

**THE IMPACT OF CORPORATE GOVERNANCE
ON SHAREHOLDER VALUE**

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Mag. Asli Toksal

aus Wien

Referent: Univ. Prof. Dr. Carsten Homburg

Korreferent: Univ. Prof. Dr. Christoph Kuhner

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Preface

When starting this thesis in 2001 the discussion on corporate governance in Germany had not yet reached its peak. During the years to follow the German literature on corporate governance was being influenced by a wave of new legal regulations. I appreciated writing on a current topic and enjoyed investigating the quality of corporate governance empirically. The personal interviews which I conducted with German firms gave me a true impression on which role corporate governance plays in practice. In that respect I would like to thank Prof. Homburg for encouraging an empirical thesis and for supporting the contact with interview partners. I also thank Prof. Homburg and Prof. Kuhner for examining my doctoral thesis. Many thanks go to Dieter Hess, Evelyn Korn, Christian Homburg, Harley Krohmer, Christoph Memmel, and Christian Löschke for their creative input into the methodology of the investigation and/or support with statistical issues. I also thank my colleagues at the Department of Management Accounting, the students that I assisted with empirical diploma theses for their cooperation as well as the firms which participated in the study.

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List of Abbreviations

AktG	Aktiengesetz
CAPM	Capital Asset Pricing Model
CEO	Chief Executive Officer
CFROI	Cash Flow Return on Investment
CGS	Corporate governance score
CVA	Cash Value Added
c.p.	ceteris paribus
D&O	Directors and Officers
DRS	Deutscher Rechnungslegungsstandard
DVFA	Deutsche Vereinigung für Finanzanalyse und Asset Management
EVA [®]	Economic Value Added ¹
FAZ	Frankfurter Allgemeine Zeitung
GCGC	German Corporate Governance Code
GDP	Growth Domestic Product
HGB	Handelsgesetzbuch
IAS	International Accounting Standards
ICGS	Internal corporate governance system
KapAEG	Kapitalaufnahmeerleichterungsgesetz
KonTraG	Gesetz zur Kontrolle und Transparenz im Unternehmensbereich
Lm	Lower management
Mb	Managing board
MitbestG	Mitbestimmungsgesetz
Mm	Middle management
NaStraG	Gesetz zur Namensaktie und zur Erleichterung der Stimmrechtsausübung
OECD	Organization for Economic Co-operation and Development
OLS	Ordinary Least Squares
RoI	Return on Investment
RoS	Return on Sales
Sb	Supervisory board
SPSS	Statistical Package for the Social Sciences
US GAAP	United States Generally Accepted Accounting Principles
VIF	Variance Inflation Factor

¹ The Economic Value Added (EVA) is a registered trademark of Stern Stewart & Co.

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List of Symbols

α_0	Constant
α	Standardized coefficient
CGSa	Corporate governance score a
CGSb	Corporate governance score b
CGSc	Corporate governance score c
ICGSa	Internal corporate governance system as calculated according to the corporate governance score a
ICGSb	Internal corporate governance system as calculated according to the corporate governance score b
ICGSc	Internal corporate governance system as calculated according to the corporate governance score c
DISa	Disclosure score according to method a
DISb	Disclosure score according to method b
DISc	Disclosure score according to method c
D/E	Debt/equity ratio
IS	The proportion of international sales to total sales
Q_{bi}	Points achieved by firm i in question b
b	Question
p_e	Share price at the end of the year
D	Dividend payment
p_b	Share price at the beginning of the year
MV_{TA}	Market value of total assets
RC_{TA}	Replacement cost of total assets
MV_E	Market value of equity capital
BV_D	Book value of debt capital
BV_{TA}	Book value of total assets
$r_i(t)$	Return of share i in t
$r_m(t)$	Market return in t
t	Time index running from $t=1, \dots, T$
R^2	Determination coefficient

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I Introduction

In the past years corporate governance has become a topic of considerable interest both, in theory and practice. Despite the existence of various approaches to what corporate governance means², corporate governance can yet be generally understood as “the system by which business corporations are directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation such as the board, managers, shareholders, and other stakeholders and spells out the rules and procedures for making decisions on corporate affairs. By doing this, it also provides the structure through which the company objectives are set and the means of attaining those objectives and monitoring performance.”³

The discussion on corporate governance goes back to the beginning of the 1980s during which US managers had been neglecting shareholders’ interests resulting in an ongoing decrease of share prices. These managers focused on firm growth rather than on increasing shareholder value. Incentive-based compensation tied to stock market performance did not exist and managers were only weakly monitored. In response to the dissatisfaction of shareholders, a wave of hostile take-overs emerged against which US managers protected themselves with severance payments. Over time, hostile take-overs turned out to be an ineffective means of improving fundamental corporate governance structures.⁴ As a result, deficits concerning the long-term alignment of shareholders’ and managers’ interests and the distribution of roles within the internal control bodies were criticized.⁵ In Europe the topic of corporate governance was already being discussed from a theoretical perspective during the 1960s and 1970s describing corporate governance as the constitution of a firm which specifies the duties and rights of firm-related parties.⁶ However, it was only in the 1990s after a number of unexpected insolvencies such as *Metallgesellschaft* in Germany and cases of fraud such as *Barings Bank* in the UK that the importance of corporate governance was realized.

² These approaches will be discussed later in this introduction.

³ OECD (1999): <http://www.oecd.org/daf/governance/Q&As.htm>.

⁴ Holmström / Kaplan (2003), pp. 10-11.

⁵ Holmström / Kaplan (2003), pp. 12-15.

⁶ Theisen (1989), pp. 132-134.

Two main developments within the past few years led to an intense discussion on corporate governance. The first development is the internationalization of capital markets; the second is the series of unexpected insolvencies mentioned above.

The internationalization of capital markets has given the topic of corporate governance considerable importance, particularly in countries where originally capital markets had not been the primary source of corporate finance. The internationalization of capital markets can be seen as a result of the globalization of countries, product markets, and companies. Internationally operating companies have started raising capital in foreign countries. At the same time investors have discovered new investment opportunities in foreign capital markets. The opening up of the markets confronted investors with unfamiliar management systems and firms with new expectations concerning capital market communication. Especially institutional investors such as pension funds have started putting pressure by benchmarking firms along their quality of corporate governance.⁷ This is mainly due to the information deficit of investors and the insufficient communication by firms on their corporate governance systems. Consequently, there is the risk that investment decisions are made upon incomplete information and that shares lose value.⁸ Hence, there is significant pressure by the capital markets on firms to make their corporate governance systems more transparent. Reducing the information gap between firms and investors can therefore decrease the perceived investment risk and make firms more attractive as investment opportunities.

The second relevant development motivating the current discussion on corporate governance is a series of sudden and unexpected insolvencies of large companies often combined with fraudulent financial reporting and auditing. Most of these insolvencies are caused by inefficiencies of management, deficits of internal control mechanisms, and inaccurate auditing. The sudden insolvency of *Enron*, the US energy company, has led to worldwide distrust. *Enron* manipulated its financial statements by taking advantage of the elbow-rooms of US-GAAP concerning the valuation of derivatives.⁹ Also in Germany there have been several cases of spectacular insolvencies in the past

⁷ Nussbaum (2002), p. 172: The US pension fund California Public Employees' Retirement System (CalPERS), for example, regularly publishes a list of firms with poor performance and quality of corporate governance. As CalPERS has been investing in several European equities in the past years, many European firms are interested in becoming or staying competitive regarding their corporate governance standards.

⁸ Saitz / Wolbert (2002), p. 322.

⁹ Lüdenbach / Hoffmann (2002), p. 1173.

years. *Philipp Holzmann*, which had been making losses due to mismanagement and economic slowdown in the construction industry, manipulated its financial statements so as to record profits. In 2002 it went bankrupt. *Comroad* is another case of fraudulent reporting. Over several years *Comroad* recorded sales with a non-existing subsidiary company in Asia, which auditors did not detect. The relevance of corporate governance is enormous as it can establish control and risk management mechanisms. Further solutions to the problems described above certainly lie in a higher quality of financial reporting standards and in a more intense cooperation of auditors with the respective internal control bodies of firms.

As a reaction to the above-mentioned problems the legislations of the USA and of many European countries have started reforming their corporate laws and enacting more binding regulations in order to regain the confidence of existing investors and to attract new investors. In the USA the Sarbanes-Oxley Act was introduced to intensify liability by managers. In Germany, for example, the government has drafted new regulations on risk management and has formed a commission to develop the German Corporate Governance Code, a list of criteria for good corporate governance. This code, which has only advisory character, particularly addresses listed corporations. Application of the code is aimed to serve as a positive signal to the capital market.

The recent developments discussed above may suggest that the objective of corporate governance is to protect only shareholders. However, there are many other stakeholders such as employees or customers, who are also interested in good corporate governance. The goals of corporate governance depend on what is understood under “corporate governance”. There are various approaches to what corporate governance refers to.¹⁰ The Shareholder Approach¹¹ focuses on the conflict of interest between shareholders and managers as well as on listed corporations. It is based on the premises of a *separation of ownership and control* (i.e. those who own the company are distinct from those who manage the company) and of opportunism by managers, which makes it necessary for shareholders to protect themselves against managerial fraud. This approach considers corporate governance as the sum of mechanisms which reduce conflicts of interest and minimize information asymmetries between shareholders and managers so that monitoring managers becomes unnecessary or easier for shareholders.

¹⁰ For an overview of these approaches see Nippa (2002), pp. 12-18.

¹¹ Blair (1995), p. 236.

Such mechanisms may comprise incentive-based compensation, the employment of control bodies, and the disclosure of corporate policy. Sometimes the definition according to the Shareholder Approach is extended by the creditors of a firm. Shleifer and Vishny (1997), for example, understand that “corporate governance deals with the ways in which suppliers of finance assure themselves of getting a return on their investment”¹². Some authors¹³ criticize the negative image that the Shareholder Approach has about managers and emphasize that managers have non-monetary incentives such as reputation or interesting tasks to achieve the firm’s goals. This so-called Stewardship Approach assumes that managers voluntarily act in shareholders’ interests, therefore making control and incentive mechanisms irrelevant. The Stakeholder Approach, on the other hand, states that a firm should consider the interests of all of its stakeholders, including its shareholders, employees, customers, creditors, and suppliers.¹⁴ The Stakeholder Approach points out that for a firm to be successful it will need to satisfy all stakeholders in the long-term. Representatives of the Shareholder Approach, however, argue that it is too complex to account for all the different, possibly conflicting, interests and that pursuing shareholders’ interests would in the long run benefit all the other stakeholders too.¹⁵ Although such an argument can be easily criticized, the Shareholder Approach appears to be the prevailing approach in the corporate governance literature. Also, the Stakeholder Approach has so far failed to prove its economic advantage over the Shareholder Approach.¹⁶ The Political Approach represents the idea that the distribution of rights among various interest groups of the firm mainly depends on their political power rather than on the internal corporate structure. This approach particularly analyzes the legislation and its efficiency in promoting the goals of various interest groups.¹⁷ Corporate governance in a broader sense may deal with all kinds of firms, institutions, and organizations as well as with all stakeholders.¹⁸ This approach can be described as referring to economic or organizational governance rather than corporate governance.¹⁹ The different understandings of corporate governance are reflected in country-specific corporate governance systems. Whereas, for instance, the USA and the UK are understood as to

¹² Shleifer / Vishny (1997), p. 737; similar Dietl (1998), p. 4.

¹³ See, e.g. Donaldson / Davis (1994), Ghoshal / Moran (1996), or Kürsten (2002).

¹⁴ Witt (2000), p. 159; Donaldson / Preston (1995), p. 68; Monks / Minow (1996).

¹⁵ Hungenberg (1998), p. 10; Nippa (2002), p. 12; Kuhner (2004), p. 254.

¹⁶ Nippa (2002), p. 17.

¹⁷ For a comparison of international legal systems see, e.g. La Porta et al. (1999) or Grossman / Adams (1993).

¹⁸ Turnbull (1997), p. 181.

¹⁹ Nippa (2002), p. 10.

follow the Shareholder Approach, Japan and Germany are often described as stakeholder-oriented.²⁰ The reasons for pursuing the one or the other approach lie in the role of the capital market as a source of finance as well as in the political power of the respective stakeholders.²¹ Germany, which is the country of reference in this thesis, has, however, experienced an increase in the importance of the capital market within the past few years so that the present discussion on corporate governance is strongly associated with the capital market and its requirements. Several empirical studies prove the rising shareholder value-orientation of German corporations.²² Moreover, the German legislation has recently reformed its corporate law in order to offer more protection to shareholders.²³ Hence, a general trend toward capital market orientation can be observed for German corporations.

The literature on corporate governance takes a theoretical as well as an empirical perspective. As far as the theoretical literature is concerned, theories of the firm and the economics of information deal with corporate governance issues. Theories of the firm include the property-rights approach, the agency theory, and the transaction cost economics. Whereas the property-rights approach analyzes the effects of different ownership structures, the agency theory designs optimal contracts between shareholders and managers. The transaction cost economics develops transaction-specific governance structures. The economics of information focuses on the reaction of the capital market to firm-related data. In addition, there is vast literature on concrete mechanisms and instruments of corporate governance, such as decision-making processes or monetary incentives, which generate ideas on how to implement corporate governance.

First empirical works on corporate governance give evidence of the importance of the legal framework for corporate control. These studies either make cross-country comparisons of legal regulations²⁴ or analyze individual aspects of corporate governance for a single jurisdiction²⁵. A number of studies test empirically whether better legal regulations result in any economic benefits. La Porta *et al.* (2002)²⁶, for

²⁰ Witt (2000), p. 160.

²¹ On the origins of the stakeholder approach in Germany see Kuhner (2004), p. 247.

²² See, e.g. Achleitner / Bassen (2002) or Pellens / Tomaszewski / Weber (2000).

²³ Beelitz (2002), p. 584; von Rosen (2002), pp. 593-596.

²⁴ See, e.g. La Porta *et al.* (1999).

²⁵ See, e.g. Lehmann / Weigand (2000), who investigate the relationship between ownership concentration and profitability.

²⁶ La Porta *et al.* (2002).

example, find that better shareholder protection is associated with a higher valuation of corporate assets. Lombardo and Pagano (2000)²⁷ give empirical evidence that judicial efficiency influences the return on equity of firms, as measured by the dividend yield and the earnings-price ratio, significantly. Recent studies measure the quality of firm-level corporate governance within a single jurisdiction and investigate its relationship with firm value. Though based on different methodologies and different understandings of corporate governance, many of these studies find a positive relationship between firm-level corporate governance and various performance measures. Klapper and Love (2003)²⁸ confirm that good corporate governance results in better operating performance and higher market valuation for a number of emerging markets. Black *et al.* (2003)²⁹ make a cross-sectional analysis for Korean firms and construct a firm-level corporate governance index which appears to be positively correlated with Tobin's q, the market-book ratio, and the market value, respectively. Gompers *et al.* (2003)³⁰ attempt a similar research for US firms and focus on shareholder rights with regard to takeover defenses. They find that stronger shareholder rights result in higher profits, sales growth, and valuation of firms. Drobetz *et al.* (2003)³¹ construct a corporate governance index for German corporations and find a positive correlation between their overall corporate governance index and stock returns.

This thesis is a contribution to the empirical research on corporate governance. Following the recent trend in corporate governance literature, the main research question of this thesis is whether good corporate governance enhances shareholder value. After Drobetz *et al.* (2003) this is the second empirical study investigating the relationship between corporate governance and shareholder value for German corporations. As the main performance measure analyzed here is shareholder value, a Shareholder Approach to corporate governance is taken. In addition, in view of the considerable trend toward shareholder value orientation of German corporations, as described above, a Shareholder Approach to corporate governance should not pose a contradiction for this study. Corporate governance is in the following understood as the mechanisms by which shareholders motivate and ensure that managers generate a competitive return on their invested capital.

²⁷ Lombardo / Pagano (2000).

²⁸ Klapper / Love (2003).

²⁹ Black *et al.* (2003).

³⁰ Gompers *et al.* (2003).

³¹ Drobetz *et al.* (2004).

The underlying research methodology is similar to recent studies³². In a first step criteria for good corporate governance are determined while taking German specificities into account. While other studies put special emphasis on shareholder rights, auditing issues, and ownership structure, this study analyzes the quality of managing and control bodies, risk management, compensation, and voluntary disclosure. For these criteria the main idea is to focus on voluntary corporate governance practice by firms. Data on the quality of firm-level corporate governance is collected through personal interviews with the German DAX, MDAX, and TecDAX companies and through an analysis of their annual reports on the business year 2002. These survey data then serve to measure the quality of corporate governance. In a second step values for the quality of corporate governance are regressed against proxies for shareholder value in a cross-sectional analysis. In contrast to similar studies³³ a significant impact of corporate governance on shareholder value cannot be confirmed per se. The main difference of this study to previous studies lies in the differentiation between the internal corporate governance system (ICGS) and disclosure, while investigating both aspects of corporate governance simultaneously for a single sample. In fact, significant results are obtained only if the internal and external dimensions of corporate governance are not mixed into one overall corporate governance measure. This separation is consistent with the economics of information, which emphasizes the aim of disclosure to reduce information asymmetry between shareholders and managers. ICGS, however, intends to influence managers' decisions and behavior. These different purposes are reflected in the results: ICGS has a positive influence on shareholder value measured by Tobin's q. Disclosure, on the other hand, does not affect Tobin's q, but reduces the cost of equity capital measured by beta according to the Capital Asset Pricing Model (CAPM).

The remainder of this thesis is structured as follows: Chapter II prepares the following chapters by presenting the various stakeholders of a company and the discussion on the Stakeholder and Shareholder Approach. In this chapter an understanding of corporate governance will be developed for the underlying study. Microeconomic theories explaining the necessity of corporate governance will be discussed in chapter III. Then, different control mechanisms will be explained and set in a theoretical as well as in a cultural context in chapter IV. On the basis of the literature criteria for good corporate governance are derived in chapter V. The empirical part of the thesis in chapter VI

³² See, e.g. Black et al. (2003), Gompers et al. (2003), Drobetz et al. (2004), or Klapper / Love (2003).

³³ See, e.g. Black et al. (2003), Gompers et al. (2003), Drobetz et al. (2004), or Klapper / Love (2003).

begins with the development of hypotheses and continues with the results of the statistic analyses. This chapter illustrates the methodology of the empirical study, offers a descriptive analysis of corporate governance characteristics of German corporations, and tests the underlying hypotheses. The final chapter VII concludes.

II Different Understandings of Corporate Governance

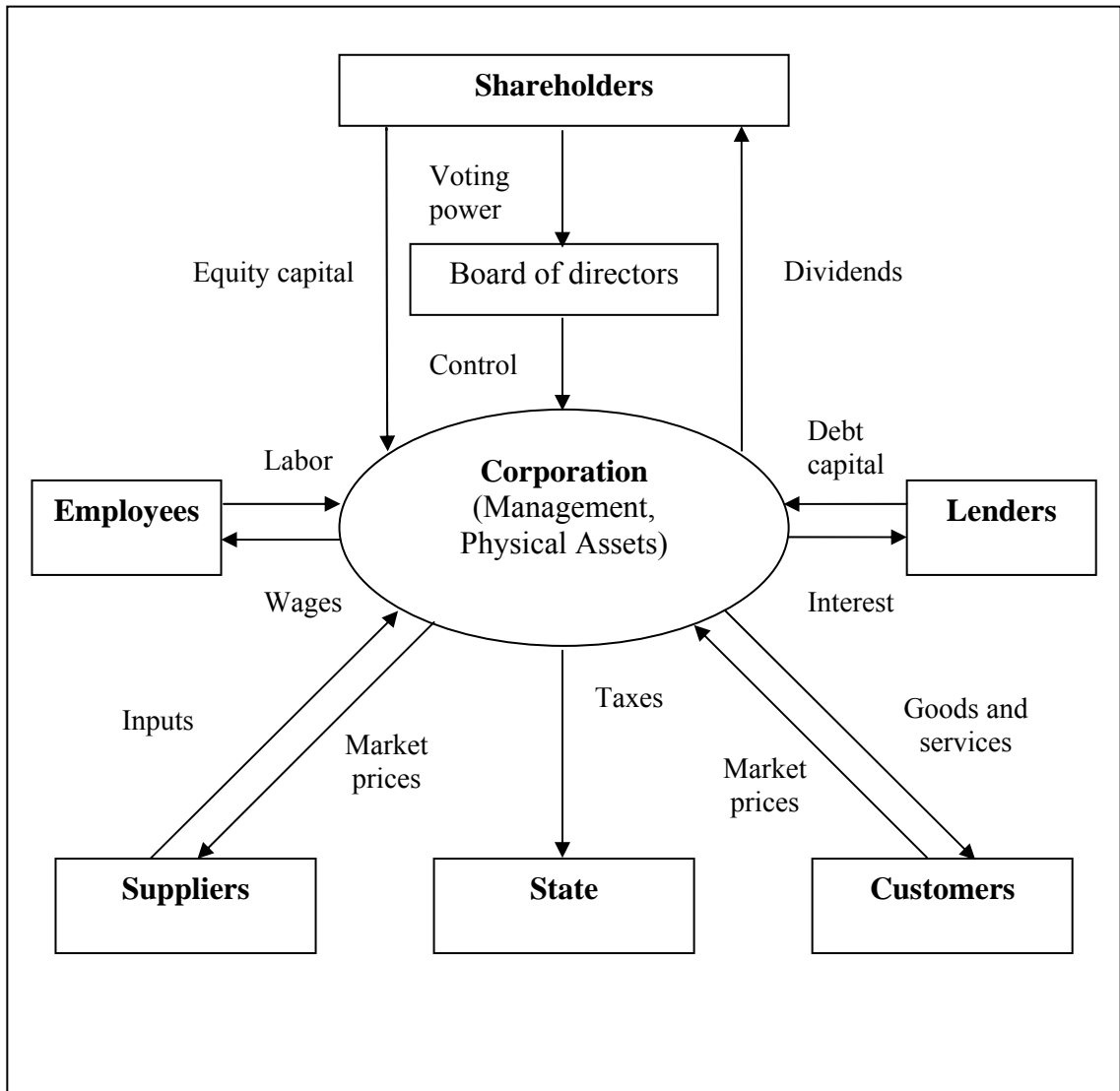
This chapter focuses on the two main approaches to corporate governance: The Stakeholder and the Shareholder Approach. In the introduction (chapter I) various other approaches have been mentioned. These approaches will not be discussed in the following. First, the stakeholders of a company are presented in order to indicate its relationships and dependencies. Second, the Stakeholder and the Shareholder Approach are analyzed and an understanding of corporate governance for this study is developed.

2.1 The Stakeholders of a Corporation

The identification of the necessary elements of a good corporate governance system requires a thorough understanding of the various stakeholders of a corporation and their demands.³⁴ The relationship between a corporation and its stakeholders can be generally illustrated as in the following Figure 1.

³⁴ Witt (2003), p. 6.

Figure 1: The relationship between the firm and its stakeholders³⁵



As Figure 1 suggests all relations of a corporation are exchanges of goods, services, or capital against monetary payments based on contractual agreements. Assuming that the stakeholders want to maintain their economic relations with the corporation on a long-term basis, they will be interested in its survival and profitability. Consequently, the stakeholders will want to ensure that the corporation is always financially sound and pursues their particular interests. The challenge for the corporation, on the other hand, is to balance the various potentially conflicting interests of stakeholders, which are discussed in the following. Although all stakeholders have the same overall interest of a profitable corporation, their respective interests may be conflicting as the benefits for a particular group may cause costs for another.

³⁵ Figure 1 is based on Blair (1995), p. 21.

Shareholders

Shareholders provide equity funds³⁶ to the corporation in exchange for “shares” or “stocks” which entitle them to share in the net profits of the company in case it generates profits and after all other financial obligations such as salaries, interests, accounts payable to suppliers, etc. are settled. This means that shareholders have no right to, i.e. a guarantee for, fixed payments. Because of being paid last, shareholders are often referred to as “residual” claimants.³⁷ If the company makes profits, the shareholders may get dividends or the profits may be reinvested in new projects which increases the value of the firm’s share and generate capital gains for the shareholders.³⁸ As shareholders have only a residual claim³⁹ in contrast to other stakeholders, it is often concluded that they have the greatest interest or incentive to ensure the profitability of the company. This is the main reason why shareholders, for example in Germany, are granted voting rights by the legislation for the election of supervisory board members, who again determine the constitution of management. The privilege of shareholders’ interests is formally reflected by their institutionalization within the company as the general assembly. Moreover, as shareholders elect the supervisory board to hire managers and to monitor them, the supervisory board, at least in Germany, is partly a representative body of the shareholders.

Lenders

Lenders are suppliers of debt capital and are thus also very important for the financing of the company’s economic activities. Debt capital in the form of bank loans or bonds entitles its holders to repayment of the principal plus a certain rate of interest. Particularly in the case of loans the company is often required to secure the loan with some form of collateral such as the company’s assets. Obligations to lenders have to be settled irrespective of the profitability of the company, i.e. even if the company makes losses in a certain business year.⁴⁰ Repayment of debt capital has the highest priority because lenders bear a different risk than shareholders and claim extra security. The risk

³⁶ Shareholders are owners of the equity capital of the company, not the owners of the company itself which is understood as a nexus of contracts, see Fama (1980), p. 290 and Alkhafaji (1989), p. 110.

³⁷ Blair (1995), p. 20.

³⁸ Blair (1995), pp. 20-21.

³⁹ Witt (2003), p. 7; Blair (1995), p. 21.

⁴⁰ Indebted firms need to be highly liquid in order to serve their financial obligations to their lenders. In addition, their creditworthiness decreases with an increasing debt-to-equity ratio. For a detailed discussion on the benefits and costs of equity and debt capital see Süchting (1995), pp. 26-32.

born by lenders is that they can only be damaged by the losses of the company but cannot benefit from its profits as shareholders can do.⁴¹ This risk is most relevant in times of a bad economic situation when indebted firms tend to invest in risky projects⁴², which, if successful, only benefit shareholders but only damage lenders otherwise.⁴³ Lenders' contractual relationship with the firm is, however, legally protected against insolvency. Moreover, their supply of corporate information is guaranteed by mandatory disclosure obligations of the firm. As they have no voting rights and thus no influence on the quality of management, lenders may sometimes be interested in being represented in the firm's control bodies.⁴⁴

Employees

Employees as human capital represent an important input factor for the company. Their main interests are the security of the payment of their wages or salaries, increases in their wages or salaries, good work conditions, enough motivation, etc. Even if their contractual relationship with the company is protected by labor law there is no guarantee for the employees that they have a secure work place and income.⁴⁵ Consequently, employees are another group of stakeholders whose interests depend on the survival and profitability of the firm.

Suppliers

Suppliers of raw material or products are highly relevant for the quality of the firm's goods and services. The suppliers' main interests are the firm's liquidity and particularly the on-time payment of their accounts receivable. As they also bear the risk of non-payment due to insolvency, their contractual relation is protected by law. On a long-term basis, however, suppliers will have no particular interest in the survival of the company as long as there are enough competition and other potential customers. This argument could actually be applied to all other stakeholders since they can choose with which company they enter into business. Still, in the case of suppliers or customers there is often more flexibility and less financial engagement compared to shareholders or lenders.

⁴¹ Witt (2003), pp. 8-9.

⁴² Risky projects are here understood as projects with a high probability of loss.

⁴³ Jensen / Meckling (1976), pp. 334.

⁴⁴ This is common corporate governance practice in some countries such as Germany or France.

⁴⁵ Witt (2003), pp. 7-8.

Customers

Customers are necessary for the success and profitability of the corporation as well. They are primarily interested in a good quality of the firm's products and services as well as in low prices and innovations.⁴⁶ Because customers can be negatively affected by the use of products, they are legally protected by consumer laws. As with suppliers they are flexible in changing the firm if there is enough competition which offers similar or even qualitatively better products.

State

Corporations pay corporate income taxes to the state and represent an important income factor for governments. Although the state need not necessarily pursue to maximize its tax income from corporations, it is nonetheless interested in financially sound companies, which fulfill their tax obligations.⁴⁷ As a consequence, the state is indirectly interested in profitable companies. Tax laws set the legal framework for the relationship between the state and corporations.

2.2 The Stakeholder versus Shareholder Approach

As has been indicated above, legal regulations play an important role in ensuring that various stakeholders' rights and claims get accepted. The legal framework, however, is still not enough a guarantee so that "private" mechanisms and instruments are often needed. Stakeholders will therefore want to participate in such mechanisms in order to have additional protection. The possible conflicting interests of stakeholders have been mentioned above. In this context, the difficulty of managers to respect each stakeholder's interests and the concentration on the most important stakeholder(s) is not to be neglected. From a theoretical perspective, the coalition theory⁴⁸ suggests that the corporation is a co-operation of different interest groups, which adds value to the firm. Such a view of the firm would favor the so-called Stakeholder Approach, which advises firms to account for all stakeholders' interests. In practice, the dominance of capital markets and the power of institutional investors in influencing corporate strategy

⁴⁶ Hungenberg (1998), p. 3.

⁴⁷ Witt (2003), p. 10.

⁴⁸ The most important representatives of the coalition theory are Barnard (1962), Cyert / March (1963), and March / Simon (1993).

suggests that shareholders would be the “more” important group of stakeholders. The approach focusing on shareholders’ interests corresponds to the Shareholder Approach. The Shareholder Approach is additionally legitimated by the property rights approach, which derives shareholders’ rights to determine the company’s goals from their property rights, i.e. their ownership of the company’s equity funds.⁴⁹ The most important reason for the priority of shareholders’ interests is that they have only a claim on the insecure residual profits. The Shareholder Approach is often argued to be very operational as the shareholder value can be measured simply and implemented within the corporate strategy.⁵⁰ Such a concept as the shareholder value can hardly be developed for stakeholders as it is difficult, if not impossible, to objectively measure the costs and benefits of each stakeholder group.⁵¹ The remaining question is what the consequences of a Shareholder Approach are for the other stakeholders, particularly whether they experience any disadvantages or not. Supporters of the Shareholder Approach argue that maximizing shareholder value requires the company to be competitive and successful in the procurement and consumer markets.⁵² As a result, an increase in shareholder value is interpreted positively for most of the stakeholders. In addition, stakeholders’ rights are protected by law, which the company has to follow. A possible negative side-effect of the shareholder orientation is the so-called myopia, i.e. the short-term maximization of shareholder value at the cost of long-term profitability potentials. Myopia of managers results in high increases of share prices but wrong investment decisions and sometimes also in criminal manipulations of financial statements.⁵³

A compromise which is often suggested by the literature is to maximize shareholder value by considering other stakeholders’ interests as restrictions. The strategic management literature has developed several concepts for combining stakeholders’ interests so as to define guidelines for managers. One of the most important concepts, which have experienced much acceptance in practice, is the *Balanced Scorecard* by Kaplan and Norton.⁵⁴ The Balanced Scorecard is the solution to the often criticized problem of neglecting non-financial key performance and success factors such as

⁴⁹ Hungenberg (1998), p. 5.

⁵⁰ Hungenberg (1998), p. 8.

⁵¹ Particularly, the individual stakeholder preferences are assumed to be conflicting and subject to change over time.

⁵² Blair (1995), p. 12.

⁵³ Strenger (2002), p. 125.

⁵⁴ Kaplan / Norton (1996). Another concept is that by the consulting firm Boston Consulting Group which developed the concept of DAVE including the Customers and Employees Perspective apart from the Financial Perspective; see Fischer / von der Decken (2002).

customer loyalty or know-how. Kaplan and Norton particularly criticize the deficits of traditional accounting measures in evaluating competitiveness and profitability. In fact, they favor a combination of past performance measures with those indicating potential future performance.⁵⁵ The central idea that financial as well as non-financial factors add value to the company is reflected in the four perspectives of the Balanced Scorecard:

- Financial Perspective
- Internal Business Process Perspective
- Customer Perspective
- Learning and Growth Perspective

While it is important to succeed financially towards the shareholders, it is also necessary to optimize business processes and products as well as to be able to react to needs for change and innovation.⁵⁶ Managers who implement a management system on the basis of such a scorecard are supposed to take all interests of stakeholders into consideration.⁵⁷

The underlying thesis takes a Shareholder Approach to corporate governance. The main reasons for this are first that the business practice indicates the increasing importance of capital markets and of shareholders as suppliers of finance. Even in countries such as Germany, where the Stakeholder Approach has been assumed to prevail, enormous changes toward capital market orientation can be observed. As the underlying study refers to German corporations the Shareholder Approach is consistent with recent developments in Germany. Second, taking a Stakeholder Approach causes problems in defining a consistent corporate goal and in modelling all stakeholders' interests. Third, as all stakeholders other than shareholders are more protected legally, shareholders can be regarded as the primary group concerned with good corporate governance.

⁵⁵ Kaplan / Norton (1996), p. 8.

⁵⁶ Kaplan / Norton (1996), p. 9.

⁵⁷ Speckbacher / Bischof (2000), p. 796; Pellens / Tomaszewski / Weber (2000), p. 1831.

III Theories of the Firm

Chapter II illustrated the various stakeholders of a company and emphasized the problem of efficiently coordinating their interests. When taking a Shareholder Approach the main challenge of corporate governance is to coordinate the interests between owners and managers. Microeconomic theories explain the existence of the firm as a social institution and the problems related to its external relationships and internal structure. In a corporate governance context microeconomic theories deliver ideas on instruments and mechanisms to solve the coordination problem. The theories to be discussed here are modern theories of the firm including the property rights approach, agency theory, and transaction cost economics. These theories have common premises concerning the behavior of human beings and the relationship structure between individuals characterizing the so-called *modern corporation*. Modern theories of the firm came up after the neoclassical approach of the firm, which had an unrealistic understanding of why firms exist. The aim of this chapter is to present the theoretical foundations of corporate governance by focusing on the property rights approach, agency theory, and transaction cost economics. These three approaches emphasize the importance of corporate governance and suggest concepts on how to implement an effective corporate governance system. This chapter is structured as follows: First, the neoclassical view of the firm will be briefly discussed in order to stress the diverging premises between the neoclassical and modern theories of the firm. Second, the three approaches mentioned above will be explained while filling the theoretical concepts with examples from corporate governance practice.

3.1 The Neoclassical Theory of the Firm

The origins of modern theories of the firm go back to the neoclassical model⁵⁸, which had a different understanding of the firm than today. The neoclassical theory is a technological approach to the existence of firms and mainly analyzes the efficient allocation of scarce resources. The framework of analysis is a market with supply and demand executing exchange transactions at equilibrium prices. Prices hereby serve as a mechanism to coordinate supply and demand sides represented by firms or consumers, respectively. Moreover, prices determine both sides' economic activities and thus lead

⁵⁸ The neoclassical theory is, among others, represented by Walras (1926/1954) or Marshall (1961).

factors of production to an efficient resource allocation, comparable to an “invisible hand”. An extra centralized authority for coordination is not needed.⁵⁹ The neoclassical theory is therefore often said to be “actually a theory of markets in which firms are important actors”⁶⁰.

Beside the efficient resource allocation there are further assumptions shaping the neoclassical model of the firm. Owners of the firm are individuals who are supposed to act in self-interest, i.e. they try to maximize their own utilities. The interests of other stakeholders in the firm are subordinate to the utility-maximizing goal of the owners.⁶¹ The concepts of private property and private enterprise, which refer to the combination of ownership and control, are further features of the neoclassical model. Private property means that there is no differentiation between active and passive property.⁶² Active property relates to tangible assets such as land or building that gives the holder of these assets the right to control them directly. Passive property such as shares or bonds, on the other hand, represents the possession of interest in the company without implying the power to control any activity concerning the asset itself. In terms of today’s corporation holders of active property would be managers whereas holders of passive property would be shareholders. Referring back to the neoclassical concept of private property both active and passive property belongs to one and the same person or people. Consequently, the neoclassical enterprise is a private enterprise where an individual or a few people are so-called owner-managers. No hierarchy or authority exists in this type of firm because owners of the firm are at same time managers of the firm.

With respect to the nature of today’s corporations the premises of the neoclassical model appear to be inadequate in describing existing problems and thus in delivering solutions to these problems. The idea of the self-interested, profit-maximizing entrepreneur ignores the indispensable relationships with other stakeholders, which are crucial for the survival of the firm. Creditors, for example, are not supposed to participate in decision-making processes. However, in case of insolvency, creditors and other stakeholders are concerned so that monitoring would be necessary.⁶³ Even if

⁵⁹ Erlei et al. (1999), p. 45.

⁶⁰ Jensen / Meckling (1976), p. 306.

⁶¹ Seger (1997), pp. 11-12.

⁶² Berle / Means (1991), pp. 303-306.

⁶³ Seger (1997), p. 12.

ownership and management lie in the hands of the same person or group of people, there might be conflicting interests with other stakeholders of the firm. The concepts of private property and private enterprise exclude a possible division of labor between owners and managers, which is found in many corporations today, and therefore fails to explain the problems occurring in such corporations. Furthermore, the premises with respect to the characteristics of the market also need to be analyzed for their plausibility. The market premises are perfect competition in the market and perfect market transparency. Competition in the product market is the most important regulating and disciplining mechanism. Only in the case of perfect competition equilibrium an efficient resource allocation is feasible. The question that arises in this context is if perfect competition is the best alternative for achieving efficient resource allocation. In certain cases a few large companies might be able to operate more efficiently than several small companies.⁶⁴ The premise of perfect market transparency denotes that the market contains all relevant information and that information is distributed symmetrically among market participants. This assumption implies that there are no information costs as well as no uncertainty when two parties enter into a contract, which is too simplified to be applicable to the real-life situation.⁶⁵ In summary, most assumptions of the neoclassical approach appear to be too abstract so that new theories with new premises needed to be developed.

