The impact of corporate governance on the performance of financial institutions

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Abstract

The aim of this thesis is to investigate corporate governance practices of firms, in particular financial institutions, and their impact on the performance of these institutions. As such it will contribute to the debate on the importance of corporate governance for banks. The investigation will cover examples from developed and transition economies. Corporate scandals in the 1990s and 2000s drew the attention of governments to the importance of corporate governance, and induced legislation to prevent similar situations in the future. This thesis highlights the differences between corporate governance of firms and that of banks and investigates the nature of the relationship between corporate governance practices and performance of banks in the USA (as an example of a developed economy) and Kosova and Montenegro (as examples of South East European (SEE) transition economies). The thesis will also investigate the state of corporate governance in the two SEE countries and its developments since these countries became independent. This thesis will address two methodological issues that have been ignored or not treated jointly by previous research: the endogenous nature of corporate governance; and the dynamic aspect of the relationship with performance. In the context of SEE countries this thesis represents the first attempt to analyse the development of a corporate governance framework for financial institutions in Kosova and Montenegro, involving the creation of an index for the quality of corporate governance and, to the extent that the data permits, the first analysis of the relationship between corporate governance quality and the performance of financial institutions.

The thesis investigates these questions by firstly embarking on a critical review of the literature to identify the strengths and weaknesses of the previous work in this area and identify the gap in the literature and secondly engaging in empirical investigation of the relationship. The data used for the empirical part of the thesis consists of published data on corporate governance ranking of US banks and the information on financial operations of banks from the Bankscope database. There are no published datasets on the state of corporate governance in SEE banks. A bank survey was therefore organised

by the author to explore the compliance of these banks with OECD Corporate Governance Principles. The data was supplemented with the financial information of individual banks obtained from their annual reports.

Using both, cross section and dynamic panel model techniques, the empirical investigation shows that there is a positive relationship between the measure of good corporate governance and the market capitalisation of banks in the USA. A similar relationship also exists between one dimension of corporate governance (shareholders' rights) and the performance of financial institutions in Kosova and Montenegro. Thus, this research contributes to the scarce empirical research on the relationship between corporate governance and performance of financial institutions in the developed economies, and to the not hitherto investigated relationship in SEE countries.

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List of abbreviations

AGM: The Annual General Meeting.
AGR: Accounting and Governance Risk.
ALCO: Asset/Liability Management Committee.
ANOVA: The Analysis of Variance Table.

BAI: The Board Accountability Index.
BCBS: The Basel Committee on Banking Supervision.
BHCs: Bank Holding Companies.
BIS: The Bank for International Settlements.
BLUE: Best Linear Unbiased Estimators.
BoD: Board of Directors.
BPK: The Banking and Payment Authority of Kosova.

CBK: The Central Bank of Kosova.
CEO: Chief Executive Officer.
CFO: Chief Finance Officer.
CGF: The Corporate Governance Framework.
CGQ: The Corporate Governance Quotient.
CGS: The Corporate Governance Score.
CLSA: Credit Lyonnais Securities Asia.
CRSP: Centre for Research in Security Prices.

EBRD: The European Bank for Reconstruction and Development..
ECB: European Central Bank.
ESG: Environmental, Social and Governance Risk exposure..

FASB: Financial Accounting Standards Board.
FDIC: The Federal Deposit Insurance Corporation.
FDICIA: The Federal Deposit Insurance Corporation Improvement Act..
FE: The Fixed Effects.
FIs: Financial Institutions.
FIU: Financial Intelligence Unit.
FSA: The Financial Services Authority.

G10: The Eleven Economies; Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States..
G7: Finance ministers of 7 developed nations; the United States, the United Kingdom, France, Germany, Italy, Canada and Japan..
GMI*: Governance Metrics International.
GMM: The Generalised Method of Moments.

HHI: Herfindahl-Hirschman Index.

IAIS: The International Association of Insurance Supervisors.
IPO: Initial Public Offerings.
IRRC: Investor Responsibility Research Center.
ISS: Institutional Shareholder Services.

KB: Kosovar Bank.
KCC: Kosova Chamber of Commerce.
KI: Kosovar Insurance Company.

LBOs: Leveraged buyouts.
LCR: Liquidity Coverage Ratio.

M&A: Merger and Acquisition.
MB: Montenegrin Bank.
MBS: Mortgage-Backed Securities.
MEBO: Management-Employee Buy-Outs.
MLR: Multiple Linear Regression.

NSFR: Net Stable Funding Ratio.
NYSE: New York Stock Exchange.

OECD: Organisation for Economic Co-operation and Development.

ROA: Return on Assets.
ROE: Return on Equity.

S&P: Standard and Poor's.
SEE: South East European.
SIFIs: Systemically Important Financial Institutions.
SOEs: State Owned Enterprises.
SOX: The Sarbanes-Oxley Act.

TCL: The Corporate Library.
TEs: Transition Economies.
TS: Time Series.

UNMIK: The United Nation Administration in Kosovo.

WSE: Warsaw Stock Exchange.

Preface

The aim of this thesis is to investigate corporate governance practices of firms, in particular those of financial institutions, and their impact on the performance of these institutions. At the broadest level, this thesis addresses two methodological issues, which have not often been confronted by previous researchers: the endogenous nature of corporate governance, which often has been overlooked; and the dynamic aspect of the relationship with performance, which has not been addressed in the past. The investigation will cover examples from developed and transition economies. Also, it will attempt to draw some comparison between corporate governance practices of the two.

The importance of the topic has been highlighted by policy makers and researchers in the last two decades: a well-functioning banking system is crucial to the health of the economy and the welfare of its citizens. The corporate scandals in the 1990s and 2000s, and particularly the financial crisis of 2008, drew the attention of governments and academia to the significance of corporate governance and the consequences of poor practices. The failure of large companies such as Enron, WorldCom, Parmalat have spurred legislation from the governments and interest from the academia. Despite this the field remains underexplored thus providing the incentive for this research project to aim to contribute to the narrowing of the knowledge gap in this area.

The specific research questions addressed in the thesis are: what is the nature of the relationship between corporate governance and bank performance, in theory and practice; what is the state of corporate governance in South Eastern European banks; is there a way to quantify corporate governance practices in the SEE countries; is there a relationship between corporate governance and bank performance in SEE countries; and whether there is any comparison in terms of corporate governance that can be drawn between developed economies and SEE countries.

The thesis investigates these questions by firstly embarking on a critical review of the literature to identify the strengths and weaknesses of the previous work in this area and therefore the gap in the literature, and secondly engaging in empirical investigation of the relationship. For the empirical part this thesis has used some published data and

information in the public domain and also engaged in primary data collection ourselves. The data on the corporate governance state of banks in the US (as the example of a developed market economy) has been obtained from Investor Shareholder Services (ISS) and the info on bank performance from the Bankscope database. For Kosova and Montengro (as examples of SEE transition countries), a dataset had to be developed by conducting a questionnaire survey of banks in the two countries and insurance companies in Kosova. The questionnaire was used to construct measures of corporate governance that are subsequently used in the empirical investigation.

The empirical methodology of the research consists of both OLS and dynamic panel model estimation. The data for SEE banks is based on the author's bank survey which was conducted for one year and can therefore be analysed only with the OLS method, leaving problems such as endogeneity unresolved. However, both ISS and Bankscope databases provide data for a longer time span (2005-2009) which allows the use of the more thorough dynamic panel analysis which allows a more satisfactory exploration of the data, including dealing with the problem of endogeneity. The empirical analysis suggests that the corporate governance practices of banks in the two regions have a positive and significant impact on the performance of financial institutions measured by market capitalisation in the US and return on equity in Kosova and Montenegro.

The structure of the thesis is as follows. Chapter 1 will investigate the concept of corporate governance. It will start by considering various definitions of corporate governance. The lack of consensus on a single definition indicates that the concept is a broad one with each researcher laying emphasis on a particular dimension of the concept and different approaches to the analysis of the concept. The chapter will explain the three main approaches to corporate governance: the shareholder value maximisation; the property rights; and the stakeholder approach. This chapter will also explain the characteristics of the two main classifications of corporate governance systems: the Anglo – American system, the single tier management board together with dispersed ownership, and the German – Japanese system, the two tier management board with large shareholders. Finally, this chapter will investigate the state of corporate governance in transition economies. Since 1989, the former socialist countries in Central and Eastern Europe (and Central Asia) have been involved in a process of transition from

centrally planned economies to market economies. As part of the transition process, they have had to develop new corporate governance systems and practices which were completely alien to them twenty years ago. The transition economies had to design a corporate governance framework from scratch in order to support the privatisation element of the transformation programme. The chapter will discuss the development of corporate governance framework for transition economies and how this framework interacted with the privatisation programmes resulting in concentrated ownership structures in most TEs.

Chapter 2 will investigate the implications of corporate governance practices for the economy. Failures of large corporations have induced emerging of new corporate governance guidelines and rules which will be discussed in chapter 2. This chapter is also concerned with the measurement of the quality of corporate governance and the ways to quantify and then rank corporate governance practices of individual companies. The methods of measurement used by various agencies and institutions will then be discussed. This chapter will introduce the relationship between the quality of corporate governance practices and firm performance by briefly reviewing some of the main contributions to this debate, leaving a fuller review to Chapter 4. The chapter end with a detailed discussion of, and comments on, the OECD corporate governance principles.

The discussion in Chapter 3 will turn to corporate governance practices of financial institutions. The focus will be on pointing out the differences between corporate governance of banks and firms in other industries. Next, the few empirical studies exploring the relationship between corporate governance and bank performance will be discussed in more detail. One of the main differences between the corporate governance of ordinary firms and that of banks is the fact that banks are heavily regulated. With regulation being such an important factor influencing the corporate governance of banks, Chapter 3 will review the important legislations and regulations which have shaped the practices of banks in the developed economies. The Sarbanes – Oxley Act and the Basel II capital accord will be discussed in greater detail from the corporate governance point of view.

Chapter 4 will set up the theoretical framework for the empirical investigation of the relationship between corporate governance and firm performance. It will start by

discussing in greater detail how the key studies in the field, explain develop or construct their own measure of corporate governance quality. These measures then can be used for empirically testing the relationship between corporate governance and firm performance. This chapter will also introduce the model which will be used to estimate the relationship between corporate governance and bank performance. This estimation will use a cross section dataset and the OLS estimation technique and will demonstrate that there is a significant and positive relationship between the corporate governance and bank performance. The chapter will also provide an analysis of the reasons why many previous studies have failed to provide statistically significant results for this relationship. Consequently, the reasoning for the model specification using variables not used by previous research will be introduced and argued in Chapter 4.

Chapter 5 confirms the findings and takes the estimation of the relationship between corporate governance and bank performance, which started in Chapter 4, a step further. With the detailed corporate governance data becoming available at a later point, it was possible to construct a panel dataset and embark on the more advanced and comprehensive panel data methodology. The potential estimation problems, including the endogeneity based on reverse causality, which could not be addressed by the cross section technique will be elaborated and dealt with. This chapter aims to point out the importance of dynamics in estimating corporate governance related models as the static panel model may generate misleading results. By applying the Generalised Method of Moments, the positive and statistically significant relationship between corporate governance and bank performance is confirmed.

Chapter 6 will investigate the development of the corporate governance framework and the relationship between corporate governance and performance of banks in two SEE countries (Kosova and Montenegro). Since there are no previous studies related to corporate governance of banks, this chapter analyses the development of the banking system and the regulation of banks in the two countries with a focus on the provisions concerned with corporate governance. In order to investigate the state of corporate governance in the two SEE countries, it is necessary to embark on primary data collection. A bank survey, using a questionnaire based on the World Bank's reports on the observance of standards and codes (ROSC) questionnaire, but adjusted to highlight

compliance with OECD corporate governance principles, was conducted during 2009. Appropriate indices of corporate governance practice were thus constructed so that they could be used in empirical investigation. The results point out the similarities and differences between the corporate governance practices of the two countries and those between banks and insurance companies in Kosova. The information obtained via the survey also allowed the calculation of 5 separate subscores, each representing compliance with one of the 5 OECD corporate governance principles (II-VI) for each bank or insurance company. Using one of the subscores as a proxy for corporate governance and the return on equity as a proxy for performance, this research finds a positive and statistically significant relationship between the two. The chapter then compares corporate governance of developed economies and SEE countries.

Chapter 7 summarises the main findings of the thesis and its contributions to knowledge. It will also point out the limitations of this research and offer some suggestions on the directions in which this research can be extended.

Introduction to Corporate Governance

1.1 Introduction

Corporate governance is not merely the governing of a certain form of organization, in this case 'a corporation', but has a broader meaning. The concept has been used by different people differently and still there is no universally accepted definition of corporate governance (Rezaee, 2009). The importance of corporate governance came to attention of governments in the 1990s after western economies witnessed a series of financial scandals such as Enron, WorldCom, Paramalat which were facilitated by wrongdoings on the part of the management, auditors and financial market operatives. These scandals shook the confidence and trust of the citizens in the institutions of these economies and led them to devise stricter regulator mechanisms – which this thesis will address elsewhere.

As a starting point, most of the work in the field of corporate governance takes the issue highlighted first by Berle and Means (1932), which is the separation of ownership and control. This separation will generate an agency relationship between owners as "the principal" and managers as "the agent". In an ideal world, managers would invest all of their abilities and skills to generate the best possible returns for investors. In the real world, things are slightly different.

A series of unexpected corporate failures in the 1990s brought to attention the importance of the corporate governance system (Diacon and O'Sullivan, 1995). With the shadow of doubt cast over companies and the way they are being managed, obtaining external finance was burdened with the need for proof of honesty. As a result, any serious listed company has had to allocate a part of annual, or other important, reports to addressing and explaining its corporate governance procedures. Furthermore international organisations such as the OECD, stock exchanges, and various government commissioned reports across the world have devised, and some of them imposed corporate governance guidelines.

There is a vast amount of literature dealing with corporate governance, and researchers such as Shleifer and Vishny (1997) or Becht et al. (2002), and others have produced surveys of the existing knowledge in this field. This chapter will adopt the approach by Shleifer and Vishny (1997), and will review a selection of the literature produced since

1997, although occasionally it will go further back. The main difference with the Shleifer and Vishny's work, which is from a straightforward agency perspective, is the fact that this chapter incorporates the stakeholder approach which is frequently encountered in the recent research.

The aim of this chapter is to discuss the following questions: What is corporate governance? Who are the parties involved? Why and when does it become a problem? The main approaches to corporate governance, the shareholder value maximisation, the legal and the stakeholder approach, are discussed in more detail starting from section 1.2, 1.3, 1.4 and 1.5 respectively below.

The chapter will also look more closely into other important concepts for corporate governance such as: specific governance arrangements and corporate governance classification. Specific governance arrangements refer to the mechanisms through which the agency problem is addressed. This is closely related to the degree of diffusion or concentration of ownership (Shleifer and Vishny, 1997). The dispersion or concentration of ownership is the basis of classification of firms into Anglo-American model, usually with a large number of small shareholders, and German-Japanese model where there are only a small number of large shareholders prevail. Same as the specific governance arrangements in section 1.6, corporate governance classification will be discussed in section 1.7. The corporate governance of firms in countries in transition is discussed in section 1.8, and finally section 1.9 concludes.

1.2 What is Corporate Governance?

Although the term corporate governance is used quite 'liberally' nowadays,[1] it is known to mean different things to different authors. Nonetheless, the following definitions should give the reader a general idea about the concept: "Corporate governance deals with the ways suppliers of finance to corporations assure themselves of getting a return on their investment" (Shleifer and Vishny 1997, p. 737). The authors ask the questions: Why do investors decide to part with their money and entrust managers with it, when there are still no proven mechanisms which would guarantee them a return on their

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[1] A simple search by one of the popular search engines (google) produced 56,400,000 results (accessed in July 2007) and about 109,000,000 results in 2013.

investments? Why managers do not run away with the money? Although there are sporadic cases, mostly they do not.

Corporate governance refers to "the design of institutions that induce or force management to internalize the welfare of stakeholders" (Tirole 2001, p.4). Another definition is: "Corporate governance is, to a large extent, a set of mechanisms through which outside investors protect themselves against expropriation by insiders[2]" (La Porta et al. 2000b, p.1). Along similar lines, from the regulatory perspective corporate governance is defined as "the system of laws, rules, and factors that control operations at a company" (Gillan and Stark, 1998, p.4).

"Defined broadly, corporate governance refers to the private and public institutions, including laws, regulations and accepted business practices, which together govern the relationship, in a market economy, between corporate managers and entrepreneurs (corporate insiders) on one hand, and those who invest resources in corporations, on the other" (Oman 2001, p.13).

"The term 'corporate governance' essentially refers to the relationships among management, the board of directors, shareholders, and other stakeholders in a company. These relationships provide a framework within which corporate objectives are set and performance is monitored" (Mehran 2003, p.1).

A more comprehensive definition where corporate governance is looked at as "the process affected by a set of legislative, regulatory, legal, market mechanisms, listing standards, best practices, and efforts of all corporate governance participants, including the company's directors, officers, auditors, legal counsel, and financial advisors, which creates a system of checks and balances with the goal of creating and enhancing enduring and sustainable shareholder value, while protecting the interests of other stakeholders" is provided by Rezaee 2009 (p.29).

Keasy et al. (1997) have identified the inconsistent use of the term 'corporate governance' by different writers and were unable to find any real consensus on the definition. According to Rose (2007) the lack of consensus in defining most of the issues

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[2] Insiders in this context are managers and controlling shareholders.

surrounding corporate governance has provided a fertile ground for the growth of a Corporate Governance Industry in the United States. The term refers to a market for corporate governance rating agencies which is discussed in more detail in the next chapter.

The lack of a precise definition, can give rise to any number of situations in a firm's 'day to day' functioning to be qualified as corporate governance problems even when they are not. The question then is, when does the corporate governance problem arise?

1.2.1 The Corporate Governance Problem

Becht et al (2002) argue that the corporate governance problem arises whenever an outside investor wishes to exercise control differently from the manager in charge of the firm. La Porta et al. (2000b) identified the risk of outside investors being expropriated by insiders as a corporate governance problem. Berglof and Von Thadden (1999, p.4) pointed out that the "recent literature is based on the premise that the main corporate governance problem is (the conflict between) self-interested management and weak, dispersed shareholders". Similarly, and in the spirit of Berle and Means, Enriques and Volpin (2007, p.1) maintain that "the fundamental problem of corporate governance in the United States is to alleviate the conflict of interest between dispersed small shareowners and powerful controlling managers". Hart (1995b, p. 678) on the other hand, argues that whenever two conditions are present, corporate governance issues arise. "First there is an agency problem" and "second, transaction costs are such that this agency problem cannot be dealt with through a contract".

The situations described above do not account for all possible manifestations of corporate governance problems; nevertheless, they give the reader an idea of the nature and breadth of the field this thesis is about to tackle. What is more or less obvious at first glance is the broad division between outsiders and insiders, something that brings the discussion back to Berle and Means (1932) and their distinction between ownership and control. However, there are other theories which can serve as grounds for nurturing different views for these problems. This chapter will return to these theories later.

1.2.2 Sources of Corporate Governance Practices

Rezaee (2009, p.44) mentions four primary sources of corporate governance in the United States as: corporate laws, securities laws, listing standards and best practices. This certainly is one end of the spectrum and can be considered valid for countries with developed legal and economic systems and slightly less so for less developed countries. For instance, there are countries that do not have established stock exchanges, thus listing standards cannot be considered a source of corporate governance for their companies.

1.2.3 Interested Parties to Corporate Governance

Perhaps the definition provided by Mehran (2003) and Rezaee (2009) give the best representation of the parties to corporate governance and these are according to the shareholder approach: management, board of directors and shareholders. If other stakeholders are brought into the equation then interested parties will also include employees, suppliers, customers, banks, regulators, the environment and the community at large.

There are interested parties which affect corporate governance indirectly but, nevertheless, it is argued that they have a substantial impact. "Governance advisers, governance rating firms, and proxy advisers (sometimes operating as business units of a single company)", alias, the Corporate Governance Industry who according to Rose (2007, p.889) influence the allocation of trillions of dollars. The leader in this industry, Institutional Shareholder Services (ISS) "claims to advise "24 of the top 25" and "81 of the top 100" mutual funds, all "25 of the top 25" asset managers…" (p. 890).

Rose suggests that this industry is playing the role of the voluntary regulator for corporate governance despite concerns about the ways affairs are handled within the industry. There are two roots to these concerns. "First, ISS is providing both governance ratings and advice on how to improve the governance score…Second, in the case of ISS, the governance adviser also serves as a proxy adviser, which creates a concern that ISS' recommendation in a proxy matter may be affected by whether or not the subject company purchases other services from ISS, such as governance advice" (p.906).

One of the main questions in respect to corporate governance over which the scholars are divided is about 'whose interests should be taken into account' in running a corporation. One group of scholars like Shleifer and Vishny, La Porta, de Silanes and others, those embracing the Berle and Means approach, argue for the primacy of shareholder's interests. The maximisation of returns on shareholder's investments should be the main goal of the firm. This means that the motivation of managers to act in the best interest of shareowners is the focus of this approach, which may also give rise to the principal-agent problem.

Another group of scholars (Tirole, 2001; Freeman, 1984; Jansson, 2005) advocate that other stakeholders' interests should be considered when important corporate decisions are made. However, the potential problem with this line of thought is the following: there is a larger number of types of claimants with a claim on the firm's profits. Two main issues are likely to arise here: (i) In the spirit of Jensen (2001, p.11) "it is logically impossible to maximize in more than one dimension at any time unless the dimensions are what are known as 'monotonic transformations' of one another", meaning that with a large number of stakeholders it would be very hard to maximise benefits of different groups simultaneously, and why the shareholders, who are stakeholders in this equation too, should bear the financial cost,[3] or in the best case, the main share of it? These concerns will be discussed in more detail later in a section that explores the stakeholder approach. But first, we will start by addressing the issues raised by the shareholder's interest group.

1.3 The Shareholder Value-Maximisation Approach

The value-maximisation proposition, according to Jensen (2001), is rooted in two hundred years of economics and finance research. This is a very plausible aim for every company since by maximizing the market value everybody stands to gain. However, in a joint stock company where there is division between ownership and control, the issue of how to divide the outcomes of maximization might arise. The managers are in a position that enables them to divert the profits for their own private benefits, in other words the relationship between shareholders and managers may be characterised by the presence of the agency problem. One of the ways to address ex-ante the agency problem are

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[3] The financial cost here is the foregone profits (opportunity cost).

contracts. Incomplete and incentive contracts along with other related aspects will be discussed in greater detail in this section.

1.3.1 The Agency Problem

The agency problem as presented in Fama (1965; 1980) can be illustrated using the concept introduced by Williamson (1975) of the 'new institutional economics' and the assumption of self-interested rational actors that want to maximise their welfare, subject to constraints imposed by the environment. The principal is the actor in possession of number of resources but not the exact combination of them which would allow him to realize interests (owners are in possession of funds that can be invested easily, but not necessarily equipped with appropriate skills) (Coleman, 1990); and the agents are managers with the know-how and experience to utilise the investment in order to generate profits. Both are rational actors. The principal has to find ways to ensure that the agent will use the skills and information in his possession for mutual benefits, rather than misusing the advantages he enjoys due to asymmetry of information to maximise his own welfare at the expense of the principal's welfare. Since there are no straightforward ways in which the principal can measure whether the agent is fully using all his resources in carrying the obligations towards the former, the relationship is subject to moral hazard behaviour from the agent. Furthermore, there are situations where the principal does not provide all the funds as they are supposed to, hence succumbing to moral hazard behaviour (Braun and Guston, 2003). Thus the principal-agent or the agency problem arises. This means that at the core of the agency problem lays the division of ownership and control or separation between finance and management. This notion, which was elaborated by Berle and Means and subsequent writers, can be traced to Adam Smith (1776). The view can be understood from a business endeavours perspective where in most cases, a business idea and funding to make it happen do not lie with the same entity or person. "A firm [or corporation], therefore, consists of the system of relationships which comes into existence when the direction of resources is dependent on an entrepreneur" (Coase 1937, p. 9), which as explained above is characterised by moral hazard and information asymmetry.

The problems raised here have highlighted the need for a contract to bind all parties to meet their obligations and responsibilities. As it stands, owners are in a better position

before committing their funds since there is less risk involved. Once they agree to sink their capital, they practically have given up their only bargaining tool. Managers, theoretically, can take the money and disappear. This is why contracts are signed, as an attempt to address the ex-post vulnerability of owners.

1.3.2 Contracts

A perfect contract, in theory, lays the ground for the perfect alignment of investors' and manager's interests. This means that a good contract would be providing ample incentives for managers to act in the interest of shareholders. The shareowners, on the other hand, apart from exercising their voting rights, are encouraged to intervene in underperforming firms and get involved with their boards in order to improve returns (Myners 2001).

Contracts signed by managers and investors, however, should not require too much interpretation in case they are to be enforced by courts. Even the most advanced countries have legal mechanisms to keep courts out of businesses i.e. business judgment rule in United States (Shleifer and Vishny 1997, p.741). On the other hand, when the funds are gathered from a vast number of small shareowners, the latter often remain too poorly informed to be able to exercise their control rights. Because they are individually small, there is no interest on their part to learn more about the companies they are financing which makes them subject to the free rider problem.

The question is: who or what forces managers and/or shareowners to honour their responsibilities. The contract? Although it is a legal act, it will be just a piece of paper without a proper legal system to enforce it. This puts in perspective the role of a healthy legal environment. Only in such an environment can contracts be used as a means of regulating the relationships between financiers and managers.

In general, a contract specifies what the manager is expected to do with the funds, and how the returns will be divided. In an ideal world, the contract would be a complete contract which specifies what the manager is expected to do and how the profits are allocated in all states of the world. The problem is that it is impossible to foresee all possible future contingencies, hence most contracts are "incomplete contracts". Such contracts are the only tool in the hands of shareholders to impose some control over the

management ex-ante when they are unable to exert much control ex-post. The consequence is that managers are left in decision making position with a significant amount of discretion, which could provide them with the incentive to maximise their own welfare. Due to the potential significance of misdemeanour by managers, the issue of managerial discretion will be discussed in more detail after the incomplete contracts.

i.   *Incomplete Contracts*

Hart (1995b, p.679) suggests that "corporate structure does matter if agency problems are present and contracts are incomplete". He argues that standard principal-agent model fails to recognize costs involved in writing a comprehensive contract. Nevertheless, these costs are present. The transaction cost literature identifies three types of important costs. First, there is the cost of thinking of all possible situations which can arise during the course of the contract, and then making plans on how to address those. Second, the costs involved in negotiating these plans with others, and third, the cost of writing the plans in such a way that they are enforceable by law in the event of a dispute. Given the complexity of corporate activities, if the "complete" contract would be possible to write, the cost would be immense. Instead the parties will resort to writing an incomplete contract which <u>will</u> have gaps and missing provisions and where future actions will be specified only partly or not at all. In a world of incomplete contracts with the presence of agency problems, "governance structure can be seen as a mechanism for making decisions that have not been specified in the initial contract" (Hart 1995b, p. 680).

The thinking behind this is actually quite straightforward. If there were a comprehensive contract in place, then everything would have been specified ex-ante. All the decisions would have been taken prior to signing the contract between the parties involved; hence there would be only a need for a monitoring body in case any of the parties falls short in fulfilling their duties and obligations. Even this body and the actions to be taken by it would have been decided prior to the signing of the contract. The argument of this sort can go on forever, and the possible moral hazard issues it can raise are incomprehensible. For this reason, a governance structure is needed to deal with day to day tasks and problems such as short delays or early deliveries of materials, shortage or too much storage space, replacement of an employee who regularly calls in sick, and a

huge number of other situations which need to be dealt with on the spot. In theory, there is the possibility that these situations will even not occur, but practice shows that they are quite common. However, this illustrates the extent of the problem if all of these situations were to be addressed by a comprehensive contract. This makes it quite obvious that such a contract cannot be written. Hence, the choice of incomplete contracts and governance structure is made on the cost effectiveness basis.

Zingales (1998) takes a slightly different perspective from Hart in arguing the importance of incomplete contracts for corporate governance. His approach is built around the concept of 'quasi-rent'.[4] However, in order to address corporate governance problems through this approach, two conditions have to be met. First, the relationship must generate some quasi–rents and second, quasi-rents cannot be perfectly allocated ex-ante. Zingales (1998) argues that corporate governance matters for the distribution of rents. He also argues that there are three main channels affecting the division of quasi-rents.

The first channel, ex-ante incentive effects, denoting the process through which the ex-post division of quasi-rent affects ex-ante incentives to undertake some actions, denotes creating or destroying some value in two main ways: (1) if not properly rewarded by the governance system, rational agents will not spend the optimal amount of resources, and (2) by trying to alter ex-post bargaining in their favour, rational agents will spend resources on inefficient activities.

The second channel is inefficient bargaining through which a governance system affects total value by altering ex-post bargaining efficiency. This suggests that a governance system is able to affect the degree of information asymmetry between the parties, the extent to which a party is liquidity constrained or the level of coordination costs.

The third channel is risk aversion, through which "a governance system might affect the ex-ante value of the total surplus by determining the level and distribution of risk"

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[4] In the situation where the buyer and the producer have entered into a contractually binding relationship, they end up trapped in a bilateral monopoly. The product has more value to the buyer than to the market and on the other hand, the producer probably can deliver at the lowest cost. The difference between what they can obtain in the marketplace in contrast to honouring the contract represents the quasi-rent. For a more elaborate explanation, see Zingales (1998).

among the parties involved (Zingales 1998, p.10). Namely, an efficient governance system would be able to allocate most effectively the risk to the most risk-tolerant party, if that different parties have different degrees of risk aversion. However, Zingales (1998) concludes that the incomplete contract approach is heavily dependent on the quality of contracts to be written, which is dependent on the ability to foresee future contingencies. For this reason this approach is efficient in explaining ownership and corporate governance structures when entrepreneurial firms are concerned, but it is less so for more complicated large and publicly owned companies.

Hart and Moore (2007) suggest that the approach to incomplete contracting should be broadened to include behavioural elements as well. The usual approach considers renegotiation of incomplete contract as the way that leads to ex post efficiency, and the focus is on distortions to ex ante investments. To Hart and Moore this is a restrictive approach. The theory of incomplete contracts is "based on the idea that a contract is a reference point for parties' feelings of entitlement, and that feelings of entitlement affect contractual performance" (Hart and Moore, 2007, p.183). Each contracting party feels entitled to the best possible outcome permitted by the contract. Naturally, there is a possibility that one or even both parties end up disappointed by the outcome.

Assuming that the transaction is not going to be a one off exercise, the outcome of previous transaction provides the discretion to each party to provide "perfunctory" or "consummate" performance. Hart and Moore argue that consummate performance does not cost much more than the perfunctory one and the party is more likely to provide it if he or she feels well treated.

However, when a party to a transaction puts up a perfunctory performance instead of consummate for whatever reason, the behaviour referred to as 'shading' occurs.[5] It can be argued that shading costs constitute a corporate governance problem. If manager (A), for example, resorts to providing only the services specified in his/her contract and nothing more, which translates into perfunctory performance, then shading costs are incurred by shareowners in respect to manager (A). The argument is underpinned by the

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[5] Shading in the context of Hart and Moore (2007) is the situation where one of the parties does not engage all of its capacities in fulfilling their end of the contract to the fullest due to the improper incentives laid in the contract.

Hart and Moore assumption that this behaviour cannot be observed or penalized by an outsider. The final assumption they make is that parties cannot shade if they do not trade. They do, nonetheless, make the note that shading costs might be capturing other kinds of transaction costs such as haggling, influence or rent seeking costs and so on.

The relevance to corporate governance of such a view is that if feelings of entitlement for either party, owners or managers, fall short of their expectations, then shading costs are expected to be incurred by the corporation. Shading costs are similar to shirking, hence they increase the overall cost of the company. This means that the residuals left in form of profit to be shared by owners are lessened. However, it is expected that shading costs are very unlikely to be incurred by large shareholders. In the spirit of Shleifer and Vishny (1997), this thesis confirms that large shareholders are the market response to poor governance laws and poor legal protection of investors, which is the remedy for shading costs also. In a system which encourages dispersed ownership, however, shading costs are a reality of corporate structures.

ii. *Managerial Discretion*

This part is more relevant to corporate governance systems characterised by dispersed ownership rather than to the concentrated ownership systems. The key element here is the absence of monitoring of managers. This and the fact that managers end up with substantial control rights (discretion) puts them in position to expropriate owners. "Straight-out expropriation is a frequent manifestation of the agency problem that financiers need to address" (Shleifer and Vishny 1997, p. 742).

The number of ways in which managers can expropriate owners ranges from cases of Ponzi schemes where they abscond with the money to more elaborate ones like transfer pricing. Shleifer and Vishny (1997) in their survey depict cases of managers setting up private companies and then buying at lower prices from, or selling at higher prices to, the corporation they manage. Other cases illustrate situations where managers will undergo a loss on behalf of the company if they can derive a profit for themselves.

There are few mechanisms to stop mangers behaving in this way, or rather encouraging them to act in the interest of shareowners. Some of these mechanisms are: incentive contracts, large shareholders, effective legal protection and others will be mentioned in

the rest of this chapter where they will be discussed in more detail as they all deal with the agency problem in one way or another.

1.3.3 Incentive Contracts

Tirole (2001) points out that recent economic analysis has identified three mechanisms which contribute to partial alignment of managerial decisions with the interests of shareholders/investors. First, management responds to monetary incentives; second, managers will try to satisfy their shareholders because they are concerned with their future careers; and third it is 'active monitoring' by the board of directors. It is quite obvious that the first two mechanisms are managerial incentives, the former explicit and the latter implicit, while the third mechanism relates to the control structure.

If owners want to ensure that managers will take the decisions which are in line with value maximisation of the company, then one of the ways is to link the compensation of managers with the performance of the company. Granting a manager "a highly contingent, long term incentive contract ex ante" will help in aligning his interests with those of the investors (Shleifer and Vishny 1997, p. 744). However, for these incentive contracts to work, they should feature some measure of performance. This measure must be highly correlated with the quality of the decisions taken by the manager and must be verifiable in court.

According to Shleifer and Vishny (1997), one of the problems with incentive contracts is that they create vast opportunities for self-dealing for managers. This problem becomes worse if managers negotiate these contracts with poorly motivated boards rather than with large investors. This means that managers will negotiate contracts including share ownership if they know that share earnings or stock price are expected to rise. They can also manipulate the financial reporting system to overstate their performance. The strengths and shortcomings, as identified and explained above, make incentive contracts a mechanism perceived as helpful in aligning manager's and owner's interests but it can hardly be said that they solve the agency problem.

1.4 Property Rights Approach

According to this line of thought, most of the corporate governance problems, as defined above, are at odds with the property rights theory where ownership is seen as a source of power. "One very simple implication of the theory is that, *ceteris paribus*, a party is more likely to own an asset if he or she has an important investment decision (where the investment decision might represent figuring out how to make the asset more productive or looking after the asset)" (Hart 1995a, p. 49). What this theory is suggesting is that, whenever possible, control is taken over by the owners since they stand to lose the most, or, one might speculate that managers will take ownership in order to avoid profit sharing or monitoring. In that case, there should be no corporate governance problem, since there is no more division between ownership and control.

However, when elaborated in more detail, the situation depicted above is not very likely to happen often. Namely, it is impossible for a single person to own and manage all the activities of a modern corporation. For one, the sheer size of trans-continental corporations makes it physically impossible. Perhaps, the property rights approach in respect to corporate governance, is valid only for firms of certain size, i.e. sole-proprietor or small family businesses.

1.5 Stakeholder Approach

According to (Cooper 2004, p.20) one of the fundamental features of this approach is that "it attempts to identify numerous different factions within a society to whom an organization may have some responsibility." Hence, corporations should not be managed based on the profit maximising function if this means that by doing so, some of the stakeholder s' interests are adversely affected. The view propagated by this group of researchers is explained by the following example: If a mining site closes down because it is no longer profitable for the shareowners and managers who stands to lose the most? [6]

Economic theory predicates that it is very likely that the shareowners have a diversified portfolio of investment (in our example this could be a larger number of mining sites

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[6] We are keeping the scenario very simple because we do not need to get involved in deeper argument for the purposes of this example.

and probably in different countries). The managers, as they belong to specialized and highly trained end of employment spectrum, have very good chances of getting another job fast. Hence, it is the actual miners who stand to lose the most since their human capital is mostly only their work experience in this particular mine. For this reason, if the employees would have a say in the decision to close the mine in our example, then most probably they would object. However, having the mine running means that the owners will have to suffer losses, or in a more optimistic scenario, they are making small profits but not as much as if they would if they closed the mine and moved the operations to a more profitable site or business.

"Stakeholder theory holds that managers should make decisions that take account of the interests of all the stakeholders in a firm" (Jensen 2001, p.8). The challenge then is how to reconcile the interests of different stakeholders. One can argue that, if the decisions taken by a firm have more effects on other stakeholders than shareholders, then it is not irrational to ask that these stakeholder's interests be taken into consideration during the decision-making process.

The OECD Principle number IV of corporate governance (OECD 2004) addresses the role of stakeholders in corporate governance.

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

As it can be seen from the citation above, OECD does not propose 'forcing' the corporations to take into consideration the interests of other stakeholders as encountered in Jensen (2001); it is calling for recognition of their rights.

The extent of decision making process can be illustrated if the mine example used earlier is elaborated little further. Let us assume that the miner's interest was considered during the decision-making process and the decision is to keep the mine

running. This decision would entail some opportunity cost[7] for owners. The question then is why is it that only one faction of stakeholders has to bear the cost of improving the social wellbeing of all stakeholders? The other question is why would the shareholders accept to do this? One can argue that they are pressured by the government to take these losses. However, it is hard to sustain such assumption since by doing this, the government would be signalling the interference in the business affairs of companies, hence risking the loss of any future investment.

However, defining who qualifies to be a stakeholder in a firm seems to be one of the shortcomings of this approach. Freeman (1984, p.31) refers to stakeholders as: "those groups without whose support the organisation would cease to exist." Another definition by Freeman (1984, p.46) states that "any group or individual, who can affect or is affected by the achievement of organisation's objectives, is a stakeholder." Jansson (2005, p.6) suggests that "each firm is unique and stakeholder groups have to be defined for each case". She also finds that there is no unified way as to which stakeholders are given decision-making rights. According to her, although there are cases of these rights being granted to stakeholders, the way it is conducted is highly country specific. In the United States and the United Kingdom the stakeholders sometimes have representatives on the board of directors. Countries with two-tier systems will always have the supervisory board including worker representatives who in certain countries comprise up to one third of the board (Taylor, 2006).

The ambiguity in defining the stakeholders and how they retain decision-making rights has adverse effects on the governance system. Jensen (2001, p.13) claims that "any theory of corporate decision-making must tell the decision makers, in this case, managers and boards of directors, how to choose among multiple constituencies with competing and, in some cases, conflicting interests." The stakeholder theory, according to Jensen (2001, p.14) does not offer boards of directors and executives in firms any principled criterion for deciding which groups should be entitled to the stakeholder privilege.

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[7] The most straightforward of these costs would be in the form of lost profits.

Discussing the future of the stakeholder approach, Jansson (2005) points out the impact of capital markets and the convergence of governance structures. This impact, according to the author, will probably be of adverse nature for the stakeholder approach. That is, since the capital markets are now global and the movement of money is hardly restricted at all, it gives better opportunities to capitalists to chase short-term high-return investments instead of low-return long-term ones, thus maximising the return on investments and downplaying the social responsibilities of the corporations as much as possible. Jansson suggests that the governance structures have a trend of moving toward a system which incorporates the power of large investors with the sort of control that is provided by the markets.

Other researchers have been exploring the potential of stakeholder model, but they seem to have come up with more negative rather than positive attributes. Some argue that in contrast to shareholder approach, the concept of stakeholder society fails on three accounts. "(1) It makes up for the dearth of pledgeable income. (2) It provides more focus and sharper incentives to managers. (3) Undivided control prevents foot-dragging and deadlock in decision-making" (Tirole 2001, p.32).

Furthermore, according to Hansman and Kraakman (2001), corporate governance should protect only the shareholders' interest while contractual and regulatory means should protect other corporate constituencies such as creditors, employees, suppliers and consumers. They do, however, recognize the importance of permitting boards to consider interests of stakeholders in special situations such as mounting takeover defences.

1.5.1 Legal Protection

In a series of papers La Porta et al. (2000) argue that the legal approach is the best way to understand the corporate governance problem. To them, the main corporate governance problem, as stated before, is the expropriation of outside investors by the insiders. Furthermore, minority investors stand to be expropriated by large investors too (La Porta et al., 2002; Shleifer and Vishny, 1997). By now, there is a vast number of ways in which expropriation can take place and for this group of researchers, it is up to the

legal system if, and to what extent, the insiders are allowed to misuse their position for their own benefit.

The methodology utilized by La Porta et al. (2000) classify legal systems into four groups: English and German - common law systems; and Scandinavian and French - civil law systems. They state that international differences in investor protection are of historical nature and they argue that each system carries from the past characteristics which are embedded in the structure of the legal system. They further show that there is a direct correlation between the quality of the law and the quality of corporate governance in a country.[8] They also find through empirical research that Civil Law countries (based on the Roman law) underperform in comparison to Common Law countries when protection of outside investors is concerned.

Commenting on the 'legal origin approach',[9] Pagano and Volpin (2005) say that one of the problems of this approach is that it lacks predictive power. However, building on the work of La Porta et al., they investigate if the political theory can explain international differences in regulation.

In their model of an economy there are three types of agents: entrepreneurs, rentiers[10] and workers. The Political system and political vote play a crucial role in this model since there is a possibility that in elections, after the firm has been set up, the law can be changed by a political vote. For this reason, when people enter into agreements, they should consider the possible outcome of elections. The willingness of external investors to provide equity finance is affected by the degree of protection they expect to enjoy from company law.

In accordance with corporate governance theory, rentiers in this model, as well as minority shareholders, want strong investor protection in order to limit entrepreneurs' opportunities to misuse their powers. Pagano and Volpin argue that if the political debate would be concerned only with the level of investor protection, then the solution

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[8] However, one must be careful when talking about the quality of the law not to take into account only the written law but also the enforcement of the law. A perfect written law is worthless without proper enforcement.

[9] Approach introduced by La Porta et al. (2000)

[10] "Rentiers are people whose main source of income is financial wealth. In the model they are non-controlling shareholders" (Pagano and Volpin 2005, p.1006)

could be found in balancing the powers between rentiers and entrepreneurs. However, another important class of stakeholders in firms is their employees.

Interests of employees are crucial to the model since as a group they tend to be ideologically cohesive. They also constitute a large fraction of the vote. In other words, employees are capable of extending political debate to labour issues like protection against dismissal, etc.

For these reasons, Pagano and Volpin model the political agenda focusing on two sets of laws that affect stakeholders: company law, setting the extent of shareholder protection; and labour law, determining employee protection against dismissal.

Their main result is that a proportional voting[11] system provides strong employment protection and weak shareholder protection. This is consistent with the Continental European countries and Japan which tend to have proportional electoral systems. They all have weak investor protection and strong employee protection. In contrast to that, Anglo-Saxon countries with their majoritarian electoral system have strong investor protection and weak employee protection.

i. *Large Investors*

In most countries, with the exception of the United Kingdom and the United States, large investors, often owning more than half of the shares, are very much present and involved in governing companies. Roe (1994) finds that large ownership in United States, especially majority ownership, is not that common because of the laws in place. Such laws restrict large ownership by banks, insurance companies, mutual funds and other institutions to prevent excessive control. However, in other countries such as Germany and Japan, large shareholders are the norm. German banks, often through proxy voting arrangements, exercise substantial control in major companies. The logical explanation for this, in accordance with La Porta et al. (2000), is that it is a substitute for the legal protection of investors. "If legal protection does not give enough control rights to small

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[11] Proportional electoral system is the one where winning the majority of votes is crucial while a Majoritarian electoral system is when a contestant needs the majority of districts to win.

investors to induce them to part with their money, then perhaps investors can get more effective control rights by being large" (Shleifer and Vishny 1997, p. 753).[12]

Large shareowners are able, and have the incentive to monitor management. They also have enough power to exercise control and enforce their decisions through boards since they usually are adequately represented. As such, the free rider problem is not an issue with large shareholders. Also the agency problem in respect to management is remedied to a large extent.

The power concentrated in an organized group of shareholders means that they can stand up to the management and in the extreme, they can target and deal with an individual 'disobedient' manager. This element adds to other contractual incentives to align manager's and shareholder's interests, the latter general being profit-maximization.

Of course, when a company is controlled by one single shareholder (or a family), other problems might arise as a result of excessive control. One potential outcome is that the rest of the shareholders might be expropriated. To prevent outcomes of this nature, laws which prevent large ownership or laws that protect the rest of the shareholders are put in operation.

In practice this means that in order to ensure monitoring and control, functions performed by laws in some countries, shareholders concentrate the ownership in the hands of few large investors. The common forms in which large investors are organized are: takeovers and large creditors.

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[12] A good example of large investors is when ownership is concentrated in the hands of a family. As the research by Morck et al. (2005) has shown, the family firm uses a control pyramid to force their decisions on the underlying firms through, for example, the following mechanism: The family firm controls more than 50 per cent of a firm, which controls more than 50 per cent of the lower level firm and so on. This way, the family firm with relatively low percentage of cash flow stakes, can control all the firms to the bottom of the pyramid. Family firms are present in most countries except for the United Kingdom and the United States, and their existence can raise a number of corporate governance concerns. The biggest concern is the fact that most of the country's corporate sector is in the hands of very few, and they can manoeuvre capital allocation, deter entry by outside entrepreneurs and impede growth in general.

ii. **Takeovers**

"One of the most radical and spectacular mechanisms for disciplining and replacing managers is a hostile takeover" (Becht et al. 2005, p.13). In a hostile takeover, the bidder makes an offer to the owners of outstanding shares or a fraction of them, and if the targeted shareholders accept the offer, the bidder "acquires control of the target firm and so can replace, or at least control the management" (Shleifer and Vishny p.756). Thus, takeovers can be considered as a very efficient tool for disciplining management and for ownership concentration.

The fact that takeovers usually target poorly performing firms supports the view of those who claim that takeovers address corporate governance problems. However, according to Becht et al. (2005) this is a highly costly and disruptive mechanism and apart from United States and United Kingdom, where it is rarely used, it is virtually non-existent. There are valid reasons why this is so, and especially with respect to their effectiveness as a corporate governance tool.

Firstly, because of their costs, takeovers are usually seen as the last resort to address only major performance failures. Secondly, "acquisitions can actually increase agency costs when the bidding management overpay for acquisitions that bring them private benefits of control" (Shleifer and Vishny 1997, p756). Thirdly, in a hostile takeover, bidders need to have access to vast amounts of capital on very short notice. Only a liquid capital market can provide such support and it is not a secret that these markets are a luxury that only a few developed nations can afford. Finally, hostile takeovers are strongly opposed by managerial lobbies, hence very prone to political influences. "In the mid-1980s, several US states passed legislation making hostile takeovers more difficult" (Bertrand and Mullainathan 2000, p.203). In other countries the non-existence of hostile takeovers in the first place can be explained by such political opposition.

iii. **Large Creditors**

Large creditors are brought into the corporate governance picture by their possession of liquid funds. Banks, insurance companies, pension funds and others have funds they can lend at short notice. However, when a company is credited with a large loan by one of these institutions, then it is quite natural that they will be interested and concerned

about how this loan will be used and how it will perform. For this reason large creditors will attempt, and in many cases succeed, to influence the decision making process of the company they are crediting. "Pension funds, mutual funds and insurance companies often buy large stakes in corporations and could take an active role in monitoring management" (Becht et al. 2005). The advantage of greater activism by large creditors, according to Becht et al. is that fund managers are not very likely to engage in self-dealing hence they are almost the ideal monitors of management. The down side to this argument is that fund managers themselves do not have any direct financial pledge in the companies they invest thus they lack the incentives for monitoring that large shareholders may have.

The effectiveness of large creditors and large shareholders as corporate governance mechanisms depends heavily on their legal rights, which are different in different countries. The powers of the banks in respect to companies are very significant in Germany and Japan. According to Shleifer and Vishny (1997), this is because they own blocks of shares, they sit on boards of directors, and they operate in a legal environment which is favourable to creditors.

Still, all large investors need some legal protection. The main advantage of large investors (except for takeovers) is that they rely on simple legal interventions, which can be handled even by poorly motivated and informed courts (Shleifer and Vishny 1997). Thus, it can be said that large investors burden the legal system less than the small ones. This could be the explanation why they are so prevalent in most countries of the world.

1.6 Specific Governance Arrangements

This section will briefly discuss some financial arrangements which are customarily used by large investors to address the agency problem through giving the owners more monitoring and control powers. Such arrangements are: (a) the debt versus equity choice, and (b) Leveraged buyouts or LBOs.

1.6.1 The Debt Versus Equity Choice

"An essential feature of debt is that a failure by the borrower to adhere to the contract, triggers the transfer of some control rights from him to the lender" (Shleifer and Vishny

1997, p. 762). This essential feature of debt is derived from the specific nature of this kind of contract. Namely, the lender agrees to lend funds to the borrower based on the promise of pre-specified flow of future payments. Additionally, the borrower must promise to respect a string of covenants such as maintaining the value of assets inside the firm. Such covenants may include, but not be restricted to, constraining future borrowings by the incumbent or other lenders, imposing their approval on important decisions, and so on. These constraints (covenants) increase the level of control by creditors thus reducing the agency problem. If any of the covenants is violated, or there is a failure to meet any of the promised payments, certain rights pass to the lender and he is able to repossess some assets or throw the company into bankruptcy.

The opportunity to get extensive control in a relatively short period of time[13] presumably gives extra confidence to the investors that they can intervene to save all or most of their investment. Another very important factor is that "the rights of creditors are clearer, and violations of those rights are easier to verify in courts" (Shleifer and Vishny 1997, p.763) which supports the fact that debt provides better protection to outside investors than equity in situations where higher risk is involved.

1.6.2 LBOs

To Roden and Lewellen (1995) the capital structure of a typical LBO firm resembles an inverted pyramid. Large amounts of senior secured debt provided by banks are at the top. The middle, 'mezzanine' financing, consists of unsecured subordinated long-term debt which can be raised from both public and private offerings to individual and institutional investors. They are commonly referred to as 'junk' or 'high-yield' bonds, and usually are securities which generally have longer maturities than the senior bank debt (p.79). Comparatively small amounts of preferred and common equity, most of which are provided by the buyout group, including the management of the newly acquired firm, are at the bottom of the pyramid.

Since the assets of the targeted firm are used as the leverage for the buyout, there is a certain expectation to perform by the acquired firm as the operations should generate

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[13] The assumption here is that violation of covenants foreseen in the debt contract are as easily spotted as a failure to meet the payment on time.

enough cash flow to service the debt. This helps the alignment of interests of the providers of finance from the top, mezzanine to the bottom level of the pyramid where management usually is, thus ameliorating the agency problem (Roden and Lewellen, 1995).

Shleifer and Vishny (1997, p. 766) find that, consistently with the idea that agency problems are reduced by large investors, the available evidence indicates that LBOs are efficient organizations. However, other reasons why this mechanism appeals to large investors might include the enormous returns. Torabzadeh and Bertin (1987, p. 318) suggest that these returns come primarily through "cost savings realized through the elimination of both agency costs and transaction costs attributable to a public corporation, as well as the possible tax savings associated with debt financing". They also find empirical evidence of abnormal returns to shareholders as a result of buyout. Thus, leveraged buyouts often are viewed as a very lucrative value-generating mechanism affordable only to a few investors.

1.7 Classifications of Corporate Governance

Researchers have identified, very broadly, two systems of corporate governance: the Anglo-American market-based system and the German-Japanese, long-term large investor models or system (Becht et al., 2005, p.32). Or as some other researchers put it: Anglo-Saxon market-oriented (which is Anglo-American) division against Japanese network-based that is adopted by some European countries too (Groot, 1998). This section will adopt this over-simplified broad division of corporate governance systems and highlight the main features of each. This division is suitable since all corporate governance systems have elements of one or the other.

1.7.1 Anglo-American Model

Countries that adopt this corporate governance system, led by the United Kingdom and the United States, generally have well developed and deep capital markets, widely diffused ownership structure and well established rules and regulations governing the capital market, and rely on markets to guide their companies. Although the two countries are put together in one category, there is a significant difference between the United Kingdom and the United States corporate governance practices. While in the

United Kingdom the position of the Chief Executive Officer is not held by the Chairman of the Board, in the United States, despite significant reservations of the practitioners and academics, it is the norm to do so (Shleifer and Vishny, 1997; La Porta et al. 2000).

On the positive side, the Anglo-American model of corporate governance highlights the shareholder interests. The non-executive, or independent, directors of a single-tiered Board of directors are elected by shareholders. In most cases they hold key positions such as compensation and audit committees, and outnumber the executive directors. The markets are generally able to reward or punish the good or bad performance of the companies (Shleifer and Vishny, 1997; La Porta et al. 2000).

On the negative side, this system gives more discretion to managers due to shareholders being small and dispersed, and not engaged in monitoring or other corporate governance activities. Among other reasons why shareholders are not active, even when they are in a position to be so, is the free rider problem. Also, La Porta et al. (2000) find that countries that provide better legal protection usually have dispersed and small shareowners who are not so active in exercising some of their rights such as monitoring.

"One of the main criticisms of Anglo-American market-based corporate governance has been that managers tend to be obsessed with quarterly performance measures and have an excessively short-termist perspective." (Becht et al. 2005, p. 33). This behaviour is induced by the threat of hostile takeovers, thus managers are interested in performing well in the short term. This has caused some researchers to call the Anglo-American model 'the myopic' model (Charkam, 1994; Keasey et al., 1998; Becht et al., 2005).

Sceptics of this model use the example of Enron to blame corporate governance structures for its collapse. According to Becht et al. (2005, p. 36), "Enron had all the characteristics of an exemplary 'Anglo-American' corporation." Yet, as stock prices of the corporation were dropping, the remuneration of the executives was not. Similar behaviour was observed during the last financial crisis where top managers of bankrupt or loss making banks were awarded hefty bonuses for the same period.

Despite these criticisms, the economies of countries belonging to the Anglo-American classification of corporate governance, especially the United Kingdom and the United

States, have continued to grow, and their corporate governance systems which allow exit of shareholders at relatively low cost, have proved to be efficient systems. The focus of this system being shareholder value maximisation appears to be one of the strong points of Anglo-American corporate governance system which allows these economies to grow. There are those who question whether the German corporate governance system is converging to the Anglo-American system due to German firms progressively applying the shareholder value principle in the future (Goergen et al. 2008).

1.7.2 German-Japanese Model

The key feature of this model is the existence of large investors such as banks and other financial institutions. Because they are able to invest large funds, they are interested in getting more involved in the corporate governance of the company they are funding. This, on its own, addresses the free rider problem of the Anglo-American model. Also large investors are able to commit to and facilitate long term investments while monitoring the managers, which addresses another of the main problems of the Anglo-American model.

Proponents of this model argue that the close relationship maintained with banks and other long-term debt and equity holders gives companies access to capital at lower cost than their counterparts in the United States and United Kingdom. This means that projects which would be refused by American or English financiers on the ground of profitability would be embraced by the German or Japanese financiers (Keasey et al. 1998).

Most researchers agree that the Japanese culture and mentality has strongly influenced their corporate governance system. "One aspect of Japanese corporate governance that has been praised in the 1980s, is the long run nature of relationships between the multiple constituencies in the corporation[14], which made greater involvement by employees and suppliers possible" (Becht et al. 2005, p. 33).

The main problem with this model, though, is the position of small shareholders. Because the practice in these countries is based on the presence of large shareholders,

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[14] One can argue that this greater participation has helped with the introduction of 'just in time' or 'lean production' methods in Japanese manufacturing firms.

there is a chance that small shareholders and/or small investors are in a disadvantageous situation and run the risk of being expropriated by large shareholders. La Porta et al. (2000) argue that the lack of legal protection for small shareholders induced these countries to end up with large investors as a solution to the agency problem.

1.7.3 Is There a Best System?

Some researchers consider the Anglo-American corporate governance system to be better than its continental counterpart (Hansman and Kraakman 2001). The relative flexibility of entry to, and exit from, shareholding at low cost make this system appealing to many. However, the legal and regulatory standards for being able to run this system of corporate governance are relatively high, which makes the Anglo-American system only suitable for developed countries with developed financial markets and democratic political systems, something which, on a global scale, is more exception than rule.[15]

On the other hand, the German-Japanese system of corporate governance is a system that has successfully managed to overcome the agency problems in successful corporations in the two countries. This system, as pointed out by Keasey at al. (1998), has the necessary institutions in place to provide large amounts of financial support at competitive cost and short time, in order to assist the realisation of big projects. Although historically associated with weaker legal systems, this is not the case at least for the European countries and Japan that adhere to the German-Japanese system of corporate governance.

In a survey of empirical studies, Khanna et al. (2006) find that there is no convergence to a single corporate governance system. Rather, countries create corporate governance systems similar to their regional neighbours. With each system having their positive and

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[15] This is not to be taken as a statement that countries belonging to the German-Japanese system are not developed economies or democratic societies. This cannot be further from the truth for the two countries that lend the name to the category. However, Megginson and Netter (2001) point out the case of the denationalisation of two corporations in 1960s where the German Government had the majority ownership, Volkswagen and VEBA, in a public offering which was designed to favour small shareholders, but within four years, the small shareholders needed to be bailed out by the government.

negative sides, it is hard for academics and/or markets to produce a clear cut answer to which system is best.

Charkham (1994) discusses corporate governance in the United States, United Kingdom, France, Germany and Japan, pointing out their similarities and differences against two criteria: the 'dynamism' and the 'accountability' of the system. His study does not draw clear cut conclusions; however, the German system performs slightly better than the others when compared against these criteria. As for the quality of the corporate governance, Charkham (1994, p.353) argues that "the test of a good system is not the number of companies from which poor CEOs are removed, but the number of times a CEO is so competent that he or she can reach retiring age in place". In contrast to Charkham, Graff (2005) finds that the system in common law countries (Anglo-American) is better compared to the civil law countries (German-Japanese system) based on the nine criteria of investor protection laws that the systems are pitted against.[16]

The conclusion Graff draws from the literature is that the common law system generally provides a more favourable basis for financial development and economic growth. The idea that the legal tradition has pronounced effects with respect to shareholder protection is supported by this analysis (p. 20).

In conclusion, since the economic and legal development of any given country plays such a significant role in the corporate governance, it can probably be said that the system which is the best for a given country is dependent on the level of economic and legal development of that country at that particular moment. However, this can change over time and a country for which the German-Japanese system was best up to a certain point in its development, might change to the Anglo-American one as it suits it better, or vice-versa.

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[16] The criteria used are: 1) One-share one-vote; 2) Proxy by mail; 3) Shares not blocked; 4) Cumulative voting; 5) Oppressed minority; 6) Pre-emptive rights; 7) Extraordinary meetings, 8) Anti-director rights; and 9) Mandatory dividend.

1.8 Ownership and Corporate Governance in Transitional Economies

The 1990s witnessed one of the most dramatic events of the 20th Century: the implosion of the socialist system in Europe and the start of the so-called "transition process", the transformation of these countries to market economies. These transition economies (TEs) went through a series of major reforms in order to build the foundations and institutions of a market economy. As Havrylyshyn and Wolf (1999) point out, transition can be broadly defined as a set of actions toward:

- Liberalization (prices, foreign trade, market operations and other economic activities);

- Macroeconomic stabilization (by market-oriented instruments);

- Privatization (to improve enterprise management and economic efficiency);

- Institution building and rule of law (to secure property rights, transparency, etc.).

