-0,156
<b>IPOs / GDP</b>	1st Period (1998)	0,454***	0,705***	0,469***	0,358*	0,37**	0,692***		-0,139
	2nd Period (2006)	0,172	0,508***	0,517***	0,488***	0,619***	0,672***		-0,326*
	Current Period (2009)	-0,176	0,474***	0,418**	0,411**	0,407**	0,496***		-0,386**
<b>Ownership Concentration</b>	1st Period (1998)	-0,425**	-0,530***	-0,549***	-0,312*	-0,517***	-0,409***	-0,243	
	2nd Period (2006)	-0,425***	-0,530***	-0,464***	-0,48***	-0,599***	-0,460***	-0,357**	
	Current Period (2009)	-0,341**	-0,530***	-0,517***	-0,438***	-0,501***	-0,561***	-0,36**	

In respect of the results of Spearman correlation analysis, the correlation value between ADRI and efficiency of the judicial system in the first and second period is “0,288” and at the third period it is “-0,078”. These two proxies have 10% level of significance positive correlation in periods first and second, but there is not statistically significant correlation in current (third) period. There is not any statistically significant relationship between ADRI and law enforcement proxies as rule of law and corruption index in all periods. The relationship between ADRI and Market Cap/GDP and Domestic firms/ pop in the first and second periods is at the 1% level of significance, positively correlated. Also the relation between ADRI and IPOs/ GDP is only in the first period at the 1% level of significance, positively correlated. The correlation between ADRI and these stock market development proxies are getting lower through the periods. The level of significance between ADRI and Market Cap/GDP in the third period increased to the 10% and correlation decreased to the “0,334”. The level of significance between ADRI and the other two stock market development proxies; Domestic firms/ pop and IPOs/ GDP is increased above the 10%, so there is not any statistically significant correlation in current (3<sup>rd</sup>) period between these proxies. ADRI is negatively correlated with ownership concentration at the all periods, but when the level of significance between these two variables in first period is 5% it decreased to the 10% in the second period and then again increased to the 5% level of significance so this correlation is statistically significant.

The correlation between law enforcement proxies as efficiency of the judicial system, rule of law, and corruption index with the other proxies except ADRI is statistically significant. The law enforcement proxies positively correlated with the other proxies except ownership concentration and ADRI. It is negatively correlated with ownership concentration. The level of significance between efficiency of the judicial system and the other proxies except ADRI in all periods is at the 1% level of significance (just the significance level of the relation between Market Cap/ GDP is at the 5% in the first period). The level of significance between the rule of law proxy and Market Cap/ GDP is at the 1% in the second period but in the first and third periods it is higher than 10%. This value is at the 1% (just the significance level of the relation between rule of law and IPOs/ GDP is at the 5% in the third period) for

the relation between rule of law and the other proxies except ADRI. While the level of significance between corruption index proxy and Market Cap/ GDP is above than 10% in the first period, it is 1% in the second and then with increasing to the 10% in the third period. Between the corruption index and IPOs/ GDP proxies there is 10% significance level in the first, 1% in the second and 5% in the third period and between the other proxies except ADRI there is 1% level of significance.

Stock market development proxies as the ratio of the Market Cap/ GDP, Domestic firms/ pop, and IPOs/ GDP positively correlated generally with 1% level of significance with the other proxies except ADRI and negatively correlated with ownership concentration.

According to the Spearman- rank correlation matrix, in the third period; it is the only proxy which has at least at the 5% level of statistically significant correlation with each proxy. Ownership concentration has not statistically significant correlation just with IPOs/ GDP proxy in the first period, it has in the other periods and with all proxies statistically significant correlation. Ownership concentration is negatively correlated with each proxy so it means in the sample countries which has higher ownership concentration, at the same time has low stock market development, law enforcement and low ADRI. Unlike the relation between the law enforcement proxies and ADRI, there is strong relationship between ADRI and ownership concentration. The general level of significance between ownership concentration and other variables is lower than 1%.

### **3.3.2. Cluster Analysis**

This section provides empirical results of cluster analysis according to the investor protection proxies. Three periods were analyzed chronologically. First period considered the 1994- 1998 period as La Porta et al. (1998) used, the second period is based on Boonlert-U-Thai, Meek, and Nabar (2006) it is between 1998- 2004. The last one presents the current period 1998- 2009. Eight institutional



variables were used to group sample countries with similar institutional characteristics. When these proxies were standardized, this study used “Range Standardization” (Boonlert-U-Thai, Meek, and Nabar (2006) used z-score to standardize) and three distinct clusters are identified through a K-means cluster analysis. This approach is similar to that of Boonlert-U-Thai, Meek, and Nabar (2006) and Leuz, Nanda and Wysocki (2003), except that this study used the most recent data for current period, added the one more country (Turkey) to the second period and used La Porta et al. (1998) data for the first period.

Firstly, the results for K-means cluster analysis of institutional variables respectively for the periods are reported. For each period, the first cluster is characterized by extensive outsider rights, strong legal enforcement, larger stock markets, and low ownership concentration. The second and third clusters are characterized by lower outsider rights, weaker legal enforcement, smaller stock markets, and higher ownership concentration, with the distinction that countries in the second cluster have significantly better legal enforcement, larger stock markets, and lower ownership concentration than those in the third cluster. According to the periods, the distances between the clusters changed and to show this difference, means of the investor-protection variables for each cluster and tests of differences between clusters are given.

Table 2 Panel A, gives the means of the investor-protection variables for each cluster and tests of differences between clusters for the first period. Table 2, Panel B, shows the first period, based on La Porta et al. (1998) cluster membership of countries cluster analysis results. The mean value of each variable except ownership concentration is the highest in the cluster 1 (ownership concentration is the lowest), cluster 2 comes next (except ADRI and Market Cap/ GDP) and then cluster 3 has the lowest mean values (ownership concentration is the highest) but the mean value of ADRI and Market Cap/ GDP in cluster 3 higher than cluster 2. According to the results, for the first period, cluster 1 characterized by extensive outsider rights, strong legal enforcement, larger stock markets, and low ownership concentration. The second cluster is between the clusters 1 and 3, but the distance between the cluster 1 and 2 is a bit higher than cluster 2 and 3. That is why the second cluster and third

clusters are characterized by lower outsider rights, weaker legal enforcement, smaller stock markets, and higher ownership concentration.

Table 2, Panel B, shows that all countries (except Norway) in the first cluster are common law while all countries in the second cluster are code law. This is consistent with the existence of institutional complementarities found in finance literature. The third cluster consists of both common-law and code-law countries. There are not any French- civil law (CD) countries in the cluster 1 and 62 % of the countries in the cluster 3 consist of French- civil law (CD) countries. According to the investor protection level, the results showed that Turkey is in the 3<sup>rd</sup> cluster with the lower investor protection proxies.