3.2 Modern Theories of the Firm

Coase's work *The Nature of the firm*⁶⁶ represents the beginning of modern approaches to the firm. The revolutionary aspect of this paper is that the neoclassical model is questioned regarding its applicability to firms. The main question was why firms exist at all if markets allow a decentralized coordination of individual economic activities. The phenomenon observed in reality, however, is that firms allocate resources by an internal, centralized authority, the management, without calling on the market. The answer lies in the cost related to using the market to find contractual parties and to execute transactions. In some situations these costs are greater than firms' internal costs. This is a plausible explanation for the existence of firms. Without calling these costs

⁶⁴ Erlei et al. (1999), p. 48; Berle / Means (1991), p. 308.

⁶⁵ Erlei et al. (1999), pp. 48-51.

⁶⁶ Coase (1937).

“transaction costs” at that time, Coase opened way to the development of the transaction cost economics.⁶⁷

From the 1960s onwards, there was an intense discussion on how real conditions can be modeled in theories. Alchian and Demsetz⁶⁸ were the first to characterize firms not by the existence of an authority but by a network of contractual relationships. The contractual view of the firm describes the firm as a nexus of contracts between individuals. This gives ownership a completely new notion. In fact, ownership becomes less important in the contractual concept of the firm with regards to control and decision rights. Every contractual partner of the firm is a stakeholder and has an interest in controlling over the firm’s decisions.⁶⁹ Therefore, it is not only the managers or owners who have “authority” but also suppliers, creditors, or customers. The contractual structure of the firm leads to a coordination problem, on the one hand and to a motivation problem, on the other hand.⁷⁰

The coordination problem arises because contracts are made among individuals with conflicting interests. The central question is how a common objective function for the firm can be defined so that all stakeholders are satisfied. Jensen and Meckling⁷¹ compare this situation to a market where a complex equilibrium process takes place. Moreover, it is impossible to include all eventualities in contracts in order to protect oneself against potential fraud by the other party. This incompleteness of contracts is mainly due to information costs associated with specifying the terms of contract. Consequently, there is a risk of opportunistic behavior by parties to a contract once it is completed, particularly when parties have different amounts of information. Additional institutional arrangements⁷² are needed then to motivate the better informed party to act in the interest of the less informed party. This motivation problem is thoroughly discussed in section 3.2.2.

The concept of the separation of ownership and control is fundamental to all modern theories of the firm. A high number of shareholders makes it difficult for each

⁶⁷ Jensen / Meckling (1976), p. 310; Erlei et al. (1999), p. 42.

⁶⁸ Alchian / Demsetz (1972).

⁶⁹ Fama (1980), p. 290.

⁷⁰ Göbel (2002), pp. 55-59.

⁷¹ Jensen / Meckling (1976), p. 311.

⁷² Hart (1995), pp. 4-5.

shareholder to participate in the management of the company. Consequently, a division of labor takes place by which control or management rights are transferred to a group of managers distinct from the shareholders. The dispersion of ownership leads a loss of control by the shareholders over the firm's assets. Instead, management has free play in the allocation of provided resources and can act in its own favor. In this model of the firm owners have no role other than bearing unlimited risk. However, there are obvious advantages of a separation of ownership and control over a combination. The separation of ownership and control can be analyzed along the decision process within a firm. The decision process is composed of the following four stages⁷³:

- 1) *Initiation* is the development of alternatives for resource allocation and ideas for the specification of contracts.
- 2) *Ratification* refers to the selection among various alternatives developed in the previous stage.
- 3) *Implementation* is the execution of decisions made in stage 2.
- 4) *Monitoring* refers to the supervision of the performance of executing people and the specification of rewards.

While stages 1) and 3) are described as decision management, steps 2) and 4) represent decision control. With respect to the separation of ownership and control within corporations, decision management and decision control are distributed to managers and shareholders, respectively. By delegating decision management rights to managers with specific knowledge and experience, shareholders reduce their costs of gathering relevant information to initiate and implement decisions. Moreover, it would be difficult to coordinate a decision process of shareholders if all of them or at least many of them wanted to participate. The same coordination problem among shareholders arises when management tasks are delegated and managers are needed to be monitored. The efficiency losses associated with the participation of all shareholders in controlling the management makes a further delegation of this task to another party reasonable.⁷⁴ The benefits of a specialization in decision management and decision control are assumed to outweigh the costs arising from potential opportunistic behavior of delegates.⁷⁵

⁷³ Fama / Jensen (1983), pp. 303-304.

⁷⁴ Control costs due to a delegation of management control may be distributed among the shareholders. The more dispersed the ownership structure of a firm, the lower are the monitoring costs born per shareholder.

⁷⁵ These costs are referred to as agency costs and will be discussed in section 3.2.2.1.

In contrast to the neoclassical view of the firm, modern theories attempt to account for the problems of today's corporations, often characterized by a separation of ownership and control. By assuming conflicting interests and information asymmetry among individuals these new theories take a more realistic approach. They emphasize the coordination and motivation problems and deliver ideas on how to solve them. The basic objects of analysis are contracts among individuals. The contractual view of the firm also points out the importance of other stakeholders than shareholders. Yet the main relationship analyzed by modern theories of the firm is that between shareholders and managers. These theories state that mechanisms⁷⁶ are needed to protect shareholders' interests and prevent opportunism by management.⁷⁷ Such instruments and institutions of corporate governance are analyzed by modern theories of the firm, including the property rights approach (see section 3.2.1), agency theory (see section 3.2.2), and transaction cost economics (see section 3.2.3).

3.2.1 The Property Rights Approach

3.2.1.1 Premises

It is important to note that the view of the firm as a nexus of contracts is crucial for the property rights approach as for the other modern theories of the firm. The property rights approach generally deals with costs and benefits that arise from entering into contracts which organize the allocation and transfer of (property) rights on all kinds of assets.⁷⁸

The property rights theory comprises three main premises. The first two are the same as in the neoclassical theory. The third premise is representative for all modern theories of the firm.

- 1) *Self-interest*: Individuals, homogenous groups of individuals, or institutions are assumed to be *homines oeconomici*, i.e. they act in self-interest in every economic decision they make.

⁷⁶ Fama / Jensen (1983), pp. 312-313; Demsetz (1983), p. 386.

⁷⁷ It is often argued that other stakeholders have enough legal or regulatory protection. Debt holders, for instance, may be secured by formal bankruptcy procedures. See also Hart (1995), pp. 10-11.

⁷⁸ The property rights approach generally refers to the exchange of tangible assets such as land or machines as well as to intangible assets such as patents or labor services; see Göbel (2002), p. 60.

- 2) *Utility maximization*: Individual goals are supposed to be achieved when their utility to the acting agents is maximized. This is expressed by the utility function. Together with the first premise this implies that individuals maximize their utility even if opportunistic behavior becomes necessary.⁷⁹
- 3) *Bounded rationality*: The premise of bounded rationality denotes that the human capacity of gathering and processing information is limited. This assumption goes hand in hand with the incompleteness of contracts. The central problem is that there is incomplete information about the future because individuals cannot foresee all possible situations and even if they did, information would not be costless.

The importance of property rights can be illustrated by the following examples of incomplete contracts. A contract between an airline company A and a producer of aircrafts B, which provides for the delivery and for the maintenance of aircrafts, may have missing points. Such a contract may, for example, not cover the circumstance of a change in the product characteristics of aircrafts due to a political or regulatory decision, although this may trigger delays in production or even price changes. There may be more things happening after the contract has been concluded, which cannot be included *ex ante* in the contract. Consequently, the contract will always have gaps that represent risks or disadvantages for the one or other party. Another example is a consumer goods producer who distributes his products via local drug stores. Whereby the contract between producer and distributor may have provisions concerning the types and brands of products to be sold, it may not consider their placement within the store or whether or not directly competitive products should be sold in the same store. The producer is then to some extent dependent on the distributor. If the producer, however, has a majority stake in the distributor's firm or even owned the distributor's firm, he has more bargaining power or is much more flexible in deciding how his products are distributed. Ownership serves as a remedy to overcome risks associated with incomplete contracts.⁸⁰ In the case of an event unspecified in the contract, it is the owner who decides what happens, i.e. has residual control rights.⁸¹

⁷⁹ Opportunistic behavior may occur when individuals have conflicting interests and when information is distributed asymmetrically among them. If these conditions apply individuals may misuse their advantages at the expense of others, i.e. act opportunistically.

⁸⁰ Hart (1995), p. 29.

⁸¹ Part of the property rights literature discusses strategic decisions of firms to gain more flexibility and power. Stiglitz (1991), for example, refers to centralization and decentralization issues. Hart (1995) or Hart and Moore (1990) compare costs and benefits of integration processes by developing a formal model.

It is important to note that the property rights approach considers ownership as the right allowing the owner to use and control the respective asset. Therefore, when an asset is owned, the rights associated with that asset are owned.⁸² Furubotn and Pejovich⁸³ characterize property rights as specifying the “behavior” of people toward assets. Property rights are laid down in contracts and are therefore legally protected. Consequently, there may be sanction mechanisms in case these rights are not respected. The property rights literature discusses the following four types of rights related to the ownership of an asset:⁸⁴

- 1) the right to use the asset (usus),
- 2) the right to change the substance of the asset (abusus),
- 3) the right to decide over the output produced by the asset (usus fructus) and
- 4) the right to transfer the rights 1), 2) and 3) to another party, for example, by sale.

These rights may be held by one single person who can exclude others from these rights. In such a case there will not be any coordination and motivation problems among various individuals.⁸⁵ For specialization reasons these rights may also be allocated among a number of individuals on a contractual basis. This causes restrictions on each individual’s rights on the asset compared to the one-owner model. The fact whether property rights are allocated to one or several individuals is assumed to affect the value of the property as well as the “behavior” of the owner(s) toward the property.⁸⁶ If several individuals share in the property rights, the asset becomes a “public” good so that the uses of the good as well as the benefits from the good are not exclusive to a single person decreasing the value of the good for each person. In addition, the consequences related to each person’s action on the good become weaker because everyone sharing in the property rights will benefit from profits as well as bear any losses in proportion to their shares. This implies that there is no incentive for any individual to handle the good efficiently. In fact, there will be opportunistic behavior of individuals because possible sanctions are born by the entire group of owners and not only by the respective opportunistic person. These external effects, which are due to the

⁸² Alchian / Demsetz (1973), p. 17.

⁸³ Furubotn / Pejovich (1972), p. 1139.

⁸⁴ Pejovich (1990), pp. 27-28; Alchian / Demsetz (1972), p. 783.

⁸⁵ Picot / Dietl / Franck (1999), p. 55.

⁸⁶ Kaulmann (1987), pp. 15-17; Göbel (2002), pp. 68-75.

free-rider problem⁸⁷, cause loss in wealth and therefore suggest the one-owner model to be more efficient.

3.2.1.2 The Free-rider Problem and the Role of Ownership for Corporate Governance

The free-rider problem occurs with the separation of ownership and control in a corporation. Shareholders delegate the power to control the firm's resources to managers and have an interest in employing an efficient management. Management services benefit all shareholders and therefore represent a common good. No shareholder can thus be excluded from the benefits the management produces for the firm. If management does not use the firm's resources efficiently because of opportunism or mistakes, shareholders need to improve this management by better monitoring.⁸⁸ The question that arises here is who will monitor the management. If, in a diffuse ownership structure, one shareholder makes efforts to improve management, he alone will bear all monitoring costs whereby all shareholders will benefit from his improvements, i.e. they will free ride on his efforts. In order to solve this free-rider problem the shareholders can delegate the monitoring task to a separate body such as the supervisory board, which would control managers on their behalf. Then all shareholders would have to bear the monitoring costs related to the employment of such a supervisory board. The property rights literature further suggests takeovers as a mechanism of corporate control.⁸⁹ Takeovers, however, are not able to solve the free-rider problem completely and often cause costs.

The free-rider problem, as discussed above, occurs in firms with a diffuse ownership structure. The existence of a few large shareholders, i.e. a more concentrated ownership structure, can be regarded as another solution to the free-riding problem in monitoring management. Although nowadays corporations are only rarely owned by a few people and ownership structures are often dispersed, large shareholders such as families or institutional investors may play an immense role in shaping and monitoring the firm.

⁸⁷ The free-rider problem can be found in connection with any „public“ or free good where no individual exclusion rights exist. See Demsetz (1967) for a discussion on public goods and the various instruments to overcome the free-rider problem. See Grossman / Hart (1980) for a formal model on how a takeover threat can improve management and prevent free-riding behavior among shareholders.

⁸⁸ Berle / Means (1991), pp. 112-114.

⁸⁹ See Manne (1965) or Jensen (1988) for the internal and external effects of takeover bids.

There are a number of arguments for and against ownership concentration versus dispersion. Demsetz and Lehn⁹⁰ identify three main determinants of ownership structure: value-maximizing size, regulation, and control potential. The value-maximizing size refers to the fact that large firms, which need and usually have more capital resources at their disposal than small firms, are characterized by a diffuse ownership structure. The “inverse relationship between firm size and ownership concentration”⁹¹ is due to the cost of capital associated with the capital demand of firms. Large firms often have a dispersed ownership structure because they can distribute their cost of capital among a high number of shareholders and thus increase the value of each single share. Regulation of industries also reduces the degree of concentration. As in regulated industries monitoring is provided by the government or other regulating institutions, direct control by a few shareholders, and thus ownership concentration, is less necessary. Firms operating in regulated industries will therefore tend to have a dispersed ownership structure. Control potential is an argument for ownership concentration. Control by a few shareholders is particularly needed in case of instability of the firm’s environment. Such uncertainty can be related to product prices or market share. In order to minimize management failure in an already risky business environment the tendency here will be ownership concentration.

As far as the advantages of concentrated ownership are concerned, a few large shareholders are able to replace inefficient managers easily, have the power to negotiate informally with the managers, and to supervise them unofficially. With their considerable holdings large shareholders can also initiate takeovers. The basic assumption here is that managers can increase takeover costs only marginally. Even if they are not motivated to takeover the firm themselves, large shareholders can facilitate takeovers by outsiders. This, indeed, shows that takeover threats are only effective in a concentrated ownership structure where large shareholders are able to bear takeover costs.⁹²

The ownership structure of a firm is only one of several corporate governance issues. In view of the fact that firms cannot choose or easily change their ownership structures, it is important to analyze which other instruments or mechanisms exist to overcome the

⁹⁰ Demsetz / Lehn (1985), pp. 1158-1161.

⁹¹ Demsetz / Lehn (1985), p. 1158.

⁹² Shleifer / Vishny (1986), pp. 461-465.

problems from a separation of ownership and control. The property rights approach emphasizes the role of ownership for human behavior. One main premise is that holders of property rights act in self-interest. In the context of the conflicting relationship between shareholders and managers, transferring property rights to managers would align their interests with those of shareholders and motivate them to act in the latter's interests. Such a transfer of property rights would make managers owners of the firm without canceling their specialization in management tasks. In listed corporations, for example, managers could be partly compensated with shares so that they bear the same risks as shareholders. Therefore, stock-based compensation is another important instrument in overcoming conflicts of interest.

The equity capital that shareholders provide to the management represents property which relates to certain rights. In view of the risk of opportunism by management it is crucial that these rights are protected by sanction mechanisms to be applied in cases of managerial fraud. Protection of rights, however, can only be provided by a legal framework and not by the firm itself. The key issues associated here are the legal protection of shareholders' rights and management liability. As with the ownership structure the degree of legal protection can be assumed to be given so that firms are not able to control the protection of shareholders' rights.

The property rights approach illustrates corporate governance aspects which can only be influenced to some extent by firms. The ownership structure of a firm, which determines the degree of direct control by shareholders, and the legal framework, which offers judicial protection to shareholders against opportunism, can be considered as rather fixed factors. The property rights approach may therefore be primarily useful in explaining fundamental corporate governance structures based on the firm-specific ownership structure and the legal corporate governance system. The property rights approach can, however, also be applied to voluntary corporate governance aspects. As ownership is a key concept, the conflict of interest between shareholders and managers can be reduced by transfer of ownership rights to managers, e.g. in the form of stock-based compensation. Moreover, the property rights approach recommends the employment of a supervisory body given a dispersed ownership structure. Therefore, the property rights theory is applicable to control and incentive problems of corporate governance.

3.2.2 Agency Theory

Agency theory analyzes principal-agent relationships in which a principal delegates a certain task to an agent. In the context of corporate governance the delegation of management tasks by shareholders to managers can be regarded as a principal-agent relationship; but also the relationship between shareholders and the supervisory board or between shareholders and auditors represent principal-agent relationships. Before discussing agency problems, which arise from such relationships, it is important to note that there are two distinct streams of agency theory, which are based on the same assumptions and address the same agency problems. The main difference between these two approaches is the “style” in which problems are dealt with and solutions are found. Positivist agency theory concentrates on identifying situations where agency problems occur and particularly researches the owner-manager relationship in large public corporations in a descriptive way. Empirical studies hereby serve as an important research tool. Normative agency theory, on the other hand, is less-empirical and characterized by the formal development of optimal contracts. Moreover, as an abstract approach, normative agency theory is applicable to many other principal-agent relationships such as lawyer-client or buyer-seller relationships.⁹³ Both approaches have their advantages and disadvantages.⁹⁴ In this respect it might be useful to consider them complementarily: While positivist agency theory can identify a number of alternative contracts, the normative approach can evaluate these alternatives formally and assess their efficiency.⁹⁵ The following analysis of agency problems, however, is based merely on the approach of positivist agency theory because first, the main object of research is the relationship between shareholders and managers or supervisory board members in listed corporations and second, the quality of corporate governance, which tries to optimize this relationship, is tested empirically here.

3.2.2.1 Premises

The phenomenon of a separation of ownership and control in corporations implies a specialization of individuals and a transfer of property rights. The relationship between shareholders and managers, for example, is characterized by a delegation of decision-

⁹³ Eisenhardt (1989), pp. 59-60.

⁹⁴ For an assessment of positivist and normative agency theories from the perspective of organization theory see Jensen (1983), pp. 334-336.

⁹⁵ Eisenhardt (1989), p. 60.

making rights by shareholders (principals) to managers (agents). Managers fulfill management tasks in return for compensation. Even though shareholders transfer a part of their property rights to managers, they remain owners of the resources provided and therefore expect managers to maximize profits. Two important questions arise in this context: Will managers act in shareholders' interest? How should the profits generated by managers be divided among both parties? Agency theory makes suggestions on how to deal with these problems.

Agency theory is based on the following three premises:

- 1) *Conflicting interests*: The principal and the agent are assumed to have conflicting interests because on the one hand, the principal wants to maximize profits requiring a high work effort by the agent and on the other hand, the agent is interested in minimizing his work effort and thus his disutility.⁹⁶ Assuming that individuals' behavior is determined by self-interest, it is doubtful that the agent will act according to the interests of the principal.⁹⁷ Consequently, there is room for opportunistic behavior as long as the advantages of such behavior outweigh its disadvantages or cost. In order to solve the problem of conflicting interests the principal can, for example, offer the agent a contract which compromises both interests and influences the agent's work effort.
- 2) *Information asymmetry*: Information asymmetry refers to the fact that the agent has more information than the principal on his real work effort and on other external factors influencing the outcome. The principal can therefore hardly monitor the agent's actions; but only observe the outcome. The principal is not able to receive any information on the agent's performance or only against high cost of information.⁹⁸ In case information cost is high, the situation becomes even more favorable for the agent as he can give false information to the principal (*cheating*). The agent may use the information deficit of the principal in his own favor. Consequently, information asymmetry opens further room for discretionary behavior.

⁹⁶ Homburg (2001), p. 67.

⁹⁷ In contrast to the property rights approach agency theory extends the premises of self-interest and utility maximization of individuals to the principal-agent relationship. Therefore, these premises are identical for both theories with the mere difference that agency theory focuses on a multi-person context.

⁹⁸ Homburg (2001), p. 68.

3) *Different risk preferences*: Agency theory also supposes different risk preferences of the principal and the agent. In order to reduce opportunism by the agent, the principal may offer the agent outcome-based (variable) compensation motivating him to choose a higher level of work effort and to maximize profits. Profits, however, not only depend on the agent's work effort but also on external factors which the agent cannot influence.⁹⁹ Being compensated on the basis of the outcome the agent participates in the risk of the principal. Assuming that the agent is risk averse and the principal is risk neutral, the agent would prefer fixed over variable compensation while the principal would bear the entire risk. However, fixed compensation of the agent leads to a very low work effort. On the other hand, if the agent should bear any risk, the principal would have to pay him an extra risk premium. The main problem is thus the trade-off between an optimal risk allocation¹⁰⁰ and motivation of the agent to act in the principal's interest.¹⁰¹ This trade-off leads to so-called agency cost, i.e. the residual loss or disutility¹⁰² of the principal from an optimal motivation scheme for the agent (*second-best solution*) compared to the situation where the principal can perfectly observe the agent's work effort (*first-best solution*).¹⁰³ While maximizing his own profit the principal must offer the agent a contract which can get him at least his reservation utility, i.e. the utility which he would benefit from if he accepted an alternative contract. In order to create an optimal principal-agent relationship it is important to write a contract that is able to balance risk allocation and incentive effects.

3.2.2.2 Agency Problems and Possible Solutions

Opportunism by the agent is the main problem discussed in agency theory. It is particularly relevant because of conflicting interests in connection with information

⁹⁹ Levinthal (1988), p. 167.

¹⁰⁰ For a formal development of the optimal incentive scheme by considering risk preferences of the agent and the principal see Grossman / Hart (1983), pp. 7-45.

¹⁰¹ Williamson (1990), p. 68.

¹⁰² Jensen / Meckling (1976), pp. 308-309 differentiate between monitoring and bonding costs apart from the residual loss. Whereas monitoring costs are associated with efforts of the principal to reduce opportunism by the agent, bonding costs are born by the agent in connection with binding behavior or a financial guarantee of him should he break the contract with the principal. Bonding costs, either monetary or non-monetary, are in most cases positive as the agent will not be able to guarantee making optimal decisions on behalf of the principal at zero cost.

¹⁰³ Homburg (2001), pp. 69-70.

asymmetry. Information asymmetry¹⁰⁴ as well as bounded rationality of individuals, on the other hand, lead to *incomplete contracting*¹⁰⁵ as the agent is usually not willing to give the information he has and both parties are unable to foresee external factors influencing the outcome. In case the agent receives fixed compensation, the principal bears the entire risk. Information asymmetry may occur at different stages of the principal-agent relationship. The following Table 1 illustrates these stages in lapse of time and the respective types of information asymmetry.

Table 1: Stages of the principal-agent relationship¹⁰⁶

t = 0	t = 1	t = 2	t = 3	t = 4	t = 5
The agent's characteristics are given	The principal offers the agent a contract	The agent decides whether to sign the contract	The agent chooses a certain level of work effort ¹⁰⁷	Influence of external factors	Outcome and compensation of the agent
Hidden characteristics			Hidden action + Hidden information		

Table 1 shows that information asymmetry can arise at three stages of the principal-agent relationship. Basically it can be differentiated between information asymmetry *ex ante* and *ex post*, i.e. before and after contracting. Before contracting ($t = 0$) the principal has only little information on the agent's true qualifications and his ability to fulfill the delegated tasks (*hidden characteristics*). After contracting ($t = 3$) the principal is not able to monitor the agent's work effort (*hidden action*). In addition, the agent knows better than the principal to which degree profits can be increased by raising his work effort (*hidden information*). It is important to note that the stages presented in Table 1 may overlap. The agent may, for example, choose a certain level of work effort before signing the contract. Also, external factors may influence the outcome

¹⁰⁴ Information asymmetry per se does not yet represent a problem but the fact that information is not costless.

¹⁰⁵ For a discussion of the theory of contracts see, e.g. Hart / Holmström (1987).

¹⁰⁶ Table 1 is based on Jost (2001), p. 30.

¹⁰⁷ It is assumed here that the agent has entered into contract with the principal.

simultaneously with the agent's work effort. Being aware of the different types of information asymmetry the principal has to create mechanisms that enable him to minimize the risk of opportunism. In the following agency problems related to the different types of information asymmetry are discussed and possible solutions are presented.

Hidden Characteristics

Hidden characteristics refer to the principal's ignorance about the agent's qualifications for the required tasks before offering a contract. The principal therefore bears the risk of employing an incapable agent, which is referred to as the problem of *adverse selection*. If the principal writes a standardized contract suitable for an "ordinary" agent with average qualifications, agents with weak qualifications will try to hide their real characteristics and imitate better qualified agents. Agents with strong qualifications, however, will reject the contract. Consequently, the likelihood that the principal employs an unqualified agent might be considerable.

As far as the solutions to the problem of adverse selection¹⁰⁸ are concerned, the principal can, for example, offer different contracts to the agent which are mainly tailored to different types of agents. In these contracts the principal may specify different degrees of variable compensation. Agents who are willing to apply a high work effort because they suffer only low disutility, for instance, will c.p. choose contracts with a high proportion of variable compensation.¹⁰⁹ Offering tailored contracts may be helpful in motivating potential agents to reveal true information on their characteristics (*revelation principle*)¹¹⁰, particularly on their disutility related to their work effort. The effect expected is that agents choose contracts adequate to their characteristics¹¹¹ and thus reduce the principal's risk of adverse selection. This solution is called *self selection*.

The principal may also try to gather additional information for a better knowledge of the agent's characteristics, which is referred to as *screening*.¹¹² Screening instruments may

¹⁰⁸ For a formal discussion of the problem of adverse selection see, e.g. Demougin / Jost (2001), pp. 68-77.

¹⁰⁹ Homburg (2001), p. 71.

¹¹⁰ For the revelation principle see, e.g. Myerson (1979) or Myerson (1982).

¹¹¹ Levinthal (1988), p. 178.

¹¹² See, e.g. Stiglitz (1975).

include interviews with the agent and his former employers, tests and a trial work period. Shareholders, for example, can ask former employers of applying managers for information on their past performance, their willingness to co-operate, or their motivation structure. By doing so, the principal hopes to lower the compensation he offers to the agent. The gain from additional information, however, has to be weighed against the respective cost of information.

A further solution to the problem of adverse selection is *signalling*.¹¹³ Signalling denotes that the agent initiates an exchange of information with the principal by revealing private information before entering into contract. It is important to note that signalling will take place only if the information given is supposed to have positive effects for the agent. An agent with a high work effort, a low disutility, and a high degree of risk aversion, for example, may communicate his risk aversion to the principal in order to receive compensation with largely fixed components. Such a contract would still offer enough motivation because a low incentive would be sufficient to affect a high work effort. The agent may, however, give false information in order to receive a contract with fixed compensation.¹¹⁴ This *cheating* by the agent can be removed by objective information contained, for example, in certificates or references to be gathered by the principal (*screening*) against cost of information. The extent to which the principal will believe the agent largely depends on the agent's costs related to adulterating his private information. Therefore, the information the agent gives will only be reliable if it is disadvantageous or costly for him to give false information.¹¹⁵ This would be the case if, for example, an unqualified manager faked certificates or if he bribed his references to give untrue information, which can be legally sanctioned. As such actions would always put him at a disadvantage, the probability that a manager will make costly efforts to imitate will be low.

Hidden Action and Hidden Information

After accepting the contract the agent chooses a certain level of work effort which the principal cannot observe (*hidden action*); instead, he can only observe and verify the outcome. The risk of opportunistic behavior by the agent due to hidden action is referred to as *moral hazard*. This leads to the fact that the agent's compensation can be

¹¹³ See, e.g. Spence (1976) or Philips (1988).

¹¹⁴ Homburg (2001), p. 71.

¹¹⁵ Göbel (2002), p. 111.

related to the outcome but not to his personal performance or contribution to the outcome. This is particularly critical for the agent because there is uncertainty on the influence of external factors affecting the outcome, even though the agent has more information on the relationship between his work effort and the outcome than the principal (*hidden information*).¹¹⁶ The principal is interested in a revelation of this information. A poor performing agent will benefit from the principal's information deficit and make external factors responsible for low profits. Even worse, the agent could intentionally reduce his level of work (*shirking*).¹¹⁷

Here again, *screening* and *signalling* can help to overcome the possibility of opportunism. As far as screening mechanisms are concerned, shareholders, for example, can monitor managers' work via formal planning and control procedures such as cost accounting or auditing. Shareholders can also choose to control managers directly by hiring a supervisory board, although such a delegation of monitoring tasks again causes agency problems between shareholders as the principal and the supervisory board as the agent.¹¹⁸ Signalling, on the other hand, can serve as a complementary action by managers. They may want to prove that they performed well or even that they performed better than other managers in order to improve their reputation. Signalling in this context may include voluntary reporting or the integration of shareholders into important decision-making processes. As with *ex ante* signalling, the reliability of voluntary information increases with the costs of false reporting.¹¹⁹

Control in its broader sense can be divided into input-based and output-based control mechanisms.¹²⁰ *Input-based control mechanisms* denote direct control of the agent's behavior or input and therefore relate to screening. The main effect of direct control is assumed to be that the agent behaves in the interest of the principal because he fears sanctions for the case he does not. Direct control, for example, over information systems or a supervisory board can, however, be very costly and time-consuming as the principal has to invest in information systems, compensate the supervisory board, and solve additional agency problems relating to the delegation of control tasks. Even if the

¹¹⁶ No matter whether the external influences are positive or negative, the overall contract offered to the agent has to at least cover his reservation utility.

¹¹⁷ Göbel (2002), p. 102.

¹¹⁸ Eisenhardt (1989), pp. 64-65.

¹¹⁹ Vincenti (2002), p. 58.

¹²⁰ Gedenk (1994), p. 37.

principal bears the costs of such mechanisms, his ability to control the agent directly will be incomplete due to his limited rationality of information processing. In fact, the principal may not be able to evaluate the quality of the agent's work effort with respect to the outcome. The probability of opportunism by the agent increases with the deficits and costs of input-based control mechanisms.¹²¹

Output-based control mechanisms, on the other hand, aim at motivating the agent with monetary incentives related to the final outcome, i.e. he shares in the profits generated by him. The higher the cost of direct control, the more important becomes the role of incentives.¹²² These affect that the agent's compensation is no longer fixed but varies according to the overall performance to which he contributed among other external factors. The idea behind this is that the agent participates in the risk of the principal in order to pursue the same interests. If the agent, however, is risk-averse, he will claim a risk premium because he prefers fixed income. The trade-off between motivation and risk transfer is a central problem with output-based control mechanisms.¹²³ An example of incentive-based compensation are stock options offered to managers, who gain from an increase in the stock price over the strike price but do not suffer losses from a decrease of the stock price under the strike price.¹²⁴

However, there are some practical problems with incentive-based compensation such as how to measure the outcome, how to determine the relation of fixed to variable compensation, or to which degree the agent's compensation should be connected with the outcome. A further disadvantage of incentive-based compensation is a possible myopia of the agent, i.e. that he does not support long-term projects but tries to maximize short-term profits in order to increase his personal salary. Another risk is the untruthful disclosure of performance measures by the agent for reasons of limited verification.¹²⁵ Nonetheless, the relevance and importance of motivation for influencing the agent's behavior¹²⁶ should not be underestimated.

¹²¹ Laux (1990), p. 6.

¹²² Laux (1990), pp. 4-6.

¹²³ Gedenk (1994), p. 38; Göbel (2002), p. 115; Eisenhardt (1989), p. 61.

¹²⁴ Kuhner (2004), p. 266.

¹²⁵ Schmidt (2001), p. 26.

¹²⁶ For a detailed description of what determines managerial behavior see Williamson (1964), p. 30, who presents a ranking of various factors of motivation such as salary, security, dominance, and professional excellence.

Input-based and output-based control mechanisms should be combined for effective control.¹²⁷ Direct control will be more accepted if not only “bad” behavior is sanctioned but also “good” behavior is rewarded so that incentives need to be created as well. On the other hand, direct control may be useful in tracing wrong decisions and behavior of the agent in order to improve incentive schemes.¹²⁸ The following Table 2 summarizes the trade-off of the principal in choosing appropriate control mechanisms.

Table 2: Input-based vs. output-based control mechanisms¹²⁹

	Input-based mechanisms	Output-based mechanisms
Description	<ul style="list-style-type: none"> ▪ Control of the agent’s behavior through, e.g. information systems or a supervisory board 	<ul style="list-style-type: none"> ▪ Motivation through outcome-based compensation, e.g. stock options
Benefits	<ul style="list-style-type: none"> ▪ Direct control ▪ Fear of sanctions 	<ul style="list-style-type: none"> ▪ Alignment of interests ▪ Transfer of risk
Costs	<ul style="list-style-type: none"> ▪ Investment e.g. in information systems, compensation of the supervisory board 	<ul style="list-style-type: none"> ▪ Risk premium for the agent
Remaining problems	<ul style="list-style-type: none"> ▪ Evaluation of the agent’s behavior with respect to the outcome 	<ul style="list-style-type: none"> ▪ Measurement of the outcome ▪ Relation of fixed to variable compensation ▪ Risk of myopia ▪ Risk of untruthful disclosure

Agency theory has immediate relevance for corporate governance as it can be applied to the analysis of the relationship between shareholders and managers or other agents

¹²⁷ For the role of trust between the agent and the principal as a complimentary phenomenon see, e.g. Göbel (2002), pp. 120-121. Trust increases with the reduction of information asymmetry over time due to learning effects.

¹²⁸ Laux (1990), p. 7.

¹²⁹ Table 2 is based on Eisenhardt (1985), p. 137.

within the corporation. Agency theory hereby particularly suggests the creation of negative and positive incentives, e.g. for managers in order to align their actions with the interests of shareholders.¹³⁰

Regarding the relationship between shareholders and managers direct control¹³¹ can hardly be carried out by the shareholders themselves. The free-rider problem of direct monitoring in a diffuse ownership structure has already been discussed in section 3.2.1.2. In large corporations the task of control is therefore delegated to a separate internal body, the supervisory board, which, however, causes further agency problems. This board is meant to safeguard the contractual relation between shareholders and managers.¹³² Other stakeholders such as debt holders, suppliers, or employees who have an interest in “good” management as well will want to be represented in the supervisory board too. Consequently, there will be interest conflicts among various groups. Agency theory emphasizes that direct control alone will not suffice to influence managers’ decisions. In fact, shareholders need to motivate managers with monetary incentives related to the outcome. Agency theory, however, does not refer to questions including how to measure the outcome and how to relate managers’ variable compensation to firm performance. Empirical investigations on different approaches concerning these questions may help finding adequate solutions in practice.

3.2.3 Transaction Cost Economics

3.2.3.1 Premises

Transaction cost economics deals with the organization of contractual relations for the exchange of goods, services, or rights¹³³ whereby the exchange itself is referred to as a transaction. As an interdisciplinary approach transaction cost economics integrates aspects of law, economics, and organization theory and compares different institutional

¹³⁰ It is important to note that agency theory suggests “internal” control mechanisms and not “external”, i.e. market-based control mechanisms which will be discussed further in section 4.1.1.

¹³¹ The mutual control of managers as a specific control mechanism is not included here.

¹³² Williamson (1985), p. 316.

¹³³ According to Commons (1934) this includes the contractual transfer or exchange of property rights. In this context, transaction cost economics can be seen as a complementary theory to the property rights approach as it evaluates the benefits of such transfers or exchanges on the basis of the respective transaction costs incurred.

models for the governance of given transactions.¹³⁴ The basic assumption is that transactions cause costs which determine whether or not and how transactions take place. Transaction costs can be generally defined as costs incurred in the search and communication of information necessary *ex ante* to enter into a transaction and *ex post* to control the transaction.¹³⁵

Transaction cost economics is based on the following premises:

- 1) *Bounded rationality*: The first premise is that individuals are characterized by bounded rationality, i.e. they are limited in terms of time and knowledge, but above all in their capacity to receive, to store, and to process information.¹³⁶ Consequently, it is reasonable that individuals divide work among each other and specialize in certain fields.
- 2) *Complexity and uncertainty*: The above-mentioned division of labor requires coordination in terms of time and content between individuals. The core problems hereby lie in the information asymmetry, on the one hand and in the uncertainty of the individuals' behaviors, on the other hand. Therefore, it is impossible to foresee the development of a transaction regarding external effects and possible opportunistic behavior of individuals.¹³⁷
- 3) *Opportunism*: The combination of the first two premises leads to a certain degree of freedom in the behavior of individuals which in the case of conflicting interests will cause opportunism. This is of high relevance as individuals involved in the transaction are assumed to be able to influence each other's utilities.¹³⁸ Opportunism can particularly take the form of a hold-up problem¹³⁹ if there are only a small number of individuals relevant to the transaction.¹⁴⁰ The assumption of self-interest or opportunism is common to all branches of the new institutional economics.

¹³⁴ Williamson (1997), p. 1.

¹³⁵ Picot (1982), p. 269; Williamson (1997), pp. 5-6. Due to measurement problems there is no clear definition of transaction costs in the literature, although there is a common understanding that transaction costs mainly comprise information and communication costs. For the only explicit definition see Coase, (1937).

¹³⁶ Williamson (1975), p. 21; Göbel (2002), p. 135; Picot (1982), p. 269.

¹³⁷ Williamson (1975), p. 23.

¹³⁸ Göbel (2002), p. 133.

¹³⁹ The hold-up problem refers to the risk that the principal becomes dependent on the agent because of the latter's specialization in the delegated tasks over time.

¹⁴⁰ This is called the small numbers problem in the literature. For details see, for example, Williamson (1975), pp. 26-29.