The Corporate Governance debate began when the discussion of privatisation and the transformation of ownership reached the agenda of the government in these countries. In this section therefore we will briefly consider the experiences of TEs in the process of ownership restructuring before discussing the effect of ownership on corporate performance and the particularities of corporate governance in TEs.

1.8.1 Ownership Restructuring in TEs

Privatisation was considered a cornerstone of the transition process as the evidence from middle-income and developed countries suggested that this helped enterprises improve their efficiency (Estrin et al. 2009). Privatisation in post-communist countries was a major task (compared to Western economies) because there was no experience of private ownership, and the citizens did not have much saving to pay for the privatised assets. Different methods of privatisation were tried in different countries and the issue of corporate governance arose in the course of the implementation of these methods.

A quantitative survey by Djankov and Murrell (2002) finds a positive relationship between privatisation and enterprise restructuring, and that enterprises with state ownership are among the least effective form of ownership. Estrin et al. (2009) too find that privatisation to foreign owners has improved the performance of firms in all transition economies. This is supported also by Megginson and Netter (2001) as their survey supports the proposition that privately owned firms are more efficient and more profitable than otherwise-comparable state-owned firms. When the foreign ownership is concentrated, the positive relationship between performance and privatisation is even stronger (Estrin et al. 2009).

These studies generally maintain that privatisation would lead to improved performance of companies because it creates an incentive for owners to monitor the managers and ensure that the managers' interests are aligned to theirs. They also face the same problem as in market economies: when ownership is dispersed, there is greater agency problem and managers have greater discretion which they may use for their own benefits. Thus the idea of large shareholders or concentrated ownership as a means of pursuing owners' interests becomes very relevant in these countries (Shleifer and Vishny, 1997).

Another conundrum faced by the governments was which method of privatisation to apply. The inability of price liberalisation and other reforms to provide sufficient incentives for State Owned Enterprises (SOEs) to reform and become competitive combined with potential de-capitalisation of firms by managers and workers in the absence of rapid clear property rights, favours fast privatisation. On the other hand, enabling the government to use a strategy which results in fewer employees (voters) to be fired, favours slow/gradual privatisation (Estrin et al. 2009). More broadly, countries which employed rapid privatisation methods managed to eliminate the dependence of firms on the state budget quickly, while countries which were reluctant to pursue reforms rigorously still finance losses of large state-owned companies (Djankov, 1998).

The transition literature discusses four types of privatisation (e.g., Megginson and Netter, 2001): i) Privatization through restitution is a method which is appropriate when land or other easily identifiable property that was nationalised by communist governments in the past can be returned to either the original owners or to their heirs.

ii) Privatization through sale of state property for cash. This category can take two forms: direct sales to an individual or a group of investors; and share issue privatization through a public share offering. iii) Mass (or voucher) privatization, whereby eligible citizens can use distributed vouchers (which may be free or at nominal cost) to bid for stakes in assets being privatized. iv) Privatization to employees of SOEs whereby the ownership of companies are transferred to management and/or employees (in some cases a minimum proportion of employees had to sign up to a proposal for it to be accepted).

Djankov and Murrell (2000) present three groupings of owners in terms of their effectiveness as owners. At the top, also representing the most effective ownership group, are managers, concentrated individual ownership, investment funds, and foreigners. Insiders, dispersed outsiders, banks, and commercialized state ownership are clustered into the middle level. Traditional state ownership and diffuse individual ownership which produce similar corporate governance effects lie at the bottom.

A broader approach groups privatisation methods applied in TEs into three categories: Privatisation to outsiders (usually foreign investors); Privatisation to insiders or management-employee buy-outs (MEBO); and Mass (or voucher) privatisation. Each of these methods has its implications for company performance and more importantly to this thesis, for corporate governance structures.

Privatisation to foreign investors would imply that the company potentially would benefit from well-established corporate governance practices in the country of origin of investors and pay more attention to business ethics. In most cases, foreign investors would apply these standards as per requirements in their country of origin, thus exercising peer pressure on the local TEs industries where they operate and regulatory bodies. Also, this form of privatisation generates concentrated share ownership meaning that the agency problem is smaller compared to other forms of privatisation.

 Privatisation to insiders through MEBO proved to be successful in the initial stages of transition since the new owners (old managers) had extensive knowledge of the companies, invested in new technology, laid off the surplus workforce, looked for

foreign partnerships and were ready to sell controlling stakes to outsiders in order to generate fresh financial capital.

Mass (or voucher) privatisation has the advantage of providing the citizens, who have contributed (albeit involuntarily) during the socialist system to establish and maintain these companies, a chance to obtain a stake in ownership for free or at symbolic prices. However, this form of privatisation creates a dispersed ownership structure and makes the company vulnerable to all kinds of agency problems. As Błaszczyk et al. (2003) point out, mass privatisation creates diffuse ownership structures which, in the environment of weak legal frameworks, lead to poor corporate governance and the lack of deep restructuring. In order to address these problems, new financial institutions, usually referred to as privatisation investment funds were introduced to serve as financial intermediaries in the post-privatisation period with the intention to provide an opportunity for ownership concentration and portfolio diversification, but without excessive fragmentation of individual holdings (Uvalic et al. 1999). But investment funds themselves were dispersed institutions with poor corporate governance and in many cases, especially in the Czech Republic, were associated with the expropriation of owners through the so-called 'tunnelling' process (Błaszczyk et al. 2003, pp. 35-36).

The trade-offs among three prevalent privatisation methods are summarized in the following Table 1-1.

Table 1-1 - Privatisation Methods in TEs and their Implications

Method	Better Corporate Governance	Speed and Feasibility	Better Access to Skills Capital	More Government Revenue	Greater Fairness
Sale to Outsiders for money	+	-	+	+	-
MEBO	-	+	-	-	-
Mass Privatisation	?	+	?	-	+

Source: World Bank (1996)

A simple glance at this table shows that the method of privatisation through sale to outsiders is the one that generates more benefits for the company and the state. Certainly it has a positive impact on corporate governance of the privatised company in contrast to the manager-employee buyouts or mass privatisations. With MEBO and mass privatisation, governments had to encourage and facilitate further, secondary privatisation (Błaszczyk, Hoshi and Woodward, 2003).

Kozarzewski and Woodward (2001) investigating the MEBO type privatisation, also referred to as the direct method, in Poland find that immediately after the initial privatisation the ownership structure of the employee – leased companies was dispersed, but then the structure tends towards more concentrated format by shares changing hands from non-managerial employees to insider elites and outside investors. In addition, they find that, during the secondary privatisation, it is more often the poor performing companies that favour concentration and 'outsiderization'[17] which have implications for the corporate governance of these companies also.

In a subsequent study, Woodward and Kozarzewski (2004) looking at data from 84 large companies selected from Poland's 500 largest privatised companies and employee – leased companies for the period 1997-2000 used in their previous study, find evidence of a positive relationship between concentrated ownership and the performance of employee – leased companies as measured by total revenues. This relationship was not statistically significant for the 84 large companies.

The surveys of the literature on privatisation process in transition economies (Megginson and Netter, 2001; Djankov and Murrell, 2002; Estrin et al., 2009)   as well as the studies referred to above seem to suggest that the concentrated ownership is more likely to result in improvements in the performance of companies and, in addition, foreign concentrated ownership is more favourable. One of the reasons can be better corporate governance practices of companies with concentrated or foreign ownership.

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[17] By this term authors describe the process of ownership changeover from polish to foreign shareholders.

1.8.2 Corporate Governance in TEs

Privatization is usually accompanied by changes in a country's legal system with some, the industrialized countries, that often need to make some changes to their corporate governance systems, and the others, usually transition economies, that have to create such system almost from scratch (Megginson and Netter, 2001). With the privatization processes occurring at the same time as other significant changes in the economy, including the legal system, it is hard to isolate the impact of corporate governance alone on firm operations.

Mládek and Hashi (1993) point out a potential corporate governance problem that privatised companies may face. The transition period for many enterprises is an "interregnum", a period in which the question of corporate governance remains unsettled, thus opening a gap for managerial abuse of resources. This is because during the transition, the government's control on enterprises has largely weakened but private owners who may influence the enterprise management have not yet taken control of enterprise affairs fully. During this period, the control of enterprises rests largely in the hands of the incumbent managers who might choose to maximise their own welfare rather than that of the government or the eventual owners of the companies. Their finding is supported by the empirical research of Sachs et al. (2000) who find that only functioning legal and regulatory institutions which support ownership can ensure that owners can exercise their rights to pressure firms to improve their performance. This is just one aspect of the agency problem which accompanied the transition of ownership in former communist countries.

Transition economies needed a corporate governance system which helps in building well-functioning institutions for economic growth; contributes to efficient capital allocation and development of financial markets; and assists in attracting foreign investment (Nestor et al., 2000). In addition to fresh foreign capital for the core business activities, corporate governance practices in transition countries are enriched as foreign investors routinely bring the top level managers from their own countries and they impose corporate governance practices which are more advanced than those of the transition economy. In addition, they invest in training of personnel and because in most cases they tend to sell to markets of developed economies, they impose high standards

of corporate governance and business ethics (Estrin et al. 2009). Also, foreign investment usually is represented in a concentrated form of ownership, which helps the alignment of interests of managers and shareholders, thus lessening the agency problem.

This is important in view of the fact that the transition economies hardly possessed the financial culture of shareholding. In a study of corporate ownership of companies privatised through mass privatisation, Boutchkova and Megginson (2000) find that in cases where initially the number of shareholders was below 100,000 this number increased within five years, while in companies with 250,000 shareholders or more, the number of shareholders reduced on average by 33 per cent within the same period. The conclusion that can be drawn from this finding is that the markets have adjusted the number of shareholders somewhere in the interval between more than 100,000 and less than 250,000. Megginson and Nettel (2001) find evidence that most of the shareholders of large privatised companies do not hold other stock, but since the long term results are generally positive, thus inducing stockowners to hold on to their shares, this might imply that governments can rely on stock exchanges and the corporate governance to be able to absorb future floatation (privatisation) of large publically owned companies. They also find that mass privatisations provide a spur to corporate governance of transition economies, as usually these processes are preceded by the creation of a legal framework and institutions needed to support the diffused ownership.

Claessens et al. (1997) show that in case of the Czech Republic, mass privatisation managed to effectively improve firm management after it resulted in a concentrated ownership structure. Using a cross section sample of 706 firms for the period 1992-95, they find a positive correlation between concentrated ownership and firm's market valuation and profitability. Particularly important in improving corporate governance is large ownership through bank-sponsored investment and strategic investors. Although it is often argued that possession of (indirect) control by the firm's bank can be viewed as a conflict of interest, the empirical analysis here shows that such control has positive and significant influence. In general, banks owning equity stakes in a firm exert a positive influence on the firm's corporate governance.

In contrast to Claessens et al., Błaszczyk et al. (2003) find that the high ownership concentration as a corporate governance control tool is not effective in dealing with agency problems. High concentration is expected to improve corporate governance, as it might lead to the replacement of old management with a new one, which may have a role in improving company performance. This was certainly true for some companies in the Polish National Investment Fund program. However, in most Polish companies, their findings suggest that the concentration process was not associated with improvements in performance.

Black (2001) finds that in context of Russian companies, the ones implementing best corporate governance practices were valued a hundred times more by stock markets compared to the companies with worst practices, which indicates that improvements may be achieved if more effective institutions are in place. Djankov and Murrell (2002) also offer some indirect evidence on the importance of corporate governance institutions. They find that the owner category which is most dependent on institutional support (i.e. corporate governance) are diffuse individual owners and outsiders. Countries which managed to provide better institutional support in their sample had more foreign owners and a larger dispersion of ownership.

The Estrin et al. (2009) survey suggests that the mass privatisation method is a hindrance to the establishment of effective corporate governance in transition countries due to the chain of agency problems it creates by the appearance of financial intermediaries in possession of privatisation vouchers. Also, this way of privatisation may be responsible for the delay in the appearance of secondary capital markets in transition economies (Estrin, 2002).

Kozarzewski and Woodward (2001), following the ownership transformation of employee owned companies, note that the transformation tended to result in one of three structures: 1) perpetuation of a dispersed shareholding structure, with dominance of insiders; 2) consolidation of ownership in the hands of insider elites; and 3) concentration of ownership in the hands of outside investors. A number of factors influence the dynamics and the direction of ownership changes, with the economic condition of the company being amongst the most important ones as, when the company is poor, concentration and "outsiderization" of ownership is most likely to

ensue. However, the study suggests that despite the outsiderization process, the position of insiders in terms of corporate governance was strengthened for the period 1997-1998. The employee-owned companies continue to concentrate ownership in the hands of insiders, while companies owned by outsiders encourage the involvement of employees in bodies of corporate governance. Some other specifics related to corporate governance of Polish companies presented by the study are: the supervisory board was introduced as a new body into the governance of Polish enterprises, and this body becomes more active in companies which are in economic distress and where there is no dominant owner group. In employee-owned companies the management (executive) boards were dominated by the same people that used to manage the companies before their privatisation, and the changes in management had most often happened in companies where outside ownership was in excess of 50 per cent. In companies where the ownership was concentrated in the hands of single or few strategic investors, the owners were very active in the decision making process.

Błaszczyk et al. (2003) investigated the role of investment funds in the corporate governance of companies in Poland, Czech Republic and Slovenia. These funds are considered to be one of the worst by-products of privatisation, as they were intended to address the principal-agent problem by helping concentrate ownership in companies with dispersed ownership. They were expected to sell their shares and perpetuate further concentration of ownership, thus reducing the principal-agent problem. In practice, however, the investment funds did not live up to these expectations. The funds did not have the capacity nor the incentives to get involved in improving corporate governance and company performance, but rather they did the opposite and got involved in schemes used to drain companies of their assets, a concept that has been known since as 'tunnelling' (Błaszczyk et al. 2003, pp. 35-36). The inability of investment funds to solve corporate governance problems in transition economies is attributed to the poor level of development of capital markets in these economies (Uvalic et al. 1999).

This summary of the literature review on transition economies shows that the privatisation process had a significant impact on corporate governance of these economies. The intensity of the impact depended on the method of privatisation. Different methods had different effects on corporate governance (some facilitated or

encouraged better corporate governance practices and some did not). Privatisation to foreign investors provided most advantages in respect of corporate governance as they were subjected to corporate governance standards and practices of the mother company which were far more advanced than the ones imposed by legal and regulatory requirements of the transition country (Estrin et al. 2009). The second best method of privatisation was MEBO as this allowed for the continuity of activities with more or less similar pace as before the privatisation, yet due to the properly aligned incentives of management, who became owners after privatisation, the agency problem was not a major issue. However, for this form of privatisation relies on corporate governance framework, and legal protection to be successful (Djankov and Murrell, 2002). The least favourable method of privatisation in terms of corporate governance was the mass-privatisation. This method produced dispersed ownership that the legal systems of the transition countries were unable to cope with. As a consequence, governments or markets had to intermediate a process of ownership concentration through secondary privatisation which in some cases lead to outsiderization of ownership (Błaszczyk and Woodward, 2001; Kozarzewski and Woodward, 2001).

1.9 Conclusion

So far, corporate governance research has raised more questions than answers. What causes the corporate governance problems and what might be the consequences of particular governance structures are difficult to define (Mehran 2003, p.3). Hart (1995a, b) and Mayer (1996) suggest that lack of trust and commitment are at the core of the corporate governance problem, thus identifying two important factors which might play a significant role in corporate governance. This may entail situations where managers wish to maximise their welfare at the expense of shareholders, or when large shareholders in collusion with management want to expropriate minority shareholders (Shleifer and Vishny, 1997; La Porta et al., 2000b; Berglof and Von Thadden, 1999). Nevertheless, researchers keep looking for solutions to corporate governance problem, which many argue stems from the separation of ownership and control as identified by Berle and Means (1932).

The way relationships between these entities are regulated depends on the level of economic development and the development of the legal system of a country. Countries

with better developed legal systems, mainly the common law system, seem to better support the diffused ownership as the corporate governance of these countries provides sufficient protection for minority shareholders. The countries with civil law systems, without prejudice to the quality of their legal system, seem to host more concentrated ownership. Historically, large shareholders were the market response to poor legal protection and corporate governance frameworks (Shleifer and Vishny, 1997).

In the 1990s, the socialist system in Europe collapsed, paving the way for the transition of these economies from planned to market oriented systems. This required a process of transferring state ownership of companies to private ownership. This was achieved by privatising enterprises using several methods, but the lack of legal heritage to deal with dispersed ownership meant that these processes were often followed by corporate governance problems. As a consequence, the governments or the markets responded to these problems. In some cases like Poland, the government responded by creating the National Investment Funds with the purpose of consolidating more concentrated ownership to support Polish mass privatisation. In other cases, the markets corrected these deficiencies by concentrating ownership in the hands of insider elites or outside investors. However, concentrated ownership did not always play out as predicted by the current knowledge on corporate governance and theory of the firm and produced a diverse range of effects. In some cases, the empirical evidence shows a positive correlation between ownership concentration and firm's market valuation and profitability, but in other cases concentrated ownership was used as a tool to drain out the assets of companies.

Finally, despite the large number of definitions, significant number of parties involved, various stages of transition or levels of legal development, corporate governance has an important role to play in modern economies. Protecting the interests of stakeholders and maintaining high confidence of investors seems to be one of the main roles of corporate governance.

Corporate Governance Regulations and Guidelines

2.1 Introduction

The previous chapter investigated corporate governance from different aspects. A number of definitions of the concept and several approaches relevant to corporate governance were explored and the key actors involved in corporate governance of a company were identified. The first chapter also highlighted some of the most 'common' corporate governance problems and discussed them in more detail. Such problems were argued to have given rise to corporate scandals like Parmalat, WorldCom, Enron and others. Consequently, there was a response in the form of various corporate governance principles and guidelines issued by different institutions. The Organisation for Economic Co-operation and Development (OECD) took the lead with the 'OECD principles of corporate governance'.[1] Later on, this chapter will explore in more detail the corporate governance guidelines and regulations which emerged in all countries in response to corporate failures.

This chapter is also concerned with the question of 'What is "sound" corporate governance?' What benefits would good corporate governance yield for companies or more important, what are the costs of bad corporate governance practices? There are a number of researchers linking corporate governance practices, or certain provisions of corporate governance, to the market valuation of the company (Gompres et al. 2003; Bebchuk et al. 2004; Brown and Caylor, 2004). Other researchers have found evidence of the correlation between good corporate governance and lower cost of equity capital. These findings are consistent with the suggestions that improved governance reduces agency costs (Derwall and Verwijmeren 2007; Ashbaugh-Skaife et al. 2004).

Furthermore, this chapter will look at the work of agencies that evaluate the quality of corporate governance. Here, the role of Institutional Shareholder Services (ISS), Governance Metrics International (GMI*)[2] as well as the role of other institutions and agencies such as Investor Responsibility Research Center (IRRC)[3], Glass Lewis & Co., Credit Lyonnais Securities Asia (CLSA), Standard and Poor's (S&P) will be explored in more detail. All of the above listed institutions/agencies have developed tools to rate

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[1] Available from: http://www.oecd.org/dataoecd/32/18/31557724.pdf.
[2] The accent (*) is put to distinguish Governance Metrics Index GMI* from the Gompers et al. (2003) study which is elsewhere in this study referred to as GMI.
[3] IRRC was acquired by ISS in 2005.

the corporate governance practices of companies (Dunev and Kim, 2003; Brown and Caylor, 2004). However, there are those who are sceptical about the real impact of corporate governance rating on improving governance of corporations. Some argue that companies being rated get access to the rating methodology and start addressing only areas which would impact their rating without actually improving their corporate governance practices (Koehn and Ueng, 2007).

The rest of this chapter is structured as follows. Section 2.2 looks at the corporate governance problems and how they contributed in creation of corporate governance rules and guidelines. Section 2.4 discusses corporate governance measurement and ranking agencies. Section 2.5 introduces the discussion on corporate governance and company performance, section 2.3 discusses the OECD corporate governance principles and section 2.6 concludes.

2.2 The Emergence of Corporate Governance Regulation

Failures in corporate governance practices were considered widely responsible for the Russian debt default and the Asian financial crisis in 1998 according to World Bank's Reports on Observance of Standards and Codes (ROSC).[4] After experiencing the systemic effects of such failures, the G7 leaders added the corporate behaviour and incentives to their priority list.[5] Shortly after that (mid-1999), the Organization for Economic Cooperation and Development (OECD) adopted a set of basic principles which were updated in 2004.[6] The OECD principles are not legally binding. Rather they are used as a benchmark by the World Bank and other key institutions to compare the existing corporate governance of a particular country or company with this benchmark. A more comprehensive discussion of the OECD principles will follow at later stages of this chapter, while here they are laid out in broad terms to provide an impression of their scope of coverage with respect to corporate governance. The OECD principles start by focusing attention on the corporate governance framework.

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[4] For more details follow link under footnote 5.
[5] For more details see: http://www.worldbank.org/ifa/rosc_cgoverview.html - accessed in Nov. 07.
[6] http://www.oecd.org/dataoecd/32/18/31557724.pdf - last accessed in Nov. 07.

> **OECD Principles of Corporate Governance**
>
> **I. Ensuring the basis for an effective corporate governance framework.**
>
> *The corporate governance framework should promote transparent and efficient markets, be consistent with the rule of law and clearly articulate the division of responsibilities among different supervisory, regulatory and enforcement authorities.*
>
> Source: (August 2004).

The importance of a good legal and regulatory framework is great as it has a direct impact on the corporate governance that will ensue. As demonstrated by La Porta et al. (2000) there is a positive relationship between good legal protection and dispersion of shareholders (the opposite is implied as the lesser the legal protection, the more concentrated ownership structures). In line with most of the existing theory on corporate governance, the first chapter explained that most of the corporate governance problems stem from the separation of ownership and control. This separation gives rise to the potential agency problem which is argued, in this case, to give managers the possibility to behave opportunistically and misuse company resources. The agency problem of this nature, which then translates into the corporate governance problem, is more likely to emerge, hypothetically, in countries with dispersed share ownership like United Kingdom and United States. In these countries the management is in stronger position because it is harder for individual shareowners to monitor and influence managers' performance. It can be argued the second OECD principle of corporate governance is designed to address this potential problem and ensure the rights of shareholders.

> **OECD Principles of Corporate Governance**
>
> **II. The rights of shareholders and key ownership functions**
>
> *The corporate governance framework should protect and facilitate the exercise of shareholders' rights.*

It is expected that different countries experience the agency and corporate governance problems differently. Using the legal system as a proxy La Porta et al. (2000) find that countries with better legal protection for shareholders tend to have more dispersed ownership. From this it can be deduced that large shareholders are a market response to weak legal protection provided by law. However, as explained in the first chapter, La Porta et al. (2000) identified as a potential corporate governance problem the risk of outsiders being expropriated by insiders (insiders are large shareholders and managers). This means that managers and large shareholders can collude and jointly exploit minority shareholders. Thus, it can be argued the following OECD principle was devised.

OECD Principles of Corporate Governance

III. The equitable treatment of shareholders

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

The company cannot be seen as a body consisting of only managers and shareholders (be that large or minority ones). It is far more complex exercise involving employees, suppliers, general public, environment and many more which jointly are considered to be the stakeholder group. The first chapter discussed the stakeholder approach in detail and the possibilities as well as the problems of including different stakeholders in the decision making process of companies. Involving a single stakeholder in this process, even if this stakeholder represents employees[7], will add a lot to the complexity of governing the corporations. Weil et al. (2002) report states that the largest difference in corporate governance practices among European Union member states is related to the position of employees in corporate governance, a difference often embedded in law (p.3). Given the complexity of the trade-offs, it can be observed that in respect to stakeholders OECD takes a more lenient approach towards shareholders in the context that it provides more detailed guidelines on how to protect their right. Nevertheless, the stakeholders' interests are recognised by OECD principles.

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[7] Or miners, if one wants to be consistent with the example in the first chapter.

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

The famous Enron and Parmalat corporate scandals which happened in 2001 and 2003 respectably, is said to have been caused by the lack of transparency and disclosure. The simplified explanation is the following: companies have used accounting methods which reported profits that were not real, and this practice forced both of them to bankruptcy and in the process shake the confidence of investors. It is expected that these scandals increased awareness for the future, hence the fifth principle is concerned with disclosure and transparency.

> **OECD Principles of Corporate Governance**
>
> **V. Disclosure and Transparency**
>
> *The corporate governance framework should ensure that timely and accurate disclosure is made on all material matters regarding the corporation, including the financial situation, performance, ownership, and governance of the company.*

The sixth OECD principle is concerned with the board and its responsibilities. The purpose of this principle, presented in a very concentrated format, is to make the board of directors responsible for the running of the company. Also, the board is liable to the shareholders and stakeholder groups.

OECD Principles of Corporate Governance

VI. The Responsibilities of the Board

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

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The OECD principles are designed to guide companies regarding their corporate governance practices. A similar approach but aimed at countries is used by the European Bank for Reconstruction and Development (EBRD). In September of 1997 EBRD published their guidelines for corporate governance named Sound Business Standards and Corporate Practices.[8] Helping companies and governments understand the broader concerns of lenders and investors is the objective of these guidelines.[9] In the same year, EBRD published 10 core principles[10] which evaluate the corporate governance framework (CGF). These principles which are based on international best practices and standards can help in assessing a country's CGF in estimating the need for reform. The EBRD principles are designed as guidelines with the purpose to identify the aims to be achieved rather than outlining the process by which to achieve these aims.

Another document produced by EBRD, 'principles of corporate governance and corporate governance checklist',[11] offers countries a tool to evaluate and improve their corporate governance practices through 70 questions divided into five groups.[12] EBRD has gathered data using this checklist in all transition countries and rated the results from fully-conforming, strongly-, weakly- to non-conforming. The Legal Transition Programme Review[13] – report published in June 2012 presents the impact of the legal transition programme during the period 2001-2010 in the countries that EBRD operates. This report confirms that the programme was successful for the aforementioned period

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[8] Available at: http://www.ebrd.com/downloads/research/guides/standards.pdf
[9] EBRD claims that these guidelines preceded the OECD Corporate Governance Principles.
[10] Available at: http://www.ebrd.com/downloads/legal/corporate/cgprin.pdf
[11] Template available at: http://www.ebrd.com/downloads/legal/corporate/checklst.pdf
[12] These five groups are identical to OECD corporate governance principles II-VI. Because the EBRD checklist document was produced in 2000 it is assumed that this is the main reason why the first OECD corporate governance principle was not included. The 1999 version of OECD principles, before they were updated in 2004, had only five principles.
[13] Available at: www.ebrd.com/downloads/ about/evaluation/121109legal.pdf

and that it had made a significant positive contribution to the legal environment for business in transition countries.

The Polish Corporate Governance Forum in 2002 presented a draft of the Corporate Governance Code for Polish Companies which is designed with the self-regulatory bottom-up approach with the intent to address the lack of faith in the Polish capital markets.[14] The main problem in the Polish capital markets at the time was the abuse of minority shareholder rights. As a consequence and with the aim to regain market confidence, a better framework for protection of minority rights had to be developed. For this purpose, the Polish Corporate Governance Forum, relying a lot on OECD Corporate Governance Principles and other similar documents, provided a set of seven principles to be adhered by the Polish companies. The seven principles are: Principle 1 – The main objective of the company should be to operate in the common interest of all the shareholders, which is to create shareholder value; Principle 2 – The composition of the supervisory board should facilitate objective oversight of the company and reflect interests of minority shareholders; Principle 3 – The powers of the supervisory board and company by-laws should ensure an effective supervisory board process and duly secure the interests of all shareholders; Principle 4 – The shareholders' meetings should be convened and organised so as not to violate the interests of any shareholders. The controlling shareholder should not restrict the other shareholders in the effective exercise of their corporate rights; Principle 5 – The company should not apply anti-takeover defences against the shareholders' interests. Changes in the company share capital should not violate the rights of the existing shareholders; Principle 6 – The company should provide effective access to information, which is necessary to evaluate the company's current position, future prospects, as well as the way in which the company operates and applies the corporate governance rules; and Principle 7 – The appointment process of the company's auditor should ensure independence of the auditor's opinion. It has to be mentioned here that there are other transition economies apart from Poland that have contributed to corporate governance guidelines, regulation, laws, hence the Polish experience is introduced here just as an example.

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[14] Available at: http://www.ecgi.org/codes/documents/code_final_complete.pdf

2.3 OECD Principles of Corporate Governance

The OECD principles of corporate governance have been first issued in 1999 and since then became a benchmark for corporate governance in many countries of the world. The current version of OECD principles of corporate governance were agreed in 2004 and they continued the role of being a guideline for policymakers, regulators and other market participants for creating a sound institutional framework which underpins good corporate governance.

In practice, banks are far more concerned with implementing Basel rules rather than OECD principles, partly because most of the regulatory authorities require that. However other financial institutions rely heavily on OECD principles for their industries. The International Association of Insurance Supervisors (IAIS) uses the OECD principles of corporate governance as a benchmark, hence all member countries must implement these principles.

The first set of OECD corporate governance principles consisted of only five subheadings, while the final version (2004) has six subheadings (principles) and these are:

I. Ensuring the Basis for an Effective Corporate Governance Framework;[15]

II. The Rights of Shareholders and Key Ownership Functions;

III. The Equitable Treatment of Shareholders;

IV. The Role of Stakeholders in Corporate Governance

V. Disclosure and Transparency

VI. The Responsibilities of the Board

In the preamble of the OECD Corporate Governance Principles document it is stated that the principles are updated with experiences from OECD area and non OECD countries to accommodate the legal and cultural circumstances and differences. Therefore, the

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[15] This principle/subheading was not present in the 1999 version of OECD Principles.

principles are intended to help governments to evaluate and improve the legal and regulatory frameworks to improve corporate governance. Also, the principles are designed to provide guidance for stock exchanges, corporations, investors and other parties of interest with a role in the building good corporate governance. OECD Corporate Governance Principles are intended for publicly traded financial and non-financial companies. Each of the principles listed above is supported by additional sub-principles which are intended to clarify the purpose of the principle and help the interested parties, either the governments, regulators/supervisors on one side, or the companies on the other, with the implementation in practice. With this in mind, each principle is going to be discussed in more detail and where relevant commented.

Principle 1, Ensuring the Basis for an Effective Corporate Governance Framework is supported by the following statement: "*The corporate governance framework should promote transparent and efficient markets, be consistent with the rule of law and clearly articulate the division of responsibilities among different supervisory, regulatory and enforcement authorities*". This statement is then broken down into four sub principles, each addressing a separate section. Namely, the first sub principle notes that the corporate governance framework should take under consideration its impact on overall economic performance, and the incentives created for market participants and the promotion of transparent and efficient markets. The second sub principle advises that any regulatory requirements should be in line with the rule of law of the country, be transparent and enforceable. The next sub principle talks about the division of responsibilities which should not generate any ambiguities and make sure that the public interest is served. The last sub principle advises the regulatory and supervisory bodies to fulfil their duties in a professional and objective manner. Furthermore, any rulings by these bodies should be timely, transparent on the logic and basis of such ruling and fully explained to all the relevant parties. From what is said above, it can be deduced that this is a very important principle which creates the grounds on which good corporate governance can be built. As such, it is a positive addition to the 1999 version.

Principle 2, The Rights of Shareholders and Key Ownership Functions has the following supporting statement: "*The corporate governance framework should protect and facilitate the exercise of shareholders' rights*". This is a very important principle which

addresses some of the key building blocks of good corporate governance. The rights of the shareholders to be able to register the ownership of the shares, be able to transfer that ownership should they chose to do so, remain informed regarding the activities of the corporation on a timely basis, to participate in the shareholders' meetings, vote on electing or firing of board members and ultimately share the profits of the corporation are all addressed on the first sub principle, and this principle has the most of them, seven. The rights of shareholders to remain informed on timely basis regarding fundamental changes such as amendments to the statutes, authorisation of issuance of additional shares and extraordinary transactions which may result in the sale of corporation are addressed on the second sub principle. The third sub principle talks about the rights of the shareholder to participate actively in the general shareholder meetings, which means that they should be informed in advance about the procedures and rules of voting. In addition shareholders should be informed in timely manner regarding the date, location, agenda and issues to be decided. Also they should have access to the board and management and be able to ask questions on various issues including the external audit and suggest resolutions. Furthermore, participation in key corporate governance decisions such as nomination and election of board members should be facilitated and remuneration schemes for board members and employees, especially if they involve the equity component, should be subject to board approval. The right of the vote should be able to be carried in person or in absentia. The remaining sub principles are concerned with the concentration or dispersion of shareholder power i.e. if there are capital structures that allow disproportionate power to the equity ownership, should be disclosed. Also, here there is a mention that anti-takeover defences should not be used to protect the board and management from accountability, and that the exercise of ownership rights by all shareholders should be facilitated. It can be argued that this is one of the most fundamental principles of corporate governance, which might be the reason why the 1999 OECD principles had it as the first principle. Although it may appear that there are some items that are repetitive, due to their importance, items like the right of shareholders to actively participate in the appointing of the board, the repetition is justifiable.

Principle 3, The Equitable Treatment of Shareholders is supported by "*The corporate governance framework should ensure the equitable treatment of all shareholders,*

including minority and foreign shareholders. All shareholders should have the opportunity to obtain effective redress for violation of their rights". Through this principle OECD aims to achieve equal treatment of shareholders' of the same class of shares. All shares of the same class should carry the same rights, the abusive actions against minority shareholders should be prohibited, and any impediments to cross border voting should be removed and so on. This principle basically addresses the potential discrimination of shareholders of the same class of shares based on the number of shares and country borders. The implications of proper observing this principle are a more liquid market for equity which stretches beyond the borders of individual countries.

Principle 4 concerned with The Role of Stakeholders in Corporate Governance, is supported by the following statement: "*The corporate governance framework should recognise the rights of stakeholders established by law or through mutual agreements and encourage active co-operation between corporations and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises*". The principle mainly talks about stakeholder groups as established by law or through mutual agreements. In this context, the stakeholder rights should be respected and in case of violation of such rights, there should be legal means in place to ensure the effective redress of such violations. Employees are considered an important stakeholder group, thus employee participation is encouraged and free communication of observed unethical or illegal behaviour of their superiors to the board, and they should be protected from suffering any consequences for doing so. In the current form, however, this principle does not take any consideration of externalities, be those positive or negative, of the business related activities of companies. Such externalities can span from the noise of lorries passing by to supply the production process and distribute the final products (in case of large production facilities), or employees of a service providing company generating additional traffic and rendering roads less safe, thus affecting the immediate community, to the consumers of the final products and/or services. This illustrate the vast number of stakeholder groups whose interests are not being addressed by OECD Corporate Governance Principles. However, the practice has shown that more serious corporations tend to carry a number of activities and investments, usually labelled under 'corporate responsibility' thus acknowledging and addressing more stakeholder groups

than described under this principle. The independent board members very often are in a better position to represent the interests of the stakeholder groups at the board level.

Principle 5 named Disclosure and Transparency has the following statement to support it: "*The corporate governance framework should ensure that timely and accurate disclosure is made on all material matters regarding the corporation, including the financial situation, performance, ownership, and governance of the company*". Observance of this principle has proved to be very important for investor confidence, and the lack of disclosure and transparency has been blamed for at least one of the spectacular corporate failures in the late twentieth century, Enron. With this in mind, the fifth principle asks for the following information to be disclosed, but not to be limited to: financial and operating results, company objectives, major share ownership and voting rights, remuneration for board and key executive officers, related party transactions and so on. The information should be disclosed in accordance with high accepted (usually international) standards and should provide ample financial and non-financial explanations. The channels of dissemination should be practical and easy to access. An annual external audit should be carried to provide objective evaluation of compliance with laws, regulations and procedures and the auditors should be accountable to shareholders and owe a duty to company to exercise due professional care in carrying the audit. The final bullet pointed item under this principle encourages a corporate governance framework which would utilise financial analysis by analysts, brokers or rating agencies. However, in later days, the Dodd-Frank Act, as mentioned in earlier parts of this chapter encourages the opposite as rating agencies are held partially responsible for the last financial crisis.

Principle 6, The Responsibilities of the Board has the following statement supporting it: "*The corporate governance framework should ensure the strategic guidance of the company, the effective monitoring of management by the board, and the board's accountability to the company and the shareholders*". As the name suggests, this principle outlines the role and responsibilities of the board by outlining few of the key functions the board should fulfil such as: reviewing and guiding corporate strategy, major plans of action, risk policy, annual budgets and business plans; monitoring the effectiveness of the company's governance practices and making changes as needed;

selecting, compensating, monitoring and, when necessary, replacing key executives and overseeing succession planning; aligning board and key executive pay with long term objectives of the company, and so on. Furthermore, board members should act in fully informed basis, in good faith and with the best interest of the company in mind. Also, if any board decision might affect different share classes differently, they should treat fairly and honestly all shareholders. In order to carry these and many other duties not mentioned here but listed under principle six, the board should have access to accurate, relevant and timely information. Hence, through this principle OECD aims to firmly establish the board of directors as the body that is in charge of running the company and consequently is liable for the company's performance.

2.4 Measurement and Ranking of Corporate Governance

In order to be able to assess the impact of corporate governance, it is necessary to be able to quantify corporate governance practices. Given that corporate governance has many aspects and each aspect has many dimensions, the measurement is a complex problem. Various institutions have been working on measuring, quantifying and ranking corporate governance practices. These rankings have been used by researchers in trying to establish a relationship between performance and corporate governance.

"Corporate governance industry" is a concept introduced by Rose (2007) referring to a market for rating corporate governance of companies which is emerging mainly in United States. The influence of the agencies that conduct corporate governance on the market is argued to be immense and not necessarily always good (Kohen and Ueng, 2007; Rose 2007). There are many agencies for rating governance and to name but a few like ISS, GMI*, Glass Lewis and Co. The market leader ISS, is adviser to clients that jointly exceed 25 trillion USD in assets and gives advice to 25 out of top 25 asset managers and 17 of the top 25 public pension funds in United States. Next, some of the mechanics behind the function of these agencies will be explored.

2.4.1 ISS

ISS is a dominant company in the corporate governance industry and influences corporate governance decisions in a number of ways.[16] However, this chapter will only concentrate on this company's model for rating corporate governance. ISS uses proprietary weights for the construction of their Corporate Governance Quotient (CGQ). There are 64 indicators (see Appendix 2-1)[17] which are divided into seven broad categories. The categories are: Board; Audit; Charter; State; Compensation; Progressive Practices; and Ownership. The CGQ provisions are constantly changing as ISS includes new ones while dropping the ones that proved superfluous through practice (Rose, 2007).

The ISS model ranks companies on per centile basis and how they perform against other national and worldwide companies. Currently the CGQ covers around 7500 companies and the indicators fall under four, more aggregated, governance categories: board, compensation, anti-takeover and audit. ISS weights the variables according to their importance and all variables under the "board" area add up to 40 % of the CGQ, while "compensation", "anti-takeover" and "audit" areas add up to 30%, 20% and 10% respectively.

Another service provided by ISS worth mentioning here, offered for a fee, is the possibility of companies to use CGQ "dynamically" to evaluate their own corporate governance practices. In practice, "dynamically" means that companies can buy the CGQ template from ISS and then compare their practices to what they are doing wrong according to the CGQ. This has raised a number of worries since it, indirectly, allows companies to improve their corporate governance rating through addressing only the symptoms and not the real causes. A more practical explanation of the ISS ratings is provided in the empirical chapters which use the ISS data as a proxy for the quality of the corporate governance of the observed banks.

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[16] For a more detailed explanation see Rose (2007); Aggarwal and Williamson (2006).
[17] A moderately updated version of ISS provisions is used by Aggarwal and Williamson (2006) which is used here.

2.4.2 GovernanceMetrics International – GMI*

GMI* developed a database that collects information on over 600 indicators and then divides those in six broad areas. Each category is further dividend in a number of research topics (Appendix 2-2). GMI* like ISS has developed a methodology which results in "yes", "no" and "not disclosed" answers. The information is primarily obtained from public documents and filings. The companies are rated from 1 to 10 indicating best and worst practices respectively. In 2010 GovernanceMetrics International was merged into GMI* Ratings together with The Corporate Library and Audit Integrity.

2.4.3 Glass Lewis & Co. – BAI

Glass Lewis & Co. is not as involved in corporate governance rating as ISS or GMI*. However, they do use the Standard & Poor's (S&P) database of 500 companies to establish for Board Accountability Index (BAI). This exercise is based on the work of Bebchuk et al. (2004) which focuses on five entrenchment features that according to their study suggest a strong correlation of corporate governance practices with performance.

2.4.4 The Corporate Library

Founded in 1999, The Corporate Library (TCL) provides independent research and ratings designated to help institutional investors evaluate corporate governance practices of firms as part of investment risk. The Corporate Library using a proprietary set of governance risk factors, rates companies listed in the Russell 3000, S&P 1500 and TSX60, by providing a score which allows businesses to have an indication of governance practices of the rated firms. The Corporate Library also provides portfolio assessment regarding the risk exposure and environmental, social and governance (ESG) research services. Furthermore, and the most important aspect as far as this thesis is concerned, the Corporate Library claims to employ the best corporate governance analysts which can provide shareholder proposal and engagement advisory services to institutional investors. In 2010 The Corporate Library was merged into GMI* Ratings together with GovernanceMetrics International and Audit Integrity.

2.4.5 Audit Integrity

Founded in 2002, Audit Integrity developed Accounting and Governance Risk (AGR) ratings for approximately 18,000 public companies worldwide. The Audit Integrity Accounting and Governance Risk (AGR) rating reflects the transparency and statistical reliability of a corporation's financial reporting and governance practices. The aim of AGR analysis is to focus on identifying the measures which are most likely associated with potential fraud.

Audit Integrity uses more than 100 accounting and governance metrics extracted from company's publicly filed information. The computed AGR produces a per centile score ranging from 0 to 100, with corresponding ratings from Very Aggressive to Conservative. In their experience they find that companies more likely to face class action litigation and financial restatements are companies rated Very Aggressive or Aggressive, which has led to these companies suffering severe equity losses as well. In contrast, the companies that have been consistently rated Conservative have shown to be more trustworthy. In 2010 Audit Integrity was merged into GMI* Ratings together with GovernanceMetrics International and The Corporate Library.

2.4.6 GMI* Ratings

GMI* Ratings as mentioned above, was formed in 2010 through the merger of three independent companies: The Corporate Library, GovernanceMetrics International and Audit Integrity. Each of the predecessor firms, explained in more detail above, had developed tools for addressing systemic shortfalls in risk modelling and mitigation. Using the intellectual capital of its predecessor firms, GMI* Ratings claims to provide ratings which are reflective of risks affecting the performance of public companies worldwide. The GMI* Metrics Environmental, Social, Governance (ESG) rating provides evaluations for more than 6,000 companies worldwide by using more than 150 ESG metrics to help investors assess the sustainable investment value of corporations. The GMI* ratings provide information in five categories named as Rating Quintiles ranging from 1 – highest risk to 5 the lowest risk.

2.4.7 The Polish Corporate Governance Forum

The Polish Corporate Governance Forum advises the Warsaw Stock Exchange to enforce these requirements on all listed companies. In addition they constructed a model consisting of 60 variables categorized in 9 groups, which enables it to rate companies from A (best) to E (worst) complying companies. The model incorporates the 'comply or explain' approach which gives the option to companies not complying with specific requirements to explain why they have not complied.

It is expected that there are more similar efforts undertaken around the world, but the Polish case is explained here as an example of individual countries addressing their problems arising from corporate governance issues and circumventing reliance on global rating agencies alone for providing such ratings.

2.5 Corporate Governance and Company Performance

The relationship between corporate governance and firm performance is very important to researchers in this field and central to this thesis. This is the reason that some of the most relevant studies dealing with this question are presented here and then explained in greater detail in Chapter 4.

There is a growing body of research relating corporate governance to some aspect of company performance. The search for the link between returns and good governance remains the academics' and practitioners' search for the Holy Grail (Bradley 2004, p. 8). In their review of literature in this field Van den Berghe and Levrau (2003) using data from emerging markets, found that there is strong evidence of a positive correlation between corporate governance and company performance. They argue that companies can no longer ignore the pressure from the investor community in respect to their corporate governance.

However, there is no one single measure for corporate governance. Thus researchers have used a wide range of approaches allowing them to explore various ingredients of governance.

Daines (2001) presents evidence of the impact of state corporate law on the value of companies. In the sample of 4,481 firms obtained from Compustat's database accounting for 47,001 firm years between 1981-1996, Daines finds that the Delaware state corporate law increases the value of public companies traded in this state. By using Tobin's Q[18] as an estimate of firm value, Daines (2001) finds that Delaware firms are worth significantly more than similar firms elsewhere in the United States. His argument is that the Delaware state corporate law reduces agency costs and private benefits for managers hence investors are willing to pay more for these firms. The increased likelihood of takeovers as well as specialized courts and judges in this state appear to play an important role in boosting shareholder welfare thus the willingness to pay the "Delaware premium" for companies.

There is evidence that financial reporting oversight by an independent audit committee is inversely correlated to cost of equity capital.[19] Namely, firms that have their reports supervised by independent audits will have lower cost of equity capital. It is argued that such effect is achieved due to smaller agency risks faced by shareholders. (Ashbaugh-Skaife et al. (2004); Derwall and Verwijmeren (2007)).

Gompers et al. (2003) explore the relationship between shareholder rights and corporate performance. They construct a "Governance Index" as a proxy for the balance of power between managers and shareholders. For every corporate governance indicator that reduces shareholders' rights they add one point. This means that firms with highest value of the index are placed into the "Dictatorship Portfolio" which fosters firms with weakest shareholder rights and highest management power. The other end of this spectrum is the "Democracy Portfolio" with strong shareholders and weak managers. This study found that the Democracy Portfolio outperformed the Dictatorship Portfolio by 8.5 per cent per year.

Bebchuk et al. (2004) basing their empirical research on 24 IRRC provisions claim to have identified six which are negatively correlated to company performance. Their argument is that these provisions impose constitutional limitations on shareholder power. The six

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[18] Tobin's Q in this case estimates the firm market value divided by its replacement cost
[19] The cost of equity capital is the discount rate that a rational investor applies to firm's expected future cash flows for the purpose of determining the current stock price.

entrenching provisions have had negative effects on firm valuation as measured by Tobin's Q as well as with stock returns for a four year period. These authors argue that these limitations do not merely reflect but bring about lower firm value.

Based on the findings from Bebchuk et al. (2004), Professor Bebchuk and Dr. Cohen in cooperation with the Glass, Lewis & Co. dataset developed the board accountability index (BAI)[20] based on five, very similar to previous 2004 study, variables.[21] The BAI uses a modified market-cap weighting algorithm that calculates a company's weight taking into account the presence or absence of five critical corporate governance features mentioned earlier. This index uses all the companies in the Standard and Poor's 500, with the latter agreeing to act as the BAI's calculating agent for daily weighting of companies' corporate governance.

The relationship between corporate governance and operating performance, is explored by Brown and Caylor (2004). Their index of firm-specific governance, "Gov-Score" is constructed on ISS data consisting of 51 indicators that cover eight corporate governance categories.[22] This study draws attention to "governance committee meets annually" and "independence of nominating committee" as factors which represent good governance and are associated with good performance but rarely used, in contrast to some factors which represent good governance but are associated with bad performance like "consulting fees less than audit fees paid to auditors", "absence of a staggered board" and "absence of poison pill". Brown and Caylor's (2004) results reveal that, as measured by Gov-Score index, firms with better governance are more valuable, have higher profit margins, higher returns on equity, pay out more cash dividends and repurchase more shares from their shareholders.

Dunev and Kim (2003) conduct a research based on CLSA data on 859 firms in 27 emerging economies. They find evidence that higher governance rating is associated

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[20] For more details, visit: http://www.glasslewis.com/solutions/bai.php accessed in Jan. 2008.
[21] On a country level, Morck et al. (2005) look at the entrenchment from the perspective of the controlling owner. In a world of controlling owners, which is everywhere but United Kingdom and United States, controlling owner is able to utilize corporate resources not owned de jure by him/her, to fund private benefits without much risk of hostile takeover or any other form of successful shareholder revolt.
[22] Audit, board of directors, charter/bylaws, director education, executive and director compensation, ownership, progressive practices and state of incorporation.

with better company performance. The motivation for firms to improve their governance practices according to Dunev and Kim (2003) is the need for external capital and more growth opportunities. Their research suggests that firms in weak legal regimes structure their own corporate governance practices more than required to make up for shortcomings of the law and provide themselves with better investment opportunities (see Appendix 2-3 for explanation on categories used for the corporate governance measure). There is evidence that firm-level corporate governance provisions matter more in countries with weaker legal systems (Klapper and Love (2002); Dunev and Kim (2003); Van den Berghe and Levrau (2003)). Using the CLSA data, Klapper and Love (2002) find that better corporate governance is associated with higher operating performance (ROA – Return on Assets) and higher Tobin's Q.

As can be seen above, the research so far has successfully identified correlations – rather than causal relationships - between corporate governance and firm performance. This limitation can be due to the endogeneity and the dynamic nature of the relationship not being addressed properly. Studies carried out in relatively similar conditions did provide relatively similar findings, but without an indication of the direction of causality. However, results as expected are highly dependent on the indicators included in construction of each governance index, legal environment and the stage of development of economies as well as datasets used by researchers.

2.6 Conclusion

The chapter started by pointing out the necessity for corporate governance practices redress as a consequence of Asian financial crisis in 1998. This seemed to be the event that set to motion the activities of governments and multinational interest groups to enact by first acknowledging that the problem lies with the lack of good corporate governance, and then by offering various guidelines on how to improve it. The European Bank for Reconstruction and Development was among the first to offer a set of corporate governance guidelines in 1997 in the form of a two page document labelled Core Principles of Corporate Governance which were addressed to both, countries and firms. In 1999 the Organisation for Economic Cooperation and Development published the first OECD Corporate Governance Principles comprised of five principles and then amended those to six OECD Corporate Governance Principles in 2004. There are also a

significant number of efforts by individual groups of experts such as the discussed Polish Corporate Governance Forum, which due to the concentrated area of influence could not make it across different industries or state borders. The impression is that there is a silent consensus throughout the developed and developing world that OECD Corporate Governance Principles are the benchmark and the main guideline for governments, firms and other relevant interested parties such as regulatory and supervisory bodies.

The chapter then briefly explores the relationship between corporate governance and company performance. Several studies find a strong correlation between the two, and this is justified with the fact that companies can no longer ignore the pressure from the investor community with respect to their corporate governance.

The review of the literature reiterated once more the lack of a persisting relationship between the same performance and corporate governance indicators. Most of the studies discussed in this chapter generate their own corporate governance ratings and then use those to test the relationships. Some of these studies then develop further their model of rating corporate governance into quasi rating agencies for other listed firms.

With all the attention that corporate governance was receiving, the need arose for agencies which would be able to evaluate the quality of corporate governance of companies and then rate it in such a way that it allows comparison amongst them. Early 2000s showed a surge of these agencies. The International Shareholder Services (ISS), GovernanceMetrics International (GMI*), Glass Lewis & Co., The Corporate Library and a number of others were competing for the approval and acceptance by markets. The vast number of mergers and acquisitions, as well as disappearance of some of the agencies shows that they were not very successful in this attempt. The information they provide however, is relevant both for investor groups, regulatory bodies and academics. This thesis for one, is going to use the ratings of ISS as a proxy for the quality of corporate governance in estimating the relationship between corporate governance and firm valuation.

Chapter 3

Corporate Governance of Financial Institutions

2.1 Introduction

The role of banks and other financial institutions is to provide financing to enterprises, facilitate various transactions and other services which makes their position integral to the economy at large. A healthy governance of the bank will have spill-over effects onto the enterprises it lends to, since by having a proper system for evaluating each loan, potentially 'bad' projects are not funded by the bank. This should be a deterrent for firms with poor ideas, which indicates that a positive selection process may take place and an economy with more successful enterprises will ensue.

However, the complex nature of finance means that the concepts and daily activities of financial institutions are not easily grasped by the majority of population, therefore they need to rely on others (the bankers) for information. Thus a key element for well-functioning of the financial systems, which at the same time exacerbates the principal-agent problem, is trust.[1] The position of trust that banks and other financial institutions hold within a community makes them different from other non-financial institutions (Trayler, 2007).

Almost all researchers, some more explicitly than others, agree that the principal-agent problem is more complex for banks and other financial institutions because managers of the bank should not make maximisation of returns for shareholders as the sole aim, since this may have adverse implications for depositors (as primary stakeholders) and taxpayers in general[2] (Alexander, 2006; Mullineux, 2006).

The more extreme view within the group calling for different approach in corporate governance among industries states that there is a large enough distinction between corporate governance of financial institutions themselves let alone in comparison to other firms, and that corporate governance of each type of financial institution should

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[1] While for most goods or services, the quality is 'observable' before, during or immediately after the transaction is made between the parties, it is not so straight forward for transactions between let's say depositors and a bank, or an insured and an insurer. The depositor (and/or the insured) in this case will have to trust the bank (and/or the insurer) that they will keep their end of the deal if it is required in the future. The depositor has to believe the bank will have his/her moneys when he/she wishes to withdraw them, and the insured has to believe that in case of the claim, insurer will meet its obligation.

[2] In case deposit insurance is offered by the state.

be studied separately.[3] However, at the opposite end of the spectrum, there are those who suggest that there are no differences between the corporate governance of financial institutions (banks) and other firms (Flannery et al. 2002) and that they are all subject to the same core corporate governance principles.

Overcoming the principal-agent problem in banking requires reducing the information asymmetries among the relevant stakeholders. For depositors as one of the key stakeholders, the principal-agent model does not provide a solution for protection of their interests. The financial industry requires another actor to ensure that a solution is found, and this is the regulator. According to Alexander (2006) the role of the regulator is to devise corporate governance standards which will balance the interests of all parties involved. "The financial system usually is among the most heavily regulated sectors and banks among the most heavily regulated of financial institutions" (Mishkin 2004, p. 260). Having said that, regulation is sometimes perceived as interference since as some argue, there has been some overlap of bank regulation with corporate governance since the earliest days of modern banking (Shull, 2007).

The differences in the way the regulation is implemented as well as differences in the risk management are considered the main elements which contributed to distinguishing of banks within the European Union in light of the recent financial crisis. While two major Spanish banks announced profit of € 14 billion for the year ending on 31st of December 2008, three Belgian banks announced losses exceeding that figure by far. The Spanish banking supervisor seems to have drawn lessons from the banking crisis of 1977 and imposed stricter capital requirements on local banks than is normal for European banks. In addition, during the good years, the banks are required to put aside more provisions for bad loans. This approach appeared to have worked until the recent financial crises (Lannoo, 2009).

This chapter will investigate the specificities of corporate governance of financial institutions that separate this industry from others. Section 2.2 will deal with the corporate governance of financial institutions in more detail, section 2.3 will explore

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[3] There are researchers who argue that there are distinctions between banks and other financial institutions (i.e. money market mutual funds, nonblank credit card companies etc.) hence advocating studying corporate governance of banks separately (Macey and O'Hara 2003).

which corporate governance characteristics have an impact on the performance of the financial institutions. Section 2.4 will be concerned with the regulatory actions of governments and finally, the chapter will end with a conclusion in section 2.5.

2.2 Corporate Governance of Financial Institutions

As mentioned earlier, the principal-agent problem is more complex for banks and other financial institutions and this has implications for the corporate governance of these institutions. Adding depositors to the principal-agent model, in addition to managers and owners, increases the likelihood of the effects of asymmetric information such as moral hazard and adverse selection problems.

The concepts of moral hazard, adverse selection, and asymmetry of information can help in understanding the form of banking regulation in many countries (Mishkin, 2004).[4] According to Alexander (2006), the rationale for bank regulation is the protection of depositors and the safety and soundness of the financial sector. However, the existence of 'safety nets' poses natural incentives for banks to take on more risk than they should and policies should be designed to counteract those incentives (Diamond and Dybvig, 1986).

The main studies in this area show that the basic elements distinguishing financial institutions from other firms are more or less the same, i.e. opaqueness, regulation, moral hazard by managers (alone or in collusion with shareholders), to name but a few. The researches are marginally different though in the level of detail they explore, hence reported individually below. The following studies should be looked at, having the principal-agent and asymmetry of information contexts in mind.

Caprio and Levine (2002) discuss the special characteristics of banks and other financial institutions that intensify the corporate governance problem. They identify three features of banks which makes them different from other firms. First, banks are more opaque, a characteristic that amplifies the agency problem. The opacity in banking makes it (i) more difficult for equity and debt holders to monitor managers, (ii) easier for

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[4] Eight basic regulation categories according to Mishkin (2004) are: the government safety net, restriction on bank asset holdings, capital requirements, chartering and bank examination, assessment of risk management, disclosure requirements, consumer protection, and restrictions on competition.

managers and large investor to exploit the benefits of control, rather than maximise value, (iii) unlikely for potential outside bidders to generate an effective takeover threat, and (iv) more likely that a situation of monopolistic behaviour by banks will ensue, and this will lessen the impact of corporate governance mechanisms through competition.[5]

Second, banks are heavily regulated and this, more often than not, imposes a natural hindrance to corporate governance mechanisms. Measures like, deposit insurance, regulatory restrictions on concentration of ownership, regulatory restrictions on entry, takeovers, bank activities etc., all have adverse effects on mechanisms to control the management by the shareholders. Hostile takeovers as a disciplinary tool, as well as limitation of stock ownership by a single owner in many countries which strips owners from concentrated ownership, another corporate governance mechanism, are eliminated because of regulation and the opaqueness of banks, argues Levine (2003). Government ownership is another factor which, Caprio and Levine suggest, makes corporate governance of banking industry very different from other industries.

Levine (2003) supports the view that banks are more opaque and more regulated than other firms and looks at the implications for corporate governance of these features. Governance implications for equity and debt holders because opaqueness stem from the greater informational asymmetries between insiders and outsiders which make it very difficult for diffuse equity and debt holders to monitor bank managers. While there are incentives for controlling owners to increase the bank's risk profile, there is no

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[5] Morgan (2002) and Iannotta (2004) provide evidence supporting the view of Caprio and Levine (2002) that banks are more opaque. Using the divergence between two major bond-rating agencies, Moody's and Standard & Poor's, Morgan (2002) argues that if the risk is harder to quantify for a particular firm/industry, this should cause different rating by the agencies. Based on the ratings for approximately 8000 new bonds issued between 1983 and 1993, the study finds that raters split significantly more over banks and insurance firms than over other types of firms which leads to believe that 'banking firms' are more opaque than other firms. Applying similar methodology to new bond issues completed by private sector firms during the period of 1993-2003 in 14 European countries Iannotta (2004) furthers Morgan (2002) by concluding the following: i) banks appear to be among the more opaque industries; ii) bank size, asset mix and capital structure can explain bank opaqueness, and iii) lower bond seniority increases opaqueness. In contrast to the previous study, Flanery et al. (2002) using two proxies for firm opacity, the stock market microstructure properties and the analysts' ability to forecast firm earnings, find that large bank holding companies traded on NYSE have very similar trading properties to their matched nonfinancial firms. They conclude that bank stocks are not unusually opaque, especially for large institutions (they do, however, find statistically and economically significant differences for the smaller firms which are traded in NASDAQ).

upside potential for debt holders from increased risk taking but due to the greater opacity of banks it is more difficult for debt holders to control banks from risk shifting. Governance implications for the bank regulation by shareholders and competition are explained in the light of restrictions on concentration of bank ownership and the ability of outsiders to purchase significant proportions of bank stock without regulatory approval. The implications for governance by depositors according to Levine (2003) arise since deposit insurance, as part of regulatory policies, reduces their incentives to monitor banks, and it induces banks to rely less on uninsured creditors with incentives to monitor and more on insured depositors which have no real incentives to exert corporate governance. Moreover, the existence of deposit insurance in conjunction with central banks as lenders of last resort, have contributed in producing banks with very low capital-asset ratios[6] relative to other firms. With the fall of capital-asset ratios, the controlling owners, as mentioned above, have more incentives to increase the risks taken by the bank. Thus, the effect of regulation in the form of deposit insurance has two-fold adverse effect on corporate governance of banks giving rise to moral hazard problems: first, it increases the incentives for risk-taking of owners, and second, it reduces the incentives of insured depositors to monitor the managers. This problem is peculiar to corporate governance of banks and other financial institutions.