**Table 2: Institutional Clusters for 1<sup>st</sup> period**

Panel A: Mean values of institutional characteristics by cluster			
Institutional Variables	Cluster 1	Cluster 2	Cluster 3
Antidirector rights	4,50	2,44	2,88
Tests of dif. between clusters	C1 vs. C3	C1 vs. C2	C1 vs. C3
Efficiency of judicial system	9,78	8,50	5,03
Tests of dif. between clusters	C1 vs. C3	C1 vs. C2	C1 vs. C3
Rule of law	1,39	1,41	-0,14
Tests of dif. between clusters	C1 vs. C3	C1 vs. C2	C1 vs. C3
Corruption index	1,37	1,12	-0,26
Tests of dif. between clusters	C1 vs. C3	C1 vs. C2	C1 vs. C3
External Cap/GDP	0,82	0,36	0,39
Tests of dif. between clusters	C1 vs. C3	C1 vs. C2	C1 vs. C3
Domestic firms/pop	49,56	17,29	5,40
Tests of dif. between clusters	C1 vs. C3	C1 vs. C2	C1 vs. C3
IPOs/GDP	4,04	0,46	0,29
Tests of dif. between clusters	C1 vs. C3	C1 vs. C2	C1 vs. C3
Ownership concentration	0,38	0,42	0,54
Tests of dif. between clusters	C1 vs. C3	C1 vs. C2	C1 vs. C3

Panel B: Cluster Membership of Countries (*sorted in alphabet order*)

Cluster 1	Cluster 2	Cluster 3
Australia (CM)	Austria (CD)	Brazil (CD)
Canada (CM)	Belgium (CD)	India (CM)
Hong Kong (CM)	Chile (CD)	Indonesia (CD)
Malaysia (CM)	Denmark (CD)	Mexico (CD)
Norway (CD)	Finland (CD)	Philippines (CD)
Singapore (CM)	France (CD)	S. Africa (CM)
UK (CM)	Germany (CD)	Thailand (CM)
USA (CM)	Greece (CD)	Turkey (CD)
	Italy (CD)	
	Japan (CD)	
	Netherlands (CD)	
	Korea, Rep. (CD)	
	Spain (CD)	
	Sweden (CD)	
	Switzerland (CD)	
	Taiwan (CD)	

Table 3, presents the second period, based on Boonlert-U-Thai, Meek, and Nabar (2006) cluster analysis results. The results show some difference from Boonlert-U-Thai, Meek, and Nabar (2006)'s paper and this differences are based on the standardized method which this study used when analyze the clusters. Table 3, Panel A, gives the means of the investor-protection variables for each cluster and tests of differences between clusters for the first period. Table 3, Panel B, shows cluster membership of countries of period 2.

In respect of the results in Table 3, Panel A, as first period the mean values of each variable except ownership concentration is the highest in the cluster 1. Cluster 2 and cluster 3 follow the cluster 1. Ownership concentration is the lowest in cluster 1 and highest in cluster 3. This table provides that cluster 1 and cluster 2 are characterized by extensive outsider rights, strong legal enforcement, larger stock markets, and low ownership concentration with considering the tests of differences between clusters. Cluster 3 characterized by lower outsider rights, weaker legal enforcement, smaller stock markets, and higher ownership concentration. Because as the period one cluster 2 is between the cluster 1 and 3, but for this period, cluster 2 is closer to cluster 1.

Table 3, Panel B, shows that all countries (except Sweden and Switzerland) in the first cluster are common law while all countries in the second cluster are code law (except Malaysia). The third cluster consists of both common-law and code-law. There is not any French- civil law countries in the cluster 1 and 70% of countries in the cluster 3 are French- civil law (CD) countries. According to the results, Turkey is in the 3rd cluster in the second period.

**Table 3: Institutional Clusters for 2<sup>nd</sup> period**

Panel A: Mean values of institutional characteristics by cluster			
Institutional Variables	Cluster 1	Cluster 2	Cluster 3
Antidirector rights	4,13	2,85	2,55
Tests of dif. between clusters	C1 vs. C3	C2 vs. C3	C1 vs. C3
Efficiency of judicial system	9,91	8,87	5,45
Tests of dif. between clusters	C1 vs. C3	C2 vs. C3	C1 vs. C3
Rule of law	1,98	1,63	0,12
Tests of dif. between clusters	C1 vs. C3	C2 vs. C3	C1 vs. C3
Corruption index	2,12	1,64	-0,02
Tests of dif. between clusters	C1 vs. C3	C2 vs. C3	C1 vs. C3
External Cap/GDP	1,02	0,50	0,24
Tests of dif. between clusters	C1 vs. C3	C2 vs. C3	C1 vs. C3
Domestic firms/pop	60,17	22,59	8,04
Tests of dif. between clusters	C1 vs. C3	C2 vs. C3	C1 vs. C3
IPOs/GDP	8,41	3,18	2,62
Tests of dif. between clusters	C1 vs. C3	C2 vs. C3	C1 vs. C3
Ownership concentration	0,35	0,41	0,53
Tests of dif. between clusters	C1 vs. C3	C2 vs. C3	C1 vs. C3

Panel B: Cluster Membership of Countries (*sorted in alphabet order*)

Cluster 1	Cluster 2	Cluster 3
Australia (CM)	Austria (CD)	Brazil (CD)
Canada (CM)	Belgium (CD)	Greece (CD)
Hong Kong (CM)	Chile (CD)	India (CM)
Singapore (CM)	Denmark (CD)	Indonesia (CD)
Sweden (CD)	Finland (CD)	Italy (CD)
Switzerland (CD)	France (CD)	Mexico (CD)
UK (CM)	Germany (CD)	Philippines (CD)
USA (CM)	Japan (CD)	S. Africa (CM)
	Malaysia (CM)	Korea, R. (CD)
	Netherlands (CD)	Thailand (CM)
	Norway (CD)	Turkey (CD)
	Spain (CD)	
	Taiwan (CD)	

Table 4 gives the last and current period cluster analysis results. Table 4, Panel A, gives the means of the investor-protection variables for each cluster and tests of differences between clusters for the first period and Table 4, Panel B, presents the cluster membership of countries of period 3.

Table 4, Panel A, gives the mean values of the variables and according to them, the mean value of each proxy except ADRI and Domestic firms/ pop proxies is the highest in cluster 1 in the current period. Then cluster 2 is so close to the cluster 1 and again cluster 3 is separate from the other 2 clusters. The mean values of ADRI and Domestic firms/ pop proxies are the highest in cluster 2. From these results, cluster 1 and cluster 2 characterized by extensive outsider rights, strong legal enforcement, larger stock markets, and low ownership concentration and referred to as “outsider economies” and cluster 3 is referred to as “insider economies” and characterized by lower outsider rights, weaker legal enforcement, smaller stock markets, and higher ownership concentration.

Table 4, Panel B, shows that Turkey is still in the cluster 3 according to analysis of the countries’ investor protection levels. Cluster 1 consist of 5 English (CM) countries (U.S., UK, Hong Kong, Canada and Australia), 2 German (CD) countries (Switzerland and Taiwan) and 1 Scandinavian (CD). There are not any French (CM) countries in the cluster 1. There is just one common law country in cluster 2 and again mix of code law and common law countries gathered in cluster 3. 63% of countries in cluster 3 are French- civil law (CD) countries.

**Table 4: Institutional Clusters for 3<sup>rd</sup> (current) period**

Panel A: Mean values of institutional characteristics by cluster			
Institutional Variables	Cluster 1	Cluster 2	Cluster 3
Antidirector rights	3,75	4,15	3,55
Tests of dif. between clusters	C1 vs. C3	C2 vs. C3	C1 vs. C3
Efficiency of judicial system	9,50	8,88	5,73
Tests of dif. between clusters	C1 vs. C3	C2 vs. C3	C1 vs. C3
Rule of law	1,60	1,54	-0,02
Tests of dif. between clusters	C1 vs. C3	C2 vs. C3	C1 vs. C3
Corruption index	1,68	1,65	-0,17
Tests of dif. between clusters	C1 vs. C3	C2 vs. C3	C1 vs. C3
External Cap/GDP	1,61	0,50	0,48
Tests of dif. between clusters	C1 vs. C3	C2 vs. C3	C1 vs. C3
Domestic firms/pop	43,03	79,86	8,73
Tests of dif. between clusters	C1 vs. C3	C2 vs. C3	C1 vs. C3
IPOs/GDP	8,33	2,69	2,60
Tests of dif. between clusters	C1 vs. C3	C2 vs. C3	C1 vs. C3
Ownership concentration	0,31	0,41	0,56
Tests of dif. between clusters	C1 vs. C3	C2 vs. C3	C1 vs. C3