4) *Transaction costs*: The above-described premises lead to the conclusion that contracting for a transaction is incomplete. Reducing this incompleteness causes so-called transaction costs. Transaction costs occur in all phases of a transaction and can hardly be expressed in monetary units. Rather it makes sense to indicate them by non-monetary factors and evaluate them in ordinal terms.¹⁴¹ Transaction costs influence the choice of the institutional environment for transactions. The transaction cost economics distinguishes between two basic forms of institutions: markets and hierarchies.¹⁴²

The origins of the transactions cost economics go back to Commons¹⁴³, who uses the term “transaction” to refer not to the exchange itself but to the underlying regulations and contracts which should serve to reduce uncertainty. Commons understands a corporation to be a system of external (bargaining) and internal (managerial) transactions. Coase¹⁴⁴ was also influential in developing the new branch of institutional economics. His basic question is: why do firms exist at all if there are markets which can coordinate economic activities with their price mechanisms? The answer lies in the costs associated with market coordination, the so-called transaction costs. Transaction costs are supposed to arise when searching information on fair prices and when concluding or negotiating contracts. Similar costs occur in firms but they are obviously lower because the hierarchical coordination in firms permits to economize on scarce capacities. Alchian and Demsetz¹⁴⁵ have later rejected Coase’s approach of characterizing firms as hierarchies and markets as price mechanisms. Instead, they describe firms as well as markets as a nexus of contracts. They explain the existence of firms with the higher productivity of team production in firms. Moreover, they analyze opportunistic behavior by individuals and indicate the necessity of creating monetary incentives as well as establishing monitoring institutions. Williamson, who counts as one of the most important representatives of the transaction cost economics, bases his analysis on Coase’s model of markets and hierarchies. His starting point are organizational failures due to human and environmental factors, which lead to transaction costs. Firms are supposed to have an advantage in overcoming human as well as environmental failures compared to markets: With their hierarchical structure

¹⁴¹ On a discussion of the measurement of transaction costs see Wallis / North (1988), p. 97.

¹⁴² Picot (1982), pp. 270-271; Williamson (1979), p. 235.

¹⁴³ Commons (1934).

¹⁴⁴ Coase (1937).

¹⁴⁵ Alchian / Demsetz (1972).

and decision processes they are able to reduce information costs. Ouchi¹⁴⁶ presents a third alternative of organizations, namely clans. Clans are characterized by group solidarity and corporate culture which represent implicit contracting and make explicit control mechanisms and hierarchical structures unnecessary. The main stream of transaction cost economics is, however, represented by the works of Coase and later Williamson.

3.2.3.2 The Governance of Transactions

The basic idea of transaction cost economics is that transactions cause costs, which can be reduced by choosing the right governance structure. It is the characteristics of transactions which determine the appropriate governance structure, i.e. either markets or hierarchies. Non-standardized or occasional transactions, for example, are better not executed over the market. Here, a more specialized governance structure may help saving costs of negotiation and control. With respect to firm-specific transactions such a specialization can be reflected by the existence of a corporate culture, of common values, of an institutional framework, or of internal information systems, which can simplify transactions within firms by decreasing costs of coordination and information. The transaction cost economics suggests that, for instance, a good internal reporting system can limit managers' opportunism and reduce control costs. Hierarchies and power play a considerable role here.¹⁴⁷ The transaction cost economics emphasizes that a change in the governance structure for the underlying transaction means a change in the respective transaction costs.¹⁴⁸ The choice of governance structures¹⁴⁹ again depends on institutional costs or behavioral preferences.

Beside institutions and individuals above all the characteristics of transactions determine the nature of the optimal governance form and the level of transaction costs. The transaction cost economics discusses the following three attributes of transactions.

- 1) *Uncertainty*: Uncertainty about future events or situations can be anticipated within contractual provisions. However, as the premise of bounded rationality becomes

¹⁴⁶ Ouchi (1980).

¹⁴⁷ For the role of hierarchies and power see, e.g. Coase (1937), Williamson (1975), or Alchian / Demsetz (1972).

¹⁴⁸ Williamson (1997), p. 7.

¹⁴⁹ For an overview of possible governance models see Williamson (1979), p. 253.

effective, a contract aiming at including all eventualities will be impossible. Rather contracts have to remain incomplete. Consequently, costs of (re)negotiation, adaptation, and control will play an important role.¹⁵⁰

- 2) *Frequency*: A high frequency with which similar or the same transactions take place can result in economies of scale and learning effects in terms of standardized processes or trust. The frequency of transactions is supposed to decrease average transaction costs.¹⁵¹
- 3) *Asset specificity*: Asset specificity denotes the degree of specialization versus standardization of the good or service underlying the transaction. In the complex case of specific assets it is difficult to determine prices as information on such assets are hard to obtain without costs. The transaction cost literature mentions two forms of asset specificity: *transaction specific investments* and *small numbers problem*.¹⁵² Transaction specific investments refer to investments in assets with unique use. The small numbers problem expresses the availability of a few relevant parties to a transaction. Both situations bear risks and will thus incur high transaction costs. Long-term and significant investments would be necessary here in order to achieve economies of scale.

Assuming that uncertainty is given for all kinds of transactions, basically the other two characteristics of transactions determine whether they are carried out by markets or hierarchies. Non-specific transactions, no matter if they are occasional or recurring, are suitable for market governance. Specific transactions, on the other hand, are better governed by organizations due to their cost-intense investments. In case they are recurring, the costs of governance can be reduced by economies of scale.

As far as transaction costs are concerned, it has been mentioned before that it is difficult to express them in monetary terms. However, transaction costs can be categorized into the following four types of costs which reflect the various stages of a transaction.¹⁵³

- *Information costs*: Information costs are related to the process of gathering information on the parties and conditions of transaction before a contract is

¹⁵⁰ Williamson (1975), p. 21.

¹⁵¹ Picot (1982), p. 272.

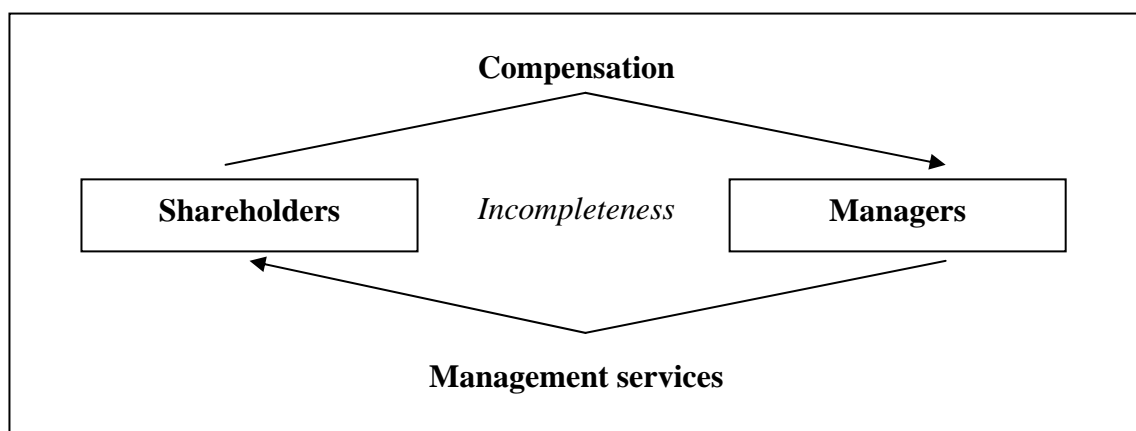
¹⁵² Williamson (1979), pp. 239-244; Picot (1982), p. 271.

¹⁵³ Picot (1982), p. 270.

concluded. Regarding the transactional relationship between shareholders and managers (see Figure 2) information costs would refer to ex ante screening by shareholders, who search, for example, information on the past performance of potential managers with their previous employers

- **Negotiation costs:** Once the appropriate party to the transaction has been found, the content and conditions of the transaction have to be negotiated. Costs occur because of the time invested in negotiations, formulation of contracts and other agreements. Shareholders and managers may negotiate compensation issues or the length of management contracts.
- **Control costs:** Control is necessary to safeguard that both parties fulfill their mutual tasks and agreements. Costs arise with time-consuming monitoring. Shareholders have to compensate the supervisory board for monitoring as well as auditors for auditing.
- **Adjustment costs:** Contracts often have to be altered or adapted to changing situations. The negotiation of contractual clauses again leads to costs in terms of time and effort. Managers, for example, have to renegotiate their compensation package when their tasks extend due to a product or market expansion of the firm.

Figure 2: The transactional relationship between shareholders and managers



In a classical sense the transaction cost economics can be applied to the production of any good. In the context of corporate governance the main transaction taking place is

that between shareholders who leave capital for firm value maximizing investments and managers who according to contractual agreements have to fulfil this task. Whereas managers offer their human capital for management services, shareholders pay them an adequate compensation (see Figure 2). The most important instrument governing this transaction is therefore a contract¹⁵⁴, although the overall legal and social environment will matter as well. As far as the characteristics are concerned, uncertainty, frequency, and asset specificity play a role. These characteristics can be directly applied to the owner-manager relationship as follows: Uncertainty exists because of incomplete contracting and room for opportunism by management, frequency is given as the task of maximizing firm value has to be fulfilled with every investment decision, and asset specificity need not to be regarded as problematic since there exists a labour market for managers with similar qualifications and work experience.

In connection with the contractual incompleteness shareholders have to bear transaction costs in the form of control and information costs. Control costs arise with the employment of a monitoring institution, the supervisory board. The supervisory board can be described as a governance structure to safeguard primarily the interests of the shareholders and secondarily those of other stakeholders. In this context the question of how the supervisory board should be composed or which stakeholders should be represented is of high relevance. Because markets are imperfect in monitoring management and can not protect against corporate failures, various interest groups require direct access to internal control bodies for information reasons. However, representation of all stakeholders in the supervisory board may be difficult due to conflicting interests and problems of coordination (see section 3.2.1.2). Instead, it may be reasonable for other stakeholders than the owners to improve their relation to the firm in general which is a compatible goal with the maximization of firm value.¹⁵⁵

Information costs are associated with regular reporting of the management to the shareholders (disclosure). Beside board representation disclosure is an important control instrument for shareholders as well as other stakeholders. Spoken in agency theoretical terms disclosure is a signalling mechanism by the management in order to gain confidence of the stakeholders which they reward. The role of reporting for reducing

¹⁵⁴ In view of the premises of transaction cost economics such a contract is assumed to be incomplete (see Figure 2).

¹⁵⁵ Williamson (1985), p. 298.

information asymmetry and thus transaction costs is considerable. Pratt / Behr¹⁵⁶ show that investment in reporting systems pays off because disclosure costs are lower than ex post transaction costs.

The supervisory board as well as disclosure are two corporate governance instruments discussed in transaction cost economics literature.¹⁵⁷

3.2.4 Summary

The above-discussed modern theories of the firm explain the existence of firms and emphasize the necessity of corporate governance mechanisms and instruments. The following Table 3 summarizes their main premises, issues, and mentions their relevance for corporate governance.

Whereas all approaches have similar premises, they focus on different problems concerning the relationship between shareholders and managers. The property rights approach investigates the role of ownership for corporate control. It particularly addresses the free-rider problem in monitoring management due to ownership dispersion. Apart from the takeover mechanisms, legal protection of shareholders' rights, and monitoring by large shareholders, the property rights approach suggests incentive-based compensation in order to align shareholders' and managers' interests. The agency theory is similar in that respect because it aims at finding an optimal contract regarding conflicting interests. However, agency theory also emphasizes the necessity of monitoring because of information asymmetry which opens room for discretionary behavior by the agent. Transaction cost economics differentiates between two types of governance structure: markets and hierarchies. It advises to choose the one or other governance structure according to the characteristics of transactions. With respect to corporate governance transaction cost economics suggests monitoring but also emphasizes the role of disclosure in order to reduce transaction costs in the form of information costs.

¹⁵⁶ Pratt / Behr (1987).

¹⁵⁷ Williamson (1985), pp. 298-319.

Table 3: A comparison of modern theories of the firm¹⁵⁸

	Property Rights Approach	Agency Theory	Transaction Cost Economics
<i>Premises</i>	<ul style="list-style-type: none"> ▪ Self interest ▪ Utility maximization ▪ Bounded rationality 	<ul style="list-style-type: none"> ▪ Self interest ▪ Opportunism 	<ul style="list-style-type: none"> ▪ Bounded rationality ▪ Complexity and uncertainty ▪ Opportunism ▪ Transaction costs
<i>Problems discussed</i>	<ul style="list-style-type: none"> ▪ Free-rider problem with management control ▪ Ownership dispersion 	<ul style="list-style-type: none"> ▪ Information asymmetry ▪ Conflicting interests ▪ Different risk preferences 	<ul style="list-style-type: none"> ▪ Information asymmetry ▪ Asset specificity ▪ Incomplete contracting
<i>Solutions suggested</i>	<ul style="list-style-type: none"> ▪ Take-over market ▪ Monitoring by large shareholders 	<ul style="list-style-type: none"> ▪ Screening ▪ Signalling ▪ Input-based and output-based control mechanisms 	<ul style="list-style-type: none"> ▪ Governance structure ▪ Legal framework
<i>Application on corporate governance</i>	<ul style="list-style-type: none"> ▪ Incentive-based compensation (particularly stock-based compensation) ▪ Ownership structure ▪ Management liability ▪ Shareholders' rights 	<ul style="list-style-type: none"> ▪ Monitoring ▪ Incentive-based compensation 	<ul style="list-style-type: none"> ▪ Monitoring ▪ Disclosure

¹⁵⁸ Own illustration.

IV Corporate Governance Systems

This chapter is aimed to give an overview over different corporate governance systems in a conceptual way. It is hereby first distinguished among external and internal corporate governance mechanisms (section 4.1). In a next step these mechanisms are discussed in a cross-cultural context explaining the role and importance of control mechanisms (section 4.2). The focus of section 4.3 is corporate governance in Germany as this will be analyzed further in the empirical study. Finally, in sections 4.4 and 4.5 general ideas for what good corporate governance is will be developed.

4.1 Corporate Control Mechanisms

In order to safeguard stakeholders' and, in particular, shareholders' interests there exist a number of instruments and mechanisms which control managers' behavior and decisions. These control mechanisms can be grouped into external and internal mechanisms according to whether or not markets function as control intermediaries.

4.1.1 External Control Mechanisms

External control mechanisms are market-based mechanisms and comprise control over the equity, product, and manager markets. External control mechanisms are referred to as mechanisms initiated by markets. Although legal regulations offer "external"¹⁵⁹ protection by the state and may affect managers' behavior with legal sanctions, they do not classify as external control mechanisms because they can be considered as the given or fixed framework for corporate governance. In fact, external control mechanisms are characterized by their controlling effect due to market forces without regulatory intervention.

Control over the Equity Market

Control over the equity market, which is also referred to as the market for corporate control, is the shareholders' possibility of sanctioning mismanagement directly with

¹⁵⁹ The term "external" is here understood as not being influenced by the firm or the shareholders as opposed to internal control mechanisms. Legal regulations are therefore neither internal control mechanisms.

their investment behavior. In fact, the liquidity feature of the stock market gives investors the necessary flexibility to react to bad performance. In case of dissatisfaction with the existing management and its performance shareholders can basically either make use of their voting rights or sell their shares in the market.¹⁶⁰ These two possibilities are also referred to as “Voice” and “Exit”.¹⁶¹ While the exercising voting rights is an internal control mechanism¹⁶², the sale of shares is a market-based or external control mechanism. If several investors sell their shares, share prices will decrease, cost of equity capital will increase and at the same time the probability that another firm will make a takeover bid. In a theoretical context both “Voice” and “Exit” represent corporate governance solutions suggested by the property rights approach. Whereas “Voice” is the use of voting, i.e. property, rights, “Exit” is the transfer of property rights. By completely transferring property rights shareholders give up all interests in the firm, which they have as owners.

The threat of a takeover therefore serves to prevent managers from so-called “empire-building”. Due to a separation of ownership and control managers are assumed to be able to misuse corporate resources for their own benefit. More concretely, managers would try to expand business activities and increase the firm size, i.e. “build an empire”, at the expense of profitability in order to maximize their own compensation.¹⁶³ As bad operative performance is automatically¹⁶⁴ reflected in the capital market, the stock price of the respective firm will decrease and other firms will be interested in improving management by taking over the target firm.¹⁶⁵ Once the firm is taken over, the existing management will be substituted by a new management. The threat of a hostile takeover is supposed to discipline managers from the start in their tendency of “empire-building”. Takeover threats, however, represent more cyclical and less continuous instruments of control. Theoretically, the takeover market is a disciplining mechanism also discussed within the property rights approach.¹⁶⁶

¹⁶⁰ Witt (2003), p. 48.

¹⁶¹ Hirschman (1970).

¹⁶² See section 4.1.2.

¹⁶³ See Williamson (1964); Manne (1965).

¹⁶⁴ Under the efficient market premise (see Fama (1991)) all firm-specific information available to the capital market flows into the valuation of the firm’s assets and thus into the stock price as the market performance indicator.

¹⁶⁵ Blair (1995), pp. 100-101.

¹⁶⁶ See section 3.2.1.2.

Hostile takeovers had particularly reached their peak in the 1980s in the USA. Although they do not occur as often nowadays, they are still considered as an effective mechanism of corporate control in the USA. With the exception of the UK, takeovers do not play a significant role in the remaining European countries.¹⁶⁷

It has been mentioned above that the capital market reacts to firm-specific information immediately in the form of a stronger or weaker demand for shares. Disclosure plays an important role in reducing information asymmetry between shareholders and managers. Agency theory and the transaction cost economics emphasize the relevance of disclosure in order to decrease agency as well as transaction costs. Legal regulations can provide for minimum standards concerning the amount and content of mandatory disclosure by firms. Not only shareholders but also lenders are interested in firm-specific information so as to evaluate firms' creditworthiness and determine their cost of capital. Consequently, rating agencies can put pressure on firms to improve their competitiveness on the capital market by extending their disclosure policy.¹⁶⁸ Managers who are expected to publish positive information will have to avoid mismanagement and opportunism. Mandatory as well as voluntary disclosures by firms represent important control mechanisms over the equity market.

Control over the Product Markets

In case of perfect competition in product markets, managers cannot afford maximizing their own benefits at the expense of profits. Firms which do not operate successfully and generate enough profits will be pushed out from the market by competitors.¹⁶⁹ Consequently, opportunism by managers is only possible if competition in product markets is imperfect due to subsidies, protectionism, or trusts. In markets where there is no pressure for competitiveness managers will misuse available sources for their own benefit.¹⁷⁰

Control over the Manager Market

The competition among managers can contribute to solve the agency problem of opportunism by individual managers, who compete with other internal managers and

¹⁶⁷ Witt (2003), p. 49.

¹⁶⁸ Witt (2003), p. 51.

¹⁶⁹ Seger (1997), p. 43.

¹⁷⁰ Witt (2003), p. 50.

with external potential managers for their positions. This competition, which causes threat of dismissal, decreases additional control or agency costs for shareholders. The control mechanism works as follows: Because managers are in a contractual relationship with the firm, which can be finished at any time, managers control each other in order to check their competitiveness.¹⁷¹ Opportunistic behavior of managers will be signaled to shareholders who may decide to sanction those managers by dismissing them. Managers who are laid off will finally lose in market value, which will weaken their negotiation power for new management contracts. These potential consequences threaten managers to pursue their own interests at the expense of the shareholders. The effectiveness of this control mechanism is difficult to evaluate since, on the one hand, it is hard for shareholders to observe the performance of individual managers and on the other hand, substituting existing managers incurs further costs.¹⁷²

The control mechanism of the manager market is highly effective in the USA. There exists empirical evidence of a high management fluctuation in times of poor market performance.¹⁷³ This can be explained by the fact that the market for managers is more active than, for example, in European countries¹⁷⁴ and that management compensation is highly transparent to the capital market.¹⁷⁵ In Europe and in Asia manager loyalty plays an important role and the market for managers is more severely regulated.¹⁷⁶

4.1.2 Internal Control Mechanisms

Internal control mechanisms refer to management-disciplining instruments that are not market-based and can be organized individually by the firms themselves. Whereas firms can not really influence external control mechanisms, they can create and develop their own internal control mechanisms. Consequently, firms which are listed at the same stock exchange and operate in the same business markets may have diverging internal corporate governance systems.

¹⁷¹ Fama (1980), p. 293.

¹⁷² Seger (1997), p. 42.

¹⁷³ See, e.g. Gilson (1989).

¹⁷⁴ In Germany, for example, managers often benefit from a relatively high length of contracts.

¹⁷⁵ Jensen / Murphy (1990), p. 255.

¹⁷⁶ Kaplan (1994a), p. 521.

Shareholders can exercise power with their voting rights which arise from stock ownership. Voting rights are one form of property rights. Generally, voting rights can be used in the shareholders' assembly in order to elect representative board members.¹⁷⁷ Also, if special investment decisions are to be made, shareholders may be able to have a "Voice" with their voting right. Today's corporation characterized by a dispersed ownership structure does not provide for more direct control remedies by shareholders. The main problem with direct control are the costs incurred in terms of time and effort. This would lead to a free-rider problem, as discussed in section 3.2.1.2, whereby one group of shareholders would try to benefit from direct control without bearing the respective costs. Voting rights may represent an effective control mechanism when there are major shareholders or a number of small shareholders with same interests.

Another way to protect shareholders' rights and interests is a provision in the firm's articles of incorporation for management liability. According to such internal regulations, which can extend legal provisions, shareholders can sue managers for any damages arising from management failures.¹⁷⁸ Even if the probability of discovering mismanagement may be insignificant, managers could be disciplined if the amount of liability is rather high. The effectiveness of such provisions is unclear as it is very difficult to prove management failures.¹⁷⁹ In a theoretical sense, management liability is suggested as a corporate governance mechanism by the property rights approach.

The most classical internal control mechanism is indirect control via an elected supervisory board, which consists of objective persons and represents shareholders' and, in case of co-determination, also employees' interests. The supervisory board's task is to monitor the management regularly. In view of the large number of shareholders it makes sense to have a supervisory board which has more direct contact to the management and is able to monitor day-to-day business better than each single shareholder. This delegation of control, however, represents a principal-agent relationship itself and causes agency problems due to the risk of opportunistic behavior by board members. Shareholders, thus, have to create incentives as well as sanctions for supervisory board members in order to ensure that they fulfill their task well. Agency

¹⁷⁷ Seger (1997), p. 37.

¹⁷⁸ Such provisions for liability may not only concern managers but also supervisory board members as the delegation of control to a supervisory board also leads to agency problems.

¹⁷⁹ Witt (2003), p. 52.

problems with respect to supervisory board members are important corporate governance problems which can be solved with similar instruments as used for managers.

Furthermore, shareholders can align managers' interests with their own interests by creating monetary incentives which relate to appropriate performance measures. Agency theory as well as the property rights approach view incentive-based compensation as an important instrument in overcoming conflicting interests between shareholders and managers. Incentive-based compensation may reward short-term performance in the form of, for example, yearly bonus payments as well as long-term performance with stocks, stock options or convertible bonds. It is important that the variable part of manager compensation is not exclusively short-term-oriented. Managers are intended to be motivated to maximize short-term profits as well as to make right long-term strategic decisions.¹⁸⁰ Consequently, it is necessary that managers are compensated according to their present decisions and behavior which may realize profits in the long-run. This is also referred to as "deferred compensation", whereby managers are compensated in the future for present decisions.¹⁸¹ Firms introducing long-term incentives have to choose efficient incentive instruments, on the one hand, and determine appropriate performance measures, on the other hand.¹⁸² Incentive instruments are mainly stock-based so that managers pursue the same interests as shareholders. The amount of variable compensation can be related to internal value-based performance measures such as Economic Value Added (EVA) or Cash Value Added (CVA). External performance measures such as the stock price performance over a specified period of time may also be taken into consideration. In this context it is important that the respective performance measures are objective and are related to the overall market performance, i.e. to that of a stock index or to the performance of the respective business sector measured by an industry index.

Finally, firms can provide for further contractual regulations which limit managers in their possibility of opportunism. Such provisions may concern managers' behavior in the auditing process or how interest conflicts are dealt with.

¹⁸⁰ Short-term compensation is criticized for causing myopia by managers, i.e. the maximization of short-term profits with the goal of maximizing their personal wealth at the expense of long-term success.

¹⁸¹ Becker (1990), p. 47.

¹⁸² The problems in the selection of incentive instruments will be discussed further in section 5.1.2.1.

4.2 International Corporate Governance Systems

This section is aimed to compare selected corporate governance systems according to their understanding of corporate governance, the role of the capital market as a source of financial funds, how management and control are organized within the corporation, and shareholders' rights. Although there exists a number of differences between the corporate governance systems of all countries, three main types can be identified and assigned to the USA, Europe¹⁸³, and Japan.

4.2.1 Corporate Governance in the USA

The role of the capital markets is highly significant in the USA which can be explained by the long history of the form of corporate finance of US firms. In the 19th century, the first railroad companies issued shares to the general public in order to raise equity capital. Since then, the ownership of shares has become common for private investors.¹⁸⁴ Today, private households represent the majority of investors in the US and reflect the nationwide significance of capital markets. The US corporation is therefore often characterized by a diffuse ownership structure.

The US model of corporate governance is organized as follows. The board of directors is the main internal institution which comprises management and control functions. The board of directors consists of so-called executive and non-executive directors. Whereas executive directors are managers of the firm, non-executive directors representing shareholders are to monitor the managers in their day-to-day business.¹⁸⁵ They therefore fulfill the monitoring task as recommended by agency theory and the transaction cost economics. The combination of management and control bodies in one single institution is referred to as a one-tier system. A separation of these functions, which, for example, can be found in a number of European countries, is called two-tier-system. The one-tier system has the advantage that non-executive directors receive more information on a

¹⁸³ For Europe it is distinguished between the UK and Continental Europe. As far as Continental Europe is concerned, only common corporate governance aspects will be discussed without presenting specificities of individual countries.

¹⁸⁴ Allen / Gale (2000); La Porta et al. (2000), p. 17; Macharzina (1999), p. 132.

¹⁸⁵ Executive and non-executive directors are also referred to as inside and outside directors expressing that non-executive directors should not be recruited internally but from outside. Although the advantage of objectivity of outside directors is obvious, many firms elect their non-executives from inside, which has often been criticized.

more regular basis and are able to monitor the management more immediately because they do not have separate meetings. An obvious disadvantage, however, is that the non-executive directors do not have the necessary distance to the management to evaluate it objectively. If managers and non-executives work like colleagues, the supervisory character of the control body may get lost. This problem of independence may disturb the efficiency of monitoring and cause additional agency costs. Within management the Chief Executive Officer (CEO) disposes of the greatest power as he is the most important decision-maker and all the other managers report to him. The CEO is elected and can be dismissed by the board. All board members are elected by the shareholders. For new members the board may make suggestions on candidates.¹⁸⁶

The shareholders are the most important interest group of the corporation. This is reflected in the fact that they determine the corporate goals significantly which are based on the maximization of shareholder value. By their ownership of shares shareholders are entitled to vote in the Shareholders' Assembly and thus to have an influence on management decisions. Due to the only small portion of shares and to their geographic dispersion¹⁸⁷ small shareholders have the difficulty of controlling directly through their voting rights ("Voice"). Actually, the only alternative small shareholders have in case of dissatisfaction with the management is "Exit", i.e. sell their shares.¹⁸⁸ In some cases, shareholders have even sued the management for damages. This is more common in the US than in other countries since it is not only rather cheap to take legal action against the management but also because it is possible by law that several shareholders go to court together. Liability by management is therefore an important issue in the US. As a reaction to a number of insolvencies caused by mismanagement, the US legislation has recently enacted the Sarbanes-Oxley Act, which provides for confirmation by oath of the financial statements, more stringent liability of managers for untrue information, and reinforcement of financial reporting to the capital market.¹⁸⁹

¹⁸⁶ Fukao (1995), p. 13.

¹⁸⁷ Fukao (1995), p. 20 and p. 25 for a comparison of ownership concentration in the USA, UK, Japan, and Germany.

¹⁸⁸ Shleifer / Vishny (1997); Witt (2000), p. 159.

¹⁸⁹ FAZ (2003), p. 17.

Banks do not play a significant role in corporate control because first, banks loans are only a secondary source of corporate finance and second, US laws enforce liability of non-executive board members.¹⁹⁰

The most important control mechanism is the threat of hostile takeovers. For a long time the market for corporate control was assumed to control managers efficiently.¹⁹¹ Because of the high frequency of hostile takeovers during the 1980s a number of defense mechanisms such as golden parachutes or poison pills have been developed. This led to a reduction of takeovers in the past decade which have become rather expensive. Also, individual states have enacted legal regulations against hostile takeovers.¹⁹²

The US American corporate governance system is further characterized by a high level of transparency concerning firm-specific information. The capital market is very demanding in that respect. The Security's Exchange Commission (SEC) as well as the individual stock exchanges provide for extensive regulations on disclosure which go beyond the US-GAAP. Particularly, the disclosure on the compensation of managers plays an important role in order to ensure an efficient market for managers. Generally, voluntary disclosure in the form of regular reports to the press, road shows, and analysts' conferences is very common.

In summary, corporate governance in the USA is largely based on external control mechanisms as discussed in section 4.1.1. Apart from monitoring and voting rights of shareholders takeovers and disclosure play a very important role in controlling and disciplining the management. This is mainly due to the significant influence of the US capital markets on firms' finance.

¹⁹⁰ Witt (2003), p. 63.

¹⁹¹ Holmström / Kaplan (2003), pp. 10-11.

¹⁹² Witt (2003), p. 63.

4.2.2 Corporate Governance in Europe

One single model of corporate governance does not yet exist in Europe. Despite a large variety of corporate governance systems two main types can be identified: corporate governance in the UK and in Continental Europe. As the USA, European countries have started developing codes of corporate governance or conduct as a reaction to the demands of the capital market and to a number of unexpected insolvencies. These codes are similar in terms of content and nature so that a convergence of the different systems is expected at least concerning the goals and values of corporate governance.

The UK model of corporate governance differs from that of Continental Europe not only in its focus on shareholders due to the importance of the capital market as a source of corporate finance but also in its board structure as a one-tier system comparable to the US model. The main difference of the UK model to the US model is the separation of the roles of the CEO and the chairman of the board. This separation of power ensures a greater balance between the influences of executive and non-executive directors.¹⁹³ The difference to the Continental European model apart from the one-tier system is that representatives of the workforce in the board do not exist. This is because in the UK it is believed that such a representation would in no way affect board or management decisions. In fact, it is argued that if several stakeholders are represented, boards may become too large and work inefficiently. The advantage of a single board is seen in a less formal and more open debate on firm-specific topics. The UK tries to reinforce the independence of non-executive board members and their power towards the executive directors.¹⁹⁴ This is above all reflected in the British code of corporate governance, the Cadbury Code, which has been developed a few years ago.

The prevailing form of corporate governance in Continental Europe is a two-tier system separating the functions of management and control.¹⁹⁵ In contrast to the USA or UK, shareholders do not play a special role compared to other stakeholders. In fact, it is important that the interests of all stakeholders, including employees, lenders and customers, are pursued.¹⁹⁶ This corporate governance “mentality” is due to the fact that

¹⁹³ Highbury (2002), p. 154.

¹⁹⁴ Highbury (2002), p. 154.

¹⁹⁵ Exceptions always exist. French firms, for example, can choose between a one-tier and a two-tier system. See also Fukao (1995), p. 13.

¹⁹⁶ Beffa (2002), p. 104.

capital markets have not been as important as in the USA or UK for a long time. In Continental Europe, banks have long been the primary providers of financial funds to firms. Consequently, banks and usually also employees are still represented in the boards of most European countries. In some countries, such as Austria or Germany, the representation of the workforce, also referred to as co-determination, is even legally regulated.¹⁹⁷ Corporate control in Continental Europe is more internal and less market-based so that, for example, hostile takeovers rarely take place and thus do not function as a control mechanism. Traditionally, the USA and the UK have been characterized as shareholder oriented whereas Continental Europe has been regarded as largely stakeholder oriented.

The internationalization of the capital markets has not only changed the capital structure of European companies which now finance their business increasingly with equity capital. Finance over the capital markets now forces European firms to emphasize shareholders' interests and rights. The so-called shareholder value-orientation comprises value-based management, incentive-based compensation, an extensive disclosure policy, etc. As a consequence, firms in Continental Europe are more and more confronted with similar issues of corporate governance as those in the UK and US.

There exist a number of concepts on how to unify the various models of corporate governance in Europe. The two most important approaches are (1) the harmonization of the corporate laws of the member states in the European Union and (2) the creation of a European Corporation, the so-called *Societas Europaea*. The harmonization particularly relates to the board structure and the co-determination by the other stakeholders. The European Union has developed a directive, the so-called 5th directive, which asks its member states to adapt new corporate governance aspects in their national corporate laws. European firms, for example, should have the right to choose between a one or two-tier board system. If firms decide for the one-tier system, non-executive members of the board must have a majority vote in order to approve decisions of the board. Furthermore, shareholders' rights have to be widely legally determined and protected. As far as co-determination is concerned, the European Union provides for different models on how to integrate the "power" of labor into the corporate governance

¹⁹⁷ Fukao (1995), p. 14.

system.¹⁹⁸ Another concept of harmonization of the various models in Europe is the creation of a European corporation which is legally independent of the individual national laws. The European Commission has been developing propositions for the structure and characteristics of such a corporation for more than a decade, which, however, have not yet been approved. The European corporation also allows for both the one and the two-tier board structure. It is, however, very restrictive with the competencies of managers. Moreover, co-determination rights by the workforce are rather weak, which is appreciated by the UK but not by Germany. In summary, it is expected that the harmonization process will still take some time due to problems of acceptance, on the one hand, and complications in a legal implementation of a European corporation, on the other hand.¹⁹⁹

4.2.3 Corporate Governance in Japan

Comparable to Continental European firms, Japanese firms finance their capital need less over the capital market than over debt instruments.²⁰⁰ The average debt ratio²⁰¹ of Japanese firms varied between 40% and 60% in the past 40 years and the issue of new shares makes up only 10% of corporate finance.²⁰² Japanese firms do not have a dispersed ownership structure, a majority of shares are held by institutional investors such as banks or insurance companies.²⁰³ Nonetheless, shareholders are, at least by law, owners of the firm and therefore their interests are to be pursued in primary place.²⁰⁴ In practice, not the shareholders but the employees²⁰⁵ are the most important stakeholders of the firm. Although employees do not have explicit rights to influence management decisions and determine corporate strategy, they have considerable power so that their interests are protected before, for example, shareholders' interests. The main reason for this is because employees are expected and supposed to show long-term commitment to their firm. This loyalty gives them a special status within the firm: "It is not uncommon, for example, to see a firm scale back dividend in order to protect jobs, or for labor and management to join forces to oppose a hostile takeover bid."²⁰⁶

¹⁹⁸ Macharzina (1999), pp. 134-136.

¹⁹⁹ Macharzina (1999), pp. 137-138.

²⁰⁰ For a detailed description of the historical importance of bank loans in Japan see Witt (2003), p. 64.

²⁰¹ The debt ratio is understood as the proportion of debt capital to total assets.

²⁰² Itami (2001), p. 95.

²⁰³ Witt (2003), p. 66.

²⁰⁴ Itami (2001), p. 92.

²⁰⁵ The term "employees" refers here to the workers as well as to the managers of the firm.

²⁰⁶ Itami (2001), p. 93.

From an economic point of view, such an emphasis on employees' interests can be justified with the advantages of *incentive compatibility* and *informational efficiency*. If the managers and employees are treated as the owners of the firm, then there are no diverging interests between them and thus no agency problems which have to be reduced with incentives (incentive compatibility). On the other hand, because employees are interested in the profitability of the firm, they are assumed to be eager to acquire new skills and to increase their productivity by an intense communication and team building (informational efficiency).²⁰⁷ Risk of mismanagement and the need for effective corporate governance still exist, though.

Market-based control mechanisms play a smaller role in Japan than internal control mechanisms. Mergers occur rarely because of cross-holding of shares among firms, the so-called Keiretsu system, and because a low acceptance of takeovers by employees. In fact, consensus is generally more appreciated in Japan.²⁰⁸ Competition in the product markets and in the internal manager market of the firm are considered to be more effective control mechanisms against potential opportunistic behavior of employees.²⁰⁹ Employees compete for promotion within the firm and are continuously controlled during their internal job rotation.²¹⁰ Incentive-based compensation as an internal control mechanism plays an important role as well. So far, the variable income of Japanese employees has been related largely to profits and dividends. In 1997, a change in the Japanese Commerce Law took place allowing firms to issue stock options to their workforce.²¹¹ Consequently, stock options have become more and more common to motivate employees on a long-term basis.

As far as the Japanese internal management and monitoring structure is concerned, there is a board which consists of a large number of directors. The board is partly composed of "managers", of an executive committee which supports the decision-making process of managers, and some representatives of the firm, who neither manage the firm nor control the managers explicitly. The Japanese board is therefore not clearly separated into members with management and monitoring functions as in the USA. This is due to the fact that managers are considered as the employees of the firm and are expected to

²⁰⁷ Itami (2001), pp. 96-97.

²⁰⁸ Fukao (1995), p. 25; Witt (2003), p. 65.

²⁰⁹ Itami (2001), p. 99.

²¹⁰ Witt (2003), p. 67.

²¹¹ Witt (2003), p. 68.

be loyal to the firm so that monitoring it not regarded as necessary. The recruitment of outside directors is therefore very uncommon. Internal directors are regarded as the best representatives of employees.²¹² Managing directors are elected by the Shareholders' Assembly for a period of two years.²¹³ The Japanese board is characterized by its hierarchical structure. The most important managing director is the President (Shacho), comparable to the CEO in the USA. In contrast to the CEO, the Japanese President rarely functions at the same time as the chairman of the entire board.²¹⁴ The chairman is represented by another member of the board.

The Japanese board has originally been established by Americans as a one-tier system after World War II. Over the years the board has been more and more adapted to the Japanese mentality so that today it is difficult to equate the Japanese model to the US or Continental European models.

4.3 Corporate Governance in Germany

This section is aimed to present the corporate governance system in Germany which is also subject of reference in the following chapters. First, an overview of the common ownership structure of German corporations is given. Second, the two-tier board system is discussed with particular attention to the duties of managers and supervisory board members. Third, recent reformatory efforts by the German legislation and private institutions are presented.

4.3.1 Ownership Structure

The ownership structure of corporations affects the importance of internal or external control mechanisms. Germany is often characterized as to have a bank-based corporate governance system as opposed to market-based systems found in the USA or UK. This can be explained by the role of banks as lenders as well as institutional investors. Consequently, it is not unusual that banks often not only have significant voting rights in the Shareholders' Assembly but also represent shareholders' interests in the

²¹² Itami (2001), p. 94.

²¹³ Fukao (1995), pp. 13-14.