The fact that financial institutions in general and banks in particular are heavily regulated means that corporate scandals are not as spectacular as Enron (Gup, 2007), at least not until the recent world financial crisis. However, regulation could not prevent the debacles like the one of The Bank of Credit and Commerce International.[7]

Ciancanelli and Reyes-Gonzalez (2000) argue that commercial banks are distinguished by a more complex information asymmetry due to the regulation. Regulation limits the power of market to discipline banks and it should be considered as an external force which alters the parameters of governance in banks. The more complex agency problem due to information asymmetry between owners and managers, in banking is

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[6] Calculated as: the company's capital (net worth) / asset (capital employed) ratio.
[7] The Bank of Credit and Commerce International was established in 1972 in Abu Dhabi. The bank at one point was present in 73 countries and in 1990 ranked the seventh largest private bank in the world. The bank was involved in all kinds of illegal affairs such as money laundering, arms trafficking, support for terrorism etc. The scandal was discovered in 1990s and the bank was globally closed in 1991 (Gup, 2007).

exacerbated by the existence of at least three more relationships between: depositors, the bank and the regulator; owners, managers and the regulator; and, borrowers, managers and the regulator. The authors summarize that what differentiates corporate governance of banks and other firms is: (i) the problem of governance will be more complex, (ii) the relationship principal-agent is unique because it is mediated by an external force, and, (iii) the owners may be considered as the single most important source of moral hazard.

Macey and O'Hara (2003) identify four points to distinguish banks from other firms. First, the liquidity production role of banks, which is explained through the capital structure of banks, is argued to be unique in two aspects. One, banks usually have very little equity compared to other firms, and two, banks' liabilities are in form of deposits, which are available to their creditors/depositors on demand, while the banks' assets are loans that on average have longer maturities (than the liabilities). The mismatch between liabilities and assets can become a problem with corporate governance implications in the unusual situation of a bank run.[8] Theoretically, bank runs can happen to solvent banks as well. In order to mitigate this problem, the deposit insurance fund was devised which, according to Macey and O'Hara, is the second distinction between corporate governance of banks and other firms. The deposit insurance fund[9] proved to be very successful in preventing banking panics. However, the regulatory cost of deposit insurance is that it gives the managers and shareholders of insured banks incentive to engage in excessive risk taking. The moral hazard problem may occur for two reasons. i) Bank shareholders are able to pass some of their losses onto innocent third parties (the healthy banks whose contributions to FDIC pay the depositors of the failed banks, or consequently the taxpayers who refill the federal insurance funds if they are drained out); ii) Unlike in insurance industry where the premium is related to amount of risk, in banking this is not the case and the FDIC is not fully compensated for the excessive risk

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[8] Bank runs are a collective action problem among the depositors. If for any reason, large withdrawals begin at a bank, the individual depositors, in fear that they will be left without anything if the reserves drain out, start withdrawing their deposits also. This is a classical prisoner's dilemma, where depositors would be better off if they would refrain from withdrawing. However, in their inability to coordinate their actions they end up causing the bank run.

[9] The Banking Act was passed by the Congress in 1933 establishing Federal Deposit Insurance Corporation (FDIC) and gave the federal government the power to insure deposits in qualified banks.

taken by a particular bank. The moral hazard problem is exacerbated in situations where a bank is at financial distress. An insolvent (or near insolvent) bank's shareholders have incentive to increase risk if this behaviour can generate gains, and they have the option to allocate their losses to third parties, i.e. "a nearly insolvent bank can continue to attract liquidity in the form of (government-insured) deposits" (Macey and O'Hara, 2003, p.98).

The third distinction is the conflict between fixed claimants and shareholders.[10] What makes banks different from other types of firms is the lack of significant discipline of other fixed claimants. The existence of FDIC insurance removes the incentives that insured depositors control excessive risk-taking since their funds are safe regardless of the investment strategies selected by banks.

The fourth distinction is the asset structure and loyalty problems. A large proportion of financial institutions' assets is held in highly liquid form. This enables managers to shift funds around easily, making it more difficult for monitoring, which in turn may increase the likelihood of insider lending hence causing loyalty problems. Since the existence of federal insurance fund decreases the incentive for monitoring, it naturally increases the risk of fraud and self-dealing. Shareholders do not have the incentive to individually monitor the management due to free-rider principle, and they rarely organize themselves because of the collective action problems. Thus, under the Federal Deposit Insurance Corporation Improvement Act (FDICIA), regulatory agencies were required to issue guidelines or regulations which would create standards for safety and soundness in several areas such as: internal controls, loan documentation, credit underwriting, interest rate exposure, asset growth, compensation, asset quality etc.

Macey and O'Hara (2003) also look at the role of directors and managers of banks as a factor which contributes to different corporate governance practices among industries.

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[10] In the view of corporation as a set of explicit and implicit contracts there are different claimants to corporation's cash flow. The group of claimants includes not only shareholders, but also creditors, employees, managers, the local communities in which the firm operates, suppliers, and, of course, customers. In the case of banks, these claimants also include depositors and the regulators in their roles as insurers of deposits and lenders of last resort and in their capacity as agents of other claimants.

They argue that due to the nature of banks' assets and liabilities, the importance of banks for the overall financial system stability, existence of deposit insurance schemes, to name but a few, bank directors should be held to a broader, if not a higher, standard of care than other directors, a view supported by Mullineux (2006) too.

Bathala et al. (2007) using a comprehensive database of the Institutional Shareholder Services (ISS) for 5298 firms in the US, argue that corporate governance practices are affected by the regulatory oversight and the size of the firm.[11] Differences are more pronounced in corporate governance practices of smaller firms mainly due to exacerbated information asymmetry, increased agency cost and monitoring differences between regulated and non-regulated industries.

The study reports a superiority of banks over non-banking firms in respect to the CGQ index score and executive compensation[12] but inferior with respect to the audit mechanism. One of the explanations put forward by the authors is that by having better corporate governance structures, banks attempt to satisfy both stockholders and regulators. The lower sub-score in the audit mechanism seem to suggest substitution effects between monitoring on industry and firm level.[13] These results lead to believe that corporate governance structures are more shareholder friendly in banks than non-banks.

2.3 Corporate Governance and Performance of Financial Institutions

Given the importance of corporate governance, one assumes intuitively that good performance of financial institutions is related to good corporate governance. However, due to their complexity it is not a straight forward answer to find which element of corporate governance will improve (or worsen) the performance of a given institution.

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[11] ISS provides two CGQ (Corporate Governance Quotient): CGQ index score (comparing firm's CGQ relative to the average CGQ of firms within S&P 500), and CGQ industry score (comparing firm's CGQ relative to an industry peer group).

[12] CGQ is calculated using 61 'items' in eight categories: 1) board of directors; 2) audit; 3) charter and bylaw provisions; 4) anti-takeover provisions; 5) executive and director compensation; 6) progressive practices; 7) ownership; and 8) director education.

[13] The study also reports some differences on corporate governance practices between small and large banks.

Most studies, though, find that addressing the principal-agent and information asymmetry problems increases the chances of improvement in performance.

Spong and Sullivan (2007) consider a sample of 143 state-chartered community banks in America's Midwest, and consistently with financial theory, report a positive correlation between improving bank performance and the reduction in principal-agent problems.

Anticipating that agency problems will be more prominent in banks with hired managers they divide their sample in two groups. One group consisted of banks whose managing officer is the largest stockholder or belongs to a group that controls the largest block of bank stock. The other group consisted of banks that have hired managers outside the controlling group.

They used their profit efficiency of each bank relative to other banks in the Tenth Federal Reserve District to measure the performance of banks in the sample. Also they developed an econometric model utilising the mentioned performance measures and estimated an efficient profit frontier for Tenth Federal Reserve District banks against which all sample banks were compared. The authors suggest that this approach allows them to better measure managerial performance than if they had used standard accounting measures like ROA or ROE. They find that small changes in the ownership stake of hired managers have a notably larger positive effect on profit efficiency than in the case of manager-owners, who have a very small profit efficiency response to small changes in ownership.

By comparing the combined cost efficiency and revenue tests, they find that the difference between the 'most efficient' and the 'least efficient' community banks in terms of board size, average age of directors, and length of tenure is not very significant. However, they find that the directors of more efficient banks have higher median net worth, a greater ownership stake in their banks, and are less likely to be outside directors.[14] The more efficient banks also feature more frequent meetings, have better attendance rates, and higher director fees. These findings suggest that directors with

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[14] Although the role of independent directors is important, in the case of community banks according to Spong and Sullivan (2007) it seems that it is inversely correlated with the bank performance since most efficient banks have on average 25.9 per cent in contrast to 34.3 per cent outside directors in least efficient banks.

higher financial stake in their banks are likely to be more actively involved in those bank's affairs and in monitoring the performance of management, which can translate into better overall bank performance. A similar argument, as financial theory suggests, holds for officers that are also major stakeholders. Their incentives to control costs and improve bank performance stem from the fact that they will directly benefit through improved stock returns. Spong and Sullivan (2007) report that an ownership stake held by managers of community banks of up to 17 per cent is likely to improve the average profit efficiency of the bank significantly.[15] This indicates amelioration of the principal-agent problem through the increase in the ownership stake. They also claim that ownership is underutilized as a tool to address agency costs and governance problems of banks.

Using the ranking of 2000 companies by Forbes.com in 2005, Trayler (2007) looks at 100 top banks in the world. The 'average bank' in his sample has the following board characteristics: board size is 14.6 persons with 25 per cent (3.7) being internal members. The number of years directors served on a board is approximately 7.7, and the number of board meetings per year is 10.2. The average bank will incorporate the following governance characteristics: a board statement on corporate governance, an audit, as well as compensation and risk committees.

Compared to the average bank, some difference in bank governance can be noticed between countries in the sample. For example, United States has the lowest number of board meetings with average of 8.7 while Italy has the average of 16.2 meetings in one year. The board structure of Japanese banks was different in the sense that the board was small[16] and the majority of directors were internal. The Italian banks have the highest number of board directors (average of 19.6) and boards of French banks consist of 50 per cent internal directors, many of whom are staff-elected representatives.

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[15] In this study, 17 per cent ownership stake for hired managers improved average profit efficiency ratios by 9 percentage points. The banks operating with higher percentage than 17 showed adverse effect on performance coming from entrenchment and conflicts with principal owners. The authors do call for caution in interpreting these results (17 per cent as a magical solution) since the performance of managers depends on other variables such as their own skill set.

[16] On average 9 board members.

Trayler (2007) uses key governance variables which are based on board characteristics (such as number of directors, percentage of inside directors, independent chairperson, statement from the board on corporate governance, statement from the board on risk direction for bank, and the existence of a risk committee) to evaluate return on assets (ROA), return on equity (ROE), BIS capital adequacy, equity to assets, and provision for loan losses to loans. The multiple regression analysis results show that the coefficients for internal directors and independent chairperson are negative and statistically significant at 1 per cent. This means a lower proportion of internal directors will improve the bank performance. The same is true for an internal chairperson, which is at odds with the legal requirement by some countries and or stock exchanges for an independent chairperson.

Adams and Mehran (2003) describe the differences and similarities of unregulated manufacturing firms and regulated bank holding companies (BHCs).[17] In their sample of thirty five BHC companies for the period 1986-1996[18], they consider a number of governance variables or proxies such as: the board size and composition, number of committees and meetings, compensation schemes for CEOs, ownership structure, and few other that have received attention by researchers in economics, law, management, and organisation and who say these variables are correlated with governance practices.[19]

They find that on average, Bank Holding Companies have slightly larger boards of directors than the manufacturing firms. BHC's boards of directors have a larger proportion of outside directors too and are found to have more committees and meetings than the manufacturing firms; however this can be attributed, according to authors, to the regulation that defines the number of meetings per certain period of time. The study found that BHC boards tend to rely less on long-term incentive-based compensation schemes for CEOs. It also found that CEO ownership for BHCs is smaller

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[17] The authors examine bank holding companies (BHC) and not banks because of the availability of information on the former.

[18] The sample size dropped to thirty two at one point because of the merger and acquisition activities.

[19] Their empirical research is not based on regression analysis but rather the descriptive statistics of the selected variables.

both in percentage and market value, when measured in direct equity holdings by directors.

In the light of the recent subprime mortgage crisis, Adams and Mehran (2008) examine the relationship between banking firm board structure and performance. With Tobin's Q[20] as a proxy for performance, they concentrate on two dimensions of the board structure: board composition and size. Their data set on 35 BHCs spans the period of 1959-1999 and has detailed information on governance variables. The study identifies three factors that are believed to play an important role in defining bank board structure. First, bank lending relationships influence board composition. If the bank has issued loans to directors or directors' employees, without being properly disclosed, this may lead to overstatement of board independence. Second, Merger and Acquisition (M&A) activity affects bank boards by adding some of the target directors to acquirer boards following acquisitions. The banking industry is not prone to hostile takeovers and M&A active BHCs would augment their boards with target directors, resulting in larger sized boards, which is consistent with Adams and Mehran (2003). Finally, organizational structure, in particular, the fact that publicly traded banks are all organized as BHCs, seems to influence bank boards. The organizational structure accounts for one of the most important differences between BHCs and manufacturing firms. By definition, BHCs are holding companies with a number of subsidiaries each of which has its own board.[21] The number of subsidiaries of BHCs is argued to contribute to the increased board size due to the need for representation and coordination between boards of the same BHC.

They find that the proportion of outsiders on the board is not related to Tobin's Q, in contrast to board size which is positively and significantly related to the performance as measured by Tobin's Q. There are two possible explanations for the positive relationship between board size and performance. First, it is possible that the results are driven by the M&A activity and the board size increases due to the incorporation of some of the target directors, and, second, the possibility that the organizational structure is

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[20] The measure of Tobin's Q in their study is the ratio of the firm's market value to its book value.
[21] In contrast, manufacturing firms often organize themselves along functional lines which do not need separate legal identity. This enables manufacturing firms to coordinate their activities through means other than boards.

contributing to the increase in size through inclusion of directors with regional expertise on the BHC boards.

The impact of ownership as an important factor of corporate governance in bank performance is shown by the following studies. Caprio et al. (2007) looking at the data for 244 banks in 44 countries find that, in terms of ownership, banks are generally not widely held. For banks with a controlling owner they find that it is a family more than half of the time and it is the state in 19 per cent of the time. They also find that stronger protection of shareholders is positively related with countries having widely held banks. Using bank-level data, the authors evaluate the impact of legal protection, bank regulatory policies and ownership structures on bank valuations. As a measure for bank valuation Caprio et al. (2007) use Tobin's Q. They find that: a) larger cash-flow rights by the controlling owner boosts valuation; b) weak shareholder protection laws lowers bank valuation; and c) regulatory policies have no effect on bank valuation.

Using the data on banks in Argentine in 1990s Berger et al. (2005) test the effects of governance on bank performance. In their model, they include the static,[22] selection,[23] and dynamic[24] effects of: domestic ownership, foreign ownership, state ownership, events like: domestic M&A, foreign acquisitions, privatizations, state restructurings, (the latter refer to events in which state-owned banks were restructured without privatization) on bank performance. Findings in terms of static effects of bank ownership on performance suggest that banks which are state-owned have poorer long-term performance than domestically- and foreign-owned banks. The main findings in terms of selection indicate that banks that underwent domestic M&A perform slightly poorer than average before the M&A events, while the main dynamic effect results suggest that there is hardly any impact on performance of banks with either domestic M&A or foreign acquisitions. In contrast, privatisation of banks seems to improve their

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[22] The static effect measured by a dummy variable equalling 1 if the governance of domestic, foreign, and state owned banks has not changed across the sample (Berger et al., 2005).
[23] Selected for Domestic M&A, Selected for Foreign Acquisition, Selected for Privatization, and Selected for State Restructuring, are dummies equalling 1 if banks underwent one or more changes in governance over the entire period (Berger et al., 2005).
[24] The Dynamic Governance Ce dummy variables equalling 1 if the bank: underwent Domestic M&A, underwent Foreign Acquisition, underwent Privatization, or underwent State Restructuring (Berger et al., 2005).

performance significantly. This is achieved due to the decline in the number of nonperforming loans and a steady increase of the bank's profit efficiency rank.[25]

To sum up, the relationships between corporate governance and the performance of financial institutions are present but in most cases the evidence is related to specific types of businesses and is not applicable to all financial institutions. What emerges as a significant relationship in one study seems to change in another. The inconsistency of methodology and variables used by different researchers to estimate the relationship corporate governance and performance, which varies across studies, seems to contribute to this situation. An example is the proportion of independent directors on the board: some suggest that the larger this proportion, the better the performance, others argue the opposite, while a third group find no relation between the independence of the board and performance. This indicates that more studies which would provide stronger evidence on the existence (or nonexistence) of this relationship are needed.

2.4 Regulations

The soundness and the safety of depositors has traditionally been the rationale of the bank regulation. The model of the principal-agent problem is more complex in the case of financial institutions and regulation should help reduce it (Alexander, 2006). Charkham (2003) suggests that sound structures and processes are required for good governance and to ensure that power is not abused, checks and balances are vital.

In the light of the most recent global financial crisis, a white paper on reforming financial markets was presented to the British Parliament in July 2009 by The Chancellor of the Exchequer.[26] Serious failures in corporate governance of many banking institutions are identified as one of the factors which contributed to the crisis. Failure of bank boards to understand and question the risk-management processes and the failing of senior management to scrutinise the nature and sustainability of the high returns being achieved summarize the corporate governance failures mentioned above. The paper

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[25] Profit Efficiency Rank indicates how well a bank is predicted to perform in terms of profits relative to other banks in the same period for producing the same set of outputs (Berger et al., 2005).
[26] Available from: http://www.hm-treasury.gov.uk/d/reforming_financial_markets080709.pdf

suggests that major changes must be made to the way that bank boards function. These changes include improved risk management processes at board level, changes to balance of skills, more experienced and independent board members, and better and more transparent approaches to audit, risk and remuneration are required. The Financial Services Authority (FSA) has proposed the incorporation of a Code of Practice on remuneration into the FSA handbook which should be applicable to banks among other firms. The general requirement of the Code is that firms must put in place and respect remuneration policies, practices and procedures which promote effective risk management. Furthermore, the Chancellor has asked the FSA to annually provide a report on remuneration practices which would report the compliance of the firms with the new Code too. The chairman of the FSA has been asked by the Chancellor to conduct a review of the corporate governance of banks and other financial firms and respond to the lessons learnt from this crisis.

On the other hand there are those who say that the most recent financial crisis was faced with regulatory framework left over from the Great Depression, which was designed on the premise of the lender of last resort protection being the Federal Reserve (Williams 2012, p.3). This framework enabled the supervisors to protect the depositors and prevent bank runs, and in the perspective of the last crises, it is considered microprudential. However, the concentration on individual depository institutions is not appropriate in a globally interdependent markets setup. The last crisis showed that well regulated banks have suffered the consequences of activities of non-banking firms. This is one of the reasons why the Board of Governors of the Federal Reserve System in order to better supervise compliance with stronger capital standards, has adopted two tools which incorporate dynamic, macroprudential elements, which are: stress testing; and firm-specific capital planning (Tarullo, 2012). This has lead the Federal Reserve to advance itself from a supervisor of specific type of financial institutions to an agency with a broader focus on systemic stability as well (Bernanke, 2012).

The regulation of the financial industry, for the purpose of this chapter is going to be discussed from the United States regulations and the Basel Committee on Banking Supervision guidelines perspective.

2.4.1 The United States Regulations

As mentioned earlier, the financial industry is among the most heavily regulated and the following Table 3-1 illustrates the extent of banking legislation in the United States in the Twentieth Century.

Table 3-1 – Legislation in the United States

Major Banking Legislation in the United States in the Twentieth Century
Federal Reserve Act (1913)*   *Created the Federal Reserve System*
McFadden Act of 1927*   *Effectively prohibited banks from branching across state lines*   *Put national and state banks on equal footing regarding branching*
Banking Act of 1933 (Glass-Steagall) and 1935*   *Created the FDIC*   *Separated commercial banking from the securities industry*   *Prohibited interest on checkable deposits and restricted such deposits to commercial banks*   *Put interest-rate ceilings on other deposits*
Bank Holding Company Act and Douglas Amendment (1956)*   *Clarified the status of bank holding companies (BHCs)*   *Gave the Federal Reserve regulatory responsibility for BHCs*
Depository Institutions Deregulation and Monetary Control Act (DIDMCA) of 1980*   *Gave thrift institutions wider latitude in activities*   *Approved NOW and sweep accounts nationwide*   *Phased out interest rate ceilings on deposits*   *Imposed uniform reserve requirements on depository institutions*   *Eliminated usury ceilings on loans*   *Increased deposit insurance to $100,000 per account*
Depository Institutions Act of 1982 (Garn-St. Germain)*   *Gave the FDIC and the FSLIC emergency powers to merge banks and thrifts across state lines*   *Allowed depository institutions to offer money market deposit accounts (MMDAs)*   *Granted thrifts wider latitude in commercial and consumer lending*
Competitive Equality in Banking Act (CEBA) of 1987*   *Provided $10.8 billion to the FSLIC*   *Made provisions for regulatory forbearance in depressed areas*
Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA) of 1989*   *Provided funds to resolve S&L failures*   *Eliminated the FSLIC and the Federal Home Loan Bank Board*   *Created the Office of Thrift Supervision to regulate thrifts*

Created the Resolution Trust Corporation to resolve insolvent thrifts *Raised deposit insurance premiums* *Reimposed restrictions on Saving and Loans (S&L) activities*
Federal Deposit Insurance Corporation Improvement Act (FDICIA) of 1991* *Recapitalized the FDIC* *Limited brokered deposits and the too-big-to-fail policy* *Set provisions for prompt corrective action* *Instructed the FDIC to establish risk-based premiums* *Increased examinations, capital requirements, and reporting requirements* *Included the Foreign Bank Supervision Enhancement Act (FBSEA), which strengthened the Fed's* *Authority to supervise foreign banks*
Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994* *Overturned prohibition of interstate banking* *Allowed branching across state lines*
Gramm-Leach-Bliley Financial Services Modernization Act of 1999* *Repealed Glass-Steagall and removed the separation of banking and securities industries*
Sarbanes Oxley Act 2002 *Call for the creation of the Public Company Accounting Oversights Board (PCAOB).* *Outline of responsibilities for the accounting firms. Among others, the lead audit and reviewing partner must rotate off the audit every 5 years.* *Prohibits loans to any of the firm's directors or executives.* *Rapid disclosure of material changes in the financial conditions of the firm.* *Whistle blower protection.*
Dodd-Frank Wall Street Reform and Consumer Protection Act 2010 *Creation of the Financial Stability Oversight Council ("Council") to address the oversight failures and the regulatory gap created by various agencies.* *Creation of the Orderly Liquidation Authority which in cooperation with the Council should monitor the activities of large institutions deemed as "too big to fail".* *Title VII of the act to be known as the "Wall Street Transparency and Accountability Act of 2010"* *The Volcker Rule, restricts the ways banks can invest and regulates trading in derivatives.*

* Source: Mishkin, F. S. (2004)

All these regulations, some more directly than others, have shaped corporate governance practices of banks. Among the ones that had a more significant impact was the Sarbanes-Oxley Act.

i.   The Sarbanes-Oxley Act (SOX)

The collapse of Enron, WorldCom and alike prompted the governments to act so future similar failures can be avoided. In 2002 the Public Company Accounting Reform and Investor Protection Act, also known as the Sarbanes-Oxley Act (SOX) was passed by congress.

SOX was built around five fundamental areas according to Rezaee (2009) 1. Corporate governance; 2. Financial reporting; 3. Audit functions; 4. Federal securities law enforcement; and 5. Others. For the purposes of this study, only the provisions addressing corporate governance will be mentioned in the following table.

A summary of provisions of SOX concerned with corporate governance is presented in the following Table 3-2.

Table 3-2 - Sarbanes Oxley Act's Provisions

Section	Provisions
202	Audit Committee Preapproval of Audit Services
205	Amendments to the Securities Exchange Act of 1934
301	Public Company Audit Committees
303	Improper Influence on Conduct of Audits
304	Forfeiture of Certain Bonuses and Profits
305	Amendments to the Securities Exchange Act of 1934
306	Insider Trades During Pension Fund Blackout Periods
402	Extended Conflict of Interest Provisions
403	Disclosures of Transactions Involving Management and Principal Stockholders
406	Code of Ethics for Senior Financial Officers
407	Disclosure of Audit Committee Financial Expert
705	Study on Investment Banks
806	Whistleblower Protection
1105	Authority of the SEC
1106	Criminal Penalties for Violations of the 1934 Exchange Act

Source: Rezaee 2009

Section 202 of SOX requires that all auditing and non-audit services provided by an auditor to be preapproved by the audit committee of the company. Section 205 amends the Securities Exchange Act of 1934 among others with the term AUDIT COMMITTEE

which is the body established by the board of directors for the purpose of overseeing the accounting and financial reporting processes of the company. Section 301 specifies the formation of an independent and competent audit committee as a committee of the board of directors, which is responsible for hiring, setting compensation, and supervising the publicly registered accounting firm's (auditing) activities. SOX calls for each member of a firm's audit committee to be a member of the board of directors and to be independent[27]. Section 303 prohibits directors and officers of the audited company to mislead or manipulate in any way the information provided to the independent audit for the purpose of rendering the audited reports and financial statements materially misleading. Section 304 obliges the CEO and CFO to forfeit any bonuses or profits for the period of previous 12 months if the company is required to prepare accounting restatements as a result of material noncompliance of the company, due to the misconduct, with any financial reporting requirements under the securities laws. Section 305 amends a section of Securities Exchange Act of 1934 in respect to Unfitness Standard and section 306 prohibits insider trading for officers and directors. Section 402 prohibits personal loans to executives and section 403 postulates the requirement of disclosure of transactions involving management and principal stockholders who directly or indirectly own more than 10 per cent of any class of any equity security. Section 406 puts the requirement for code of ethics[28] for senior financial officers. Section 407 postulates that the audit committee of a company must have at least one financial expert as its member. Section 705 requires from the Comptroller General of the United States to conduct a study on whether investment banks and financial advisers have assisted the failed Enron Corporation and Global Crossing to misrepresent their real financial situation. Section 806 puts in place protection mechanisms for whistleblowers. Section 1105 sets the authority of the Securities Exchange Act to prohibit persons from serving as officers or directors if such person is found to have violated rules set by this

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[27] To be considered "independent" a member of an audit committee may not, other than in his or her capacity as a member of the audit committee, the board of directors, or any other board committee— (i) accept any consulting, advisory, or other compensatory fee from the firm; or (ii) be an affiliated person of the firm or any subsidiary thereof.

[28] Code of ethics means standards that are required for promotion of: 1. Honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships, 2. Full, fair, accurate, timely, and understandable disclosure in the periodic reports required to be filed by the company, 3. Compliance with applicable governmental rules and regulations

act, section 1106 amends the act by increasing criminal penalties as foreseen by Section 32(a) of the Securities Exchange Act of 1934.

To summarise, SOX provisions influence corporate governance in several ways Rezaee (2009) argues. First, new components[29] are introduced to internal governance as gatekeepers. Second, fiduciary duties and legal status of directors and officers, particularly CEO and audit committee have been enhanced significantly and third, some aspects of state law were replaced[30] and federalised.

ii.   *Dodd-Frank Wall Street Reform and Consumer Protection Act*

The last financial crisis brought to surface a lot of problems and gaps with the then current laws and regulations. As a result, the United States Congress, on January the 5th, 2010 passed the Dodd-Frank Wall Street Reform and Consumer Protection Act.[31] This is a cumbersome piece of legislation addressing almost all areas of financial activities in the United States. At the current state, the Act resembles more a framework which will require a lot of studies and rulemaking to enable the enactment of the provisions. This seems to be the status of the legislation addressing the issues of corporate governance as well.

Out of 1601 sections of the law, only two sections, SEC. 971 and SEC. 972 under Subtitle G – Strengthening Corporate Governance are dedicated to corporate governance. On the 848 pages of legislation, corporate governance is mentioned only six times including the table of content. On the official page, the link about corporate governance and public companies provides very limited information. In brief, one can read that the Dodd-Frank Act significantly impacts the proxy process and the annual meeting with nonbinding say-on-pay votes. It also mentions the additional disclosures regarding executive compensation and permitting shareholders to include director nominees in a company proxy statement. There is also a bit that talks about compensation committees needing new procedures when retaining compensation consultants, legal counsel and other advisors. The word count on the page is 113 and it closes with: "Check back soon

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[29] Auditors, analysts, legal counsel.
[30] For example laws in some states would allow loans to directors and officers, but SOX prohibits such loans.
[31] Available at: http://www.gpo.gov/fdsys/pkg/BILLS-111hr4173enr/pdf/BILLS-111hr4173enr.pdf

for more information about corporate governance and public companies".[32] A more detailed discussion of sections follows.

SEC. 971. Proxy Access of Dodd-Frank Act amends Section 14(a) of the Securities Act of 1934 by adding a section about the "(A) solicitation of proxy, consent, or authorisation by (or on behalf of) an issuer include a nominee submitted by a shareholder to serve on the board of director of the issuer"; and, "(B) a requirement that an issuer follow a certain procedure in relation to a solicitation described in subparagraph (A)".

SEC. 972. Disclosures regarding chairman and CEO structures amends the Section 14A of the Securities Act of 1934 by adding the following "SEC. 14B. Corporate Governance" – which states that "Not later than 180 days after the date of enactment of this subsection, the Commission shall issue rules that require an issuer to disclose in the annual proxy sent to investors the reasons why the issuer has chosen – (1) the same person to serve as chairman of the board of directors and chief executive officer (or in equivalent positions); or (2) different individuals to serve as chairman of the board of directors and chief executive officer (or in equivalent positions of the issuer)".

From what has been written above regarding the Dodd-Frank Act with respect to corporate governance it is obvious that a substantial bit of rulemaking is required to make the Law usable by both supervisory bodies and the institutions that are being supervised.

2.4.2 The Basel Committee on Banking Supervision

The Basel Committee on Banking Supervision (BCBS) is a committee within the Bank for International Settlements (BIS), the oldest international bank established in 1930. With the aim of harmonizing bank supervision and capital adequacy among the countries of G10[33], the BCBS has issued several accords commonly known as Basel I, Basel II, Basel II.V and Basel III in 1988, 2004, 2009 and 2011 respectively. Basel I, II.V and III do not address corporate governance issues directly, but due to its importance for banking industry are explained briefly below, while Basel II touches upon corporate governance,

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[32] Available at: http://dodd-frank.com/dodd-frank-and-corporate-governance-and-public-companies/ (accessed on September 30, 2013; the last update of the page: July 25, 2010).
[33] Only countries belonging to the G10 group are obliged to comply with these standards.

hence, it is elaborated in more detail. Also, the BCBS provides further guidance for supervisors via Core Principles for Effective Banking Supervision which are discussed at the end of this sub-section.

i. *Basel I - International Convergence of Capital Measurement and Capital Standards*

This document represents the original Basel Capital Accord, which is known to set down the agreement of the G10 central banks[34] to apply common minimum capital standards to their banking industries. The Committee's work on regulatory convergence targets two fundamental objectives: First, the soundness and stability of the international banking system should be served by the new framework, and, second, with the view to diminish an existing source of inequality among international banks, the framework should be fair and have a high degree of consistency in its application to banks in different countries.

The document is comprised by three sections with the first two describing the framework: Section I the constituents of capital and Section II the risk weighting system. Target standard ratio is dealt with in Section III.

ii. *Basel II - The New Basel Capital Accord*

The new Basel Capital Accord, commonly known as Basel II consists of three pillars: (1) minimum capital requirements, (2) supervisory review of capital adequacy, and (3) public disclosure. Although designed to help with proper capitalisation of banks, Basel II in contrast to Basel I, addresses corporate governance issues in pillars 2 and 3 which will be discussed below.

Pillar one - A major innovation of the Basel II accord is the introduction of three distinct options for the calculation of credit risk[35] and three others for operational risk.[36] These

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[34] The group of G10 is consisted of eleven economies: Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States (as defined by BIS, available at: http://www.bis.org/publ/g10.htm).

[35] Credit Risk: (1) Standardised Approach; (2) Foundation IRB Approach; (3) Advanced IRB Approach

[36] Operational Risk: (1) Basic Ce Approach; (2) Standardised Approach; (3)Advanced Measurement Approaches (AMA)

approaches are intended to increase risk sensitivity and to allow banks and supervisors to select the approach/es they believe are most suitable for them.

Pillar two - This pillar covers the Supervisory Review Process and describes the principles for effective supervision. Banks are required to evaluate their activities, corporate governance, risk management and risk profiles in order to determine whether they have allocated the appropriate amount of capital for their risks. Supervisors and management of the bank are expected to jointly find the best internal control processes and risk assessment systems. These are peculiar to each bank since they depend on the bank's organisational structure, business practice and regulatory framework.

Paragraph 725 identifies four principles[37] of supervisory guidance complementing the principles outlined in the BIS document Core Principles for Effective Banking Supervision, which will be discussed in more detail later on. Paragraph 728 provides guidance on board and senior management oversight. The board and senior management are advised to view capital planning as a crucial element in enabling the achievement of strategic objectives (paragraph 729), while 730 calls for bank's board of directors responsibility to set the bank's tolerance for risks and the need for management to establish a framework for assessing various risks, a system to relate risk to the capital level, and establish methods for monitoring compliance with internal policies. Paragraph 743 asks for adequate monitoring and reporting system which would enable bank's senior management and board of directors to evaluate risk exposures and potential need for capital. The bank's internal control structure is addressed in paragraph 744 suggesting that effective control of capital assessment process includes an independent review and if necessary the involvement of internal and external audits.

Pillar three - addresses corporate governance issues through transparency and market discipline mechanisms which would improve the flow of information among investors and bank management. Paragraph 810 suggests that banks' disclosures should be consistent with how senior management and the board of directors assess and manage the risks of the bank. Pillar three bestows upon the management's discretion to determine the appropriate medium and location of the disclosure in situations where

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[37] Principle 1 discusses the need for banks to have processes in place for assessing their capital adequacy in relation to their risk profile and a strategy to maintain their capital levels.

the disclosures are made under accounting requirements or are made to satisfy listing requirements promulgated by securities regulators. In these situations banks should explain material differences between the accounting or other disclosure and the supervisory basis of disclosure (paragraph 814). For those disclosures that are not mandatory under accounting or other requirements, management may choose to provide the information through other means (such as internet website or in public regulatory reports filed with bank supervisors), consistent with requirements of national supervisory authorities (paragraph 815). By linking the quality of disclosure to the regulatory capital requirements, pillar three attempts to give incentives to banks to improve the quality of the information regarding the bank's risk exposure and management practices. This can be achieved if banks improve their internal controls, systems operations, and overall risk-management practices.

iii.   Basel II.V and Basel III Accord

The corporate governance practices of banks as discussed in the previous section, are addressed in Basel II accord. The Basel II.V package (BCSB 2009) and Basel III can be considered to be a response to the financial crisis with no direct implications for corporate governance, thus only the main points are going to be highlighted.

Basel II.V charges banks more for keeping assets in the trading book, a portfolio which banks hold for daily trade usually on behalf of clients, instead of the banking book, a portfolio where usually banks keep the long term investments. This set of rules entered in force on 31st December 2011 for Europe and most of the financial world jurisdictions, but Switzerland has started applying the requirements one year earlier than everybody else, while in the United States they will came to power in 2013. In United States, the Basel II.V starts one year later due to the noncompliance issues with the Frank-Dodd Act. The rating agencies such as Moody's and Standard and Poor's which produce ratings that are used to calibrate capital charges by Basel II.V are held partially responsible for the crisis and the Frank-Dodd Act expressively forbids the use of such ratings. For this reason, American regulators have to come up with their own formula on capital charges for banks.

Turner (2009) identifies the regulatory capital requirements set by the Basel II accord as too low thus exacerbating the effect of the last financial crisis. Consequently, one of the recommendations of his report is the improvement of the quality and the quantity of the capital banks hold. Pepe (2013), following Turner 2009 finds that banks which tended to write the investment in the trading book before the Basel 2.5, now are writing more in the banking book. These findings are supported also by an article in The Economist[38] stating that the financial three quarterly results of Credit Suisse in 2011 show an increase on risk-weighted assets leading to higher capital costs for investment banking as a result of complying with Basel 2.5.

Basel III is the new framework for capital adequacy of banks that has been endorsed by the G20 at the November 2010 Summit in Seoul. The lessons learned from the 2008-2009 financial crisis taught the relevant stakeholders such as lawmakers and regulators that financial institutions previously considered 'too big to fail' can get into difficulties via companies operating in less regulated industries. This is why these institutions, referred to as systemically important financial institutions (SIFIs) are at the focus of the Basel III framework.

The implementation period for Basel III is 2013-2019, and there are a number of issues that need to be clarified and specified in the meantime, but many countries have already embarked in complying with these requirements rather than awaiting the final version of the rules. Previous experience with Basel II has taught countries as well as companies that strategic planning and adequate evaluations are crucial to successful implementation.

The major Basel III recommendations are designed to address the following areas: 1. Increased quality of capital; 2. Increased quantity of capital; 3. Reduced leverage; 4. Increased short term liquidity coverage; 5. Increased stable long term balance sheet funding; and 6. Strengthened risk capture.

Increase of the quality of capital should be achieved by using retained earnings and common equity as the main components of Tier 1 capital, and not financial instruments

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[38] Half cooked Basel, published on 7th of January 2012 edition of The Economist, available at: http://www.economist.com/node/21542463

based in debt which according to the current rules can be more than half of Tier 1. Other means, such as simplified requirements for Tier 2 capital and less complicated financial derivatives to be used for Tier 1 capital are part of measures to increase the quality of capital.

The increase of quantity of capital is aimed to be achieved by increasing the minimum Tier 1 common equity from 2 per cent to 4.5 per cent, introducing a 2.5 per cent capital conservation buffer bringing the total common equity requirements to 7 per cent. The minimum total capital is increased from 8 per cent to 10.5 per cent as a consequence of the capital conservation buffer.

Reducing the leverage of banks will be achieved by setting the leverage limit as 3 per cent which in accounting terms means that total bank's assets cannot be more than 33 times bank capital. This ratio is meant to supplement the risk based measures of regulatory capital and is to be applied to gross and un-weighted capital basis (risks related to assets are not included in the leverage calculation).

The increased short term liquidity coverage introduced in the form of Liquidity Coverage Ratio (LCR) aims to make sure that global banks have high quality liquid assets that can withstand a 30 day stressed funding scenario. The liquidity of assets is weighted on the basis that government bonds receive 100 per cent weight while corporate bonds can vary anywhere from 0 to 50 per cent.

The regulatory objective 5 presents the Net Stable Funding Ratio (NSFR) which is expected to incentivize and encourage banks to use stable funding sources for their activities rather than relying on short term wholesale funding. The logic behind this ratio is in comparing the required to available funding, ratios which are determined using weighting factors for assets such as government bonds weighted from 0 to 5 per cent, 65 per cent for mortgages, 85 per cent for retail loans and 100 per cent for all other assets. The weighting factors for liabilities vary from 0 per cent for European Central Bank (ECB) funding, 50 per cent for unsecured wholesale funding, 90 per cent for core retail deposits and 100 per cent for Tier 1 capital.

The 6th objective is about the strengthening risk capture with focus on counterparty risk. Through this set of rules, the BCBS aims to motivate a full coverage of risks in Pillar 1

framework, which were not captured by Basel II framework due to low capital requirements. Most of the objective 6 is covered by Basel II.V with respect to trading book and securitisation positions, but Basel III proposals take this a step further by modifying primarily the exposures to financial institutions and the counterparty risk on derivative exposures.

iv.   Core Principles for Effective Banking Supervision

This document was issued by the Basel Committee on Banking Supervision in September 1997 and is comprised of twenty-five basic principles that need to be in place and enable an effective supervisory system. Core principles for effective banking supervision refer to a management structure composed of a board of directors and senior management. One of the fundamental guidelines is the encouragement of market discipline through good corporate governance. Supervisors should encourage appropriate structure and set of responsibilities for board of directors and senior management alongside with enhanced market transparency as means to improved banking.[39]

In 2006, this document was revised with four more basic principles which had been identified as apparent gaps during the implementation of the first version of Core Principles. The Core Principles have served countries as a benchmark for assessing the quality of their supervisory systems. This led to identifying supervisory and regulatory needs to achieve a baseline level of sound supervisory practices.[40]

By the end of 2011 the Basel Committee on Banking Supervision completed its review of the October 2006 Core principles for effective banking supervision and the associated Core principles methodology and The revised Core Principles were endorsed by banking supervisors at the 17th International Conference of Banking Supervisors held in Istanbul, Turkey, on 13-14 September 2012.[41]

The revised set of twenty-nine core principles has been reorganized to follow a more logical flow of implementation and to provide a clearer division between what

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[39] For further discussion please see Appendix 1.
[40] Available at: http://www.bis.org/publ/bcbs129.htm
[41] Further details available at: http://www.bis.org/publ/bcbs230.htm

supervisors should do and what banks are expected to do from the supervisory perspective. In this light, principles 1 through 13 reflect the supervisory powers and obligations and principles 14 through 29 cover supervisory compliance of banks, focusing on corporate governance practices and risk assessment policies.

The latest financial crisis has brought to light many corporate governance failures in banking practices thus, Principle 14 – Corporate Governance, postulates that supervisor determines that banks and banking groups have robust corporate governance policies and processes covering, for example, strategic direction, group and organisational structure, control environment, responsibilities of the banks' Boards and senior management, and compensation. These policies and processes are commensurate with the risk profile and systemic importance of the bank. Principle 15 – Risk Management Process, requires from banks to have comprehensive risk management processes which include board and senior management insight. This principle then obliges the bank to behave accordingly for principles 16 through 19 which deal with: capital adequacy; credit risk; problem assets, provisions and reserves; and concentration risk and large exposure limits, respectively. Principle 20 addresses transactions with related parties, principles 21 through 25 deal with country and transfer risks; market risks; interest rate risk in the banking book; liquidity risk; and operational risk, respectively. The remaining principles 26 through 29 address audit and transparency issues such as: internal control and audit; financial reporting and external audit; disclosure and transparency; and abuse of financial services.

2.5 Conclusions

The chapter started with the discussion of the role of banks and other financial institutions as integral part of the economy and the potential spill over effects of bank (and other financial institutions) corporate governance onto the enterprises they lend to. Then the issue of whether corporate governance for financial and non-financial institutions is the same was examined. The current literature mainly supports the view that corporate governance for financial institutions is different from that of non-financial ones mainly due to the fact that the principal-agent problem is more complex for banks and other financial institutions than it is for non-financial ones. There are some who support the view that there are enough features to distinguish corporate

governance of banks and other financial institutions. At the other end of the spectrum, there are those who consider that corporate governance should not be different for financial and non-financial companies. The main studies in the field mention more or less the same basic elements distinguishing financial from non-financial firms and those are: opaqueness of bank operations, heavy regulation, and higher moral hazard opportunities by managers. This leads to a consensus that financial institutions are different from non-financial ones, thus the corporate governance should be adapted accordingly.

Further in this chapter, the relationship between corporate governance and performance of financial institutions is examined. The literature review showed a lack of consensus among the academia on which performance indicators and which corporate governance indicators are the most adequate ones for testing this relationship. Some studies showed that a higher frequency of board meetings combined with higher director fees and ownership stake and better attendance rates translates to higher profit efficiency of banks. Then there are studies that find that the lower the proportion of internal directors and an external chairperson will produce higher return on assets and return on equity for the bank. In addition, there are some studies that find that the board size and performance as measured by Tobin's Q are positively related. Consequently, the review of literature showed that a relationship between corporate governance and bank performance discovered in one study, is not supported by another study thus empirically supporting the prevailing lack of consensus in the academia about which indicators to use for estimating the relationship.

The next section discussed the regulation and it showed that the banking industry is heavily regulated. The financial sector in United States alone has seen thirteen very relevant pieces of legislation spanning from 1913 to 2010 which have shaped the behaviour of financial firms. The regulation was intensified after the financial crisis which was blamed on failures of corporate governance practices of banks and other financial institutions. The regulation addressing corporate governance practices such as the Sarbanes-Oxley Act, Basel II, and Core Principles for Effective Banking Supervision are discussed in detail. The common aspect of all these bits of legislation is the increase

of disclosure and transparency practices of financial institutions as one of the key aspects of improving corporate governance.

Chapter 4

Theoretical Framework and Cross Section Analysis

4.1 Introduction

It is generally agreed that good corporate governance is important for the operation of modern economies. However, there is no general agreement as how to establish that good corporate governance leads to better performance of firms. Arguably, this stems from the lack of a unified method of measuring the quality of corporate governance. This lack of consensus among academics and professionals of the field has produced divergences in terms of substance, methodology, techniques and other details used as to establish the direction and nature of the relationship.

The study conducted by Gompers et al. (2003), hereinafter GIM, is among the first to attempt to quantify the corporate governance practices of companies and evaluate its impact on equity prices. There have been many studies of the subject since this paper, some agreeing with this approach while others do not. Bebchuk et al. (2005), e.g., consider that GIM method uses too many factors and dropping most of them will produce a better measure of corporate governance quality. Brown and Caylor (2004) use similar methods to the studies mentioned above but a different dataset, using another measure for the quality of corporate governance. Bhagat and Bolton (2008) use a different approach and use a system of simultaneous equations involving performance, governance, ownership and capital structure to estimate the relationship between performance and corporate governance.

One of the important issues facing researchers studying corporate governance is to provide empirical evidence for the intuitive correlation between corporate governance and firm performance. However, finding a consistent relationship between corporate governance and firm performance has been a serious challenge for researchers. The literature, as seen in previous chapters, shows that a corporate governance feature emerging as relevant in one study disappears in another. The situation is worse for financial institutions, as there are hardly any studies that explore this relationship for banks (or/and other financial institutions). Another issue facing researchers is the methods of investigation utilised in empirical research – most researchers use cross section analysis due to the nature of data availability. Econometric problems such as the treatment of endogeneity, which is one of the fundamental problems of this type of

investigation, have generally been ignored in the studies discussed earlier (and those that will be considered in this chapter).

This chapter is structured in the following way. Section 4.2 will look at the most relevant research which is used to build the theoretical framework of this study. Section 4.3 will analyse the studies that are concerned with the measurement of the quality of corporate governance, looking at some of the widely used indices. Next the focus will turn to the relationship between corporate governance and bank valuation in section 4.4, section 4.5 will embark on the empiric analysis by discussing the model, section 4.7 will explain the methodology used, section 4.8 will present the empirical findings and section 4.9 will summarize the points made by this chapter and conclude.

4.2 Theoretical Framework

As seen in chapter one corporate governance issues stem from the separation of ownership and control (Berle and Means, 1932) and the prevalence of agency problem (Fama, 1980). In practice this means that owners of capital have to part with their money and trust that managers will act in their best interests. This trust is weakened by the asymmetry of information between managers and owners, together with the uncertainty of the firm's operations and the incompleteness of contracts which result in agency problems. The inability to address the agency problem through contracts due to high transaction costs will impact the corporate governance (Hart, 1995b).

The agency problem illustrates how and why one of the main corporate governance problems is that between owners of capital and managers (Berglof and Von Thadden, 1999) although there are other ways in which the corporate governance problem is manifested – for example the collusion of large shareholders and managers to expropriate small shareholders (Shleifer and Vishny, 1997; Claessens et al., 1999).

Finding ways for suppliers of capital to get a return on their investment seems to be one of the main concerns of corporate governance (Shleifer and Vishny, 1997). For this reason the collapse of large corporations like Enron and WorldCom in late 1990s and early 2000s has had a negative effect on public trust and investor confidence (Rezaee,

2009).[1] Getting the confidence back to investors required significant improvements in financial reporting, transparency and other aspects of corporate governance. The New York Stock Exchange (NYSE), among others, requires a majority of board members to be independent for a company to be listed.[2]

Shareholders elect the board of directors so that it can oversee the management. As such, the board of directors' function is to resolve or ameliorate the agency problem arising from the separation of ownership and management (Rezaee, 2009). In practice though, things are not that straight forward due to the opportunity that members of both, board of directors as well as management, pursue their individual interests instead of those of the company. Managers, as the agency theory suggests, might choose to maximise their own utility in contrast to maximising shareholder value (Jensen and Meckling 1976, p.2; Fama, 1980).[3] Similarly, board members can put provisions in place which might protect them from being removed (or replaced) easily by the board and entrench their position or seat on the board. This kind of behaviour by managers and board members can exacerbate the agency and the corporate governance problems.

Considering that the board of directors is the medium where the interests of shareholders and the management of the company interact with each other, it is very important that the role and the functioning of the board of directors are not compromised. Although the decision making process (at the micro level) is delegated to the management, the board is responsible for running the company. The board represents the interest of all shareholders and its decisions should reflect the intention to increase shareholder value. Due to its importance, the board of directors is

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[1] The Enron, WorldCom and other corporate scandals have prompted corporate governance reforms in United States such as SOX, listing standards etc, in order to restore investor confidence (Rezaee 2009).

[2] NYSE Listed Company Manual, Section 303A.01 Independent Directors: Listed companies must have a majority of independent directors.
Commentary: Effective boards of directors exercise independent judgment in carrying out their responsibilities. Requiring a majority of independent directors will increase the quality of board oversight and lessen the possibility of damaging conflicts of interest. Amended: November 25, 2009 (NYSE-2009-89). Available at: http://nysemanual.nyse.com/LCMTools/PlatformViewer.asp?searched=1&selectednode=chp_1_4_3_1&CiRestriction=303A&manual=%2Flcm%2Fsections%2Flcm-sections%2F
Accessed in June 2010

[3] Jensen and Meckling (1976) argue that an manager of mixed financial structure (debt and equity claims) firm would choose a set of activities for the firm which would result in lesser total value of the firm than it would be worth if the manager was the only owner.

considered "the cornerstone of the company's corporate governance structure with the primary role of safeguarding interests of shareholders and other stakeholders" (Rezaee, 2009, p.91). Having this in mind, one can suggest that a company's corporate governance is only as good as the quality of its board members.

As seen in chapter two there is a growing body of literature exploring the relationship between corporate governance and performance of firms. This chapter will broaden the discussion by analysing the studies mentioned in chapter two and augment it with other relevant developments in the field.

Erkens et al. (2012) survey corporate governance of financial institutions worldwide during the period 2007-2008. They provide empirical evidence of the influence of corporate governance on the performance of these institutions during the crisis period. Their dataset consists of 296 of the world's largest financial institutions spread across 30 countries. These institutions have suffered the largest impact of the crisis according to the authors. Their model estimates stock returns during the crisis period January 2007 to September 2008 and the corporate governance indicators such as i) board independence; ii) institutional ownership; and iii) the presence of large shareholders. They find that board independence is negatively related to performance due to the requirement of capitalisation at the time of depressed stock prices which in turn caused the wealth transfer from shareholders to debt holders. Also, greater institutional ownership is negatively related to performance as a result of institutional shareholders encouraging the management to take higher risks during the period leading to crisis (i.e. 2000-2006).

Some researchers suggest that improved governance reduces agency costs (Derwall and Verwijmeren, 2007; Ashbaugh-Skaife et al., 2004). The argument behind these studies is that firms featuring better corporate governance practices are expected to face lower costs of capital. Using the Governance Metrics International (GMI*) ratings for 2519 US firms, with diverse ratings, over the period 2003-2005, Derwall and Verwijmeren (2007) investigate the association between corporate governance and the cost of capital. They obtain the data on the cost of equity (the expected return) from Institutional Brokers' Estimate System (IBES) and dividend and price information from Compustat. Regressed

on the implied cost of equity as the dependent variable, their variable GOVSCORE is reported to be statistically significant at 10%.[4]

Along the same line, Ashbaugh-Skaife et al. (2004) look at the impact on firms' cost of equity capital of governance attributes that aim to mitigate agency risk. They examine governance attributes relating to the quality of financial information, shareholder rights, and board structure by using a sample of 5306 firms compiled from a broad range of data sources.[5] Abnormal accruals (an accounting based measure of the quality of financial information), earnings transparency (a market based measure of quality), the quality of audit committee (represented as the percentage of independent committee members), and the board structure (the proportion of independent board members) are all statistically significant at 5% or better and have the expected signs. These results allow the authors to suggest that firms with better corporate governance practices face lower cost of equity capital. They argue that this, as in the case of Derwall and Verwijmeren (2007), is due to the amelioration of the agency problem.

Agency costs can be affected in many ways, one of which is the existence, or absence, of country (or in the case of US, state) laws regulating rights and obligations of management and/or shareholders. Daines (2001) finds that companies incorporated in the state of Delaware have higher share value than similar companies incorporated elsewhere in United States. By being agile in changing their laws so that they better suit the needs of firms and appointing a specialized corporate court, Delaware provides an option for parties to use contractual substitutes which may limit the agency costs.

Owners and managers of firms going public[6] have strong incentives to display value maximising behaviour. Since the Initial Public Offerings (IPO) are usually conducted during the stage of concentrated ownership and low agency costs, it is expected that a legal framework which provides lower agency costs and limits managerial behaviour is beneficial. The state of Delaware has the largest number of firms incorporated in the

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[4] The model also comprises of other control variables such as: firm size, firm's beta (daily stock returns over the previous year), book debt to assets ratio, and the price to book ratio.

[5] They use: Investor Responsibility Research Center and the Corporate Library for board and committee composition and management entrenchment ces; Compact Disclosure for ownership data; CDA/Spectrum for Institutional holdings; Compustat for accounting variables; CRSP for stock return data; and Value Line for expected returns.

[6] Firms that are publicly traded.

United States, more than half of all public firms, generating around 20 per cent of state revenues.[7] The Delaware law, according to Daines facilitates the easier acquisition of firms. Approximately 20% of firms incorporated in Delaware, in contrast to 14% of firms incorporated elsewhere in the United States, received at least one takeover bid during 1995, resulting in completed sale of 12% of Delaware firms in contrast to 8% of other firms. The empirical evidence supporting this comes from a sample of 4481 United States exchange–traded firms over the period of 1981 to 1996. Using Tobin's Q as the dependent variable, which stands for an approximation of firm value, Daines (2001) finds that the variable 'Delaware incorporation' is positive and significant at 1%.

Daines argues that these findings provide strong evidence against voices that Delaware Law creates conditions for managerial rent seeking instead of an increase in shareholder value. Since Delaware has managed to create a legal structure such that it can reduce agency costs and private benefits for managers, investors are willing to pay the "Delaware Premium" for companies.

Quantifying whether any given company has good or bad corporate governance practices has been a challenge for academics. This is mainly due to the complexity and multidimensionality of factors impacting corporate governance – and these have also contributed to the lack of consensus about a set of variables used to measure corporate governance practices. However, there have been several attempts by various researchers to quantify the corporate governance practices of companies for the purpose of empirical work. The following section will look into these studies.

4.3 Measures of the Quality of Corporate Governance and their relationship with performance

Academics and practitioners studying corporate governance are well acquainted with the most important developments in the area of measuring the quality of corporate governance. There are two approaches to measuring this quality that can be classified broadly into academic and commercial. The academic approach was pioneered by a widely cited work produced by Gompers, Ishii and Metrick (2003) which was followed by

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[7] In contrast to second largest market share, the state of New York which accounts for five per cent of public firms incorporated.

Bebchuk et al. (2004). Brown and Caylor (2004) also use a similar method but with a different database to quantify the quality of corporate governance of companies.

On the commercial side, there are agencies such as Institutional Shareholder Services (ISS), Governance Metrics International (GMI*), and The Corporate Library (TCL), specialising in rating corporate governance practices of companies. Also some stock exchanges have their own models for measuring and ranking the quality of corporate governance of listed companies, such as the Warsaw Stock Exchange. However, the commercial approach is beyond the scope of this chapter since chapter two has a section about their function, hence, the academic approach will be considered next.

4.3.1 "The Governance Index"

Gompers, Ishii and Metrick (2003) have produced one of the most cited works in respect of the relationship between corporate governance and performance. Their paper on corporate governance and equity prices has become a benchmark against which most of other works in this field are compared. They use the data published by Investor Responsibility Research Center (IRRC) to construct what they call a "Governance Index". The aim of the index is to evaluate the governance practices of companies using the level of shareholders' rights within firms as a proxy. The logic behind the calculation of the index is quite simple; the presence of any provision in the company bylaws or state laws restricting shareholder rights would add one point to the index.[8]

GIM focus on the two extremes of the spread of the Governance Index; firms scoring the index value ≥ 14, are put in the "Dictatorship Portfolio" and firms with the index ≤ 5 are sorted into the "Democracy Portfolio".[9] They find that $1 investment in a "Dictatorship portfolio" firm in 1990 would have grown to $3.39 in 1999, while the same investment in a "Democracy portfolio" firm would have grown to $7.07 for the same period. This

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[8] Also, the absence of one or both of specific provisions (which is considered to improve the position of shareholders), Secret Ballot and Cumulative Voting, would add one (or two) points to the Governance Index. Hence, the Governance Index represents the sum of ones which derive from the presence or absence of the respective provisions. The data is used to construct five sub-indices such as: Delay, Protection, Voting, Other and State. Appendix 4-1 shows 28 provisions out of which the Governance Index is calculated.

[9] The former group consists of the firms where the managers have superior power while the latter group has firms in which shareholders are in a better position.

translates to returns of 14 per cent annually for the former firm and 23 per cent for the latter. The argument behind this approach is the following. If corporate governance is important for firm performance, and this relationship is incorporated by the market, this would be reflected in stock price which would adjust to relevant changes in corporate governance practices of the firm. However, if corporate governance matters but this information is not recognised (or ignored) by the market and therefore stock prices do not reflect the changes in governance, then the realized returns on the stock would systematically differ from equivalent securities (Gompers et al. 2003, p.13). To explain this disparity between the returns of firms belonging to each portfolio, they look at the "style" or riskiness of the portfolios by estimating the four factor model developed by Carhart (1997):

$$R_t = \alpha + \beta_1 * RMRF_t + \beta_2 * SMB_t + \beta_3 * HML_t + \beta_4 * Momentum_t + \varepsilon_t$$

where Rt is the return difference between Democracy and Dictatorship portfolios in month t, RMRFt is the month t value-weighted market return minus the risk-free rate, and the terms SMBt (small minus big), HMLt (high minus low), and Momentumt are the month t returns on zero-investment factor-mimicking portfolios designed to capture size, book-to-market, and momentum effects, respectively. The estimated intercept, "alpha", which is interpreted as the abnormal return, was both significant at 5 per cent and positively correlated with the governance index for the democracy portfolio and also significant at 5 per cent but negatively correlated for the dictatorship portfolio, thus the study suggests that the disparity in returns is due to the underperformance of the dictatorship portfolio and the overperformance of the democracy portfolio.

GIM take their investigation further by investigating the relationship between governance and the firm value. Using Tobin's Q as a measure for firm value, they construct the following model:

$$Q'_{it} = a_t + b_t X_{it} + c_t W_{it} + e_{it}$$

With Q'_{it} is the industry adjusted Q value,[10] X_{it} represents a vector of governance variables and W_{it} a vector of firm characteristics[11]. Their results suggest a positive and economically large relationship between corporate governance and firm value. Their point estimate for 1999, as an example, can be interpreted as follows. In 1999, all else equal, a one-point increase in the governance index (taking the firm toward the dictatorship portfolio) is associated with 11.4 percentage points lower firm value.