Panel B: Cluster Membership of Countries (*sorted in alphabet order*)

Cluster 1	Cluster 2	Cluster 3
Australia (CM)	Austria (CD)	Brazil (CD)
Canada (CM)	Belgium (CD)	Greece (CD)
Hong Kong (CM)	Chile (CD)	India (CM)
Sweden (CD)	Denmark (CD)	Indonesia (CD)
Switzerland (CD)	Finland (CD)	Italy (CD)
Taiwan (CD)	France (CD)	Malaysia (CM)
UK (CM)	Germany (CD)	Mexico (CD)
USA (CM)	Japan (CD)	Philippines (CD)
	Netherlands (CD)	S. Africa (CM)
	Norway (CD)	Thailand (CM)
	Singapore (CM)	Turkey (CD)
	Korea, Rep. (CD)	
	Spain (CD)	

### 3.3.3. Evaluation

Firstly, this study begins with correlation analysis of eight proxies and found that they are well descriptive variables of investor protection as La Porta et al. (1997, 1998), Leuz, Nanda and Wysocki (2003), Boonlert U-Thai (2006) and various studies used to measure the investor protection. La Porta et al. (1998) emphasized the importance of the stock market development proxies to assess investor protection. Consistent with La Porta et al. (1998), this study found that stock market development proxies have statistically significant relationship with the other proxies except ADRI in all periods and Rule of Law proxy in first and third period. This study could not find any statistically significant correlation between Market Cap/ GDP and Rule of Law proxies in the first and third periods also this relation is consistent with the study of Boonlert U-Thai et al. (2006). In respect of the results, there is statistically significant correlation between the rule of law enforcement proxies and the other proxies except ADRI and Market Cap/ GDP. Chhabra, Ferris and Sen (2007) used efficiency of the judicial system to measure the investor protection, Kaufmann, Kraay, and Mastruzzi (2009) is publishing the governance indicators index which include rule of law and corruption index to measure the governance, and its effectiveness every year. La Porta et al. (1997, 1998), Leuz, Nanda and Wysocki (2003), Boonlert U-Thai (2006) and various authors used the law enforcement proxies to estimate investor protection level of countries. Consistent with all these studies, law enforcement proxies are well determiner of investor protection and governance as claimed by Kaufmann, Kraay, and Mastruzzi (2009) and the correlation results of this study except ADRI are consistent with the findings of all authors which we mentioned above.

Yurtoğlu (2000), Shleifer and Wolfenzon (2002), Lemmons and Lins (2003), Evrim Mandacı and Kurt Gümüş (2010) and various authors studied on the ownership concentration and they claimed that ownership concentration plays important role to define the investor protection level of related country. The correlation between ownership concentration and the other proxies is consistent with



the above studies and it is negatively correlated with all proxies in all periods. Thus, in this study the role of ownership concentration is crucial as literature.

Beginning with La Porta et al. (1998), ADRI has been used in almost 100 published studies to measure the investor protection in related country. The correlation results of ADRI in this study are not totally consistent with the literature especially for the second and third periods. The results show that there is not any statistically significant correlation between ADRI and Rule of law, and Corruption Index in all periods, between ADRI and Efficiency of the Judicial System in the third period, between ADRI and Domestic firms/ pop in the third period and between ADRI and IPOs/GDP in the second and third periods. This could be the reason of the concept of ADRI. ADRI was introduced by La Porta et al. (1998) according to its time conditions. In this article period, the world was lack of the consciousness of investor protection. ADRI added the new approach to measure the investor protection around world. When we observe the first period results between ADRI and all proxies except Rule of Law and Corruption Index there is statistically significant correlation but when we come close to current period, between ADRI and all variables except ownership concentration and Market Cap/ GDP there is not any statistically significant relation. This results show that ADRI has to be revised or changed with new approach. At this time Djankov et al. (2006)'s new approach; Anti Self Dealing Index instead of ADRI is available to measure investor protection instead of ADRI. Furthermore, consistent with the literature there is negative and significant correlation between ADRI and ownership concentration.

Generally, this study observed the differences between the periods to determine the development of investor protection level of the countries. Findings are consistent with studies which observed investor protection and with some changes the cluster membership of countries in this study is similar to that obtained by Leuz, Nanda and Wysocki (2003) and Boonlert-U-Thai, Meek, and Nabar (2006). The difference between periods could reflect the development of countries' investor-protection levels.

When analyzing the clusters for all periods based on they are developing countries, developed countries, OECD countries and EU countries, this study presented an extensive and useful results for either Turkey or the sample countries.

Most of OECD countries in the sample of this study are gathered in the cluster 2 in all periods. Except Korea and Taiwan for first period, Malaysia and Taiwan for second period and Korea and Singapore for third period all countries are OECD countries in cluster 2. In cluster 3, at the first period just Mexico and Turkey, at the second and third period Greece, Italy, Mexico and Turkey represent the OECD countries. In OECD countries, decreasing from cluster 2 to cluster 3 for Greece and Italy attracts the attention. OECD countries cover higher than 50% of countries in the cluster 1 in all periods.

This study retrieved data from IMF web site<sup>2</sup> to evaluate countries whether they are developing or developed. Developed and developing countries are spread through the clusters consistent with their level of investor protection. Developing countries are accumulated in cluster 3 and developed countries are in the cluster 1 and 2. In the first period, there are not any developed countries in cluster 3, in the second period Greece, Italy and Korea and in the third period Greece and Italy are the developed countries in the cluster 3. Except Malaysia and Chile all developing countries among the sample countries are gathered in the cluster 3.

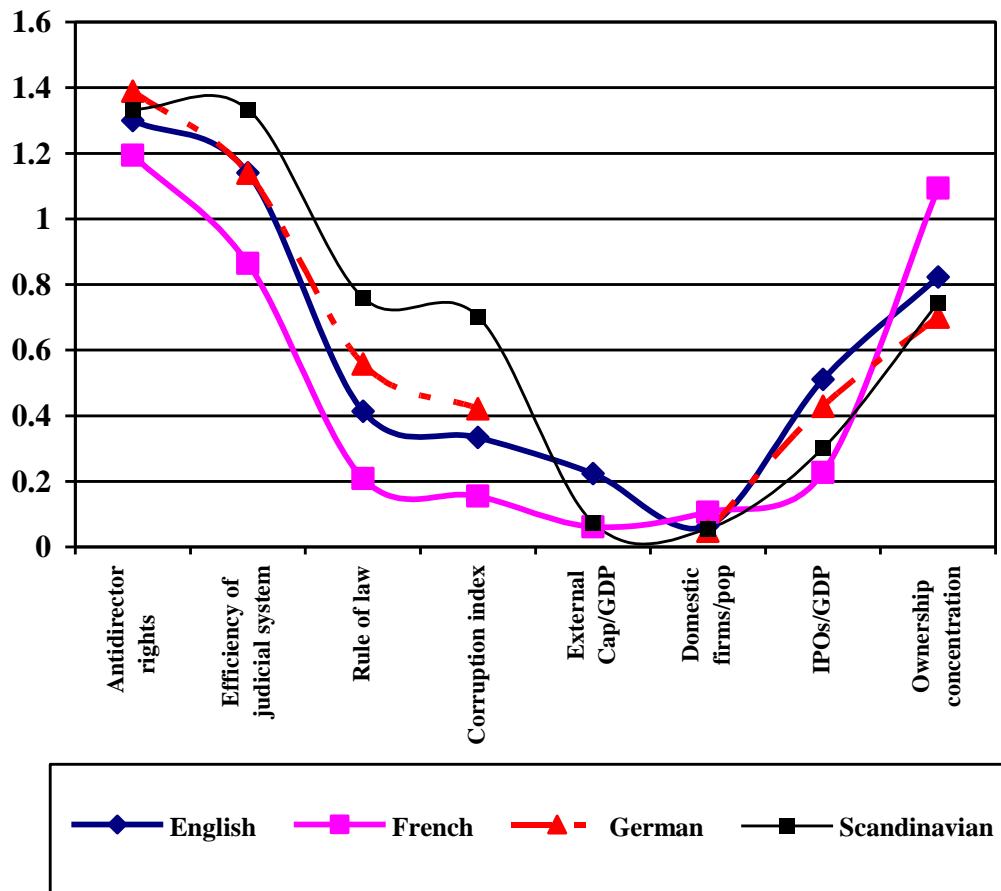
In the first period there is just one EU country (UK) in the first cluster and there is not any EU country in the third cluster. Eleven of sixteen cluster 2 countries in the first period are EU countries. This view changed through the periods. In the second period, Sweden is added to the cluster 1 as EU countries so it has two EU countries (UK and Sweden), then Greece and Italy are added to the cluster 3, so there are two EU countries in the cluster 3. This table is not changed in the third period.