²¹⁴ Witt (2003), pp. 65-66.

supervisory board. Beside that, banks are often authorized by private investors who hold bearer shares to exercise proxy votes.²¹⁵

The capital market has so far played a secondary role for the external finance of German corporations. This is changing due to an increasing internationalization of capital markets. In 2000, 6.2 million people had direct investments in shares.²¹⁶ Germans increasingly prefer buying investment funds which have enormous growth potential. Whereas in 1999, 4.8 million people held shares in investment funds, the number increased to 8.4 million in the year 2000.²¹⁷ A comparison of the importance of the capital market is given in Table 4 for Germany, France, the UK, Japan, and the USA. As shown in Table 4, Germany has the least market capitalization in proportion to its GDP (Growth Domestic Product) compared to the other countries. In 1998, 741 firms were listed at the German stock exchange. The mostly traded shares contributed to already 84% of the overall trade volume. The respective figures for 2001 confirm a growth of the capital market.

Table 4: A comparison of international capital markets²¹⁸

	Germany		France	UK	Japan	USA
	1998	2001	1998	1998	1998	1998
Market capitalization in proportion to GDP	50.9%	58.1%	68.1%	168.2%	65.5%	144.9%
Number of listed companies	741	749	914	1.957	2.416	7.555
Contribution of the mostly traded shares (top 5%) to the total trade volume	84%	61.6%	81.2%	85.9%	70.9%	65.1%

The entrance of institutional investors such as investment and pension funds is supposed to trigger improvements in the German corporate governance system such as a more intense shareholder-value orientation as well as more voluntary reporting to the capital

²¹⁵ Wulfetange (2002), p. 91; Franks / Mayer (1996), p. 283.

²¹⁶ Wulfetange (2002), p. 91.

²¹⁷ Wulfetange (2002), pp. 91-92.

²¹⁸ Deutsches Aktieninstitut (2000): see tables 05-03, 02-2, and 06-04 for the year 1998; Deutsches Aktieninstitut (2002): see tables 05-3, 02-3, and 06-4 for the year 2001.

market. The demand and pressure of institutional investors for better corporate governance is also referred to as *Shareholder Activism*. The main motivation for shareholder activism is that large investors can not easily sell their shares in case of dissatisfaction with management (“Exit”) like small investors can do. Sales of a large proportion of shares may not only decrease share prices but are often also difficult to substitute by alternative investments of large scale.²¹⁹ Exercising voting rights might not be useful if such large investors are still minority shareholders. In this case they might try to convince other shareholders to support their ideas with their votes (so-called *Proxy Contests*). Generally, it is better for institutional investors to influence the management informally over a ranking or the press.²²⁰

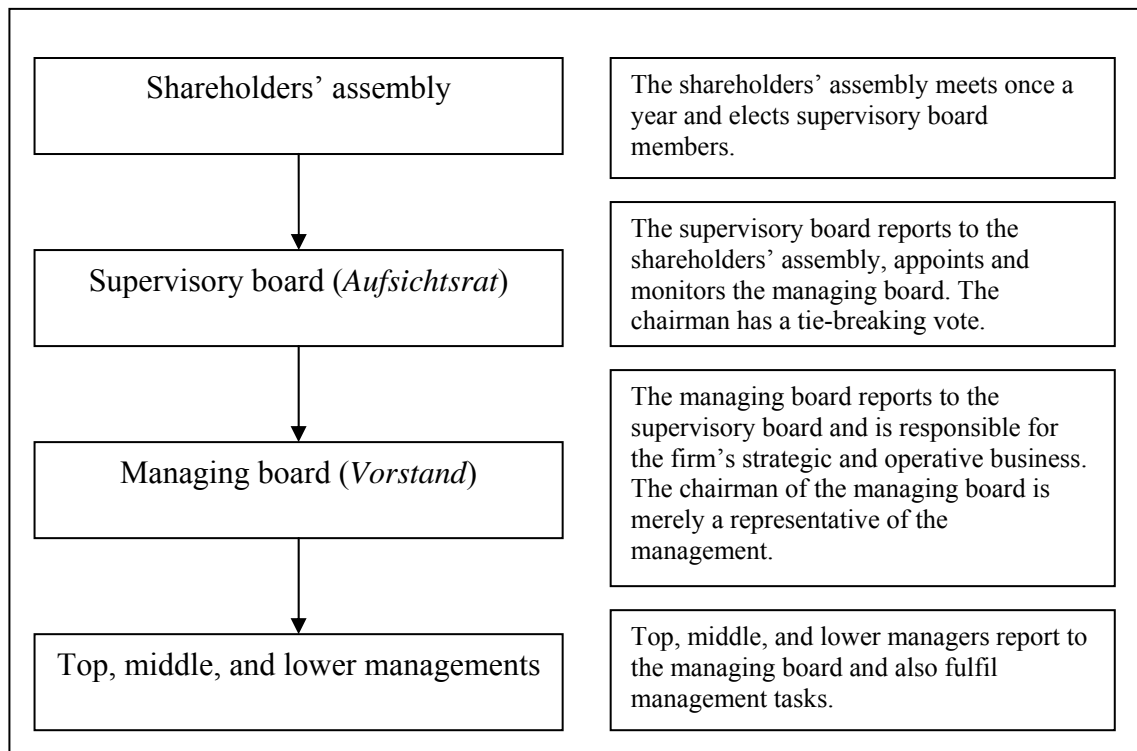
4.3.2 Management and Internal Control Bodies

From an internal control perspective the German corporate governance system is organized as a two-tier system, i.e. management and control functions are separated into two different institutions, the managing and the supervisory board or the so-called *Vorstand* and *Aufsichtsrat*. Figure 3 summarizes the German corporate governance model.

²¹⁹ Davis / Thompson (1994), p. 154.

²²⁰ Nussbaum (2002), pp. 174-176. The US pension fund CalPERS, for example, publishes a ranking of firms with good corporate governance on a regular basis.

Figure 3: The German corporate governance model²²¹



The structure of Figure 3 reflects the hierarchy in the German corporate governance model. The shareholders' assembly is the most important institution which appoints the supervisory board. For German corporations, i.e. *Aktiengesellschaften*, with at least 2,000 employees 50% of the supervisory board members are appointed by the shareholders' assembly and the workforce, respectively.²²² Although the shareholders are not involved in the day-to-day business of the firm, they can introduce a provision in the articles of incorporation for certain management decisions to be approved by the shareholders' assembly.²²³ Shareholders can influence the firm's business affairs by exercising their voting rights. Apart from such a direct control, shareholders delegate monitoring duties to the supervisory board which consists of independent members pursuing shareholders' interests.

The German supervisory board's main function is therefore to appoint the managing board and to evaluate the management's performance.²²⁴ The supervisory board usually consists of representatives of shareholders who are elected by the shareholders'

²²¹ See also Wulfetange (2002), p. 93.

²²² § 1 (1) and § 7 (1) Mitbestimmungsg or Co-Determination Law.

²²³ Beside such provisions the German Stock Corporation Law (§119(1)) specifies certain issues such as the change of the firm's capital structure which by all means have to be approved by the shareholders' assembly.

²²⁴ Kaplan (1994b), p. 147.

assembly.²²⁵ In large corporations half of the supervisory members are by law to be elected by the employees and labor unions.²²⁶ The co-determination by employees can be regarded a long tradition in German corporate culture and understanding of corporate governance. Its importance is due to the general stakeholder approach of German corporations and to the power of labor unions, not found in the Anglo-Saxon world. Having seats on the supervisory board employees' representatives ensure that management does not make business decisions at the expense of jobs. In fact, the supervisory board assumes that co-determination by employees helps understanding the interests and requirements of the workforce.²²⁷ The chairman of the supervisory board, who is elected by the supervisory board itself²²⁸, however, has tie-breaking vote in favor of the shareholders so that in case of doubt shareholders' interests have priority. The German co-determination feature affects the efficiency of the entire supervisory board, because it leads to an increase in the number of supervisory board members. German supervisory boards often reach a size of 20 members, which affects the discussion quality as well as reduces the frequency of board meetings.²²⁹

The entire managing board is appointed by the supervisory board, for a maximum period of five years and may be dismissed by the supervisory board for cause.²³⁰ The managing board consists of insiders who can not be members of the supervisory board at the same time.²³¹ The chairman of the managing board, who is also determined by the supervisory board²³², is rather a representative of the board than superior of the remaining board members as is the case in the USA.²³³ Top, middle and lower management report to the managing board which is by law responsible for the management of the firm.²³⁴

²²⁵ Members of the supervisory board are appointed for a period of five years at maximum, see § 101 and 102 AktG.

²²⁶ Fukao (1995), p. 14; Kaplan (1994b), p. 147; see also Wulfetange (2002), p. 90. In corporations with more than 500 employees the proportion of employee representatives is one third.

²²⁷ Schmidt (2000), p. 111.

²²⁸ § 107 AktG.

²²⁹ Wulfetange (2002), p. 90.

²³⁰ § 84 (1) and (3) AktG.

²³¹ The separation of the managing and supervisory boards is legally regulated in §105 AktG.

²³² § 84 (2) AktG.

²³³ Kaplan (1994b), p. 147.

²³⁴ § 76 (1) AktG.

4.3.3 Reformation of the German Corporate Governance System

As has been mentioned before, one important weakness of the German corporate governance system lies in the insufficient flow of information between the management and the supervisory board due to the separation of these institutions. Moreover, international and institutional investors have been complaining about the low quality of financial reporting by German firms to the capital market which is less value and risk-oriented than, for example, by US American firms. The need for changes in the German corporate governance system comes above all from the increasing capital market orientation of German firms. As the legislation is an important basis for the corporate governance structure, a number of reforms in the German corporate laws have taken place within the past few years. This section is aimed to give an overview of these reforms.

Gesetz zur Kontrolle und Transparenz im Unternehmensbereich (KonTraG)

The Gesetz zur Kontrolle und Transparenz im Unternehmensbereich (KonTraG) was enacted in 1998 and represents the first reaction of the German legislation to a number of weaknesses in the German corporate governance system reflected, for example, by several unexpected insolvencies. The KonTraG is a law which modifies the existing Stock Corporation Law. It particularly emphasizes monitoring of the management by the supervisory board and the shareholders' assembly, reduces differences in shareholders' voting rights, allows for incentive-based compensation of the management with stock options, intensifies the co-operation between the supervisory board and the auditor, and shrinks ownership by banks.²³⁵ Moreover, it requires the management explicitly in § 91 (2) AktG (German Securities Law) to arrange for an appropriate risk management system which enables to identify firm-specific risks early and ensures the survival of the firm.²³⁶

Kapitalaufnahmeerleichterungsgesetz (KapAEG)

Due to the increasing financing of German corporation over the capital market, another goal of the legislation was to ensure that firms satisfy the information needs of international and institutional investors. The KapAEG, which was also enacted in 1998,

²³⁵ von Rosen (2001), p. 3.

²³⁶ Martin / Bär (2002), p. 39.

aims at increasing the attractiveness of German firms as investment targets. It allows German firms to publish their group's financial statements according to international accounting standards without additionally doing so according to German accounting standards.²³⁷ Later in 2001, the Gesetz zur Namensaktie und zur Erleichterung der Stimmrechtsausübung (NaStraG) was introduced in order to reinforce capital market orientation of German firms. NaStraG regulates the issue of registered shares instead of bearer shares, which allows direct communication with each shareholder. This is an important development for the improvement of investor relations by German corporations.

Codes of Best Practice

International and institutional investors were not only interested in a more detailed financial reporting but they above all missed transparency concerning the German corporate governance and particularly board structure. In 2000, the Frankfurt Commission of Corporate Governance Principles (Frankfurter Grundsatzkommission) developed a code of best practice which, on the one hand, explains the German two-tier model and on the other hand lists a number of principles of good corporate governance to be pursued by German firms. These principles have only advisory character and require enough independence of supervisory board members, especially the avoidance of recruiting former managers to the supervisory board. They also emphasize the disclosure of managers' conflicts of interest as well as their compensation. Another aspect dealt with in the code of best practice is the use of the internet as an instrument of investor relations for the publication of the annual report and other firm-specific information in German and in English.²³⁸ In the same year, another commission in Berlin (Berliner Initiativkreis) modified the code of best practice by adding new principles concerning the duties of the managing board.²³⁹ The existence of several codes of corporate governance led to confusion among firms so that the German government appointed a separate commission (Regierungskommission) to develop a code of corporate governance which would "unify" all the different codes.

The German Corporate Governance Code (GCGC) which represents a catalogue of criteria for good corporate governance was published in February 2002. The GCGC has

²³⁷ Martin / Bär (2002), p. 37.

²³⁸ von Rosen (2001), p. 4.

²³⁹ Wulfetange (2002), p. 98.

only advisory character. Although its recommendations are not legally binding because firms cannot be sanctioned for not pursuing them, the German government assumes that the capital market will be efficient enough to reward those firms which adapt the code and to sanction others.²⁴⁰ In fact, several empirical studies give evidence that over 90% of German listed corporations adhere to the principles of the GCGC.²⁴¹ Furthermore, firms are required by law (§ 161 AktG) to disclose in their annual reports whether they adapt the code and if not, they have to publish which recommendations of the GCGC they do not follow. This regulation is also referred to as the “comply or explain“-rule.²⁴²

The GCGC consists of four parts dealing with shareholders’ interests, the board structure, the duties of the managing and supervisory boards, and finally with disclosure and accounting issues.²⁴³ First, the role of the shareholders’ assembly and shareholders’ voting rights are explained. Second, the two-tier model is discussed with particular emphasis on the co-operation between the managing and supervisory boards and the managing board’s duties of supplying information.²⁴⁴ The GCGC indicates that the managing board has to establish an appropriate risk management system by law.²⁴⁵ Also, the creation of monetary incentives for the management and therefore the introduction of a variable component in the compensation scheme are suggested.²⁴⁶ Further, the GCGC advises the supervisory board to build committees specialized in selected issues such as risk management, strategy, or auditing in order to improve the quality of internal monitoring.²⁴⁷ The last part of the GCGC deals with disclosure. It specifies time limits for the annual and quarter-end reports²⁴⁸ and provides for the disclosure of stakes in other firms.²⁴⁹ The GCGC contains only very few new regulations. However, because of its compactness and its initiation by the German government the GCGC is supposed to be accepted more than its predecessors.

²⁴⁰ See Ehrhardt / Nowak (2002), p. 344: Empirical studies give evidence that such recommendations initiated by private institutions are able to influence the quality of corporate governance positively. In the UK, for example, the recommendations of the Cadbury Committee not only improved corporate governance of British firms but also their average performance (see, e.g., Dahya / McConnell / Travlos (2002), p. 461)

²⁴¹ See, e.g., von Werder (2003b).

²⁴² Pfitzer / Oser / Wader (2002), p. 1120; Pfitzer / Orth / Wader (2002), p. 753.

²⁴³ von Werder (2002), pp. 803-809.

²⁴⁴ See GCGC (2003), paragraph 3.4.

²⁴⁵ See GCGC (2003), paragraph 4.1.4.

²⁴⁶ See GCGC (2003), paragraph 4.2.3.

²⁴⁷ See GCGC (2003), paragraph 5.3.1.

²⁴⁸ See GCGC (2003), paragraph 7.1.2.

²⁴⁹ See GCGC (2003), paragraph 7.1.4.

4.4 International Corporate Governance Standards

While in the past, different corporate governance systems were compared to each other as if they competed, it is widely accepted today that the prevailing systems fit the cultural and economic circumstances in the respective countries. Consequently, it has been understood that it is difficult, for example, for Germany to completely adapt the US model of corporate governance. Various countries have rather passed over to pick-up selected aspects of corporate governance which they believe would enhance the quality of their own system. Whereas Germany has recently discovered the importance of incentive-based compensation which is common practice in the USA, the USA, on the other hand, tries to separate the roles of the CEO and the chairman of the board as is the case in Germany. In summary, there is a co-existence of various corporate governance systems rather than a competition of them.²⁵⁰

Nonetheless, it is reasonable to identify general principles of good corporate governance in order to ensure a common understanding and quality of corporate governance. On an international scale there exist only two efforts to harmonize corporate governance among countries. In May 1999, the OECD and the World Bank have developed a catalogue of minimum requirements for the corporate governance systems of member countries. These criteria are, however, formulated very vaguely and need to be specified by the individual states.²⁵¹ They particularly concern the protection of shareholders' rights as well as an equal supply of information to small as well as large investors.²⁵² It is often criticized that the OECD refers mainly to emerging economies and less developed countries. Moreover, the specific issues and problems in individual countries are very complex so that the OECD principles do not necessarily contribute to solve them. Harmonization efforts also exist in the European Union which has enacted a directive concerning the board structure, shareholders' rights, and co-determination by employees.

²⁵⁰ von Werder (2003a), p. 19.

²⁵¹ Wulfetange (2002), p. 98.

²⁵² von Rosen (2000), p. 1.

4.5 Success Factors for Good Corporate Governance

So far, it has been distinguished between internal and external control mechanisms which ensure that managers are efficiently monitored and disciplined. External control mechanisms are based on control over the capital, manager, and product markets and can be regarded as difficult to influence by individual firms. In fact, firms are more able to specify their internal control mechanisms and undertake changes. Apart from the legally binding regulations concerning voting rights of shareholders or the board structure, firms can voluntarily modify their articles of incorporation or management contracts and therefore improve their corporate governance system. This voluntary aspect of corporate governance is a central element of this thesis because it is assumed that firms differ from each other in terms of their voluntary corporate governance practice and are able to increase their attractiveness on the capital market by introducing appropriate corporate governance instruments.

The previous sections have presented the scope of possible corporate governance mechanisms and instruments. If success factors for good corporate governance should be specified, the efficiencies of each individual aspect would have to be analyzed. Basically, it can be distinguished between external and internal corporate governance mechanisms. Also, corporate governance may be considered from a mandatory and a voluntary perspective. As has been mentioned before, investors are expected to reward voluntary efforts in improving corporate governance. Mandatory corporate governance standards are to be fulfilled by all firms. Therefore, voluntary corporate governance instruments can be regarded as the success factors of corporate governance. The quality of auditing standards, legal regulations, but also market-based control mechanisms, on the other hand, cannot be considered as determining the quality of the individual corporate governance system because they cannot be directly influenced by the firms.

The success factors for good corporate governance then refer to the aspects of managerial contracts, monitoring by the supervisory board, and voluntary disclosure. As far as managerial contracts are concerned, firms can specify general qualifications of managers such as age, experience, independence, i.e. no conflicts of interest due to contractual relationships with competitors, for example. Incentive-based compensation is rather a new issue in Germany as opposed to the USA or the UK, although from a

theoretical point of view it is an efficient mechanism to influence managerial behavior. Also, providing for liability of managers for mismanagement is another criterion for good corporate governance with respect to managerial contracts. As regards the supervisory board, it is important to guarantee enough independence of board members as well as to create monetary incentives and possibilities for sanctions. Risk management which is required by KonTraG is an explicit dealing with firm-specific risks which improves the quality of monitoring and avoids unexpected financial crises. The supervisory board can make use of a risk management system in order to improve the quality of control. Disclosure is another success factor. German firms can attract more investors if they disclose firm-specific information more frequently and according to the expectations of international and institutional investors. The following chapter discusses these success factors with particular attention to the German corporate governance system.

V Criteria for Good Corporate Governance

This chapter serves to develop an understanding of what represents good corporate governance. It will particularly consider solutions to deficits in German corporate governance system. First, management issues are dealt with (section 5.1). Second, characteristics of the supervisory board are discussed (section 5.2). Third, the importance of a risk management system as part of an internal control system is shown (section 5.3). Fourth, criteria for good disclosure are presented.

5.1 Management

Agency problems and the necessity of controlling managerial behavior have been discussed in chapter III. This section presents ideas on how to solve agency problems with respect to the management. First, general job qualifications of managers are discussed. Second, compensation schemes as instruments of rewarding good behavior are presented. Third, an overview of the importance of liability by managers for sanctioning bad behavior is given.

5.1.1 Qualifications

It is crucial that firms recruit highly qualified managers in terms of job experience as well as personality. Managers can be insiders, i.e. they are promoted to the managing board or they can be recruited from the external market for managers. If managers are insiders, the firm has the advantage of having prior information on the respective managers' qualifications from their employment history. If managers are recruited externally, the problem of hidden characteristics (see section 3.2.2.2) is more relevant. Usual requirements such as job experience in the respective business sector or an open and loyal personality are difficult to evaluate with regard to the up-coming decisions to be made. In fact, there exist only little empirical evidence on a relationship between managers' personal characteristics and their decisions.²⁵³

²⁵³ Gedenk (1994), p. 114. For an overview of empirical studies on the relationship between managers' personal characteristics and corporate strategy see Schrader (1995).

An important corporate governance issue is the independence of managers. Independence refers to conflicts of interest, which managers may have due to their association with important business partners of the firm such as customers, suppliers, or competitors.²⁵⁴ Such a conflict of interest may affect management decisions which are the reason why independence is a necessity. In Germany, no explicit legal rules exist in the German Corporation Law on how to deal with interest conflicts of managers. The law only states that managers have to be loyal to the interests of the firm.²⁵⁵ However, the GCGC suggests the disclosure of insufficient independence to the managing board and the chairman of the supervisory board. Furthermore, firms may specify in their articles of incorporation that the managers concerned are not allowed to participate in critical decision-making processes, that they are excluded from board meetings or even that they are dismissed in case of potential damages for the firm.²⁵⁶ From a theoretical point of view conflicts of interest represent an agency problem, which can be solved particularly by incentive-based compensation as discussed in agency theory. Conflicts of interest can be considered as hidden characteristics which shareholders may overcome by screening. The firm may gather information on managers' previous relationships with customers, suppliers, or competitors. A more effective method may be signaling or disclosure by the managers, which can be motivated by sanctions of non-disclosure.

The German Corporation Law requires that managing board members get offered a five-year contract at maximum.²⁵⁷ It has often been criticized that most companies offer this maximum contract which is far longer than management contracts, for example, in the USA. The criticism relates to the danger that managers have a job security for several years and so have a negative incentive to opportunism. Therefore, it has been discussed that firms could put more pressure on managers and discipline them if they shortened the length of their contracts.²⁵⁸ The GCGC does not recommend any specific length of management contracts.

²⁵⁴ Such an association occurs if managers, for example, have seats on the supervisory boards of competitors.

²⁵⁵ Möllers (2003), pp. 416-417.

²⁵⁶ The supervisory board can dismiss members of the management for cause such as damages to the firm due to insider trading, manipulation of accounts or the misuse of corporate resources for their own benefit. See Grumann / Gillmann (2003), p. 771.

²⁵⁷ § 84 (1) AktG.

²⁵⁸ Ernst&Young / FAZ Institut (2002), p. 19.

5.1.2 Compensation

Compensation represents an important tool in influencing management behavior. This is theoretically suggested as well as empirically confirmed. This section deals with the possible compensation instruments motivating managers to improve corporate performance and with severance payments which reimburse managers in case of dismissals, for example, after takeovers.

5.1.2.1 Incentives

It is well established in the motivation literature that non-monetary incentives such as recognition, an interesting field of work, possibility of promotion, etc. are not to be neglected.²⁵⁹ Nonetheless, it is doubtless that monetary incentives are easier to control²⁶⁰ and that their effects may be stronger. Monetary incentives will be the focus of the following discussions.

Compensation of managers may consist of fixed and variable income. Only the variable component has incentive effects and can be divided into short-term and long-term incentives. Whereas short-term incentives such as bonus payments in cash are paid out on a yearly basis, long-term incentives are related to corporate and management performance over several years, i.e. more than one year. Short-term payments are determined by the yearly operative performance of the firm measured by sales, operative income, or the degree of cost reduction. These are rather objective measures which enable comparisons with competitors more easily. With respect to the efficiency of a value-based management system it is reasonable to measure management performance additionally with internal value-based ratios such as EVA or CFROI in order to motivate managers to enhance shareholder value.

If short-term payments are related to market performance in terms of share price movements, managers might try to increase share prices in the short run while neglecting long-term value enhancing strategies. As has been mentioned before, this problem is also referred to as the *myopia* of managers. In order to address this risk,

²⁵⁹ Gedenk (1994), pp. 108-109.

²⁶⁰ Finkelstein / Hambrick (1988), p. 544.

long-term incentives need to be introduced.²⁶¹ Long-term compensation aims at ensuring that managers pursue the goal of shareholder value maximization on a long-term basis. If their compensation was not evaluated by long-term measures managers would have no incentive to make decisions in the interest of shareholders. Long-term incentives may therefore be related to the firm's share price, which reflects the development of the firm. Additionally they may consider the stock index or an industry index as a measure of reference. In order for long-term incentives to be efficient they need to refer to the present performance of managers but reward them on the basis of future "profits".²⁶² From the perspective of managers, increasing the market performance of the firm may benefit them in the form of a higher reputation and therefore a higher value in the manager market.

From a theoretical point of view, long-term incentives reduce agency costs by *aligning the interests* of managers to those of shareholders. Managers try to maximize shareholder value because they are compensated in proportion to it.²⁶³ Long-term incentives also overcome the different risk preferences of managers and shareholders. Assuming that managers are more risk averse than shareholders, long-term components may transfer risk to managers motivating them to generate shareholder value on a long-term basis. The problem of an optimal risk allocation, however, remains. Long-term variable compensation should be competitive and sufficient enough to retain managers (*retention*), particularly during unprofitable business years due to external factors. Firms can also retain their managers by, for example, specifying blocking or service periods for exercising stock options in which they have to stay with the firm.²⁶⁴ Fourth, compensation opportunities should be limited so as to control the *cost of long-term incentives* born by shareholders and therefore to yet ensure a maximum shareholder value.²⁶⁵ This limitation of management compensation is also referred to as an (*upper cap*) and can be applied to long-term incentives as well as yearly bonus payments by specification in management contracts.

²⁶¹ The creation of long-term incentives is also recommended by the GCGC. Most German corporations have already implemented this suggestion. See PwC (2003), p. 6.

²⁶² Riegler (2000), pp. 161-164.

²⁶³ Hall (2002), p. 7 talks about managers being turned into owners.

²⁶⁴ Hess / Lüders (2001), p. 14. Such service periods may last up to 4 years.

²⁶⁵ O'Byrne / Stern Stewart & Co. (1996), p. 371.

As far as the possible instruments of long-term compensation are concerned, firms may, for example, issue phantom stocks or stock options. It is important to note that there are only little differences between them, even though the issue of stock options is widely disseminated. The more important aspect is that an incentive-based compensation scheme takes short-term and long-term performance into consideration and fulfils the above-mentioned criteria of aligning, retention, and shareholder cost.²⁶⁶ Further possible long-term compensation instruments are stocks, convertible bonds, and stock appreciation rights. All these instruments have in common that there is a considerable upside potential and downside risk. The only differences may lie in their disclosure in the financial accounts.²⁶⁷

5.1.2.2 Severance Payments

Severance payments are granted to managers in case they have to leave the company after a hostile takeover. The idea behind severance payments, also referred to as golden parachutes, is that managers are reimbursed for any damages they incur in connection with their dismissal. Such damages may comprise the risk of not finding another job immediately, the loss in their market value, or the career opportunities they may have had. Severance payments give managers security and to some extent motivation because the firm rewards their loyalty. The risk that managers misuse the possibility of receiving such payments is not to be neglected. In view of the risk of managerial opportunism, it is critical whether severance payments solve agency problems rather than creating them. In Germany, the takeover market is very inactive and consequently, golden parachutes may not play a major role in management contracts.

5.1.3 Liability

In view of the potential opportunism by managers it is not only important to reward good behavior but also to sanction bad management behavior. Shareholders' power to control managers directly is widely limited which makes shareholder protection necessary. The legislations of several countries have noticed the importance of liability of managers in order to discipline them and to prevent insolvencies. In the USA, for

²⁶⁶ See also Hall (2002), pp. 7-8.

²⁶⁷ Hess / Lüders (2001), p. 13. In the US, firms prefer issuing stock options to other forms of variable compensation due to advantages offered by the US GAAP.

example, the government has enacted the Sarbanes-Oxley Act which poses financial sanctions on managers as well as auditors for manipulation of accounts and fraudulent auditing.²⁶⁸ In Germany, there exist a number of laws concerning the personal liability of managers and supervisory board members.²⁶⁹ These regulations, nonetheless, have not been able to prevent managers from mismanagement and fraud. Consequently, one aim of the GCGC was to make recommendations on how to complement the legal provisions on liability by voluntary measures. The GCGC advises German corporations to take out a Directors' & Officers' (D&O) liability insurance policy which covers damages caused by the managers or supervisory board members and born by the firm and the shareholders. In order to create threat of liability the GCGC recommends providing for the participation of managers and supervisory board members in damages. Even if the probability that the insurance policy takes effect is low, the threat of monetary liability alone is supposed to deter managers from fraud. There is, however, no suggestion in the GCGC on up to which amount managers should participate in damages.²⁷⁰ This is an important aspect since the effect of such a provision will largely depend on the amount of participation.

5.2 Supervisory Board

It is often neglected that shareholders stand in a principal-agent relationship with the supervisory board as with managers.²⁷¹ In fact, direct monitoring is delegated to the supervisory board on behalf of shareholders as management tasks are transferred to managers. The relationship between the supervisory board and shareholders may cause agency problems as the supervisory board can be assumed to behave in opportunistic form. The main reason for this is that the supervisory board has no more incentive per se than managers to act according to shareholders' interests. Due to the incompleteness of their contractual relationship shareholders have to apply similar instruments of motivation and sanction on the supervisory board as for managers. Shareholders are interested in a good quality of monitoring as they are not able to monitor the managing board themselves due to the free-rider problem discussed within the property rights approach. In the case of the supervisory board it is important how the board is

²⁶⁸ Ballwieser / Dobler (2003), p. 460.

²⁶⁹ See Ballwieser / Dobler (2003), pp. 460-461 for a list of regulations on management liability.

²⁷⁰ Lange (2003), p. 1835.

²⁷¹ Hermalin / Weisbach (2003), p. 10.

structured and how decision-making processes are organized. Taking these additional aspects into consideration this section discusses criteria for an efficient supervisory board.

5.2.1 Qualifications

In the event of improving board control it is necessary to ask which board attributes may affect the success and efficiency of monitoring. A number of empirical studies exist which confirm correlations between board characteristics such as board size or composition and firm performance.²⁷² Although the German supervisory board is different from the US American board, the suggestions made in American literature on the characteristics of non-executive or outside directors can be applied for the German supervisory board members. The GCGC makes clear specifications of the attributes supervisory board members should have.

A general but new requirement concerns the age of members of German supervisory boards. Most firms have no age limit for board members so that it is not unusual that they reach an age far beyond the retirement age of 65. This “practice” is assumed to distort the quality of monitoring and is therefore criticized. Although the mental fitness of a person can hardly be evaluated merely by their age, it is widely accepted that there should be an age limit. The GCGC advises firms to specify an age limit for supervisory board members without suggesting a certain age limit.²⁷³ Another element potentially affecting the quality of monitoring is the time that board members are able to invest in it. In Germany, it is not uncommon for board members to have several further mandates in other corporations. This may be critical if the board members take on further mandates at the expense of their monitoring quality. The GCGC recommends limiting the number of supervisory board mandates to 5, if the respective persons at the same time hold management positions.²⁷⁴ In any case, managers need to get the approval of their supervisory board for accepting board mandates somewhere else.

Independence and objectivity are other important attributes supervisory board members should dispose of. Interest conflicts due to affiliations with significant business partners

²⁷² See Zahra / Pearce (1989), p. 309 for an overview of studies investigating the relationship between board attributes and service, strategy and control, which again influence performance.

²⁷³ See GCGC (2003), paragraph 5.4.1.

²⁷⁴ See GCGC (2003), paragraph 5.4.3.

of the corporation should be disclosed to the chairman of the board (*signalling*). Similar to the case of managers it may be required in the articles of incorporation that the respective board members concerned are not allowed to participate in relevant decision-making processes, that they are excluded from board meetings or even that they are dismissed in case of potential damages for the firm.

In connection with a number of insolvencies of large corporations due to failures of control²⁷⁵ the process of monitoring has become an important corporate governance issue. Several new ideas on how to increase the effectiveness and efficiency of supervision arose comprising the building board committees²⁷⁶, a more intense co-operation between the supervisory board and auditor, more involvement of the board in strategic issues, and evaluation. Board committees specialize in certain topics such as risk management, strategy or investments and enable the board to have more information on the management's activities.²⁷⁷ Also, it is important that the supervisory board, and not the management, concludes the auditing contract and determines the payment of the auditor. The GCGC also provides for a regulation that firms should determine a list of decisions to be by all means approved by the supervisory board. Thus, the management can not act without consulting the supervisory board. Moreover, it has often been criticized that the performance of the board is not evaluated. The method of peer review, which is common in the USA, is picked up by the GCGC. A peer review may serve to evaluate the performance of individual board members.

5.2.2 Composition

The composition of the supervisory board reflects potential independence problems as well as the power of stakeholders. Independence problems may occur if supervisory board members are not recruited from outside but are former managers of one and the same firm. In the USA as well as in Germany the importance of "outside" directors is widely recognized.²⁷⁸ As far as the representatives of the firm's stakeholders are concerned, the German law provides for co-determination by employees depending on firm size. Moreover, banks play an important role in supervisory boards because they

²⁷⁵ See Gaulke (1996) for an overview of supervisory board failures in the past decades.

²⁷⁶ See GCGC, paragraph 5.3.1.

²⁷⁷ Donaldson (1996), p. 54.

²⁷⁸ See, e.g. Economist (2001), p. 77.

have always been significant lenders as well as institutional investors.²⁷⁹ The German corporate governance system, despite being often understood as a stakeholder oriented system gives shareholders more power in case of doubt since the chairman elected by the shareholders has a tie-breaking vote.

5.2.3 Compensation

In view of the existing agency problems it is necessary that also the supervisory board is compensated with variable performance-based instruments.²⁸⁰ Therefore, the same questions on the pay mix and the incentive instruments have to be asked for the supervisory board. It is, however, reasonable to reduce the proportion of variable income for the supervisory board, since the performance of the firm is mainly due to the efforts and the performance of the management. In Germany, the supervisory board only gets an insignificant amount of monetary incentives. The issue of stock options is even forbidden by the German Stock Corporation Law so that supervisory board members usually get convertible bonds²⁸¹ or merely bonus payments related to profit-based measures such as dividends. The GCGC emphasizes the creation of short-term as well as long-term incentives for the supervisory board.²⁸²

5.2.4 Liability

The suggestion of the GCGC to take out a Directors' & Officers' (D&O) liability insurance policy also refers to supervisory board members. Such an insurance policy covers damages to the firm and/or the shareholders which are caused by the managers or supervisory board members. The GCGC emphasizes the importance of providing for the participation of supervisory board members in damages. Such a threat of liability serves to force supervisory board members to careful monitoring. As for managers the GCGC makes no suggestion on the amount of such a liability for damages. Because managers are the primary group responsible for the financial standing of the firm the amount of participation for the supervisory board should be lower than for managers.

²⁷⁹ See Forschungsinstitut der Friedrich-Ebert-Stiftung (1997), pp. 17-23.

²⁸⁰ Fallgatter (2003), pp. 704-706.

²⁸¹ Wiechers (2003), pp. 595-596.

²⁸² See GCGC (2003), paragraph 5.4.5.

5.3 Risk Management

Business decisions are characterized by uncertainty in terms of outcome and thus involve the probability of profits as well as of losses. The term risk can therefore also be understood as a chance for profits. In a narrow sense, risk refers to the probability of a loss.²⁸³ The attention to risk management has increased with the enacting of the KonTraG which provides for the establishment of an appropriate risk management system by the management in order to minimize substantial risks which could impede the financial soundness of the firm.²⁸⁴ Risk management in this context can be understood as the system of monitoring or *screening* to prevent dangers to the survival of the firm.²⁸⁵ As such, it becomes a fundamental tool in making investment decisions. Risk management thus has to be integrated into the strategy and its operative implementation.²⁸⁶ From the perspective of the shareholders, risk management protects firm-specific investments, improves decision-making, and capital budgeting.²⁸⁷

5.3.1 Risk Management Process

The risk management process explains how risks are dealt with in a systematic way. It basically represents a general model which can be applied to any kind of risks (market risks as well as operational risks). The most important steps in risk management are: Identification, Analysis, Evaluation, and Control. Additionally, risk reporting should take place at all stages of the process. The following Figure 4 illustrates the risk management process.

²⁸³ Lück (1999), p. 144; Burger / Buchhart (2002a), p. 1.

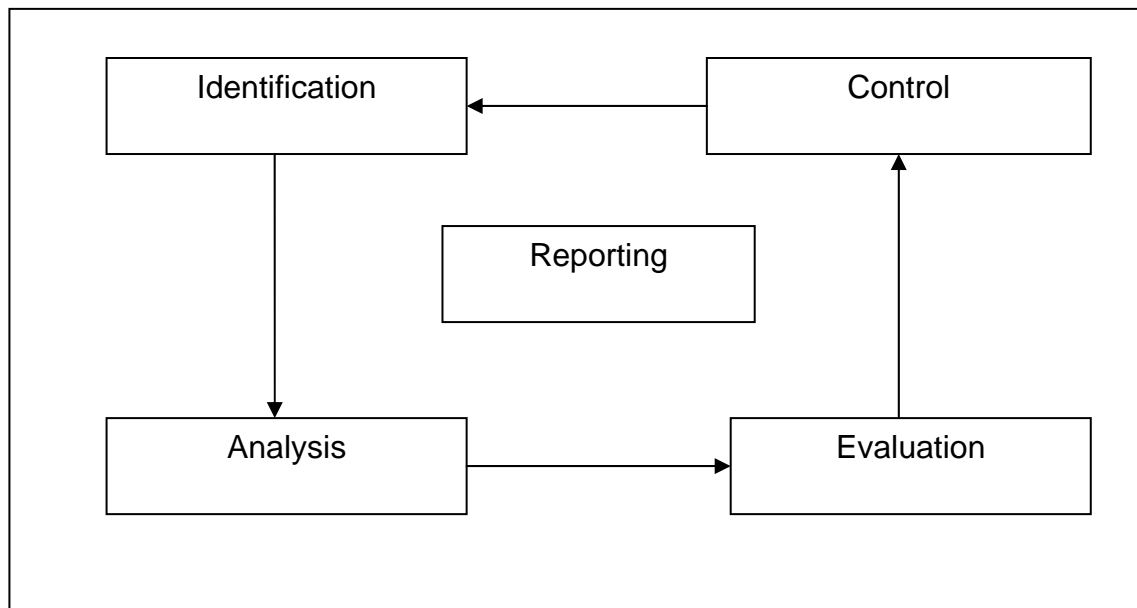
²⁸⁴ See § 91(2) AktG.