The Governance Index developed by GIM has been used as a measure of the quality of firms' governance by a significant number of studies such as: Hafod, Mansi, and Maxwell (2008); Klock, Mansi and Maxwell (2005); Amit and Villalonga (2006); and others.

There is no rationale to assume that all 24 provisions of the IRRC data contribute to the same extent[12] to the firm's valuation. Most provisions elaborated by the GIM study are negatively correlated but there are some that are positively correlated with firm value and even among the same group of criteria, one can expect that the weighting of provisions would be different. This has led a number of researchers to look in more detail inside the IRRC provisions. Chapter 6 of this thesis empirically investigates the relationship between performance and corporate governance of banks and insurance companies in SEE countries, and it is shown that using a sub-index (measuring some aspect of corporate governance) may be more useful than using an overall index.

4.3.2 "The Entrenchment Index"

Bebchuk et al. (2004) study was among the first to raise the potential problem of too many provisions. They suggested that only few of the provisions are correlated with the firm's valuation while the rest are merely a measurement noise. Their hypothesis is that the IRRC provisions that matter are the ones that provide protection to incumbent managers against removal or the consequences of removal. They refer to this protection as "entrenchment". The entrenchment index is compiled from six provisions grouped in 'constitutional limitations to shareholder rights' and 'takeover readiness' provisions. The first group has four provisions: staggered boards, limits to amend bylaws, limits to

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[10] Firm Q minus industry mean Q.

[11] Firm characteristics used are book value of assets, firm's age, whether the firm is incorporated in the state of Delaware and whether the firm is listed in S&P500 or not.

[12] Or contribute at all, which might be the case for any given provision.

amend charter; and supermajority. The second group is consisted of: golden parachutes and poison pill provisions.[13]

One of the main contributions of this paper is the identification of the provisions which are negatively correlated to the firm's valuation. Although the evidence presented by them is not sufficient to establish causality, it is consistent in suggesting that entrenching provisions contribute to bringing or maintaining a lower firm valuation.

4.3.3 "The Gov-Score Index"

Brown and Caylor (2004) question whether the GIM index can be used to denote broader governance. Since most of the 24 provisions used by GIM are anti-takeover measures, Brown and Caylor argue that the GIM index is an anti-takeover protection index. They make the point that this index is designed to be negatively related to firm's good corporate governance practices or lack of shareholder rights, while Gov-Score is constructed to be positively related to the strength of firm's governance practices. Hence, 'Gov-Score' is a more adequate measure of corporate governance and it shows that better-governed firms are more profitable, pay out larger dividends and are valued higher by investors.

Gov-Score is based on the ISS data which consists of 51 factors covering eight areas of corporate governance: board of directors, executive and director compensation, director education, audit, progressive practices, charter/bylaws, ownership, and state of incorporation. Gov-Score is computed by assigning each of the 51 factors the value of 1 or 0 depending on whether the firm has (or has not) minimally acceptable governance practice.[14] The value of Gov-Score is obtained by adding all the assigned values (ones and zeros), which means that in theory a firm can have a Gov-Score from 0 (worst) to 51 (best). Brown and Caylor compute their index for 2327 firms using the ISS data on 1st

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[13] The rationale presented by the authors for not including the remaining 18 IRRC provisions in the index is that none of the 18 provisions has been subject to precatory shareholder resolution.
[14] Brown and Caylor (2004, p.11) "Example of a factor with minimally acceptable governance:
1. *Audit:* Consulting fees paid to auditors are less than audit fees paid to auditors.
2. *Board of directors:* Board is controlled by more than 50% independent outside directors.
3. *Charter/Bylaws:* Company either has no poison pill or a pill that was shareholder approved."

February 2003. Performance variables are extracted from Compustat for the 2002 fiscal year end.

Correlating Gov-Score using Pearson and Spearman correlations with industry-adjusted variables for performance, Brown and Caylor find that all but one of performance measures,[15] including return on equity (ROE), net profit margin, Tobin's Q, dividend yield and stock repurchases are statistically significant[16] and of expected sign. This study reports that firms with higher Gov-Score, in other words with better governance practices, display ROE which is 9.244% above the industry average (compared to -6.806% for low Gov-Score firms), net profit margin of 45.997% above the industry average (compared to -19.518%) and so on.

Brown and Caylor (2004) also report the association between the six performance measures and the eight governance categories and find that ROE is positively and statistically significantly related to five categories.[17] Net profit margin is positively and statistically significantly correlated to four categories, Tobin's Q is positively and statistically correlated to two categories, dividend yield is correlated to five categories and all the correlations are positive and statistically significant.

4.3.4 Other Contributions

Baghat and Bolton (2008) raise some doubts regarding the governance measure developed by GIM and say that there are at least three alternative ways of interpreting the abnormal returns for the firms in the democracy portfolio. One, the results can be specific to the period and sample used. Two, there might have been some unobservable risk-factor correlated to the governance measure, i.e. the risk-adjustment could have been flawed. Three, considering the possibility of an endogenous relationship between performance and corporate governance, one can assume that the causality explanations provided by GIM will be distorted.

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[15] The exception is Sales Growth.
[16] Stock Repurchases is not statistically significant for Pearson correlation but it is positive and it is positive and significant at 1% for Spearman correlation.
[17] It is also correlated to 'the state of incorporation' category but it is statistically insignificant.

Baghat and Bolton (2008) find that board independence (measured by the proportion of independent members on the board) is negatively correlated with current and future operating performance, but confirm that better governance as measured by GIM and Bebchuk et al. (2004) indices, stock ownership of board members, and the separation of the CEO-Chairperson roles is positively correlated with the operating performance measure used above. Baghat and Bolton suggest that in order to study, from the econometric point of view, the relationship between corporate governance and performance, a system of simultaneous equations specifying the relationships between performance, corporate governance, ownership structures and capital structures should be designed, thus they estimate the following:

Performance = f_1(Governance, Ownership, Capital Structure, Z_1, ε_1)

Governance = f_2(Performance, Ownership, Capital Structure, Z_2, ε_2)

Ownership = f_3(Governance, Performance, Capital Structure, Z_3, ε_3)

Capital Structure = f_4(Governance, Ownership, Performance, Z_4, ε_4)

Where Z_i are vectors of control variables and ε_i are the error terms. They use the data of the following sources: IRRC and The Corporate Library (TLC) for the board variables; Compustat and Centre for Research in Security Prices (CRSP) for performance variables. Using Return on Assets (ROA), ROA for the next year and ROA for next two years,[18] Baghat and Bolton find their results consistent with GIM results for relationship between good governance and performance for the period 1990-1999 which extends for the period 2000-2004 too.[19] They also suggest that stock ownership by board members will serve as incentive for better monitoring and more involvement in the strategic decision making processes, hence, a reliable proxy for good corporate governance can be the board members' share ownership.

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[18] Under the assumption that performance is affected by governance, then operating performance can be expected to be impacted for several coming years (Baghat and Bolton, 2008).

[19] Baghat and Bolton study was conducted in 2008 hence the data for the period up to year 2004 was available.

There are, however, researchers who ask the question 'does better corporate governance cause better firm performance?'[20] with a touch of scepticism. Chidambaran et al. (2008) find that there is no clear correlation between good governance and good performance if governance measures are considered, as they should, to be endogenous.[21] To investigate this issue, they design three samples for the period 1992-2002, constituting firms that have experienced large changes in governance but not extremely good/bad changes in performance (Moderate Performance Sample), large performance declines (Abnormally Bad Performance Sample), and large performance improvements (Abnormally Good Performance Sample).

Using CRSP and Compustat databases to construct industry adjusted ROA and stock returns they classify firms into the 'Abnormally Bad Performance' sample if their industry-adjusted stock return is in the lowest quartile in the identification year and in the top quartile the previous two. Firms that inversely meet this criteria, i.e. they are in the top quartile in the identification year and in the bottom quartile the previous two years, are sorted into the 'Abnormally Good Performance' sample. The firms whose governance changes are large, but whose performance changes are not sorted into any of the two previous samples, are put into the 'Moderate Performance' sample.

To classify the governance changes for firms, Chidambaran et al. (2008) use 13 criteria in five governance categories: 'board monitoring', 'pay-performance sensitivity', 'shareholder rights' and other 'governance measures'. The composition of the criteria belonging to each category is presented in Appendix 4-2 where each governance measure (mechanism) is represented with its ex-ante value for good governance changes.

The study fails to find a direct correlation between good performance and good governance except in isolated cases. In more than 50% of cases firms with good governance changes suffer negative changes in industry-adjusted performance. The

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[20] This was the working title of the paper by Chidambaran et al. (2006) which was published by the title 'Corporate Governance and Firm Performance: Evidence from Large Governance Changes' in 2008.

[21] Authors argue that governance measures (or mechanisms) to ameliorate the agency problem, such as: size of the board, independence of the board, frequency of board meetings are not necessarily exogenous.

authors often find that firms make at the same time good and bad governance changes. They also find that 'good' and 'bad' changes in governance affect performance; however, direct or inverse causality cannot be confirmed. These findings are in line with Core et al. (2006) who find that abnormal stock returns for firms with weak shareholder rights are somewhat greater than the abnormal returns for firms with strong governance practices.

These findings show that a robust relationship between good governance practices and good firm performance remains unresolved. However, the authors themselves report that changes in governance practices, whether good or bad, affect firms' performance. Hence, one can argue that the fact that these studies fail to find the 'good governance – good performance' relationship may be due to misspecification of models (misspecification stemming from failure to properly address endogeneity and dynamic issues). This could arguably represent a situation where some unobserved firm characteristic(s) is/are driving the results. Also, the biased way samples were created in the Chidambaran et al. (2008) study may suggest that there might not have been enough time lags taken into consideration to allow for governance changes to start showing their impact on firms' performance.

4.4 The Relationship Between Corporate Governance and Firm Valuation – The Cross Section Investigation

The previous sections of this chapter gave a more elaborate insight into the prevailing approaches for exploration of the relationship between corporate governance and performance of firms. The (large) number of corporate governance and performance measures used in these studies is an indicator of the lack of a unified theory and consensus on what is the most appropriate relationship and which factors are important.

One possible explanation for such diversity of approaches can be the fact that corporate governance as a scientific field has started to receive the deserved attention fairly recently, after the failures of Enron, World Com and the like. Considering that this is all happening in the last decade and a half, arguing that the field is still 'relatively new' is a plausible explanation.

The shifting of focus to corporate governance meant, however, that any hypothesized relationship has to be tested and supported by data. This pointed out the obvious problem of lack of data from the corporate governance perspective which in turn gave way to the emerging of a number of agencies specialized in corporate governance. As described in chapter 2, these agencies gather relevant corporate governance data and rate corporate governance practices of companies.

This situation entailing a number of agencies providing more or less different versions of the same thing in respect of corporate governance practices and lack of consensus on the theoretical model although not a receipt for a unified approach, at least provides scope for experimentation with different combinations of corporate governance – performance/valuation relationship.

4.5 Determinants of Good Corporate Governance – Discussion of the Model

Throughout this thesis the few most important studies, such as Gompers et al. (2003), Bebchuk et al. (2004) and Brown and Caylor (2004), have been explained from different aspects. Here they will be subject to detailed investigation of the corporate governance component of the model these studies use and how these relate to the performance or valuation of the firms. Attention has to be drawn to the fact that all these studies are based on decomposed[22] governance information which is crucial to the testing of specific aspects of corporate governance. This study does not possess such detailed data, thus the investigation is limited in this respect.

Gompers et al. (2003) as mentioned earlier, use the IRRC database to design their corporate governance index consisted of 24 provisions (see Appendix 4-1). The index which can have maximum value of 24 (representing the weakest shareholder rights) is negatively correlated to the firm value as measured by Tobin's Q. The main finding of Gompers et al. (2003) is that firms with strongest shareholder rights (low value of the index) have higher firm value, profits, sales growth etc.

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[22] Disaggregated firm-level information.

Bebchuk et al. (2004) in their study present a more parsimonious index compared to the one of Gompers et al. (2003) and suggest that 18 out of 24 provisions used in the Gompers et al. study bring only 'noise' to the index, hence, have no correlation with firm valuation. The provisions singled out by this study, consequently comprising the Entrenchment index are: *Staggered Board* (boards with directors divided into different classes and separate election terms for each class); *Limitation on Amending Bylaws*; *Limitation on Amending the Charter* (provisions which limit shareholders' ability through majority vote to amend the corporate bylaws and corporate charter respectively); *Supermajority to Approve a Merger* (a requirement of more than a majority of shareholders to approve a merger); *Golden Parachute* (a severance agreement to protect the management or/and board members following a change in control); and *Poison Pill* (a shareholder right that can be used in the event of an undesired change in control).

Bebchuk et al. (2004) recognize that there might be aspects in which the power of the entrenchment index can be improved. For one, the index is constructed by assigning equal weights to each provision, which means that potential effects that several provisions might have jointly, is neglected. Nevertheless, their results suggest that six provisions in the Entrenchment Index are sufficient to explain the relationship between a low firm valuation as measured by Tobin's Q for the period 1990-2003 and shareholder rights.[23]

Brown and Caylor (2004) find a positive relationship between a Gov-Score constructed from 51 factors provided by the Institutional Shareholder Services (ISS) and Tobin's Q. In this study other measures of performance and valuation such as Return on Equity, Net Profit Margin, Sales Growth, Dividend Yield and Stock Repurchases, are also used. The correlation between these measures and Gov-Score was found using the ISS data from 2003. However, in 2006 these authors publish another version of their paper where the main differences from the previous 2004 paper is that they use only Tobin's Q as a measure of firm value and they construct a more parsimonious index called Gov-7. They use a three step procedure in order to identify which are the most important factors

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[23] Bebchuk et al. (2004) use the same data source (IRRC) to construct their index hence their findings are comparable to Gompers et al. (2003).

driving the relationship between corporate governance and firm value. The first step (referred to as ALL approach) is a process of regressing Tobin's Q on all 51 factors and control variables log (Assets), log (Firm Age) and Delaware (dummy) and this produces six factors as statistically significant. The second step the technique used by Bebchuk et al. (2004) to derive the entrenchment index, with the difference that the regressions on Tobin's Q are run for each ISS factor individually (excepting the six identified in the first step) and 50 remaining grouped together. This step generated three more statistically significant factors. The third step (referred to as Step approach) employs a stepwise regression and as a result six factors are singled out, four of which have been already identified by the previous two steps. After some simple tabulations of the results from the three steps described above, Gov-7 was constructed from the following factors: (1) average options granted in the past three years as a percentage of basic shares outstanding did not exceed 3%; (2) board members are elected annually; (3) company either has no poison pill or a pill that is shareholder approved; (4) option re-pricing did not occur within the last three years; (5) directors are subject to stock ownership guidelines; (6) directors attended at least 75% of meetings or had a valid excuse for non-attendance; and (7) board guidelines are in each proxy statement. When Tobin's Q was regressed on Gov-7, Gov-Remaining44 and control variables, Gov-7 came out highly significant while Gov-Remaining44 turned to be statistically insignificant, thus indicating that the factors driving the relationship between corporate governance and firm value have been identified successfully.

Bebchuk et al. (2004) and Brown and Caylor (2006) bring out an important aspect of corporate governance measures, which is aggregation of a large number of individual corporate governance aspects into a single index. Although this aggregation makes it easier to compare companies with regards to their corporate governance practices, it also contributes to the bluntness of the measure in modelling terms. This means that effects of individual corporate governance aspects are averaged in a single index. Yet Bebchuk et at. (2004) show that only a few of the 24 corporate governance provisions used in Gompers et al. (2003) drive the relationship and a similar finding is presented by Brown and Caylor (2006) in the paragraph above.

With all the evidence presented and discussed throughout this thesis regarding the positive relationship between corporate governance and firm value/performance, this chapter sets out to test whether this is true for the banking sector. Before delving on explaining the approach in more detail, a few notes should be taken into consideration. First, corporate governance rating agencies are usually private enterprises and access to their data is restricted by fee payments which are not modest by any standards.[24] Second, the last global crisis hit the banking system the worst which indicates that there might be few relationships disturbed in the process, and third, as mentioned in chapter 3 banks are considered to be opaque in comparison to most other industries hence evaluating their corporate governance practices might have been harder for the rating agencies.

A model used by Brown and Caylor (2004) will serve as basis for the starting point of this analysis. There are two main reasons for this. First, the data for the corporate governance rating of banks used in this research (produced by ISS) is the same as that used by them and most of the variables can be replicated (or proxy-ed) easily.[25] Second, this would potentially give some comparability to the model as results can be compared to Brown and Caylor (2004) findings. Having said that, the variable for corporate governance in the model is expected to suffer from the same bluntness as explained above.

4.6 The data

The dataset which will be used for the empirical analysis in this chapter is compiled from two separate databases, ISS CGQ Profiles (Institutional Shareholder Services Corporate Governance Quotient) and Bankskope. This was necessary as all the data (variables) needed for the econometric modelling were not available in one place. Although this allows for a larger variety of variables, the downside of combining a dataset from two or more databases is that a significant number of observations are lost due to the mismatch of information on any one entity. The following short presentations of

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[24] The lowest quote offered by one of these agencies for a one year single user account was USD 15,000.00.

[25] Brown and Caylor (2004) use the Gov-Score (all 51 factors) instead of Gov-7, which is convenient as the dataset used for this chapter does not have the disaggregated corporate governance index.

databases will give an idea of how the data is collected and presented and in the next heading the effects of mismatched information will be explained in more detail.

4.6.1 ISS CGQ

ISS collects data from public disclosures, press releases and websites on 7500 companies worldwide. According to the RiskMetrics Group, who acquired ISS in 2007 and consequently have the rights to the Corporate Governance Quotient (CGQ®), the selection of companies in their database is done irrespective of whether they ask to be rated or not. The rankings are derived based on a model which looks at over 60 data points relevant to corporate governance practices of the company and then categorizes this information into eight areas: 1) board of directors, 2) audit, 3) charter and bylaw provisions, 4) anti-takeover provisions, 5) executive and director compensation, 6) progressive practices, 7) ownership, 8) director education. The model then produces two ratings, which are on percentile basis, for each company: CGQ Index – comparing corporate governance scores of companies listed in the same market index; and, CGQ Industry – comparing governance scores in the same industry (i.e. with all other US banks). For the purpose of this analysis, CGQ Industry will be used as the way it is constructed allows for comparison of corporate governance scores of all banks in the sample, and also dummy variables to control for each listing index are going to be included in the model. Hence, in future, reference made to CGQ scores shall mean CGQ Industry unless explicitly stated otherwise. According to Stybel (2009, p.7) "CGQ index score provided by ISS compare to Relevant Market Index including: S&P 500, Mid-Cap S&P 400, Small-Cap S&P 600, Russell 3000, and CGQ Universe (remaining companies covered by CGQ but outside the Russell 3000)". Note that when CGQ refers to a "Russell 3000" CGQ score, it is referring to Russell 3000 companies MINUS the three S&P Indices). A sample of the questionnaire used to calculate the rating is attached as Appendix 4-3 to this chapter.

4.6.2 Bankscope

Bankscope is a database produced by BUREAU VAN DIJK and publishes data on approximately 30000 banks all over the world.[26] The large number of banks included in each region is a good argument against any selection criteria bias. The information presented in the database is compiled from a number of sources. Financial data supplied by Fitch Ratings consists mainly of information available on balance sheet and income statements as well as audited reports. Ratings and rating reports are gathered from four different agencies: Fitch, Moody's, Standard and Poor's, and Capital Intelligence. The security and price information is provided by Fininfo and ownership information is drawn from BvDEP resources.[27]

To summarize the dataset, it is clear that there is an ample number of banks in each database, especially in Bankscope and for the developed economies. However, when combined to generate the dataset for this chapter, the number of common observations is greatly reduced, leaving us with a dataset of 276 observations.

4.6.3 The Process of Generating the Dataset

The logical consequence of trying to match observations from two databases is that the constraint on the number of observations is imposed by the database with the smaller number of banks. For this reason, the first search was conducted on the ISS CGQ database. By using a single search criteria "Bank" which selects all the registered companies within the banking industry (and obviously having the word 'Bank' in their name), out of 7500 entries, a list of 613 banks is generated.[28] The report contains several important fields such as the report date, company identifiers, industry, securities

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[26] Bankscope has up to 16 years of financial information for public and private banks with a geographical span as below: The top 7,000 European banks; The top 12,000 North American banks; 800 Japanese banks; 1,000 Russian banks; Over 3,000 other major banks; The leading 32 supranational banking and financial organisations. However, it contains limited information only on few SEE banks.
Available at: http://www.bvdinfo.com/getattachment/c6ce49f6-ac7f-4782-a2fa-0637cce8992a/Bankscope.aspx accessed in September 2010.
[27] Available at: http://www.bvdinfo.com/getattachment/c6ce49f6-ac7f-4782-a2fa-0637cce8992a/Bankscope.aspx accessed in September 2010.
[28] When a similar search was conducted at the beginning of March 2010, a report of only 113 banks was generated.

information and Corporate Governance Quotient (index and industry score), the latter also being broken down into sub-scores for board, compensation, takeover and audit (please see Appendix 4-4). In contrast to the Corporate Governance Quotient which is expressed on per centile basis, the sub-score ratings take the values from 1 to 5 (bottom quintile and top quintile respectively).

Once the information from ISS database is organised the next step is to find the information in BankScope for the banks in the ISS list. This means searching for the banks from the ISS list one by one in BankScope. The outcome was classified into three categories: (1) not in BankScope; (2) in BankScope, but only minimal information is available; and (3) in BankScope and there is full information on it in the database. The explanation of categories is intuitive as for category (1) BankScope search would return a "No match found" - answer. There are 123 banks that fall under this category. For the 198 banks in category (2) the search would result in bringing up a file on the bank containing some narrative information but no financial data whatsoever. The category which contains 292 banks, category (3), has all the information on banks, narrative and financial, which spans from financial reports of 2009 to, in some cases, as early as 1994. However, for some banks financial reporting dates would fall short of 2009. In order to complete these observations for the missing years, each of the banks' websites was visited and in most cases there was valid information such as annual or other useful reports. Another very useful resource is the Securities and Exchange Commission website where publicly listed US companies have to submit their information (such as 10K form). However, in some cases these banks had undergone acquisition processes or had filed for bankruptcy, hence there is no information available beyond the years on the BankScope file.

4.7 Methodology

The components of the econometric model can be loosely sorted in three groups, corporate governance, valuation, and control variables. The model to be estimated a variation of the Brown and Caylor (2004) model with the following distinctions: the inclusion of other listing indexes such as S&P 400, S&P 600, Russell 3000, and CGQ Universe in addition to the S&P 500 used by Brown and Caylor (the dummy variable for companies incorporated in the state of Delaware used by Brown and Caylor is not

available to this model); and finally, the inclusion of the dummy variable 'dce' which should act as an alert of something not being right with the financial indicators, in this case change in Market Book Value and change in total assets. Hence the model to be estimated in this chapter is the following:

$$\ln aq\_2009 = \beta_0 + \beta_1 \ln cgq\_in + \beta_2 \ln ta\_2009 + \beta_3 \ln Age + \beta_4 Dce +$$
$$+ \beta_5 Drussell3000 + \beta_6 Dsp500 + \beta_7 Dsp400 + \beta_8 Dsp600 + \varepsilon$$

Where aq represents the *Approximate Q* ta is *total assets*, age is *the age of the firm'*, indicator is *crisis effect* and takes 0 or 1 values depending on the criteria explained later, Drussell3000 controls whether a bank is listed in the *Russell 3000 listing index*, and Dsp dummies provide information whether a bank is listed in one of the *'S&P 400; S&P 500; and S&P 600 indices.*

The variables included in the model and the reasons why they are important for this estimation are discussed below.

CGQ index score. There are two composite indices generated for each company: CGQ Index – comparing corporate governance scores of companies listed in the same stock market index and, CGQ Industry – comparing governance scores in the same industry. For the purpose of this analysis, CGQ Industry will be used as the way it is constructed allows for comparison of corporate governance scores of all banks in the sample. It is of course also important to know on which stock market index a particular share is included and, therefore, we have included dummy variables to control for each listing index (Russell3000, S&P400, 500 and 600) (more on these listing indices later).

Approximate Q. Tobin's Q is a measure of firm value, widely used by academics and practitioners of finance as seen throughout the literature review in previous chapters (Gompers et al. 2003, Brown and Caylor 2004 (and 2006), Villalonga 2004, Cremers and Nair 2005, Villalonga and Amit 2006, Baghat and Bolton 2008). The idea behind Tobin's Q is to compare the stock market value of the company and the cost of replacing the assets of the company.[29] The Q ratio became very popular following the paper by Lindenberg and Ross (1981) but their formula for calculating this ratio (shown below) is

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[29] The hypothetical value of this index is 1 (or approximately 1) indicating that the assets of the company are valued 'correctly' by the markets.

very demanding in terms of both, information requirements and computation capacities.

$$L - R_q = \frac{PREFST + VCOMS + LTDEBT + STDEBT - ADJ}{TOTASST - BKCAP + NETCAP}$$

where L-R$_q$ is Lindenberg and Ross's Q; PREFST represents the liquidation value of a firm's preferred stock, VCOMS the product of firm's common stock price and number of shares outstanding at the close of the year; LTDEBT the value of the long-term debt adjusted for its age structure; STDEBT the book value of current liabilities; ADJ the value of net short-term assets; TOTASST the book value of total assets; BKCAP the book value of net capital stock; and NETCAP inflation-adjusted net capital stock. Obviously the use of the formula described above is preferable, but due to limited information available, it is also very hard to realize. However, an alternative method of calculating the approximate value of Tobin's Q is presented by Chung and Pruitt (1994). This method allows the calculation of an Approximate Q value using the data available in financial statements and explains at least 96.6% of variability of Tobin's Q values obtained by the theoretically more appropriate L-R$_q$ formula. The formula Chung and Pruitt suggest is:

$$Approximate \ Q = \frac{MVE + PS + DEBT}{TA}$$

Where MVE is the product of share price and common shares outstanding; PS represents the liquidation value of a firm's outstanding preferred stock; DEBT is the value of short-term liabilities net of short-term assets plus the book value of the long-term debt; TA stands for the book value of total assets of the firm.

Given that the information required for the calculation are obtainable from financial statements, the dependent variable used in this study is Approximate Q.[30]

Total Assets. Total assets represents the value of assets in millions of dollars at the end of the financial year. This variable was used as a control by Brown and Caylor (2004) and (2006). It appears in the natural logarithm form in the models to be estimated later in this chapter.

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[30] None of the banks in my data sample has reported preferred stock.

(Bank) Age. Brown and Caylor in both of their publications in 2004 and 2006 use firm age as a control variable and, we too, use this variable in the regressions of this chapter. Following Brown and Caylor (2004 and 2006) and Fahlendbrach (2008) age enters the regressions in its natural logarithm form.

S&P 500. S&P 500 was set up in 1957 and covers 500 largest US firms with market capitalisation in excess of US$ 4 billion and captures around 75% of US equities.[31] Listing in this market index is used in a number of studies (Gompers et al. 2003, Brown and Caylor 2004). A dummy variable identifies the banks in this index (taking the value of 1 when the bank is listed in this index and 0 otherwise).

S&P 400. S&P 400 captures around 7% of US equities and consists of mid-cap companies with market capitalization between US$ 850 million and US$ 3.8 billion. Other criteria for inclusion are geographical location, public float of at least 50% etc.[32] The inclusion of other listing indices than S&P 500 is important to the model as previous studies (e.g. Brown and Caylor, 2004; Gompers et al., 2003) covered more industries; hence, S&P 500 provided enough variation and positive selection of largest companies in respective industries. The model used in this chapter, however, looks only at the banking sector with a sample comprised entirely of US banks. Hence, listing of banks on these respective indices carries more explanatory power. A dummy variable identifies the banks in this index (taking the value of 1 when the bank is listed in this index and 0 otherwise).

S&P 600. S&P 600 index covers approximately 3% of the US equities market. Measuring the small cap segment, with companies with market capitalization between US$ 250 million and US$ 1.2 billion, this index serves as an efficient portfolio of companies that meet specific inclusion criteria and enables these companies to be investable and

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[31] For more information, follow the link: http://www.standardandpoors.com/indices/sp-500/en/us/?indexId=spusa-500-usduf--p-us-l--

[32] For more information, follow the link: http://www.standardandpoors.com/servlet/BlobServer?blobheadername3=MDT-Type&blobcol=urldata&blobtable=MungoBlobs&blobheadervalue2=inline%3B+filename%3DFactsheet_SP_MidCap_400.pdf&blobheadername2=Content-Disposition&blobheadervalue1=application%2Fpdf&blobkey=id&blobheadername1=content-type&blobwhere=1243765720041&blobheadervalue3=UTF-8

financially viable.[33] A dummy variable identifies the banks in this index (taking the value of 1 when the bank is listed in this index and 0 otherwise).

Russell 3000. Russell 3000 is an index comprised of the 3000 largest US companies. This index is reputed to serve as a broad barometer for the market and is reconstituted on annual basis to reflect any changes in the list of largest companies.[34] A dummy variable identifies the banks in this index (taking the value of 1 when the bank is listed in this index and 0 otherwise).

CGQ Universe. Companies that have had their corporate governance score calculated by ISS and are not included in the Russell 3000 are put together in what Risk Metrics International[35] calls the CGQ Universe.[36] A dummy variable identifies the banks in this index (taking the value of 1 when the bank is in this group and 0 otherwise).

Each of the companies in the sample belong to only one index. ISS explain that the situations in which the same company would qualify to be listed in both the Russell3000 (3000 top companies in US) and S&P500 (500 top companies), for example, have been sorted out and each company is associated with only one listing index.

Book Value and Market Value. The book value of a bank is calculated by deducting "Deposits & Short term funding" from "Total Assets", both pieces of information available on the financial reports provided by BankScope.

The market value of the bank is calculated by multiplying "Shares outstanding" and "Market price - year end" also available from financial reports provided by BankScope. Both of these variables are calculated for at least five years (or more) subject to data

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[33] For more on this index, follow the link:
http://www.standardandpoors.com/servlet/BlobServer?blobheadername3=MDT-Type&blobcol=urldata&blobtable=MungoBlobs&blobheadervalue2=inline%3B+filename%3DFactsheet_SP_SmallCap_600.pdf&blobheadername2=Content-Disposition&blobheadervalue1=application%2Fpdf&blobkey=id&blobheadername1=content-type&blobwhere=1243765720053&blobheadervalue3=UTF-8

[34] For more on this index, follow the link:
http://www.russell.com/indexes/data/fact_sheets/us/Russell_3000_Index.asp

[35] Risk Metrics International has concluded the acquisition of ISS on 11th January 2007. For more information please see the press release at the following link:
http://www.riskmetrics.com/press/riskmetrics_acquires_iss

[36] For more information on the index follow:
https://frontoffice.riskmetrics.com/wiki/index.php/Index_CGQ

availability for the respective banks. Although these variables do not enter the model directly, they are needed for calculation of the ratio Market to Book Value (MBV).

Indicator. As mentioned earlier in this chapter, in the period studied, banks suffered one of the most severe financial crisis and this variable is an intuitive measure to 'alert' if there is something counterintuitive happening with the information reported. For instance, the market book value (MBV) of the company in the current year is higher compared to the MBV of the previous year, while total assets in current year are lower compared to the previous year. This variable enters the model as dummy which takes the value of 1 in case that the following condition is met:

$$MBV_t > MBV_{t-1} \text{ and Total Assets}_t < \text{Total Assets}_{t-1}$$

Otherwise it is 0. There are a number of hypothetical situations even during the normal economic cycle when that situation can occur such as the case when the assets of a bank decline and market value remains the same, or, both MBV and Total Assets decline but the latter suffer a larger decline than the former. However, especially during the crisis, one would expect that markets are more alert to the changes in balance sheets and this should be reflected on the stock price of the respective banks.

Distance to Default (d2d). This variable is included in the model following Spong and Sullivan (2007) as a comprehensive measure of bank risk. According to their definition (p.16) "It is based on the probability distribution of the income earned by the bank and is derived by asking the question: How far would income have to fall before the bank would be forced to default on its debt?" and the formula they use is:

$$Dist\ to\ Default = \frac{Capital\ to\ asset\ ratio + average\ value\ of\ return\ on\ assets}{stndard\ deviation\ of\ return\ on\ assets}$$

And the information to calculate this variable is reported by BankScope for most of the banks, hence it is available from the balance sheets.

Tier 1 Ratio (t1r). This regulatory measure was introduced by FDICA and requires from banks to set aside a proportion of their capital to provision for risk weighted assets. The benchmark for well capitalised banks according to this ratio is at 6% or more. A detailed

discussion of tier 1 ratio follows in section 5.4 and Table 5-3 displays the levels of capitalisation of American banks.

Market Capitalisation (MC). MC is a simpler measure of bank value determined mainly by the stock markets as it represents the product of the number of shares outstanding and stock price at the end of the year. Table 4-1 presents the variables of the model with statistical information.

Table 4-1 - Summary statistics on the main variables

Variable	Obs	Mean	Std. Dev.	Min	Max
lnaq_2009	223	1.69	0.51	0.82	6.41
lncgq_in	290	3.69	0.96	−1.20	4.61
lnta_2009	277	7.81	1.58	4.84	14.61
lnAge	290	2.35	0.42	1.10	2.77
dce	223	0.11	0.31	0	1
Dsp500	290	0.05	0.21	0	1
Drussell30000	290	0.26	0.44	0	1
Dsp400	290	0.08	0.27	0	1
Dsp600	290	0.09	0.29	0	1
lnmc_2009	257	5.14	2.53	0.69	15.71
cgq_in	290	53.60	29.95	0.30	100.00
d2d_2009	257	12.17	5.87	−2.66	39.51
t1r_2009	211	11.82	3.62	0.20	29.90
roe_2009	275	−0.73	2.43	−11.35	3.69
CGQ Universe	121	8621.77	57685.50	2	515053
S&P 500	13	721242.40	1909842.00	1390	6652934
S&P 400	23	1623.26	871.53	376	4689
S&P 600	26	612.26	331.93	137	1680
Russell 3000	74	16112.05	67653.52	26	390352

The method of Ordinary Least Squares (OLS) is found to be the best approach for the relationship between corporate governance and firm valuation given the nature of the data at our disposal. As Wooldridge (2005) points out the OLS method gives unbiased estimators if the following five assumptions from Gauss-Markov theorem hold: Assumption 1: Relationship is linear in parameters; Assumption 2: Random Sampling; Assumption 3: Sample variation in explanatory variable, i.e. explanatory variables are not all the same value; Assumption 4: Zero conditional mean, i.e. the sum of residuals in any explanatory variable is expected to be zero; and, Assumption 5: Homoscedasticity, i.e. the error term has the same variance for any given value of the explanatory variable.

The compliance with these assumptions will result in OLS estimators being Best Linear Unbiased Estimators (BLUE) of estimated coefficients. Gujarati (2003, p.79) explains that for the OLS estimators to be BLUE, the following criteria will have to hold: "1. It is linear, that is a linear function of a random variable, such as the dependent variable Y in the regression model; 2. It is unbiased, that is, its average or expected value, $E(\hat{\beta}_2)$, is equal to the true value of β_2; 3. It has minimum variance in the class of all such linear unbiased estimator; an unbiased estimator with the least variance is known as an efficient estimator".

It has to be mentioned here that neither OLS estimation nor the data available for this chapter allow the addressing of either potential endogeneity (for which 2SLS, had the instrumental variables been available, would be a better technique) or dynamic issues (requiring data for several years on each observation). These issues will be addressed in Chapter 5, while the findings of this chapter will serve to introduce the relationships of new variables not used in previous research thus developing the basis for the preferred models to be used in both Chapter 4 and Chapter 5. With these caveats at mind, OLS regression will be used for estimating the relationships for the sample used in this chapter.

4.8 Discussion of the Results

Using the data as described above to estimate the model laid out in section 4.5 provides the initial results presented in Table 4-2.

Table 4-2 - Lnaq Regression Results

Dependent variable lnaq_2009. Dummy benchmark 'DcgqUniv'	
lncgq_in	0.01 (0.04)
lnta_2009	−0.01 (0.03)
lnAge	0.21** (0.08)
dce	−0.06 (0.11)
Dsp500	−0.52** (0.23)
Drussell3000	−0.13 (0.08)
Dsp400	−0.11 (.15)
Dsp600	−0.05 (0.13)
Cons	1.32*** (0.31)
Note: ***, **, and* denote level of significance at 1%, 5% and 10%. SE value in parenthesis.	

The results do not support the correlation between corporate governance and bank valuation. Although the sign of the main variable of interest is positive, the estimated coefficient on the variable is not significant meaning that statistically it is not different from 0. The log-log specification of the model shows satisfactory diagnostics tests (see the Stata outputs in Appendix 4-5).

The interesting finding about this model is that the dummy variable for whether the bank is listed in the S&P 500 index is one of the only two significant variables and at the 5% level. The interpretation of this variable would be as follows. Banks that are listed under the S&P 500 index, ceteris paribus, stand to have a 0.4 per cent lower approximate Tobin's Q in comparison to banks grouped under the CGQ Universe (banks that are excluded from the Russell 3000, hence also from the other three listing indices). Conversely, as the effects associated with the largest banks listed in the S&P 500 are diluted in successively broader indices containing larger numbers of smaller banks, so this negative effect is attenuated in Russell 3000, -0.13; S&P 400, -0.11; and S&P 600, -

0.06. Although the coefficients on broader categories are not estimated with statistical significance, the results suggest that the larger the bank, ceteris paribus, the lower the Approximate Q.

This finding is quite counterintuitive and requires further attention. In order to test whether these results are peculiar to 2009 or stretch over a longer period of time this chapter averages the data over the period 2005 to 2009. Statistically insignificant results on all variables excepting age, and contradictory result on heteroscedasticity tests by STATA indicate that there might be some unaccounted factor which is influencing the model. For the period of time covered by this model it can be argued that the financial crisis which hit the financial sector, especially in the United States where the sample data used for this chapter is from, then it is arbitrarily decided to divide the sample by averaging the data for years 2008-2009 and 2005-2007. The results for the three regressions are reported in the following Table 4-3.

Table 4-3 – Average Approximate Q Regression Results

Dependent variable Average Approximate Q for the period: Dummy benchmark 'DcgqUniv'			
Period	**2005-2009**	**2005-2007**	**2008-2009**
lncgq_in	0.02 (0.04)	0.06 (0.04)	0.01 (0.04)
lnAvta	-0.01 (0.03)	-0.060* (0.030)	-0.01 (0.03)
lnAge	0.23** (0.09)	0.31** (0.09)	0.19** (0.08)
Dsp500	-0.36 (0.24)	0.07 (0.08)	-0.49** (0.22)
Drussell3000	-0.03 (0.08)	0.24 (0.15)	-0.09 (0.08)
Dsp400	0.02 (0.15)	0.28** (0.12)	-0.11 (0.14)
Dsp600	0.13 (0.12)	-0.03 (0.24)	0.02 (0.12)
Cons	1.17*** (0.32)	1.16*** (0.31)	1.24*** (0.29)
Note: ***, **, and* denote level of significance at 1%, 5% and 10%. SE value in parenthesis.			

Results presented in Table 4-3 support the suspicion of the impact of the financial crisis on the valuation of banks as measured by Approximate Q. The estimated coefficients of variables, excepting bank age which is statistically significant across all model specifications, suggest that the models specified by averaging the data between 2005-2007 and 2008-2009 make more sense than the joint specification over 2005-2009.

Firstly, for the period 2005-2007 the main variable of interest, CGQ industry, although not statistically significant at conventional levels, is significant at 14% and has the right sign. This result supports the finding by Bebchuk et al. (2010) that in 2000s the association between corporate governance and Tobin's Q still exists.[37] The statistically significant variable Total Assets has a negative sign and there is no economically intuitive explanation for such relationship. The statistically significant estimation on the dummy for whether the company is listed in the S&P 400 (mid-cap companies) suggests that banks in this category have been valued slightly higher than similar banks listed in CGQ Universe index.[38]

On the other hand, the results of the model averaging the data over the period 2008-2009 exhibit similar properties to the first model as presented in table 2. Again the only statistically significant relationships are the positive correlation with bank age and negative correlation with banks listed in S&P 500. Considering that S&P 500 index is regarded as a respectable gauge for large-cap US equity market, the intuitive (anticipated) correlation between banks listed in this index and their valuation, is not a negative one (for Stata printouts see Appendix 4-6).

By deepening the research, this chapter comes to a revelation that the results actually support an emerging strand of studies that are concerned with the use of accounting regulations by banks in light of the recent financial crisis. Huizinga and Laeven (2009) report that banks in US had managed to successfully lobby against the use of 'fair value

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[37] Bebchuk et al. (2010) argue that in 2000s the association between abnormal returns and their measure for governance (G- and E-indices) due to learning of market participants to appreciate the difference between firms scoring poorly and well on governance indices. However, their research shows that the negative association (due to the construction of G- and E- indices) with Tobin's Q still remains.

[38] Since the data is averaged over a period of time, resorting to more detailed interpretation of these results might stress the economical meaning of the relationship.

accounting' regulation as the impact of crisis started to show.[39] By claiming that their assets are mostly not impaired currently and that they intend to hold on to them till maturity since "the market prices reflect distress sales into an illiquid market" (Huizinga and Leaven, 2009, p.3) banks have manoeuvred their way into downplaying the extent of their losses by overstating the book value of their assets (or understating the value of the loss).

Normally, accounting techniques should not generate significant differences between the market and book value of assets. However, during the crisis, large gaps emerge between these two values, especially when assets reflect values based on historical cost (Huizinga and Laeven, 2009).[40] This, according to the authors, raised doubts about the reliability and the relevance of bank's accounting information. In their paper, they prove that banks have systematically understated the impairment of their assets related to real estate, in an attempt to keep book capital. Firstly, large discounts to mortgage-backed securities (MBS) are proven even in the situations when they were carried at fair value (they appeared to be overvalued on bank's balance sheets). Secondly, banks with high exposure to MBS experienced large excess returns when fair value accounting rules were relaxed.[41] Thirdly, banks with large MBS portfolios tend to report low rates of loan charge-offs and loan-loss provisioning.

This is also supported by the model as it can be seen in Table 4-4 as the dummy for S&P 500 keeps its sign and statistical significance in 2009 and 2008 while in 2007 it becomes insignificant (see Appendix 4-7 for stata outputs).[42]

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[39] As it is stipulated by the accounting standards, the quoted market price should be used as basis for the estimation of the asset's fair value. However, if such information is not obtainable, then fair values of such assets should be calculated based on the information available. Huizinga and Laeven (2009).

[40] Huizinga and Laeven (2009) state that by the end of 2008, market-to-book value of more than 60% of bank holding companies (compared to 8% in 2001) in US was below 1. Also the average ratio of Tier 1 capital to bank assets was relatively stable at 11% during this time (2008). This has created the situation where market value of bank equity drops although the book capital remained virtually constant.

[41] In October 2008 the allowable use of non-market information for determination of fair value was clarified by Financial Accounting Standards Board (FASB) and in April 2009 the same body released a decision to provide banks with greater discretion for the use of non-market based information for the evaluation of hard-to-value assets. (Huizinga and Laeven 2009).

[42] As a robustness check for this relationship, the dependent variable is replaced with MBV and the regression is run on the data for 2009. Although none of the coefficients are statistically

Table 4-4 - Comparative Regression Results

Dependent variable, lnaq dummy benchmark 'DcgqUniv'			
	2009	**2008**	**2007**
lncgq_in	0.01 (0.04)	0.01 (0.03)	0.05 (0.04)
Lnta_	−0.01 (0.03)	−0.01 (0.03)	−0.06* (0.03)
lnAge	0.21** (0.08)	0.16** (0.08)	0.28** (0.08)
dce	−0.06 (0.11)	N.A.	N.A.
Dsp500	−0.52** (0.23)	−0.38* (0.20)	−0.1 (0.23)
Drussell3000	−0.13 (0.08)	−0.01 (0.07)	0.02 (0.08)
Dsp400	−0.11 (0.15)	−0.02 (0.13)	0.14 (0.15)
Dsp600	−0.05 (0.13)	0.14 (0.11)	0.21 (0.13)
Cons	0.01 (0.04)	1.24*** (0.27)	1.19*** (0.29)
Note: ***, **, and* denote level of significance at 1%, 5% and 10%. SE value in parenthesis.			

With the results supporting Huizinga and Laeven (2009), indicating that banks might be involved in 'creative accounting', the lack of statistically significant correlation between corporate governance and bank value perhaps can be attributed to the irregularities in balance sheets. For this reason, this chapter will turn to an alternative measure of bank value, Market Capitalisation. Although it is not sophisticated as Tobin's Q (or approximate Tobin's Q in this case), the advantage of the market capitalisation measure is that it is exclusively market based.

The focus, then, is on the relationship between market capitalisation and corporate governance index. For this purpose, the following model is estimated:

$$\ln mc\_2009 = \beta_0 + \beta_1 cgq\_in + \beta_2 D2D\_2009 + \beta_3 t1r\_2009 + \beta_4 roe\_2009 + \\ + \beta_5 Drussell3000 + \beta_6 Dsp500 + \beta_7 Dsp400 + \beta_8 Dsp600 + \varepsilon$$

On the left-hand side is market capitalisation in its natural logarithmic form for the year 2009. The right-hand side is comprised of control variables such as: distance to default, Tier 1 capital ratio, return on assets and listing index dummies.

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significant, the signs on the coefficients are not contradicting the results of previous models (see appendix 7 for STATA results).

Some statistical properties of the variables which will be used have already been presented in Table 4-1.

The results presented in Table 4-5 are quite intuitive and all the variables have the expected sign.

Table 4-5 - Regression Results with MC

Dependent variable lnmc_2009. Dummy benchmark 'Dsp500'	
cgq_in	0.01*
	(0.01)
d2d_2009	0.03**
	(0.01)
t1r_2009	-0.01
	(0.02)
roe_2009	0.01***
	(0.01)
Drussell3000	-3.31***
	(0.31)
Dsp400	-1.43***
	(0.34)
Dsp600	-2.41***
	(0.34)
DcgqUniv	-4.66***
	(0.32)
cons	7.97***
	(0.51)
Note: ***, **, and* denote level of significance at 1%, 5% and 10%. SE value in parenthesis.	

The diagnostics indicate that this is a well specified model and the suspicion of potential heteroscedasticity problem cast by Breusch-Pagan / Cook-Weisberg test is removed by Cameron & Trivedi's decomposition of IM-test (see Appendix 4-9). As seen in Table 4-5, the results support a positive relationship between corporate governance and market capitalisation. According to these results, market capitalisation of a bank, ceteris paribus, will increase by 0.05 percentage points if the corporate governance score of a bank increases by 1. This relationship is statistically significant at the level of 10%. However, it can be argued that the magnitude of the effect, i.e. a small estimated coefficient, is influenced by the existence of an additional group of stakeholders in the context of the banking industry (depositors), and also the heavy regulation in this industry.

Tier 1 ratio in this estimation losses statistical significance. With the mean value of tier 1 ratio as reported in Table 4-1 at approximately 11%, this finding might indicate that banks are keeping the Tier 1 Ratio intentionally at high levels as this measure is easily observable by markets, with the hope of being rewarded if it is high. This particular bank behaviour is supported by results of Huizinga and Laeven (2009) as in their sample, same as here, tier 1 ratio was observed to remain at 11% although banks were suffering large losses which should be cushioned by this fund.

The relationship between distance to default and market capitalisation, is statistically significant at 5 per cent and the interpretation is as follows. All else being equal, a 1 per cent[43] increase in the capital provisions will increase the market capitalisation by 0.033 percentage points. Arguably this can be attributed to the fact that distance to default is being observed by the markets hence a bank with proper capital 'buffers' against defaulting loans is rewarded with higher market capitalisation.

Other relationships are statistically significant and display the expected signs. The relationship between return on equity (roe_2009)[44] and market capitalisation is positive and statistically significant at a level of 1%.[45] This model specification produces the intuitively expected relationships between market capitalisation and dummy variables for listing indices.[46] Using the methodology suggested by Halvorsen and Palmquist (1980), Gujarati (2004), Wooldridge (2005), the dummy variable for CGQ Universe index should be interpreted as follows. The median Market capitalisation of banks listed under CGQ Universe index, ceteris paribus, is approximately 1.04 times lower than the median

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[43] Distance to default is a ratio, hence the interpretation 1% increase…

[44] The Return on Equity / Assets (ROE; ROA) are presented by Bankscope as averaged values to of the respective indices throughout a period of time (usually one year) thus in Bankscope datasets these indices would appear as ROAE and ROAA. However, to avoid causing confusion, this thesis resorts to shortening the abbreviations to the more conventional ROE and ROA respectively.

[45] There is nothing counterintuitive about this, and the regression results can be interpreted as follows: everything else equal, 1 percentage point increase in return on average equity will result at approximately 15 percentage points increase on the market capitalisation of the respective bank. Since the roe_2009 appears in its level functional form then the interpretation of this relationship is $\%\Delta y = (100\beta)\Delta x$ (Wooldridge, (2005) p. 50; Gujarati (2004) p. 179). However, due to problems pointed out earlier in this chapter regarding the reliability of financial statements of banks throughout this period, perhaps one should refrain from quantifying this relationship.

[46] The base category is CGQ Universe listing index.

market capitalisation of banks listed under S&P 500 index.[47] Although this result might appear to be very large, the summary statistics (Table 4-1) support this interpretation, as the maximum value of market capitalisation of a bank listed in S&P 500 is on the order of six trillion US dollars.

The findings discussed in the previous two paragraphs, together with the evidence presented in Table 4-1, indicate that there is an adverse selection of banks grouped under CGQ Universe listing index. This is supported by the fact that excepting banks listed under S&P 500, some of the largest banks as measured by market capitalisation are listed in the CGQ Universe index. As such, in a way these findings provide some support to the suspicions expressed at the beginning of this chapter after the estimation of the first model that there is something dubious about the information presented by banks listed under the CGQ Universe index.

Having said that, the strategy of moving the investigation towards measures that are determined more by the markets proved to be a step in the right direction as it was possible to provide evidence of the positive and statistically significant relationship between corporate governance quality as measured by ISS CGQ score and the valuation of banks as measured by market capitalisation of banks. Although Tobin's Q or some alternative more sophisticated measure of valuation or performance would be preferable, there is evidence that such measures might be compromised due to crisis and changes in accounting regulation, that have effected financial statements of US banks. Nonetheless, the existence of positive and statistically significant correlation between corporate governance and any measure of valuation should not be ignored.

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[47] The formula g= {exp(c) - 1} as suggested by Halvorsen and Palmquist (1980) where g is the relative effect and c is the estimated coefficient. Applying the formula to the coefficient the following is obtained: g = {exp(4.66)-1}={105.63-1}≈104.63 (104.63/100 = 1.0463). The dummy variable for banks listed under the S&P 400 following the same logic of interpretation can be explained as follows: The median market capitalisation of banks listed in S&P 400, ceteris paribus, is 0.03 times lower than median market capitalisation of banks listed under S&P 500. Banks listed in S&P 600, everything else equal, tend to have 0.1 times lower median market capitalisation than the omitted category and banks listed under Russell3000 index, ceteris paribus, have on average 0.2 times lower median market capitalisation than the reference S&P 500 index.

4.9 Conclusions

The chapter started by explaining the lack of consensus in academia regarding the relationship between corporate governance and firm valuation indicators. The corporate governance problem stems from the separation of ownership and control according to Berle and Means (1932). This problem is exacerbated by the asymmetry of information and incompleteness of contracts which worsens the agency problem. Enron and WorldCom failures are among the largest ones to provide an exhibition of the devastating power of poor corporate governance in practice. Re-establishing investor trust and assuring the suppliers of capital that they will get a return on their investment triggered a number of acts. These acts range from passing of laws as seen in chapter three, to attempts of quantifying and measuring corporate governance practices.

The 'Governance Index' by Gompers et al. (2003), 'The Entrenchment Index' by Bebchuk et al. (2004) and other indices investigate different aspects of corporate governance practices and most of them report positive correlation between good corporate governance and firm performance. However, the existing evidence in respect to this relationship is inconclusive.

All the studies discussed in this chapter explore the relationship between corporate governance and performance for a broad range of firms. The evidence of such empirical research carried specifically for banks is very scarce or non-existent. Hence, this chapter has contributed to closing the gap by empirically exploring the relationship between corporate governance and bank performance.

The findings on this chapter are one more proof of the difficulties in finding a persistent relationship between corporate governance and performance. The indicators used in previous studies, due to the accounting issues explained in the previous section, could not be used for the estimation model of this chapter, thus warranting the search for a new measure, which in this case was market capitalisation. It can be argued that in case of this study, the estimation was exacerbated due to the crisis period being investigated and the lack of data for more than one year with regards to corporate governance score of banks.

The crisis period made it impossible to estimate similar models to the ones used in previous research due to the change of some accounting practices in the US during the investigated period. However, the findings in this chapter managed to identify a relationship between corporate governance and firm valuation irrespective of the crisis period. The empirical results support the positive relationship between corporate governance of banks and the market capitalisation leading to believe that corporate governance practices are observed by markets even during one of the largest financial crisis. Being aware of the shortcomings of the cross section OLS estimation of the corporate governance relationship, the main one being the inability to address potential endogeneity, the next chapter will investigate this relationship using a panel data set and more advanced statistical methods.

Corporate Governance and Bank Valuation - A Panel Data Analysis

5.1 Introduction

The previous chapter developed and tested a model of the relationship between corporate governance and market capitalisation of banks, using a cross section analysis due to data limitations. Despite the numerous flaws in this approach, exacerbated by the fact that the estimated model contains data from the financial crisis period (2005-2009), the exercise did prove to be fruitful as it managed to identify relationships between corporate governance and bank valuation not highlighted in the literature previously, and provided a plausible explanation for why the models used in previous studies failed to produce meaningful and statistically significant results. As such, the contribution of chapter 4 should be considered more as a means to investigate new relationships untested before in the literature, and seen as a prelude to chapter 5 where the data allows for the application of more advanced empirical approaches, thus addressing the issues identified in previous chapters.

The aim of this chapter then, is to test whether the relationship between corporate governance and bank valuation, as identified in chapter 4, holds over time or not. Such an inquiry requires panel data, i.e., information on the same unit of analysis over more than one period in time. The panel modelling became possible once we were able to obtain additional data for the years 2005-2008 from ISS, amend the dataset used in the previous chapter, and create a panel dataset for the years 2005-2009.

The chapter is laid out as follows. Section 2 explains the data, section 3 explains the model, section 4 describes the empirical assessment strategy, section 5 interprets the results, section 6 carries out the robustness checks, and section 7 concludes.

5.2 The Data

The previous chapter explains the process of creating the cross section dataset by combining the information extracted from two sources, Institutional Shareholder Services (ISS) database which provides governance scores and the Bankscope database which provides financial information for respective banks. The same approach is applied in this chapter except here the adjustments are made to accommodate the creation of a panel dataset.

ISS publishes a 'corporate governance quotient' for US and international companies on a regular basis. In their *Best Practices and User Guide Glossary*[1], ISS explain that for generating the CGQ index for each company, publicly disclosed documents covering eight arrears which produce data on 61 different issues of corporate governance are analysed. These areas are: 1) board of directors; 2) audit procedures; 3) charter and bylaw provisions, 4) anti-takeover provisions, 5) remuneration of executives and directors; 6) progressive practices, 7) ownership, and 8) director education. Each variable is evaluated at on a standalone basis, however, some variables are also looked at in combination under the premise that corporate governance is improved by the presence of selected combinations of favourable governance provisions.

Actually, ISS produces two corporate governance quotients (CGQ) for each company, *CGQ industry* and *CGQ index*. The *CGQ industry* measures the corporate governance practices of each company against that of companies in the same industry while the *CGQ index* measures the corporate governance practices of each company against that of companies listed in the same listing index. All companies are listed in one of 5 listing indices[2], Russell 3000, S&P400, S&P500, S&P600 and CGQ Universe – the last group constitute companies that are rated for their corporate governance practices but are not listed in any of the previous four listing indices. The scoring is relative to other companies and can take the value 0 to 100.[3] In addition to the two main quotients, ISS provides four more sub-scores for industry and index comparisons each. The sub-scores are related to board issues, takeover defences, compensation policies and audit. The sub-scores can take values from 1 to 5 with 1 meaning that the company ranks in the bottom 20% of companies in terms of its performance in a particular area of corporate governance practice, and 5 meaning that the company is in the top 20% of best performing companies.

In terms of creating the dataset for this chapter, the first step was to identify the banks in the ISS database and extract the information relevant to these banks. There were 613

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[1] Available from: www.alacra.com/alacra/help/iss_bestpractices.rtf

[2] ISS say that they make sure that there is no cross-listing of companies i.e. that each company is listed only in one listing index on their database.

[3] For example: Microsoft has CGQ industry score of 97 and CGQ index score of 75. This means that Microsoft outperforms 97% of companies in the software industry and 75% of companies in S&P500 listing index (where it is listed) in terms of corporate governance practices.

banks in the database, all being US banks. The next step was to extract the financial information from the Bankscope database for these 613 banks. Only 490 of these banks were found in the Bankscope database- they were searched one by one using their name or the Primary 'Committee on Uniform Securities Identification Procedures' (CUSIP). However, for 200 out of the 490 banks, there is no other information besides the identification by which they were searched. Consequently, it was only possible to construct a panel dataset with information on 290 banks over a 5-year period resulting in 1450 observations.

5.3 Methodology

The availability of panel data provides an opportunity to extract and use more available information on the dependant and the independent variables provided by the dataset and utilise the advantages of the greater cross sectional and time variation for each observation. According to Greene (2002, p.282), the fundamental advantage of a panel data set over a cross section is the flexibility it allows the researcher to model differences in behaviour across individuals. In this study, the panel data enables control for unobserved bank specific characteristics that affect market capitalisation. The assumption here is that these unobserved factors are stable over the whole period of analysis - i.e. are time invariant or, at least, "slowly moving" (i.e. relatively little within-group variation). This feature of the panel data modelling and the period of five years data create a clear advantage over the use of cross section and time series models. In addition, estimating a static model when there are dynamic relationships present can be construed as a specification error (Pugh, 2009).

With panel data several options are available. The static Fixed Effects (FE) approach is usually the starting point. In Greene's (2002) basic FE model, $y_{it} = x'_{it}\beta + \alpha_i + \varepsilon_{it}$, α_i is a group-specific constant term (or dummy variable) that captures the influence on the dependent variable of all time-invariant observable effects. Because the α_i are in the estimated part of the model, it does not matter if they are correlated with one or more of the independent variables in the *x* vector (at worst, this gives rise to multicollinearity, which in a panel context is unlikely to be a significant threat to valid estimation). Furthermore, in a situation where the α_i and one or more of the independent variables are jointly determined, the presence of the α_i in the estimated part of the model means

that – by construction - the α_i are not in the error term and a source of potential endogeneity is avoided.

The random effects (RE) model also allows for group-specific fixed effects, but these are assumed to be randomly distributed and, hence, part of a composed error term: $(u_i + \varepsilon_{it})$, where ε_{it} is the usual idiosyncratic (observation-level) error. The drawback of RE estimation is that it is generally implausible to assume that that the α_i are uncorrelated with one or more of the independent variables in the *x* vector. In this case, when the α_i are correlated with one or more of the independent variables, RE suffers from an inherent endogeneity problem. Moreover, whereas FE models are estimated by OLS, RE cannot be estimated by least squares either efficiently or consistently. To anticipate, the dynamic model favoured by this thesis is a species of RE modelling, because it includes a composed error term: $(u_i + \varepsilon_{it})$. Nonetheless, the GMM estimation strategy allows an instrumental variables approach to addressing endogeneity as well as consistent estimation.