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<sup>2</sup> <http://www.imf.org/external/index.htm> (18.11.2010)

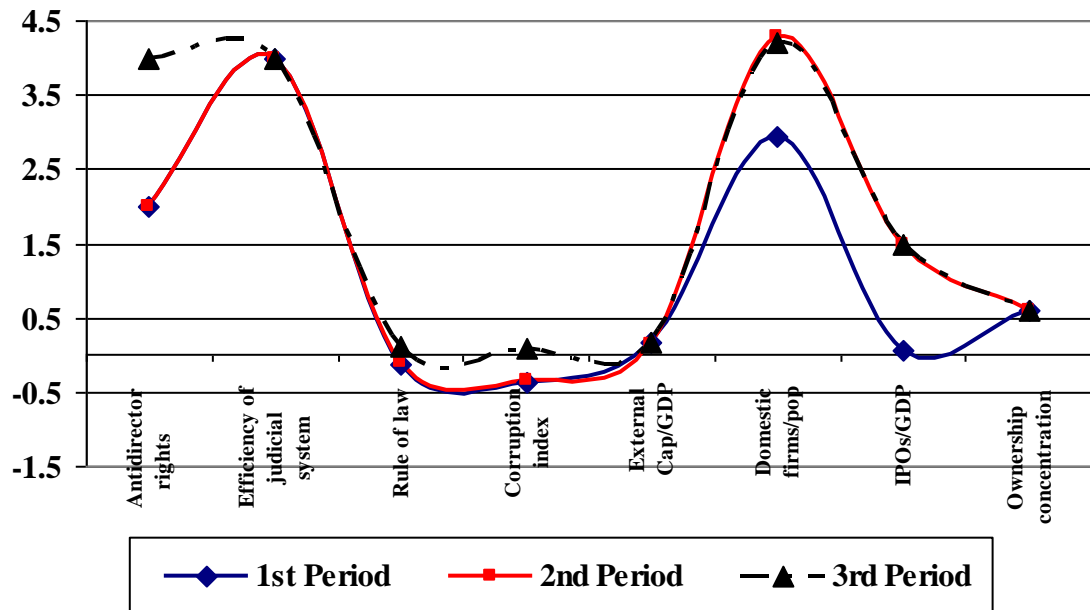
Figure 1 shows the means of the investor protection variables for the current period according to the legal origins. Glaeser and Shleifer (2002), La Porta, Lopez-de-Silanes and Shleifer (2008), Boonlert-U-Thai, Meek, and Nabar (2006), Leuz, Nanda and Wysocki (2003) and various studies mentioned the important role of the legal origins for investor protection. Glaeser and Shleifer (2002), and La Porta, Lopez-de-Silanes and Shleifer (2008) suggested that common law is associated with better economic outcomes than French- civil law, Glaeser and Shleifer (2002:1224) suggested civil law could become a control instrument of a bad government, and this view could be analyzed in Figure 1. The means of all variables (except ownership concentration) are the lowest in French- civil law countries and also cause of ownership structure is negatively related with all the other variables, the mean of ownership structure is the highest in French- civil law countries. Contrary to French- civil law countries, the mean value of all variables except ownership concentration is highest and ownership concentration is the lowest in the common law countries. Obviously it is seen that Scandinavian- civil law and English- common law countries at the higher investor protection level and French- civil law countries are the lowest for investor protection.

**Figure 4: The legal origins**



Turkey is a French- civil law country and according to IMF it is in the developing country status. In this study, most of French- civil law countries and developing countries gathered in the third cluster in all periods. Third cluster in this study named as insider featured countries with low investor protection, high ownership concentration and low stock market development. As a result, according to the three periods of cluster analysis into 32 countries around the world, this study showed that Turkey is still at the third cluster with the characteristics of low investor protection, low stock market development and high ownership concentration. These findings are consistent with literature such as La Porta et al. (1997, 1998) and Yurtoğlu (2000).

**Figure 5: Turkey's institutional characters for current period**



On the other hand, the results could not mean that Turkey did not improve its investor protection level through the periods. Figure 2, shows the means of investor protection variables of Turkey. It is clearly shown that Turkey improved its investor protection level at the second and third period. When comparing the data with the previous periods, the changing of the ADRI, legal enforcement proxies and stock market development proxies attracts the attention.

Turkey's rule of law and corruption indexes are lower than the mean value of these indexes in the cluster 3 of first and second periods, but in the third period these indexes of Turkey are higher than the mean value of cluster 3. This is the movement of Turkey's rule of law and corruption indexes. The other variables are lower than their mean values of the cluster 3 in all periods. When generalize the Turkey's development of investor protection level, as shown in Figure 2, Turkey's investor protection level is improved but the other countries' levels are improved too and some of them improved its level more than Turkey, that is why they changed their cluster to one upper level and some of them lose its position to lower level. However Turkey improved its investor protection level through the periods, this improvement

is not sufficient to change its cluster to one upper level and it is still with the countries which have low investor protection in the cluster 3.

The studies that investigate the Turkish corporate governance system focus mainly on the ownership structure and investor protection. Since Turkey is a civil law country, controlling the shareholders is more important than controlling the capital markets (Durukan, Özkan, and Dalkılıç, 2009:2). Also according to the list edited by Durukan, Özkan, and Dalkılıç (2009:2) and Yurtoğlu (2000:193) the characteristics of the Turkish corporate governance system is concentrated ownership, pyramidal structures, family owned companies, bank-based, and low investor protection. All the proxies in this study reflect that Turkey is an insider economy with low investor protection and high ownership concentration. Hence, findings of this study are consistent with the results of La Porta et al. (1998), Yurtoğlu (2000) and Durukan, Özkan, and Dalkılıç (2009)'s studies. Furthermore, in this study like all proxies, investor protection reflects the CG level of related country. As Dargenidou, McLeay and Raonic (2007:266) suggested that CG performances substitute for the lack of investor protection and Klapper and Love (2004:25) specified that good governance is positively correlated with market valuation and operating performance. According to these studies, this paper displayed that the CG level of Turkey is lower than countries which are in the cluster 1 and 2 for all periods.

According to La Porta et al. (1997:1131), countries that protect shareholders have more valuable stock markets, larger numbers of listed securities per capita, and a higher rate of IPO activity than do the unprotective countries. The results show that, in cluster 1, for all periods, with a few distinctions, there are the same countries. After controlling these countries' stock market development proxies, the results are consistent with La Porta et al. (1997). The countries which are the member of cluster 1 have more valuable stock market capitalization, IPO and domestic firms.