²⁸⁵ See § 91(2) AktG.

²⁸⁶ For the use of the Balanced Scorecard as an element of the risk management system see Homburg / Haupt / Stephan (2004), pp. 12-18.

²⁸⁷ Kaen (2000), pp. 251-256.

Figure 4: The risk management process²⁸⁸



One important task of the management is to introduce this process in all business units and departments and to increase the acceptance of the system by the employees, i.e. create a “risk culture”. The efficiency of a risk management system requires readiness by employees to report risks, to observe them and to evaluate them. Another success factor for risk management is the documentation of the risk management process in a risk handbook available to all employees. Such a handbook can ensure a common understanding on the importance of risk management and give clear constructions on how employees have to behave to contribute to the success of the system. Also, setting risk limits such as a budget limit or production time can increase the acceptance and efficiency of risk management, particularly if the exceeding such limits is related to sanctions. The risk management process can be considered as a support tool for the supervisory board to fulfil its monitoring tasks. The managing board members as well as other managers constantly have to report on the operative business so that monitoring becomes easier for the supervisory board. Also, the information costs as internal transaction costs related to monitoring can be reduced with the establishment of a risk management system.

²⁸⁸ Figure 4 is based on Gampfrieder / Greiner (2002), p. 284.

5.3.2 Institutions of Risk Management

Risk management is an integrative part of every business activity. The acceptance and efficiency of a risk management system can be increased if there are explicit institutions or persons within the firm who coordinate the risk management processes across business units and subsidiaries. Such institutions could be independent departments or the task of risk management could be fulfilled by related departments such as management accounting, internal audit, supervisory board committee, etc. These institutions would then have to co-operate with the auditor who by law has to evaluate the quality of the risk management system.²⁸⁹

5.3.3 Quantification of Risks

The final stage in the risk management process (control) is easier to manage if it is possible to determine the risk exposure and the necessary actions to cover it. Therefore, the quantification of risks plays an important role and firms should try the best they can to calculate the potential losses (profits) arising from business decisions. However, not all risks are measurable. Whereas, for example, political risks are difficult to evaluate, financial risks such as price or interest rate risks are easy to identify and calculate. In fact, there exist mathematical approaches for risk evaluation such as the Value-at-Risk. The main reason of the difficulty of risk calculation often lies in the lack of availability of risk data. Risks such as concerning the entrance of a competitor in the product market may be difficult to estimate. Such risks, however, can then be described and categorized according to whether their probabilities are rather high or low.²⁹⁰

5.4 Disclosure

Disclosure represents the communication of firm-specific information to the capital market. It refers to all kinds of communication tools firms may use. Addressees of disclosure, however, are not limited to the capital market but include also employees, customers, competitors, suppliers, and the press.

²⁸⁹ See § 317 (4) HGB, § 91 (2) AktG and the Auditing Standard IDW PS 340.

²⁹⁰ For example, in a BCG Matrix, Matrix of McKinsey, or the Balanced Chance and Risk Card. See Burger / Buchhart (2002b), p. 593.

5.4.1 Mandatory Disclosure and the Role of Accounting Standards

Mandatory disclosure refers to the amount and depth of information required by law and/or by stock exchanges which largely depend on the legal form, the size, and other firm characteristics. Mandatory publication of firm-specific information comprises the balance sheet, profit & loss accounts, and an appendix for supplementary information. Since the introduction of KonTraG the annual report has to be complemented by a cash flow statement and a business unit report.²⁹¹ The German Commercial Law (§ 292a I, II HGB) allows listed corporations to disclose their financial statements according to internationally accepted accounting standards such as IAS or US GAAP.²⁹² The amount of mandatory disclosure has been extended by a risk and forecast report. The structure of this report is not specified. Beside the annual report corporations are required to publish quarterly reports and also immediate reports, if necessary.

Voluntary disclosure goes beyond mandatory disclosure and aims to reduce the information gap of investors and to attract new investors. Voluntary disclosure is particularly needed where mandatory rules do not give any specifications as it is the case for the risk and forecast report. The most demanded information by the shareholders is value reporting, risk reporting, and reporting on the compensation of managers and supervisory board members. In a theoretical context, voluntary disclosure can be classified as a *signalling* instrument, which reduces the asymmetric distribution of information and therefore additional information or transaction costs. Good disclosure, which meets the information demand of the capital market, is then supposed to increase confidence of investors. The risk of false disclosure is not insignificant because voluntary information is not audited by an objective third party such as an auditor.

5.4.2 Value Reporting

Value reporting is crucial for shareholders because it informs them on the market value of their capital provided to the firm. Value reporting usually comprises the following three parts: *Total Return Reporting*, *Value Added Reporting*, and *Strategic Advantage*

²⁹¹ See § 297 I. (2) HGB. On the attitude of German managers towards US-GAAP see Glaum (1998).

²⁹² Hütten (2000), p. 129.

*Reporting.*²⁹³ Total Return Reporting serves to comment on the development of the overall market performance of the firm. Therefore, it concentrates on a presentation and explanation of the share price development in the respective business year and relates this information to historic data of the past three to five years. Ratios such as earnings or cash flow per share may additionally be useful in comparing firms with each other.²⁹⁴ Furthermore, firms can inform shareholders on the development of dividend payments and on internal value-based measures such as EVA or CFROI, which, however, do not serve for comparison purposes as most firms, calculate these ratios differently. This type of reporting refers to Value Added Reporting. Furthermore, firms may also comment on their non-financial value drivers such as technological competencies or customer satisfaction and analyze their long-term potential of competitiveness in the so-called Strategic Advantage Reporting.

5.4.3 Risk Disclosure

The KonTraG reformed the mandatory disclosure of German corporations by requiring an extension of their annual reports by a risk report which has to address substantial risks that firms have identified in the business year and which bear the danger of having long-term effects. This can be viewed as a complementary rule to the required establishment of a risk management system. In order to increase the transparency towards the capital market, firms can voluntarily disclose additional relevant information. Therefore, there is enough room for voluntary disclosure. As regards the structure and content of the risk report there are no specifications in the law. The German Accounting Standard Committee (DRSC) is a private institution and develops recommendations for German corporations on their disclosure policy. The German Accounting Standard No. 5 deals with risk reporting. It suggests that firms discuss their risk management system and its integration into the strategy and value-based management system. Firms should further mention whether they have written a risk handbook and which instruments they use to hedge risks. The most important aspect is the presentation of the most relevant risks which, if possible, should be quantified. An analysis of the risk reports of the largest German corporations indicates that the risk

²⁹³ Fischer / Wenzel (2002), p. 329; Ruhwedel / Schultze (2002), p. 603.

²⁹⁴ Pellens / Hillebrandt / Tomaszewski (2000), pp. 190-191.

reports are rather short and risks are rarely quantified.²⁹⁵ The German Accounting Standard No. 5 is definitely a good basis for orientation.

5.4.4 Disclosure of Management and Board Compensation

Transparency concerning the compensation of manager and supervisory board members is another requirement of the capital market. The GCGC not only provides for the introduction of variable market-based components but also the disclosure of individual incomes.²⁹⁶ This is particularly interesting if managers receive abnormally high salaries. In the USA, this problem has often been criticized and therefore it is understood as good corporate governance if firms disclose the compensation of individual managers. Particularly, when firms issue stock option plans it is interesting for shareholders to understand the respective incentive mechanisms. In Germany, it is rather a taboo to disclose individual salaries. In 2002, for example, most German firms have given information only on the total amount of income paid to the entire management or supervisory board in their annual reports.

²⁹⁵ See Rucker (2003).

²⁹⁶ See GCGC (2003), paragraphs 4.2.4 for the management and 5.4.5 for the supervisory board.

VI Empirical Analysis

This chapter focuses first on the formulation of research questions and hypotheses (section 6.1) on the basis of the theoretical explanations of the necessity and importance of corporate governance in chapter III and criteria for good corporate governance presented in chapter V. These hypotheses serve then as the starting point of the following empirical analyses presented in section 6.2.

6.1 Development of Hypotheses

6.1.1 Research Questions

The theoretical approaches presented in chapter III emphasize the importance of introducing efficient control and incentive mechanisms (corporate governance) in order to solve agency problems. The legal system of a country can create an important framework for the quality of corporate governance of firms because it can ensure minimum standards concerning the protection of shareholders' rights. Countries, such as the USA or the UK, where capital markets play a significant role for corporate finance tend to be more shareholder oriented and to have more stringent regulations, for instance, on the disclosure practice of firms.²⁹⁷ In Germany and many other Continental European countries equity capital has been only recently gaining importance. Therefore, the legal systems of these countries have to adapt to the new circumstance that shareholders, particularly institutional shareholders, now demand more protection. Apart from legal provisions investors expect voluntary commitment of firms to shareholder value orientation and good corporate governance because adherence to the law alone is not assumed to ensure profitability and the creation of shareholder value. It is well established that investors base their investment decisions on firms' market performance and the degree of their commitment to pursue shareholders' interests.²⁹⁸ In a narrower sense corporate governance mechanisms aim at accomplishing shareholders' interests. Consequently, it is interesting to ask whether firms can contribute to shareholder value enhancement by having a "good" corporate governance system. In other words, it would be interesting to know whether a higher quality of corporate

²⁹⁷ Whether the quantity of legal regulations influences the quality of corporate governance has to be considered critically.

²⁹⁸ See, e.g. Beelitz (2002), p. 578.

governance effectively improves the agency relationship between shareholders and managers so that managers increase shareholder value. Furthermore, it is would important to analyze which aspects of corporate governance are more or less relevant in reducing agency costs and in creating shareholder value.

The main research questions in this thesis are therefore the following:

- 1) Do firms with better corporate governance c.p. generate higher value for shareholders than firms with worse corporate governance?
- 2) Which aspects of corporate governance are more or less important in a possible influence of corporate governance on shareholder value?

In order to address these research questions it is necessary first to analyze the factors determining shareholder value (see section 6.1.2) and second, to explain the reasons for a potential influence of corporate governance on shareholder value (see section 6.1.3).

6.1.2 Success Factors for Shareholder Value Maximization

The internationalization of capital markets and the increasing involvement of institutional investors in corporate finance have given shareholder value a considerable importance as a performance measure. In fact, investment decisions are made upon the market performance of firms. Firms raising equity funds over the capital market are expected to maximize shareholder value, i.e. the market value of their equity capital.²⁹⁹ Shareholder value is generated if the return on equity capital, consisting of an increase in the share price and dividends, is larger than the cost of equity capital, which is understood as the opportunity cost from alternative investments. As it is difficult for firms to control their operative business according to their external market performance, they need to identify the expected return by shareholders³⁰⁰ and to consider it in their business decisions.

²⁹⁹ Coenenberg / Salfeld (2003), pp. 18, 37

³⁰⁰ Coenenberg / Salfeld (2003), p. 36. The usual method of calculating the cost of equity capital is the CAPM, which accounts for the amount and cost of risk born by shareholders.

The integration and implementation of the shareholder value concept into a firm's strategic and operative business, its control systems as well as compensation schemes are referred to as value-based management. Value-based management is characterized by the substitution of profit-based measures by value-based measures, which take the cost of equity capital into consideration. A firm changing from a profit-based to a value-based measurement system may use the EVA[®] or the CFROI instead of the Return on Investment (ROI) or the Return on Sales (RoS). Furthermore, compensation of managers is increasingly related to value-based performance measured by such value-based ratios. These are important aspects of internal efforts of maximizing shareholder value in contrast to maximizing profitability which does not account for an adequate return for shareholders. The above-mentioned measures are internal ratios that can be implemented in a firm's planning and internal reporting system. Firms controlling internally with such value-based measures are then understood as shareholder value-oriented firms.

Shareholder value represents the ultimate market-based performance measure of firms to which several factors contribute. For decision-making purposes by the management the rather general concept of shareholder value maximization needs to be broken down to so-called value drivers which the firm can control in its operative business.³⁰¹ Rappaport³⁰² specifies seven value drivers including capital expenditure, sales growth, and cash tax rate. Other value drivers are discussed by Kaplan / Norton³⁰³ in their concept of the balanced scorecard. The balanced scorecard advises managers to control their business according to financial as well as non-financial aspects. Non-financial value-drivers are difficult to measure and may comprise customer satisfaction and employee satisfaction. Consequently, it is imaginable that intangible assets or competencies of firms contribute to the maximization of the shareholder value. The success factors for shareholder value have certainly not yet been researched to an end and the role of subjective judgements on what enhances value is not to be neglected either.³⁰⁴ Firms' success in generating shareholder value will to a large extent depend on their individual organizational, cultural, and business characteristics. Consequently, generalizations are hard to make.

³⁰¹ Sinha / Morison (1999), p. 8.

³⁰² Rappaport (1998), p. 39.

³⁰³ Kaplan / Norton (1996).

³⁰⁴ Sinha / Morison (1999), p. 8.

6.1.3 The Relationship between Corporate Governance and Shareholder Value

Listed corporations, which are expected to be shareholder-oriented, need to adapt their management and control systems as well as their overall corporate policy to the expectations of the capital market. As corporate governance can generally be understood as the management and control systems of firms, the concept of maximizing shareholder value has to be taken into account in the organization of corporate governance.

Whether corporate governance is a success factor for shareholder value is difficult to maintain *per se*. Microeconomic theories discussed in chapter III support the implementation of a good corporate governance system in order to optimize management contracts and internal supervision. Nonetheless, whether good corporate governance is value-enhancing is an open question which can only be answered by empirical evidence. The following arguments speak for a positive relationship between corporate governance and shareholder value.

First, corporate governance provides for internal control mechanisms which influence managerial behavior and decisions by threat of sanctions. In a firm with dispersed ownership structure, monitoring tasks are delegated to a separate body such as the supervisory board due to difficulty of direct control.³⁰⁵ This delegation causes monitoring costs (agency costs) which, however, do not outweigh the costs arising from moral hazard by managers. Effective monitoring may achieve that managers behave in the interest of shareholders, because they fear sanctions in case of opportunism, and make value-maximizing business decisions which, *c. p.*, generate higher cash returns than without being monitored. The supervisory board may, for example, use an internal reporting system or a risk management system to ensure effective control.

Second, similarly to control mechanisms, compensation schemes influence managerial behavior and decisions with monetary incentives. They do not sanction “bad” behavior but, in contrast, reward “good” behavior. Motivational theories emphasize that

³⁰⁵ Compare section 3.2.1.2 discussing the free-rider problem.

incentives are even more important than sanctions in controlling human behavior.³⁰⁶ In the context of shareholder value, it is crucial that managers' compensation is to a large extent related to internal value-based measures as well as to the firm's market performance. Moreover, it is important that the proportion of variable compensation contains long-term incentives, thus avoiding only short-term profit-maximizing efforts by managers. Here again, managers are assumed to make value-enhancing decisions because of being motivated to increase their personal income. Corporate governance can specify the proportion of variable compensation and determine the measures to which it is related. In view of the necessity of aligning the interests of shareholders and the supervisory board (see section 5.2.3), similar monetary incentives can be used for the supervisory board in order to ensure that managers are controlled effectively and make value-maximizing decisions.

Third, the information gap between shareholders and managers, which causes information costs, can be reduced if the firm decides to voluntarily give firm-specific information, which refers to *signalling* in agency theory. As investment decisions are to a large extent made upon available information firms will be motivated to be able to publish positive information or even more positive information than their competitors. For shareholders information serves to reduce the risk of making wrong investment decisions. The lower this risk the lower is an additional risk premium which shareholders require. Such a risk premium is again an important determinant of the cost of capital paid to shareholders and thus, of the shareholder value.

In summary, control mechanisms, monetary incentive schemes, and disclosure policy can be considered as value-enhancing corporate governance instruments. Whereas control mechanisms and compensation schemes represent internal aspects of corporate governance, disclosure refers to an external corporate governance instrument. The internal aspects aim at influencing managers' decisions and behavior. Disclosure, on the other hand, addresses the problem of minimizing information asymmetries. Such a differentiation between the internal and external dimensions of corporate governance may make sense with respect to their different ways of affecting shareholder value.

³⁰⁶ See, e.g. Ellig (1982).

6.1.4 Previous Empirical Research

Previous empirical work on corporate governance gives evidence of the importance and relevance of the legal framework within which corporate control can take place. These studies either make cross-country comparisons of the scope and intensity of legal provisions³⁰⁷ or analyze individual aspects of corporate governance within a single jurisdiction.³⁰⁸ The recent trend in corporate governance research, however, is the attempt to measure the quality of corporate governance on a firm-level and to analyze its effects on firm-specific capital market performance.³⁰⁹ The empirical study underlying this thesis follows this trend by analyzing the relationship between the quality of firm-specific corporate governance and shareholder value. Capital market performance hereby serves as an indicator whether a good quality of corporate governance is rewarded by shareholders.

The internationalization of capital markets has made corporate governance an international topic. First studies on corporate governance attempt to compare various international corporate governance systems discussing their efficiency regarding corporate control. These studies identify three main types of systems to be found in the USA, in Germany, and in Japan, respectively. An important finding in these studies is that different countries have different understandings of how corporate governance should be arranged, which is reflected in their legal framework. Following studies concentrate on analyzing cross-country differences regarding selected aspects such as ownership structure.³¹⁰ A number of studies test empirically whether better legal regulations result in any economic benefits. La Porta *et al.*³¹¹ find that better shareholder protection is associated with a higher valuation of corporate assets. Lombardo and Pagano³¹², on the other hand, give empirical evidence that judicial efficiency has a significant influence on the return on equity of firms measured by the dividend yield and the earnings-price ratio. Apart from these international studies there is a number of national research investigating country-specific issues. For Germany, for example,

³⁰⁷ See, e.g. La Porta *et al.* (1999).

³⁰⁸ See, e.g. Lehmann / Weigand (2000).

³⁰⁹ See, e.g. Drobetz *et al.* (2004).

³¹⁰ See, e.g. La Porta *et al.* (1999).

³¹¹ La Porta *et al.* (2002).

³¹² Lombardo / Pagano (2000).

Lehmann and Weigand³¹³ find a negative relationship between ownership concentration and profitability, but a positive impact of bank ownership on performance. Boehmer³¹⁴ discovers a negative influence of bank control over voting rights on shareholder value measured by the market value of equity capital.

Recent studies measure the quality of firm-level corporate governance within a single jurisdiction and investigate its relationship with firm value. Though based on different methodologies and different understandings of corporate governance, these studies interestingly all find a positive relationship between firm-level corporate governance and a number of performance measures. Klapper and Love³¹⁵ confirm that good corporate governance results in better operating performance and higher market valuation for a number of emerging markets. Black *et al.*³¹⁶ make a cross-sectional analysis for Korean firms and construct a firm-level corporate governance index which appears to be positively correlated with Tobin's q, the market-book ratio, and the market value, respectively. Gompers *et al.*³¹⁷ attempt a similar research for US firms whereby their focus is more on shareholders' rights with regard to takeover defenses. They find that stronger firm-specific shareholders' rights result in higher profits, sales growth, and valuation of firms.

The current study is comparable to Drobetz *et al.*³¹⁸ who construct a corporate governance index for German corporations. Drobetz *et al.* find a positive correlation between their overall corporate governance index and sales increase, stock returns, and the market value measured by Tobin's q, respectively. As in many other studies Drobetz *et al.* mix various dimensions of corporate governance into one single corporate governance measure and do not differentiate between the internal and external dimensions of corporate governance.

The necessity of such a differentiation can be concluded from the disclosure literature, which investigates the economic benefits of mandatory disclosure standards and voluntary disclosure policy. Research on disclosure concentrates on one aspect of

³¹³ Lehmann / Weigand (2000).

³¹⁴ Boehmer (2000).

³¹⁵ Klapper / Love (2003).

³¹⁶ Black *et al.* (2003).

³¹⁷ Gompers *et al.* (2003).

³¹⁸ Drobetz *et al.* (2004).

corporate governance among others. Findings of disclosure studies indicate that disclosure of firm-specific information causes reactions by the capital market. In fact, firm-related information serves to facilitate investment decisions and to control shareholders' expectations. Whereas the internal corporate governance mechanisms influence the actual quality of corporate governance, disclosure shapes the perception of this quality by the capital market. The effects of the two dimensions are thus expected to be different. Disclosure focuses on information asymmetry between the firm and the capital market. In order for a market to be efficient information asymmetry among market participants should not be excessive. Otherwise market transactions might not take place.³¹⁹ Empirical studies on voluntary disclosure³²⁰ find effects of disclosure on market liquidity and the cost of equity capital. Botosan³²¹, for example, constructs a disclosure score³²² which she regresses on proxies for the cost of equity capital. The result is negative but insignificant. The disclosure literature shows that disclosure has a different purpose than the internal corporate governance system, i.e. reducing information asymmetry in the market, and thus probably a different effect on shareholder value.

6.1.5 Hypotheses

The main research question whether the quality of corporate governance of a firm³²³ influences its shareholder value is investigated by testing hypotheses on this relationship. Consistent with recent studies a hypothesis concerning the quality of the overall corporate governance system is formulated. The basic characteristic of the underlying research, however, is the assumption that the effects of the internal and external dimensions of corporate governance have diverging effects on shareholder value. This assumption will be broken down to further hypotheses in sections 6.1.5.2 and 6.1.5.3.

³¹⁹ Akerlof (1970).

³²⁰ See, e.g. Diamond / Verrecchia (1991); Baiman / Verrecchia (1996); Botosan (1997).

³²¹ Botosan (1997).

³²² A high score relates to high disclosure quality.

³²³ For the underlying study it is crucial that corporate governance refers to voluntary corporate governance efforts of firms. Therefore, legal regulations as well as market mechanisms such as takeovers are not included.

6.1.5.1 The Overall Corporate Governance System

Recent studies have analyzed the quality of the overall corporate governance system. Each study has its own definition of corporate governance and thus a different composition of its corporate governance measure. The quality of the overall corporate governance system of a firm is here understood as to comprise the criteria for good corporate governance discussed in chapter V, i.e. *Management, Supervisory board, Risk management, and Disclosure*.³²⁴

Even though it can be expected that various individual aspects corporate governance have more or less strong effects, it is interesting to analyze whether weaknesses in some parts of the corporate governance system are compensated by the strengths of other parts. Therefore, it is investigated whether the average quality of corporate governance is correlated with shareholder value. In this respect the following analysis is consistent with similar studies. The reasons for a positive impact of corporate governance on shareholder value have already been discussed in section 6.1.3. Shareholder value can be measured in different ways. Tobin's q is a common proxy used by the above-mentioned similar studies for the calculation of the firm or shareholder value³²⁵ (these terms are used synonymously here). Tobin's q is calculated as the relation between the market value of total assets and the replacement cost of assets. Other proxies for shareholder value such as market capitalization or the total shareholder return will be used complementarily to check the robustness of the results. Hypothesis 1 is formulated as follows:

H₁: The quality of the overall corporate governance system has a positive impact on shareholder value.

³²⁴ Other studies sometimes include legal aspects or auditing in their measure of corporate governance, which are here considered to be factors which firms cannot influence. Therefore they do not represent the basis of the understanding of corporate governance here.

³²⁵ In proper sense, firm value comprises shareholder value and the market value of debt capital. Thus, proxies for the firm value at the same time provide measures for shareholder value.

6.1.5.2 The Internal Corporate Governance System

Measuring the quality of corporate governance on the basis of several or too many aspects bears the risk that a clear relationship between corporate governance and shareholder value cannot be established because individual aspects may have diverging effects. The understanding of corporate governance as specified here comprises the quality of the internal corporate governance system (ICGS) and that of disclosure. The possible diverging effects have been mentioned before. ICGS covers the mechanisms of control and incentives, which aim at monitoring managers' efforts and at aligning their interests with those of shareholders. ICGS, therefore, affects managerial behavior directly, reduces the risk of opportunism and ensures that management decisions support the goal of shareholder value maximization. It can be assumed that if managers are monitored effectively and motivated by monetary incentives that they create value for shareholders. The following hypothesis 2 expresses this assumption.

H₂: The quality of the internal corporate governance system (ICGS) has a positive impact on shareholder value.

Shareholder value is again measured by Tobin's q. By comparing the results with those achieved for hypothesis 1, it will be possible to evaluate the effect of ICGS alone and together with disclosure.

6.1.5.3 Disclosure

The disclosure literature indicates that disclosure concentrates on the reduction of information asymmetry, risk and cost of equity capital. Disclosure therefore primarily levels at increasing investors' confidence in the firm³²⁶, transparency about the firm's strategic and financial standing, and ultimately at reducing shareholders' perceived investment risk. Firms will therefore want to be able to publish more positive information than their competitors and thus try to operate more profitably. As disclosure has the primary goal of reducing information asymmetry, it will influence shareholder value only indirectly by decreasing the cost of equity capital. In fact, a decrease in the investment risk is supposed to be reflected in lower risk premiums or cost of equity

³²⁶ Klijnsmit (2001), p. 87.

capital for firms. As the cost of equity capital is a determinant of shareholder value, disclosure should affect shareholder value, although the influence cannot be expected to be considerable in view of the “long” causal chain.

Hypothesis 3a aims at testing a “direct” influence of disclosure on shareholder value.

H_{3a}: The higher the quality of disclosure the higher is shareholder value.

In order to account for the “indirect” relationship between disclosure and shareholder value over the cost of equity capital, as suggested by the disclosure literature, hypothesis 3b is developed. As far as the measurement of the cost of equity capital is concerned, beta according to the CAPM is used. Beta measures the amount of risk of a firm’s shares as perceived by the capital market. Therefore, it is appropriate as a proxy for the cost of equity capital, which comprises the amount and price of investment risk. The empirical literature also uses dividend yields as proxies for the cost of equity capital.³²⁷ Dividend yields will be applied as well to check the robustness of results.

H_{3b}: The higher the quality of disclosure the lower is the cost of equity capital measured by beta.

6.2 Empirical Research

This section is aimed to present the methodology and results of an empirical study including survey-based data collection and statistical analyses with capital market data. First, the methodology is discussed by explaining sample selection and data collection. Second, a descriptive analysis of the corporate governance characteristics of German corporations follows. Third, the hypotheses specified in section 6.1 are tested by means of regression analyses. Finally, a discussion of the results of hypotheses concludes the section.

³²⁷ Botosan (1997).

6.2.1 Sample Selection

The underlying study is made for German listed corporations. This is consistent with the fact that the topic of corporate governance is mainly concerned with listed corporations characterized by a diffuse ownership structure. The basic population chosen for the underlying research consists of firms represented in the German DAX (blue chip index), MDAX (mid-cap index) and TecDAX (growth index) indices on April 30, 2003. With this basic population of 110 firms this study covers the largest German corporations. Moreover, these firms are primarily concerned by the new regulations and recommendations on how to improve the quality of corporate governance.³²⁸ Consequently, these companies are highly motivated to deal with the topic of corporate governance.

The selected stock indices comprise various business sectors including the banking and insurance sectors. In contrast to similar studies for Germany, it is assumed here that there is a difference between firms in more and in less regulated sectors regarding the quality of corporate governance. Therefore, banks, insurance companies, and other financial services firms, which are subject to different requirements and regulations, particularly concerning risk management and disclosure policies, were taken out of the basic population of 110 companies in order to obtain a homogenous sample. For this reason the size of the final relevant population was reduced to 87 companies.

6.2.2 Data Collection

In the hypotheses it has been differentiated between ICGS and disclosure as their effects on shareholder value might diverge. This differentiation is reflected in the methods of data collection. As ICGS is understood as the internal and thus for shareholders invisible practice of corporate governance, data on ICGS is not publicly available and is therefore collected via interviews. The quality of disclosure, on the other hand, can be evaluated on the basis of the content and amount of information published by firms. Data on disclosure is therefore gathered from the annual reports and the websites of the respective firms.

³²⁸ The GCGC and the German Accounting Standard No. 5, for example, explicitly address listed corporations.

6.2.2.1 Data on the Quality of the Internal Corporate Governance System

Data on the quality of ICGS has been collected through structured interviews which were based on a previously developed questionnaire. The main task of the questionnaire to be developed for the underlying study was to cover as many corporate governance aspects as possible, which, on the one hand, are supposed to be of high importance and relevance for investors and on the other hand, represent voluntary practice, i.e. go beyond the requirements of legislation. Both goals are congruent as investors are assumed to compare firms along voluntary corporate governance and disclosure practices for investment decisions.³²⁹ The overall legal framework may at the most serve to decide whether or not to enter a capital market in a certain country. Within a single jurisdiction the difference in the quality of corporate governance is based on voluntary commitment.

The main sources for the construction of the questionnaire were recommendations of the GCGC³³⁰, the German Corporate Governance Scorecard by the Deutsche Vereinigung für Finanzanalyse und Asset Management (DVFA - German Society of Investment Analysis and Asset Management)³³¹, the California Public Employees' Retirement System (CalPERS) German Market Principles³³² as well as the Deutscher Rechnungslegungsstandard Nr. 5 (DRS Nr. 5 - German Accounting Standard No.5)³³³. In addition, interviews conducted by Ernst&Young and the Frankfurter Allgemeine Zeitung (FAZ) Institut (2002)³³⁴ with leaders in German corporations and business scientists gave interesting ideas on corporate governance aspects which are not yet regulated but expected from the capital market.

As far as the structure of the questions is concerned, most of the questions are formulated as "yes or no" questions investigating the existence or non-existence of specified corporate governance aspects. The majority of items were thus constructed as binary variables in order to avoid a subjective estimation of the interviewed person, which would have been the case with ordinary variables. The structure of the

³²⁹ Bain / Band (1996), p. 14.

³³⁰ GCGC (2003).

³³¹ DVFA (2000).

³³² CalPERS (2004).

³³³ German Accounting Standard No. 5 (2003).

³³⁴ Ernst & Young and FAZ Institut (2002).

questionnaire is based on the criteria for good corporate governance as discussed in chapter V. As has been mentioned before, the subject of disclosure, however, is not included in the questionnaire. Table 5 shows the different parts of the questionnaire and the topics dealt with within each part. Each part of the questionnaire contains a different number of questions so that later the parts contribute with different amounts of points to the corporate governance score. This automatically reflects their relative importance. When constructing the questionnaire the number of questions asked within each part varied according to the number of issues and problems to be analyzed. It can be assumed that parts covering more problems are more relevant and should therefore be treated as more important in terms of points. The questionnaire comprises 47 variables which are further broken into items.

Table 5: Structure of the questionnaire on ICGS

<p>I. Management and Control</p> <p><i>Managing board</i></p> <p><i>Supervisory board</i></p>	<ul style="list-style-type: none"> • Management contracts • External supervisory board mandates • Independence • Liability <hr/> <ul style="list-style-type: none"> • Board members' contracts • Additional supervisory board mandates • Composition of the board • Independence • Liability • Supply of information • Board meetings
<p>II. Risk Management</p>	<ul style="list-style-type: none"> • Risk strategy • Risk management process • Institutions of risk management • Internal risk reporting
<p>III. Compensation (supervisory board, managing board, top, middle and lower management)</p>	<ul style="list-style-type: none"> • Composition of compensation • Yearly bonus payments • Long-term incentives

Similar empirical studies investigating the quality of corporate governance are based on questionnaires which are sent out to firms for response by mail.³³⁵ These studies have specified a large basic population so that the response rate is on average rather low.³³⁶ In order to increase the response rate, on the one hand, and the quality of data, on the other hand, the underlying study is to a large extent based on personal interviews. The response rate is supposed to increase because firms are contacted personally and are asked to talk about their individual experiences and problems in implementing an appropriate corporate governance system.

As important as a high response rate is the data quality.³³⁷ The literature on the methodology of empirical research³³⁸ often points out the risk of misunderstanding questions leading to either missing or to wrong answers. Personal interviews have the advantage that the interviewer has a chance to explain the questions, if necessary and that the interviewed person has the opportunity to ask immediately if questions are incomprehensible. Moreover, the interviewer can also ask after the reasons for given answers and get more information in this way. Such additional information can be helpful in explaining descriptive statistical analysis of results. The problem of influence by the interviewer can be regarded as a disadvantage of personal interviews. For the underlying study, this aspect is not considered as a problem since possible answers are mainly formulated in binary form and do not require subjective estimations.

For this study managing board members, top managers, risk managers, and employees of investor relations and management accounting departments were contacted for personal interviews. Out of the 87 firms in the target population, i.e. without banks and insurance companies, 45 agreed to participate in the study. This corresponds to a response rate of 52%. This response rate is particularly satisfying because the sample contains almost all DAX firms and thus the largest German corporations participated. As shown in Table 6, the response rate within the DAX index is over 80%.

³³⁵ For example, Drobetz et al. (2004) as well as Gompers et al. (2003) conduct surveys by mail.

³³⁶ For German corporations Drobetz et al. (2004) achieve a response rate of 36 % (91 firms).

³³⁷ For the advantages of personal interviews see also Pellens / Tomaszewski / Weber (2000).

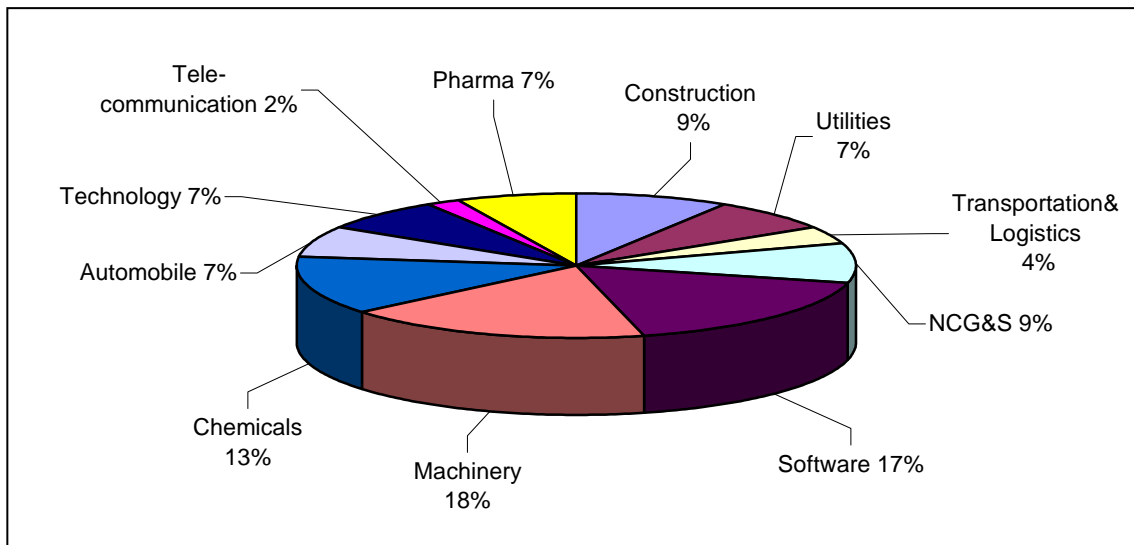
³³⁸ See, e.g. Hermann / Homburg (2000), pp. 26-28.

Table 6: Response rates

	No. of companies participated	Response rate
<i>DAX</i>	19 out of 23	82.61%
<i>MDAX</i>	16 out of 40	40%
<i>TecDAX</i>	10 out of 24	41.67%
Total	45 out of 87	51.72%

The following Figure 5 demonstrates the variety of business sectors represented in the sample of 45 firms. Firms from the chemicals, software, and machinery industries are most occurring. The telecommunication and transportation & logistics industries are the least represented sectors in the sample. Nonetheless, firms from all possible business sectors participated in the study so that an industry-wide comparison of the quality of corporate governance is possible.

Figure 5: Sectors represented in the final sample



As has been mentioned before, one goal of the underlying study was to collect data mainly via personal interviews in order to increase data quality and decrease the amount of missing values. Table 7 shows the number and percentage of firms with which personal or telephone interviews were conducted and those firms which responded by mail or fax. Almost half of the firms (48.89%) agreed to give personal interviews. With

17.78% of the firms telephone interviews³³⁹ were conducted. Only one third of the firms preferred to answer the questions via mail or fax. In these cases telephone interviews usually followed in order to clarify answers.

Table 7: Conduct of interviews

	No. of companies	%
<i>Personal interviews</i>	22	48.89%
<i>Telephone interviews</i>	8	17.78%
<i>Response by mail or fax</i>	15	33.33%

6.2.2.2 Data on the Quality of Disclosure

Data on the quality of disclosure is collected from the annual reports of the firms in the sample on the business year 2002. Although firm-specific information is also disclosed via other media such as analysts' conferences or the press, the annual report can be considered as representative of a firm's general disclosure quality.³⁴⁰ Moreover, with respect to the reaction of the capital market it can be assumed that all shareholders have received the information given in the annual report.³⁴¹

A checklist of selected criteria for "good" disclosure served as a guideline for the analysis of the annual reports. These criteria are mainly based on issues discussed in the disclosure and value-based management literature, which have been presented in section 5.4. Particularly recommendations in the GCGC and the German Accounting Standard No. 5 were integrated into the checklist. The checklist, therefore, does not contain criteria that are already regulated legally but rather investigates the quality of voluntary disclosure. The basic idea is that there must be differences in the disclosure policies of companies which the capital market takes into consideration for investment decisions. The disclosure checklist consists of the five aspects shown in Table 8. The checklist

³³⁹ Telephone interviews are considered to be as good as personal interviews with respect to ensuring data quality.

³⁴⁰ Labhart (1999), p. 96.