Hitherto, where the potential endogeneity of corporate governance has been taken into account in the literature, this has been approached by static panel data techniques and/or by instrumental variables (IV) estimation. According to Wooldridge (2002, p.83-84), the IV method provides a solution to the problem of an endogenous explanatory variable. In order to apply this method in estimating a model where x_k is endogenous, we need to find an observable variable z_i that satisfies two conditions. First, z_i is not correlated with the error term, and second, z_i is (partially) correlated with x_k. The dataset used for this chapter, provides at least one variable z_i (share price) which meets the conditions described above. To anticipate, the objection raised by this thesis to conventional IV strategies is not the use of instrumental variables as such but to the use of instrumental variables in the context of either cross-section or static FE/RE models. Indeed, when conventional IV methods are applied to the data, the estimated results are hard to explain using economic theory (see Appendix 5-2).[4] Yet the application of

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[4] The results show a negative sign on the corporate governance variable, which leads to the following interpretation of the relationship: everything else the same, the lower the corporate governance score (the worse the corporate governance practices) the higher the market capitalisation of the bank.

the GMM approach to instrumentation in the context of a dynamic model yields economically more plausible results.

To summarize the estimation strategy so far, there are two serious problems in the data that need to be addressed: endogeneity and autocorrelation or serial correlation.[5] Given that the former causes the OLS estimators to be biased and inconsistent and the latter renders the OLS estimators not BLUE, these problems cannot be ignored. In the following subsections, these problems are elaborated and the estimation techniques that would resolve these problems are identified.

5.3.1 Endogeneity

The nature of corporate governance and the interdependent, complicated relationships in the day to day running of any firm create the conditions for the phenomenon of endogeneity to arise. The dilemma at this point is: Are firms applying good corporate governance practices from the beginning of their operations, or, do firms concentrate on becoming successful first and then improve their corporate governance framework? It can be argued that compliance cost is the underlying mechanism driving this relationship. Considering that corporate governance has a compliance cost (be that time wise or foregone potential profits due to adherence to the related rules), then logically it can be deduced that companies that have higher market capitalisation can afford to invest more funds and time to improve their corporate governance, which in turn is expected to be rewarded by markets with higher share price thus higher market capitalisation.

In technical language, a variable x_j is considered to be endogenous if for any reason it is correlated with the error term u (Wooldridge, 2005, p. 95). The endogeneity in econometric sense can arise as a result of three situations: omitted variables, measurement error and simultaneity (Wooldridge, 2002, pp. 50 - 51). Greene (2002, pp. 259-261) provides a slightly different categorisation to Wooldridge, adding a new group and slightly different description: Omitted variables, either observed or unobserved; Feedback effects; Dynamic effects; and Endogenous sample design.

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[5] Similar to Gujarati (2004) this thesis will resort to using the terms 'autocorrelation' and 'serial correlation' interchangeably and as synonyms of each other.

For the purposes of this chapter, since there are no grounds to believe that there are omitted variables or measurement error during the collection of data, the endogeneity of the variable/s of interest will be regarded as being caused by the 'simultaneity' (Wooldridge). This is consistent with theory as explained in section 4.3.4 of this thesis.

Wooldridge (2002, p. 51) provides the following definition: "Simultaneity arises when at least one of the explanatory variables is determined simultaneously along with y. If, say, X_k is determined partly as a function of y, then x_k and u are generally correlated."

The reason why endogeneity is such a problem is that it violates one of the assumptions of the Multiple Linear Regression (MLR), the 'Zero Conditional Mean', otherwise known as MLR.4, which requires that the mean of the error term u given a specific value of the independent variable x_i (i=1, 2,.., k) is zero, or: $E(u \mid x_1, x_2,..., x_k) = 0$. If this expression is different from zero, the implications are that at least one of the independent variables is correlated with the disturbance term, which means that all the parameters estimated by OLS are biased (Wooldridge, 2005). This imposes the necessity to search for a more appropriate estimation method. There are such methods available, and these will be discussed in other sections of this chapter.

Several studies such as Black et al. (2003) and Drobetz et al. (2004) note the problem of endogeneity but their proposed solutions cannot be replicated easily. Black et al. (2003) use instrumental variables available for South Korean firms, while Drobetz et al. (2004) are aware of potential problems caused by endogeneity but their data offers limited potential to address it. They too, similar to Black et al (2003), use characteristics specific to German firms, i.e. German listing indices, to instrument for the endogenous variable in their model. Morey et al. (2009) acknowledge the possibility of endogeneity in their data but they do not report any steps to try and address it. Later studies carried by Dunev and Kim (2005) and Black et al. (2006a) also use instrumental variables to address the endogeneity issues.

5.3.2 Autocorrelation or Serial Correlation

Autocorrelation or serial correlation arises when error terms are correlated across time. "One interpretation of serial correlation in the errors of a panel data model is that the error in each time period contains a time-constant omitted factor" (Wooldridge, 2002, p.

176). While serial correlation is not a problem for cross section data due to the random sampling assumption, it is a problem for time series and panel data analysis (Wooldridge 2005, p. 357). "The problems for estimation and inference caused by autocorrelation are similar to (although, unfortunately, more involved than) those caused by heteroscedasticity. As before, least squares is inefficient, and inference based on the least squares estimates is adversely affected." (Greene, 2012, p. 946).

The Gauss-Markov theorem suggests that time series (TS) assumptions TS.1 – TS.5,[6] will also make OLS the best linear unbiased estimator (Wooldridge 2005, p. 358). However, serial correlation violates TS.5 which makes OLS no longer BLUE. This in addition renders the standard errors and statistics estimated by OLS, invalid. (Wooldridge, 2005; Gujarati, 2004).

Using enough lags of dependent variable *y* as explanatory variables, to the point that the inclusion of more lags of *y* and explanatory variables does not matter for the explanation of y_t, leads to a dynamic model (Wooldridge, 2005, p. 406). Such point is supported by Arellano and Bond (1991, p.278) who state that an estimation that uses lags as instruments would lose its consistency if in fact the errors were serially correlated. "Some think that all models should be dynamically complete and that serial correlation in the errors of a model is a sign of misspecification" (Wooldridge, 2005, p. 407), and, unsatisfactory results of tests for serial correlation may point out dynamic misspecification of the model (Wooldridge, 2005).

The arguments presented above support the need to introduce dynamics to the estimated model in this chapter. In the literature on corporate governance to date, a 'common' modelling fault shared by most can be identified. While a few studies, as mentioned previously, at least acknowledged the problem of endogeneity and even fewer attempted to address it, the use of dynamic specification in modelling corporate governance has been virtually non-existent.[7] As this chapter will show, omitting dynamics from modelling will generate misleading results.

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[6] TS.1 – estimation follows a model which is linear in parameters; TS.2 – No perfect collinearity; TS.3 – Zero conditional mean; TS.4 – Homoscedasticity; and TS.5 – No Serial correlation;

[7] Some exceptions are: Rafferty and O'Connor 2011 (available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1773020), e.g. use dynamic modelling

Returning to the estimation strategy of the relationship between corporate governance and bank performance/valuation in the light of the problems and issues discussed above, it can be said that there are a number of techniques that can be used to address those problems individually, such as use of instrumental variables to control for endogeneity and use of a number of lags to control for serial correlation. However, addressing one problem at a time is not the solution[8], and an alternative technique which addresses both problems at the same time should be tried. The Generalised Method of Moments (GMM) enables both instrumented variables and lagged dependent variables, into the same estimation model.

5.3.3 Generalised Method of Moments (GMM)

The Method of Moments, according to Greene (2002, p. 526), rests on the benign assumption that, with random sampling, a sample statistic will converge in probability to some constant. This constant will be a function of unknown parameters of the distribution, which can be used to compute moments whose probability limits are known. The least squares estimator for the classical model of the form $y_i = x_i'\beta + \varepsilon_i$ would be an inefficient estimator in the situation where some of the x_i variables (k variables) are correlated to the error term ε_i. If one supposes that there are L variables z_i, where $L \geq K$, in such way that z_i is correlated to x_i but not with ε_i, then, a consistent estimator β can be constructed taking into consideration the relationships between z_i, x_i and ε_i for E $[\varepsilon_i | z_i] = 0$. The assumption $E[\varepsilon_i | z_i] = 0$ implies the orthogonality condition[9] which can be written as Cov $[z_i, \varepsilon_i,] = 0$ or $E[z_i(y_i - x_i'\beta)] = 0$. This can be developed to find the population moment equation and subsequently the empirical moment equation. The

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techniques but the endogeneity issues are immense and probably not addressed properly for the results to be considered as valid. And Barker (2010) uses a GMM approach in his book 'Corporate Governance, Competition and Political Parties' but the processes and detailed results and diagnostics are not presented. Also, in Barker (2010) Corporate Governance is the regressor.

[8] Appendix 2 exhibits a panel estimation using instrumental variables (stata command: ivreg2). While the diagnostics show that the model is well specified, and the tests for the validity of instruments pass the statistical significance of 1% and 5% for the instruments used (return on average assets and share price respectively), the relationship between the regressor and the main variable of interest emerges with an unexpected negative sign. This outcome can be the result of the static modelling of the IV approach which does not include the lagged dependent variable in the model. As a consequence, the autocorrelation problem is not addressed and the results are considered biased.

[9] The orthogonality condition means that the disturbance and the regressors in the model are uncorrelated (Greene, 2002, p. 165).

empirical moment condition is *L* equations, in *K* unknowns with three potential possibilities where *L < K,* 'underidentified'*; L = K,* 'exactly identified'*; and L > K,* 'overidentified' (Greene 2002, p. 75, pp.201-202). In most cases, there are far more orthogonality moments than parameters, leading to the model being overidentified (Greene 2002, p. 314).

Using more moments than there are parameters enhances the estimation process as it maximises the information available for it, and this advantage becomes even more important when it is known and accounted for based on economic grounds and/or stems from the statistical character of the model (Pugh 2009, p.8). Wooldridge (2002, p.183) points out that the term generalized method of moments was coined by Hansen (1982) who also provides support to the consistency and asymptotic normality of GMM estimators under the orthogonallity conditions (Hansen, 1982, p. 1050).

GMM is an approach to estimation (like OLS and MLE). It is suitable for application to dynamic panel models, because the lagged dependent variable in a panel model is, by construction (i.e. by the design of the model), endogenous (or, strictly speaking, predetermined). The GMM approach to defining internal instruments is ideal for addressing this endogeneity. Moreover, the same approach can be applied to other independent variables that are potentially endogenous.

One of the main advantages of the dynamic panel modelling with GMM is that the procedure for addressing the endogeneity of the lagged dependent variable, may be applied to all suspected/potentially endogenous variables and predetermined variables in the model (Pugh, 2009 p.17). However, this might generate a large number of moments (potential instruments) which may be of the order of hundreds.[10] As a consequence, the potential problem of too many instruments is the weakening of the Hansen version of Sargan test meaning that the test finds it increasingly hard to reject the null hypothesis of instrument validity (Pugh, 2009 p. 19). Researchers are warned against instrument proliferation in system GMM as this may generate results which are invalid but appear valid (Roodman, 2008).

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[10] Stata 9.1 software when executing the xtabond2 command would generate the following:
"Warning: Number of instruments may be large relative to number of observations.
  Suggested rule of thumb: keep number of instruments <= number of groups."

Arellano and Bond (1991), Arellano-Bover (1995) and Blundell-Bond (1998) have developed GMM estimators which can be applied to: 1) "small T, large N" panels, meaning that only a few time periods and a large number of individuals are required;[11] 2) panels where there is linear relationship; 3) the estimation where the dependent variable is dynamic, meaning that its current value is dependent on its values in previous time periods; 4) estimations where there are independent variables which are not strictly exogenous; 5) fixed individual effects; and 6) data that displays heteroscedasticity and autocorrelation within individuals but not across them (Roodman, 2009).

With all these warnings and caveats in mind, the unrestricted model is estimated using the STATA 11 software package and the user written and explained command 'xtabond2' in Roodman (2009). The GMM approach as explained in Arellano-Bover (1995) and Blundell-Bond (1998) is implemented by default in 'xtabond2'. In essence, system GMM estimation is a weighted average of two estimated models (hence "system" GMM): one in which the levels of predetermined and potentially endogenous variables are instrumented by lagged differences; and one in which the differences of predetermined and potentially endogenous variables are instrumented by lagged levels.

5.4 The Estimated Model

This chapter employs the model introduced in the previous chapter, with firm valuation as the dependent variable and the corporate governance score and a few control variables as independent variables. The control variables included in the model are: *lagged dependent, assets, age, agesq, tier1, tier1sq, dist2def,* and *year.* Listing index dummies are also included in the model. The measure for firm valuation is market capitalisation, which is selected to circumvent the problems arising from misrepresentation of actual facts in the accounts of banks discussed in more detail in the previous chapter. Due to the nature of banking, it can be argued that the values of most indicators of a bank's performance in the current year are dependent on their values in

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[11] Large *T* tends to make insignificant the dynamic panel bias while the number of instruments 'explodes'. Small *N* may cause the cluster-robust standard errors and Arellano-Bond autocorrelation unreliable (Roodman 2009, p.128).

the previous year, and the availability of panel data in this chapter allows for the modelling of such dependencies across time. The model is estimated with the following additions as compared to the cross-section model in the previous chapter: (i) the inclusion of the lagged dependant variable, which changes the estimation from static to dynamic; (ii) the ability to address the endogeneity issue by exploiting time-series dependencies; and (iii) the ability to address omitted dynamics, which otherwise appear as serial correlation in the residuals (as shown in Appendix 5-1; the xtserial test following static fixed effects estimation confirms that the null of no serial correlation can be rejected; p=0.000).

These features are important for improving the consistency and efficiency of the estimators. The consistency of an estimator implies that it does not have any inherent bias, thus does not underestimate or overestimate systematically and, as the sample increases indefinitely, has a value that converges to the true natural value in the population (Gujarati, p.110, 2004; Wooldridge, p. 182-183, 2005). Also, as defined in Gujarati 2004 (p.79) an efficient estimator is an unbiased estimator with the least variance.

Allowing for dynamics in the model, even if the statistical significance and/or the sign of the lagged dependent variable is not of direct interest, may prove crucial for obtaining consistent estimates of other parameters (Bond, 2002). In addition it can be argued that, in dynamic panel models, the lagged dependent variable gives an indication of the speed of adjustment of the regressand. We conclude that the correct specification of the model requires dynamics in the estimated part of the model (i.e. not in the residuals). In addition, the general method of movements approach to estimating dynamic models allows the endogeneity problems mentioned in the previous chapter to be addressed.

Thus, the preferred model estimated is an augmented model, based on the relationships emerging from the previous chapter, in which the market capitalisation is regressed on its own lagged value, corporate governance index, and bank-specific indicators such as total assets and age, proxy measures intended to capture the 'governance quality' such

as "distance to default" and "tier one ratio" as well as dummies for years and listing indices.[12]

The preferred model to be estimated is as follows:

$$\ln mc_{i,t} + \beta_1 \ln mc_{i,t-1} + \beta_2 cgq\_indu_{i,t} + \beta_3 age_{i,t} + \beta_4 agesq_{i,t} + \beta_5 assets_{i,t} + \beta_6 dist2def_{i,t} +$$
$$+ \beta_7 tier1_{i,t} + \beta_8 tier1sq_{i,t} + \beta_9 y06 + \beta_{10} y07 + \beta_{11} y08 + \beta_{12} y09 + \beta_{13} Dsp400 + \beta_{14} Dsp500 +$$
$$+ \beta_{15} Dsp600 + \beta_{16} Dcgq + \varepsilon_{i,t}$$

Where β_0 represents the intercept term; *lnmc*, the natural log of Market Capitalisation (measured in millions of dollars); *cgq*, the Industry Corporate Governance Quotient; *age* - Number of years since the establishment of the bank; *agesq* –the squared value of number of years since the establishment of the bank squared; *assets* - Total Assets in million dollars; *dist2def* – Distance to Default; *tier1* – Tier 1 (risk weighted) Ratio; tier1sq – 'Tier 1 (risk weighted) Ratio' squared; y_j - Year dummies (j =2005 to 2009); d_j - Dummies for listing indices (j = SP400-600, Russell3000, CGQUniverse); ε - The error term; *i,t* - bank and time specific subscripts; β_j - Parameters to be estimated (j = 1 − 16)

The economic reasoning for including these variables in the model as well as the expected signs are discussed below. Also, whether the variables entering the model are considered endogenous or exogenous is explained. But first some descriptive statistics of the data are presented in

Table 5-1 below.

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[12] 'Governance Quality' loosely defined in this context is the attitude of management towards risk or efficiency and the ability of the board of directors to notice and address that.

Table 5-1 - Descriptive Statistics

#	Variable	# of Obs	Mean	Std. Dev.	Min	Max	Expected sign
1	lnmc	1211	5.5	2.0	-0.4	15.7	
2	Lag1_lnmc	954	5.5	1.8	-0.4	12.4	+
3	cgq_indu	1178	52.4	29.3	0.3	100.0	+
4	assets	1416	19436.0	129126.9	64.5	2223299.0	+
5	age	1450	70.2	47.7	0	177.0	+
6	agesq	1450	7197.3	7654.6	0	31329.0	?
7	dist2def	1299	16.5	9.8	-2.9	158.4	+
8	tier1	1089	11.7	3.5	0	35.4	+
9	tier1sq	1089	148.0	101.6	0	1251.7	-
10	dcgq	1178	0.5	0.5	0	1	-
11	dRus3000	1178	0.3	0.5	0	1	base
12	dsp400	1178	0.0	0.2	0	1	?
13	dsp500	1178	0.0	0.2	0	1	?
14	dsp600	1178	0.1	0.3	0	1	?
15	y05	1450	0.2	0.4	0	1	base
16	y06	1450	0.2	0.4	0	1	?
17	y07	1450	0.2	0.4	0	1	?
18	y08	1450	0.2	0.4	0	1	?
19	y09	1450	0.2	0.4	0	1	?

Having in mind that the period of analysis includes one the largest financial crises since 1929, exerting a strong influence on the operation of banks and their corporate governance practices, and that there is not much previous theoretical or empirical work dealing with this period, most of the relationships tested by the model have not been used by previous research to model the relation between corporate governance and valuation.

The case for using market capitalisation as a measure of bank valuation has been made in the previous chapter where it is mentioned that several studies estimate the relationship between corporate governance and share prices (Deutsche Bank 2004;

Bauer et al. 2005) as a measure of valuation. This study, similar to Black (2001)[13], takes the measure of valuation a step further and uses market capitalisation which is a product of share price and number of outstanding shares. Also, throughout this thesis, there have been references to other studies that have analysed the existence of a relationships between corporate governance and measures of performance and/or valuation that may have ceased to exist in certain time periods (Bebchuk, 2010), so the introduction of different measures to capture the value or/and performance of companies has been an integral part of the theoretical and empiric literature on this field.

For the purpose of this chapter and the thesis in general, the most important parameter in the model is β_2 i.e. the coefficient of corporate governance. The following Table 5-2 contains the coefficients to be estimated and their expected signs.

Table 5-2- Coefficients to be estimated and their expected signs

Coefficient	Expected sign	Coefficient	Expected sign
β_1	+	β_7	+
β_2	+	β_8	-
β_3	+	β_9	+
β_4	?	β_{10}	+
β_5	+	β_{11-12}	? (-)
β_6	+	β_{13-16}	?

The expected sign of the coefficient of the lagged value of the dependent variable is positive, because the size of market capitalisation in the current year is expected to be positively related to its value in the previous period. Mangan et al. (2005) suggest that including the lagged dependent variable, even if it is not of direct interest, caters for dynamics in the model – i.e. the effects of history - which may help in consistent estimations of other parameters.

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[13] Black (2001) also uses market capitalisation when estimating the relationship between the valuation of Russian firms in 1999 and their corporate governance. It would be interesting to find out whether this is a mere coincidence or whether Market Capitalisation is a measure robust to crisis; but there are no other studies to date exploring this relationship?

The corporate governance index (*cgq_indu*) enters the model as an endogenous variable. The reasons why this is treated as such are explained in section 5.3.1 above. The a priori expected sign of the coefficient is positive, since the contrary would suggest that good corporate governance will decrease the value of the bank.

The control variables such as *age* and *assets* are introduced to the model as exogenous and their expected signs are positive. *agesq* also enters the model as exogenous and the expected sign is unknown. While the signs of the first two variables are easy to understand and interpret, the *agesq* is expected to produce information on whether the relationship between market capitalisation and the age of the bank is non-linear or not (different for older banks rather than for newer ones).

The three variables *dist2def*, *tier1, tier1sq squared* are included in the model in order to capture the impact of the quality of governance, specifically the bank's and management's attitude to risk. These variables are treated as endogenous, because the higher the market capitalisation, the higher the availability of funds to be used as buffers in the form of Tier 1 capital ratio or distance to default. As these aspects are either directly or indirectly related to corporate governance practices, they are discussed below in some more detail.

In line with the finding of Demirguc-Kunt et al. (2010) that better-capitalised banks, as proxied by tier 1 capital ratio, cope better with crisis. Tier 1 (risk weighted) ratio is the ratio of the risk-weighted and Core (Tier 1) Capital to total capital.[14] According to Appendix A of the 1991 Federal Deposit Insurance Corporation Improvement Act (FDICIA) this ratio should be equal to or exceed 4%.[15] The Tier 1 (risk weighted) ratio emerged as one of the requirements of the 1991 FDIC Act as a measure of proper capitalisation of United States banks (Jorge and Amadou, 2006). After the failure of

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[14] "Core (Tier 1) capital is defined as the sum of core capital elements minus all intangible assets (other than mortgage servicing assets, nonmortgage servicing assets and purchased credit card relationships eligible for inclusion in core capital pursuant to § 325.5(f)), minus credit-enhancing interest only strips that are not eligible for inclusion in core capital pursuant to § 325.5(f), minus any disallowed deferred tax assets, and minus any amount of nonfinancial equity investments required to be deducted pursuant to section II" (p. 198). For full definition of Core (Tier1) capital follow link: http://www.gpo.gov/fdsys/pkg/CFR-2012-title12-vol5/pdf/CFR-2012-title12-vol5-part325-appA.pdf

[15] The Federal Act, FDICIA, recapitalised the Bank Insurance Fund of the Federal Deposit Insurance Corporation and expanded the authority of banking regulators so to protect banking consumers' interests.

saving and loan associations in 1980s in United States, the FDICIA has set the general capital thresholds displayed in Table 5-3.

Table 5-3 – Capitalisation of US banks according to FDICIA

Capitalisation	Tier 1 (risk weighted) ratio
Well capitalised	≥ 6%
Adequately capitalised	≥ 4%
Undercapitalised	< 4%
Significantly undercapitalised	< 3%
Critically undercapitalised	Tangible net worth (equity) ≥ 2%, and ≤ 65% of the required leverage limit

Source: US Federal Deposit Insurance Corporation, available at:
http://www.fdic.gov/news/news/inactivefinancial/1995/fil9564.pdf p. 45607, footnote 3 and
http://www.clevelandfed.org/research/Commentary/1992/0901.pdf.

The FDICIA sets the guidelines for regulators on how to deal with banks especially if they fall in one of the three bottom categories. Prompt Corrective Actions, as they are otherwise known, are measures that help limit the losses faced by taxpayers in case of failure of a depository institution (Pike and Thomson, 1992).

However, since there is no upper cap on the Tier 1 Ratio, the economic reasoning suggests that there has to be a limit to how much capital should be set aside for this purpose.[16] It can be argued that after a certain point increasing the Tier 1 Ratio capital may start to produce negative effects. For this reason the tier1sq variable is introduced in the model to capture the non-linearity effect and help identify the point where increasing Tier 1 Ratio capital will start effecting the market capitalisation of the company adversely.

Similar to Tier 1 Ratio, *dist2def* (distance to default) is a measure to capture the risk attitude and, implicitly, the quality of bank governance. In finance vocabulary, a higher

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[16] The obvious theoretically possible Tier 1 Ratio is 100% of the capital.

distance to default ratio means that a bank can suffer larger negative returns before being rendered insolvent (Beltratti and Stulz, 2010). The difference between the two variables is that the former is quite heavily regulated and monitored by FDIC but the latter is not. Crosbie and Bohn (2003) find that a typical firm has a 2% probability to default (with AAA rated firms at the top of the spectrum with a probability of 0.02% and the CCC rated firms at the other end with a probability of 4%). They find that although some firms default when their asset value reaches the book value of their total liabilities, others continue trading and servicing their debts. Whether a firm will default at this point has to be looked at in the context of the firm's business risk. Jorge and Amadou (2006) argue that distance to default in banking might not be the most appropriate indicator, especially in a sample with several countries as it might not pick up all the regulatory and supervisory complexities. They make an argument in favour of a Distance to Capital measure which supposedly is more appropriate.[17] However, since this chapter looks at US banks only and the variable could be computed from the available balance sheets, distance to default is deemed appropriate for the purpose of this investigation. The use of Tier 1 Ratio should help satisfy the argument of Jorge and Amadou.

According to Mangan et al. (2005), in order to address the cross-sectional dependence in the panel data, time dummies should be included in a dynamic model. Roodman (2006, p.14) explains how GMM estimators in respect of idiosyncratic disturbances are based on two (out of eight) assumptions which are: 1) idiosyncratic disturbances have individual-specific patterns of heteroskedasticity and serial correlation; and 2) the idiosyncratic disturbances are uncorrelated across individuals. While the first assumption can be addressed by estimating standard errors that are robust to heteroscedasticity (Roodman, 2006), the second assumption implies that if time-related effects are not modelled in the observed part of the model they will be captured by the error term, which might cause correlation across individuals or groups. Roodman (2006, p.25), therefore, suggests including time dummies as a means of removing time-related shocks from errors.

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[17] Distance to Capital is a measure of credit risk based on Merton (1974) according to which the equity of a firm should be based on the value of its assets. Consequently, firm defaults when its asset value falls below the face value of its debt.

The time dummies for the years 2006-2009 with 2005 as base year, enter the model as exogenous variables and the expected signs are positive for 2006 and 2007 and, due to the crisis, unknown (potentially negative) for 2008 and 2009.

Finally, as explained in the data section, most of the banks in the sample are listed in one of the four listing indices i.e. S&P 400, S&P 500, S&P 600 and Russell3000. Other banks that are not listed in one of the mentioned listed indices but for which CG quotient is provided, are pooled together in a virtual listing index by ISS and labelled CGQ Universe. A dummy variable taking the value of 1 if the bank is listed in any particular index and 0 otherwise enter the model. These variables are endogenous by construction, as market capitalisation is one of the main factors that determines in which index a company is listed (this is especially relevant for S&P listing indices). There is no expected sign for this group of dummies (except for the CGQ Universe which is negative) and the benchmark group is Russell3000.

5.5 Interpretation of the results

The results of the GMM system estimation using Stata command 'xtabond2' with Windmeijer (2005) two-step robust correction of errors are presented in Table 5-4 below.

Table 5-4 – System GMM Results

Dependent variable 'lnmc'			
Explanatory variables	Coefficient	z values	Treated as
lnmc L1	0.29	1.47	Exogenous
cgq_indu	0. 01	1.97**	Endogenous
age	-0.01	-0.51	Exogenous
assets	2.73e-06	1.97**	Exogenous
dist2def	0.04	1.30	Endogenous
tier1	0.27	2.40**	Endogenous
tier1sq	-0.01	-1.65*	Endogenous
agesq	0.01	0.36	Exogenous
y06	0.77	3.17***	Exogenous
y07	0.58	2.56**	Exogenous
y08	0.31	3.07***	Exogenous
dsp400	0.95	0.91	Endogenous
dsp500	-0.03	-0.02	Endogenous
dsp600	0.361	0.72	Endogenous
dcgq	-1.29	-4.28***	Endogenous
_cons	-0.14	-0.39	

Group variable: bank	Number of obs = 595
Time variable : year	Number of groups = 200
Number of instruments = 28	Obs per group: min = 1
Wald chi2(19) = 3117.34	avg = 2.98
Prob > chi2 = 0.000	max = 4

Arellano-Bond test for AR(1) in first differences: z = -3.79 Pr > z = 0.000
Arellano-Bond test for AR(2) in first differences: z = -1.18 Pr > z = 0.482

Sargan test of overid. restrictions: chi2(12)   = 25.67 Prob > chi2 = 0.298
Hansen test of overid. restrictions: chi2(12)   = 14.67 Prob > chi2 = 0.621

For a full stata printout, including the pattern of instrumentation, please see Appendix 5-3.

The model displays satisfactory diagnostic statistics: indicating first-order serial correlation, significant at 1 per cent; but no second order serial correlation. These are denoted by the Arellano-Bond test for AR(1) in first differences, and the Arellano-Bond test for AR(2) in first differences presented in the table above. The implication of these results is that the instruments can be accepted as valid and that the GMM method is a consistent estimator.

The Sargan Test is a test of the validity of the overidentifying restrictions (instruments). However, the problem of the Sargan test, as Roodman (2008) suggests, is that it is consistent only under the assumption of homoscedasticity of errors, which in this context is not an assumption often made.

Conversely, the Hansen test is also designed to test for the exogeneity of, hence the validity of, the overidentifying instruments but is heteroscedasticity robust. Roodman (2008) warns researchers not to feel comfortable by not rejecting the H_0 at conventional levels of 5 or 10 per cent levels as, due to instrument proliferation, the test might not perform well. He recommends that p-values below 25 per cent should be viewed with concern.

In line with advice from Roodman (2009), to test the consistency of the model, given that the preferred model was estimated with the 'collapse' option to reduce the number of instruments, a model specification without the collapse option is estimated. "[In] the standard, un-collapsed form each instrumenting variable generates one column for each time period and lag available to that time period, the number of instruments is quadratic in T. To limit the instrument count, one can restrict the lag ranges used in generating these instrument sets. Or one can collapse them" (Roodman 2009, p.108). By this logic, the number of instruments is reduced when the 'collapse' option is applied. However, if the reduction in number of instruments is large, and the estimated coefficients change substantially compared to the 'un-collapsed' estimation along with the change in p-values, this should cast some doubts on the model consistency.

In the case of the model estimated above, when the 'collapse' option was removed from the 'xtabond2' stata command, the number of instruments increases by 5, from 28 to 33, and the statistical significance of the main variable of interest, *cgq_indu*, improves

slightly changing the band of significance from 5 to 1 per cent. Also, the number of instruments generated, which is 28 and 35 respectively for the two estimations, is considered appropriate also based on footnotes 16 and 17 above. The Stata printout of the estimated model with the 'collapse' option is presented in Appendix 5-4.

In terms of economic interpretation, as shown in Table 5-4 above, the model does provide empirical support for a few relationships. The main variable of interest, corporate governance (*cgq_indu*) has the expected positive sign and is statistically significant at the 5 per cent level. The estimated coefficient is 0.02 which can be interpreted as follows: an increase of the corporate governance score by 1, ceteris paribus, will increase the market capitalization of the bank by 0.02 percentage points. As stated earlier in section 4.8 of this thesis, the low magnitude of the coefficient can be due to the existence of depositors as an important stakeholder in the corporate governance of banks, and the heavy regulations to protect their interests can dampen the direct effects of corporate governance on the market capitalisation of the bank.

 Assets and market capitalisation of the bank have, as anticipated, a positive and statistically significant (at 5 per cent) relationship. However, the coefficient is very small, such that the increase of bank assets by 1 million US dollars, ceteris paribus, will have a negligible effect on market capitalisation of the bank.

Tier 1 weighted ratio (*tier1)* is positive and statistically significant at 5 per cent. The estimated coefficient is 0.27 meaning that the increase of the Tier 1 ratio capital by 1 (per cent), ceteris paribus, will increase the market capitalisation by 0.27 percentage points. However, as explained elsewhere, it is not reasonable to increase the tier 1 ratio capital constantly and indefinitely as the squared value of this variable ('tier 1 ratio squared', *tier1sq*) has a negative sign. This means that increasing the tier 1 ratio capital, beyond a certain point, by 1 per cent, all else equal, the market capitalisation of the bank will start decreasing as suggested by *tier1sq*. When estimated with the cross section data in the previous model *tier1* was not statistically significant.

Obviously, it is important for this discussion to find the point beyond which the increase of tier 1 capital ratio would have negative effect on the bank's market capitalisation. A relatively straightforward mathematical differencing produces a figure of 20.1 per cent

as the break point of positive effect of tier 1 ratio on market capitalisation (see Appendix 5-7 for mathematical derivation). At first, this figure appears to be quite excessive, especially in light of the 6 per cent threshold. However, this chapter due to data constraints (5 years of observations), deals with the crisis period exclusively and, during crisis, it would not be so unusual to consider that firms having made more provisions than suggested by laws and regulations have been appreciated more by markets. Both economic theory and common sense dictate that in times of economic prosperity such banks would be punished for being too conservative.

Out of four year dummies included in the model, one is dropped by the model for lack of variability in the data (year 2009), the remaining three (years 2006-2008) are positive and statistically significant. This means that compared to the base year, which is 2005, the market capitalisation of the bank, all else equal, is higher in these three years.

In addition, the dummy variable for the listing index Universe is statistically significant at 1 per cent and has a negative sign, which means that banks listed in this index, all else equal, have lower market capitalisation than those listed in the Russell 3000 index.

Finally, although the estimated coefficient on the lagged dependent variable is not statistically significant, it can nonetheless be used to calculate a statistically significant long-term relationship between the dependent variable (*lnmc*) and the main variable of interest, corporate governance (*cgq_indu*). The argument behind calculating the long-run effect coefficient is the assumption that the historical effect of all estimated variables on the dependent variable is captured by the lagged dependent variable. Thus as expected, the estimated long-run coefficient of corporate governance is higher than the short-run or impact effect, indicating that corporate governance exerts a cumulative effect on the market capitalisation of banks in the sample. The software package Stata 12 calculates the long-run coefficient using the command 'nlcom'; the underlying arithmetic explanation is laid out in Appendix 5-5. Results of the long-run coefficient estimation are presented in

Table 5-5.

Table 5-5 Calculation of the long run coefficients using 'nlcom'

lnmc	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]

| _nl_1 | 0.03 | 0.01 | 2.10 | 0.036 | 0.0018 | 0.0534 |

Given that the focus of this thesis is the relationship between corporate governance and bank performance, then only the long-run coefficient for the main variable of interest is calculated. The estimated long-run coefficient for *cgq_indu* is statistically significant at the 5 per cent level, indicating that there is a long-run relationship between corporate governance and the market capitalisation of the bank. However, the coefficient's magnitude is only a little larger than the short-run estimated coefficient, which is due to the low persistence of market capitalisation in the sample period.

5.5.1 Testing for Robustness

The testing for robustness of the model specifications follows two approaches. One approach, which is a check rather than a test, is based on intuitive and suggestive value of the lagged variable's estimated coefficient as used by Roodman (2009). The other approach is a comparison with a model specified using different variables than the one reported above.

OLS estimation produces upwardly biased estimates of the effect of the lagged dependent variable (in this case the coefficient is 0.90) and the fixed effects estimation produces a downwardly biased coefficient on the lagged dependent variable (in this case 0.37) (see Appendix 5-8). The true estimate of the lagged variable then, according to Roodman (2009) should lie between these two values. Since the coefficient of the lagged variable of the main model is 0.29 with the confidence interval lying between -0.09 and 0.68, it can be considered that this check holds.

This does not mean that some further investigation should not be undertaken to understand why the estimated coefficient on the lagged variable is slightly outside the suggested limits set by the procedure above (although, crucially, well above the lower limit of the FE confidence interval). In an extensive research of GMM system estimators, Bazzi and Clemens (2009, p. 17) find that in their reproduction of Levine, Loayza and Beck (2000) results, face a similar situation where the estimated coefficient on the lagged variable sits slightly beyond the upper bound. Their conclusion is that the system estimators might be upward biased. The same explanation can be applied to the results of the preferred model, presented in Appendix 5-3 with the difference that that the

estimated coefficient on the lagged dependent variable is slightly below the lower bound hinting that the estimators might be downward biased. Even if this is the case with the estimation of this chapter, there is not much harm as the purpose of this chapter is to investigate whether there is a relationship between corporate governance and firm valuation, rather than to precisely quantify this relationship.

The other, more important test of robustness is the estimation of an alternative model in order to observe whether the relationships persist. Here, the model used as a robustness check uses a different measure for corporate governance. As explained in more detail in sections 4.6.1 and 5.2 of this thesis, ISS produces two groups of indices for each rated bank, one comparing corporate governance of any given bank with all the banks in the banking industry (*cgq_indu* used in the preferred model) and the other that compares the corporate governance framework of any given bank with other banks listed in the same listing index (*cgq_inde*).

The results of the estimated model show that the relationships defined in the preferred model persist (see Appendix 5-6). This model too displays very satisfactory diagnostics, implying that the model is well specified. This specification also allows estimation of a statistically significant long-run coefficient, which in terms of magnitude is of similar size to the one estimated by the preferred model specification (0.03, significant at the one per cent level, in both the preferred model and in the model estimated as a robustness check).

5.6 Conclusion

This empirical investigation confirms the findings of a positive relationship between corporate governance and firm valuation identified in the previous chapter using cross section data. The relationship between market capitalisation and corporate governance seems to hold over the period of five years which is an investigative restriction imposed by the availability of data. The period investigated, 2005-2009, encompassing one of the largest financial crisis since 1929 has impacted this investigation in terms of the disappearance of more established relationships explored in previous empirical research, to produce statistically acceptable and economically reasonable results. These studies use other measures of firm valuation or performance such as Tobin's Q value,

return on assets (ROA), return on equity (ROE), stock returns and alike. The persistence of the valuation measure used in this chapter, market capitalisation, can be prescribed to its simplicity as it the product of two elements: a) number of outstanding shares and b) share price. Corporate governance can be argued to influence firm valuation via the share price.

As an important issue, this chapter has pointed out the importance of methodology applied for the estimation of the relationship between corporate governance and performance or/and valuation of companies. The investigation here showed that omitting dynamics from the model, which is the case with almost all the previous research in this field, may produce misleading results.

Chapter 6

Corporate Governance and Performance of Banks in Kosova and Montenegro

6.1 Introduction

This chapter will investigate the relationship between corporate governance and performance of banks in two South East European (SEE) countries, Kosova and Montenegro. The concept of corporate governance is new in both countries and the corporate governance practices of banks in these countries have not been studied before.[1] The two countries in question have recently become independent with their central banks being the regulatory institution to develop and enforce corporate governance principles. The banks play an important role in the development of these countries and their corporate governance practices can influence their behaviour and performance and, therefore, this thesis has decided to investigate them and empirically test the relationship between return on equity and corporate governance.

These two relatively young independent countries share a number of characteristics, which justify their joint study. First is the history. Both of these countries were administrative entities[2] of the same state, Yugoslavia during the second half of the 20th Century. Second is their transformation process as both countries at some point have declared independence from Serbia; Montenegro on 3rd of June 2006 and Kosova on 17th of February 2008. And finally, both countries use the Euro as their currency, renouncing their monetary policies, although they are not members of the European Union yet.

For the purpose of the empirical part of this chapter, data related to corporate governance was collected directly from the banks via a survey.[3] In 2009 a survey focusing on corporate governance practices of financial institutions was carried out in both countries. The questionnaire used for the survey was designed on the basis of the OECD Corporate Governance Principles. Financial data was gathered from the financial reports published by banks and the dataset was augmented with additional information

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[1] A part of this Chapter has been previously published by the Riinvest Institute for Development Research (Riinvest, 2009) which was conducting a research project on the corporate governance of financial institutions in Kosova. The author of this thesis was a member of the project team and the principal author of the main part of the project report, which is most of the findings for Kosova, presented in this chapter. The sections about Montenegro and the empirical report investigation for both countries were not part of that report. As per agreement, the initial results of the Survey were presented in a conference organised by the RIINVEST Institute in April 2009.

[2] Autonomous Province of Kosova and Republic of Montenegro respectively.

[3] In Kosova the data is collected for Insurance Companies too.

gathered from various stakeholders such as representatives of central banks and chambers of commerce (the questionnaire used in the survey is presented as Appendix 6-1).

The remainder of the chapter is laid out as follows. Section 6.2 will present a brief overview of the development of the banking sector in both Kosova and Montenegro; section 6.3 will provide an overview of the banking laws and regulations in both countries; section 6.4 will discuss the results of the survey; section 6.5 will present the empirical investigation of the relationship between corporate governance and performance of banks in the two countries; and section 6.6 will conclude.[4]

6.2 The Banking Sectors in Kosova and Montenegro

In order to understand the current developments in the banking sectors of the two countries better, a brief historical background of the banking system is necessary. This section aims at providing this brief background, first for Kosova and then for Montenegro.

6.2.1 Brief History of Kosova's Banking Sector

For the period 1945 -2008, Kosova was de jure a constituent part of another state: initially Yugoslavia, then Serbia and Montenegro and finally Serbia. De facto, however, Kosova was separated from Serbia following the 1999 War, and has been a separate country, initially under the United Nation Administration in Kosovo (UNMIK) set up under the UN Security Council Resolution 1244 and independent from 2008.

In 1999 UNMIK was faced with a war torn country which in addition to severe damages to its infrastructure and human resources inflicted during the war, had also suffered a continuous and deliberate depletion of resources during the period 1989-1999 (Riinvest, 1998). The Yugoslav banks that used to operate in the region left Kosova before the Serbian Army in 1999, leaving Kosova without any banks or a banking system. In the same year, 1999, UNMIK established the Banking and Payment Authority of Kosova which took on the functions of the central bank and eventually, in 2008, became the

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[4] Section 6.4 of this chapter (the part about Kosova) was published in the 2009 report by RIINVEST as mentioned in footnote 1.

Central Bank of Kosova (CBK). One of the functions of this institution has been to license and regulate banks in Kosova. Foreign banks entered the market first in 1999[5] and operating as the only bank for more than a year. By the end of 2005 there were seven banks in Kosova, two of them foreign (Toçi 2008). In subsequent years one small bank was closed down by the regulator, two domestically owned banks merged and were then acquired by a foreign bank (Slovenian), and a few foreign banks entered the market afresh, thus changing ownership landscape of the banking sector of Kosova.

The banking system in Kosova now consists of eight commercial banks, of which six are foreign-owned, owning some 89 per cent of total assets of the banking system. Total assets of all banks in Kosova during 2011 reached EUR 2.65 billion and exhibited a growth of 8.3% compared to the previous year. The banks operating in Kosova and their ownership are listed alphabetically in

Table 6-1 below:

Table 6-1 Banks operating in Kosova

No	Bank Name	Ownership
1	Banka Ekonomike	Domestic
2	Banka Kombëtare Tregëtare (BKT)	Foreign
3	Banka për Biznes (BpB)	Domestic
4	Komercialna Banka	Foreign
5	NLB Prishtina	Foreign
6	ProCredit Bank	Foreign
7	Raiffesien Bank	Foreign
8	TEB	Foreign

Although the market structure of the banking system continues to be characterized by a high degree of concentration, the Herfindahl-Hirschman Index (HHI) shows a small decrease in concentration although remains highly concentrated. Using the HHI for bank assets as presented in CBK reports, only in 2012 the banking sector in Kosova approaches the 'moderately concentrated' as per interpretation of the Federal Reserve System in the United States.[6]

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[5] Micro Enterprise Bank (MEB Kosovo) was established in 1999 to provide loans to small businesses, as well as usual banking activities.

[6] The Federal Reserve System guidelines are: Bank markets with HHI<1,000 are considered unconcentrated; Markets with an HHI >1,000 but <1,800 are considered moderately

Starting from a small role to oversee the payment system in the post war country, the CBK gradually developed to a fully-fledged Central Bank, gradually acquiring all the regulatory, prudential and monetary authority roles of a central bank. The corporate governance role of the Bank has gradually developed too and will be discussed in Section 6.4 of this chapter.

6.2.2 Brief History of Montenegrin Banking Sector

As stated in the Introduction to this chapter, Montenegro was also a constituent part of Yugoslavia since 1945 until the breakup of that state. The development of the banking industry in Montenegro has been shaped by the political developments which culminated with wars between Serbia and other republics during the 1990-2000 period.

Unlike Kosova, however, the Montenegrin banking system did not have to be built from scratch. At the breakup of Yugoslavia in 1991, most of the banking services were provided by branches of Serbian based banks. Only at the beginning of the 2000, foreign banks led by Slovenian ones started to show interest in the Montenegrin market. The establishment of the Montenegrin Central Bank in 2002 and the adoption of Euro as the national currency in March 2002 were steps in the right direction to enable entry of foreign banks. The Central Bank signalled the intention to reform the banking system in Montenegro through the Law on Banks[7] and established initial structures of banking supervision.

As a result of these actions by the government (establishing the Central Bank, adoption of Euro, and passing the Law on Banks) between 2002 and 2004, two Montenegrin banks, Euromarket and Montenegro Banka were acquired and merged into the NLB Montenegro with Slovenian capital. In 2004 a Hungarian investment group acquired majority share ownership in Komercialna Banka.

In 2006, following a referendum vote, Montenegro was officially separated from the Union of Serbia and Montenegro. The same year also witnessed the big reform of the

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concentrated. The HHI form Kosova's banking industry year – HHI is: 2007 – 2864; 2008 – 2744; 2009 – 2481; 2010 – 2254; 2011 – 2052; and 2012 – 1888.

[7] For the first time, banks were legally treated on their own and not looked at as a part of a larger group (when applicable).

role of the Montenegrin Central Bank with the focus on bank supervision. Modern approaches to risk evaluation were introduced along with prudential measures for the operation of commercial banks. In 2006 HIP and Adria banks merged and the Oportunity, an American funded bank, was established. In 2008, the latter was acquired by Erste Bank through its Croatian branch.

In 2011, majority of banks in Montenegro were in foreign ownership. The list of banks operating in Montenegro and their ownership for the year 2008 is presented in Table 6-2 below.

Table 6-2 Banks operating in Montenegro

No	Bank Name	Ownership
1	Atlasmont banka	Foreign
2	Erste bank	Foreign
3	First financial bank	Domestic
4	Hipotekarna banka	Foreign
5	Hypo alpe-adria banka	Foreign
6	Invest banka Montenegro	Foreign
7	Komercijalna banka Budva	Foreign
8	Montenegrobanka NLB	Foreign
9	Podgorička banka	Foreign
10	Prva banka CG - osnovana 1901	Domestic

6.3 Overview of Banking Laws and Regulations

6.3.1 Kosova

In the absence of a specific law, the regulation of the banking and insurance industries in the country is governed by, respectively, UNMIK regulations No. 1999/21 and 2001/25. The Banking and Payment Authority of Kosova (BPK), in the past, and CBK, since the independence, have also issued rules and other documents to supplement or amend these regulations which remain at the core of the regulatory framework for the banking industry.[8]

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[8] There are laws like the Law on Internal Audit 03/L-128 that would have had impact on the corporate governance of banks and insurance companies, but these were passed after the survey was conducted (like this one dated 13.10. 2009) or the Law on Banks and Micro Finance

Legal Provisions for the Banking Sector in Kosova. Regulation No. 1999/21, 'On Bank Licensing, Supervision and Regulation' has been in force since 15 November 1999. It is a document comprising 53 sections covering the three areas indicated in its title. Only a few of these sections address directly or indirectly the governance of banks and other issues related to good corporate governance.

Articles 6.1(a) and 6.1(d) of 'Section 6 – License Application' under the heading 'Licensing of Banks' require from the body applying for a bank license to provide ample information regarding the qualifications and experience of administrators and persons applying to be principal shareholders or have significant interest in the bank.

Article 7.2(c) requires BPK to approve the qualifications, experience and integrity of administrators and principal shareholders before it grants a bank license. Furthermore, Section 18 demands that all persons elected or appointed as administrators of a bank must be fit and proper and of good repute and be approved by BPK prior to assuming office. However, this Article does not impose any measurable standard for a person to fulfil in order to be appointed to these positions in a new (or existing) bank.

Article 14.1 requires prior written authorization of the BPK for the transfer of equity interest among a bank's shareholders in order to prevent any person or interest group becoming a significant shareholder, i.e. owning more than 20 per cent of any class of voting shares of the bank.

Article 17.1 stipulates that each bank should be governed by a Governing Board consisting of an uneven number of members (not less than five), of which two shall be non-executive directors, and shall have an Audit Committee, a Credit Risk Management Committee and an Asset and Liability Management Committee. Articles 17.2 and 17.3 stipulate that the Governing Board should be elected by shareholders, appointed by the general meeting of shareholders and held responsible for establishing, supervising and implementing policies.

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institutions and financial non-banking organisations 04/L-093 (dated: 12.04.2012) thus will not be discussed in this chapter.

Articles 23.1–23.10 provide a wide range of advice and rules on conflict of interest for bank administrators and other employees of the bank, disclosure of information and an upper limit on the proportion of unsecured credit.

Section 30 restricts banks to enter into financial transactions with related parties or employees in a manner which would be under less favourable terms and conditions for the bank. No bank shall extend credit to or for the benefit of a person related to the bank in excess of limits established by the BPK.

Section 32 instructs banks to prepare annual financial statements which adequately reflect their operations and financial condition in accordance with international accounting standards, reflecting the operations and financial condition of its subsidiaries and branch offices, both on an individual and consolidated basis.

Section 33 provides explicit requirements regarding the role and the obligations of the audit committee and the external auditor, and the rights and obligations of the internal auditor.

Section 34 stipulates that each bank shall within thirty days of each calendar quarter publish in a national newspaper a summary of its quarterly balance sheet, and also within four months of the end of its financial year publish in a national newspaper a fair summary of its balance sheet and its auditor's opinion for the preceding financial year. Each bank shall also publish its annual report and provide free of charge copies to the public. This section was amended by Rule XXIV in September 2003.

By comparing and contrasting the rules and regulations of banking in Kosova against the OECD principles of Corporate Governance (2004) it can be seen that most of the regulations address financial reporting and disclosure corresponding to the fifth OECD principle: Disclosure and Transparency. A reasonable proportion of the regulations discussed above specify the obligations and responsibilities of key executives and shareholders as well as different committees, which corresponds to the sixth OECD principle: the Responsibilities of the Board.

Rules and regulations touch upon the areas covered by the first OECD principle—Ensuring the Basis for an Effective Corporate Governance Framework—and the second principle—the Rights of Shareholders.

The fourth OECD principle—the Role of Stakeholders—is very vaguely addressed in Amended Rule VIII, where the rights of depositors are mentioned. However, the list of stakeholders is not limited to depositors only since there are a significant number of groups that are stakeholders in a bank (e.g. employees, clients, community, etc.). What the rules and regulations of the banking industry in Kosova fail to address is the third OECD principle—Equal Treatment of Shareholders—and perhaps this should be addressed in the near future.

Another issue under discussion is the presence of non-executive executives on the governing boards (out of five, two should be non-executive directors). There is no provision requiring the presence of independent board members.

6.3.2 Montenegro

Banks and other financial institutions in Montenegro are regulated mainly by three laws. These are, the Company Law ("Sl. list RCG", br. 06/02"), the Law on Banks ("Sl. list Crne Gore" br 17/08) and the Law on Accounting and Audit ("Sl. list RCG", br. 69/05"). Each of these laws covers a vast range of companies (including the financial institutions) functioning but this report will look closely only at the Law on Banks and relevant articles addressing corporate governance from other laws.

The Law on Banks (no. 17/08). This Law governs the foundation, management, operations and supervision of banks and micro-credit financial institutions and credit unions and it governs the conditions and supervision of operations of parties involved in credit and guarantee operations. Its aim is to establish and maintain a safe and sound banking system that protects the interests of depositors and other creditors. This law was passed in February 2008. For the purpose of this chapter, this law will be examined with regards to its corporate governance provisions for banks.

The law, compared to Kosova's law and regulations is much more precise in addressing corporate governance practices.[9] Although there is an entire section labelled "Corporate Governance" encompassing articles 29 through 41, there are other articles which will affect the corporate governance of banks. These articles are:

Article 7 provides the information on who might be a founder of a bank. Article 9 addresses the qualified participation[10] in the bank and postulates that an ownership stake of 20%, 33% or 50% cannot be attained without prior approval of the Central Bank. Articles 13 and 14 explain what will happen if a bank allows qualified acquisition without the Central Bank approval and the legal consequences of such actions. Article 19 regulates the 'Shareholder's agreement' and restricts accession of new member/s to this initial agreement without the Central Bank approval.

Article 29 is about the Shareholder Assembly. This article lists the powers of the shareholder assembly which are: adopting the bank's articles of association; reviewing the annual report on the bank's operations with an independent external auditor's report; appointing and relieving from duty members of the bank's board of directors; deciding on the distribution of profits; deciding on capital increase and decrease; deciding on restructuring and closing of the bank; establishing the amount of remuneration of members of the board of directors; and deciding on other issues as specified in the bank's articles of association.

Article 30 states that a bank shall be governed by a Board of Directors which is to consist of a minimum five members (who can be foreign nationals, provided that at least one director in the board is familiar with the official language and is resident in Montenegro). At least two of them must be independent from the bank, and the meaning of independent is explained in more detail in this article. The Banking law

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[9] Kosova has promulgated a Law on Banks, microfinance institutions and non-bank financial institutions on 30.04.2012 available from: http://www.assembly-kosova.org/?cid=2,191,884 However, this chapter will be concerned only with laws and regulations in force during the period of conducting the survey, which is the year 2009.

[10] According to this law qualified participation is:
- independently or mutually with other related parties, direct or indirect participation in capital or voting rights of a legal person of at least 5%,
- possibility of making significant influence on the management, i.e. policy of a legal person based on an agreement or a contract with another party, or in any other way, regardless of the amount of participation in capital or voting rights in a bank.

allows the election of the chairman from amongst the board members provided that this person is not the executive director. Executive directors may be appointed as board members provided that the total number of executive directors is not greater than one third of the total number of board directors. The board members are elected for a period of four years and they can be reappointed.

Article 31 lists the requirements to be fulfilled by a potential board member among which is the requirement that this person should have not been employed in the Central Bank for the last 24 months (up to application). Further restrictions are related to whether an applicant has held any important post in an institution which has faced bankruptcy or administration measures. Article 32 makes it clear that a board member cannot be appointed without prior Central Bank approval and that this approval can be withdrawn if it was obtained under false information provided to the authorities.

Article 33 establishes the responsibilities of the board of directors. The list of 20 items, addressing various aspects of board responsibilities, will be condensed in this paragraph. As per this article, the board of directors should establish and maintain the system of managing risks; review the annual report on the bank's operations with an independent external auditor's report. Article 33 lists the responsibilities of the board of directors, which include, among others: appoint and relieve from duty members of the bank's board of directors; decide on the distribution of profits; decide on capital increase and decrease; decide on restructuring and closing of the bank; establish the amount of remuneration of members of the board of directors. Among other board responsibilities, Article 33 mentions the adoption of the internal audit annual plan and internal audit reports; establishing the bases of the internal control systems adequate to the size, complexity of operations and the level of assumed risk; reviewing the Central Bank's examination reports; appointing executive directors and other persons responsible for managing the bank's operations and set their salaries; elect the bank's external auditor; appoint members of the audit committee; review annual reports of the audit committee; prepare proposals of decisions to be approved by the Shareholders' Assembly and ensure their implementation; passing of the bank's general acts, except those passed by the Shareholders' Assembly; establishing the code of conduct for the bank employees; approving the introduction of new products and services of the bank;

convene meetings of the Shareholders' Assembly; and performing other duties specified in the law and the bank's articles of association.

Article 34, like Article 33, is named "Responsibilities of the Board of Directors" and lists other responsibilities for board members: ensuring that the bank's operations are in compliance with the law, the Central Bank's regulations and the bank's internal policies and procedures, as well as that all measures imposed by the Central Bank are implemented. The board is made responsible for the operational safety and financial stability of the bank and for the accuracy of all operating reports of the bank that are published and submitted to the Shareholders' Assembly, the Central Bank and competent authorities.

Article 35 regulates the meetings of the board of directors. This article stipulates that board meetings can be held as frequently as needed, subject to a minimum of once a month. Other aspect of convening the meeting such as deciding whether there is quorum, the proportion of votes by which a member can be removed, and dealing with situations of conflict of interest are addressed under this article too. Finally, this article stipulates that the Central Bank can call an extraordinary board meeting to address issues related to bank's stability and safety.

Article 36 stipulates that banks in Montenegro should have executive directors and lists their main duties while Article 37 lists the requirements for a candidate to be considered for the position of the executive director among which are the possession of the University Degree and the relevant experience in the field. This article stipulates that foreign individuals can be appointed in executive director positions; however, two of them must be familiar with the official language used in Montenegro and have to reside in Montenegro during the period of performing their duties.

Article 38 regulates powers and responsibilities of executive directors. Article 39 postulates that the audit committee shall be comprised of three individuals not related to the bank other way than the audit committee and who should be experts in the field of finance. Article 41 addresses compliance monitoring function of the unit within a bank which should be concerned with the compliance of bank operations with laws and

regulations in power and paying special attention to provisions against money laundering and financing of terrorism.

In addition, the Company Law (no. 06/21), which is applicable to all companies including banks unless regulated differently by a specific law, in Article 34 allows for the same person to serve as the Chairman and the CEO. Article 37 item 3 of the same law postulates that shareholders with minimum 10% of shares can add items to the agenda of AGM. These two articles can have direct impact on corporate governance practices of banks in Montenegro.

6.4 The 2009 Survey

Although in both countries there are legal provisions for good corporate governance, there was little empirical evidence as to the degree of implementation and compliance or the effectiveness of these provisions. It was therefore decided to investigate the state of compliance with the OECD Principles through a bank survey.

The survey questionnaire was designed to investigate the compliance of the surveyed entities with OECD corporate governance principles and was adjusted to suit both banks and insurance companies in Kosova and Montenegro. It was addressed to the top management and the chairperson of the board with the assumption that they would be best prepared to provide accurate answers. Because of the high importance of the targeted respondents within their organisations, the design of the questionnaire took into account the value of these people's time, reducing the number of questions to an absolute minimum so it would not take more than 20 minutes of the respondent's time. For this reason, most of questions asked were multiple choice or 'yes/no' questions. Also, the questionnaire was prepared in English and translated into Albanian and Montenegrin languages to ensure that the respondents communicated in their mother tongues.

The questionnaire consists of 85 questions which are designed to get some general information about the institution and the respondent, as well as more detailed responses regarding their compliance with the OECD principles. Since the first principle, 'Ensuring the Basis for an Effective Corporate Governance Framework' essentially deals

with the legal and regulatory aspect of the environment in which firms operate, and it falls upon the respective states and their regulatory bodies to ensure the best possible conditions for individual companies, this aspect was considered invariant across observations in each country and thus not included in the questionnaire. Five remaining OECD principles which are: ii. The Rights of Shareholders and Key Ownership Functions; iii. The Equitable Treatment of Shareholders; iv. The Role of Stakeholders in Corporate Governance; v. Disclosure and Transparency; and vi. The Responsibilities of the Board, are addressed with the respective questions, according to the key to the questionnaire shown in Table 6-3 below:

Table 6-3 Questions covering five OECD principles

OECD Principle	Corresponding questions
II	6; 9-13; 20-28; 44-45.
III	46-54; 60-61.
IV	55-59.
V	7-8; 29; 37-38; 62-84.
VI	14-19; 30-36; 39-43.