Not surprisingly, the highest level of investor-protection found in developed countries including the UK, the U.S., Australia, Sweden, Canada, and Hong Kong so in this study cluster 1 consists of these countries with high level of investor protection. There are some countries which changed its place over three periods. For

example, Taiwan was in the cluster 2 in the first two periods and at the current period Taiwan increased its investor protection level and took place in the 1<sup>st</sup> cluster. Singapore and Norway lost their place in the cluster 1 in the current period and took place in the cluster 2. On the contrary, the lowest investor protection found in developing countries including Turkey, Brazil, India, Indonesia, Mexico, Philippines, South Africa and Thailand. Thus, cluster 3 presents these countries with low investor protection.

Italy and Greece have to be observed deeply, cause of their place in the clusters. They are EU, OECD and developed countries and not the same as the countries which are at the same conditions with them; they are in the third cluster at the last two periods. On the contrary, Chile is developing and OECD country such as Turkey and it is in the second cluster in all periods. Especially in the third period it is the only developing country in the second cluster.

## CONCLUSION

Investor protection is one of the most important issues for financial markets. In Turkey, corporate governance develops its effectiveness day by day by improving its legislation and regulations and investor protection is getting the fundamental indicator of CG.

This study aims at determining the Turkey's position according to its investor protection level around the world. First of all, the commonly used eight investor protection proxies in literature were gathered to observe 32 countries' investor protection level and to confirm the strong relation between these proxies, correlation analysis was used. Data of eight proxies were obtained for three periods from La Porta et al. (1997), Boonlert-U-Thai, Meek, and Nabar (2006), Kaufmann, Kraay, and Mastruzzi (2009), World Bank, WFE and OECD. Three periods reflects different time periods. First period reflects the early period which is before the scandals as Enron and WorldCom; the period of 1994- 1998. Second period data consists of during and after these scandals period; the period of 1998- 2004 and the last period presents the current period; the period of 1998- 2009.

The results of the analysis show that there are positive, strong and statistically significant relations between the investor protection proxies except ADRI and ownership concentration. There is negative, strong and statistically significant relation between the ownership concentration and other proxies. On the contrary to the previous studies this study in current period could not find any statistically significant relation between ADRI and law enforcement, and stock market development proxies. The findings of the relations between other proxies are consistent with results of previous studies.

In the second part of analysis, three clusters are obtained for each period by K-means cluster analysis.



Regarding to the results of the cluster analysis, Turkey's position based on three clusters did not change over the periods, this result presents that Turkey's either investor protection or CG level are at the third cluster level with the other developing countries. From the characteristics of third cluster in this study, it corresponds that Turkey has a low investor protection, high ownership concentration and low stock market development. Thus, regarding characteristics of Turkey in literature, the results confirm that Turkey is a developing country with French- civil law origin. Addition to the results, Turkey also improved its investor protection level based on eight proxies, but it is not enough to change its place to upper cluster or this improvement is lower than the other countries which are in the cluster 2 and 1.

The highest level of investor-protection found in developed countries including the UK, the U.S., Australia, Sweden, Canada, and Hong Kong. On the contrary, the lowest investor protection found in developing countries including Turkey, Brazil, India, Indonesia, Mexico, Philippines, South Africa and Thailand. Furthermore there are several countries which changed their places to upper level or lower level over the periods. For instance, Taiwan changed is position to upper cluster in the current period, whereas Singapore, Norway lost their position to second cluster, Greece and Italy lost their position to the third cluster in the current period.

Italy and Greece are countries, which this study retrieved interesting results about, could be extended by future studies as well. Although Italy and Greece are EU, OECD and developed countries with advanced economies, contrary to the other developed countries these two appeared in the third cluster with developing countries. Third cluster presents that they have low investor protection, high ownership concentration and low stock market development.

While there are several studies in Turkey, there is limited amount of research on the subject of investor protection. Thus, the dissertation provides one of the unique studies that analyzed the investor protection with current data and compare with different periods in Turkey.

# **APPENDIX**

**Appendix 1: Investor-protection proxies by country for 1<sup>st</sup> period**

Country	Legal Origin	Legal Tradition	Anti-director Rights	Efficiency of judicial system	Rule of law	Corruption index	Market Cap /GDP	Domestic firms/pop	IPOs/GDP	Ownership concentration
Australia	English	CM	4	10,00	1,72	1,92	0,49	63,55	-	0,28
Austria	German	CD	2	9,50	1,82	1,88	0,06	13,87	0,25	0,58
Belgium	French	CD	0	9,50	1,27	1,42	0,17	15,50	0,30	0,54
Brazil	French	CD	3	5,75	-0,29	0,08	0,18	3,48	0,00	0,57
Canada	English	CM	5	9,25	1,69	2,06	0,39	40,86	4,93	0,40
Chile	French	CD	5	7,25	1,23	1,43	0,80	19,92	0,35	0,45
Denmark	Scandinavian	CD	2	10,00	1,80	2,26	0,21	50,40	1,80	0,45
Finland	Scandinavian	CD	3	10,00	1,92	2,33	0,25	13,00	0,60	0,37
France	French	CD	3	8,00	1,37	1,37	0,23	8,05	0,17	0,34
Germany	German	CD	1	9,00	1,60	1,97	0,13	5,14	0,08	0,48
Greece	French	CD	2	7,00	0,82	0,88	0,07	21,60	0,30	0,67
Hong Kong	English	CM	5	10,00	0,88	1,08	1,18	88,16	5,16	0,54
India	English	CM	5	8,00	0,23	-0,38	0,31	7,79	1,24	0,40
Indonesia	French	CD	2	2,50	-0,78	-1,00	0,15	1,15	0,10	0,58
Italy	French	CD	1	6,75	0,85	0,80	0,08	3,91	0,31	0,58
Japan	German	CD	4	10,00	1,37	1,21	0,62	17,78	0,26	0,18
Malaysia	English	CM	4	9,00	0,39	0,49	1,48	25,15	2,89	0,54
Mexico	French	CD	1	6,00	-0,43	-0,33	0,22	2,28	0,03	0,64
Netherlands	French	CD	2	10,00	1,73	-	0,52	21,13	0,66	0,39
Norway	Scandinavian	CD	4	10,00	1,86	0,66	0,22	33,00	4,50	0,36
Philippines	French	CD	3	4,75	-0,26	0,70	0,10	2,90	0,27	0,57

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Appendix 1 (continued)

Country	Legal Origin	Legal Tradition	Anti-director Rights	Efficiency of judicial system	Rule of law	Corruption index	Market Cap /GDP	Domestic firms/pop	IPOs/GDP	Ownership concentration
Singapore	English	CM	4	10,00	1,31	1,05	1,18	80,00	5,67	0,49
South Africa	English	CM	5	6,00	0,00	-0,17	1,45	16,00	0,05	0,52
Korea, Rep.	German	CD	2	6,00	0,83	0,27	0,44	15,88	0,02	0,23
Spain	French	CD	4	6,25	1,33	0,13	0,17	9,71	0,07	0,51
Sweden	Scandinavian	CD	3	10,00	1,76	-0,71	0,51	12,66	1,66	0,28
Switzerland	German	CD	2	10,00	1,90	0,79	0,62	33,85	-	0,41
Taiwan	German	CD	3	6,75	0,90	0,79	0,88	14,22	0,00	0,18
Thailand	English	CM	2	3,25	0,51	-0,64	0,56	6,70	0,56	0,47
United Kingdom	English	CM	5	10,00	1,68	2,08	1,00	35,68	2,01	0,19
USA	English	CM	5	10,00	1,57	1,64	0,58	30,11	3,11	0,20
Turkey	French	CD	2	4,00	-0,13	-0,36	0,18	2,93	0,05	0,59