³⁴¹ Coenenberg (1998), p. 554.

covers 5 parts which are at the same time regarded as variables or questions and is broken down into 39 items in total, which are formulated as binary variables.³⁴²

Table 8: Structure of the disclosure checklist

I. Value Reporting	<ul style="list-style-type: none"> • Total return reporting • Value added reporting • Dividend policy • Shareholder value ratios • Intangible assets
II. Risk Reporting	<ul style="list-style-type: none"> • Risk management system • Quantification of risks • Categorization of risks
III. Disclosure of Compensation Policy	<ul style="list-style-type: none"> • Composition of compensation • Incentive programs • Trading by managers and directors
IV. Forecast Report	<ul style="list-style-type: none"> • Strategic advantage reporting • Competition analysis
V. Other Investor Relations Measures	<ul style="list-style-type: none"> • General assembly • Information via the internet

In case of necessary information unavailable in the annual reports, the websites of the firms were reviewed or investor relations departments were asked for clarification.

6.2.3 Descriptive Analyses

This section is aimed to give a descriptive overview of the answers in each individual part of the questionnaire and the checklist without analyzing any statistical effects, i.e. without testing the hypotheses. The results of the descriptive analyses demonstrate the main characteristics of the present corporate governance systems of German corporations and indicate their potential for improvement or change. This section is organized according to the structure of the questionnaire on ICGS and the disclosure checklist. The following descriptive analyses will not cover all questions asked but rather concentrate on selected issues.

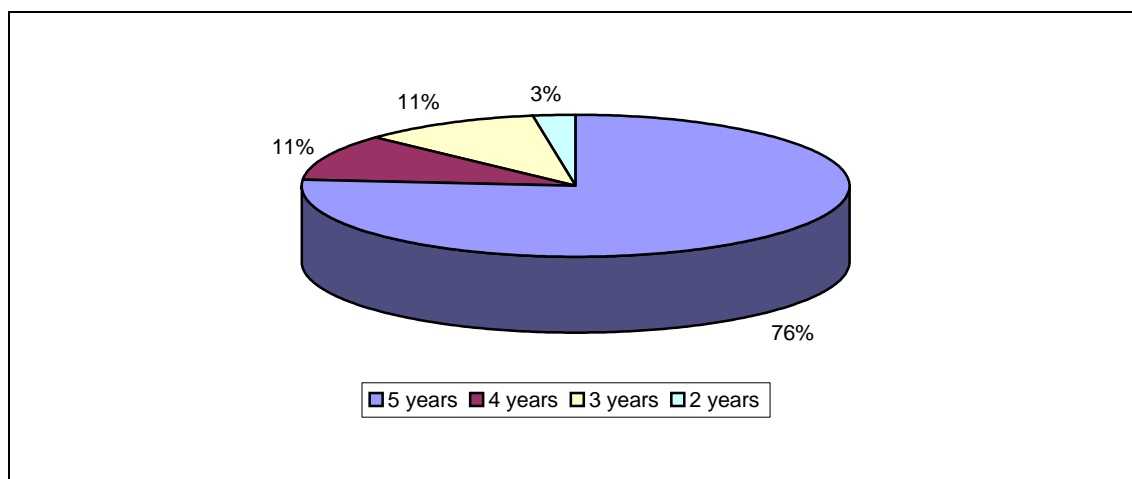
³⁴² For the individual questions of the checklist see appendix 2.

6.2.3.1 Management

Questions on the quality of management aim at analyzing whether management contracts offer managers security in connection with their employment, i.e. whether contracts contain time or monetary constraints for the firm to dismiss managers in case of opportunistic behavior. Such constraints may, for example, relate to the length of contracts or to severance payments in case of an early cancellation of the contract by the firm.

Firms in the relevant sample were asked on the average length of management contracts in order to check whether German corporations tend to reduce the common length of management contracts of five years. Over three quarters of the interviewed companies (see Figure 6), however, still offer a five-year contract to their management. The suggestion in the corporate governance literature to reduce the length of management contracts to less than five years as it is in the US is not yet accepted by most German companies.

Figure 6: The average length of management contracts

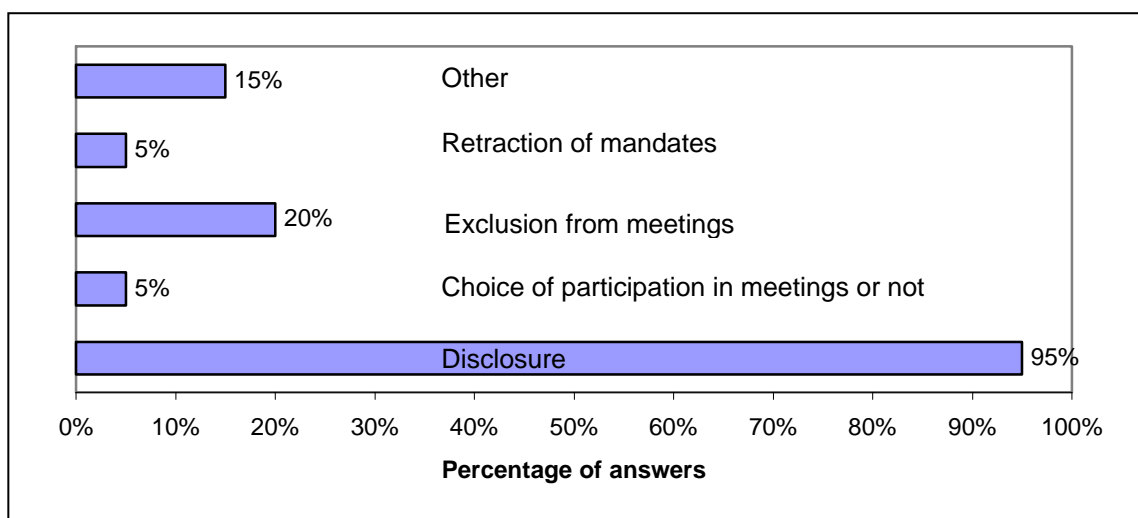


It has been mentioned in section 5.1.2.2 that severance payments are often criticized for giving managers too much job security and less incentive to make efforts. The underlying study shows that severance payments are of less importance in Germany than it is the case, for example, in the USA or UK, where the manager market is more active. Only 6.7% of the companies in the sample provide for so-called “golden parachutes” in case of an early termination of management contracts, for example, due to take-overs.

An age limit for supervisory board members is regarded as an important criterion in the GCCG. For managers there are no general specifications in the literature. It can be argued, however, that if the age of supervisory board members is assumed to influence the quality of monitoring that the same can be expected for managers. The study shows that 71.8% of the companies have specified an age limit for their managers of 65 years or less. Only 2.6% have limited their managers' age at over 65 years. The remaining 25.6% have no internal regulation regarding the age of managers.

Another important characteristic of managers is their objectivity or independence. Interest conflicts due to affiliations with the firm's business partners may limit their objectivity and open room for discretionary behavior. In order to deal with this problem firms can require their managers to disclose potential conflicts of interest. Such an internal requirement may also be related to sanctions in case of non-compliance. There may be various other ways to deal with conflicts of interest. The underlying research shows that the most important tool of dealing with conflicts of interest is their mandatory disclosure by the respective managers towards the chairman of the supervisory board as well as towards the managing board. As indicated in Figure 7, 95% of the firms asked have introduced such a rule. Companies demand only rarely the exclusion of the respective managers from meetings and discussions (20%) or even withdraw their mandates (5%).

Figure 7: Dealing with managers' conflicts of interest



The GCGC suggests German corporations to take out an insurance policy covering financial or material damages caused by management faults. This so-called Directors' and Officers' Liability (D&O) insurance can be provided for managers as well as members of the supervisory board. Although the GCGC has no legal but only advisory character, most companies in the sample (over 90%) follow the recommendation of taking out a D&O liability insurance policy. The GCGC, however, makes no specifications concerning the participation of managers in damages not covered by the D&O insurance policy. Consequently, it is up to the individual companies whether or not and up to which amount managers should participate in damages born by shareholders. 63.4% of the interviewed companies provide for a participation of managers in damages. Only 26.7% of these companies give detailed information on the amount their managers have to pay in, which varies between 5,000 and 550,000 euro per manager. This large range can be explained by the fact that there is no general consensus on the appropriate amount of participation.

6.2.3.2 Supervisory Board

Questions on the quality of monitoring by the supervisory board also consider the issues of independence and liability. Apart from that, they deal with the composition of the board and the supply of information to the board.

Regarding the age limit of supervisory board members only 2.6% of the companies asked have specified an age limit of 65 years or less for their supervisory board members. 46.2% have limited their board members' age at over 65 years. The remaining 51.3% have no age limit. This is rather disappointing result in view of the increasing demand for an age limit of supervisory board members as recommended by the GCGC.

The quality of monitoring in German corporations has often been criticized because many supervisory board members hold several board mandates in different companies and are thus not able to invest enough time for their monitoring tasks in each firm. As a reaction to a number of unexpected insolvencies the GCGC suggests to limit the number of supervisory board mandates to five if the respective board member holds a management position at the same time. The underlying study shows that even 75.6% of the companies have no internal regulation on how many supervisory board mandates

their board members should have with other companies, irrespective of whether they hold management positions or not. Only 19.5% specify that board members should at maximum accept five further board positions. 4.9% even allow more than five external mandates.

As far as the composition of the supervisory board is concerned, the criticism of the dominance of representatives of lending banks in German supervisory boards as well as of the internal recruitment of former managers to board positions is no longer legitimate. 72.5% of the companies in the sample do not have any representatives of debt-financing banks and 95% of the firms have at maximum two bank representatives (see Figure 8). Moreover, over 50% of the companies have not recruited any supervisory board member from their management. However, a change from a management position to a board position still occurs in a number of companies (see Figure 9).

Figure 8: Number of banks represented in the supervisory board

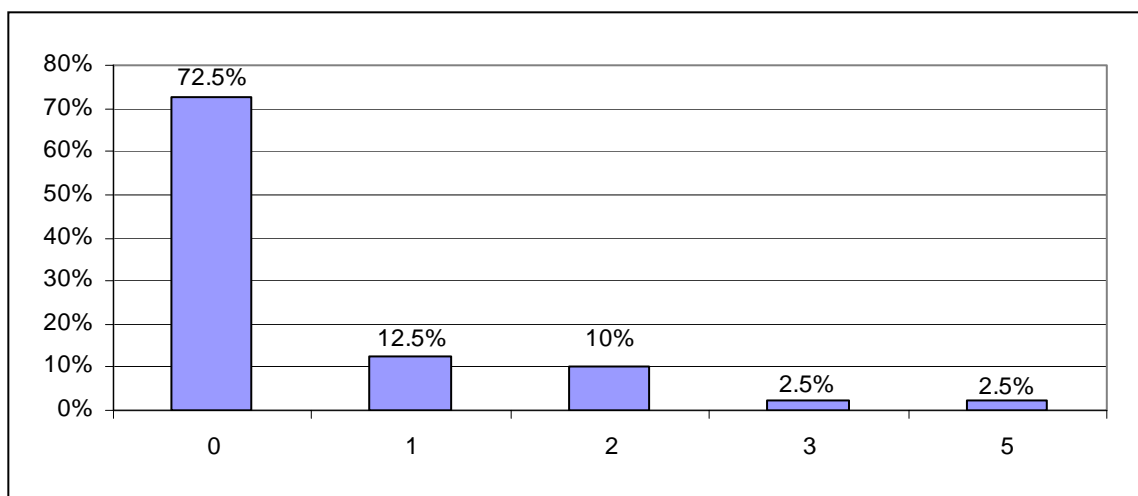
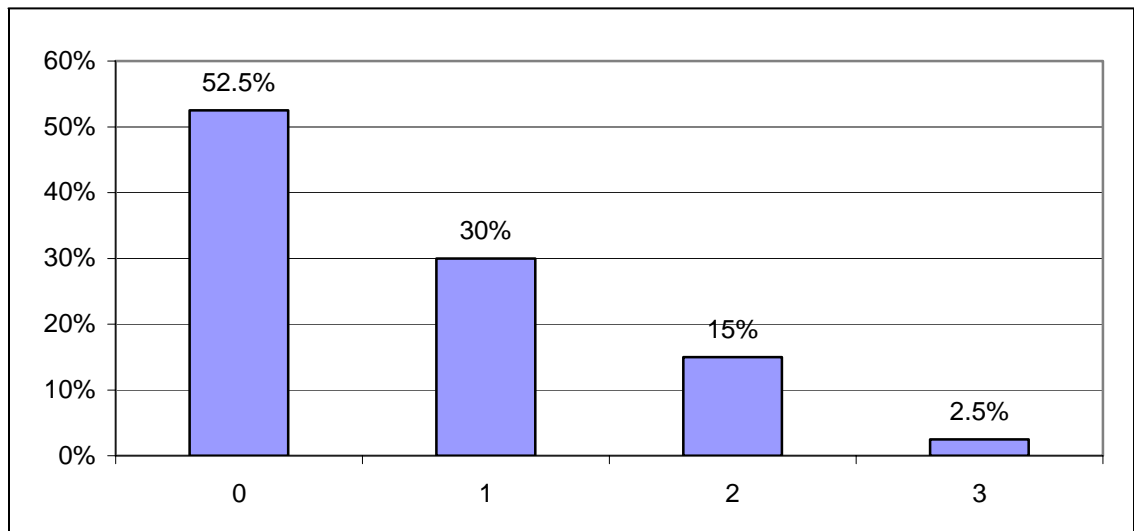


Figure 9: Number of former managers elected to the supervisory board

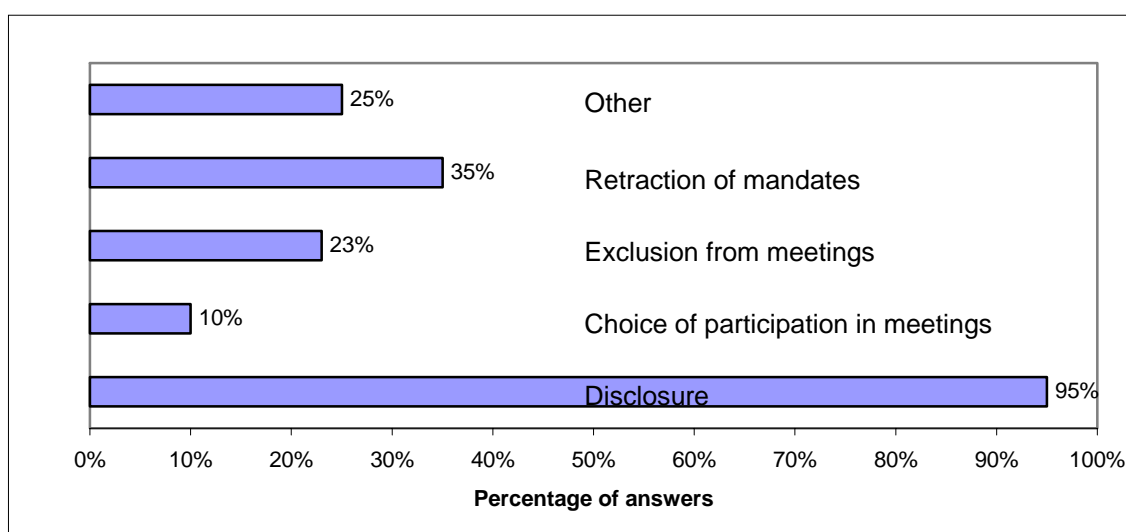


The GCGC also proposes that the chairman of the supervisory board should not be at the same time chairman of the audit committee. 69.2% of the companies do not follow this suggestion. Consequently, there is potential for improvement of the objectivity of the chairman of the supervisory board in German corporations.

Moreover, it is advised in the GCGC that the chairman of the audit committee should not be a former member of the management team. Similar to the penultimate question on the number of former managers recruited to the board, the result here is that only in one fifth of the companies the chairman of the audit committee was once a manager of the same firm.

As far as the dealing with conflicts of interest of supervisory board members is concerned, a similar answer structure occurs as for the management: Disclosure of interest conflicts towards the chairman is the most important means of dealing with interest conflicts. In contrast to the management a retraction of board mandates is taken more often into consideration.

Figure 10: Dealing with supervisory board members' conflicts of interest



Liability of supervisory board members for damages due to their neglecting of duty is considered to be as important as the liability of managers.³⁴³ From a theoretical point of view the same agency problems exist between shareholders and supervisory board members as between shareholders and managers. Therefore, the same sanction mechanisms need to be applied to the supervisory board. The D&O liability insurance policy can be taken out for managers as well as for supervisory board members. 61% of the companies follow the recommendation of the GCGC to arrange for a participation of supervisory board members in the reimbursement of damages to the firm or the shareholders. The amount to be paid in varies between 2,500 and 75,000 euro per supervisory board member, which is on average considerably lower than that for managers.

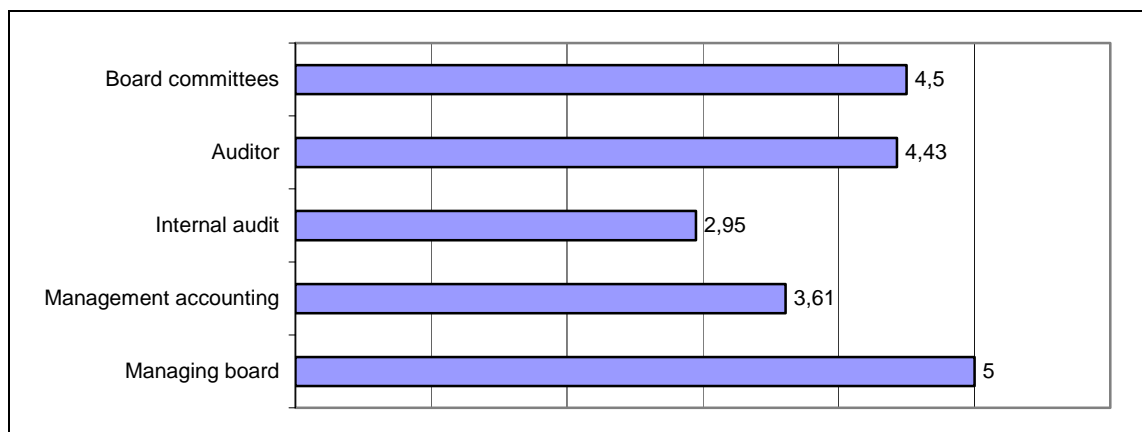
As far the internal reporting system or the supply of information to the supervisory board is concerned, 76.7% of the companies have explicitly specified the duty of the management to regularly supply business information to the supervisory board. Such specifications refer to the form, content, and frequency of information supply. The supervisory board not only receives information from the management but also from its committees which are specialized in certain topics or tasks. The most occurring board committees are the audit committee (93.2%) and the staff committee (84.1%). The latter is concerned with management contracts, particularly with compensation issues. Other

³⁴³ The GCGC emphasizes that the liability of supervisory board members for lack of monitoring is as important as the liability of managers for management faults.

committees, for instance, for strategy or corporate governance are rarely established in German corporations.

Furthermore, companies were asked about the importance of different institutions within the organization as sources of information for the supervisory board. The departments of *Management accounting* and *Internal audit* were indicated as less important sources due to their indirect communication line with the supervisory board. The *managing board*, the *auditor* as well as the *board committees* were ranked as the most important sources of information (see Figure 11). This result shows the increasing importance of the auditor and the board committees, which is also recommended by the GCGC.

Figure 11: The supervisory board’s sources of information
(with answers 1=“not important” and 5=“very important”)



6.2.3.3 Risk Management

Questions on the quality of risk management analyze whether firms have established explicit rules on how to deal with risks as well as whether they quantify and control risks.

The underlying study indicates that almost 80% of the companies dispose of an “explicit” risk management system with a risk strategy which is integrated in their corporate strategy. Over 90% of the companies have even written a risk management handbook stipulating general standards and principles on how to identify, report, and hedge risks.

The German Accounting Standard No. 5 suggests German corporations to quantify their internal risks in terms of a maximum loss³⁴⁴ in favor of more transparency towards the capital market. In fact, shareholders are assumed to pursue firms' businesses in terms of their risk exposure. 86.7% of the companies in the sample even categorize qualitative risks along incidence rate and potential for damage. This is a very positive result. 57.8% of the companies asked even calculate a total risk for the entire company. Many companies, however, prefer an aggregation of risks only up to the division level than to the company level in favor of a better comparability.

The companies were also asked whether they set risk limits for their business units which may have negative consequences, i.e. sanctions, for the respective responsible employees in case they exceed the limits. An example of such a risk limit could be a maximum amount to be spent within a year on the procurement from a certain supplier. Non-adherence to this risk limit may cause non-adherence to the budget plan and therefore increase the risk of illiquidity. Only 37.8% of the companies affirmed to set risk limits. Almost half of the interviewed companies do not provide for risk limits at all. This is an interesting result because the effectiveness of a risk management system is closely related to control mechanisms supporting the system.

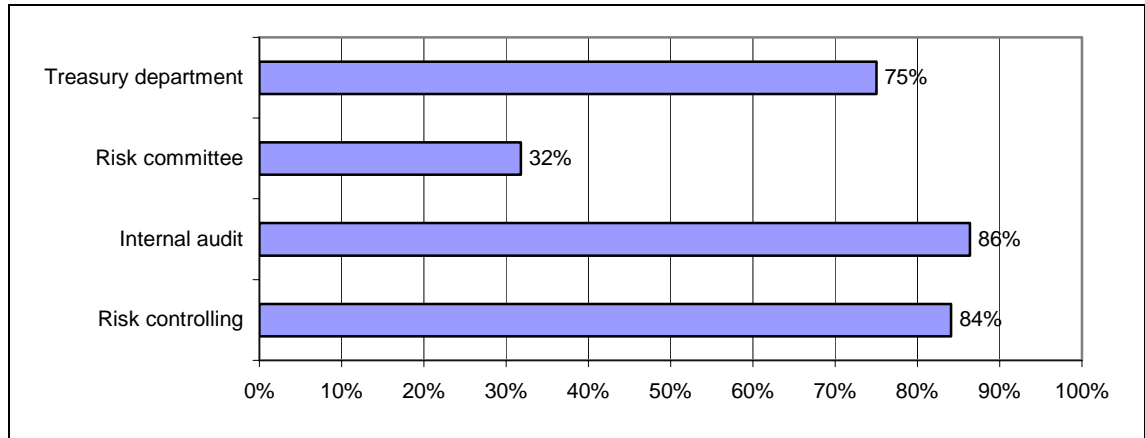
Risk planning and control are further significant issues. It is necessary that risk management is not only integrated in the operative business activities but also in the firm's strategic management tools. It is interesting to note that more than half of the companies (56.8%) do not dispose of a strategic tool based on ratios such as a Balanced Chance and Risk Card to manage and control their risks.

The institutionalization of risk management within the firm is one of the most important ways of making risk management explicit and of increasing employees' awareness of internal risks. Moreover, such institutions specializing in the corporate-specific problems of risk management represent a relevant source of information for managers as well as the supervisory board. The underlying study shows that in German corporations the departments of management accounting (*risk controlling*) and that of *internal audit* traditionally take on risk management functions (see Figure 12). However, this is a negative result in view of the previous result that these institutions

³⁴⁴ A specific method of quantification such as the concept of Value-at-Risk is not suggested.

represent only secondary sources of information for the supervisory board which by law has to monitor the firm's risk management system.

Figure 12: Institutions of risk management



Another success factor for an effective risk management system is the internal and on-time reporting of occurring risks by the individual employees. In this context, the study shows that 84.1% of the companies motivate their employees to an on-time reporting of observed risks. Many firms have indicated that on-time reporting is rewarded in monetary terms.

6.2.3.4 Compensation

Questions on the compensation of managers including lower layers of management and supervisory board members mainly concentrate on whether long-term incentives related to market-based performance measures are offered. Figure 13 gives an overview of the percentages of firms paying fixed income, yearly cash bonuses, and long-term incentives.

Figure 13: Percentage of companies paying fixed income, yearly bonuses, and long-term incentives

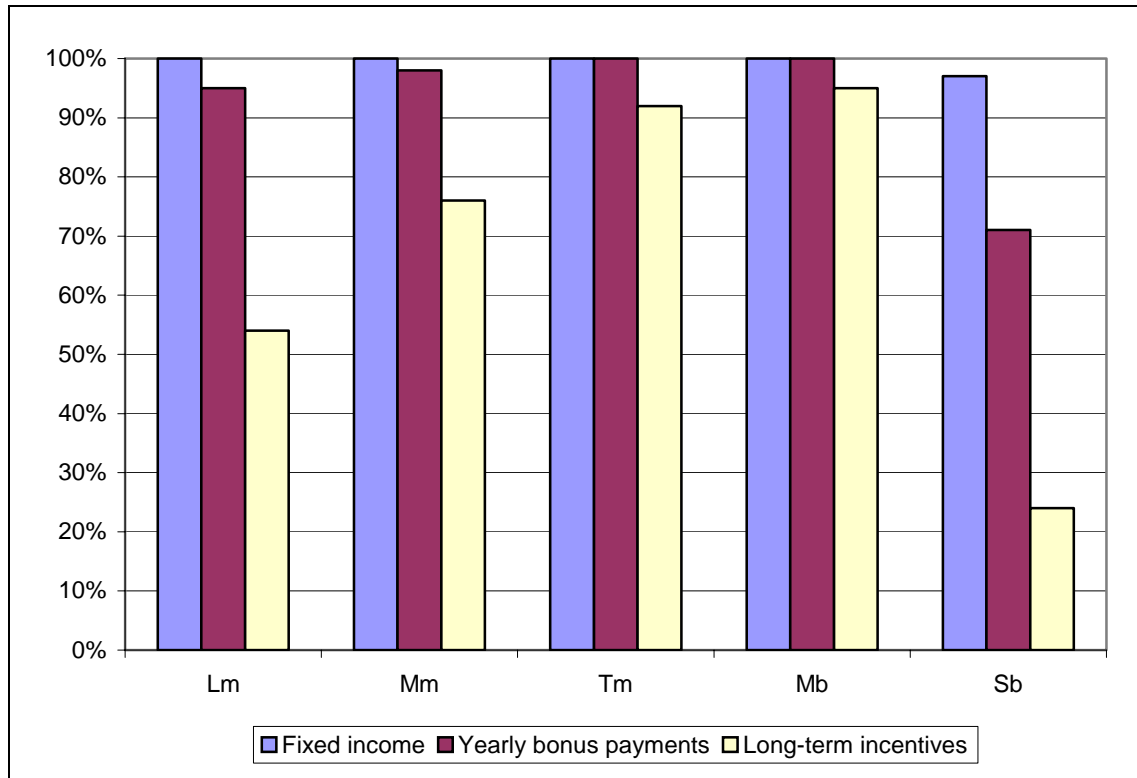
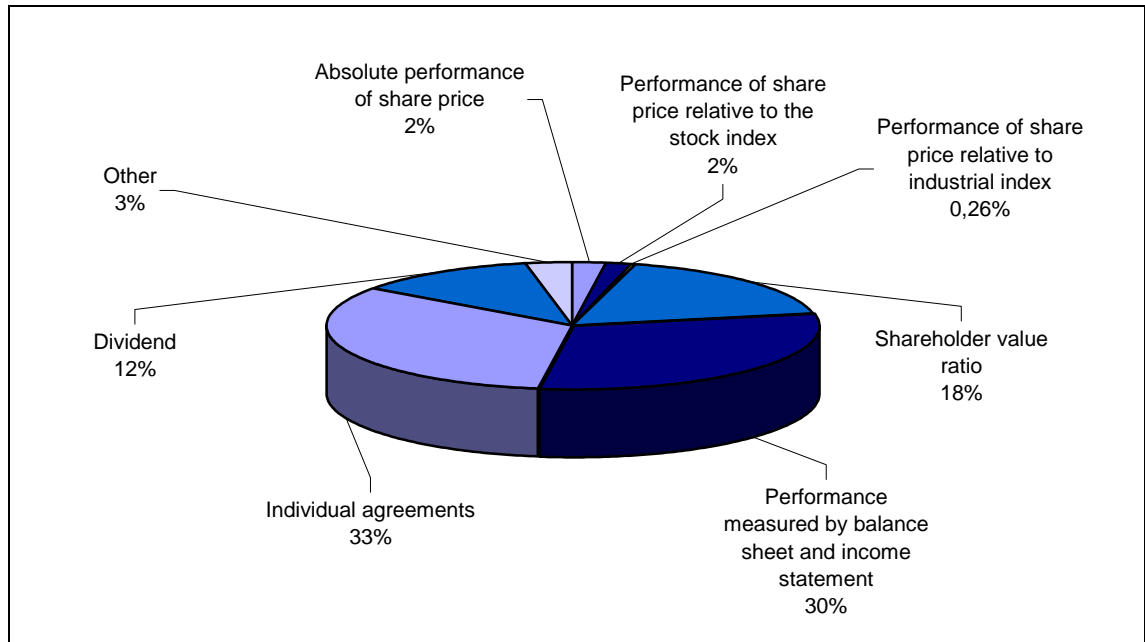


Figure 13 shows that it is very common for German companies to offer long-term compensation schemes to the managing board members and to the top management. Over 70% of the companies also offer such incentives to the middle management. Room for improvement can be observed for the lower management and the supervisory board. Agency theory suggests that supervisory board members should receive incentive-based compensation so as to align their interests with those of shareholders. This recommendation is not yet implemented in practice.

The effectiveness of short-term as well as long-term variable income is influenced by the respective underlying performance measures. These performance measures should be closely related to the shareholder value or the market value of equity capital measured either externally e.g. by the stock price performance or internally by the firm's value-based ratio. The following Figure 14 presents that yearly bonus payments depend largely on performance according to individual agreements (33%) and on the performance measured by balance sheet and income statement such as sales or net income. Consequently, capital market performance does not play a considerable role for short-term incentives.

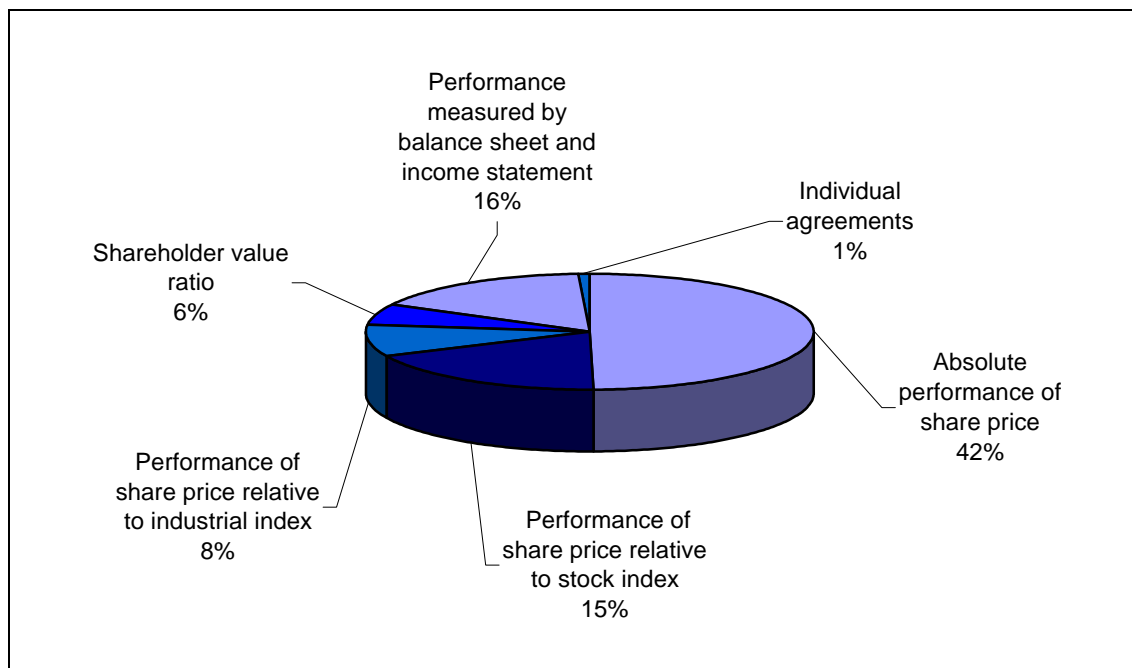
Figure 14: Performance measures for yearly bonus payments



Although bonuses represent incentives to improve the overall short-term performance of the firm, the capital market often criticizes the enormous amounts of salaries paid to managers which are due to bonus payments. In Germany, 73.2% of the companies in the sample have therefore set upper-caps for yearly bonus payments.

Figure 15 presents the performance measures determining the amount of long-term compensation. With 42% the absolute performance of the share price is the most important factor. This result is critical because, on the one hand, it is important that managers and supervisory board members are compensated on the basis of objective market-based performance measures but, on the other hand, their performance should be compared to that of competitor firms. This is not to be neglected because shareholders also relate firms' performance to that of the market or business sector for their investment decisions. The absolute share price performance does not fulfill the second requirement. Consequently, it would be better if companies related long-term incentives to performance relative to a general stock index or to an industry index.

Figure 15: Performance measures for long-term incentives



The following Table 9 shows that there is a difference in the use of instruments of long-term compensation according to the stock index. Whereas stock options and virtual options are more frequently used by DAX and MDAX companies, convertible bonds are favoured by TecDAX companies. The firm size may have relevance here. Besides the fact that TecDAX companies were previously listed at the Neuer Markt where share prices slumped dramatically within a few years, may explain the rare use of stock-based compensation within this stock index.

Table 9: The use of long-term incentives classified according to stock indices

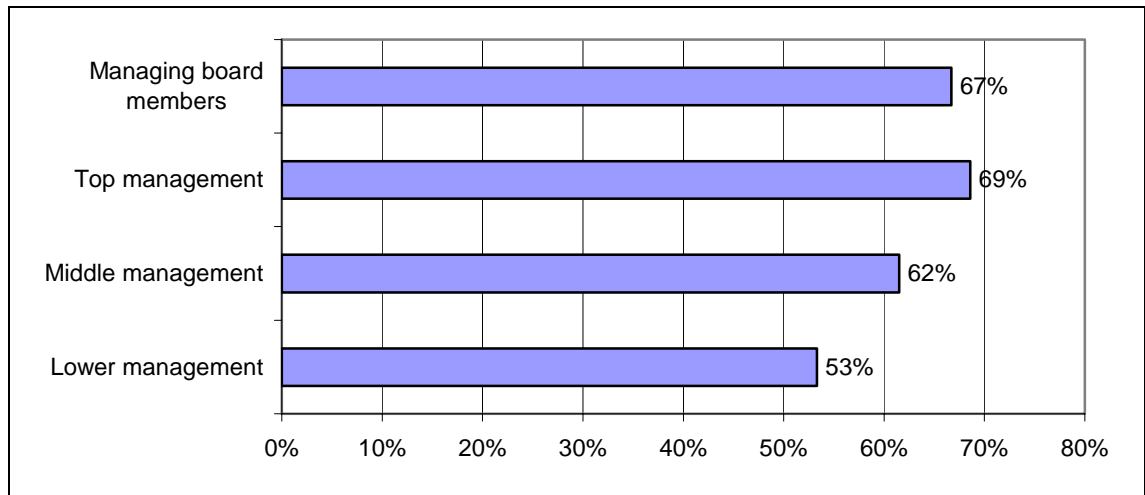
	DAX	MDAX	TecDAX	Total
<i>Stock options</i>	44%	30%	26%	100%
<i>Convertible bonds</i>	0%	25%	75%	100%
<i>Virtual stocks</i>	55%	36%	9%	100%
<i>Staff stocks</i>	55%	27%	18%	100%
<i>Other</i>	33%	33%	33%	100%

As far as the instruments of long-term compensation are concerned, it can be noticed that stock options play an important role. Figure 16 presents the percentage of companies using stock options for the following hierarchy layers.³⁴⁵ The supervisory

³⁴⁵ The German Securities Law does not permit the issue of stock options to members of the supervisory board.

board usually does not obtain long-term incentives. Those firms providing for long-term incentives compensate supervisory board members with convertible bonds or merely shares.

Figure 16: Percentage of companies issuing stock options

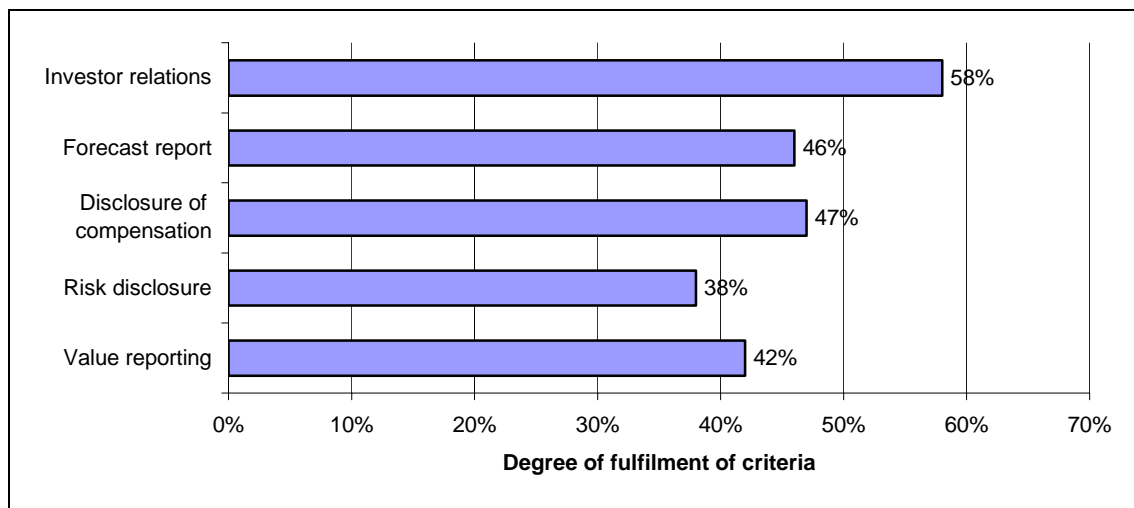


6.2.3.5 Disclosure

The checklist on disclosure tests the quantity and quality with which firm-specific information is disclosed to the capital market.