The approach to getting the respondents to answer the questionnaires was different in Kosova and Montenegro. In Kosova, this survey was complementary to the final phase of a project conducted by the RIINVEST Institute for Development Research and an agreement was reached to share resources and findings.[11] The intention was to interview the chairperson of the board and the CEO separately. In many cases only CEOs were interviewed and only in few occasions it was possible to interview the chairperson of the board (domestic banks/insurance companies). The survey produced 16 interviews in Kosovo, 8 from the banking sector and 8 from insurance companies. The 8 questionnaires from banks covered 6 banks and the 8 questionnaires from the insurance industry covered 7 companies.[12]

In Montenegro the process of distributing the questionnaires and getting the CEOs to respond was much better organized. This was possible due to the fact that the survey

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[11] The process of interviewing respondents would have been extremely difficult without the help of the RIINVEST institute as they were able to use their resources to arrange appointments and share the workload for interviews. Because of potential conflict of interest (as a member of the management of an insurance company in Kosova), I personally was not involved in interviewing any of the insurance companies in Kosova.

[12] For two banks and one insurance company in Kosova it was possible to interview both the chairperson and the CEO.

was made a part of an ongoing project on corporate governance of banks by the Montenegrin Central Bank.[13] All ten banks in Montenegro responded to the survey thus giving us the whole population of banks. However, in contrast to Kosova where the central bank supervises insurance industry also, in Montenegro it is the independent Insurance Supervising Agency and the same approach to ensure response by submitting the questionnaire via the supervising authority, was unsuccessful and therefore there are no insurance companies in the Montenegrin sample.[14] Also, it was not possible to conduct interviews with Montenegrin stakeholders, thus, the next section contains only interviews of Kosovar ones.

Interviews with stakeholders. In this survey, in addition to banks and insurance companies, other relevant stakeholders such as the Kosova Chamber of Commerce (KCC), and Central Bank of Kosova (CBK) have been interviewed. On behalf of KCC, the head of the Department for Economic Analysis and Policies has been interviewed while in the CBK it was the deputy governor and the head of banking supervision. They were asked for their opinions in respect of: board functionality and quality; relationship of Financial Institutions (FIs) with stakeholders; protection of shareholders' rights and related party issues; and whether FIs in Kosova comply with OECD principles of Corporate Governance.

In respect to first area, functionality and quality of boards, the KCC representative focused more on experiences that accompanied the setting up and functionality of banks and referred to corporate governance as the main problem at the time. Poor division of functions and responsibilities among governing bodies was particularly symptomatic to local banks. Arrival of foreign banks has introduced better corporate governance practices to the market according to the KCC representative. The CBK representatives referred to the current regulation and emphasized the application of "fit

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[13] I am greatly indebted to my fellow PhD Student Zorica Kalezić who implemented the survey in Montenegro and who allowed me to use the results.

[14] Several meetings were held with representative of the Albanian and Macedonian central banks in the attempt to engage them in this survey and disseminate and collect the questionnaires in their respective countries, but these attempts failed to produce any results. However, once more, I express my gratitude to fellow PhD students (former and current) for their assistance in setting up these meetings with relevant people within their respective institutions (Petrit Gashi, Valentin Toçi, Fatmir Besimi, Viktorija Atanasovska, Natasha Trajkovska, Erjon Luci, Hilda Shijaku, Igor Velickovski).

and proper" criteria as one of the important factors impacting positively the functionality and quality of boards. The processing of information for persons applying for board members and senior management positions involves a network of agencies outside CBK like Financial Intelligence Unit (FIU) that used to operate as a UNMIK 'agency'. For foreign banks, the information is verified with respective institutions of the 'parent' country. For Insurance Companies the criteria are stricter since the mid-level management such as unit directors, are subjected to these procedures too. The CBK representatives stated that independent board members undergo same procedures before being approved by the CBK.

Asked about their opinions regarding the relationship of Financial Institutions with their stakeholders such as depositors, employees, community et cetera, the KCC representative thinks that communication among these actors is still at an unsatisfactory level. The CBK representatives suggest that the relationship of Financial Institutions and stakeholders is condensed to quality of reporting and disclosure. There is a "reporting framework" which all Financial Institutions have to follow as well as there are strict regulations regarding the publishing of audited reports and financial statements. In additions, all banks and insurance companies have to disclose in their websites their interest rates and premium tariffs respectively, while for foreign banks the requirement is to publish their financial reports also for the whole group to which they belong. This increases the transparency of Financial Institutions towards their stakeholders, according to CBK representatives.

Protection of shareholders' rights and related party transactions should be regulated by law was the opinion of KCC representative. The CBK representatives confirmed that there is a clear definition of what is considered a related party transaction, and there are limits in place as far as the amounts of loans for bank management and employees are concerned. A crucial point in this aspect is the division of the post of CEO and Board Chairman which contributes to the independence of these two positions. CBK representatives emphasized that due to the reporting requirements, banks have to submit reports of the amount of "loans to management" on monthly basis.

Finally, when asked whether they think the OECD principles on corporate governance are being implemented the KCC representative replied that it might be partially, due to

regulation which touches upon these principles, but there is room for improvement. According to CBK representatives, all insurance companies comply with these principles since International Association of Insurance Supervisors (IAIS) operates according to OECD principles. Banks however, are not required to comply with OECD principles since the regulation is based upon Basel Committee Principles for corporate governance. Through "advisory letters" CBK has adapted the Basel principles for the Kosovar market. In future, implementation of Basel II is aspired and this is expected to increase the management standards and improve corporate governance.

After receiving all the questionnaires, the information obtained was processed and the results are presented and discussed in the following section.

Survey Results. The survey of the banks and insurance companies operating in Kosova was carried out between the last week of December 2008 and the first week of February 2009. Interviews were held with 16 persons, representing the boards or the management of six banks (out of eight) and six insurance companies (out of ten). The survey was conducted in Montenegro in October 2009. The results of the survey according to the five OECD principles will be discussed now.

6.4.1 The Rights of Shareholders and Key Ownership Functions

The OECD's second principle of corporate governance states that 'The corporate governance framework should protect and facilitate the exercise of shareholders' rights'. The questions and results from the present survey related to this principle are summarized in Appendix 6-3, which reports that banks in Kosova have on average 18.5 shareholders and insurance companies 2.1. The Montenegrin banks have on average 237 shareholders. The main method used to announce shareholders' meetings is through email: two thirds of banks and the majority of insurance companies use this tool, though some use the public media and more traditional means, such as phone or written notification by post. In Montenegro, two thirds of banks use the public media to announce shareholders' meeting and few use email notification of written notification by post.

One third of banks surveyed announce their general meetings one month in advance, another one third two weeks in advance and one bank makes its announcement of the general meeting only one week in advance. Half of the insurance companies announce the shareholder meeting one month in advance, one a fortnight in advance and another company only one week in advance. In Montenegro most banks announce the shareholder meeting 1 month in advance, but there is one that announces two weeks ahead of time, and another one that announces only one week ahead.[15] Along with the announcement of time and place of the general meeting all banks publish the agenda and the material to be approved in the meeting. Only half of the insurance companies follow this practice. Few Montenegrin banks publish some additional information.

To put an item on the agenda of the general meeting, half of the banks in the survey require 50%+1 of the shares or votes and one third require 25 per cent or fewer shares or votes (with some banks requiring as little as 10%). On the other hand, only one third of insurance companies require 50%+1 shares to put an item on the agenda of general meetings; the other two thirds of respondents did not reply to this question. Most of Montenegrin banks require 5% of votes but there is one that requires 10% and another one 100% (see footnote 15).

Electing or removing board members requires 50%+1 of shareholders' votes in half of the banks, with one bank requiring 100 per cent. Two banks did not respond to this question. For insurance companies half of the respondents did not reply to this question, one third require 50%+1 of shareholders' votes and one company requires 100 per cent of shareholders' votes. Seven Montenegrin banks require 5 per cent, two require 50%+1 and one bank 100% (see footnote 15). Attention is drawn here to the 5 per cent shareholders' votes required to elect or remove board members which is very low and could potentially increase the turnover of board members significantly rendering the board unstable and eventually not functional. However, since these are the responses received from the bank, they are reported here with the caveat that the question might have been misinterpreted or misunderstood.

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[15] This study assumes that the bank that announces one week ahead of the shareholder meeting is the bank that has a single shareholder.

For amending their statutes half of the banks and insurance companies require the approval of two thirds of shares, one third of banks require the approval of all the shareholders, while one third of insurance companies require either one third or 50%+1 of shareholders' votes. In Montenegro two banks require two thirds of the votes, two require 50%+1, one requires 100%, another one requires 10% and four banks require 5%. Same reasoning as in the previous paragraph is applicable here regarding the low percentages required by Montenegrin banks for amending statutes. To approve mergers or takeovers, half of banks require two thirds of shareholders' votes, one requires the approval of three-quarters and one all shareholders' votes. In Montenegro eight banks require two thirds of the votes, one 50%+1 and another one the approval of all shareholders. For insurance companies, two thirds of them require two thirds of shareholders' votes and one requires three-quarters of shareholders' votes.

These findings suggest that shareholders are informed properly and in a timely manner about their rights. Also, there are indications that these rights are respected, with shareholders able to exercise their key functions. These results indicate that compliance with the second OECD principle is at acceptable levels. Once more, attention is drawn to the ability of minority shareholders to exercise excessive powers in some Montenegrin banks with respect to appointing or removing board members, and changing the statutes of the bank. In addition, this should be treated with caution as a significant proportion of questions in this section did not receive any response from representatives of Kosovar banks or insurance companies, or both.

6.4.2 Equitable Treatment of Shareholders

The OECD third Principle of Corporate Governance, regarding the equitable treatment of shareholders, states, 'The corporate governance framework should ensure the equitable treatment of all shareholders, including minority and foreign shareholders. All shareholders should have the opportunity to obtain effective redress for violation of their rights.' Through the present survey these statements as applied in Kosova and Montenegro were tested, and the results are summarized in Appendix 6-3.

The survey results indicate that the issue of minority shareholders in Kosova and Montenegro is not of great importance. This most certainly is due to the fact that there

is no stock exchange in Kosova where shares can be floated and traded. Not surprisingly this has limited the number of shareholders, shown from our survey to be a maximum of 40 (Appendix 6-3). Such a small number of shareholders have ameliorated the problems of minority shareholders. This however is not the case with Montenegro which has a Stock Exchange since 1993 though it is not as active as stock exchanges in developed countries, thus the results are fairly similar in both countries. But the existence of the stock exchange has impacted the number of shareholders as there is a bank with 237 shareholders in Montenegro (Appendix 6-3).

The way these institutions deal with minority shareholders' concerns depends on whether these are foreign banks or local banks. The foreign banks act according to the corporate culture and laws of the country of the parent bank to address and deal with such concerns, while the local banks appear not to have a formal mechanism, or at least one that the survey was able to identify.

One half of respondents did not reply to the question 'How do you address and deal with minority shareholder concerns?' in Kosova while the other half gave answers indicating that there was no explicit mechanism for dealing with minority shareholders' concerns. In Montenegro there was one bank that didn't respond (see footnote 15) while the remaining banks in the sample reported that there has never been any minority shareholder problem so far.

Some answers indicate that there is an 'agreement' amongst large and minority shareholders conjoined by the right to delegate their votes. In the case of one bank there is a minority shareholder representative on the board, while another answered that it was possible to discuss openly all the issues at the Annual General Meeting (AGM), and for some banks all decisions taken up to now have been agreed upon by consensus.

What these answers do not provide is what happens if a minority shareholder has a concern, i.e. whether his rights are being violated. Open discussion at the AGM might provide a way to voice one's concerns and this method gives one the opportunity to appeal to the other shareholders, but this is where the issue ends. The fact that all

decisions have so far been taken by consensus is no guarantee that they will be in the future.

There are even fewer shareholders among Kosovo's insurance companies than among its banks, with a maximum of four, and an average of 2.1, shareholders per company. The fact that one third of companies interviewed in our survey are owned by one shareholder, and another one third by two shareholders, means that the problem of minority shareholders is mitigated. This is accentuated by the fact that the companies owned by two, three or four shareholders were often one of several other businesses that these people had set up jointly in the past. Hence, there is a degree of trust and mutual understanding among them that has developed over time, even if one were to hold more shares than any other shareholder or even group of shareholders. It is important to emphasize this situation because even if a shareholder were to hold a majority of shares in an insurance company for example, he or she might not do so in other joint businesses. Thus the incentive to abuse the minority shareholders' rights is minimized. This situation is indicated by the answers given in our survey to the question 'How do you address and deal with minority shareholder concerns?' Only two thirds answered the question, and did so along the lines of, 'Their interests are taken into consideration,' or, 'All decisions are taken by consensuses.'

Voting in absentia is possible in the majority of Kosovar banks and all Montenegrin ones, and there appears to be no cost for using this method, which provides shareholders with an already established alternative when exercising their voting rights. However, the insurance companies were more reserved than banks over the issue of proxy voting. Only a few of them answered that it was possible to vote in absentia. One reply was negative and the others did not have a view on this issue, responding that they 'have never had to deal with such situation'.

To summarize, the survey found no indication that banks and insurance companies treat their shareholders inequitably. If anything, as seen in section 6.4.1 of this chapter, minority shareholders are positively discriminated in certain instances. Nevertheless, it is of concern that there are no mechanisms in place to protect minority shareholders. Although it is comforting to know that there have been no cases of abuse of minority shareholders' rights reported for the period when the survey was conducted, absence of

relevant rules or regulations might give rise to such behaviour in the future. The respective governments and their regulatory bodies should act proactively to guide banks and insurance companies to implement appropriate procedures which address equitable treatment of shareholders fairly.

6.4.3 Role of Stakeholders in Corporate Governance

A stakeholder is a person or a group of people that stand to affect or be affected by the actions of a company. The 2004 OECD fourth Principle defines the role of stakeholders as follows: 'The corporate governance framework should recognize the rights of stakeholders established by law or through mutual agreements and encourage active cooperation between corporations and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises'.

The issue of stakeholders in the banking and insurance industries in Kosova and Montenegro is not fully regulated. There are certain groups of stakeholders such as employees whose rights are regulated by labour laws, and depositors who are protected by laws and regulations constraining risk exposure of banks, but in general it is up to the individual companies to address the stakeholders as they see fit, which has led to a situation where stakeholders are addressed mainly for public relations purposes. The survey reflects the fact that there is no legal requirement in place, particularly for employees in Kosova as the Labour Law was promulgated mid-2010. Appendix 6-4 reports the survey's findings on the role of stakeholders.

When asked to identify stakeholders for their companies, all banks picked borrowers, depositors and the community, and the majority also chose employees. In contrast only one insurance company gave 'the insured' as a stakeholder, and one gave 'employees' and 'the community': the majority of insurance companies chose not to answer this question. This was the case also with the Montenegrin banks where four out of ten did not reply to this question. Although the majority of banks selected employees as stakeholders, all responded negatively to the question of whether they have an employee representative on the board. The same answer was given by the majority of insurance companies too.

It was expected that, due to lack of regulation, the majority of banks do not have deposit insurance, and this was the case in Kosova with five of them, with only one, a branch of an international bank, replying positively. The situation was different in Montenegro where seven banks indicated that they have deposit insurance.

6.4.4 Disclosure and Transparency

The OECD fifth principle on transparency and disclosure states the following: 'The corporate governance framework should ensure that timely and accurate disclosure is made on all material matters regarding the corporation, including the financial situation, performance, ownership, and governance of the company'.

In the present survey, all the Kosovar banks and insurance companies replied positively to the question about the publication of financial statements and operating results, but only eight Montenegrin replied positively while the remaining two did not select any of the options (See Appendix 6-5). This was to be expected as such publication is required by the rules and regulations governing these industries (for the two banks not answering the question, it is assumed that it was due to a human error, such as m the question during the process of providing responses to the questionnaire).[16] However, a different response was given when the question concerned the publication of strategic objectives. About one third of the banks and most (more than two thirds) of the insurance companies do not publish their strategic objectives. Also eight banks from Montenegro responded negatively and only two positively to this question.

The survey findings emphasized that publication of names of major shareholders is an unregulated matter and it is up to individual institutions to decide whether to publish the names or not. Nevertheless, all Kosovar respondents replied positively to the question, 'Do you publish the names of your large shareowners?' However, there were differences among the banks in terms of the threshold before declaring a shareholder. The majority of respondents either did not provide an answer or were unsure whether there is a set limit of ownership before an owner have to be declared. However, while

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[16] For the banking industry it is UNMIK Regulation No. 1999/21, sections 28, 32, 35, 36 and Amended Rules XI and XXIV, while for the insurance industry it is UNMIK Regulation No. 2001/25 provisions 50.1, 50.2, Rule 7 and Rule 8.

one responded that all shareholders are listed on their web page, another replied that they declared only the eight largest shareholders; the third respondent's answer was that seven per cent ownership is necessary for an owner to be declared. Three of Montenegrin banks do not publish their large shareholders while the other seven do. Of all insurance companies interviewed, only one gave an answer, replying negatively to having a threshold for declaring a shareholder. The low level of response from the insurance industry may again be explained by the small number of shareholders (from one to four) and perhaps the respondents assumed that it is obvious that all shareholders are disclosed.

According to the survey results, Kosovar banks are quite transparent when it comes to publishing information about their board members.[17] Two thirds of the banks responded positively to the question about publishing such information. Out of those one third publish full CVs and the qualifications of their board members; one half of banks publish information on the qualifications of their board members in addition to their CVs. Some banks publish a short biography in addition to the qualifications of their board members. However, the fact remains that one third of Kosovar banks in the survey do not publish any information on their board members, while none of the banks in the sample publish any information on remuneration of the bank managers or board members. In Montenegro the situation is different. Only half of the banks publish information on their board members out of which on publishes the CVs of board members, one in addition to CVs publishes the qualifications of the board members, and the remaining three publish other company directorships. Half of the Kosovar banks and insurance companies in the survey disclose to the regulatory authority the remuneration of both board members and managers, with the other half considering this information confidential. Four out of ten banks in Montenegro disclose this information (three only to the relevant authorities) while the remaining six do not disclose such information.

A similar situation applied to the insurance companies: although two thirds publish some information on their board members, the information consists of only their names and percentage of ownership. One company responded that only a short profile of the

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[17] The question was asked whether any (or all) of the following information is published: full CV; qualifications – other company directorships; selection process; remuneration.

board member is published.[18] The survey also shows that neither banks nor insurance companies publish information regarding the process of selecting their board members, or information regarding other directorships.

Perhaps, the most controversial result of the survey was the fact that all Kosovar banks responded negatively to the question of the presence of independent board members despite the fact that Regulation 1999/21 section 17 states that two of the board members should be non-executive directors. In this respect, insurance companies were different from banks with two-thirds having independent directors on their board, though this still leaves one-third that responded negatively to this question. Seven of Montenegrin banks responded positively to having independent board members on their boards, two negatively and one bank did not provide any response to the question.

In respect to related party transactions, most banks in both countries replied positively to having policies on dealing with companies in which board members or managers are important shareholders or employees. The response from insurance companies to the question on related party transactions was similar. Interestingly, only one Kosovar bank responded negatively to the question of whether there are procedures in place addressing related party transactions while the other five banks responded positively; the insurance companies also had one negative response to this question but the other companies chose not to respond.[19] The responses from Montenegrin banks were split down the middle with five responding positively and five negatively.

Regarding disclosure and publication of financial information, all banks use a combination of international and local accounting standards, while insurance companies use only international accounting standards. The frequency of disclosure of information is regulated for both banks and insurance companies, and it is also required by the

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[18] We have found that one insurance company publishes the names of board members while another company publishes the name and ownership percentage of its two shareholders (which are two of five board members). Once again, we were unable to find any further information in respect of board members of insurance companies

[19] In 2004-2005 the issue of related party transactions emerged as a serious problem. The failure to implement sound standards in corporate governance has led to serious problems in at least two Kosovar banks, one of which, Credit Bank of Prishtina, went bankrupt in 2004. The main problem appeared to be the conflict of interest of certain BoD members in these banks through the issuing of credits for their own or related businesses and subsequent failure to repay these debts.

regulations to publish audited reports in a timely manner in national newspapers.[20] All banks in the survey publish operating results on their own website, though some publish in national newspapers only their balance sheet. One-third of banks in the survey responded that they contract a different independent auditor every three year with the other two-thirds doing so every five year. The independent auditor in all banks reports to shareholders (AGM) and for half of banks in the survey it also reports to the BoD. Publishing of audited reports is different for insurance companies since this is not regulated as it is for banks. All insurance companies in our survey publish their reports on their web sites and only a few also publish this information in their annual report. When appointing a new independent auditor, one-third replied 'every six months', another third replied 'every year', and the remaining one-third replied 'every five years'. Attention is drawn to the fact that the response of one third of insurance companies appointing a new independent audit is every six months. This raises the suspicion that the question was misinterpreted for internal audit activities. In the case of insurance companies, the survey found that the independent audit reports to the BoD in approximately 85 per cent of cases, with the remaining 15 per cent additionally reporting to the CBK and to the shareholders.

To summarize, from the results of the survey it appears that banks and insurance companies are very diligent about issues related to transparency and disclosure that are imposed by laws or regulations, though in general banks publish more information than insurance companies. Perhaps the fact that the regulatory bodies have paid attention to this issue has resulted in better compliance with the OECD principle. However, the survey showed that respondents were reluctant to publish information regarding the remuneration of managers or board members.

6.4.5 Responsibilities of the Board

Principles of corporate governance place a heavy responsibility on company boards, even though in some cases they do not take this responsibility seriously.[21] The quality of a company can often be judged by the quality of its board (Rezaee, 2009). The sixth

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[20] UNMIK Regulation No. 1999/21, Section 34.

[21] Such a case was Banka Kreditre e Prishtines which was closed by the CBK in March 2006 due to a number of problems including related parties dealings of board members.

OECD Principle highlights the role of the board: 'The corporate governance framework should ensure the strategic guidance of the company, the effective monitoring of management by the board, and the board's accountability to the company and the shareholders.' Appendix 6-6 summarizes the findings of the present survey in terms of board functioning.

Attendance of board members in board meetings was very good for Kosovar banks (100%) and relatively good for insurance companies (two thirds have between 80% and 100% participation). The Montenegrin banks did not match their Kosovar counterparts as only half of them reported 100% participation, one reported over 80% and the remaining banks reported over 50% participation. Although half of the banks did not have a system of penalties for non-attendance, the rest had quite severe measures in place: e.g. if a board member fails to attend three meetings (in one bank's case it is two meetings), the board chairperson may request his or her replacement. A majority of Montenegro's banks (6) do not have a system of penalties for non-attendance. For insurance companies, the situation was slightly different, with only one applying penalties for non-attendance and three not doing so, with the other companies not responding. (The penalty for non-attendance was that the per diem payment would not be made – hardly a penalty.)

Bank BoDs seem to have met more often during 2008 than did those of insurance companies. Three Kosovar banks had twelve or more board meetings, with the rest meeting on a quarterly or bimonthly basis. The average for all Montenegrin banks is 15.2 indicating that in Montenegro banks tend to meet more often than in Kosova. The majority (5) of insurance companies met on a monthly basis during 2008, with only one meeting more than once a month.

All banks replied to the survey questions of whether their boards deal with corporate strategy, major action plans, risk policy, annual budget, and a business plan. All insurance companies responded that their boards deal with corporate strategy, major action plans, and risk policy, with two replying that their boards also deal with an annual budget and a business plan. Half of the banks have their corporate strategy approved by the board for a three-year period and five years for the other half. One third of

insurance companies approve their corporate strategy for a period of three years and the other two thirds do so for five years.

All banks and insurance companies, with the exception of one Montenegrin bank, declared that their boards set performance objectives for management. The performance objective most frequently used by the boards was the 'market share', but quite often 'number of clients' was used as a performance target too. Boards of banks also use qualitative and quantitative performance criteria such as the quality of the portfolio, the proportion of projects implemented successfully, the achievement of set goals (such as increase in deposits), development of certain lines of business, etc. Other objectives used by boards of insurance companies are not as elaborate as those used in the banking industry. Only one insurance company mentioned 'development and training of staff' and 'creativity' as performance objectives.

The situation proved to be different when the question was asked whether there were performance objectives for board members. Only half of Kosovar banks and one Montenegrin bank in the survey responded positively to this question. One third of insurance companies responded positively too. Performance objectives for board members included finishing projects on time, increase in the bank's overall profit, increase in the number of clients, achievement of objectives as set in the short- and medium-term plan, etc. For insurance companies the target was the fulfilment of plans on time.

For the majority of Kosovar banks (5) and three Montenegrin banks in our survey, monitoring the implementation of strategic plans and corporate performance and overseeing major capital expenditures are conducted jointly by the BoD and management. Seven Montenegrin banks have responded that it is only the BoD that monitors the above mentioned processes. In the remaining Kosovar bank this is done by the internal audit committee while one Montenegrin bank reported that the AGM in addition to BoD monitors the processes. For two thirds of insurance companies it is the BoD alone that deals with these issues and for the remaining one third of companies the BoD and management jointly monitor implementation of strategic plans and corporate performance, and oversee major capital expenditures.

Banks in the survey appear to have more committees and better qualified members than insurance companies. All Kosovar banks and eight out of ten Montenegrin banks have audit committees, in contrast to only five insurance companies; some Kosovar banks have remuneration and appointment committees while insurance companies have neither of these; all Kosovar banks and nine out of ten Montenegrin banks have a risk management committee in contrast to one third of insurance companies having one. Some banks have other committees such as Asset/Liability Management Committee (ALCO) while some insurance companies have committees such as claims evaluation committee, underwriting committee, committee for evaluation of training needs, etc.

Finally, the boards decide on corporate governance practices of the majority of banks and insurance companies. The survey found the implementation and monitoring of these practices is very similar for both industries. Reports from different levels of management, as well as from the internal audit person or committee are used to monitor and implement corporate governance practices. However, the impression from at least some of the interviews was that board members need more insight about higher standards of corporate governance and OECD principles, especially concerning the relationships among shareholders, BoD and management.

To sum up, according to the survey shareholders are informed properly and in timely manner about their rights, and they are able to exercise their key functions. The banks and insurance companies appear to treat their shareholders equitably (in the sense that minority shareholders are not negatively discriminated) but not always diligent about issues related to transparency and disclosure beyond legal requirements. This is especially the case of disclosure of remuneration for board members and managers. There are slight differences in how bank boards and insurance company boards work as bank boards tend to have more committees and better qualified members. The survey also picked up few issues that deserve attention by the respective authorities. Namely, it became known that a few Montenegrin banks have granted excessive rights to minority shareholders in some cases. In neither Kosova nor Montenegro there are any mechanisms to protect minority shareholders. Another failure in complying with OECD

principles is the lack of attention to some stakeholder groups. This is symptomatic of both industries in both countries.

6.4.6   The Corporate Governance Score - CGS

The information gathered via the survey offers more than what was presented in the section above narratively. The questionnaires ask most of the questions in such a way that allows quantifying the answers which then can be computed to produce a value for each surveyed entity. There are many ways to decide what value to assign to a particular response, but this study uses an approach similar to Gompers et al. (2003) where a value of 1 is assigned to a practice which is considered to be in line with laws and regulations and promotes good corporate governance practices and 0 to practices that do not. The precise description of the responses to each question which would be assigned the value of 1 is explained in Appendix 6-7.

A simple adding up of the values assigned to each of the 62 questions shows that the total Corporate Governance Score (CGS) can be ranging from 62 to 0 with 62 representing the ideal company with best corporate governance practices on all observations. Also, using the information in Table 6-4 it is possible to quantify the ideal values for each of five OECD corporate governance principles. Table 6-4 below presents this information in two formats, the actual score as calculated by the values assigned to each response and by normalising the results to 100 for ease of interpretation.

Table 6-4 Maximum Calculated (and weighted) Score

	Actual Score	Weighted score
Maximum Score for all questions	62	100
Maximum Score for questions on OECD Principle 2	14	23
Maximum Score for questions on OECD Principle 3	5	8
Maximum Score for questions on OECD Principle 4	3	5
Maximum Score for questions on OECD Principle 5	26	42
Maximum Score for questions on OECD Principle 6	14	23

Table 6-5 shows the corporate governance scores for the Montenegrin and Kosovar financial institutions, allocated on the basis of responses to the survey questions. Due to the sensitivity of the data upon which the Corporate Governance Score is calculated, this study will present the results for the surveyed entities by replacing the names of banks

and insurance companies with numbers - KBi (i=1,2,…,6) for Kosovar Banks, KIi (i=1,2,…,6) for Kosovar insurance companies and MBj (j=1,2,…,10) for Montenegrin banks.

Table 6-5 Corporate Governance Score of Surveyed Institutions

Company	Weighted CGS	Company	Weighted CGS
MB1	58	KB2	47
MB2	55	KB3	60
MB3	61	KB4	66
MB4	71	KB5	58
MB5	74	KB6	66
MB6	68	KI1	44
MB7	50	KI2	66
MB8	55	KI3	58
MB9	63	KI4	40
MB10	68	KI5	45
KB1	68	KI6	40

The findings presented in Table 6-5 reflect the reality observed at the time of the survey. Montenegrin banks have scored slightly higher (highest CGS=74; lowest CGS=50; average CGS=62) than Kosovar banks (highest CGS=68; lowest CGS=47; average CGS=61). It can be argued that better legal framework in Montenegro has provided better guidance to banks in building and maintaining their corporate governance practices. A similar statement can be made with regards to Kosovar insurance companies as compared to Kosovar banks. Insurance companies have scored lower than banks in both countries (highest CGS=66; lowest CGS=40; average CGS=49) and once more this can be attributed to poor legal framework and supervision of this industry in Kosova. The statistics mentioned above seem to capture the importance of the first principle of OECD Corporate Governance. Broadly speaking, it appears that

Montenegrin banks, which operate in better legal framework, have outscored Kosovar banks and insurance companies, which operate in poorer legal framework.

Similar analysis can be drawn for each of the five OECD corporate governance principles (P_i, *i=2-6*). Table 6-6 below present the corporate governance sub-scores for five Principles.

Table 6-6 Corporate Governance Sub-Scores

Company	Weighted CGS	P 2	P 3	P 4	P 5	P 6
KB1	68	16	8	2	26	16
KB2	47	6	0	2	26	13
KB3	60	16	5	3	21	15
KB4	66	16	6	2	24	18
KB5	58	11	2	2	27	16
KB6	66	15	8	2	31	11
KI1	44	8	2	3	18	13
KI2	66	15	5	2	29	16
KI3	58	16	3	2	23	15
KI4	40	10	3	3	16	8
KI5	45	5	5	2	23	11
KI6	40	5	3	2	19	11
MB1	58	13	5	2	24	15
MB2	55	11	6	2	24	11
MB3	61	18	5	2	27	10
MB4	71	15	5	2	35	15
MB5	74	19	6	3	29	16
MB6	68	15	8	0	24	21
MB7	50	15	5	0	19	11
MB8	55	16	6	0	21	11
MB9	63	11	5	3	34	10
MB10	68	15	8	2	27	16

These findings show that respective authorities should pay attention particularly to P3 – equitable treatment of shareholders where one Kosovar bank has a CGS sub-score of 0, and P4 - The role of stakeholders in corporate governance where three Montenegrin banks have a CGS sub-score of 0.

The normalised CGS to 100 (%), compares the achieved CGS as compared to the ideal company i.e. MB5 in Table 6-6 has achieved 74% of corporate governance practices quality (similarly KI6 has only managed up to 40% of the ideal company). This means that on average across the board, the entities have only managed to reach 58% of quality of corporate governance as compared the ideal company which highlights the need of these companies to invest in improving their corporate governance practices.

To summarize, the findings suggest that when better legal framework is in place, the banks and insurance companies appear to have better corporate governance practices in place. Also, the findings indicate that in both countries there are aspects of corporate governance that need to be better regulated by law or regulations such as the equitable treatment of shareholders, and the role of stakeholders.

6.5 Empirical Investigation

The information gathered via the survey which led to rating corporate governance of surveyed banks and insurance companies creates the opportunity to test the relationship between corporate governance and performance or valuation of financial institutions, which this thesis has been concerned with, in the context of banks in Kosova and Montenegro.

A model similar to that used in chapter 4 and chapter 5 can be constructed and estimated for this purpose. The information available allows the use of a measure of performance, return on equity, and the corporate governance score explained in the previous section (6.4.6), and few variables to control for size and industry. However, the estimation is constrained by the small number of observations. This makes the estimation process very difficult and limits the model in terms of the number of variables that can be included.

Return on Equity (ROE; lower case in the empirical specifications, *roe*), as a measure of bank performance has many positive properties but, in the context of the observations used in this chapter, amongst the most important ones are the straightforward relationship with profitability and availability (it was found that banks and insurance companies often report ROE but, even when they do not, it is very easy to compute the

ratio from the available accounting data). In simple terms, ROE measures a corporation's profitability by indicating how much profit a company generates with the capital that shareholders have invested. ROE is therefore an appropriate indicator of performance, the dependent variable in the corporate governance-performance relationship. The preferred model is specified as follows:

$$lnroe = \beta_0 + \beta_1 CGS + \beta_2 assets + \beta_3 db + \varepsilon$$

Lnroe – is the returns on equity in the natural logarithmic form and is calculated from the published information of banks and insurance companies by dividing the net income at the end of the year by the shareholders equity. Also, in the literature, there are a number of studies that use ROE as a measure of performance (Brown and Caylor 2004, 2006; Trayler, 2007). The log-lin form is chosen to satisfy the diagnostic requirements of the estimation procedure.

CGS – the corporate governance score.

Assets – represent the assets of the surveyed institutions as presented in their respective financial reports.

db – is a dummy variable which takes the value of 1 if the observation is a bank and 0 if it is an insurance company.

The dataset used in the empirical work has been explained earlier in this chapter, nevertheless, it is worth mentioning the mechanics of the process. The starting point was the calculation of corporate governance score for banks and the insurance companies that participated in the survey. The next step was to obtain the financial information for the respective bank or insurance company. For each individual institution in the dataset, this information was obtained from their financial reports (most often from the annual report) for the year 2008. These reports were the source of the financial data which are used as proxy for the performance (return on equity) and as control variable for size (total assets) in the model.

The model is estimated using Ordinary Least Squares (OLS) technique. The advantages of using the OLS technique is that this method is suitable for estimating models with a

small number of observations (in this case, 23). However, one should bear in mind that in the case of Montenegrin banks and Kosovar insurance companies the whole population is covered by the survey, and in the case of Kosovar banks six out of eight banks are represented in the survey. Consequently, the data used for this estimation can be considered to be the population of financial institutions in the two countries. Other properties of OLS have been explained in greater detail in the previous chapters of this thesis.

6.5.1   Interpretation of the Results

The results of the estimated model are presented in Table 6-7 below.

Table 6-7 - Estimation with CGS

Lnroe	Coefficient (SE)
CGS	0.01 (0.026)
assets	2.80e-06*** (6.75e-07)
Db	1.01** (0.398)
cons	0.91 (1.098)
Note: ***, **, and * denote significance at 1%, 5% and 10% respectively.	

Before interpreting the relationships, a word on the diagnostics and model specification. The Breusch-Pagan/Cook-Weisberg test for heteroscedasticity shows that there is homoscedasticity in the estimated data, while the Ramsey RESET test suggests that the model does not suffer from omitted variables. The Cameron & Trivedi's decomposition of IM-test supports the previous diagnostic tests that suggest the model does not suffer from any sort of misspecification (see Appendix 6-8). However, the relationship between the main variable of interest, CGS and return on equity, despite the expected positive sign is insignificant.

There are few reasons why this may be the case. First, it can be argued that the small number of observations limits the process of estimation. Second, it could happen that

the calculated corporate governance score, because it reflects the five OECD principles in practice, contains too much information to be utilised by the small dataset.

If the second argument were to hold, then perhaps individual subscores, may provide some empirical insights into the relationship – this is because such an approach would reflect compliance with only one of the five subscores each time. This is in line with the discussion of section 4.3.1 where it was pointed out that sometimes a sub-index yields better results. Thus this chapter will estimate the following model:

$$lnroe = \beta_0 + \beta_1 P2 + \beta_2 assets + \beta_3 db + \varepsilon$$

Where the CGS variable is replaced with P2, representing the second OECD principle – rights of shareholders and key ownership functions. Estimation of this model produced the following results presented in Table 6-8:

Table 6-8 Estimation with P2

lnroe	Coefficient (SE)
P2	0.13* (0.061)
assets	3.11e-06*** (5.81e-07)
Db	1.12** (0.310)
cons	0.14 (0.601)
Note: ***, **, and * denote significance at 1%, 5% and 10% respectively.	

Let us start by investigating the specification of the model. Looking at the Stata printouts (Appendix 6-9), the analysis of variance (ANOVA) table indicates that 70 per cent of the variance of the dependent variable in the model is explained by the variables used in the model. The F values of the overall model fit suggest that the independent variables explain the dependant variable at the significance level of 1.5 per cent and the proportion of the variance in the dependent variable is at levels in excess of 71 per cent. The Breusch-Pagan/Cook-Weisberg test; The Ramsey RESET test; and, The Cameron &

Trivedi's diagnostic tests suggest the model does not suffer from any sort of misspecification.

With the model specification meeting the required criteria at satisfactory levels, the chapter turns to interpreting the results. The initial impression of the estimated βs is that all the coefficients are statistically significant and exhibit the expected signs. The results suggest that, ceteris paribus, the increase of the corporate governance subscore P2, reflecting the rights of shareholders and key ownership functions by one, will translate into 0.13 percentage point increase in the return of equity. The estimated coefficient is statistically significant at 10% level. In economic terms, this can be interpreted as follows: banks and insurance companies that pay attention to the rights of shareholders and their key ownership functions can improve their performance as measured by the return on equity.

The estimated coefficient of the assets is significant at 1 per cent level and is positive. Also, the extremely small value of the estimated coefficient 3.11e-06. This means that, all else equal, an increase of 1 thousand Euros in assets of a banks or insurance company will translate to a very small increase (0.00000311 percentage points) in the performance depicted by the return on equity.

The estimated coefficient on the dummy variable is positive and statistically significant at 5%, meaning that, everything else equal, Kosovar banks have higher returns on equity compared to the insurance companies.

To summarize, this section has shown that there is a positive relationship between some aspect of corporate governance (the ability of shareholders to exercise their rights), and the performance of banks and insurance companies in Kosova and Montenegro.

6.6 Conclusion

This chapter started by investigating the corporate governance of banks in two SEE countries, Kosova and Montenegro. When talking about two countries from the same region with a number of similarities such as size, recent history, currency and the absence of monetary policy powers, it would be safe to assume that the corporate governance practices of similar industries in these countries will be fairly similar too.

Kosova was faced with the situation of building the banking systems from scratch. For Kosova, this meant the establishment of the Payment Authority of Kosova in 1999, subsequently transformed to central bank, and the establishment of the Central Bank of Montenegro in 2002. The banking systems of both countries are dominated by foreign banks, 6 out of 8 in Kosova and 8 out of 10 in Montenegro.

In Kosova the regulation of the banking industry was governed by UNMIK regulations up to 2012, while Montenegro promulgated its Law on Banks in 2002.[22] The lack of specific banking laws is compensated by other laws, such as company law applicable to banks and regulations issued by central banks of respective states. With respect to corporate governance, the laws of each country have attempted to set the framework for good governance, concentrating on the responsibilities of the board of directors, composition of the boards, dealings with related party transactions and so on. In Montenegro, the same person can serve as the chairperson of the board and the CEO because the practice is allowed under the company law.[23]

Faced with the lack of empirical evidence for SEE countries, it was decided to conduct a survey which would investigate the degree of implementation of OECD Principles on corporate governance. The same questionnaire was distributed to banks and insurance companies in Kosova and the banks in Montenegro. The questionnaire was designed to obtain information regarding compliance with 5 out of 6 OECD principles, as the first principle, the sound corporate governance framework was investigated through review of relevant laws and regulations in both countries.

The findings show, there are some subtle but relevant differences between Kosovar and Montenegrin banks. The survey showed that it is very important to have a sound legal framework governing the corporate governance practices of banks (and insurance companies). Banks operating in the country with better rules and regulations, have better corporate governance practices than the banks operating in the country that lacks such regulation. However, it has to be mentioned that all institutions covered by the sample have gaps in their practices, when corporate governance is measured by a

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[22] Kosova up to now (October 2013) does not have a Law on Insurance.
[23] Since the Law on Banks, which is the specific law, does not regulate on this issue, technically, the same person can be the CEO and the Chairperson. However, the 2009 survey did not show any of the banks having that situation.

questionnaire based on OECD corporate governance principles. The results show that none of the banks belong to top 25% as far as the corporate governance practices are concerned thus indicating that there is room for improvement.

In addition, the empirical results show a positive relationship between corporate governance and performance of banks and insurance companies in Kosova and Montenegro. For the purpose of this chapter, the corporate governance is proxied by the subscore on the performance of the surveyed firms with respect to second OECD principle, i.e. the rights of shareholders and key ownership functions, while performance is measured by return on equity. This finding is in line with the behaviour of firms in transition economies as discussed in chapter one of this thesis. The active involvement of shareholders, increases the performance of companies. This is expected in countries with less dispersed ownership and weak legal framework, as is the case in Kosova and Montenegro.

If the comparison were to be broadened to corporate governance of developed economies and corporate governance of SEE countries, it would be safe to say that the two countries studied in this chapter aspire towards the Anglo-American, single tier system of corporate governance. Because Kosovar regulations prohibit the possibility of the same person serving as the Chairman and the CEO while the Montenegrin law allows it, it can be said that Kosovar corporate governance system is more like the United Kingdom (Anglo) and the Montenegrin one like American system. The empirical evidence from this chapter seems to support the view that concentrated ownership has emerged as the main corporate governance mechanism in transition economies. This is in line with findings of Shleifer and Vishny (1997) and La Porta et al. (2000), arguing that in the absence of a well-developed legal system and the protection it offers the shareholders, large shareholder groups become the vehicle for corporate governance. The level of development of legal systems supporting corporate governance in the SEE is very low, which is understandable given the fact that they have been established only recently.

Chapter 7

Concluding Remarks

7.1 Introduction

This thesis aimed at investigating the relationship between corporate governance and performance of firms with focus on financial institutions. It started with investigation of corporate governance as a concept exploring the situations where it is most likely to appear, what may be the consequences and who the involved parties are, and where do the corporate governance practices come from.

The literature on corporate governance and different theories and empirical evidence in the area were critically reviewed. There is sporadic evidence for a positive relationship between corporate governance and firm performance in a variety of circumstances and countries. However, the research review showed that studies measuring this relationship in the banking sector are rather scarce.

Aiming to narrow this gap in the literature, this thesis embarked on an empirical investigation of whether there is a relationship between corporate governance and the performance or valuation of financial institutions. The approach was to study this relationship in context of developed market economies as well as South East European (SEE) economies and find out if there any parallel developments between the two regions. While the data on measuring of corporate governance practices for banks in the United States was not easy to obtain, there was no data on corporate governance practices of financial institutions in the SEE region and therefore we had to embark on a bank survey of our own in order to construct indicators of corporate governance practices in these countries

The rest of this chapter is structured as follows. Section 7.2 will present the main findings of the research; section 7.3 will discuss the contribution of this thesis to knowledge, section 7.4 draws policy implications from this research, section 7.5 points out the limitations of this research and section 7.6 will consider the ways in which this research can be further developed.

7.2 Main Findings

The importance of corporate governance for the proper functioning of capital markets and ensuring investor confidence has been well established in the last two decades, particularly since the corporate scandals of Enron, WorldCom, Parmalat, etc. in the late 1990s through to the late 2000s and the financial crisis of 2008. The underlying concepts which are based on the separation of ownership and control and the principal-agent relationship, however, were introduced by Berle and Means (1932) and Fama, (1965; 1980) respectively. In recent times, cg has been viewed as a mechanism which, on the one hand, assures investors that their capital is protected and that they will not be the target of expropriation by managers (Shleifer and Vishny, 1997); and, on the other hand, assures minority shareholders that they will not be expropriated by the majority shareholders (LaPorta, et al., 2000). This implies that a certain framework and institutional set ups have to be in place to protect the interest of the parties involved.

The experience of different developed countries, and also transition economies, has shown that the above aims can be achieved in one of two ways. An efficient way is a well-established legal system geared to investor protection - and the experience has shown that countries that have managed to ensure good functioning legal systems focused on protection of investors have also developed deep capital markets and diffused ownership structures of companies. In other countries, where the legal system was not focused on investor protection (particularly minority investors), many companies experienced concentrated ownership (the emergence of large shareholders who can look after their own interests better if they have large enough bundle of shares to be able to control the management) (La Porta et al. 2000). This means that owners can exercise their powers to align managements' activities with the profit maximising aim of the company.

The shareholder value maximisation approach is one approach to corporate governance whereby the owners are concerned with preventing management from diverting company profits for their own private benefit. However, another approach is that the company is not a body consisting of only two entities, shareholders and managers, but there are other interested parties such as employees, suppliers, customers and so on, otherwise known as stakeholders who affect or are affected in some form by the

achievement of company's objectives (Freeman,1984). This is the stakeholder approach to corporate governance. The role of the stakeholders in corporate governance up to date is not very much elaborated. It is important to note that the stakeholder approach implies that the management will not be maximising any particular objective function: when firms have more than one objective to pursue, they will not be able to maximise anything (they will display 'satisficing behaviour' rather than 'maximising behaviour').

Corporate governance of banks is different from other companies because: i) there is an important and very different type of stakeholder (depositors) whose relationship to the bank involves serious agency cost;[1] ii) the principal-agent problem is more complex in the banking sector since managers are required to act in a way that profit maximisation for shareholders does not have adverse implications for depositors (Alexander, 2006; Mullineux, 2006); iii) unlike most industries, bank activities are opaque to depositors and the general public – with greater potential for opportunistic behaviour by managers and iv) also unlike most other industries, banking is one the most regulated industries in all countries because of the need to protect the interest of depositors (as primary stakeholders) (Mishkin, 2004). For governments it also makes sense to regulate the banking industry because of their importance of this sector for the economy and the potential systemic effects of banking industry failure spilling over to the whole economy (and the recent history has not been short of such examples). This has warranted a broad range of institutions providing guidelines, regulation and laws to ensure the effective functioning of the banking industry. Only in the United States there have been thirteen highly relevant pieces of legislation for the period 1913 – 2010 some of which have had indirect effect on corporate governance practices of banks. However, there is legislation that targeted important aspects of corporate governance practices of the United States banks. The most important laws, with strong impact on corporate governance following the corporate failures in early 2000s is Sarbanes Oxley Act (2002), and following the last financial crisis is the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010). On a global scale, the Basel Committee on Banking Supervision has started issuing accords since 1988 to guide banks on how to better

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[1] Insurance companies, as another example, have the insured as an interested group, with a particularly problematic relationship to the company (best described in a principal-agent framework).

protect their assets by putting appropriate provisions in place. In this way, these accords were addressing the interests of depositors by improving the quality of portfolio and restricting the excessive risk taking of bank managers and shareholders. The aspect that was prevalent in all the legislation, regulation and guidelines is the increase of transparency and disclosure as means of improving corporate governance of banks. In addition, many stock exchanges have imposed the requirement of board majority independence which is the case with NYSE, or other forms of controlling the quality of corporate governance by asking the listed companies to provide information on the 'comply or explain' principle as the case of WSE.

Another aspect of corporate governance addressed by this thesis was the corporate governance in transition countries. At the beginning of the 1990s, the socialist system in Europe collapsed giving way to the transition of these economies from a planned to a market oriented system. The governments of former-socialist countries needed to create a new legal infrastructure to support the process of ownership transformation - in most cases from scratch. This resulted in a dispersion of ownership which did not prove to be a suitable structure in these countries as the legal systems were not equipped to protect the interests of investors and minority shareholders. Eventually, as predicted by Shleifer and Vishny (1997) and LaPorta et al. (2000), forms of concentrated ownership, insider or outsider ownership, emerged in all these countries. Furthermore, there is some evidence that outside ownership proved to be more effective form of ownership because, among other advantages, they employed the more advanced corporate governance practices which improved their efficiency.

There have been a number of studies exploring the relationship between corporate governance and firm performance. The seminal paper by Gompers et al. (2003) found that firms with better corporate governance practices that provide shareholder protection, as measured by an index constructed by them, outperform (measured by equity prices) firms where managers had strongest rights. Other studies have used various indices and indicators for measuring corporate governance have reported positive relationship with performance which is also measured by a variety of indicators such as Tobin's Q, valuation, profit margins, return on assets, dividends etc. (Klapper and Love, 2002; Dunev and Kim (2003; Bebchuk et al., 2004; Brown and Caylor, 2004). Van

den Berghe and Levrau (2003) that find evidence that firm-level corporate governance provisions matter more in countries with weaker legal systems.

With the relationship between corporate governance and firm performance empirically documented, the focus of this thesis was turned to investigating whether such a relationship also holds, first for financial institutions in a broad sense and, second, for banks in particular. The very first thing that can be noticed is that there are only few studies which look at this relationship. The common suggestion of the few that do, seem to suggest that banks that managed to address the agency problem better, had better results. Caprio et al. (2007) find that larger cash-flow rights by the controlling owner boosts valuation; weak shareholder protection laws lower bank valuation; and regulatory policies have no effect on bank valuation (measured by the Tobin's Q). Looking at 100 top banks in the world, Trayler (2007) finds that better performing banks, as measured by their ROA, ROE, capital adequacy and other measures, feature more independent directors with the chairperson being appointed by large shareholder or investor groups. Spong and Sullivan (2007) looking and community banks in American Midwest find that providing ownership stakes to members of management, improves banks' performance. In addition, the more efficient banks had more insider board members who held greater ownership stake of the bank. Adams and Mehran (2008) looking at Bank Holding Companies (BHCs) do not find any relationship between Tobin's Q and the proportion of independent directors on the board but they do find a positive relationship between the size of the board and Tobin's Q.

In the light of these debates and the previous literature, this thesis has investigated the relationship between corporate governance and bank performance empirically (proxies by the CGQ published by ISS for the United States banks and CGS computed from banks' responses to the author's survey questionnaire for SEE countries) and bank performance (as measured by market capitalisation for developed markets and ROE for SEE banks). This research is distinct from the few existing ones focusing on banks because this thesis has utilised a measure of corporate governance which is generated by ISS and investigated how is that related to bank performance, while the previous research has considered the impact of corporate governance aspects (such as proportion of independent board members; size of the board; frequency of meetings; remuneration

policies; etc.) on bank performance. In this investigation, the measures of bank performance such as Tobin's Q, ROE, ROA used in the previous literature did not show a meaningful relationship with the measure of corporate governance. There can be two reasons for this. First, as Bebchuk et al. (2010) have argued, the relationship between corporate governance and performance may have disappeared for the banks in the post SOX period because of the massive financial crisis of 2008. Second, in line with Huizinga and Laeven (2009) the banks have managed to persuade the relevant authorities in the United States to relax the 'fair valuation' rule with the argument that during the times of crisis, markets cannot be the only measure of valuation of assets. This enabled banks in the United States to keep on their books as assets financial vehicles known as mortgage backed up assets (MBA) up to their maturity even in cases where it was known that these assets are worth far less. This meant that indicators which rely on balance sheet data of banks were not representative of the actual situation, which was picked up by the earlier models discussed in the thesis.

The empirical part of the thesis consisted of developing a model of the relationship between corporate governance and performance for financial institutions which avoided the problems of previous studies referred to above and also with the specific conditions of SEE countries in mind. For developed market economies, United States was chosen as a country with well-developed financial institutions and available data on the measurement of corporate governance practices for these institutions. For SEE countries, the initial aim was to conduct bank surveys in four SEE countries (Albania, Macedonia, Kosova and Montenegro) but in the course of the field work it became clear that it was not possible to conduct the survey in Albania and Macedonia, despite the intervention of many institutions and individuals supporting the research project. The survey was therefore limited to Kosova and Montenegro.

The data for US banks was compiled from two sources. The Corporate Governance Quotient (CGQ), the measure of effective corporate governance together with its subscores measuring the effectiveness of different elements of corporate governance, are generated by the Institutional Shareholder Services. The financial data for banks were obtained from the Bankscope database. Initially the data for CGQ was available only for the year 2009, allowing only a cross section analysis, but later the data became

available for the years 2005-2008 which enabled a panel data estimation for the period 2005-2009. The data for Kosovar and Montenegrin institutions were compiled by the author from the results of the bank surveys in the two countries and the financial reports of the institutions. Using the responses to survey questionnaire, corporate governance scores were developed for Kosovar banks and insurance companies as well as Montenegrin banks. The financial data for the institutions in these two countries were compiled from the financial accounts of these companies which are in the public domain.

Using market capitalisation as a measure of performance for American banks seemed to circumvent the issue of problematic balance sheets and also suggested that the markets were paying attention to corporate governance of banks even during the crisis period as there was a positive relationship between the two. The OLS estimation of course involves caveats such as the results might be a snapshot of the relationship rather than a representation of the situation on the population, and the inability to address the endogeneity issues arising from estimating such relationship. When a larger database of CGQ was obtained, we embarked on panel data estimation techniques to respond to some of these caveats. The findings of the cross section estimation were supported also in context of panel data (albeit a weaker relationship) which takes into account a greater amount of information over a number of years. Furthermore, this thesis reports positive a relationship between the corporate governance score (developed from the questionnaire survey) and return on equity for banks in Kosova and Montenegro.

In terms of policy implications, two issues have been highlighted. In context of the United States banks, and banks in other developed economies, the change in the accounting system, without paying sufficient attention to the potential outcomes, may result in adverse impact for corporate governance practices of these institutions - as was the case with the relaxing of the 'fair valuation rule' during the crisis period. For the policymakers in SEE countries, it may be relevant to pay more attention to laws and regulations explicitly addressing the corporate governance practices of financial institutions. Better legal frameworks does seem to induce better corporate governance practices of the subjected institutions.

7.3 Main Contributions to Knowledge

The lack of sufficient empirical exploration in the field, and the absence of any quantitative measure of corporate governance for the financial institutions of SEE countries, were the main motivations for this thesis. The aim, therefore, has been to attempt to contribute by investigating the relationship between corporate governance and bank performance or valuation in both developed and SEE countries. The comparison is important as it will enhance our understanding of the role of corporate governance practices in countries with different levels of development of the market system and institutions. The empirical work in both areas constitute contributions to knowledge made by this research

Given the data availability in the early part of the research, a cross section model similar to Brown and Caylor (2004) was estimated using the ordinary least squares method. The main distinction was that Brown and Caylor investigated all the United States companies in one stock exchange listing (S&P 500) whereas the model used in this thesis focused only on American banks listed in S&P 400, S&P 500, S&P 600, Russell 3000, and a group of banks that were not listed in any of the mentioned listing indices but for which the corporate governance ratings were available in the ISS database. By furthering the investigation in light of Huizinga and Laeven (2009) study and using market capitalisation as a measure of performance, a positive and significant relationship between the quality of banks' corporate governance and their performance was obtained.

The results of this estimation, despite the diagnostic testing indicating a well specified model, failed to provide evidence of meaningful relationship between corporate governance and measures of performance (the Q-value of the firm, ROE or ROA).

A major contribution of the thesis is the panel investigation of the corporate governance-bank performance relationship. The investigation supports all the findings of the cross section estimation. First it supports the lack of statistically significant relationship between corporate governance and measures of bank performance used in previous studies such as the Q-value, ROE, ROA; and second, it supports a statistically significant relationship between corporate governance and market capitalisation. These

results are considered more reliable as the panel data allows for the endogeneity problem to be addressed and treated properly.

Furthermore, as there was insufficient economic explanation for the results of the static model, the thesis embarked on dynamic panel model estimation of the relationship. Using the Generalised Method of Moments (GMM) technique to estimate the relationship, which in addition to treating endogeneity issues, takes into consideration influences from previous periods, a statistically significant relationship between market capitalisation and corporate governance emerged.

Considering that none of the important studies[2] which empirically investigate the relationship between corporate governance and firm performance, consider the dynamics of the relationship, and that many of them do not even acknowledge or treat the endogeneity issues, it can be argued that the treatment of these issues constitutes an important contribution to knowledge of this thesis.

Another contribution of the thesis is the investigation of the relationship between corporate governance and bank performance in two SEE transition economies. For these two countries, there was no published corporate governance data prior to this research. None of the rating institutions or other agencies had embarked on rating the corporate governance practices of banks in these countries. This meant that it was necessary to collect the data via a survey questionnaire, using a questionnaire similar to the ROSC questionnaires of the World Bank, but adjusted so that it revolved around the OECD Corporate Governance Principles.

The purpose of the survey was to obtain a snap shot picture of the corporate governance situation in the surveyed entities at the time of the survey (2008-2009). In order to get a better understanding of the corporate governance environment, additional interviews were conducted with other stakeholders such as the Central Bank and the chamber of commerce. The findings suggested that better legal frameworks induce better corporate governance practices of banks and insurance companies. The

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[2] To our knowledge, only one previous study attempted to use the GMM model to estimate the corporate governance-performance relationship but, as explained in Chapter 5, it had many unresolved issues in terms of diagnostics that made the use of method inappropriate (at least judging by what was reported by this study. E.g. Rafferty and O'Connor (2011)).

findings also indicate that in both countries there are aspects of corporate governance that need to be better regulated by law or regulations such as the equitable treatment of shareholders, and the role of stakeholders.

The responses to the survey questionnaire enabled us to construct a measure of corporate governance practice (with its subscores), the 'corporate governance score (CGS)' for each bank or insurance company. Since the questionnaire was designed with OECD Corporate Governance Principles as benchmark, it was possible to calculate individual sub-scores for each of five OECD principles (second to sixth). In theoretical sense, the index measures the level of compliance of respondents with OECD principles. Even though the bank survey was limited to two countries, this methodology which can be extended to banks in other SEE countries, where the corporate governance rating is still unavailable, constitutes another contribution to knowledge of this thesis.

The empirical analysis of the data using OLS method, the estimated model did not establish a statistically significant relationship between bank performance measured by ROE and the CGS. It may be argued that with a small number of observations which limits the degrees of freedom, and the complex nature of compliance with the OECD principles accounted by the CGS, the limited data was unable to reveal any underlying relationship. However, the sub-score for the second OECD Corporate Governance Principle – Shareholder Rights and Key Ownership Functions, and the ROE was statistically significant. This empirical evidence, though limited, is another contribution of the thesis as, to date, there are no other studies that have dealt with the issue of corporate governance of banks and insurance companies in Kosova and Montenegro.

7.4 Policy implications

Given that this thesis has provided evidence of a statistically significant relationship between corporate governance and the performance of financial institution, it can be expected that it should have some policy implications. The distinct nature of the empirical research presented in chapters 4, 5 and 6 is that it is based on both developed market economies as well as transition economies. Chapters 4 and 5 consider banks from the United States of America, which can be used as the representative of developed economies, while chapter 6 is concerned with the two SEE countries of

Kosova and Montenegro, as representatives of less developed (transition) economies. As such, the main audience of these findings are regulatory and supervisory bodies dealing with corporate governance. These findings should be interesting also to banks and their respective boards.

For the developed economies, the policy implications from this thesis are at a broad level. Namely, the relationship between corporate governance and bank performance, as evidenced by the empirical results, implies that regulatory and supervisor bodies in these economies should continue to ensure that good corporate governance is observed and implemented and, when possible, improved. Throughout this thesis, it has been argued that corporate governance reduces the principal agent problem by aligning the incentives of shareholders and managers. One of the mechanisms used for the alignment of interests of the two parties is the compensation scheme for executives. The last financial crisis pointed out a number of flaws with this mechanism and perhaps the regulators in developed economies should pay special attention to this aspect of corporate governance. In a series of recent studies carried out by Bebchuk and Hamdani (2009), Bebchuk (2010) and Bebchuk et al. (2010) on bankers' pay, they showed that the incentives of managers were not properly aligned with the profit maximisation aim of the companies they manage, but rather designed to maximise the managers' earnings. In their research on Bear Stearns and Lehman Brothers for the period 2000-2008, Bebchuk et al. (2010) found that the executives of these two corporations had managed to cash out through equity sales around USD 2 billion combined by 'unloading' large amounts of their shares before the meltdown of their respective companies. Better observance of corporate governance rules would imply closing the loop holes which allowed this kind of self-seeking behaviour by bank managers.