**Appendix 2: Investor-protection proxies by country for 2<sup>nd</sup> period**

Country	Legal Origin	Legal Tradition	Anti-director Rights	Efficiency of judicial system	Rule of law	Corruption index	Market Cap /GDP	Domestic firms/pop	IPOs/GDP	Ownership concentration
Australia	English	CM	4	10,00	2,00	2,05	0,63	66,43	6,49	0,28
Austria	German	CD	2	9,50	2,10	1,93	0,07	12,18	1,71	0,58
Belgium	French	CD	0	9,50	1,64	1,36	0,33	15,62	2,04	0,54
Brazil	French	CD	3	5,75	-0,15	0,01	0,13	2,95	0,04	0,57
Canada	English	CM	5	9,25	2,01	2,30	0,61	92,19	8,49	0,40
Chile	French	CD	5	7,25	1,33	1,54	0,50	23,00	0,36	0,45
Denmark	Scandinavian	CD	2	10,00	1,97	2,36	0,31	43,71	1,29	0,45
Finland	Scandinavian	CD	3	10,00	2,13	2,54	0,93	25,78	3,45	0,37
France	French	CD	3	8,00	1,49	1,46	0,49	13,29	2,56	0,34
Germany	German	CD	1	9,00	1,91	1,72	0,26	10,65	3,67	0,48
Greece	French	CD	2	7,00	0,75	0,80	0,25	26,67	12,41	0,67
Hong Kong	English	CM	5	10,00	1,66	1,44	1,39	106,13	8,94	0,54
India	English	CM	5	8,00	0,23	-0,21	0,19	5,98	0,74	0,40
Indonesia	French	CD	2	2,50	-0,90	-1,09	0,12	1,37	1,58	0,58
Italy	French	CD	1	6,75	0,94	0,89	0,19	4,75	5,06	0,58
Japan	German	CD	4	10,00	1,82	1,38	0,59	19,55	2,39	0,18
Malaysia	English	CM	4	9,00	0,55	0,18	0,78	33,02	5,09	0,54
Mexico	French	CD	1	6,00	-0,37	-0,39	0,11	1,94	0,26	0,64
Netherlands	French	CD	2	10,00	1,97	2,34	0,88	14,00	2,80	0,39
Norway	Scandinavian	CD	4	10,00	2,01	2,11	0,25	43,65	3,26	0,36
Philippines	French	CD	3	4,75	-0,50	-0,49	0,28	2,97	1,69	0,57

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Appendix 2 (continued)

Country	Legal Origin	Legal Tradition	Anti-director Rights	Efficiency of judicial system	Rule of law	Corruption index	Market Cap /GDP	Domestic firms/pop	IPOs/GDP	Ownership concentration
Singapore	English	CM	4	10,00	2,12	2,50	0,80	89,20	7,08	0,49
South Africa	English	CM	5	6,00	0,30	0,50	0,78	15,11	0,63	0,52
Korea, Rep.	German	CD	2	6,00	0,65	0,45	0,32	15,69	3,97	0,23
Spain	French	CD	4	6,25	1,38	1,66	0,32	18,04	3,11	0,51
Sweden	Scandinavian	CD	3	10,00	1,98	2,48	0,90	30,40	12,05	0,28
Switzerland	German	CD	2	10,00	2,22	2,22	1,44	33,10	6,98	0,41
Taiwan	German	CD	3	6,75	0,87	0,72	0,83	21,24	9,60	0,18
Thailand	English	CM	2	3,25	0,43	-0,34	0,18	6,69	0,96	0,47
United Kingdom	English	CM	5	10,00	1,93	2,17	1,20	34,97	11,68	0,19
USA	English	CM	5	10,00	1,92	1,77	1,18	28,93	5,54	0,20
Turkey	French	CD	2	4,00	-0,10	-0,34	0,13	4,29	1,48	0,59

**Appendix 3: Investor-protection proxies by country for 3<sup>rd</sup> (current) period**

Country	Legal Origin	Legal Tradition	Anti-director Rights	Efficiency of judicial system	Rule of law	Corruption index	Market Cap /GDP	Domestic firms/pop	IPOs/GDP	Ownership concentration
Australia	English	CM	4	10,00	1,73	2,03	0,65	86,03	8,71	0,28
Austria	German	CD	4	9,50	1,76	1,75	0,17	9,92	1,16	0,58
Belgium	French	CD	2	9,50	1,37	1,43	0,33	15,39	2,35	0,54
Brazil	French	CD	5	5,75	-0,18	-0,07	0,36	1,95	0,05	0,57
Canada	English	CM	4	9,25	1,78	2,04	0,67	111,47	8,57	0,40
Chile	French	CD	5	7,25	1,25	1,37	0,78	13,67	0,51	0,45
Denmark	Scandinavian	CD	4	10,00	1,87	2,42	0,39	37,26	1,20	0,45
Finland	Scandinavian	CD	4	10,00	1,94	2,22	0,57	23,42	3,78	0,37
France	French	CD	5	8,00	1,43	1,41	0,52	15,03	2,31	0,34
Germany	German	CD	4	9,00	1,63	1,70	0,30	7,34	2,78	0,48
Greece	French	CD	3	7,00	0,64	0,12	0,26	25,26	8,78	0,67
Hong Kong	English	CM	4	10,00	1,49	1,84	6,17	1,28	9,12	0,54
India	English	CM	4	8,00	0,05	-0,33	0,53	4,29	0,60	0,40
Indonesia	French	CD	2	2,50	-0,56	-0,71	0,19	1,73	1,67	0,58
Italy	French	CD	2	6,75	0,39	0,05	0,23	4,83	5,94	0,58
Japan	German	CD	5	10,00	1,31	1,35	0,66	25,15	2,39	0,18
Malaysia	English	CM	4	9,00	0,55	0,02	0,84	34,70	6,18	0,54
Mexico	French	CD	2	6,00	-0,57	-0,27	0,21	1,16	0,22	0,64
Netherlands	French	CD	4	10,00	1,78	2,10	0,44	610,50	2,63	0,39
Norway	Scandinavian	CD	4	10,00	1,88	1,94	0,28	39,36	2,20	0,36
Philippines	French	CD	4	4,75	-0,53	-0,71	0,31	2,67	2,22	0,57

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Appendix 3 (continued)

Country	Legal Origin	Legal Tradition	Anti-director Rights	Efficiency of judicial system	Rule of law	Corruption index	Market Cap /GDP	Domestic firms/pop	IPOs/GDP	Ownership concentration
Singapore	English	CM	4	10,00	1,61	2,26	0,93	92,03	5,94	0,49
South Africa	English	CM	5	6,00	0,06	0,10	1,78	7,36	0,65	0,52
Korea, Rep.	German	CD	4	6,00	1,00	0,52	0,53	74,37	5,32	0,23
Spain	French	CD	5	6,25	1,13	1,01	0,59	74,74	2,41	0,51
Sweden	Scandinavian	CD	4	10,00	1,93	2,23	0,52	35,80	6,33	0,28
Switzerland	German	CD	3	10,00	1,75	2,01	1,72	27,94	7,11	0,41
Taiwan	German	CD	5	6,75	0,93	0,57	-	32,13	10,07	0,18
Thailand	English	CM	4	3,25	-0,13	-0,23	0,38	7,90	0,82	0,47
United Kingdom	English	CM	4	10,00	1,71	1,54	0,70	35,24	11,27	0,19
USA	English	CM	2	10,00	1,53	1,18	0,82	14,34	5,47	0,20
Turkey	French	CD	4	4,00	0,12	0,09	0,16	4,21	1,48	0,59