The results for the quality of disclosure of German corporations are rather disappointing. Except for the topic *Investor relations* the average answers over all firms do not even fulfil 50% of the criteria in the underlying checklist for “good” disclosure. Figure 17 summarizes the degree of fulfilment for all five topics in the checklist. On average 58% of the criteria for *Investor relations* are fulfilled. In view of the small number of criteria within this topic this result must not be over interpreted. The worst quality (38%) is observed for the topic *Risk disclosure* so that German corporations have the greatest potential for improvement here.

Figure 17: Degree of fulfilment of disclosure criteria



There are also sector-specific differences in the overall quality of disclosure. Whereas firms in the transportation & logistics and automotive industries dispose of the best quality of disclosure, firms in the technology sector, particularly from the TecDAX index, are often characterized by a low quality of disclosure.

6.2.4 Regression Analyses

This section presents first the development of a corporate governance score on the basis of the answers obtained through personal interviews and the disclosure checklist. It then prepares the regression analyses by discussing the selection of adequate proxies and summary statistics. Finally, the impacts of the quality of the overall corporate governance system, of ICGS, of disclosure, and of individual dimensions of ICGS are analyzed. The section concludes with a robustness check regarding a change in the calculation of the corporate governance score.

6.2.4.1 Development of a Corporate Governance Score

The idea behind the construction of the questionnaire on ICGS, in particular, was to ask as many questions as possible, even if the companies would not agree to answer all questions for confidentiality reasons. In fact, some critical questions such as the amount of participation of managers and supervisory board members in damages, which are not covered by the D&O-insurance policy, were not answered by the majority of firms. However, the few answers given leave at least an idea of the range of answers and the

problems or taboos companies are not willing to talk about. Questions with a very low response rate, i.e. more than 15 missing values, are taken out before constructing the corporate governance score.³⁴⁶ This ensures that the corporate governance score contains variables which enable drawing conclusions from the sample to the basic population. Moreover, questions which are difficult to translate specifically in any criteria for good corporate governance are taken out. For instance, the answer to the question on the number of bank representatives in the supervisory board cannot be clearly evaluated in terms of whether it is good or bad corporate governance. A firm stating to have 2 bank representatives is hardly to be discriminated against a firm with one bank representative. Such questions, however, were asked for the purpose of descriptive analyses in section 6.2.3.

A second step was to look at the variance of the answers. Some questions were answered similarly by almost all firms. For example, almost all firms have written a risk handbook. Despite these similarities such variables were not taken out because they can still explain any differences between companies with respect to the quality of their corporate governance systems. The following Table 10 shows the variables taken for the calculation of the corporate governance score.

Table 10: Derivation of variables for the corporate governance score

Total no. of variables in the questionnaire (47) + disclosure checklist (5)	52
No. of variables with very low response rate and difficulty of evaluation	12
Remaining variables for construction of the corporate governance score	40

The corporate governance score is constructed on the basis of a scoring model, i.e. every question has a certain amount of items or points which each company can reach. Each item is formulated as a binary variable checking for the existence or non-existence of specified criteria. If the item is positive, 1 point is given to the respective firm.

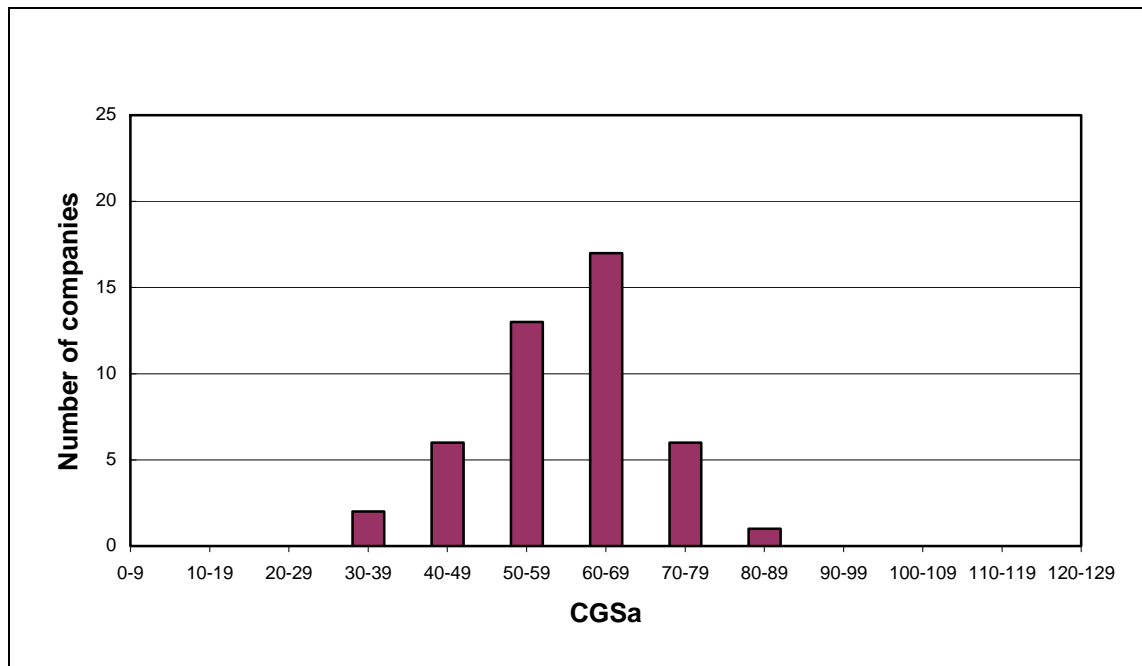
³⁴⁶ The statistics literature (see, e.g. Hartung (2002)) emphasizes for regression analyses the use of 30 cases or answers at minimum for each variable in order to be able to obtain representative results. As the size of the underlying sample is 45, the number of missing answers per question must not be greater than 15. Also, it would have been possible to take mean values for missing data. As it can be assumed that most questions not answered by firms were at the same corporate governance criteria which they did not fulfil, using mean values would have distorted the score positively.

Ordinary variables were avoided in order to prevent subjective estimation by the interviewed person. The firm-level corporate governance score (CGSa) is calculated as the equally weighted sum of the points achieved for each question (see (1)), because every question is considered to be equally important. However, as each question provides for a different amount of items, there is automatically a stronger weighting of questions with more items or points than with less points. As this can be viewed critically, two other corporate governance scores (CGSb and CGSc) are calculated in order to check the robustness of results.³⁴⁷ The first score denoted as CGSa is defined as follows:

$$CGSa_i = \sum_{b=1}^{40} Q_{bi} \quad (1)$$

where Q_{bi} stands for the points achieved by company i in question b . The score is based on 40 questions or variables which in total comprise 152 items or points. Therefore, $0 \leq CGSa \leq 152$. CGSa comprises the points achieved for questions on ICGS as well as for questions on disclosure.

Figure 18: Distribution of CGSa



³⁴⁷ These scores are presented in section 6.2.5 in connection with the robustness analyses.

Figure 18 shows the distribution of CGSa, which is skewed to the left. The firms in the sample have reached only 52.6% of the points at maximum. Over 80% of the firms have obtained a corporate governance score between 40 and 70. Despite the fact that no firm achieves more than 80 points, there is still a wide distribution of the score up to the 80-point level. Selection bias, i.e. the distortion of statistical results due to sample selection, does therefore not pose a problem for this study. This is supported by the fact that firms with a variety of corporate governance scores or quality are represented in the underlying sample.

6.2.4.2 Selection of Proxies

Proxies for Shareholder Value

The following are possible proxies for shareholder value which are frequently used in the empirical literature. As Tobin's q has been used in the hypotheses as a proxy for shareholder value, the other proxies will be used as control variables in order to test the robustness of the effects of independent variables. For the underlying study data has been derived from DataStream.

Market Value

The market value is calculated as the share price multiplied by the number of issued ordinary shares as of the end of 2002 and is expressed in millions of euro. The market value represents the value of the equity capital of a company. The share price is an important element because it reflects the overall information of the market on the company and thus investors' expectations concerning future returns. Moreover, an increase in the share price is part of the total return to shareholders. The market-book ratio relating the market value to the book value of equity or the market-sales ratio calculating the market value of equity in proportion of the firm's sales are further measures for the firm value.

*Total Shareholder Return*³⁴⁸

The total shareholder return is calculated as the sum of the increase in share value, i.e. share price, and the dividend payment which is assumed to be reinvested to buy additional shares:

$$TSR = \frac{p_e + D - p_b}{p_b} = \frac{p_e + D}{p_b} - 1, \quad (2)$$

where p_e denotes the share price at the end of the year, D is the dividend payment in the respective period, and p_b represents the share price at the beginning of the year. The period of reference here is the business year 2002.

Tobin's q

Tobin's q is another market-based ratio and relates the market value of a company's assets to their estimated replacement cost. Tobin's q expresses the capital market's estimation of the value of present assets and future investment opportunities.³⁴⁹ The market value of a company's total assets is calculated as the sum of the market value of the equity capital and the book value of the debt capital. The book value of debt capital is assumed to be equal to the market value of debt capital. The estimated replacement cost is the cost which would have to be born if the company wanted to replace all of its assets. A proxy for the estimated replacement cost is the book value of the firm's total assets, which represents their original purchasing cost:

$$Tobin'sq = \frac{MV_{TA}}{RC_{TA}} = \frac{MV_E + BV_D}{BV_{TA}}, \quad (3)$$

where MV_{TA} is the market value of total assets and RC_{TA} denotes the replacement cost of total assets. MV_E , BV_D , and BV_{TA} stand for the market value of equity capital, the book value of debt capital, and the book value of total assets, respectively.

³⁴⁸ In DataStream the total shareholder return is denoted as the return index.

³⁴⁹ Servaes (1989), p.1.

Proxy for the Cost of Equity Capital

Beta

Beta is a risk measure of the CAPM³⁵⁰ referring to the systematic risk of investors which they cannot diversify in their portfolio as opposed to the unsystematic risk. For this non-diversifiable systematic risk investors demand a risk premium which is determined by the covariance between the return of the underlying share and the market return. Beta itself is calculated as the ratio of this covariance and the variance of the market return.³⁵¹ For the data in this study we use the total shareholder returns for individual shares and the return of the DAX100 as the market return. We calculate beta on a three-year basis using monthly data from the years 2000 to 2002.

$$\beta_i = \frac{\text{Cov}(\rho_i, \rho_m)}{\text{Var}(\rho_m)} = \frac{\frac{1}{T} \sum_{t=1}^T r_i(t) \cdot r_m(t) - \frac{1}{T^2} \sum_{t=1}^T r_i(t) \cdot \sum_{t=1}^T r_m(t)}{\frac{1}{T} \sum_{t=1}^T r_m^2(t) - \left(\frac{1}{T} \sum_{t=1}^T r_m(t) \right)^2} \quad (4)$$

with

$r_i(t)$	= return of share i in t
$r_m(t)$	= market return, here DAX100 return in t
t	= time index running from t=1,...,T
T	= 36 months
$\text{Cov}(\rho_i, \rho_m)$	= covariance between share return ρ_i and market return ρ_m
$\text{Var}(\rho_m)$	= variance of the market return ρ_m

Proxy for Share Liquidity

Turnover Volume

The turnover volume can serve as an important control variable in this study, particularly in connection with the hypotheses 3a and 3b. The turnover volume is a

³⁵⁰ The CAPM has often been criticized for its unrealistic assumptions. For the deficiencies of the CAPM see, e.g. Oertmann (1997), pp. 20-21.

³⁵¹ For beta and the CAPM see Fama / French (1996).

measure for the liquidity of a security in the market where it is traded.³⁵² Liquidity, on the other hand, is an indicator for information asymmetry among market participants. The higher the information asymmetry the lower is the liquidity of the respective share measured by its turnover volume. The turnover volume is calculated as the number of shares (in thousands) traded on average per day during the year 2002.

6.2.4.3 Dealing with Missing Values

The problem of missing values is often expected in connection with statistical analyses. Missing values are unavailable data on the questions or variables because of a lack of answers by the interviewed people, because of invalid answers³⁵³, or because of the user's fault of not coding or wrongly coding some data³⁵⁴. The statistics literature discusses various methods of dealing with missing values.³⁵⁵ The underlying study and its data is analysed with the statistics program SPSS which has individual features for missing values.³⁵⁶

Missing values, either specified by SPSS or the user, may be excluded by SPSS from analyses. SPSS differentiates two types of deletion of cases with missing values. *List-wise deletion* refers to the deletion of cases with missing data from all analyses even if a majority of data is available. *Pair-wise deletion* denotes the exclusion of cases with missing data only from the respective calculations when one or both values (i.e. dependent and independent variables) are missing. It is also possible to take *mean values* for missing data instead of deleting cases.

The variable concerned by the problem of missing data in the following regression analyses is beta. Missing values for beta are due to the fact that beta is calculated on a three year basis and 6 firms have not yet been listed on the stock exchange for three years so that the required data is unavailable. The method chosen to overcome the problem of missing data for the underlying study is pair-wise deletion in order to avoid too much loss of data as opposed to list-wise deletion. This means that firms with

³⁵² Brunner (1996), p. 15.

³⁵³ Backhaus et al. (2000), p. 32.

³⁵⁴ Decker / Wagner / Temme (2000), p. 85.

³⁵⁵ For the general problem of dealing with missing data in statistics see, e.g. Little / Rubin (1987) or Anderson et al. (1983).

³⁵⁶ Bühl / Zöfel (2003), p. 38; Backhaus et al. (2000), pp. 32-33.

missing data have only been neglected in analyses where beta occurs. Mean values are not taken because they are assumed to distort results positively or negatively. Using mean values for beta would increase the underlying sample for the analyses but not necessarily reflect the true values.

The corporate governance score as the independent variable has been calculated before regression analyses. Cases with missing data with respect to the answers on the corporate governance system have been given the lowest points for the respective questions, i.e. 0 points. Missing values in connection with the corporate governance questionnaire are mostly due to confidentiality reasons. In the few cases where the interviewed person did not know the answers, other departments were asked. Those firms which did not give information for confidentiality reasons can be to a large extent assumed not to fulfill the respective criteria for good corporate governance. Therefore, these firms are sanctioned by not giving them any points for their corporate governance score.

6.2.4.4 Summary Statistics

Before testing the hypotheses developed above, correlation statistics are analyzed between the corporate governance score and a number of financial data including the selected proxies and control variables to be either substituted for the dependent variables or to extend the regression equations in to increase the explanation power of the models. The following Table 11 shows summary statistics between CGSa, its subscores³⁵⁷, and financial data.

Table 11: Pearson correlation coefficients between CGSa, subscores, and financial data

	CGSa	I. Management	II. Supervisory board	III. Risk management	IV. Compensation	V. Disclosure
<i>TSR</i>	0.068	-0.133	-0.197	0.166	0.310*	-0.122
<i>Tobin's q</i>	0.187	0.039	0.267*	0.242*	0.057	-0.130

³⁵⁷ Subscores refer to the topics or parts of the overall corporate governance score. These are *Management*, *Supervisory board*, *Risk management*, *Compensation*, and *Disclosure*. The subscores express the amount of points achieved for the respective parts of the overall score.

<i>Market-book ratio</i>	-0.098	0.048	0.024	0.097	-0.185	-0.081
<i>Market-sales ratio</i>	0.220	0.064	0.180	0.014	0.157	-0.004
<i>Market value</i>	0.153	-0.033	-0.079	0.313**	0.051	-0.002
<i>Dividend yield</i>	0.009	-0.095	-0.072	-0.079	0.031	0.040
<i>Turnover volume</i>	0.140	0.136	-0.039	0.068	0.111	0.019
<i>Beta</i>	-0.089	-0.072	0.123	-0.205	0.082	-0.256
<i>Debt/equity ratio</i>	-0.413***	-0.398***	-0.462*	0.194	-0.397***	0.079

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.10$ (two-tail test)

A first correlation analysis between CGSa, its subscores, and some financial ratios gives hints on which variables could be taken into consideration for further regression analyses. The Pearson correlation coefficients relate to two-tail significance tests at the 1, 5 and 10 percent levels.

As far as the relationships between the various corporate governance aspects and proxies for shareholder value are concerned, these appear to be different in terms of direction and strength of correlation. Only the relationship with Tobin's q is widely positive except for the quality of disclosure. These correlations are only partly significant. Strong negative and significant relationships can be found between CGSa and a majority of subscores and the debt/equity ratio. This is a plausible result indicating that the relative importance of shareholders vs. debt holders as corporate financiers determines the quality of the corporate governance system. This result is also consistent with the theory of the firm that shareholders as residual claimants have a considerable interest in corporate control (see chapter III). The largely insignificant correlations may be due to the fact that other factors are more powerful in explaining

variance of the shareholder value or that the corporate governance score and its subscores contain too many different aspects. Another explanation could be that the size of the underlying sample is not large enough to deliver significant or representative results. However, the size of the sample should not pose a problem because it comprises the largest and, thus, the most relevant firms for the recent corporate governance discussion. The influence of other factors can be taken into account by employing of adequate control variables in OLS regressions.

The importance of control variables which account for firm characteristics and aim at deleting distortions of results has been mentioned before. Possible control variables are presented in Table 12. These variables will later be employed in regression equations in order to check the robustness of results.

Table 12: Control variables

Control variables	Proxies for
In (number of years listed at the German stock exchange)	Firm age
In (assets)	Firm size
Number of employees in 2002	Firm size
Proportion of international sales to total sales	Degree of internationalization
Dummy variable (listing at a foreign stock exchange)	Degree of internationalization
Percentage of foreign investors	International ownership structure
Percentage of shares held by banks	Ownership concentration
Percentage of small investors	Dispersion of ownership
Business sector	Business sector
Number of supervisory board members	Size of internal control body
Number of managing board members	Size of management
Accounting standard (German GAAP, US GAAP or IAS)	Accounting standard

These control variables are assumed to influence either the dependent variable as well as explanatory variables including CGSa. *Firm age*, for example, may play a role for the quality of corporate governance. “Old” firms may either be listed at the stock exchange for a long time because of having a good quality of corporate governance; or they do not have a good quality of corporate governance because they assume that investors have enough confidence in them. *Firm size*, on the other hand, may influence the finance and ownership structure but also the market capitalization of the firm. A firm’s *degree of internationalization* may, for example, reflect its understanding for foreign investors’

demand on corporate information. International firms may have a good disclosure policy. Similarly, the *ownership structure* may determine the control potential of shareholders and the role of disclosure or compensation schemes. Firms whose shares are, for instance, largely held by institutional investors are assumed to have a high disclosure quality. The *business sector* may reflect the general corporate governance quality of firms in the same industry but also the systematic risk beta. Furthermore, the *size of the managing* and the *supervisory board* can influence the quality of management decisions and monitoring. Finally, the *accounting standard* used by firms may determine the quality of voluntary disclosure.

Before integrating these variables into the regression analyses it is interesting to investigate the correlations between these control variables and subscores of corporate governance. The following Table 13 summarizes Pearson correlations with two-tail significance tests at the 1, 5, and 10 percent levels.

Table 13: Pearson correlations between subscores and control variables

	CGSa	I. Management	II. Supervisory board	III. Risk management	IV. Compensation	V. Disclosure
ln (number of years listed at the German stock exchange)	0.181	0.084	-0.142	0.377**	0.098	0.306**
ln (assets)	0.179	-0.120	-0.208	0.346**	0.151	0.101
Number of employees in 2002	0.016	-0.072	-0.255*	0.113	0.114	0.040
Proportion of international sales to total sales	0.474***	0.294*	0.134	0.302*	0.415***	0.092
Dummy variable (listing at a foreign stock exchange)	0.138	-0.132	-0.040	0.301**	0.089	-0.074
Percentage of foreign investors	0.039	0.024	0.059	0.223	-0.044	-0.121

Percentage of shares held by banks	-0.155	-0.645**	-0.471*	0.309	0.149	0.341
Percentage of small investors	-0.110	-0.016	-0.194	-0.406***	0.342**	0.137
Business sector	-0.085	-0.059	0.041	-0.060	-0.049	-0.028
Number of supervisory board members	0.100	-0.078	-0.220	0.295**	0.108	0.112
Number of managing board members	0.076	0.106	-0.162	0.200	0.026	0.086
Accounting standard (German GAAP, US GAAP, or IAS)	0.135	-0.109	-0.072	-0.032	0.273*	0.020

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.10$ (two-tail test)

The correlation analyses show that particularly the firms' degree of internationalization as well as their ownership structure influences the quality of their corporate governance systems. The qualities of *Management*, *Risk management*, and *Compensation* significantly relate with the firm's proportion of international sales to total sales. Moreover, that firms' shares are held by banks affects the quality of *Management* and *Supervisory board* negatively. Also, a high percentage of small investors correlates significantly with a bad quality of *Risk management* but positively with the adequacy of *Compensation*.

6.2.4.5 The Impact of the Overall Corporate Governance System

This section presents the testing of hypothesis 1 on the relationship between the overall corporate governance system and shareholder value. Hypothesis 1 was formulated as follows:

H₁: The quality of the overall corporate governance system has a positive impact on shareholder value.

Recent empirical research provides evidence for a positive relationship between corporate governance and firm value.³⁵⁸ It is important to note that these studies often take different corporate governance issues into consideration. Gompers *et al.*³⁵⁹, for example, concentrate on takeover defences of US firms while Black *et al.*³⁶⁰ focus on board structure of Korean firms. This indicates that studies on corporate governance are highly based on country-specific issues and therefore on different understandings of corporate governance. In view of this variety of corporate governance topics, it is astonishing that a large majority of studies can prove a significant correlation between corporate governance and firm value. In this study the focus is on the corporate governance of German corporations. In contrast to similar studies a significant impact of the overall corporate governance quality on shareholder value cannot be confirmed here. A first correlation analysis has already shown a positive but insignificant relationship between the overall corporate governance score and shareholder value estimated, for example, by Tobin's q, the market-book ratio, and the market-sales ratio.

The influence of other economic factors on corporate governance as well as firm value has already been discussed in the literature.³⁶¹ Therefore, employing control variables plays an important role in correctly estimating shareholder value. The first step is to regress the firm-level corporate governance score CGSa against Tobin's q, the selected shareholder value measure. In single OLS regressions CGSa has a positive but insignificant impact (significance at the 0.218 level with an explanatory power of 18.7%). In a next step control variables are included. The market or shareholder value of a firm is mainly influenced by its cost of capital, which again depends to a large extent on its capital structure. Therefore, the debt/equity ratio is adequate for controlling the effects of the capital structure on Tobin's q. Furthermore, the correlation analysis in Table 11 shows a negative and significant relationship between CGSa and the debt/equity ratio. This is a plausible result since firms with more equity capital are required to provide for better shareholder protection, i.e. better corporate governance mechanisms than otherwise. In this respect it is even more reasonable to include the debt/equity ratio into the regression equation conditioning that multicollinearity does not occur. As regards the factors potentially influencing the corporate governance score,

³⁵⁸ See, e.g. Drobetz *et al.* (2004).

³⁵⁹ Gompers *et al.* (2003).

³⁶⁰ Black *et al.* (2003).

³⁶¹ See, e.g. Himmelberg *et al.* (1999).

there is only one variable which actually affects the overall corporate governance quality: the firm's degree of internationalization measured by the proportion of international sales to total sales. The more international a firm's business the more international are its stakeholders, including customers, suppliers, and investors. The requirements to the quality of corporate governance are expected to be higher for internationally operating firms than for others. All the other firm characteristics do not correlate significantly with CGSa (see Table 13). Therefore, the following equation is estimated:

$$Tobin'sq_i = \alpha_0 + \alpha_1 \cdot CGSa_i + \alpha_2 \cdot D/E_i + \alpha_3 \cdot IS_i + \varepsilon_i \quad (5)$$

Table 14: Regression analyses for CGSa

Regressors	Hypotheses	Standardized coefficients	t-statistics	p-value
Constant		1.308	1.594	0.120
CGSa	+	0.030	0.155	0.877
D/E	-	-0.305	-1.771	0.085
IS	+	0.109	0.619	0.540
Adjusted R ²	5.2%			
F-test	1.737			0.176

Employing control variables (see Table 12 for a list of control variables used in this study) decreases the significance of CGSa indicating that other factors play a more important role in explaining Tobin's q than CGSa. The debt/equity ratio contributes significantly to the prediction of Tobin's q. The decrease in significance of CGSa is not due to multicollinearity. In fact, VIF (Variance Inflation Factor) values are all below 2. Introducing further control variables such as firm size measured by ln (assets), demand for shares indicated by turnover volume, or operative performance calculated by sales does neither improve the significance level of CGSa nor the overall explanation power of the model. If the market value as another measure for shareholder value is substituted for Tobin's q, adjusted R² increases to 81.5%, yet the corporate governance score

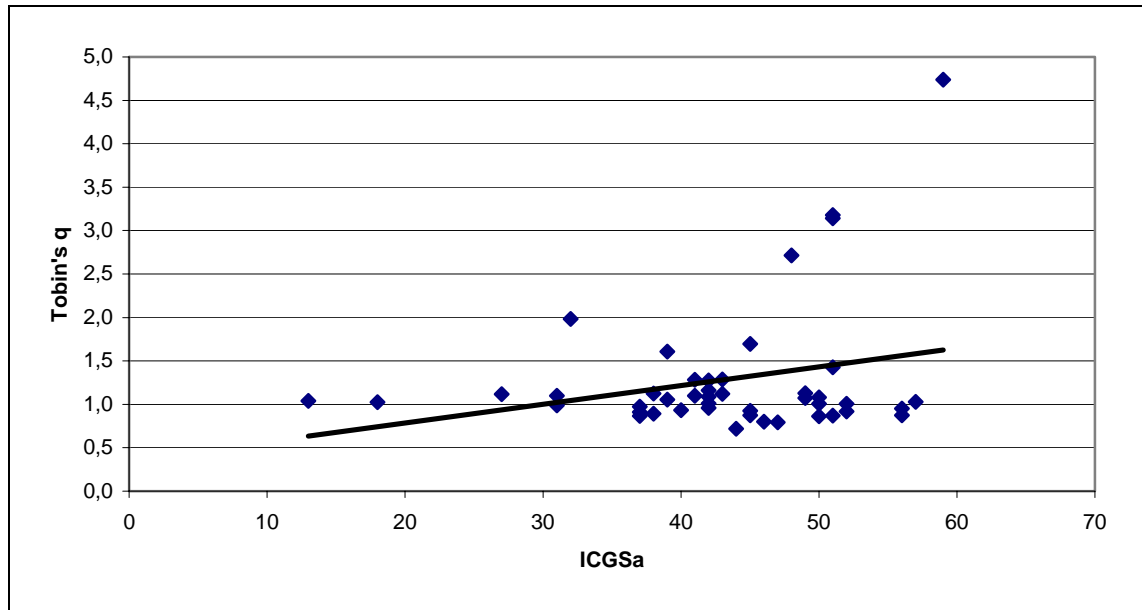
remains insignificant. A similar result is obtained regarding the market-sales ratio. Centralisation of the dependent and independent variables does not improve results either. Consequently, hypothesis 1 must be rejected not because of the direction of the relationship between the quality of overall corporate governance but because of the insignificance of results.

6.2.4.6 The Impact of the Internal Corporate Governance System

Following the results in the previous section a positive relationship between the overall corporate governance system and shareholder value cannot be found as suggested by other empirical studies. Consequently, it is reasonable to analyze different aspects of corporate governance individually. The main idea of this study is to differentiate between ICGS and disclosure. The summary statistics in Table 11 has already shown that individual dimensions of corporate governance are correlated at different levels of significance with firm-specific financial data. This picture supports the concept of differentiating between ICGS and disclosure, which are assumed to affect shareholder value in different ways. The ICGS score is measured as the sum of the scores achieved for the issues *Managing board*, *Supervisory board*, *Risk management*, and *Compensation*, which deliver data on the quality of a firm's internal control system, management, and incentives schemes. The respective hypothesis 2 is that these factors determine the quality of management decisions by controlling managerial behavior and therefore positively affect shareholder value, the ultimate relevant performance measure for investors. Hypothesis 2 was expressed as follows:

H₂: The quality of the internal corporate governance system (ICGS) has a positive impact on shareholder value.

Figure 19: Scatter plot for ICGSa and Tobin's q



Regressing ICGSa on Tobin's q in a univariate model shows a positive impact of ICGS on shareholder value with the standardized regressor coefficient being 0.267 at a 0.076 level of significance (see Figure 19). This result does not remain robust, however, if we substitute Tobin's q by the market value. In a next step several control variables are employed to check the robustness of the significance of ICGSa. The debt/equity ratio proves to be the only effective control variable in explaining residual variance in Tobin's q. When estimating equation (6), there is only a weak explanation power for the prediction of Tobin's q and ICGSa becomes insignificant (see Table 15):

$$Tobin's\ q_i = \alpha_0 + \alpha_1 \cdot ICGSa_i + \alpha_2 \cdot D/E_i + \varepsilon_i \quad (6)$$

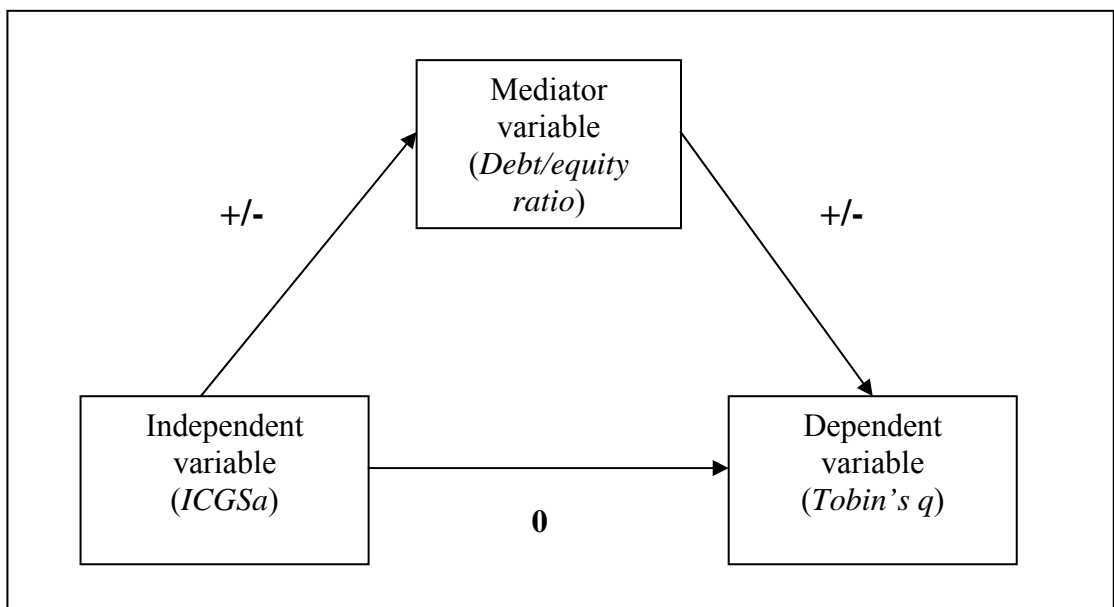
Table 15: Regression analyses for ICGSa (1)

Regressors	Hypotheses	Standardized coefficients	t-statistics	p-value
Constant		1.015	1.458	0.152
ICGSa	+	0.142	0.839	0.406
D/E	-	-0.24	-1.419	0.163
Adjusted R ²	11.4%			
F-test	2.700			0.079

Table 15 shows that the debt/equity ratio has a stronger effect on Tobin's q than ICGSa, nevertheless, it is an insignificant variable. Because of the insignificant relationship between the debt/equity ratio and Tobin's q, a mediating influence of ICGSa on Tobin's q via the debt/equity ratio cannot be assumed, even though ICGSa has a significant negative impact on the debt/equity ratio. This correlation can be interpreted as follows: Firms with good corporate governance systems attract more investors resulting in a relatively low debt/equity ratio.

A mediating effect is assumed when a third variable explains an indirect relationship between the dependent and independent variable.³⁶² In the case above the debt/equity ratio could represent a mediator variable between ICGSa and Tobin's q. In order for the debt/equity ratio to qualify as a mediator variable there would have to be a certain causal chain between the three variables as shown in Figure 20. A mediating effect has to be rejected, however, because the relationship between the debt/equity ratio and Tobin's q is insignificant. As a mediator variable there must be significant relationships between ICGSa and the debt/equity ratio and between the debt/equity ratio and Tobin's q, respectively. The relationship between ICGSa and Tobin's q is allowed to be insignificant.

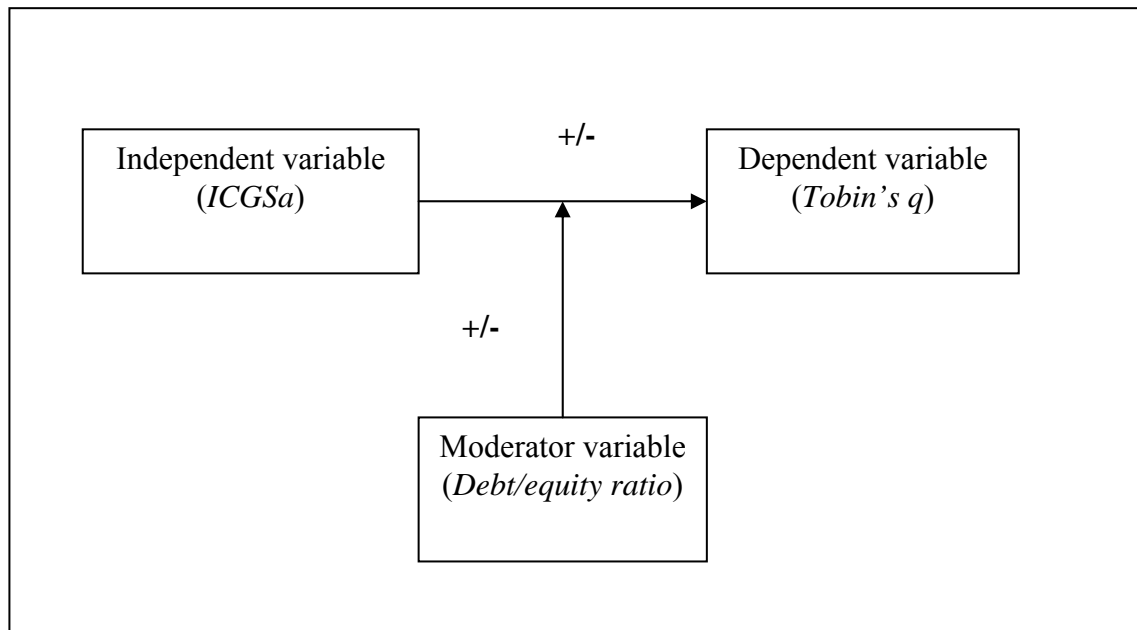
Figure 20: Mediator variable



³⁶² For mediation issues see Baron / Kenny (1986) and Judd / Kenny (1981).

A moderator variable, on the hand, determines when or under which circumstances a significant relationship exists between the dependent and independent variables.³⁶³ The moderator effect represents the strength of the relationship between the dependent and independent variables. The relationship between these variables may be higher or lower by employing the moderator variable.

Figure 21: Moderator variable



Following the results in Table 15 of an insignificant relationship between ICGSa and Tobin's q, it is interesting to analyze if the debt/equity ratio reduces or enhances the impact of ICGSa on Tobin's q, i.e. if the debt/equity ratio functions as a moderator variable. In order to test this question the interaction of the two predictor variables is measured by their product and included into the equation:

$$Tobin'sq_i = \alpha_0 + \alpha_1 \cdot ICGSa_i + \alpha_2 \cdot D/E_i + \alpha_3 \cdot (ICGSa_i \cdot D/E_i) + \varepsilon_i \quad (7)$$

³⁶³ For regression analysis with moderator variables see, e.g. Champoux / Peters (1987).

Table 16: Regression analyses for ICGSa (2)

Regressors	Hypotheses	Standardized coefficients	t-statistics	p-value
Constant		-0.149	-0.188	0.852
ICGSa	+	0.511	2.387	0.022
D/E	+	0.568	1.616	0.114
ICGSa* D/E	-	-0.778	-2.581	0.014
Adjusted R ²	18.2%			
F-test	4.264			0.010

The estimation results improve considerably by employing the moderator variable. 18.2% of the overall variance is explained with the model and ICGSa is significant at the 5% level. ICGS has a positive and a more significant impact on Tobin's q if the debt/equity ratio is taken into account by the moderating effect. The influence of ICGS on Tobin's q is stronger when the debt/equity ratio is lower. The capital structure, thus, represents a condition for the effect of corporate governance on shareholder value. Other control variables such as firm size, business sector, ownership structure, and the degree of internationalization, which are largely used in similar studies, do not contribute to prediction of Tobin's q here.

The regression analyses above confirm hypothesis 2 on a positive relationship between ICGS and shareholder value.

6.2.4.7 The Impact of Disclosure

Disclosure, the remaining aspect of corporate governance, is assumed to have an "indirect" effect on shareholder value because it reduces the investment risk which again decreases the cost of equity capital and should finally influence shareholder value positively. The main hypothesis here is that a good disclosure policy characterized by a regular communication of firm-specific relevant information to the capital market will reduce extra information costs by investors, on the one hand, and will decrease investment risk, on the other hand. Due to a decrease of information asymmetry

investors will have less information costs which is reflected in a lower cost of equity capital of the firm. Finally, a lower cost of equity capital will affect firm or shareholder value positively.

There is vast empirical literature investigating the relationship between disclosure and the cost of equity capital.³⁶⁴ As it is difficult to measure the cost of equity capital itself, most empirical studies use proxies for the cost of equity capital. A direct relationship can be seen between disclosure policy and the cost of equity capital. A higher disclosure quality will reduce shareholders' information gap and thus decrease their observed investment risk. Investment risk can be measured, for example, by the share price volatility which, however, is an absolute measure and does not enable comparisons with the general market. The CAPM measures systematic risk of investors with beta, which addresses this problem. Beta, calculated according to the CAPM (see equation (4)), is used in the following as a measure for the cost of equity capital.