In terms of Kosova and Montenegro and other transition countries, here too the regulators should try to implement the existing corporate governance rules fully and improve them whenever possible. However, as the corporate governance framework in these countries is not well developed yet, more focused policies need to be formulated. Since this thesis has presented empirical evidence of a statistically significant and positive relationship between corporate governance (or one aspect of it) and bank performance, the policy makers should consider the following.

Regulators and other relevant bodies dealing with corporate governance should make sure that current laws, regulations, and rules on corporate governance are observed and implemented fully by the banking industries in their respective countries. When shortcomings of these rules and regulations are identified, then they should be amended and improved by taking into consideration best practices from developed economies.

The particular aspect of corporate governance which is positively related to bank performance in Kosova and Montenegro is the OECD Corporate Governance Principle II, which means that banks that better observe shareholder rights and their key ownership functions, tend to have better performance. This leads to the belief that if banks were to pay attention to the OECD Corporate Governance Principle III, the equitable treatment of all shareholders, the minority shareholders will be encouraged to invest in the banking industry in the future which would give rise to a more dispersed ownership in these countries. As has been explained by Shleifer and Vishny (1997) and La Porta et al. (2000), dispersed ownership requires good legal protection, thus the regulators of the respective countries should insist on observance of laws and regulations by banks.

The importance of the legal framework also is confirmed by the Corporate Governance Score computed in chapter 6 of this thesis. As shown in Table 6-5, Montenegrin banks score the highest, followed in the second place by Kosovar banks and then by Kosovar insurance companies. This corresponds to the analysis of legal frameworks of these countries carried out in section 6.3 where it was made clear that the legal framework governing Montenegrin banks is more developed and better implemented than those applied to Kosovar banks, while the legal framework for the insurance industry in Kosova is the weakest of all. Thus the regulators and other relevant actors should put their efforts into improving the legal framework in Kosovo as a starting point, if they expect these industries to perform better.

7.5 Limitations of the Research

This thesis, similar to most other research projects, encountered a number of unexpected problems and became subject to a number of limitations. The main limitation in the case the United States banks was that the period of study encompasses

the crisis period when a lot of relationships are distorted and 'out of equilibrium' as compared to normal non-crisis periods. This means that findings of this research warrant some caution if one were to stretch the findings and implications beyond the studied period. The ability to extend the sample period beyond 2005-2009 would provide insights on the behaviour of banks during the period of calm and times of crisis. Also, given the central role of the banks in the economy, it would help if other types of financial institutions (as well as the financial institutions of other developed economies) are included in the sample. In terms of the financial institutions in SEE countries, the main problem (and limitation) was the unwillingness of these institutions in Albania and Macedonia to participate in the survey. Broadening the geographical coverage to cover other SEE countries would help further this research. As it was discussed earlier, the sample in Kosova and Montenegro represented 90 per cent of the population of banks (Montenegro 100 per cent and Kosova 80 per cent), yet the sample is very small. The non-inclusion of other finance institutions in the sample is another limitation of this thesis. The cross section analysis of the small sample developed in Chapter 6 did not allow us to address the potential endogeneity problems.

7.6 Further Research

There are several ways in which this research can be expanded. First and foremost, in terms of developed economies, the period of investigation can be broadened to include observations before and after the crisis period. This would enable the researcher to potentially isolate the bank behaviour which is peculiar to crisis, and maybe identify which corporate governance practices contributed to good or bad performance before, during and after the crisis period.

Also, including banks from other developed countries the research could perhaps benefit from investigating which countries apply better corporate governance systems thus using this information to guide policymakers in other countries during the process of designing or implementing corporate governance related policies. In addition, the sample can be enriched with other financial institutions and explore what are the implications of certain laws or regulations for banking and other non-banking financial institutions.

In terms of the investigation of corporate governance of SEE countries, there are two ways to further this research. First, it would be highly rewarding to conduct another survey of the same entities at a different point in time, i.e. another snap shot of corporate governance practices after a given number of years. This would enable the researchers to identify any changes during this period, and if there was any progress in terms of corporate governance behaviour of these institutions. Second, by broadening the sample to include other SEE countries such as Albania, Macedonia, Bosnia and Herzegovina and Serbia would provide more variation in the sample and facilitate better econometric analysis and more robust results. Finally, it would be a good idea to persuade the central banks of respective countries to help with the survey on annual basis. The questionnaire designed for this thesis, with minor alterations, could serve for this purpose. This would help the central banks, which usually are the regulatory and supervisory body for the banking sector, to remain informed about the corporate governance behaviour of the institutions under their supervision.

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Appendices

Appendices related to chapt. 2

Appendix 2-1 – The ISS Minimally Acceptable Corporate Governance Standard

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BOARD

1. All directors attended 75% of board meetings or had a valid excuse
2. CEO serves on the boards of two or fewer public companies
3. Board is controlled by more than 50% independent outside directors
4. Board size is at greater than five but less than 16
5. CEO is not listed as having a related-party transaction
6. No former CEO on the board
7. Compensation committee comprised solely of independent outsiders
8. Chairman and CEO are separated or there is a lead director
9. Nominating committee comprised solely of independent outsiders
10. Outsider controlled board or board controlled by 50% to 75% of independent outsiders with officer and director ownership between 5% to 30%
11. Governance committee exists and met in the past year
12. Shareholders vote on directors selected to fill vacancies
13. Governance guidelines are publicly disclosed
14. Annually elected board (no staggered board)
15. Directors are subject to stock ownership requirements
16. Executives are subject to stock ownership guidelines
17. Policy exists on outside directorships (four or fewer boards is the limit)
18. Shareholders have cumulative voting rights
19. Shareholder approval is required to increase/decrease board size
20. Qualifies for proxy contest defenses combination points
21. Director term limits exist
22. Board controlled by 50% or more independent outsiders and all committees are comprised solely of independent outsiders

AUDIT

23. Consulting fees paid to auditors are less than audit fees paid to auditors 64.0% 98.0% 53.0%
24. Audit committee comprised solely of independent outsiders 70.3% 86.2% 22.7%
25. Auditors ratified at most recent annual meeting 56.4% 65.5% 16.2%
26. Policy disclosed regarding auditor rotation 2.8% 45.7% 1548.1%

CHARTER

27. Single class, common
28. Majority vote requirement to approve mergers (not supermajority)
29. Shareholders may call special meetings
30. Majority vote requirement to amend charter/bylaws (not supermajority)
31. Poison pill with a trigger >= 20%
32. Shareholder may act by written consent
33. Company is not authorized to issue blank check preferred and either has no poison pill or a pill that was shareholder approved.
34. Poison pill with a qualified offer clause
35. Poison pill with TIDE provision
36. Board cannot amend bylaws without shareholder approval or can only do so under

limited circumstances
37. Poison pill with sunset provision

STATE
38. Incorporation in state w/o a control share cash-out statute, or with a control share cash-out statute but company has opted out
39. Company has no pill or state does not endorse poison pills
40. Incorporation in a state without stakeholder laws, or independent directors comprise 75% or more of the board
41. Incorporation in state w/o a control share acquisition statue, or with a control share aquisition statute but company has opted out
42. Incorporation in state with a fair price provision
43. Incorporation in state w/o a freezeout provision, or with a freezeout but company has opted out
44. Incorporation in state without any state anti-takeover provisions

COMPENSATION
45. Interlocks among compensation committee members
46. Non-employee directors participate in pension plan
47. No option repricing within last three years
48. Directors receive all or a portion of their fees in stock
49. All stock-incentive plans adopted with shareholder approval
50. The last time shareholders voted on an option plan, ISS deemed the cost reasonable
51. Company does not provide any loans to executives for exercising options
52. Repricing prohibited
53. Options grants align with company performance and reasonable burn rate
54. Company expenses stock options

PROGRESSIVE PRACTICES
55. Board has the express authority to hire its own advisors
56. Performance of the board is reviewed regularly
57. Board approved succession plan in place for the CEO
58. Outside directors meet without CEO and disclose number of times met
59. Directors are required to submit resignation upon a change in job
60. Mandatory retirement age for directors

OWNERSHIP
61. Does not ignore shareholder proposal
62. All directors with more than one year of service own stock
63. Officers' and directors' stock ownership is at least 1% but not over 30% of total shares outstanding
64. Majority of directors have participated in a director education program.

Source: Aggarwal and Williamson (2006).

1. BOARD ACCOUNTABILITY
Sub-Categories
1.1 Board Leadership
1.2 Board Composition
1.3 Board Elections
1.4 Pursuit of Shareholder Value
1.5 CEO Evaluation
1.6 Succession Planning
1.7 Governance Committee
1.8 Corporate Governance Policies
1.9 Board Evaluations
1.10 Board Meetings
1.11 Board Procedures
1.12 Code of Ethics
1.13 Scrutiny of Related-Party Transactions
1.14 Director Stock Ownership
1.15 Company Response to Shareholder Proposals
Sample Metrics
• Does the company disclose the criteria used by the board or a board committee to formally evaluate CEO performance?
• Does a committee of the board evaluate the performance of the board on a regular basis?
• Does each board committee undertake an evaluation of its own performance on a regular basis?
• Is it the board's policy to hold meetings of the non-executive directors before or after every board meeting?
• Is training and orientation required for new board members?
• Does the board have a policy concerning directors whose principal occupation has changed?
• Is there a limit to the total number of years an individual is able to serve as a board member, or is there a limit to the number of times a director is allowed to be re-elected to the board?
• Have any directors served on the board for fifteen years or more?
• Has there been a related-party transaction involving the Chairman, CEO, President, COO or CFO or a relative within the last three years?
• Has the number of company shares held by the senior management decreased by 10 per cent or more over the last twelve months?
2. FINANCIAL DISCLOSURE AND INTERNAL CONTROLS
Sub-Categories
2.1 Audit Committee Composition
2.2 Audit Committee Oversight Powers
2.3 Audit Board
2.4 Annual External Audit
2.5 Review of Internal Controls
2.6 Financial Statements

2.7 Earnings Management

2.8 Accounting Standards

2.9 Management Discussion and Analysis

Sample Metrics

- Is training required for audit committee members?
- Does the company have a policy for selection of auditors that includes either periodic rotation of the outside audit firm or competitive procurement?
- Does the company measure, value or report one or more intangible assets such as intellectual property, long-term service contracts, and brand equity on a regular basis?
- Has the company restated earnings at least twice within the past three years?
- Has the company taken two or more extraordinary charges representing five per cent or more of revenue within the last three years?
- Is the company under investigation for accounting irregularities?
- Has the company been forced to restate earnings within the past three years due to regulatory action or pressure?

3. SHAREHOLDER RIGHTS

Sub-Categories

3.1 Shareholder Protection

3.2 Annual Meeting Agenda

3.3 Ballot Access

3.4 Votes per Share

3.5 Confidential Voting

3.6 Cumulative Voting

3.7 Dissident Resolutions

3.8 Right to Convene an EGM

3.9 Votes Results Disclosure

Sample Metrics

- Do all common or ordinary equity shares have one vote per share with no restrictions?
- Is there a securities regulatory body with significant enforcement powers in the main jurisdictions in which the company operates or is headquartered?
- Does the company have confidential voting with no exceptions other than those required by law or when shareholders expressly request disclosure of their own votes?
- Do shareholders have the right to convene a special meeting with 10% or less of the shares requesting one?
- Do shareowners have the right to act in concert through written communication?
- Must shares be deposited or blocked from trading in order to vote?
- Are voting rights different depending on the duration of ownership?
- Are voting rights capped at a certain percentage, no matter how many shares the investor owns?

4. REMUNERATION

Sub-Categories

4.1 Remuneration Committee

4.2 Executive Remuneration Disclosure

4.3 CEO Incentives

4.4 CEO Remuneration Disclosure

4.5 Board Remuneration

4.6 Stock Ownership Guidelines

4.7 Cost of Stock Options

4.8 Potential Dilution

Sample Metrics

- Is the remuneration committee wholly composed of non-executive board members?
- Was the CEO's last annual bonus cut or capped in response to a decline in earnings or a loss?
- Are there stock ownership guidelines for the CEO and the other members of the senior management team?
- Are a portion of executive stock options granted with exercise prices set 5% or more above market value at the time of grant, or does the company require that executives already holding a certain amount of company stock pay a premium to exercise additional stock options?
- Does the company take an annual charge against earnings to reflect the expense of employee stock option grants?
- Do restricted stock grants include performance hurdles?
- What is the potential dilution as a result of stock options and related awards outstanding?
- What is the total potential dilution as a result of stock options and related awards outstanding, plus options and other equity-based awards approved for grant but not yet granted?
- Within the last three years, has the company either repriced outstanding executive stock options or used a stock option exchange program in which senior management was allowed to participate?

5. MARKET FOR CONTROL

Sub-Categories

5.1 Unilateral Defenses

5.2 Tender Offer and Proxy Contest Defenses

5.3 Ownership Structure

5.4 Right to Elect Board Members

Sample Metrics

- Does the company have a fair price provision in place or is it subject to fair price protection under applicable law?
- Can directors be removed without cause?
- Has the company's poison pill been ratified by a shareholder vote?
- Does the poison pill include a provision allowing it to be redeemed by a vote of the majority of shareholders other than the potential acquirer ("chewable" pill)?
- Does the poison pill have a "dead-hand" provision?
- What is the per cent of shares owned outright by officers and directors?
- Is the company involved in a series of cross-shareholdings with related companies?
- Is there a single shareholder or shareholder group that controls a majority of the voting power of the company?
- Does the company have a shareholder holding "golden" shares?

6. CORPORATE BEHAVIOR

Sub-Categories

6.1 Employee Relations

6.2 Sourcing Policies

6.3 Environmental Risk Management

6.4 Overall Reputation

Sample Metrics

- Does the company comply with an established workplace code such as the ILO Fundamental Conventions or SA 8000?
- Does the company disclose its workplace safety record in the annual report or in another form accessible to shareholders?
- Does the company subscribe to an established code for sourcing its contractors?
- Does the company have in place a program to monitor its contractors?
- Does the company disclose its environmental performance in its annual report, on its website, or in a special environmental report?
- Does the company follow the Global Reporting Initiative to disclose its environmental performance?
- Does the company employ ISO 14001 as its environmental management system?
- Does the company report to shareholders on its exposure to and management of climate change risks?
- Has the company been subject to a regulatory investigation for a material issue other than for accounting irregularities?
- Does the company have pending criminal litigation against it, has it been found guilty within the last 3 years, or has it pled the equivalent of no contest in such litigation in the past three years?

Source: Governance Metrics International (2007). Example available at:

http://www.gmiratings.com/(vspl5c2ltzrxby45iljihlzi)/Images/HighRatedCompany3.pdf

Discipline (15%)[3]
1. Has the company issued a "mission statement" that explicitly places a priority on good corporate governance
<…>[4]?
2. Is senior management incentivised to work towards a higher share price for the company eg, <…> expected
remuneration for the top executive(s) is tied to the value of the shares?
3. Does management stick to clearly defined core businesses? (Any diversification into an unrelated area in last 3
years would count as "No".)
4. <…> Is management's view of its cost of equity within 10% of a CAPM derived estimate?
5. <…> Is management's estimate of its cost of capital within 10% of our estimate based on its capital structure?
6. Over the past 5 years, is it true that the Company has not issued equity, or warrants for new equity, for
acquisitions and/or financing new projects where there was any controversy over whether the acquisition/project was financially sound? <…>
7. Does senior management use debt for investments/capex only where ROA (or average ROI) is clearly higher
than cost of debt and where interest cover is no less than 2.5x? <…>
8. Over the past 5 years, is it true that the company has not built up cash levels <…> ?
9. Does the company's Annual Report include a section devoted to the company's performance in implementing
corporate governance principles?

Transparency (15%)
10. Has management disclosed three- or five-year ROA or ROE targets? <…>
11. Does the company publish its Annual Report within four months of the end of the financial year?
12. Does the company publish/announce semiannual reports within two months of the end of the half-year?
13. Does the company publish/announce quarterly reports within two months of the end of the quarter?

---

[3] Percentages reflect the weight in the CLSA weighted average index.

[4] We kept the wording of the questions exactly as specified in the CLSA report, however to save the space and without loss of contents we cut out portions of the questions, these cuts are marked with <…> . For example we removed all clarifications as to how the analysts should answer the questions and endings such as "as far as the analyst can tell".

14. Has the public announcement of results been no longer than two working days of the Board meeting? <…>
15. Are the reports clear and informative? (Based on perception of analyst.) <…>
16. Are accounts presented according to IGAAP? <…>
17. Does the company consistently disclose major and market sensitive information punctually? <…>
18. Do analysts have good access to senior management? Good access implies accessibility soon after results are
announced and timely meetings where analysts are given all relevant information and are not misled.
19. Does the Company have an English language web-site where results and other announcements are updated
promptly (no later than one business day)?

Independence (15%)
20. Is it true that there has been no controversy or questions raised over whether the board and senior management
have made decisions in the past five years that benefit them, at the expense of shareholders? (Any loans to group
companies/Vs, non-core/non-controlled group-investments, would mean "No").
21. Is the Chairman an independent, non-executive director?
22. Does the company have an executive or management committee <…> which is substantially different from
members of the Board and not believed to be dominated by major shareholders? (ie, no more than half are also Board members and major shareholder not perceived as dominating executive decision making.)
23. Does the company have an audit committee? Is it chaired by a perceived genuine independent director?
24. Does the company have a remuneration committee? Is it chaired by a perceived genuine independent director?
25. Does the company have a nominating committee? Is it chaired by a perceived genuine independent director?
26. Are the external auditors of the company in other respects seen to be completely unrelated to the company?
27. Does the board include no direct representatives of banks and other large creditors of the company? (Having
any representatives is a negative.)

Accountability (15%)
28. Are the board members and members of the executive/management committee substantially different <…>? (ie, no more than half of one committee sits on the other?)
29. Does the company have non-executive directors who are *demonstrably and unquestionably* independent?
(Independence of directors must be demonstrated by either being appointed through nomination of non-major
shareholders or having on record voted on certain issues against the rest of the Board. <…>)
30. Do independent, non-executive directors account for more than 50% of the Board?

31. Are there any foreign nationals on the Board <...> ?

32. Are full Board meetings held at least once a quarter?

33. Are Board members well briefed before Board meetings? <...>(Answers 33-35 must be based on direct contact
with an independent Board member. If no access is provided <...> answer "No" to each question.)

34. Does the audit committee nominate and conduct a proper review the work of external auditors <...>?

35. Does the audit committee supervise internal audit and accounting procedures <...> ?

Responsibility (15%)

36. If the Board/senior management have made decisions in recent years seen to benefit them at the expense of
shareholders (cf Q20 above), has the Company been seen as acting effectively against individuals responsible and
corrected such behavior promptly, ie, within 6 months? (If no such case, answer this question as "Yes".)

37. <...> Over the past five years, if there were flagrant business failures or misdemeanors, were the persons
responsible appropriately and voluntarily punished? (If no cases <...> then answer "No.")

38. Is there any controversy or questions over whether the Board and/or senior management take measures to
safeguard the interests of all and not just the dominant shareholders? <...>

39. Are there mechanisms to allow punishment of the executive/management committee in the event of
mismanagement <...> ?

40. Is it true that there have been no controversies/ questions over whether the share trading by Board members
have been fair, fully transparent and well intentioned? <...>

41. <...> Is the board small enough to be efficient and effective? (If more than 12, answer "No".)

Fairness (15%)

42. Is it true that there have not been any controversy or questions raised over any decisions by senior management
in the past 5 years where majority shareholders are believed to have gained at the expense of minority shareholders?

43. Do all equity holders have the right to call General Meetings? <...>

44. Are voting methods easily accessible (eg proxy voting)?

45. Are all necessary <...> information for General Meetings made available prior to General Meeting?

46. Is senior management unquestionably seen as trying to ensure fair value is reflected in the market price of the
stock <...> ?

47. Is it true that there has been no questions or perceived controversy over whether the Company has
issued depositary receipts that benefited primarily major shareholders <...> ?

48. Does the majority shareholder group own less than 40% of the company?

49. Do foreign portfolio managers, and/or domestic portfolio investors who have a track record in engaging management on CG issues, own at least 20% of the total shares with voting rights?

50. Does the head of Investor Relations report to either the CEO or a Board member?

51. <…> Over the past five years, is it true that total directors remuneration has not increased faster than net profit
after exceptionals ? <…>

Social awareness (10%)

52. Does the company have an explicit (clearly worded) public policy statements that emphasize strict ethical
behavior: ie, one that looks at the spirit and not just the letter of the law?

53. Does the company have a policy/culture that prohibits the employment of the under-aged <…> ?

54. Does the company have an explicit equal employment policy <…> ?

55. Does the Company adhere to specified industry guidelines on sourcing of materials <…> ?

56. Is the company explicitly environmentally conscious? <…>

57. Is it true that the company has no investments operations in Myanmar?

Source: Klapper and Love (2002)

Appendices related to chapt. 4

Appendix 4-1 – Governance Provisions used by Gompers et al.

Governance Provisions

I.   *Delay*
     1. Blank check
     2. Classified board
     3. Special meeting
     4. Written consent
 II.   *Protection*
     5. Compensation
     6. Contracts
     7. Golden parachutes
     8. Indemnification
     9. Liability
     10. Severance
 III.   *Voting*
     11. Bylaws
     12. Charter
     13. Cumulative voting
     14. Secret ballot
     15. Supermajority
     16. Unequal voting
 IV.   *Other*
     17. Antigreenmail
     18. Directors' duties
     19. Fair price
     20. Pension parachutes
     21. Poison pill
     22. Silver parachutes
 V.   *State*
     23. Antigreenmail law
     24. Business combination law
     25. Cash-out law
     26. Directors' duties law
     27. Fair price law
     28. Control share acquisition law

Source: Gompers et al. (2003).

Appendix 4-2 – Classification of Corporate Governance Criteria (Chidamabaran)

Governance Measure	Ex-ante "Good" Governance Changes
Board Monitoring:	
	Decrease
Bsize	
Boutsiders	Increase
Bmeeting	Increase
Pay-Performance Sensitivity:	
	Increase
Bonus	
Options	Increase
Ppswealth	Increase
Newoptions	Increase
Shares	Increase
Shareholder Rights:	
	Decrease
G-Index	
E-Index	Decrease
Other Governance Measures:	
	Increase
Instshares	
Insiders	Increase when Insiders < 5%
	Decrease when 5% < Insiders < 25%
	Unknown for Insiders > 25%
Turnover	High

Source Chidamabaran et al. (2008)

ISS Corporate Governance Quotient Profiles

REPORT DATE: June 24, 2010

xxxxx **Bank**

xxxxxx

* * * * * * * * * * COMPANY IDENTIFIERS * * * * * * * * * *

TICKER: xx

PRIMARY CUSIP: xxxxxxxx

ISIN: xxxxxxxxxxx

SEDOL: xxxxxx

WKN: xxxxxxxxx

CORPORATE GOVERNANCE QUOTIENT

Question	Answer	Points	Weight	Factor
Is shareholder quorum for shareholders' meetings at least 2 persons representing at least 25% of the outstanding shares?	Shareholder quorum is less than 2 persons and/or representing less 25% of the shares	-1	.2	Quorum for shareholder meetings is less than 2 persons representing at least 25% of the shares

Question	Answer	Points	Weight	Factor
Do NEDs receive compensation other than board/committee attendance fees?	No	0	.5	Non-employee directors do not receive cash compensation other than board/committee attendance fees
Does the company provide loans to directors?	Yes	-2.5	.5	The company provides loans to directors
What part of the total remuneration received by directors is options based?	Enter percentage if known	0	.22	0% of the total remuneration received by non-employee directors is options based
Do directors participate to equity based plans?	No	3.9	.78	Non-employee directors do not participate in equity based plans
What is the independent director composition of the board?	Percentage	1.5	.4	87.5% of the board is independent
Does the company disclose the performance measures, hurdle rates, and target payout thresholds for the short-term cash incentive plan that generated the awards reported?	The company discloses complete information on the short-term performance-based program	1.67	.3333	The company discloses complete performance measure information for the short-term cash incentive plan
What percentage of the annual bonus for CEO is or can be deferred?	No deferral or no information	-.33	.1667	There is no deferral or the company has not readily disclosed whether any portion of

Question	Answer	Points	Weight	Factor
				the CEO's annual bonus is or can be deferred
What percentage of the annual bonus for Executives is or can be deferred?	No deferral or no information	-.33	.1667	The company has not readily disclosed whether any portion of the NEOs' annual bonuses are or can be deferred
Is part of the bonus granted or to be granted guaranteed?	No	0	.3333	No portion of the Named Executive Officers' cash compensation components are guaranteed
Does the company disclose a performance measure for stock options plans (for executives)?	The company discloses or it is clear from the disclosure of the company that there are no performance conditions	0	.6	There are no performance measures attached to treasury-based executive stock options
Does the company disclose a performance measure for restricted share plans (for executives)?	Executives receive restricted shares based on a target which is disclosed	2	.4	Executive treasury-based restricted shares are based on a target which is disclosed
What are the minimum vesting periods mandated in the plan documents for executives' stock options or SARS in the equity plans adopted/amended in the	Number in months	.4	.2	The vesting period for treasury-based executives' stock options is 48 months

Question	Answer	Points	Weight	Factor
last 3 years?				
What are the minimum vesting periods mandated in the plan documents, adopted/amended in the last three years, for executives' restricted stock?	Number in months	.2	.2	The vesting period for executives' treasury-based restricted stock awards is 36 months
What are the vesting periods mandated in the plan documents, adopted/amended in the last three years, for executives' other long-term plan?	Number in months	1	.2	The vesting period for executives' other treasury-based long-term equity awards is 36 month(s)
What is the holding period for stock options (for executives)?	No information	-1	.2	The company has not readily disclosed any holding period for executives' treasury-based stock options
Has the company backdated options within the past two years?	No	0	.3	The company has not backdated treasury-based options within the past 2 years
Does one or more of the company's equity plans approved or amended in the past three years permit option/ SAR repricing and cash buyouts?	The company's equity plans prohibit repricing, but are silent on cash buyouts	1.05	.35	The company's treasury-based equity plans prohibit repricing, but are silent on cash buyouts
Has the company repriced options or exchanged them for shares, options or cash without shareholder approval in the last	No	1.75	.35	The company has not repriced treasury-based options or exchanged them for shares,

Question	Answer	Points	Weight	Factor
three years?				options or cash without shareholder approval in the last 3 years
Is the CEO subject to stock ownership guidelines?	Robust	1	.3333	The company's CEO stock ownership guidelines are greater than five times salary
Are directors subject to stock ownership guidelines?	Standard	1	.3333	The company's director stock ownership guidelines are between three and five times retainer
Do all directors with more than one year of service own stock?	No	-1.67	.3333	One or more directors with more than one year of service do not own stock or deferred share units
What's the trigger under the change-in-control agreements?	Company has double trigger agreements	5	1	The CEO's change-in-control agreement is a double trigger
What is the qualification of the Chairman of the Board?	The Chairman is an independent director	2	.4	The chairman is an independent director
Do equity based plans or long term cash plans vest completely on change in control?	Equity based plans or long term cash plans do not vest completely upon a change in control unless there is a loss	0	0	Equity based (from treasury) or long term cash plans do not vest completely upon a change in control unless there is a loss of

Question	Answer	Points	Weight	Factor
	of employment			employment
Does the company provide loans to executives?	Yes	-.5	.1	The company has provided loans to executives
Did the company disclose a claw back provision?	Yes	.15	.05	A claw back provision was disclosed
Are any of the NEOs eligible for multi-year guaranteed bonuses?	None	0	.05	None of the named executive officers are eligible for multi-year guaranteed cash compensation
Are the roles of Chairman and CEO separated?	Yes	0	.2	The roles of chairman and CEO have been separated
What is the multiple of salary plus bonus in the change-in-control agreements for named executive officers excluding the CEO?	Acceptable	0	.2	The multiple of salary plus bonus in the change-in-control agreements for named executive officers excluding the CEO is acceptable
What is the multiple of salary plus bonus in the severance agreements for the CEO upon a change-in-control?	Acceptable	0	.2	The multiple of salary plus bonus in the change-in-control agreements for the CEO is acceptable

Question	Answer	Points	Weight	Factor
Are executives given credit toward pension for years not worked?	No	0	.175	No executives are being granted additional service credits toward their pension for years not worked or the company does not have a pension plan
Has the company voluntarily adopted a management 'say on pay' advisory vote resolution for the most recent annual meeting or committed to a resolution going forward?	Yes, voluntarily adopted	1.12	.225	The company has adopted a management 'say on pay' advisory vote resolution
What is the independent status of the nominating committee members?	Percentage	5	1	100% of the nominating committee is independent
Non-Audit fees represent what percentage of total fees?	Percentage	0	1	Non-audit fees represent 0% of total fees
What is the independent status of the compensation committee members?	Percentage	5	1	100% of the compensation committee is independent
Did the auditor issue an adverse opinion in the past year?	Unqualified	0	.3846	The auditor issued an unqualified opinion in the past year
What is the independent status of	Percentage	5	1	100% of the audit committee is

Question	Answer	Points	Weight	Factor
the audit committee members?				independent
Has the company restated financials for any period within the past two years?	No	0	.2308	The company has not restated financials within the past 2 years
Does the company disclose a policy requiring an annual performance evaluation of the board?	The company discloses an annual and individual performance evaluation	.4	.08	The board and individual directors are subject to an annual performance evaluation
Did any directors attend less than 75% of the board meetings without a valid excuse?	No	.75	.15	No directors attended less than 75% of the board meetings without a valid excuse
Did outside directors meet without management present?	Yes	.35	.07	Outside directors met without management present
Can directors hire own advisors without management approval?	Yes	.35	.07	Directors can hire their own advisors without management approval
How many directors received withhold/ against votes of 50% or greater at the last annual meeting?	Number	0	.09	0 director(s) received withhold votes of 50% or greater at the last annual meeting
Has the company made late financial disclosure filings in the past two years?	No	0	.1538	The company has not made late financial disclosure filings in the

Question	Answer	Points	Weight	Factor
				past 2 years
What per cent of the directors were involved in material RPTs?	Percentage	.45	.09	0% of the directors were involved in material related party transactions
Do the directors with RPTs sit on key board committees?	Not applicable	.25	.05	No directors were involved in material related party transactions
Does the company have a majority vote standard in uncontested elections?	The company has a plurality vote standard with a director resignation policy	.6	.2	The company has a plurality vote standard with a director resignation policy
Did the company have a slate ballot at its last shareholders' meeting?	Company has individual director elections	1	.2	Directors are elected on an individual basis
Does the company have classes of stock with different voting rights?	No	0	.6	The company has a single class share capital structure
Are there any directors on the board who are not up for election by all classes of common shareholders	No	0	.1	All common shareholders are entitled to vote on all directors standing for election
Is there a sunset provision on the	No unequal voting	0	.1	The company has a

Question	Answer	Points	Weight	Factor
company's unequal voting structure?	structure			single class share capital structure
Has a securities regulator taken enforcement action against the company in the past two years?	Yes	-1.15	.2308	A securities regulator has taken enforcement action against the company in the past 2 years
What percentage of the company's share capital is made up of non-voting shares?	Percentage	1	.2	0% of the company's issued and outstanding common share capital is comprised of non-voting shares
Are all directors elected annually?	Yes	2.5	.5	All directors are elected annually
Is the board authorized to issue blank check preferred stock?	No	2.5	.5	The board is not authorized to issue blank cheque preferred stock
Has the company disclosed any material weaknesses in its internal controls in the past two years?	No	0	1	The company has not disclosed any material weakness in its internal controls in the past 2 years
Has the board failed to implement a shareholder resolution supported by a majority vote	No/ No majority supported shareholder proposals	0	.6	The board has not ignored any majority supported shareholder proposals

Audit Score	85
Audit Concern	MEDIUM
Board Structure Score	96.1716
Board Structure Concern	LOW
Shareholder Score	91.6667
Shareholder Concern	LOW
Compensation Score	78.5926
Compensation Concern	LOW

PUBLICATION-TYPE: Company Profile

LANGUAGE: ENGLISH

COMPANY: xxxxxx **BANK** (91%)

LOAD-DATE: June 24, 2010

FOCUS - 1 of 113 DOCUMENTS

ISS Corporate Governance Quotient Profiles

REPORT DATE: April 1, 2010

Centerstate **Banks,** Inc.

* * * * * * * * * * **COMPANY IDENTIFIERS** * * * * * * * * * *

TICKER: CSFL

PRIMARY CUSIP: 15201P109

* * * * * * * * * * **DESCRIPTION** * * * * * * * * * *

INDUSTRY: Banks

* * * * * * * * * * **SECURITIES INFORMATION** * * * * * * * * * *

STOCK INDEX: Russell 3000

CORPORATE GOVERNANCE QUOTIENT

	Index Score	Industry Score
Corporate Governance Quotient	35.9	50.6
Board Subscore	2	3
Compensation Subscore	3	3
Takeover Subscore	3	3
Audit Subscore	2	3

LOAD-DATE: April 1, 2010

Appendix 4-5 – Cross section regression with Approximate Q

```
regress lnaq_2009 lncgq_in lnta_2009 lnAge dce Dsp500 Drussell3000 Dsp400
Dsp600


      Source |       SS       df       MS              Number of obs =     223
-------------+------------------------------           F(  8,   214) =    2.42
       Model |  4.79354052     8  .599192565           Prob > F      =  0.0160
    Residual |  52.9548503   214  .247452571           R-squared     =  0.0830
-------------+------------------------------           Adj R-squared =  0.0487
       Total |  57.7483908   222  .260127886           Root MSE      =  .49745


------------------------------------------------------------------------------
   lnaq_2009 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
    lncgq_in |   .0137496   .0426225     0.32   0.747    -.0702641    .0977633
   lnta_2009 |  -.0141052   .0378491    -0.37   0.710      -.08871    .0604995
       lnAge |   .2137021   .0891175     2.40   0.017     .0380415    .3893627
         dce |  -.0679559   .1105521    -0.61   0.539    -.2858663    .1499545
      Dsp500 |  -.5252669    .232273    -2.26   0.025    -.9831029    -.067431
Drussell3000 |  -.1328135   .0863786    -1.54   0.126    -.3030752    .0374483
      Dsp400 |  -.1099791   .1543637    -0.71   0.477    -.4142472    .1942889
      Dsp600 |  -.0554383   .1306926    -0.42   0.672     -.313048    .2021714
       _cons |   1.322929   .3134746     4.22   0.000     .7050361    1.940822
------------------------------------------------------------------------------
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of lnaq_2009

        chi2(1)      =      1.51
        Prob > chi2  =    0.2191

Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
            Source |      chi2     df       p
-------------------+-------------------------------
Heteroskedasticity |     38.08     32     0.2121
          Skewness |      9.96      8     0.2681
          Kurtosis |      1.09      1     0.2955
-------------------+-------------------------------
             Total |     49.13     41     0.1794
---------------------------------------------------

Ramsey RESET test using powers of the fitted values of lnaq_2009
       Ho:  model has no omitted variables
              F(3, 211) =       0.88
              Prob > F =       0.4516

    Variable |       VIF       1/VIF
-------------+----------------------
   lnta_2009 |      3.01    0.332448
      Dsp500 |      2.28    0.438602
      Dsp400 |      1.83    0.545928
      Dsp600 |      1.42    0.702323
Drussell3000 |      1.36    0.733710
    lncgq_in |      1.25    0.802844
       lnAge |      1.13    0.882707
         dce |      1.06    0.945364
-------------+----------------------
    Mean VIF |      1.67
```

Appendix 4-6 – Cross section regression with averaged values

```
regress lnAvAQ5 lncgq_in lnAvTA5 lnAge Dsp500 Drussell3000 Dsp400 Dsp600


      Source |       SS       df       MS              Number of obs =     217
-------------+------------------------------           F(  7,   209) =    1.84
       Model |  3.05151345     7  .435930493           Prob > F      =  0.0813
    Residual |  49.5268193   209  .236970427           R-squared     =  0.0580
-------------+------------------------------           Adj R-squared =  0.0265
       Total |  52.5783327   216  .243418207           Root MSE      =   .4868

--------------------------------------------------------------------------------
     lnAvAQ5 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+------------------------------------------------------------------
    lncgq_in |   .0222997   .0434542     0.51   0.608    -.0633651    .1079644
     lnAvTA5 |  -.0162721   .0377125    -0.43   0.667    -.0906177    .0580735
       lnAge |   .2360113   .0942571     2.50   0.013     .0501947    .4218278
      Dsp500 |  -.3692555   .2456378    -1.50   0.134    -.8535009    .1149898
Drussell3000 |  -.0332811   .0849321    -0.39   0.696    -.2007146    .1341523
      Dsp400 |   .0267635   .1524876     0.18   0.861    -.2738474    .3273743
      Dsp600 |   .1323121     .12793     1.03   0.302    -.1198865    .3845106
       _cons |   1.176205   .3252532     3.62   0.000      .535008    1.817403
--------------------------------------------------------------------------------
```

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of lnAvAQ5

        chi2(1)      =    15.05
        Prob > chi2  =   0.0001
```

```
Cameron & Trivedi's decomposition of IM-test

-----------------------------------------------------
              Source |     chi2     df      p
---------------------+-------------------------------
  Heteroskedasticity |    40.91     25   0.0235
            Skewness |    10.20      7   0.1775
            Kurtosis |     1.03      1   0.3100
---------------------+-------------------------------
               Total |    52.14     33   0.0183
-----------------------------------------------------
```

```
Ramsey RESET test using powers of the fitted values of lnAvAQ5
      Ho:  model has no omitted variables
              F(3, 206) =       0.78
              Prob > F =       0.5083

   Variable |      VIF       1/VIF
------------+----------------------
    lnAvTA5 |     2.88    0.346907
     Dsp500 |     2.20    0.455258
     Dsp400 |     1.78    0.561292
     Dsp600 |     1.42    0.704174
Drussell3000 |    1.35    0.741799
   lncgq_in |     1.23    0.812789
      lnAge |     1.14    0.877326
------------+----------------------
   Mean VIF |     1.71
```

Appendix 4-6 (continued)

```
Regress lnAvAQ5 lncgq_in lnAvTA5 lnAge Dsp500 Drussell3000 Dsp400 Dsp600,
vce(robust)                                        Number of obs =      217
                                                   F(  7,   209) =     9.08
                                                   Prob > F      =   0.0000
                                                   R-squared     =   0.0580
                                                   Root MSE      =    .4868

-------------------------------------------------------------------------------
             |             Robust
     lnAvAQ5 |     Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+-----------------------------------------------------------------
    lncgq_in |   .0222997    .046422     0.48   0.631    -.0692158    .1138151
     lnAvTA5 |  -.0162721   .0702011    -0.23   0.817    -.1546652     .122121
       lnAge |   .2360113   .0919168     2.57   0.011     .0548084    .4172141
      Dsp500 |  -.3692555   .3106082    -1.19   0.236    -.9815822    .2430711
Drussell3000 |  -.0332811   .0709685    -0.47   0.640     -.173187    .1066248
      Dsp400 |   .0267635   .1638043     0.16   0.870     -.296157     .349684
      Dsp600 |   .1323121   .1116181     1.19   0.237    -.0877296    .3523537
       _cons |   1.176205   .5528411     2.13   0.035     .0863459    2.266065
-------------------------------------------------------------------------------

. regress  lnAvAQ5 lncgq_in lnAvTA5 lnAge Dsp500 Drussell3000 Dsp400 Dsp600,
vce(hc2)                                           Number of obs =      217
                                                   F(  7,   209) =     8.61
                                                   Prob > F      =   0.0000
                                                   R-squared     =   0.0580
                                                   Root MSE      =    .4868

-------------------------------------------------------------------------------
             |           Robust HC2
     lnAvAQ5 |     Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+-----------------------------------------------------------------
    lncgq_in |   .0222997   .0466379     0.48   0.633    -.0696413    .1142406
     lnAvTA5 |  -.0162721   .0717997    -0.23   0.821    -.1578165    .1252723
       lnAge |   .2360113   .0924759     2.55   0.011     .0537061    .4183164
      Dsp500 |  -.3692555   .3203471    -1.15   0.250    -1.000781    .2622701
Drussell3000 |  -.0332811   .0727703    -0.46   0.648     -.176739    .1101767
      Dsp400 |   .0267635   .1693365     0.16   0.875    -.3070631      .36059
      Dsp600 |   .1323121   .1151301     1.15   0.252    -.0946531    .3592772
       _cons |   1.176205   .5618091     2.09   0.038     .0686665    2.283744
-------------------------------------------------------------------------------

. regress  lnAvAQ5 lncgq_in lnAvTA5 lnAge Dsp500 Drussell3000 Dsp400 Dsp600,
vce(hc3)                                           Number of obs =      217
                                                   F(  7,   209) =     7.86
                                                   Prob > F      =   0.0000
                                                   R-squared     =   0.0580
                                                   Root MSE      =    .4868

-------------------------------------------------------------------------------
             |           Robust HC3
     lnAvAQ5 |     Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+-----------------------------------------------------------------
    lncgq_in |   .0222997   .0477501     0.47   0.641    -.0718338    .1164332
     lnAvTA5 |  -.0162721   .0749947    -0.22   0.828    -.1641151    .1315709
       lnAge |   .2360113   .0948198     2.49   0.014     .0490855     .422937
      Dsp500 |  -.3692555   .3375433    -1.09   0.275    -1.034681    .2961704
Drussell3000 |  -.0332811    .076283    -0.44   0.663    -.1836639    .1171016
      Dsp400 |   .0267635   .1788193     0.15   0.881    -.3257572    .3792841
      Dsp600 |   .1323121   .1213235     1.09   0.277    -.1068627    .3714868
       _cons |   1.176205   .5826867     2.02   0.045     .0275089    2.324902
-------------------------------------------------------------------------------
```

```
regress  lnAvAQ3 lncgq_in lnAvTA3 lnAge Drussell3000 Dsp400 Dsp600 Dsp500

      Source |       SS       df       MS              Number of obs =     234
-------------+------------------------------           F(  7,   226) =    2.97
       Model |  5.24765011      7  .749664302          Prob > F      =  0.0054
    Residual |  57.1257448    226  .252768782          R-squared     =  0.0841
-------------+------------------------------           Adj R-squared =  0.0558
       Total |  62.3733949    233  .267696974          Root MSE      =  .50276


------------------------------------------------------------------------------
     lnAvAQ3 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
    lncgq_in |   .0630627   .0419312     1.50   0.134    -.0195634    .1456888
     lnAvTA3 |  -.0670688   .0361018    -1.86   0.065     -.138208    .0040705
       lnAge |   .3016167    .093982     3.21   0.002     .1164236    .4868097
Drussell3000 |   .0744372   .0842416     0.88   0.378    -.0915622    .2404366
      Dsp400 |   .2463049   .1511086     1.63   0.104     -.051457    .5440669
      Dsp600 |   .2899561    .128223     2.26   0.025     .0372906    .5426216
      Dsp500 |  -.0378195   .2415797    -0.16   0.876    -.5138563    .4382173
       _cons |   1.168673    .311468     3.75   0.000     .5549204    1.782426
------------------------------------------------------------------------------

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of lnAvAQ3

        chi2(1)      =      4.63
        Prob > chi2  =    0.0314

Cameron & Trivedi's decomposition of IM-test

-----------------------------------------------------
              Source |      chi2     df      p
---------------------+-------------------------------
  Heteroskedasticity |     40.60     25   0.0253
            Skewness |     10.01      7   0.1881
            Kurtosis |      1.03      1   0.3113
---------------------+-------------------------------
               Total |     51.63     33   0.0205
-----------------------------------------------------

Ramsey RESET test using powers of the fitted values of lnAvAQ3
        Ho:  model has no omitted variables
                F(3, 223) =      0.89
                Prob > F =      0.4481

. estat vif

    Variable |      VIF       1/VIF
-------------+----------------------
     lnAvTA3 |     2.64    0.378910
      Dsp500 |     2.00    0.500488
      Dsp400 |     1.65    0.605225
      Dsp600 |     1.35    0.741305
Drussell3000 |     1.29    0.773659
    lncgq_in |     1.22    0.816974
       lnAge |     1.14    0.877623
-------------+----------------------
    Mean VIF |     1.61
```

```
regress  lnAvAQ2 lncgq_in lnAvTA2 lnAge Dsp500 Drussell3000 Dsp400 Dsp600

      Source |       SS       df       MS              Number of obs =     223
-------------+------------------------------           F(  7,   215) =    2.47
       Model |  3.88347375      7  .554781965           Prob > F      =  0.0188
    Residual |  48.3840535    215  .225042109           R-squared     =  0.0743
-------------+------------------------------           Adj R-squared =  0.0442
       Total |  52.2675272    222  .235439312           Root MSE      =  .47439


------------------------------------------------------------------------------
     lnAvAQ2 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
    lncgq_in |   .0138651   .0406776     0.34   0.734    -.0663128    .0940431
     lnAvTA2 |   -.006314   .0357299    -0.18   0.860    -.0767398    .0641118
       lnAge |    .191937   .0851061     2.26   0.025     .0241879    .3596862
      Dsp500 |  -.4985359   .2206165    -2.26   0.025     -.933384   -.0636878
Drussell3000 |  -.0907855   .0817389    -1.11   0.268    -.2518977    .0703267
      Dsp400 |  -.1001416   .1456247    -0.69   0.492    -.3871765    .1868933
      Dsp600 |   .0225364   .1239211     0.18   0.856    -.2217193    .2667922
       _cons |   1.243409   .2935077     4.24   0.000     .6648882     1.82193
------------------------------------------------------------------------------


Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of lnAvAQ2

        chi2(1)      =      0.57
        Prob > chi2  =    0.4513

Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
            Source |      chi2     df        p
-------------------+-------------------------------
Heteroskedasticity |     36.57     25     0.0634
          Skewness |      9.39      7     0.2256
          Kurtosis |      1.05      1     0.3046
-------------------+-------------------------------
             Total |     47.02     33     0.0539
---------------------------------------------------


Ramsey RESET test using powers of the fitted values of lnAvAQ2
      Ho:  model has no omitted variables
             F(3, 212) =       0.93
               Prob > F =      0.4284

. estat vif

    Variable |      VIF       1/VIF
-------------+----------------------
     lnAvTA2 |      2.95    0.338776
      Dsp500 |      2.26    0.442145
      Dsp400 |      1.79    0.557863
      Dsp600 |      1.41    0.710429
Drussell3000 |      1.34    0.745162
    lncgq_in |      1.25    0.801624
       lnAge |      1.14    0.880224
-------------+----------------------
    Mean VIF |      1.73
```

Appendix 4-7 – Cross section regression with Approximate Q (2007-08)

```
regress lnaq_2008 lncgq_in lnta_2008 lnAge Dsp500 Drussell3000 Dsp400 Dsp600

      Source |       SS       df       MS              Number of obs =     236
-------------+------------------------------           F(  7,   228) =    2.23
       Model |  3.29304313     7  .470434733           Prob > F      =  0.0329
    Residual |  48.1217304   228  .211060221           R-squared     =  0.0640
-------------+------------------------------           Adj R-squared =  0.0353
       Total |  51.4147735   235   .21878627           Root MSE      =  .45941

------------------------------------------------------------------------------
    lnaq_2008 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     lncgq_in |   .0130766   .0386394     0.34   0.735    -.0630593    .0892125
    lnta_2008 |  -.0115074   .0319884    -0.36   0.719    -.0745381    .0515234
        lnAge |   .1677072   .0806707     2.08   0.039     .0087519    .3266625
       Dsp500 |  -.3879409    .204506    -1.90   0.059    -.7909042    .0150224
 Drussell3000 |  -.0162167   .0762406    -0.21   0.832     -.166443    .1340096
       Dsp400 |  -.0293828   .1353249    -0.22   0.828    -.2960301    .2372644
       Dsp600 |   .1400042   .1169633     1.20   0.233     -.090463    .3704714
        _cons |   1.243072   .2740938     4.54   0.000     .7029912    1.783153
------------------------------------------------------------------------------
```

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of lnaq_2008

        chi2(1)      =      2.89
        Prob > chi2  =    0.0894
```

```
Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
            Source |     chi2     df      p
-------------------+-------------------------------
  Heteroskedasticity |    35.88     25   0.0734
          Skewness |     8.90      7   0.2599
          Kurtosis |     1.03      1   0.3108
-------------------+-------------------------------
            Total |    45.81     33   0.0683
---------------------------------------------------
```

```
Ramsey RESET test using powers of the fitted values of lnaq_2008
      Ho:  model has no omitted variables
              F(3, 225) =      1.87
              Prob > F =      0.1351

    Variable |      VIF       1/VIF
-------------+----------------------
   lnta_2008 |     2.68    0.372602
      Dsp500 |     2.08    0.481206
      Dsp400 |     1.66    0.602428
      Dsp600 |     1.35    0.743210
 Drussell3000 |    1.28    0.778461
    lncgq_in |     1.22    0.817792
       lnAge |     1.14    0.876477
-------------+----------------------
    Mean VIF |     1.63
```

Appendix 4-7 (continued)

```
regress lnaq_2007 lncgq_in   lnta_2007 lnAge Dsp500 Drussell3000 Dsp400 Dsp600

      Source |       SS       df       MS              Number of obs =     241
-------------+------------------------------           F(  7,   233) =    2.58
       Model |  4.81610254     7  .688014648           Prob > F      =  0.0142
    Residual |  62.2534424   233  .267182156           R-squared     =  0.0718
-------------+------------------------------           Adj R-squared =  0.0439
       Total |   67.069545   240  .279456437           Root MSE      =  .5169


------------------------------------------------------------------------------
    lnaq_2007 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
    lncgq_in |   .0558072   .0416596     1.34   0.182    -.0262704    .1378849
    lnta_2007 |  -.0624999   .0367107    -1.70   0.090    -.1348272    .0098275
       lnAge |   .2878884   .0899999     3.20   0.002     .1105708     .465206
      Dsp500 |  -.1033163   .2292319    -0.45   0.653    -.5549484    .3483157
Drussell3000 |   .0208303   .0855866     0.24   0.808    -.1477922    .1894528
      Dsp400 |   .1476288   .1523309     0.97   0.333    -.1524932    .4477508
      Dsp600 |   .2031088   .1310457     1.55   0.123    -.0550772    .4612948
       _cons |   1.194659   .2965409     4.03   0.000     .6104144    1.778903
------------------------------------------------------------------------------
```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of lnaq_2007

        chi2(1)   =   0.46
        Prob > chi2 =   0.4992

Cameron & Trivedi's decomposition of IM-test

```
---------------------------------------------------
            Source |      chi2     df       p
-------------------+-------------------------------
Heteroskedasticity |     36.95     25    0.0584
          Skewness |      9.23      7    0.2366
          Kurtosis |      1.03      1    0.3112
-------------------+-------------------------------
             Total |     47.20     33    0.0520
---------------------------------------------------
```

Ramsey RESET test using powers of the fitted values of lnaq_2007
        Ho: model has no omitted variables
             F(3, 230) =   0.19
             Prob > F =   0.9025

```
    Variable |       VIF       1/VIF
-------------+----------------------
    lnta_2007 |      2.75    0.363293
      Dsp500 |      2.06    0.484344
      Dsp400 |      1.66    0.600629
      Dsp600 |      1.34    0.747815
Drussell3000 |      1.29    0.775997
    lncgq_in |      1.24    0.804838
       lnAge |      1.15    0.869010
-------------+----------------------
    Mean VIF |      1.64
```

Appendix 4-8 – Cross section regression with Market to Book value

```
regress mb_2009 cgq_industry ta_2009 age dce Dsp500 Drussell3000 Dsp400 Dsp600

      Source |       SS       df       MS              Number of obs =     223
-------------+------------------------------           F(  8,   214) =    0.44
       Model |  5884.9637        8  735.620463          Prob > F      =  0.8947
    Residual |  356082.008      214  1663.93462          R-squared     =  0.0163
-------------+------------------------------           Adj R-squared = -0.0205
       Total |  361966.972      222  1630.48186          Root MSE      =  40.791

-------------------------------------------------------------------------------
      mb_2009 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+-----------------------------------------------------------------
 cgq_industry |   .0796901   .1050182     0.76   0.449    -.1273125    .2866928
     ta_2009 |   7.05e-07   .0000177     0.04   0.968    -.0000341    .0000355
         age |  -.9001953   .6983192    -1.29   0.199     -2.27666    .4762695
         dce |  -4.284213   9.03653     -0.47   0.636    -22.09622    13.52779
      Dsp500 |   -7.28458   15.06917    -0.48   0.629    -36.98758    22.41842
Drussell3000 |  -5.306412   6.717289    -0.79   0.430    -18.54694    7.934112
      Dsp400 |   -8.15826   10.32775    -0.79   0.430    -28.51541    12.19889
      Dsp600 |  -6.915032   9.997237    -0.69   0.490     -26.6207    12.79064
       _cons |    13.0381   10.25014     1.27   0.205    -7.166073    33.24227
-------------------------------------------------------------------------------
```

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of mb_2009

        chi2(1)      =    408.57
        Prob > chi2  =   0.0000
```

```
Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
              Source |      chi2     df      p
---------------------+-----------------------------
  Heteroskedasticity |     10.27     32    0.9999
            Skewness |      4.89      8    0.7690
            Kurtosis |      1.03      1    0.3107
---------------------+-----------------------------
               Total |     16.20     41    0.9998
---------------------------------------------------
```

```
Ramsey RESET test using powers of the fitted values of mb_2009
        Ho:  model has no omitted variables
              F(3, 211) =      2.60
               Prob > F =      0.0530
```

```
   Variable |      VIF       1/VIF
-------------+----------------------
      Dsp500 |     1.43    0.700703
     ta_2009 |     1.29    0.777418
 cgq_industry |    1.26    0.790809
      Dsp600 |     1.24    0.807092
Drussell3000 |     1.23    0.815817
      Dsp400 |     1.22    0.820085
         age |     1.06    0.942864
         dce |     1.05    0.951423
-------------+----------------------
    Mean VIF |     1.22
```

```
regress mb_2008 cgq_industry  ta_2008 age dce  Dsp500 Drussell3000 Dsp400 Dsp600

      Source |       SS       df       MS              Number of obs =     223
-------------+------------------------------           F(  8,    214) =    0.42
       Model | 1356.22127      8  169.527659           Prob > F      = 0.9077
    Residual | 86181.5568    214  402.717555           R-squared     = 0.0155
-------------+------------------------------           Adj R-squared = -0.0213
       Total | 87537.7781    222  394.314316           Root MSE      = 20.068


--------------------------------------------------------------------------------
     mb_2008 |     Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+------------------------------------------------------------------
cgq_industry |   .0384235   .0516587     0.74   0.458    -.0634015    .1402485
     ta_2008 |   4.82e-07   9.98e-06     0.05   0.962    -.0000192    .0000202
         age |  -.4428594   .3437309    -1.29   0.199    -1.120391    .2346724
         dce |  -2.203601   4.445745    -0.50   0.621    -10.96666    6.559457
      Dsp500 |  -3.603047   7.506872    -0.48   0.632    -18.39993    11.19383
Drussell3000 |  -2.389088   3.304693    -0.72   0.471    -8.903006    4.124829
      Dsp400 |  -3.743674   5.081001    -0.74   0.462    -13.75889    6.271544
      Dsp600 |  -2.979908   4.918153    -0.61   0.545    -12.67413    6.714318
       _cons |    6.63008   5.043088     1.31   0.190    -3.310407    16.57057
--------------------------------------------------------------------------------

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of mb_2008

         chi2(1)      =    405.83
         Prob > chi2  =    0.0000

Cameron & Trivedi's decomposition of IM-test

    ---------------------------------------------------
                 Source |      chi2     df      p
    --------------------+------------------------------
     Heteroskedasticity |     10.26     32    0.9999
               Skewness |      4.89      8    0.7690
               Kurtosis |      1.03      1    0.3107
    --------------------+------------------------------
                  Total |     16.18     41    0.9998
    ---------------------------------------------------

Ramsey RESET test using powers of the fitted values of mb_2008
         Ho:  model has no omitted variables
                 F(3, 211) =      2.58
                 Prob > F =      0.0548

    Variable |      VIF       1/VIF
-------------+----------------------
      Dsp500 |     1.46    0.683375
     ta_2008 |     1.32    0.755072
cgq_industry |     1.26    0.791005
      Dsp600 |     1.24    0.807130
Drussell3000 |     1.23    0.815798
      Dsp400 |     1.22    0.820042
         age |     1.06    0.941855
         dce |     1.05    0.951376
-------------+----------------------
    Mean VIF |     1.23
```

```
regress mb_2007 cgq_in  ta_2007 age dce  Dsp500 Drussell3000 Dsp400 Dsp600

      Source |       SS       df       MS              Number of obs =     223
-------------+------------------------------           F(  8,   214) =    0.45
       Model |  17526.5991     8  2190.82488           Prob > F      =  0.8893
    Residual |  1040613.41   214  4862.67947           R-squared     =  0.0166
-------------+------------------------------           Adj R-squared = -0.0202
       Total |     1058140   222  4766.39642           Root MSE      =  69.733


------------------------------------------------------------------------------
     mb_2007 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      cgq_in |   .1398686   .1794966     0.78   0.437    -.2139391    .4936763
     ta_2007 |   2.00e-06   .0000439     0.05   0.964    -.0000846    .0000886
         age |  -1.520786   1.191905    -1.28   0.203    -3.870163    .8285913
         dce |  -7.562235   15.44363    -0.49   0.625    -38.00335    22.87888
      Dsp500 |  -12.84086    26.0893    -0.49   0.623    -64.26577    38.58406
Drussell3000 |  -9.408035   11.47752    -0.82   0.413    -32.03151    13.21544
      Dsp400 |  -14.35239    17.6601    -0.81   0.417     -49.1624    20.45762
      Dsp600 |  -12.38189   17.08518    -0.72   0.469    -46.05868    21.29489
       _cons |   22.13641   17.51473     1.26   0.208    -12.38707     56.6599
------------------------------------------------------------------------------

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of mb_2007

        chi2(1)      =   409.19
        Prob > chi2  =   0.0000

Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
            Source |     chi2    df       p
-------------------+-------------------------------
Heteroskedasticity |    10.26    32    0.9999
          Skewness |     4.89     8    0.7688
          Kurtosis |     1.03     1    0.3107
-------------------+-------------------------------
             Total |    16.18    41    0.9998
---------------------------------------------------

Ramsey RESET test using powers of the fitted values of mb_2007
        Ho:  model has no omitted variables
                F(3, 211) =      2.57
                Prob > F =      0.0554

    Variable |      VIF       1/VIF
-------------+----------------------
      Dsp500 |     1.46    0.683167
     ta_2007 |     1.31    0.763278
      cgq_in |     1.26    0.791094
      Dsp600 |     1.24    0.807577
Drussell3000 |     1.22    0.816627
      Dsp400 |     1.22    0.819641
         age |     1.06    0.945830
         dce |     1.05    0.951957
-------------+----------------------
    Mean VIF |     1.23
```

.

Appendix 4-9 – Cross section regression with Market Capitalisation

```
regress lnmc_2009 cgq_in d2d_2009  t1r_2009 roe_2009 Drussell3000 Dsp400
Dsp600  DcgqUniv

      Source |       SS       df       MS              Number of obs =     207
-------------+------------------------------           F(  8,   198) =   87.26
       Model |  635.023882     8  79.3779852           Prob > F      =  0.0000
    Residual |  180.112784   198  .909660525           R-squared     =  0.7790
-------------+------------------------------           Adj R-squared =  0.7701
       Total |  815.136665   206   3.9569741           Root MSE      =  .95376

------------------------------------------------------------------------------
   lnmc_2009 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      cgq_in |   .0050851   .0026111     1.95   0.053    -.0000641    .0102343
    d2d_2009 |   .0332611    .016025     2.08   0.039     .0016596    .0648626
    t1r_2009 |  -.0127002   .0259294    -0.49   0.625    -.0638334     .038433
    roe_2009 |   .0154758   .0029043     5.33   0.000     .0097486     .021203
Drussell3000 |  -3.310125   .3165108   -10.46   0.000     -3.93429   -2.685961
      Dsp400 |  -1.433237   .3480163    -4.12   0.000    -2.119531   -.7469428
      Dsp600 |  -2.416836   .3405228    -7.10   0.000    -3.088353   -1.745319
    DcgqUniv |  -4.660027   .3265186   -14.27   0.000    -5.303927   -4.016126
       _cons |    7.97616   .5004645    15.94   0.000     6.989235    8.963085
------------------------------------------------------------------------------

. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of lnmc_2009

        chi2(1)      =      4.20
        Prob > chi2  =    0.0404

. estat imtest

Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
            Source |      chi2     df      p
-------------------+-------------------------------
Heteroskedasticity |     26.86     34    0.8029
          Skewness |     11.31      8    0.1846
          Kurtosis |      2.58      1    0.1082
-------------------+-------------------------------
             Total |     40.76     43    0.5690
---------------------------------------------------

. estat ovtest

Ramsey RESET test using powers of the fitted values of lnmc_2009
      Ho:  model has no omitted variables
            F(3, 195) =      1.52
              Prob > F =      0.2094
```

Appendices related to chapt. 5

Appendix 5-1 Estimation of Fixed effects and the test for serial correlation

```
xtreg lnmc  cgq_indu age assets dist2def  tier1  tier1sq y06 y07 y08 y09
Dsp400 Dsp500 Dsp600 dcgq, fe
note: y09 omitted because of collinearity


Fixed-effects (within) regression              Number of obs      =       745
Group variable: bank                           Number of groups   =       233

R-sq:  within  = 0.7046                         Obs per group: min =         1
       between = 0.0114                                        avg =       3.2
       overall = 0.0010                                        max =         5

                                               F(13,499)          =     91.57
corr(u_i, Xb)  = -0.9875                        Prob > F           =    0.0000


------------------------------------------------------------------------------
       lnmc |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
------------+-----------------------------------------------------------------
   cgq_indu |   .0005422   .0015998     0.34   0.735    -.002601    .0036854
        age |  -.2709236   .0159533   -16.98   0.000    -.3022676   -.2395797
     assets |   1.79e-06   4.16e-07     4.31   0.000     9.73e-07    2.61e-06
    dist2def |  .0066867   .0025997     2.57   0.010     .0015791    .0117944
      tier1 |   .2963409   .0253011    11.71   0.000     .2466311    .3460507
    tier1sq |  -.0079123   .0009169    -8.63   0.000    -.0097138   -.0061108
        y06 |   .4155784   .0501861     8.28   0.000     .3169763    .5141806
        y07 |   .5088299   .0480868    10.58   0.000     .4143523    .6033076
        y08 |   .1826051   .0483618     3.78   0.000     .0875872     .277623
        y09 |  (omitted)
     Dsp400 |   .3814083   .1841813     2.07   0.039     .0195418    .7432747
     Dsp500 |   .7899305   .3775095     2.09   0.037     .0482266    1.531635
     Dsp600 |   .6148249   .1249044     4.92   0.000     .3694216    .8602282
       Dcgq |  -.6175615   .0771809    -8.00   0.000     -.769201    -.465922
      _cons |   20.82597   1.086285    19.17   0.000     18.69171    22.96023
------------+-----------------------------------------------------------------
    sigma_u |  13.382442
    sigma_e |   .4339534
        rho |  .99894959   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(232, 499) =    25.38            Prob > F = 0.0000
```

```
xtserial lnmc  cgq_indu age assets dist2def  tier1  tier1sq y06 y07 y08 y09 Dsp400
Dsp500 Dsp600 dcgq

Wooldridge test for autocorrelation in panel data
H0: no first order autocorrelation
    F(  1,     136) =     43.944
          Prob > F =       0.0000
```

Appendix 5-2 - Instrumental variables

```
ivreg2 lnmc  age assets dist2def   tier1 tier1sq y06 y07 y08 y09 Dsp400
Dsp500 Dsp600 dcgq( cgq_indu =  sharepri roa), endogtest( cgq_indu)

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics consistent for homoskedasticity only

                                                  Number of obs =      737
                                                  F( 14,   722) =    27.34
                                                  Prob > F      =   0.0000
Total (centered) SS    = 2973.922293             Centered R2   =  -0.1825
Total (uncentered) SS  =  25951.9729             Uncentered R2 =   0.8645
Residual SS            = 3516.613251             Root MSE      =    2.184

------------------------------------------------------------------------------
      lnmc |     Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------+------------------------------------------------------------------
  cgq_indu | -.0658672   .0178056    -3.70   0.000    -.1007656   -.0309688
       age |  .0071217   .0022394     3.18   0.001     .0027325    .0115109
    assets |  1.42e-06   8.31e-07     1.71   0.087    -2.07e-07    3.05e-06
   dist2def |  .0282162   .0092063     3.06   0.002     .0101722    .0462603
     tier1 |  .2937512    .084657     3.47   0.001     .1278266    .4596759
    tier1sq | -.0100661   .0029021    -3.47   0.001    -.0157541   -.0043781
       y06 |  .2716432   .2766218     0.98   0.326    -.2705256     .813812
       y07 |  .3310985   .2804297     1.18   0.238    -.2185335    .8807306
       y08 | -.1705476   .2855722    -0.60   0.550    -.7302588    .3891637
       y09 | -.1253481   .2833485    -0.44   0.658     -.680701    .4300048
    Dsp400 |  2.293882   .4259715     5.39   0.000     1.458993    3.128771
    Dsp500 |  4.966941   .6235567     7.97   0.000     3.744792    6.189089
    Dsp600 |  1.200605   .3600836     3.33   0.001     .4948545    1.906356
      Dcgq | -2.841594   .3286603    -8.65   0.000    -3.485756   -2.197431
     _cons |  6.947977   1.147978     6.05   0.000      4.69798    9.197973
------------------------------------------------------------------------------
Underidentification test (Anderson canon. corr. LM statistic):      22.573
                                                 Chi-sq(2) P-val =   0.0000
------------------------------------------------------------------------------
Weak identification test (Cragg-Donald Wald F statistic):           11.390
Stock-Yogo weak ID test critical values: 10% maximal IV size        19.93
                                         15% maximal IV size        11.59
                                         20% maximal IV size         8.75
                                         25% maximal IV size         7.25
Source: Stock-Yogo (2005).  Reproduced by permission.
------------------------------------------------------------------------------
Sargan statistic (overidentification test of all instruments):       0.098
                                                 Chi-sq(1) P-val =   0.7541
-endog- option:
Endogeneity test of endogenous regressors:                          46.731
                                                 Chi-sq(1) P-val =   0.0000
Regressors tested:    cgq_indu
------------------------------------------------------------------------------
Instrumented:         cgq_indu
Included instruments: age assets dist2def tier1 tier1sq y06 y07 y08 y09
                      Dsp400 Dsp500 Dsp600 dcgq
Excluded instruments: sharepri roa
------------------------------------------------------------------------------
```

Appendix 5-3– GMM system estimation 'industry' – (collapse)

```
xtabond2 lnmc  L.lnmc cgq_indu  age assets dist2def  tier1tier1sq agesq y06 y07
y08 y09 Dsp500 Dsp400 DspP600  Dcgq, gmm(L.lnmc, laglimits (1 .) collapse)
gmm(cgq_indu, laglimits (3 .) ) gmm (dist2def  tier1tier1sq, laglimits (4 .)
collapse) gmm(Dsp500 Dsp400 DspP600  Dcgq, laglimits (4 .)) iv(age assets  agesq
y06 y07 y08 y09 ) robust twostep
Favoring space over speed. To switch, type or click on mata: mata set matafavor
speed, perm.
y09 dropped due to collinearity
Warning: Two-step estimated covariance matrix of moments is singular.
  Using a generalized inverse to calculate optimal weighting matrix for two-step
estimation.
  Difference-in-Sargan statistics may be negative.