## REFERENCES

- Agrawal, A., and Chadha, S. (2004). *Corporate Governance and Accounting Scandals*. AFA 2004 San Diego Meetings. September 2004.
- Ararat, M., and Uğur, M. (2003). *Corporate Governance In Turkey: An Overview And Some Policy Recommendations*. *Corporate Governance* , 3(1):58-75.
- Bauer, R., Günster, N., and Otten, R. (2004). *Empirical Evidence On Corporate Governance In Europe: The Effect On Stock Returns, Firm Value And Performance*. *Journal of Asset Management* , 5(2):91-104.
- Bebchuk, L., Cohen, A., and Ferrell, A. (2004). *What Matters in Corporate Governance?*. *The Review of Financial Studies* , 22(2):783-827.
- Beck, T., Levine, R., Loayza, N. (2000). *Finance and the Sources of Growth*. World Bank Policy Research Working Paper (2057)
- Becht, M., Bolton, P., and Röell, A. (2002). *Corporate Governance and Control*. ECGI Working Paper Series in Finance. 02:1-122.
- Becker, G. (1976). *Crime And Punishment: An Economic Approach*. *Journal of Political Economy*, 76:169–217.
- Berle, A., and Means, G. (1932). *The Modern Corporation and Private Property* . New York, NY: MacMillan.
- Bhagat, S., and Bolton, B. (2008). *Corporate Governance And Firm Performance*. *Journal of Corporate Finance*. 14(3):257–273.
- Black, B. S. (2000). *The Core Institutions that Support Strong Securities Markets* . *Business Lawyer*. 55:1565-1607.

Black, B., Jang, H., and Kim, W. (2006). *Does Corporate Governance Affect Firm Value? Evidence From Korea*. *Journal of Law, Economics and Organization*. 22(2):366-413.

Boonlert-U-Thai, K., Meek, G. K., and Nabar, S. (2006). *Earnings attributes and investor-protection: International evidence*. *The International Journal of Accounting*. 41:327–357.

Boubakri, N., Cosset, J.-C., and Guedhami, O. (2005). *Postprivatization corporate governance: the role of ownership structure and investor protection*. *Journal of Financial Economics*. 37:369-399.

Bris, A., Brisley, N., and Cabolis, C. (2008). *Adopting better corporate governance: Evidence from cross-border mergers*. *Journal of Corporate Finance*. 14:224–240.

Brockman, P., and Chung, D. Y. (2003). *Investor Protection and Firm Liquidity*. *The Journal of Finance*. 58(2):921-937.

Brown, L. D., and Caylor, M. L. (2006). *Corporate governance and firm valuation*. *Journal of Accounting and Public Policy*. 25(4):409-434.

Cadbury, A. (1992). *The Committee on the Financial Aspects of Corporate Governance*. London: Gee and Company.

Capital Markets Board of Turkey (CMBT). (2003). *Corporate Governance Principles*. Turkey: The Capital Markets Board of Turkey.

Center for International Private Enterprise. (2002). *Instituting corporate governance in developing, emerging and transitional economies: A handbook*. Washington, DC: Author. Retrieved from [www.cipe.org](http://www.cipe.org).

Chava, S., Dierker, M., and Livdan, D. (2004). *Do Shareholder Rights affect the cost of bank loans?* Houston, TX: University of Houston.

Chhabra, M., Ferris, S. P., and Sen, N. (2007). *Investor protection effects on corporate liquidity and the cost of capital*. Applied Economics Letters. 1-8.

Chhaochharia, V., and Laeven, L. (2007). *Corporate governance norms and practices*. ECGI- Finance Working Paper. 165:1-27.

Choi, S. (2005). *Three Essays in Banking and Finance*. Troy, NY:Rensselaer Polytechnic Institute.

Coffee, J. (1999). *The Future As History: The Prospects For Global Convergence In Corporate Governance And Its Implications*. Northwestern University Law Review. 93:641-708.

Cremers, K. M., and Nair, V. (2005). *Governance Mechanisms And Equity Prices*. Governance Mechanisms and Equity Prices. 03(15):1-60.

Dargenidou, C., McLeay, S., and Raonic, I. (2007). *Ownership, Investor Protection and Earnings Expectations*. Journal of Business Finance and Accounting. 34(1-2):247–268.

David, R., and Brierley, J. (1985). *Major Legal Systems in the World Today*. London: Stevens and Sons.

Denis, D. K., and McConnell, J. J. (2003). *International Corporate Governance*. ECGI Working Paper Series in Finance. 05-2003:1-56.

Djankov, S., La Porta, R., Lopez-de-Silanes, F., and Shleifer, A. (2006). *The Law and Economics of Self-Dealing*. Journal of Financial Economics. 88(3):430-465.

Durukan, M. B., Özkan, S., and Dalkılıç, A. F. (2009). *The Effectiveness of The Turkish Corporate Governance System: CEO Changes and Performance Measures*. Working Paper Series. May 15, 2009.

Evrin Mandacı, P. and Kurt Gümüş, G. (2010). *Ownership Concentration, Managerial Ownership and Firm Performance: Evidence from Turkey*. South East European Journal of Economics and Business. 5(1):57-67.

Fan, J. P., and Wong, T. J. (2002). *Corporate Ownership Structure And The Informativeness Of Accounting Earnings In East Asia*. Journal of Accounting and Economics. 33(3):401-25.

George, D., and Mallery, P. (2003). *SPSS for Windows Step by Step A Simple Guide and Reference 11.0 Update*. Boston,U.S.: Pearson Education, Inc.

Gibson, M. S. (2003). *Is Corporate Governance Ineffective in Emerging Markets?*. The Journal of Financial and Quantitative Analysis. 38(1):231-250.

Gillan, S., Hartzell, J. C., and Starks, L. T. (2003). *Explaining Corporate Governance: Boards, Bylaws, and Charter Provisions*. Weinberg Center for Corporate Governance Working Paper. 03:1-46.

Glaeser, E. L., and Shleifer, A. (2002). *Legal Origins*. The Quarterly Journal of Economics. 117(4):1193-1229.

Glaeser, E., Johnson, S., and Shleifer, A. (2001). *Coase versus The Coasians*. Quarterly Journal of Economics. 116(3):853-899.

Gompers, P., Ishii, J., and Metrick, A. (2003). *Corporate Governance and Equity Prices*. Quarterly Journal of Economics. 118(1):107-156.

Iskander, M. R., and Chamlou, N. (2000). *Corporate Governance: A Framework for Implementation*. World Bank Group, Washington, D.C.

Jensen, M., and Meckling, W. (1976). *Theory Of The Firm: Managerial Behavior, Agency Costs, And Ownership Structure*. Journal of Financial Economics. 3(4):305-360.

Jiraporn, P., Kim, Y. S., Wallace, D. N., and Singh, M. (2006). *Corporate Governance, Shareholder Rights And Firm Diversification: An Empirical Analysis*. Journal of Banking and Finance. 30(3):947–963.

Johnson, S., and Shleifer, A., (2001). *Privatization and Corporate Governance*. 12th Annual East Asian Seminar on Economics. June 28-30.

Kaufmann, D., Kraay, A., and Mastruzzi, M. (2009). *Governance Matters VIII, Aggregate and Individual Governance Indicators: 1996-2008*. The World Bank Policy Research Working Paper. 4978.

Khanchel, I. (2007). *Corporate Governance: Measurement And Determinant Analysis*. *Managerial Auditing Journal*. 22(8):740-760.