In order to investigate the relationship between disclosure and beta, as suggested by hypothesis 3b (*The higher the quality of disclosure the lower is the cost of equity capital measured by beta*), the following equation is developed:

$$\beta_i = \alpha_0 + \alpha_1 \cdot DIS_i + \varepsilon_i \quad (8)$$

Table 17: Regression analyses for disclosure (a)

Regressors	Hypotheses	Standardized coefficients	t-statistics	p-value
Constant		1.088	5.767	0.000
DIS	-	-0.256	-1.614	0.115
Adjusted R ²	4.0%			
F-test	2.603			0.115

³⁶⁴ See, e.g. Diamond / Verrecchia (1991), Leuz (2003), or Verrecchia (2001).

As expected, a single regression analysis between beta and disclosure shows a negative relationship with the estimated coefficient being -0.256. The coefficient is, however, only significant at the 0.115 level (see Table 17). This result does not support hypothesis H_{3b}, although the level of significance is not too bad. In a next step a number of control variables such as the turnover volume as a proxy for the liquidity of a firm's shares, ln (assets) as a proxy for firm size, the first year of listing at a German stock exchange, and the number of supervisory board members are employed. Including control variables into equation (8) increases the adjusted R² to 10.4%. The influence of disclosure as well as its level of significance decrease to 18.2% and 0.264, respectively. The result of a negative impact of disclosure on beta remains robust when including control variables; the level of significance, however, shrinks.

Regression analysis between the disclosure score and Tobin's q value delivers a negative and insignificant result and therefore rejects hypothesis 3a (*The higher the quality of disclosure, the higher will be shareholder value*). The previous result that ICGSa has a positive impact on Tobin's q when the debt/equity ratio is taken into account differs from the disclosure analysis. The debt/equity ratio does not contribute to a significant relationship between disclosure and Tobin's q. In fact, when the debt/equity ratio is employed into the equation (8) as a control variable the value for the adjusted R² increases to 6.8%; the impact of disclosure on beta remains negative and insignificant. The influence of the debt/equity ratio on beta is negative and insignificant (-24.5% at the 0.133 level) so that it cannot be concluded that firms with a high quality of disclosure and a low debt/equity ratio have a lower cost of equity capital. In addition, if Tobin's q is substituted for beta, the debt/equity ratio shows a negative and significant impact (-30.6% at the 0.042 level). Disclosure, however, has, other than expected, a negative and insignificant influence on Tobin's q (-10.6% at the 0.471 level). Consequently, a significant relationship between disclosure and shareholder value cannot be found for the underlying sample. This result may be due to the fact that first, there are many variables other than disclosure which influence shareholder value but cannot be observed and that second, firms with a high quality of disclosure and a low cost of equity capital may not necessarily have a lower total cost of capital.

In summary, neither hypothesis 3a nor hypothesis 3b can be confirmed. The significance of the result for hypothesis 3b is slightly over the 0.10 level so that at least

a weak relationship between the quality of disclosure and the cost of equity capital measured by beta can be assumed.

6.2.4.8 Evidence on Hypotheses

The results of the previously specified hypotheses are summarized as follows:

Table 18: Evidence on hypotheses for CGSa

Hypotheses	Effect	Significance	Result
H ₁ : The quality of the overall corporate governance system has a positive impact on shareholder value.	+	0.877	H ₁ rejected
H ₂ : The quality of the internal corporate governance system (ICGS) has a positive impact on shareholder value.	+	0.022	H ₂ confirmed
H _{3a} : The higher the quality of disclosure the higher is shareholder value.	-	0.394	H _{3a} rejected
H _{3b} : The higher the quality of disclosure the lower is the cost of equity capital measured by beta.	-	0.115	H _{3b} rejected

Following the findings of corporate governance literature, it was assumed that the quality of firm-level corporate governance affects shareholder value positively (Hypothesis 1). Hypothesis 1 has to be rejected even after controlling for firm characteristics. This result is supported by the discussion in the literature that corporate governance is possibly influenced by a variety of economic factors which are difficult to identify. Consequently, it is differentiated between ICGS and disclosure. The respective hypothesis 2 assumes that ICGS should have a positive impact on shareholder value measured by Tobin's q. OLS regressions confirm a positive and significant relationship, which is even improved by employing the capital structure. The evidence of a significant impact of ICGS is conditioned by the debt/equity ratio indicating that firms with good ICGS dispose of a higher Tobin's q if their debt/equity ratio is rather low.

The debt/equity ratio functions as a moderating variable in the respective equation. The economic interpretation of this result is that investors evaluate firms according to their quality of ICGS as well as their debt/equity ratio. Both criteria give investors security that their interests will be of importance. ICGS and debt/equity ratio interact with each other: Firms with good ICGS will attract more investors than firms with bad ICGS resulting in a low debt/equity ratio. On the other hand, firms which are less indebted will have an incentive to invest in their ICGS in order to satisfy and maintain existing investors.

As far as disclosure is concerned, disclosure deals with the information economic aspect of corporate governance and therefore has different goals than control mechanisms or incentive schemes. Since the disclosure policy alone does not qualify a firm to have good corporate governance, investors are not expected to evaluate firms merely according to the quality of their disclosure. In fact, voluntary disclosure practice serves to facilitate investment decisions which investors reward with lower risk premiums. Consequently, a significant impact of disclosure on shareholder value is not expected and hypothesis H_{3a} is rejected. Furthermore, as the literature states that disclosure policy is important for reducing the information gap among investors who require a smaller risk premium, hypothesis H_{3b} postulates a negative relationship between the firm-level disclosure score and the cost of equity capital measured by beta according to the CAPM. This hypothesis cannot be confirmed either, although the level of significance is not too bad. This shows that closing the information gap with better disclosure of firm-specific information may still reduce investors' observed risk, which finally corresponds to a lower cost of equity capital.

6.2.5 Robustness tests

This section serves to check the robustness of previous results for regression analyses. The robustness as investigated here relates to a change in the determination of the corporate governance score. As has been mentioned before, it can be assumed that the results of the empirical investigation depend considerably on how the independent variable, here the quality of corporate governance, is calculated. This section presents two alternative calculations of the corporate governance score which focus on the relative quality of firms' corporate governance rather than on their absolute quality as

before. The aim is to analyze how the results above change when another measure of corporate governance quality applies.

6.2.5.1 First Alternative Calculation of the Corporate Governance Score

The first alternative to the calculation of the corporate governance score is to relate the individual points achieved by each firm to the maximum points achievable in the questionnaire and the checklist, respectively. By doing so, the firm-specific corporate governance quality is evaluated by its distance to the ideal corporate governance quality. The maximum points are given the value '1', all points below the maximum points are then lower than '1'. In a next step, the regression analyses presented above are carried out with the new score, which is denoted as CGSb in the following.

The first analysis concerns the relationship between the overall corporate governance score and shareholder value as measured by Tobin's q.

$$Tobin'sq_i = \alpha_0 + \alpha_1 \cdot CGSb_i + \varepsilon_i \quad (9)$$

Table 19: Regression analyses for CGSb (1)

Regressors	Hypotheses	Standardized coefficients	t-statistics	p-value
Constant		0.327	0.606	0.547
CGSb	+	0.265	1.806	0.078
Adjusted R ²	4.9%			
F-test	3.260			0.078

The results for equation (9) show a positive and significant effect of the quality of corporate governance on Tobin's q. In contrast to CGSa CGSb has a much stronger and more significant explanatory power. In order to check the robustness other possible independent variables are included into the regression equation. The following equation (10) employs the debt/equity ratio and the proportion of international sales to total sales.

$$Tobin'sq_i = \alpha_0 + \alpha_1 \cdot CGSb_i + \alpha_2 \cdot D/E_i + \alpha_3 \cdot IS_i + \varepsilon_i \quad (10)$$

Table 20: Regression analyses for CGSb (2)

Regressors	Hypotheses	Standardized coefficients	t-statistics	p-value
Constant		0.875	1.210	0.234
CGSb	+	0.165	0.944	0.351
D/E	-	-0.255	-1.535	0.133
IS	+	0.075	0.463	0.646
Adjusted R ²	7.4%			
F-test	2.067			0.121

Comparable to the results with CGSa equation (10) shows that the effect of corporate governance decreases considerably when taking other variables into account. In fact, the influence of corporate governance becomes even insignificant. This picture is consistent with the results on the basis of CGSa. Therefore, hypothesis 1 can be rejected here as well. The next analyses focus on a differentiation between the internal corporate governance system and disclosure. As far as the impact of ICGS is concerned, the relevance of the capital structure has been discussed before. Consequently, employing the debt/equity ration into the regression equation (11) is consistent with previous analyses.

$$Tobin'sq_i = \alpha_0 + \alpha_1 \cdot ICGSb_i + \alpha_2 \cdot D/E_i + \varepsilon_i \quad (11)$$

Table 21: Regression analyses for ICGSb (1)

Regressors	Hypotheses	Standardized coefficients	t-statistics	p-value
Constant		1.066	1.800	0.079
ICGSb	+	0.144	0.910	0.368
D/E	-	-0.256	-1.614	0.114
Adjusted R ²	7.4%			
F-test	2.770			0.074

Again, the results are consistent with ICGSa regarding a weak influence of ICGS on Tobin's q. In a next step, the debt/equity ratio is considered for moderating effects. As shown in Table 22, employing the debt/equity ratio as the moderator variable increases the overall explanatory power of the equation to 16.9%. Moreover, ICGSb turns out to be a significant variable when taking the capital structure into account. Therefore, hypothesis 2 can be confirmed.

$$Tobin's q_i = \alpha_0 + \alpha_1 \cdot ICGSb_i + \alpha_2 \cdot D/E_i + \alpha_3 \cdot (ICGSb_i \cdot D/E_i) + \varepsilon_i \quad (12)$$

Table 22: Regression analyses for ICGSb (2)

Regressors	Hypotheses	Standardized coefficients	t-statistics	p-value
Constant		0.140	0.206	0.836
ICGS	+	0.474	2.328	0.025
D/E	+	0.574	1.522	0.136
ICGS* D/E	-	-0.827	-2.401	0.021
Adjusted R ²	16.9%			
F-test	3.978			0.014

Finally, the hypotheses regarding the influence of disclosure are tested. In single OLS regressions the quality of disclosure as measured according to the underlying method shows an insignificant relationship with Tobin's q. This is consistent with previous results and hypothesis 3a can be rejected. Relating disclosure to beta, however, delivers a negative impact which is significant at the 10% level (see Table 23) and hypothesis 3b can be confirmed.

$$Beta_i = \alpha_0 + \alpha_1 \cdot DISb_i + \varepsilon_i \quad (13)$$

Table 23: Regression analyses for disclosure (b)

Regressors	Hypotheses	Standardized coefficients	t-statistics	p-value
Constant		1.406	4.147	0.000
DISb	-	-0.278	-1.759	0.087
Adjusted R ²	5.2%			
F-test	3.094			0.087

The alternative calculation of the corporate governance score by relating the firm-specific points to the maximum achievable points does not disturb the previous results considerably. The evidence on the hypotheses is exact the same except for the relationship between disclosure and beta which is here more significant, thus confirming hypothesis 3b (see Table 24).

Table 24: Evidence on hypotheses for CGSb

Hypotheses	Effect	Significance	Result
H ₁ : The quality of the overall corporate governance system has a positive impact on the shareholder value.	+	0.351	H ₁ rejected
H ₂ : The quality of the internal corporate governance system (ICGS) has a positive impact on shareholder value.	+	0.025	H ₂ confirmed

H _{3a} : The higher the quality of disclosure the higher is shareholder value.	+	0.412	H _{3a} rejected
H _{3b} : The higher the quality of disclosure the lower is the cost of equity capital measured by beta.	-	0.087	H _{3b} confirmed

6.2.5.2 Second Alternative Calculation of the Corporate Governance Score

A second alternative to the calculation of the corporate governance quality is to relate the points achieved by each individual firm to the firm with the highest points, i.e. the firm with the best quality standards for the respective corporate governance criteria. This score which is referred to as CGSc here differs from CGSb in that it compares firms according to best practice and not merely according to the criteria previously specified. The following illustrations present regression results on the basis of CGSc. The analyses start with testing hypothesis 1 on a positive relationship between the overall corporate governance score and Tobin's q.

$$Tobin's q_i = \alpha_0 + \alpha_1 \cdot CGSc_i + \varepsilon_i \quad (14)$$

Table 25: Regression analyses for CGSc (1)

Regressors	Hypotheses	Standardized coefficients	t-statistics	p-value
Constant		0.367	0.659	0.513
CGSc	+	0.248	1.679	0.100
Adjusted R ²	4.0%			
F-test	2.818			0.100

Other than previous results equation (14) shows a positive and significant (10% level) relationship between the overall corporate governance score and Tobin's q. Though the influence is not strongly significant, hypothesis 1 cannot yet be rejected under the calculation with CGSc. In a next step, control variables are employed (see equation (15)).

$$Tobin's\ q_i = \alpha_0 + \alpha_1 \cdot CGSc_i + \alpha_2 \cdot D/E_i + \alpha_3 \cdot IS_i + \varepsilon_i \quad (15)$$

Table 26: Regression analyses for CGSc (2)

Regressors	Hypotheses	Standardized coefficients	t-statistics	p-value
Constant		0.977	1.347	0.186
CGSc	+	0.128	0.707	0.484
D/E	-	-0.267	-1.577	0.123
IS	+	0.081	0.493	0.625
Adjusted R ²	6.4%			
F-test	1.918			0.144

As shown in Table 26, the influence of the overall corporate governance quality decreases considerably when employing further variables. The results do not remain

significant leading to a rejection of hypothesis 1. Again, the splitting into ICGS and disclosure appears to be reasonable. Equation (16) represents the assumed relationship between ICGS and Tobin's q.

$$Tobin'sq_i = \alpha_0 + \alpha_1 \cdot ICGSc_i + \alpha_2 \cdot D/E_i + \varepsilon_i \quad (16)$$

Table 27: Regression analyses for ICGSc (1)

Regressors	Hypotheses	Standardized coefficients	t-statistics	p-value
Constant		1.014	1.660	0.104
ICGSc	+	0.154	0.967	0.339
D/E	-	-0.251	-1.576	0.123
Adjusted R ²	7.7%			
F-test	2.829			0.070

As shown in Table 27, the impact of ICGS on Tobin's q is positive but not significant. Again, the debt/equity ratio can be assumed to have a moderating effect. Testing such an effect in equation (17) indicates that the influence of ICGS is significant when considering the debt/equity ratio as a moderator variable. Moreover, the overall explanatory power of the equation increases to 18.2% and hypothesis 2 can be confirmed.

$$Tobin'sq_i = \alpha_0 + \alpha_1 \cdot ICGSc_i + \alpha_2 \cdot D/E_i + \alpha_3 \cdot (ICGSc_i \cdot D/E_i) + \varepsilon_i \quad (17)$$

Table 28: Regression analyses for ICGSc (2)

Regressors	Hypotheses	Standardized coefficients	t-statistics	p-value
Constant		-7.48 E-03	-0.011	0.992
ICGSc	+	0.504	2.472	0.018
D/E	+	0.619	1.652	0.106
ICGSc* D/E	-	-0.864	-2.531	0.015
Adjusted R ²	18.2%			
F-test	4.265			0.010

Testing for hypothesis 3a, regression analyses deliver a negative but highly insignificant relationship between the quality of disclosure and shareholder value measured by Tobin's q. Therefore, hypothesis 3a has to be rejected. As for hypothesis 3b, the following equation is estimated on the basis of CGSc. Similar to the results for CGSa the relationship is negative but insignificant. Even though the level of significance is not too low, hypothesis 3b cannot be confirmed.

$$Beta_i = \alpha_0 + \alpha_1 \cdot DISc_i + \varepsilon_i \quad (18)$$

Table 29: Regression analyses for disclosure (c)

Regressors	Hypotheses	Standardized coefficients	t-statistics	p-value
Constant		1.364	3.604	0.001
DISc	-	-0.233	-1.460	0.153
Adjusted R ²	2.9%			
F-test	2.131			0.153

The following Table 30 summarizes the results for the hypotheses on the basis of CGSc. Similar to CGSa hypotheses 1, 3a and 3b need to be rejected.

Table 30: Evidence on hypotheses for CGSc

Hypotheses	Effect	Significance	Result
H ₁ : The quality of the overall corporate governance system has a positive impact on shareholder value.	+	0.484	H ₁ rejected
H ₂ : The quality of the internal corporate governance system (ICGS) has a positive impact on shareholder value.	+	0.018	H ₂ confirmed
H _{3a} : The higher the quality of disclosure the higher is shareholder value.	-	0.914	H _{3a} rejected
H _{3b} : The higher the quality of disclosure the lower is the cost of equity capital measured by beta.	-	0.153	H _{3b} rejected

The robustness check in 6.2.5.1 and 6.2.5.2 has shown that the method of calculation of the corporate governance score matters only weakly. In fact, the direction of effects and their levels of significance largely remain robust so that the results for the hypotheses are widely similar for CGSa, CGSb, and CGSc, respectively.

VII Conclusion

The main goal of this thesis was to create a list of criteria for good corporate governance which are tested empirically for the German market. The research questions hereby were first whether firms with better corporate governance are able to generate higher shareholder value and second which aspects of corporate governance play a more or less important role in explaining the relationship between the quality of corporate governance and shareholder value. The foundations of this investigation lie in modern theories of the firm comprising the property rights approach, agency theory, and the transaction cost economics. All of these theoretical approaches can be applied to the problem of corporate governance in modern corporations characterized by a dispersed ownership structure. They emphasize the necessity of monitoring and incentive schemes as well as the role of voluntary disclosure. These aspects establish at the same time the basis for the underlying criteria for good corporate governance, which have been developed by taking recommendations for German corporations such as in the GCGC into consideration. The criteria for good corporate governance refer to the following aspects as presented in chapter V: Management, Supervisory board, Risk management, and Disclosure. As far as the hypotheses are concerned, it is argued that corporate governance influences managerial behavior over control and incentive mechanisms. At the same it is crucial for shareholders to receive firm-specific information in order to reduce their personal transaction costs.

This study belongs to the stream of empirical research on corporate governance, which attempts to measure the quality of firm-level corporate governance for German corporations. While the main research questions are related to recent studies, the results differ. Investigating the relationship between firm-level corporate governance and shareholder value, the assumed positive impact of corporate governance on shareholder value cannot be confirmed. Instead, it appears to be necessary to differentiate between the internal (ICGS) and external (disclosure) dimensions of corporate governance. In fact, ICGS has a positive and significant explanation power of Tobin's q , the selected proxy for shareholder value, as opposed to the overall corporate governance score. Disclosure, on the other hand, reduces information asymmetry of investors and thus their cost of equity capital measured by beta according to the CAPM.

Limitations and possible extensions of this study can be seen in the fact that the underlying study is a cross-sectional analysis of the relationship between corporate governance and shareholder value. As previous studies have indicated, the importance of time-series analyses which would allow investigating the consequences of a change in the corporate governance systems of firms is not to be neglected. Therefore, it would be useful to observe differences in firm valuation over several management generations.

With this study new results are contributed to the empirical corporate governance literature, particularly in Germany. The results indicate that in the short run firms should invest in both the internal and external corporate governance dimensions as positive effects can be established. These effects should not be overestimated, however, as there are potentially further economic factors and interactions of them which may play a larger role. Consequently, c. p. it is reasonable for firms to invest in their corporate governance systems. On a long-term basis, the impact of corporate governance on shareholder value may be stronger. In fact, Germany is rather at the beginning of reforming its corporate governance structure and new recommendations and regulations are expected to come in the future.

Appendix 1: Questionnaire on the Quality of ICGS

I. MANAGEMENT AND CONTROL

Managing board

A) Contractual arrangements

A1) How long is the average length of management contracts?

A2) Is there an age limit for managers?

- Yes
- No

If yes, what is the age limit?

A3) Do management contracts provide for severance payments in the event of an early termination of contracts, particularly in case of hostile takeovers?

- Yes
- No

B) External mandates

B1) Are there any regulations in the articles of incorporation or in management contracts on how many supervisory board mandates managers are allowed to hold at maximum outside the firm?

- Yes
- No

If yes, how many?

C) Independence

C1) How does the firm deal with possible conflicts of interest of individual managers?

- Disclosure toward the supervisory and the managing board
- Option for the respective manager to participate in relevant discussions and votings
- Prohibition of the respective manager's participation in relevant discussions and votings
- Retraction of the mandate
- Other:

D) Liability

D1) Has the firm taken out a D&O-insurance policy for its managers?

- Yes
- No

If yes, does the insurance policy provide for a participation of individual managers in damages?

- Yes
- No

If yes, how is such a participation arranged ?

Supervisory board

A) Contractual arrangements

A1) Is there an age limit for supervisory board members?

- Yes
- No

If yes, what is the age limit?

B) External mandates

B1) Are there any regulations in the articles of incorporation on how many external board mandates supervisory board members are allowed to hold at maximum?

- Yes
- No

If yes, how many?

C) Board composition

C1) How many supervisory board members are representatives of banks which play a major role in the firm's debt financing?

D) Independence

- D1) How many supervisory board members are former managers of the firm?
- D2) Is the chairman of the supervisory board at the same time a member of the audit committee?
- Yes
 - No
- D3) Is the chairman of the audit committee a former manager of the firm?
- Yes
 - No
- D4) How does the firm deal with possible conflicts of interest of individual supervisory board members?
- Disclosure toward the chairman of the supervisory board
 - Option for the respective member to participate in relevant discussions and votings
 - Prohibition of the respective member's participation in relevant discussions and votings
 - Retraction of the mandate
 - Other:

E) Liability

- E1) Has the firm taken out a D&O-insurance policy for the supervisory board members?

- Yes
- No

If yes, does the insurance policy provide for a participation of individual members in damages?

- Yes
- No

If yes, how is such a participation arranged ?

F) Supply of information

F1) How often does the managing board supply the supervisory board with information on the following issues?

	monthly	quarterly	half-yearly	yearly
Strategy				
Business planning				
Business development				
Risk management				

F2) Are the duties of the managing board to supply information specified in any written form with respect to content, form, and frequency?

- Yes
- No

F3) Are there board committees specialized in certain topics or tasks in order to improve the supply of information to the supervisory board as well as to increase the efficiency of the work of the supervisory board?

- Yes
- No

If yes, which committees?

- Strategy committee
- Audit committee
- Risk management committee
- Corporate governance committee
- Personnel committee for managers
- Other:

F4) Please estimate the importance of the following sources of information for the supervisory board.

	Not important			Very important	
Managing board	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Management accounting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internal audit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Auditor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Board committees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

G) Board Meetings

- G1) Do the board committees prepare separately for board meetings?
- Yes
 - No
- G2) Do representatives of shareholders and representatives of employees prepare separately for board meetings?
- Yes
 - No
- G3) Does the supervisory board prepare together with the managing board for its meetings?
- Yes
 - No
- G4) Does the supervisory board regularly sit without the managing board?
- Yes
 - No
- G5) Does the supervisory board regularly evaluate its efficiency?
- Yes
 - No

If yes, how? (e.g. peer review)

II. RISK MANAGEMENT

A) Risk Strategy

- A1) Has the firm defined a risk strategy as a part of its corporate strategy?
- Yes
 - No

If yes, are risk policies developed from such an overall risk strategy for operative business units?

- Yes
- No

A2) Does the firm has a risk handbook with company-wide guidelines on risk management specifying responsibilities, reporting duties, and principles of risk management?

- Yes
- No

B) Risk Management Process

Risk Identification and Analysis

B1) Please estimate the importance of the following instruments of risk identification within the firm.

	Not important			Very important		
Brainstorming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Checklists	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Group discussions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Observation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

B2) Please estimate the importance of the following instruments of risk analysis within the firm.

	Not important			Very important		
Risk inventory	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scenario analyses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Balance sheet simulations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Risk drivers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Statistical analyses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Calculation of risks

B3) Are qualitative risks calculated or “evaluated”?

- Yes
- No

If yes,

1) how?

2) does such an evaluation include estimations on the probability and potential of damage?

- Yes
- No

B4) Which measures or concepts are used to evaluate quantitative risks?

B5) Are individual or business unit-specific risks aggregated to a total risk of the firm?

- Yes
- No

Risk Control

B6) Has the firm specified any risk limits for operative business units?

- Yes
- No

If yes, are there any sanction mechanisms in the case of non-compliance?

- Yes
- No

If yes, what are these sanctions?

B8) Does the firm account for diversification effects in its allocation of risk capital to operative business units?

- Yes
- No

B9) Does the firm allocate risk-specific equity capital to operative business units?

- Yes
- No

B10) Is there an instrument for risk control which is based on ratios? (e.g. Balanced Chance and Risk Card)?

- Yes
- No

If yes, please describe the main characteristics of this instrument.

C) Institutionalization of Risk Management

C1) Which of the following departments exist within the firm?

- Risk Accounting – as part of Management Accounting
- Internal Audit
- Risk committee
- Treasury Department
- Other

D) Internal Risk Reporting

D1) Are employees motivated to an on-time reporting of observed risks?

- Yes
- No

If yes, how?

III. COMPENSATION

Supervisory board = Sb

Managing board = Mb

Top management = Tm

Middle management = Mm (e.g. Head of department)

Lower management = Um (e.g. Product manager)

Long-term incentives (> 1 year)

A) Composition of Total Compensation

A1) What is the composition of the total compensation?

	Sb	Mb	Tm	Mm	Lm
Fixed income					
Yearly bonus payments					
Long-term incentives					

B) Variable Component of Compensation

B1) To which measures are yearly bonus payments related?

	Sb	Mb	Tm	Mm	Lm
Absolute share price performance					
Share price performance relative to market performance					
Share price performance relative to industry performance					
Internal shareholder value-ratio, since when?					
Measures based on the balance sheet and/or the profit&loss account					
Individual arrangements					
Other					

B2) Are there any upper caps for yearly bonus payments?

- Yes
- No

B3) To which measures are long-term incentives related?

	Sb	Mb	Tm	Mm	Lm
Absolute share price performance					
Share price performance relative to market performance					
Share price performance relative to industry performance					
Internal shareholder value-ratio, since when?					
Measures based on the balance sheet and/or the profit&loss account					
Individual arrangements					
Other					

B4) Which instruments are used in order to create long-term incentives?

	Sb	Mb	Tm	Mm	Lm
Stock options					
Convertible bonds					
Appreciation rights					
Virtual / Phantom stocks					
Employee stocks					
Other					

B5) If stock options are used, is there a minimum time horizon to be respected before exercising them?

- Yes
- No

If yes, how long is this time horizon?

- 1 year
- 2 years
- 3 years
- >3 years

Appendix 2: Disclosure Checklist

I. VALUE REPORTING

- 1) Does the firm present its share price performance over several years (at least over 3 years) and compare it to an industry index?
- 2) Does the firm report on value-based management or at least on the goal of a long-term increase of its firm value?
- 3)
 - a. Does the firm report on an internal value-based measure?
 - b. Is this measure quantified?
 - c. Is the calculation of the measure explained?
- 4) Are intangible assets explicitly mentioned?
- 5) Does the firm report on its dividend policy?
- 6) Is there a calculation of the value added?
- 7) Does the firm report on at least two share price ratios such as earnings per share or price/earnings ratio?

II. RISK DISCLOSURE

- 1) Is there a separate risk report in the annual report?
- 2) Are there any references in the risk report to other parts of the annual report?
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- 4) Does the firm report on basic or fundamental risks?
- 5) Does the firm report on risks that may endanger the financial standing of the firm considerably?
- 6) Are there any comments on risk concentration?
- 7) Is the focus of risk disclosure on firm-specific risks?
- 8) Are individual risks described?
- 9) Is there any information on damage potential?
- 10) Does the firm report on risks at the business unit level?
- 11)
 - a. Is there any information on probabilities?
 - b. If yes, are these probabilities quantified?

- 12) Are risks quantified? (value at risk, cash flow at risk, duration measures, sensitivity or scenario analyses)
- 13) Are the methods used to quantify risks and their premises explained?
- 14) Is there any information on how the firm deals with risks?
- 15) Does the firm report on risks remaining after insurance or hedging activities?
- 16) Is there any information on interdependencies between risks?
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- 18) Does the firm comment on any changes in the firm's risk exposure compared to the year before?
- 19) Does the firm report on the strategy of its risk management?
- 20) Does the firm explain how its risk management system is structured in terms of organization and process?
- 21) Is there any information on the existence of a risk handbook?

III. DISCLOSURE ON COMPENSATION

- 1) Are there any quantitative comments on the composition of compensation (fixed versus variable)?
- 2) Does the firm report on the individual compensation of managing and supervisory board members?
- 3) Does the firm report on long-term incentives such as stock options?
- 4) Does the firm report on buying and selling activities of managing and supervisory board members?

IV. FORECAST REPORT

- 1) Does the firm comment on its position and development within the industry?
- 2) Does the firm report on its expected market share?
- 3) Is there any information the firm's long-term market strategy?
- 4) Does the firm comment on the competition expected for the future?
- 5) Does the firm report on expected developments of individual business units?

V. FURTHER INVESTOR RELATIONS MEASURES

- 1) Does the firm report on its own corporate governance principles?
- 2) Does the firm allow shareholders to pursue the shareholders' assembly and other public conferences over the internet?

Appendix 3: Translation of the Questions into the Corporate Governance Score

I. MANAGEMENT AND CONTROL

Managing board

A) Contractual arrangements

A1) How long is the average length of management contracts?

1 point if less than 5 years, 0 otherwise

A2) Is there an age limit for managers?

- Yes
- No

If yes, what is the age limit?

2 points if age limit is equal to or less than 65, 1 point if it is over 65

A3) Do management contracts provide for severance payments in the event of an early termination of contracts, particularly in case of hostile takeovers?

- Yes
- No

1 point for "No"

B) External mandates

B1) Are there any regulations in the articles of incorporation or in management contracts on how many supervisory board mandates managers are allowed to hold at maximum outside the firm?

- Yes
- No

If yes, how many?

2 points if less than "5", 1 point if "5" or more than "5"

C) Independence

- C1) How does the firm deal with possible conflicts of interest of individual managers?
- Disclosure toward the supervisory and the managing board
 - Option for the respective manager to participate in relevant discussions and votings
 - Prohibition of the respective manager's participation in relevant discussions and votings
 - Retraction of the mandate
 - Other:

1 point for each positive answer

D) Liability

- D1) Has the firm taken out a D&O-insurance policy for its managers?

- Yes
- No

If yes, does the insurance policy provide for a participation of individual managers in damages?

- Yes
- No

If yes, how is such a participation arranged ?

1 point if participation is provided for

Supervisory board

A) Contractual arrangements

- A1) Is there an age limit for supervisory board members?

- Yes
- No

If yes, what is the age limit?

2 points if age limit is equal to or less than 65, 1 point if it is over 65

B) External mandates

B1) Are there any regulations in the articles of incorporation on how many external board mandates supervisory board members are allowed to hold at maximum?

- Yes
- No

If yes, how many?

2 points if less than “5”, 1 point if “5” or more than “5”

C) Board composition

C1) How many supervisory board members are representatives of banks which play a major role in the firm’s debt financing?

Question not considered in the score

D) Independence

D1) How many supervisory board members are former managers of the firm?

Question not considered in the score

D2) Is the chairman of the supervisory board at the same time a member of the audit committee?

- Yes
- No

1 point if “No”

D3) Is the chairman of the audit committee a former manager of the firm?

- Yes
- No

1 point if “No”

D4) How does the firm deal with possible conflicts of interest of individual supervisory board members?

- Disclosure toward the chairman of the supervisory board
- Option for the respective member to participate in relevant discussions and votings
- Prohibition of the respective member's participation in relevant discussions and votings
- Retraction of the mandate
- Other:

1 point for each positive answer

E) Liability

E1) Has the firm taken out a D&O-insurance policy for the supervisory board members?

- Yes
- No

If yes, does the insurance policy provide for a participation of individual members in damages?

- Yes
- No

If yes, how is such a participation arranged?

1 point if participation is provided for

F) Supply of information

F1) How often does the managing board supply the supervisory board with information on the following issues?

	monthly	quarterly	half-yearly	yearly
Strategy				
Business planing				
Business development				
Risk management				

Question not considered in the score

F2) Are the duties of the managing board to supply information specified in any written form with respect to content, form, and frequency?

- Yes
- No

1 point if “Yes”

F3) Are there board committees specialized in certain topics or tasks in order to improve the supply of information to the supervisory board as well as to increase the efficiency of the work of the supervisory board?

- Yes
- No

If yes, which committees?

- Strategy committee
- Audit committee
- Risk management committee
- Corporate governance committee
- Personnel committee for managers
- Other:

1 point for each positive answer

F4) Please estimate the importance of the following sources of information for the supervisory board.

	Not important			Very important	
Managing board	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Management accounting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internal audit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Auditor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Board committees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2 points for each answer if “very important”, 1 point if one less than “very important”

G) Board Meetings

G1) Do the board committees prepare separately for board meetings?

- Yes
- No

1 point if “Yes”

G2) Do representatives of shareholders and representatives of employees prepare separately for board meetings?

- Yes
- No

1 point if “Yes”

G3) Does the supervisory board prepare together with the managing board for its meetings?

- Yes
- No

1 point if “Yes”

G4) Does the supervisory board regularly sit without the managing board?

- Yes
- No

1 point if “Yes”

G5) Does the supervisory board regularly evaluate its efficiency?

- Yes
- No

If yes, how? (e.g. peer review)

1 point if “Yes”

II. RISK MANAGEMENT

A) Risk Strategy

A1) Has the firm defined a risk strategy as a part of its corporate strategy?

- Yes
- No

1 point if “Yes”

If yes, are risk policies developed from such an overall risk strategy for operative business units?

Question not considered in the score

A2) Does the firm has a risk handbook with company-wide guidelines on risk management specifying responsibilities, reporting duties, and principles of risk management?

- Yes
- No

1 point if "Yes"

B) Risk Management Process

Risk Identification and Analysis

B1) Please estimate the importance of the following instruments of risk identification within the firm.

	Not important			Very important		
Brainstorming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Checklists	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Group discussions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Observation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Question not considered in the score

B2) Please estimate the importance of the following instruments of risk analysis within the firm.

	Not important			Very important		
Risk inventory	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scenario analyses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Balance sheet simulations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Risk drivers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Statistical analyses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Question not considered in the score

Calculation of risks

B3) Are qualitative risks calculated or “evaluated”?

- Yes
- No

1 point if “Yes”

If yes,

1) how?

2) does such an evaluation include estimations on the probability and potential of damage?

- Yes
- No

1 point if “Yes”

B4) Which measures or concepts are used to evaluate quantitative risks?

3 points at maximum if “value at risk”, “sensitivity analysis” or “damage potential times probability”

B5) Are individual or business unit-specific risks aggregated to a total risk of the firm?

- Yes
- No

1 point if “Yes”

Risk Control

B6) Has the firm specified any risk limits for operative business units?

- Yes
- No

1 point if “Yes”

If yes, are there any sanction mechanisms in the case of non-compliance?

- Yes
- No

1 point if “Yes”

If yes, what are these sanctions?

Question not considered in the score

B8) Does the firm account for diversification effects in its allocation of risk capital to operative business units?

- Yes
- No

1 point if “Yes”

B9) Does the firm allocate risk-specific equity capital to operative business units?

- Yes
- No

1 point if “Yes”

B10) Is there an instrument for risk control which is based on ratios? (e.g. Balanced Chance and Risk Card)?

- Yes
- No

1 point if “Yes”

If yes, please describe the main characteristics of this instrument.

Question not considered in the score

C) Institutionalization of Risk Management

C1) Which of the following departments exist within the firm?

- Risk Accounting – as part of Management Accounting
- Internal Audit
- Risk committee
- Treasury Department
- Other

1 point for each positive answer

D) Internal Risk Reporting

D1) Are employees motivated to an on-time reporting of observed risks?

- Yes
- No

1 point if “Yes”

If yes, how?

Question not considered in the score

III. COMPENSATION

Supervisory board = Sb

Managing board = Mb

Top management = Tm

Middle management = Mm (e.g. Head of department)

Lower management = Um (e.g. Product manager)

Long-term incentives (> 1 year)

A) Composition of Total Compensation

A1) What is the composition of the total compensation?

	Sb	Mb	Tm	Mm	Lm
Fixed income					
Yearly bonus payments					

Long-term incentives					
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1 point for each positive answer for long-term incentives and for bonus payments, respectively (10 points at maximum)

B) Variable Component of Compensation

B1) To which measures are yearly bonus payments related?

	Sb	Mb	Tm	Mm	Lm
Absolute share price performance					
Share price performance relative to market performance					
Share price performance relative to industry performance					
Internal shareholder value-ratio, since when?					
Measures based on the balance sheet and/or the profit&loss account					
Individual arrangements					
Other					

1 point for each positive answer except for the last three rows (20 points at maximum)

B2) Are there any upper caps for yearly bonus payments?

- Yes
- No

1 point if "Yes"

B3) To which measures are long-term incentives related?

	Sb	Mb	Tm	Mm	Lm
Absolute share price performance					
Share price performance relative to market performance					

Share price performance relative to industry performance					
Internal shareholder value-ratio, since when?					
Measures based on the balance sheet and/or the profit&loss account					
Individual arrangements					
Other					

1 point for each positive answer except for the last three rows (20 points at maximum)

B4) Which instruments are used in order to create long-term incentives?

	Sb	Mb	Tm	Mm	Lm
Stock options					
Convertible bonds					
Appreciation rights					
Virtual / Phantom stocks					
Employee stocks					
Other					

1 point for each positive answer

B5) If stock options are used, is there a minimum time horizon to be respected before exercising them?

- Yes
- No

1 point if "Yes"

If yes, how long is this time horizon?

- 1 year
- 2 years
- 3 years

- o >3 years

Question not considered in the score

Disclosure Checklist

1 point is given for each positive answer

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V. FURTHER INVESTOR RELATIONS MEASURES

- 1) Does the firm report on its own corporate governance principles?
- 2) Does the firm allow shareholders to pursue the shareholders' assembly and other public conferences over the internet?

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