Dynamic panel-data estimation, two-step system GMM
------------------------------------------------------------------------------
Group variable: bank                            Number of obs      =       595
Time variable : year                            Number of groups   =       200
Number of instruments = 28                      Obs per group: min =         1
Wald chi2(15) =   3317.34                                      avg =      2.98
Prob > chi2   =    0.000                                       max =         4
------------------------------------------------------------------------------
             |              Corrected
        lnmc |    Coef.    Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        lnmc |
         L1. |  .2935421   .2001551    1.47   0.142    -.0987546    .6858388
             |
    cgq_indu |  .0194872   .0098694    1.97   0.048     .0001435     .038831
         age | -.0029678   .0058455   -0.51   0.612    -.0144249    .0084893
      assets |  2.73e-06   1.39e-06    1.97   0.049     1.02e-08    5.45e-06
     dist2def|  .0443327   .0341629    1.30   0.194    -.0226253    .1112907
       tier1 |  .2796316   .1163888    2.40   0.016     .0515136    .5077495
      tier1sq| -.006962    .0042289   -1.65   0.100    -.0152504    .0013265
       agesq |  .000013    .000036     0.36   0.718    -.0000576    .0000835
         y06 |  .7744727   .2439716    3.17   0.002     .2962971    1.252648
         y07 |  .5809332   .2273145    2.56   0.011      .135405    1.026461
         y08 |  .3177462   .1034708    3.07   0.002     .1149471    .5205453
      Dsp500 | -.0314394   1.296852   -0.02   0.981    -2.573222    2.510343
      Dsp400 |  .9592993   1.050944    0.91   0.361    -1.100513    3.019112
      Dsp600 |  .3618471   .5033101    0.72   0.472    -.6246225    1.348317
        Dcgq | -1.293383   .3018886   -4.28   0.000    -1.885074   -.7016926
       _cons | -.1412011   .3604457   -0.39   0.695    -.8476616    .5652595
------------------------------------------------------------------------------
Instruments for first differences equation
  Standard
    D.(age assets Agesq y06 y07 y08 y09)
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    L(1/.).L.lnmc collapsed
    L(3/.).cgq_indu
    L(4/.).(dist2def tier1tier1sq) collapsed
    L(4/.).(Dcgq  Dsp400 Dsp500 Dsp600)
Instruments for levels equation
  Standard
    _cons
    age assets Agesq y06 y07 y08 y09
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    D.L.lnmc collapsed
    DL2.cgq_indu
    DL3.(dist2def tier1tier1sq) collapsed
    DL3.(Dcgq  Dsp400 Dsp500 Dsp600)
------------------------------------------------------------------------------
Arellano-Bond test for AR(1) in first differences: z =  -4.22  Pr > z =  0.000
Arellano-Bond test for AR(2) in first differences: z =  -0.70  Pr > z =  0.482
------------------------------------------------------------------------------
Sargan test of overid. restrictions: chi2(12)   = 14.04  Prob > chi2 =  0.298
  (Not robust, but not weakened by many instruments.)
Hansen test of overid. restrictions: chi2(12)   =  9.94  Prob > chi2 =  0.621
  (Robust, but can be weakened by many instruments.)
```

```
Difference-in-Hansen tests of exogeneity of instrument subsets:
  gmm(dist2def    tier1tier1sq, collapse lag(4 .))
    Hansen test excluding group:      chi2(8)   =    7.23  Prob > chi2 =  0.512
    Difference (null H = exogenous): chi2(4)   =    2.72  Prob > chi2 =  0.607
  iv(age assets Agesq y06 y07 y08 y09)
    Hansen test excluding group:      chi2(6)   =    4.37  Prob > chi2 =  0.627
    Difference (null H = exogenous): chi2(6)   =    5.57  Prob > chi2 =  0.473


nlcom ( _b[cgq_indu]/(1-_b[l1.lnmc]))

      _nl_1:  _b[cgq_indu]/(1-_b[l1.lnmc])

------------------------------------------------------------------------------
       lnmc |     Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------+-----------------------------------------------------------------
      _nl_1 |   .0275844   .0131466     2.10   0.036     .0018176    .0533512
------------------------------------------------------------------------------
```

Appendix 5-4 –Estimation of the preferred model without the 'collapse' option

```
xtabond2 lnmc  L.lnmc cgq_indu  age assets dist2def  tier1  Tier1sq Agesq y06 y07
y08 y09 Dsp500 Dsp400 Dsp600  dCGQ, gmm(L.lnmc, laglimits (1 .) ) gmm(cgq_indu,
laglimits (3 .) ) gmm (dist2def  tier1  Tier1sq , laglimits (4 .) ) gmm(Dcgq
Dsp400 Dsp500 dSP
> 600, laglimits (4 .)) iv(age assets  Agesq y06 y07 y08 y09 ) robust twostep
Favoring space over speed. To switch, type or click on mata: mata set matafavor
speed, perm.
y09 dropped due to collinearity
Warning: Two-step estimated covariance matrix of moments is singular.
  Using a generalized inverse to calculate optimal weighting matrix for two-step
estimation.
  Difference-in-Sargan statistics may be negative.

Dynamic panel-data estimation, two-step system GMM
------------------------------------------------------------------------------
Group variable: bank                            Number of obs      =       595
Time variable : year                            Number of groups   =       200
Number of instruments = 33                      Obs per group: min =         1
Wald chi2(15) =    429.70                                       avg =      2.98
Prob > chi2   =    0.000                                        max =         4
------------------------------------------------------------------------------
             |              Corrected
        lnmc |     Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        lnmc |
         L1. |   .1513969   .2035216     0.74   0.457    -.2474982     .550292
             |
    cgq_indu |   .0294621   .0104679     2.81   0.005     .0089455    .0499787
         age |  -.0026853   .0079722    -0.34   0.736    -.0183105    .0129399
      assets |   3.27e-06   1.86e-06     1.75   0.080    -3.85e-07    6.92e-06
     dist2def |   .0684668   .0349517     1.96   0.050    -.0000373    .1369709
        tier1 |   .3332148   .1377455     2.42   0.016     .0632386    .6031909
      Tier1sq |  -.0093781   .0047066    -1.99   0.046    -.0186029   -.0001534
        Agesq |   3.63e-06   .0000471     0.08   0.939    -.0000887     .000096
          y06 |   .7153282   .2839304     2.52   0.012     .1588347    1.271822
          y07 |    .543612   .2525441     2.15   0.031     .0486346    1.038589
          y08 |   .3585064   .1054793     3.40   0.001     .1517707    .5652422
       Dsp500 |  -.0207701   1.757605    -0.01   0.991    -3.465613    3.424072
       Dsp400 |   1.778369   1.488437     1.19   0.232    -1.138915    4.695653
       Dsp600 |   .2486026   .5408927     0.46   0.646    -.8115275    1.308733
         Dcgq |  -1.047808   .3603475    -2.91   0.004    -1.754076   -.3415402
        _cons |  -.6701031   .7923924    -0.85   0.398    -2.223164    .8829575
------------------------------------------------------------------------------
Instruments for first differences equation
  Standard
    D.(age assets Agesq y06 y07 y08 y09)
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    L(1/.).L.lnmc
    L(3/.).cgq_indu
    L(4/.).(dist2def tier1 T1Rsq)
    L(4/.).(Dcgq  Dsp400 Dsp500 dSP600)
Instruments for levels equation
  Standard
    _cons
    age assets Agesq y06 y07 y08 y09
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    D.L.lnmc
    DL2.cgq_indu
    DL3.(dist2def tier1 T1Rsq)
    DL3.(Dcgq  Dsp400 Dsp500 dSP600)
------------------------------------------------------------------------------
Arellano-Bond test for AR(1) in first differences: z =  -3.51  Pr > z =  0.000
Arellano-Bond test for AR(2) in first differences: z =  -1.26  Pr > z =  0.207
------------------------------------------------------------------------------
Sargan test of overid. restrictions: chi2(17)   =  18.20  Prob > chi2 =  0.376
  (Not robust, but not weakened by many instruments.)
Hansen test of overid. restrictions: chi2(17)   =  10.80  Prob > chi2 =  0.867
  (Robust, but can be weakened by many instruments.)
```

```
Difference-in-Hansen tests of exogeneity of instrument subsets:
  gmm(dist2def tier1 T1Rsq, lag(4 .))
    Hansen test excluding group:     chi2(6)    =    4.63  Prob > chi2 =  0.592
    Difference (null H = exogenous): chi2(11)   =    6.17  Prob > chi2 =  0.862
  gmm(Dcgq  Dsp400 Dsp500 dSP600, lag(4 .))
    Hansen test excluding group:     chi2(2)    =    3.09  Prob > chi2 =  0.213
    Difference (null H = exogenous): chi2(15)   =    7.70  Prob > chi2 =  0.935
  iv(age assets Agesq y06 y07 y08 y09)
    Hansen test excluding group:     chi2(11)   =    6.45  Prob > chi2 =  0.842
    Difference (null H = exogenous): chi2(6)    =    4.35  Prob > chi2 =  0.629

. nlcom ( _b[cgq_indu]/(1-_b[l1.lnmc]))

      _nl_1:  _b[cgq_indu]/(1-_b[l1.lnmc])

------------------------------------------------------------------------------
        lnmc |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _nl_1 |   .0347183   .0124216     2.79   0.005     .0103724    .0590643
------------------------------------------------------------------------------
```

Appendix 5-5 Calculation of the Long-run effect on the dependent variable

Let's agree to rewrite the main estimated model as:

$$y_{it} = c + \beta_1 y_{it-1} + \beta_2 x_{it} + \beta_3 x_{it-1} + u_{it}$$

Where y_{it} is the market capitalisation of the bank i in year t and x_{it} is corporate governance i in year t.

2.   To obtain the long-run – or equilibrium steady state – effect of changes in market capitalisaton, time subscripts are dropped:

$$y_i = c + \beta_1 y_i + \beta_2 x_i + \beta_3 x_i + u_i$$

3.   Collect variables:

$$(1-\beta_1)y_i = c + (\beta_2 + \beta_3)x_i + u_i$$

Drop the error term: it is assumed that the variables correspond to theory: i.e., to their long-run equilibrium quantities. Hence:

$$y_i = \frac{c}{1-\beta_1} + \frac{\beta_2 + \beta_3}{1-\beta_1} x_i$$

$$where \ \frac{\beta_2 + \beta_3}{1-\beta_1} \ is \ the \ LR \ coefficient \ (effect)$$

Appendix 5-6 Robustness Check (estimation of the model with *cgq_inde*)

```
xtabond2 lnmc  L.lnmc cgq_inde  age assets dist2def tier1 tier1sq Agesq y06 y07
y08 y09 Dsp500 Dsp400 Dsp600  Dcgq, gmm(L.lnmc, laglimits (1 .) collapse)
gmm(cgq_inde, laglimits (3 .) ) gmm (dist2def tier1 tier1sq, laglimits (4 .)
collapse) gmm(Dcgq  Dsp400 Dsp500 Dsp600, laglimits (4 .)) iv(age assets  Agesq
y06 y07 y08 y09 ) robust twostep
Favoring space over speed. To switch, type or click on mata: mata set matafavor
speed, perm.
y09 dropped due to collinearity
Warning: Two-step estimated covariance matrix of moments is singular.
  Using a generalized inverse to calculate optimal weighting matrix for two-step
estimation.
  Difference-in-Sargan statistics may be negative.

Dynamic panel-data estimation, two-step system GMM
------------------------------------------------------------------------------
Group variable: bank                            Number of obs      =       595
Time variable : year                            Number of groups   =       200
Number of instruments = 28                      Obs per group: min =         1
Wald chi2(15) =    799.12                                      avg =      2.98
Prob > chi2   =     0.000                                      max =         4
------------------------------------------------------------------------------
             |              Corrected
        lnmc |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        lnmc |
         L1. |   .1828887   .1875907     0.97   0.330    -.1847824    .5505598
             |
    cgq_inde |    .021292   .0083377     2.55   0.011     .0049505    .0376336
         age |  -.0006374   .0063951    -0.10   0.921    -.0131715    .0118967
      assets |   3.19e-06   1.23e-06     2.59   0.010     7.73e-07    5.61e-06
     dist2def |   .0740837   .0435494     1.70   0.089    -.0112715    .1594389
       tier1 |    .315439   .1056361     2.99   0.003     .1083961    .5224819
      tier1sq |  -.0085306   .0043652    -1.95   0.051    -.0170862    .0000249
       Agesq |   1.10e-06   .0000395     0.03   0.978    -.0000762    .0000784
         y06 |   .5947261   .2752333     2.16   0.031     .0552787    1.134174
         y07 |   .4226629   .2480408     1.70   0.088    -.0634882    .9088139
         y08 |   .2670204   .0836862     3.19   0.001     .1029985    .4310424
      Dsp500 |   .8170465   .9880909     0.83   0.408    -1.119576    2.753669
      Dsp400 |   1.434431   1.060318     1.35   0.176    -.6437542    3.512617
      Dsp600 |   .8939843   .3765519     2.37   0.018     .1559561    1.632012
        Dcgq |   -1.61394    .327945    -4.92   0.000      -2.2567   -.9711793
        _cons |  -.1148168   .4271234    -0.27   0.788    -.9519634    .7223297
------------------------------------------------------------------------------
Instruments for first differences equation
  Standard
    D.(age assets Agesq y06 y07 y08 y09)
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    L(1/.).L.lnmc collapsed
    L(3/.).cgq_inde
    L(4/.).(dist2def tier1tier1sq) collapsed
    L(4/.).(Dcgq  Dsp400 Dsp500 Dsp600)
Instruments for levels equation
  Standard
    _cons
    age assets Agesq y06 y07 y08 y09
  GMM-type (missing=0, separate instruments for each period unless collapsed)
    D.L.lnmc collapsed
    DL2.cgq_inde
    DL3.(dist2def tier1 tier1sq) collapsed
    DL3.(Dcgq  Dsp400 Dsp500 Dsp600)
------------------------------------------------------------------------------
Arellano-Bond test for AR(1) in first differences: z =  -3.39  Pr > z =  0.001
Arellano-Bond test for AR(2) in first differences: z =  -1.00  Pr > z =  0.316
------------------------------------------------------------------------------
Sargan test of overid. restrictions: chi2(12)   =  14.72  Prob > chi2 =  0.257
  (Not robust, but not weakened by many instruments.)
Hansen test of overid. restrictions: chi2(12)   =   7.94  Prob > chi2 =  0.790
  (Robust, but can be weakened by many instruments.)
```

```
Difference-in-Hansen tests of exogeneity of instrument subsets:
  gmm(dist2def    tier1tier1sq, collapse lag(4 .))
    Hansen test excluding group:    chi2(8)   =   7.37  Prob > chi2 =  0.497
    Difference (null H = exogenous): chi2(4)   =   0.57  Prob > chi2 =  0.966
  iv(age assets Agesq y06 y07 y08 y09)
    Hansen test excluding group:    chi2(6)   =   3.29  Prob > chi2 =  0.772
    Difference (null H = exogenous): chi2(6)   =   4.66  Prob > chi2 =  0.589

. nlcom ( _b[cgq_inde]/(1-_b[l1.lnmc]))

      _nl_1:  _b[cgq_inde]/(1-_b[l1.lnmc])

------------------------------------------------------------------------------
       lnmc |     Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      _nl_1 |   .0260577   .0086898     3.00   0.003     .0090261    .0430893
------------------------------------------------------------------------------
```

$$\frac{d(lnMC)}{d(T1R)} = \hat{\beta}_{11}T1R + \hat{\beta}_{12}T1R^2$$

$$\frac{d(lnMC)}{d(T1R)} = \hat{\beta}_{11} + 2\hat{\beta}_{12}T1R$$

$$\hat{\beta}_{11} + 2\hat{\beta}_{12}T1R = 0$$

$$2\hat{\beta}_{12}T1R = -\hat{\beta}_{11}$$

$$2(-0.006962)T1R = -0.27963$$

$$T1R = 20.08$$

Appendix 5-8 – Robustness check (OLS and Fixed Effects estimation of the lagged variable)

OLS

```
regress lnmc  L.lnmc cgq_indu age assets dist2def  tier1  tier1sq Agesq
y06 y07 y08 y09 Dsp400 Dsp500 Dsp600  dcgq
note: y08 omitted because of collinearity

      Source |       SS       df       MS              Number of obs =     595
-------------+------------------------------          F( 15,   579) =  587.56
       Model |  1969.50492    15  131.300328          Prob > F      =  0.0000
    Residual |  129.388155   579  .223468315          R-squared     =  0.9384
-------------+------------------------------          Adj R-squared =  0.9368
       Total |  2098.89307   594  3.53349002          Root MSE      =  .47272


------------------------------------------------------------------------------
        lnmc |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        lnmc |
         L1. |   .9072769   .0196258    46.23   0.000     .8687305    .9458233
             |
    cgq_indu |  -.0015421     .00075    -2.06   0.040    -.0030152    -.000069
         age |  -.0019128   .0017264    -1.11   0.268    -.0053035    .0014779
      assets |   6.44e-07   1.78e-07     3.61   0.000     2.93e-07    9.95e-07
    dist2def |   .0156283   .0026409     5.92   0.000     .0104414    .0208151
       tier1 |   .1638601   .0204028     8.03   0.000     .1237877    .2039326
     tier1sq |  -.0044132    .000713    -6.19   0.000    -.0058137   -.0030127
       Agesq |   .0000135   .0000106     1.27   0.205    -7.39e-06    .0000344
         y06 |   .6110489    .059867    10.21   0.000      .493466    .7286318
         y07 |   .2910232   .0579904     5.02   0.000     .1771261    .4049203
         y08 |  (omitted)
         y09 |      .0725   .0540285     1.34   0.180    -.0336158    .1786157
      Dsp400 |   .2260791   .0888747     2.54   0.011     .0515231    .4006351
      Dsp500 |   .2720879    .119841     2.27   0.024     .0367118     .507464
      Dsp600 |   .1076045    .066203     1.63   0.105    -.0224228    .2376319
        Dcgq |  -.2678996   .0559728    -4.79   0.000    -.3778341   -.1579652
       _cons |  -1.311074   .1930497    -6.79   0.000    -1.690237   -.9319107
------------------------------------------------------------------------------
```

Appendix 5-8 (continued)

Fixed effects

```
xtreg lnmc  L.lnmc cgq_indu age assets dist2def  tier1  tier1sq Agesq y06 y07 y08
y09 Dsp400 Dsp500 Dsp600  dcgq, fe
note: y06 omitted because of collinearity
note: y09 omitted because of collinearity

Fixed-effects (within) regression            Number of obs     =        595
Group variable: bank                         Number of groups  =        200

R-sq:  within  = 0.7397                       Obs per group: min =         1
       between = 0.0008                                      avg =        3.0
       overall = 0.0002                                      max =          4

                                              F(14,381)         =      77.34
corr(u_i, Xb)  = -0.9918                      Prob > F          =     0.0000

------------------------------------------------------------------------------
        lnmc |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        lnmc |
         L1. |   .3789335   .0607068     6.24   0.000     .2595712    .4982959
             |
    cgq_indu |  -.0007219   .0019441    -0.37   0.711    -.0045444    .0031006
         age |   -.326558   .0361174    -9.04   0.000    -.3975724   -.2555436
      assets |   1.49e-06   4.60e-07     3.24   0.001     5.87e-07    2.39e-06
     dist2def |   .0121159   .0036856     3.29   0.001     .0048692    .0193626
       tier1 |     .19562   .0320937     6.10   0.000     .1325169     .258723
     tier1sq |  -.0051145   .0011574    -4.42   0.000    -.0073902   -.0028388
       agesq |   .0000779   .0001998     0.39   0.697    -.0003148    .0004707
         y06 |          0  (omitted)
         y07 |   .0735478   .0533439     1.38   0.169    -.0313376    .1784331
         y08 |  -.0613436   .0499292    -1.23   0.220    -.1595148    .0368277
         y09 |          0  (omitted)
      Dsp400 |   .3117442   .1970732     1.58   0.115     -.075743    .6992314
      Dsp500 |   .7916462   .4147395     1.91   0.057    -.0238187    1.607111
      Dsp600 |   .6274196   .1422066     4.41   0.000     .3478116    .9070277
        Dcgq |  -.5133242    .081848    -6.27   0.000    -.6742545   -.3523938
       _cons |   22.64346    1.85385    12.21   0.000      18.9984    26.28852
-------------+----------------------------------------------------------------
     sigma_u |  15.011393
     sigma_e |  .42717721
         rho |  .99919086   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(199, 381) =      1.65          Prob > F = 0.0000
```

Appendices related to chapt. 6

Appendix 6-1 Survey Questionnaire

1	Name of the institution_____
2	☐ Bank ☐ Insurance company
3	Name of the respondent?_____ Nationality _____ Gender M/F (cross over as appropriate)
4	Position of the respondent at the institution?
5	A brief history of the institution
6	What is the number of shareholders/owners? _____
7	What is the number of board directors? _____
8	Is the number of shareholder meetings regulated by law? ☐ Yes, ☐ No, ☐ Not sure
9	How is the shareholder meeting announced? *(Please tick the appropriate box/es)* ☐ Company web site ☐ Public media (electronic and printed) ☐ Email ☐ Written notification by post ☐ Phone ☐ Other (please specify)
10	How far in advance is the shareholder meeting announced? *(Please tick the appropriate box)* ☐ 1 week ☐ 2 weeks ☐ 1 month or more ☐ Other (please specify) ☐ Not sure
11	Is the agenda for the shareholder meeting announced at the same time as the shareholder meeting? *(Please tick the appropriate box)* ☐ Yes, ☐ No,

Note:
Questions with multiple answers are denoted by the sentence "Please tick the appropriate box/es)"
Questions with only one possible answer are denoted by "Please tick the appropriate box"

	☐ Not sure
12	What information, except for date and location in respect to the general meeting is announced? *(Please tick the appropriate box/es)* ☐ Agenda ☐ Materials to be approved at the meeting ☐ Other (please specify)
13	What (%) of shares is needed to put an item on the agenda of general meetings? *(Please tick the appropriate box)* ☐ 10% ☐ 25% ☐ 33% ☐ Other _____% (please specify) ☐ Not sure
14	What percentages of board members on average participate (either in person or by proxy) in the board meetings? *(Please tick the appropriate box)* ☐ Over 50% ☐ 100% ☐ Other (please specify) ☐ Not sure
15	How often does the board meet during a year? *(Please tick the appropriate box)* ☐ Monthly, ☐ Quarterly ☐ Three times, ☐ Twice ☐ _____ (Other)
16	Do you have the same person serving as the chairperson of the board and CEO? ☐ Yes ☐ No
17	How many board meetings have been held in 2008? _____
18	Does the institution have a system of penalties for members who fail to attend the board meetings? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No (if No, please skip the next question) ☐ Not sure
19	What penalties do members who fail to attend the board meeting face? (please explain)

20	What % of shareholders' votes is necessary to Elect/remove members of the board? *(Please tick the appropriate box)* ☐ Not sure ☐ 50%+1 ☐ _____% (other))
21	Apart from shareholders, who participates in general shareholder meetings? *(Please tick the appropriate box/es)* ☐ CEO ☐ Senior Manager or managers? ☐ Internal audit person/committy representative ☐ Not sure ☐ Other (please specify
22	Except for shareholders who else is entitled to a share in the profits of the corporation? *(Please tick the appropriate box/es)* ☐ Managers ☐ Employees ☐ Not sure ☐ Other (please specify)
23	What % of shareholders (or votes) has to agree on amending the statutes? *(Please tick the appropriate box)* ☐ Not sure ☐ 50% + 1 ☐ 2/3 ☐ _____ % (Other, please specify)
24	What % of shareholders has to agree on approving mergers/takeovers? *(Please tick the appropriate box)* ☐ Not sure ☐ 50% + 1 ☐ 2/3 ☐ _____ % (Other, please specify)
25	Except for initial shares has your institution issued additional shares? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No (if No, please skip the next question) ☐ Not sure

26	What procedures have to be followed for issuing additional shares?*(Please describe)*
27	Are compensation schemes for board members announced at AGM? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No
28	Who decides upon compensation schemes for board members? *(Please tick the appropriate box)* ☐ Not sure, ☐ AGM ☐ Other (please explain)
29	Do you disclose (make public) remuneration for board members? *(Please tick the appropriate box)* ☐ Yes ☐ Yes only to the respective regulatory/monitoring authorities ☐ No
30	Does the board deal with: *(Please tick the appropriate box/es)* ☐ corporate strategy, ☐ major plans of action, ☐ risk policy, ☐ annual budgets (most recent date of approval:_____) ☐ business plans (most recent date of approval: _____) ☐ Other
31	For what period is the corporate strategy approved by the board? *(Please tick the appropriate box)* ☐ Five years ☐ Ten years ☐ ____ years; Other
32	Does the board set performance objectives for management? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No ☐ Not sure

33	What performance objectives for managers does your institution employ? *(Please tick the appropriate box/es)* ☐ Not sure ☐ Number of clients ☐ % of market share ☐ Other (please explain)
34	Do you have a bonus system for management? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No
35	How does your bonus system work?
36	Do managers own shares of the company? *(Please tick the appropriate box)* ☐ Yes ☐ No
37	Do you make public the information regarding ownership stake of managers? *(Please tick the appropriate box)* ☐ Yes ☐ No ☐ Not sure
38	Do you disclose remuneration of managers? *(Please tick the appropriate box)* ☐ Yes ☐ Yes only to the respective regulatory/monitoring authorities ☐ No
39	Do you set up performance objectives for board members? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No ☐ Not sure
40	Can you describe what performance objectives does your institution employ for board members?

41	Who monitors the implementation of strategic plans and corporate performance and oversees major capital expenditures? *(Please tick the appropriate box)* ☐ Board of directors ☐ Top management ☐ Both, board of directors and top management ☐ Other (please explain)
42	Does the Board have any of the following committees? *(Please tick the appropriate box/es)* ☐ Audit Committee, ☐ Remuneration Committee, ☐ Appointment Committee, ☐ Risk Assessment Committee, ☐ Risk Management Committee, ☐ Other (please explain)
43	Does the board decide on a 'corporate governance practice'? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No ☐ Not sure
44	How does the board monitor corporate governance practices?
45	Is it possible to vote in absentia? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to next question) ☐ No (if No, please skip the next question)
46	How does a shareholder vote in absentia? *(Please tick the appropriate box/es)* ☐ Postal system (voting by post) ☐ Authorised representative (proxy voting) ☐ Other (please explain procedure/method)
47	Is there any cost to vote in absentia? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No (if No, please skip the next question)

48	What is the cost of voting in absentia? *(Please tick the appropriate box/es)* ☐ Administrative fee ☐ Complicated procedures to follow ☐ Other (please explain)
49	Does your institution issue more than one type of shares? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No (if No, please skip the next question)
50	What type of shares does your institution have? *(Please tick the appropriate box/es)* ☐ Ordinary ☐ Preference share ☐ Shares with more than one vote ☐ Others (please specify)
51	How do you address and deal with minority shareholder concerns?
52	Does your institution have a policy (approved regulations) on conducting business with companies in which board members are important shareholders' or employees? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No (if No, please skip the next question
53	Can you please explain the policy which deals with the situation of conducting business with another company in which board member/s are important shareholders' or employees?
54	Does your institution have a policy on conducting business with companies in which members of management have 'significant' shares? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No (if No, please skip the next question
55	Can you please explain the policy which deals with the situation of conducting business with another company in which member/s of management have shares?

56	Which of the following is considered a stakeholder by your company? ☐ Borrowers ☐ Depositors ☐ The Insured ☐ Employees ☐ Community ☐ Other (please specify)
57	Can you describe what your company does to cultivate relations with its stakeholders?
58	Does your institution have deposit insurance? *(Please tick the appropriate box)* ☐ Yes – what amount _____ ☐ No ☐ Not sure
59	Does your institution have a representative of employees on the board? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No ☐ Not sure
60	Can you describe the election procedures for the employee's representative at the board?
61	Can minority shareholders have a representative at the board? *(Please tick the appropriate box)* ☐ Yes ☐ No ☐ Not sure
62	What percentage of shareholders' votes is necessary for board membership? *(Please tick the appropriate box)*

	☐ 50% + 1 ☐ 2/3 ☐ Others (please specify) _____
63	Do you publish the financial statements and operating results of the company? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No (if No, please skip the next question)
64	Where do you publish your financial statements and operating results? *(Please tick the appropriate box/es)* ☐ Own web page, ☐ Company papers/publications/pamphlet, ☐ Daily newspapers ☐ Other (please specify)
65	Do you publish the company's strategic objectives? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No
66	How do you publish the company's strategic objectives?
67	Do you publish the names of your large shareowners? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No
68	What percentage of ownership is required for a shareowner to be declared? *(Please tick the appropriate box)* ☐ 5% ☐ Top 10 shareowners (sorted by: most to least shares) ☐ Not sure ☐ Other _____% (please specify)
69	Do you publish information about board members? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No
70	What information about board members is published? *(Please tick the appropriate box/es)* ☐ Full CV ☐ Their qualifications, ☐ Other company directorships, ☐ Selection process

	☐ Remuneration ☐ Other
71	Do you have any independent member on the board of directors? *(Independent means independent of managers and shareholders) (Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No
72	How many independent board directors serve in your board? _____
73	What is your company's policy for selecting and replacing key executives?
74	What accounting standards are used to prepare and disclose company's financial information? *(Please tick the appropriate box)* ☐ Local ☐ International ☐ Combination of Local and International ☐ Other (please specify)
75	Do you have an internal auditing person/committee? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No
76	Who does the internal auditing person/committee report to? *(Please tick the appropriate box)* ☐ Board of directors ☐ Not sure ☐ Other
77	Has the report of internal auditing person/committee been discussed at the board meetings? *(Please tick the appropriate box)* ☐ Yes ☐ No ☐ Not sure

78	How often do you appoint a new (different from the current or previous) external auditor? *(Please tick the appropriate box)* ☐ Every year ☐ Every third year ☐ Have had the same auditor for more than 3 years ☐ Other (please explain) ☐ Not sure
79	Who does the external auditor report to? *(Please tick the appropriate box)* ☐ Shareholders ☐ Board of directors ☐ Not sure ☐ Other
80	Do you publish your audited reports? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No
81	Where do you publish your audited reports? *(Please tick the appropriate box/es)* ☐ Own web page, ☐ Company Newspapers, ☐ Daily Newspapers, ☐ Other (please specify)
82	Do you have a Corporate Governance Policy? *(Please tick the appropriate box)* ☐ Yes (If Yes, please go to the next question) ☐ No ☐ Not sure
83	Is your corporate governance policy aligned with OECD principles on Corporate Governance? *(Please tick the appropriate box)* ☐ Yes ☐ No ☐ Not sure
84	Do you have a policy on human resource development and training? *(Please tick the appropriate box)* ☐ Yes (if Yes, please go to the next question) ☐ No ☐ Not sure
85	Can you briefly explain your human resource development and training policies?

Note:
Questions with multiple answers are denoted by the sentence "Please tick the appropriate box/es)"
Questions with only one possible answer are denoted by "Please tick the appropriate box"

Appendix 6-2 Analysis of Survey Questionnaire

		Kosovo		Montenegro
Questionnaire questions	Answers	Banks	Insurance companies	Banks
Number of shareholders	Average	18.5	2.1	100.3
	Max	40	4	237
	Min	2	1	1
How is the shareholders' meeting announced?	Co. website	-	-	-
	Public media	1	1	8
	Email	4	5	2
	Written notification by post	2	-	2
	Phone	2	1	-
	No response	1	1	-
How far in advance is the shareholder meeting announced?	One week	1	1	1
	Two weeks	2	1	1
	One month	2	3	8
	No response	1	1	-
What other information, except for date and location, about the General Shareholder Meeting is announced?	Agenda and materials to be approved	6	3	9
	Other	-	-	4[1]
	No response	-	3	-
What (%) of shares (or votes) is required to put an item on the	50% +1 and more	3	2	1[2]

---

[1]Information on how and where to get hold of the information and the proposed decisions for the upcoming meeting.

[2] 100% since it is a 1 shareholder bank.

agenda of general meetings?	25% or less	2	-	1[3]
	5%	-	-	8
	No response	1	4	-
What % of shareholders' votes is necessary to Elect/remove members of the board?	50% +1	3	2	2
	5%	-	-	7
	Other	1	1	1[4]
	No response	2	3	-
What % of shareholders (or votes) is needed to amend the statutes?	2/3 of shareholders	3	3	2
	50%+1			2
	All shareholders	2	-	1
	Other	-	2	5[5]
	No response	1	1	-
What % of shareholders is needed to approve mergers/takeovers?	2/3 of shareholders	3	4	8
	All shareholders	1	-	1
	Other	1	1	1[6]
	No response	1	1	-

---

[3] 10%

[4] 100%

[5] 5% for four banks and 10% for one

[6] 50%+1

Appendix 6-3 - The Equitable Treatment of Shareholders

Questions	Answers	Kosovo		Montenegro
		Banks	Insurance companies	Banks
How do you address and deal with minority shareholder concerns?	Formal mechanisms	-	-	-
	Other	3	2	9[7]
	No response	3	4	1
Is it possible to vote in absentia?	Yes	5	2	10
	No	1	1	-
	Other	-	3	-
Is there any cost to voting in absentia?	Yes	-	-	-
	No	5	2	10
	No response	1	4	-

---

[7] All the banks responding to this question replied that there has been no minority shareholder problem so far (which is for sure the case for the two single-shareholder banks in the sample).

Appendix 6-4 - The Role of Stakeholders in Corporate Governance

Questions	Answers	Kosovo Banks	Kosovo Insurance companies	Montenegro Banks
Which of the following is considered a stakeholder by your company?	Borrowers	3	-	3
	Depositors	6	-	2
	The insured	-	1	-
	Employees	5	1	4
	The community	6	1	-
	Others	-	-	2^8
	No response	-	5	4
Does your institution have a deposit insurance system?	Yes	1	-	7
	No	5	-	3
Does your institution have a representative of employees on the board?	Yes	-	1	-
	No	6	5	10

---

[8] One bank has listed clients and one has listed investors as stakeholders.

Appendix 6-5 - Disclosure and Transparency

Questions	Answers	Kosovo		Montenegro
		Banks	Insurance companies	Banks
Do you publish your financial statements and operating results?	Yes	6	6	8
	No	-	-	-
Do you publish the company's strategic objectives?	Yes	4	2	2
	No	2	4	8
Do you publish the names of your large shareowners?	Yes	6	6	7
	No	-	-	3
Is there a limit of ownership set, for a shareowner to be declared?	Yes	3	-	6
	No	1	1	-
	No response	2	5	4
Do you publish information about board members?	Yes	6	4	5
	No	-	2	4
	No response	-	-	1
Do you have any independent member on the board of directors?	Yes	-	4	7
	No	6	2	2
	No response	-	-	1
Do you disclose remuneration for managers and board members?[9]	Yes	-	1	1
	No	3	3	6
	Other (Yes, to Authorities)	3	2	3

---

[9] For Montenegro this row contains information only for board members while for Kosova responses are for board members and managers.

Do you disclose remuneration for managers?	Yes	-	-	-
	No	-	-	4
	Other (Yes, to Authorities)	-	-	6
Does your institution have a policy on conducting business with companies in which board members are important shareholders' or employees?	Yes	4	5	6
	No	2	1	4
Does your institution have a policy on conducting business with companies in which members of management have 'significant' shares?	Yes	5	-	5
	No	1	1	5
	No response	-	5	-
Do you publish your audited reports?	Yes	6	6[10]	10
	No	-	-	-
How often do you appoint a new (different from the current or previous) external auditor?	Every third year	2	-	4
	Every fifth year	4	2	-
	Annual basis or less	-	4	6

---

[10] One insurance company did not reply to this question since it was the first quarter of its functioning and there were no audited reports yet.

Appendix 6-6 - The Responsibilities of the Board

Questions	Answers	Kosovo		Montenegro
		Banks	Insurance companies	Banks
Average (%) of participation in board meetings?	100%	6	2	5
	> 80%	-	2	1
	Over 50%	-	-	4
	No response	-	2	-
Does the institution have a system of penalties for members who fail to attend the board meetings?	Yes	2	1	4
	No	3	3	6
	No response	-	2	-
How many times did the board meet in 2008?	Average	12	11.1	15.2
	Max number of meetings	24	14	19
For what period is the corporate strategy approved by the board?	One year	-	-	1
	Three years	3	2	6
	Five years	3	4	2
	No response	-	-	1
Does the board set performance objectives for management?	Yes	6	6	9
	No	-	-	1
Does the company have performance objectives for board members?	Yes	3	1	1
	No	2	4	7
	No response	1	1	2
Who monitors the implementation of strategic plans and corporate performance and oversees major capital expenditures?	Board of directors	-	4	7
	Board of directors and management	5	2	3

	Other	1	-	1[11]
Does the board have any of the following committees?	Audit	6	5	8
	Remuneration	1	-	
	Appointment	2	-	
	Risk	6	2	9
	Other	1	2	6[12]
Does the board decide on a 'corporate governance policy'?	Yes	5	5	6
	No	1	1	4

[11] One bank has reported that the AGM also monitors the implementation of strategic plans and corporate performance and oversees major capital expenditure.
[12] All these respondents have the ALCO committee.

Appendix 6-7 – Coding of the responses

Q	Value Assigned	Condition
7	1	if number of BoD > 5 and odd
8	1	if the number of shareholder meetings regulated by law is answered Yes.
9	1	if email or written notification is sent to shareholders to announce the meeting.
10	1	If the shareholder meeting is announced 1 month or more in advance.
11	1	If the agenda is announced at the same time as the shareholder meeting.
12	1	if Agenda and Materials to be approved are announced at the same time as the shareholder meeting.
13	1	if 25% or less shares are required to put an item on the agenda.
14	1	if 75% - 100% of board members participate in board meetings during the year.
15	1	if the board meets during the year in quarterly basis or more often.
16	1	if the chairperson and the CEO is not the same person.
17	1	If the number of meetings in 2008 is more than 6.
18	1	if there is a system of penalties for board members failing to attend board meetings.
20	1	if 50% + 1 or more shares are required to elect/remove board members.
21	1	if any or all of the following participate in general shareholder meetings: CEO, Senior Manager/s, Internal Audit/committee representative.
22	1	if Employees are entitled to a share in the profits of the corporation.
23	1	if 2/3 or more votes are required to amend the statutes.
24	1	if 2/3 or more votes are required to approve mergers/takeovers.
25	1	if the institution has issued additional shares.
27	1	if compensation schemes for board members are announced at the AGM.
28	1	if AGM decides upon compensation schemes for board members.
29	1	if the remuneration to board members is made public, or disclosed to relevant authorities.
30	1	if board deals with any of the following: corporate strategy, major plans of action, risk policy, annual budgets, business plans.
31	1	if the corporate strategy is approved for 3 years or more.
32	1	if board sets performance objectives for management.
34	1	if there is a bonus system for management.
36	1	if managers own shares of the company.
37	1	if information regarding the ownership stake of managers is made public.
38	1	if remuneration of managers is made public or disclosed to relevant authorities.
39	1	if performance objectives are set for board members.
41	1	if BoD alone or jointly with top management monitor the implementation of strategic plans, corporate performance and major expenditures.
42	1	if the board has 3 out of 5 listed committees which are: Audit, remuneration, appointment, risk assessment, risk management committee.
43	1	if the board decide on corporate governance practice.

45	1	if it is possible to vote in absentia.
47	1	if there are no costs to voting in absentia.
49	1	if the institution issues more than one type of shares.
52	1	if the institution has approved policy/regulations on doing business with companies related to board members.
54	1	if the institution has a policy on doing business with companies related to members of management.
56	1	if the company recognizes 3 out of 5 listed groups as stakeholders: borrowers, depositors, the insured, employees, community.
58	1	if company has deposit insurance.
59	1	if the company has a representative of employees on the board.
61	1	if minority shareholders can have a representative on the board.
62	1	if 2/3 of votes are required to affect board membership.
63	1	if the company publishes the financial results.
64	1	if the company publishes the financial results in at least 2 out of 3 listed mediums: own web page, company papers/publications, daily newspapers.
65	1	if the company publishes the strategic objectives.
67	1	if the company publishes the names of large shareholders.
68	1	if the company has a criteria to publish the shareowners which is 5% share ownership or a list of 10 largest shareholders.
69	1	if the company publishes information about board members.
70	1	if the company publishes 3 out of 5 aspects of information about board members: full CV, qualifications, other company directorships, selection process, remuneration.
71	1	if the company has independent board members.
72	1	if the company has 2 or more independent board members.
74	1	if the company uses international accounting standards to prepare and disclose financial information.
75	1	if the company has internal audit person or committee.
76	1	if the internal audit reports to the BoD.
77	1	if reports of internal audit have been discussed in board meetins.
78	1	if the external audit is appointed each year or every third year.
79	1	if the external audit reports to the BoD.
80	1	if the reports of external audit are published.
81	1	if the company publishes the audit reports in at least 2 out of 3 listed mediums: own web page, company papers/publications, daily newspapers.
82	1	if the company has corporate governance policies.
83	1	if the corporate governance policies are in line with OECD corporate governance principles.
84	1	if the company has a policy on human resource development and training.

Appendix 6-8 – Stata printouts of the main estimated model

```
. regress  lnroe cgs assets db

      Source |       SS       df       MS              Number of obs =      16
-------------+------------------------------           F(  3,   12) =    6.31
       Model |  5.0880564        3  1.6960188           Prob > F      =  0.0082
    Residual |  3.22526817      12  .268772348          R-squared     =  0.6120
-------------+------------------------------           Adj R-squared =  0.5150
       Total |  8.31332458      15  .554221638          Root MSE      =  .51843


------------------------------------------------------------------------------
       lnroe |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         cgs |     .01005   .0263478     0.38   0.710    -.047357     .067457
      assets |   2.80e-06   6.75e-07     4.15   0.001    1.33e-06    4.27e-06
          db |   1.011721   .3982786     2.54   0.026    .1439466    1.879495
       _cons |   .9115449   1.098507     0.83   0.423   -1.481897    3.304987
------------------------------------------------------------------------------
. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of lnroe

        chi2(1)      =     1.20
        Prob > chi2  =   0.2735

. estat imtest

Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
              Source |      chi2     df      p
---------------------+-----------------------------
  Heteroskedasticity |     13.25      8    0.1037
            Skewness |      5.93      3    0.1151
            Kurtosis |      0.89      1    0.3458
---------------------+-----------------------------
               Total |     20.06     12    0.0659
---------------------------------------------------

. estat ovtest

Ramsey RESET test using powers of the fitted values of lnroe
        Ho:  model has no omitted variables
                  F(3, 9) =      1.43
                  Prob > F =      0.2964
```

Appendix 6-9 – Stata printouts of the derived estimated model

```
regress  lnroe P2 assets db

      Source |       SS       df       MS              Number of obs =      16
-------------+------------------------------           F(  3,    12) =    9.84
       Model |  5.91122898     3  1.97040966           Prob > F      =  0.0015
    Residual |  2.40209559    12  .200174633           R-squared     =  0.7111
-------------+------------------------------           Adj R-squared =  0.6388
       Total |  8.31332458    15  .554221638           Root MSE      = .44741

------------------------------------------------------------------------------
       lnroe |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          P2 |   .1272639   .0613178     2.08   0.060    -.0063361    .2608638
      assets |   3.11e-06   5.81e-07     5.36   0.000     1.85e-06    4.38e-06
          db |   1.123326   .3095729     3.63   0.003     .4488245    1.797827
       _cons |   .1422884   .6014988     0.24   0.817    -1.168265    1.452842
------------------------------------------------------------------------------


. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of lnroe

        chi2(1)      =     0.02
        Prob > chi2  =   0.8967

. estat imtest

Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
             Source |       chi2     df      p
--------------------+------------------------------
  Heteroskedasticity |      14.14      8    0.0782
           Skewness |       3.36      3    0.3390
           Kurtosis |       1.31      1    0.2522
--------------------+------------------------------
              Total |      18.81     12    0.0931
---------------------------------------------------

. estat ovtest

Ramsey RESET test using powers of the fitted values of lnroe
        Ho:  model has no omitted variables
                 F(3, 9) =      0.48
                 Prob > F =      0.7054
```

Appendix 6-10 – Additional Stata printouts (specifications of the models with OECD principles 3-6 and the CGS)

```
regress  lnroe P3 assets db

      Source |       SS       df       MS              Number of obs =      16
-------------+------------------------------           F(  3,   12) =    7.52
       Model | 5.42687983     3  1.80895994            Prob > F      = 0.0043
    Residual | 2.88644474    12  .240537062            R-squared     = 0.6528
-------------+------------------------------           Adj R-squared = 0.5660
       Total | 8.31332458    15  .554221638            Root MSE      = .49045


------------------------------------------------------------------------------
       lnroe |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          P3 |   .1161759   .0926836     1.25   0.234    -.0857642    .3181161
      assets |   2.88e-06   6.16e-07     4.68   0.001     1.54e-06    4.23e-06
          db |   1.162947   .3720804     3.13   0.009     .3522533     1.97364
       _cons |   .8878563    .408112     2.18   0.050    -.0013433    1.777056
------------------------------------------------------------------------------

. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of lnroe

        chi2(1)      =      0.01
        Prob > chi2  =    0.9039

. estat imtest

Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
              Source |       chi2     df      p
---------------------+-----------------------------
  Heteroskedasticity |       8.09      8    0.4245
            Skewness |       0.70      3    0.8722
            Kurtosis |       1.73      1    0.1881
---------------------+-----------------------------
               Total |      10.53     12    0.5697
---------------------------------------------------
. estat ovtest

Ramsey RESET test using powers of the fitted values of lnroe
      Ho:  model has no omitted variables
               F(3, 9) =      2.14
               Prob > F =     0.1653

. regress  lnroe P4 assets db

      Source |       SS       df       MS              Number of obs =      16
-------------+------------------------------           F(  3,   12) =    6.35
       Model | 5.10149412     3  1.70049804            Prob > F      = 0.0080
    Residual | 3.21183046    12  .267652538            R-squared     = 0.6137
-------------+------------------------------           Adj R-squared = 0.5171
       Total | 8.31332458    15  .554221638            Root MSE      = .51735


------------------------------------------------------------------------------
       lnroe |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          P4 |  -.1059385   .2391036    -0.44   0.666    -.6269006    .4150236
      assets |   2.68e-06   6.39e-07     4.20   0.001     1.29e-06    4.07e-06
          db |   .9519698   .3444317     2.76   0.017     .2015176    1.702422
       _cons |   1.436545   .3462043     4.15   0.001     .6822312     2.19086
------------------------------------------------------------------------------

. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
```

```
                  Ho: Constant variance
                  Variables: fitted values of lnroe

                  chi2(1)    =     1.42
                  Prob > chi2 =   0.2340

. estat imtest

Cameron & Trivedi's decomposition of IM-test

-----------------------------------------------------
            Source |      chi2    df      p
-------------------+---------------------------------
Heteroskedasticity |      5.38     8    0.7162
          Skewness |      7.21     3    0.0656
          Kurtosis |      1.05     1    0.3045
-------------------+---------------------------------
             Total |     13.64    12    0.3242
-----------------------------------------------------
. estat ovtest

Ramsey RESET test using powers of the fitted values of lnroe
       Ho:  model has no omitted variables
                 F(3, 9) =       2.01
                 Prob > F =      0.1835

. regress  lnroe P5 assets db

      Source |       SS       df       MS              Number of obs =      16
-------------+------------------------------           F(  3,   12) =    8.19
       Model | 5.58516558     3  1.86172186            Prob > F       = 0.0031
    Residual | 2.728159      12  .227346583            R-squared      = 0.6718
-------------+------------------------------           Adj R-squared = 0.5898
       Total | 8.31332458    15  .554221638            Root MSE      = .47681

------------------------------------------------------------------------------
       lnroe |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          P5 | -.0665402   .0433271    -1.54   0.151    -.1609417    .0278614
      assets |  2.68e-06   5.85e-07     4.59   0.001     1.41e-06    3.96e-06
          db |  .7100539    .347532     2.04   0.064    -.0471532   1.467261
       _cons |    2.4443   .7609476     3.21   0.007     .7863373   4.102262
------------------------------------------------------------------------------
. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of lnroe

        chi2(1)    =     3.00
        Prob > chi2 =   0.0831

. estat imtest
Cameron & Trivedi's decomposition of IM-test

-----------------------------------------------------
            Source |      chi2    df      p
-------------------+---------------------------------
Heteroskedasticity |     10.43     8    0.2359
          Skewness |      9.05     3    0.0286
          Kurtosis |      0.51     1    0.4771
-------------------+---------------------------------
             Total |     19.99    12    0.0673
-----------------------------------------------------

. estat ovtest

Ramsey RESET test using powers of the fitted values of lnroe
       Ho:  model has no omitted variables
                 F(3, 9) =       2.26
                 Prob > F =      0.1499
```

```
. regress   lnroe P6 assets db

      Source |       SS       df       MS              Number of obs =      16
-------------+------------------------------          F(  3,   12) =    6.66
       Model |  5.19341864     3  1.73113955          Prob > F      =  0.0067
    Residual |  3.11990593    12  .259992161          R-squared     =  0.6247
-------------+------------------------------          Adj R-squared =  0.5309
       Total |  8.31332458    15  .554221638          Root MSE      =  .50989


------------------------------------------------------------------------------
       lnroe |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          P6 |    .059774   .0801879     0.75   0.470    -.1149404    .2344884
      assets |    2.91e-06   6.79e-07    4.29   0.001     1.43e-06    4.39e-06
          db |    .9962338   .3472612    2.87   0.014     .2396167   1.752851
       _cons |    .7345856   .8187508    0.90   0.387    -1.049319    2.51849
------------------------------------------------------------------------------

. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of lnroe

        chi2(1)      =      2.96
        Prob > chi2  =    0.0854

. estat imtest

Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
            Source |      chi2     df       p
--------------------+------------------------------
 Heteroskedasticity |      6.53      8     0.5880
           Skewness |      7.42      3     0.0597
           Kurtosis |      0.13      1     0.7179
--------------------+------------------------------
              Total |     14.08     12     0.2956
---------------------------------------------------

. estat ovtest

Ramsey RESET test using powers of the fitted values of lnroe
       Ho:  model has no omitted variables
                F(3, 9) =      1.57
                Prob > F =      0.2630




regress   lnroe cgs assets db

      Source |       SS       df       MS              Number of obs =      16
-------------+------------------------------          F(  3,   12) =    6.31
       Model |  5.0880564     3  1.6960188           Prob > F      =  0.0082
    Residual |  3.22526817    12  .268772348          R-squared     =  0.6120
-------------+------------------------------          Adj R-squared =  0.5150
       Total |  8.31332458    15  .554221638          Root MSE      =  .51843


------------------------------------------------------------------------------
       lnroe |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         cgs |     .01005   .0263478     0.38   0.710     -.047357    .067457
      assets |    2.80e-06   6.75e-07    4.15   0.001     1.33e-06    4.27e-06
          db |    1.011721   .3982786    2.54   0.026     .1439466   1.879495
       _cons |    .9115449  1.098507     0.83   0.423    -1.481897   3.304987
------------------------------------------------------------------------------
. estat hettest
```

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of lnroe

        chi2(1)      =      1.20
        Prob > chi2  =    0.2735

. estat imtest

Cameron & Trivedi's decomposition of IM-test

-----------------------------------------------------
            Source |      chi2      df       p
--------------------+--------------------------------
  Heteroskedasticity |     13.25       8     0.1037
           Skewness |      5.93       3     0.1151
           Kurtosis |      0.89       1     0.3458
--------------------+--------------------------------
             Total |     20.06      12     0.0659
-----------------------------------------------------

. estat ovtest

Ramsey RESET test using powers of the fitted values of lnroe
      Ho:  model has no omitted variables
                 F(3, 9) =      1.43
                 Prob > F =      0.2964
```