Khiari, W., Karaa, A., and Omri, A. (2007). *Corporate Governance Efficiency: An Indexing Approach Using The Stochastic Frontier Analysis*. *Corporate Governance*. 7(2):148-161.

Klapper, L. F., and Love, I. (2004). *Corporate Governance, Investor Protection and Performance in Emerging Markets*. *Journal of Corporate Finance*. 10(5):703-28.

Klock, M. S., Mansi, S. A., and Maxwell, W. F. (2005). *Does Corporate Governance Matter to Bondholders?*. *Journal of Financial and Quantitative Analysis*. 40(4):693-720.

Krishnamurti, C., Sevic, A., and Sevic, Z. (2003). *Legal Environment, Firm-level Corporate Governance and Expropriation of Minority Shareholders in Asia*. *Economic Change and Restructuring*. 38(1):85-111.

Kumar, K. B., Rajan, R. G., and Zingales, L. (1999). *What Determines Firm Size?*. NBER Working Paper. 7208.

La Porta, R., Lopez-De-Silanes, F., Shleifer, A., and Vishny, R. (1997). *Legal Determinants of External Finance*. *The Journal of Finance*. 52(3):1131-1150.

La Porta, R., Lopez-de-Silanes, F., and Shleifer, A. (1998). *Corporate Ownership Around the World*. *Journal of Finance*. 54(2):471-517.

La Porta, R., Lopez-De-Silanes, F., Shleifer, A., and Vishny, R. (1998). *Law and Finance*. *Journal of Political Economy*. 106 (6):1113-1150.

La Porta, R., Lopez-De-Silanes, F., Shleifer, A., and Vishny, R. (1999a). *The Quality of Government*. *Journal of Law Economics and Organization*. 15(1):222-279.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R. (1999). *Investor Protection: Origins, Consequences, Reform*. The World Bank Financial Sector Discussion Paper. 1:11-17.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R. (2000a). *Agency Problems and Dividend Policies Around The World*. *Journal of Finance*. 55(1):1-33.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R. (2000). *Investor Protection And Corporate Governance*. *Journal of Financial Economics*. 58(1-2):3-27.

La Porta, R., Lopez-De-Silanes, F., Shleifer, A., and Vishny, R. (2002). *Investor Protection and Corporate Valuation*. *The Journal of Finance*. 57(3):1147-1170.

La Porta, R., Lopez-De-Silanes, F., and Shleifer, A. (2004). *What Works in Securities Laws?. The Journal of Finance*. 61(1):1-32.

La Porta, R., Lopez-de-Silanes, F., and Shleifer, A. (2008). *The Economic Consequences of Legal Origins*. *Journal of Economic Literature*. 46(2):285-332.

Lemmon, M. L., and Lins, K. V. (2003). *Ownership Structure, Corporate Governance, and Firm Value: Evidence from the East Asian Financial Crisis*. *The Journal Of Finance*. 58(4):1145-1468.

Leuz, C., Nanda, D., and Wysocki, D. P. (2003). *Investor Protection and Earnings Management: An International Comparison*. *Journal of Financial Economics*. 69(3):505-527.

MacQueen, J. B. (1967). *Proceedings of 5-th Berkeley Symposium on Mathematical Statistics and Probability*. London:Cambridge Universtiy Press.

McGee, R. W. (2008). *Corporate Governance in Developing Economies*. Springer Singapore Pte. Limited. NY

Milligan, G. W., and Cooper, M. C. (1988). *A study of standardization of variables in cluster analysis*. *Journal of Classification*. 5(2):181-204.

Nenova, T. (2003). *The value of corporate voting rights and control: A cross-country analysis*. *Journal of Financial Economics*. 68(3):325–351.

Newman, D. P., Patterson, E. R., and Smith, J. R. (2005). *The Role of Auditing in Investor Protection*. *The Accounting Review*. 80(1):289-313 .

O’Connell, B. T. (2004). *Enron con: he that filches from me my good name . . . makes me poor indeed*. *Critical Perspectives on Accounting*. 15(6-7):733-49.

OECD. (2003). *Survey on Corporate Governance Developments in OECD Countries*. OECD Publications Service.

OECD. (2004). *OECD Principles of Corporate Governance*. OECD Publications Service.

OECD. (2006). *Corporate Governance in Turkey*. OECD Publications Service.

OECD Factbook (2009). *Economic, Environment and Social Statistics*.

Olivia, L. S. (2004). *The Impact of Ultimate Ownership and Investor Protections on Dividend Policies*. Hong Kong: The Chinese University of Hong Kong.

Oman, C., Fries, S., & Buiters, W. (2003). *Corporate Governance In Developing, Transition And Emerging- Market Economies*. OECD Development Centre Policy Brief. 23.

Pagano, M., and Volpin, P. (2005). *The Political Economy Of Corporate Governance*. *American Economic Review*. 95(4):1005–1030.

Qu, B. (2004). *What Determines Corporate Ownership Concentration Around The World?*. Emerald Group Publishing Limited. 9:221-246.

Romesburg, H. C. (2004). *Cluster Analysis for Researchers*. North Carolina: Lulu Press.

Santana, M. H., Ararat, M., Alexandru, P., and Yurtoglu, B. B. (2008). *Novo Mercado and Its Followers: Case Studies in Corporate Governance Reform*. International Finance Corporation. Global Corporate Governance Forum Focus 5.

Sapovadia, V. K., and Rehman, R. (2007). *Good Corporate Governance: An Instrument For Wealth Maximisation*. Working Paper Series. MBA Department of Saurashtra University Conference, India.

Shleifer, A., and Vishny, R. W. (1997). *A Survey of Corporate Governance*. The Journal Of Finance. 52(2):737-783.

Shleifer, A., and Wolfenzon, D. (2002). *Investor Protection and Equity Markets*. Journal of Financial Economics. 66(1):3-27.

Slavova, S. (1999). *Law and Finance in Transition Economies*. Manuscript.

Smith, A. (1776). *Wealth of Nations*. Indianapolis: Liberty Fund.

SOX. (2002). *Sarbanes-Oxley Act of 2002*. Public Law. 107th Congress:107-204.

Spamann, H. (2008). *'Law and Finance' Revisited*. Harvard Law School John M. Olin Center Discussion Paper. 2(12).

Steinley, D. (2006). *K-means clustering: A half-century synthesis*. British Journal of Mathematical and Statistical Psychology. 59:1-34.

Steinley, D., and Brusco, M. J. (2008). *A New Variable Weighting and Selection Procedure for K-means Cluster Analysis*. Multivariate Behavioral Research. 43:77-108.



Switzer, L. N. (2007). *Corporate Governance, Sarbanes-Oxley, And Small-Cap Firm Performance*. The Quarterly Review of Economics and Finance. 47(5): 651-666.

The Institute of International Finance, Inc. (2005). *Corporate Governance in Turkey: An Investor Perspective*. Task Force Report.

Volpin, P. F. and Pagano, M. (2005). *The Political Economy of Corporate Governance*. American Economic Review. 95(4).

Wurgler, J. (2000). *Financial Markets And The Allocation Of Capital*. Journal of Financial Economics. 58(1-2):187-214

Yurtoğlu, B. B. (2000). *Ownership, Control and Performance of Turkish Listed Firms*. Kluwer Academic Publishers. 27(2):193-222.

**Internet sources:**

<http://data.worldbank.org/>

<http://www.world-exchanges.org/>

<http://www.imf.org/external/index.htm>

[http://www.oecd.org/home/0,2987,en\\_2649\\_201185\\_1\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/home/0,2987,en_2649_201185_1_1_1_1_1,00.html)

<http://www.ise.org/Home.aspx>