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EDITORIAL

Dear readers!

This issue of the journal is devoted to the issue of corporate ownership that is originated from the title of our journal. We tried to consider the issue of corporate ownership from various positions. A focus was done toward the markets of different countries and regions such as Asia and Europe, Canada, the USA, UK and others. Authors of the papers on corporate ownership made their utmost to deliver the new findings to the reading audience.

The very progressive element of the research on corporate ownership presented in the journal is a very thorough comparative analysis of corporate ownership structure in various countries both developed and developing. That gives a new incentive to investigate the issue of corporate ownership more.

Besides that we introduce you papers on such challenging issues in corporate governance as corporate control with application to European countries, corporate governance and financial system with application to Japan, employee stock options, mergers and acquisitions and few others. We expect that these papers will be interesting for you and make you consider an opportunity to submit a paper to the journal.

A special section on corporate governance in a particular country is devoted to Germany. The papers published in this section concerns the major direct impacts of SOX on the European Union (EU) and Germany as a Member State, the importance of corporate governance for growth companies, derives specific requirements for them and evaluates the corporate governance quality for companies listed on Tec-Dax, the financial impact of initial IFRS adoption on the statement of changes in equity and the income statement of German companies. All these issues are on the forefront of corporate governance in Germany.

"Practitioner's corner" narrates on the research of the corporate board practices. Special attention is paid to the issue of the director independence. Moreover, this is a detailed analysis of factors influencing the board composition.

We hope that you will enjoy the journal content and join the author or subscriber groups of our journal.

CORPORATE OWNERSHIP & CONTROL

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CONTENTS

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find evidence that the variables vary with culture, e.g., in general patterns in English speaking countries appear to be comparable, but not so for other countries. We found it also varies across countries.

SECTION 2. CORPORATE OWNERSHIP

SECTION 3. NATIONAL PRACTICES OF CORPORATE GOVERNANCE: GERMANY

SECTION 4. PRACTITIONER'S CORNER

SECTION 5. CORPORATE WORLD NEWS

РАЗДЕЛ 1
НАУЧНЫЕ ИССЛЕДОВАНИЯ
И КОНЦЕПЦИИ

SECTION 1
ACADEMIC
INVESTIGATIONS
& CONCEPTS

CORPORATE CONTROL AND RELATIONSHIP FINANCE BY BANKS OR BY NON-BANK INSTITUTIONAL INVESTORS? A REVIEW WITHIN THE THEORY OF THE FIRM

Ettore Andreani, Doris Neuberger*

Abstract

In continental Europe, banks are more and more replaced by non-bank institutional investors in the financing and control of firms, which may imply a shift from relationship finance with insider control to arm's length finance with outsider control. However, non-bank institutional investors may develop relationships with firms similar to the traditional long-term bank-firm relationship, providing substitutive services. The present paper differentiates between relationship banking and relationship investing within the theory of the firm and reviews the financial and corporate control services provided by both arrangements.

Keywords: corporate control, relationship banking, relationship investing, banks, institutional investors, theory of the firm

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1. Introduction

The financial systems of continental Europe are under change, driven by population ageing, wealth accumulation, technological change and financial market integration. Demographic trends with a move towards funded pension systems will boost capital markets and enhance the shift from traditional bank intermediation to intermediation by non-bank institutional investors, mainly pension funds, mutual funds and life insurance companies (Davis 2003, Schmidt et al. 1999). Increasing competition between large publicly held companies for international capital market funds and between performance oriented asset managers for mobilizing savings put pressure on management to increase shareholder orientation and improve investor relations, in particular by the release of more public information. Since the professional institutional investors hold internationally diversified portfolios of investments, whose returns are periodically evaluated against international benchmarks, their activities have induced an international standardization of investments policies and performance measurements (Moerland 1995). This puts the control–oriented financial systems with their reliance on insider control, long-term implicit contracts and stakeholder orientation under pressure, in particular regarding the role of banks as an effective instrument of control in such systems as the German and the Japanese ones (Neuberger, 2000).

This development may be seen as a move from continental European bank-based financial systems towards the Anglo-Saxon market-based system. According to a well established literature the contrast

between both systems is exemplified by the contrast between short-termism and long-termism (Kaplan 1994). The Anglo-Saxon market-based system is characterized by a large number of institutional investors who have a short-term investment approach, focusing their attention on annual and inter-annual results and on return ratios, and by companies that finance themselves first of all through the capital market, while using bank loans mainly to finance day-to-day operations. On the contrary, the German and Japanese bank-based model is characterized by a small number of sizeable investors, mainly banks and insurance companies, which have a long-term investment approach and are less committed with investigating how the company is managed in the short run.[1] On the one hand, they finance directly the companies' long-term investments through long term credits, on the other hand, they are often among the biggest shareholders of the companies they have financed (Wenger/Kaserer 1998). In this sense Carlin and Mayer (2000) argue that economies of scale in monitoring make banks more efficient monitors than individual market participants, in particular when good investments require the costly accumulation of available information on the quality and performance of borrowers. This is brought about especially in long-term bank-firm relationships.

However, a movement from bank-based intermediation to intermediation by non-bank institutional investors is not necessarily a shift from relationship finance to arm's length provision of finance. To the extent that institutional investors are active holders of shares and/or debt securities, they develop relationships with firms that may have features of the traditional bank-firm relationship (Perée/Riess 2003, p.24). Whether this shift from relationship banking to relationship investing will ultimately lead to efficiency gains, is an open question. In Germany, the general public is concerned about the dissolution of housebank relationships which are seen as valuable for the financing of small and medium-sized enterprises. At the same time, in the U.S. there is concern about the behavior of institutional investors, mutual funds being accused of hurting investors by pursuing their own goals (see e.g. The Economist 2003a,b).

While the benefits and costs of institutional investors' relationships with firms are primarily examined within the corporate governance literature and the literature on efficient markets (Davis 2003, Gillan/Starks 2000, Menkhoff 2002), the pros and cons of relationship banking are mainly discussed within contract theory (Boot 2000, Ongena/Smith 2000). The present paper attempts to integrate both forms of relationship finance within the theory of the firm. We will compare three alternative relationships: (1) relationship banking (or lending) as a close relationship between an industrial firm and a bank, resulting from long-term lending with inside information, (2) relationship investing as a close relationship between an industrial firm and a non-bank institutional investor, where direct control is exerted via large holdings of publicly traded shares or inside equity; (3) transaction finance (lending or investing) by publicly traded bonds or stocks on the capital market or by arm's length provision of finance by intermediaries.

The rest of the paper is organized as follows: Section 2 defines the different concepts of relationship finance and reviews the literature. In section 3 we review the relevant theories of the firm and use them to discuss the corporate control and financial services provided by both types of relationship finance. Section 4 concludes.

2. Concepts of Relationship Finance and Literature Review

2.1. Transaction Finance, Relationship Finance and Intermediation

The provision of external finance to firms can be transaction-based or relationship-based. Transaction finance may be viewed as arm's length finance which typically involves one-time or short-term interactions of contracting partners without accumulation of confidential or private information. Thus, we define transaction finance as the provision of financial services by an investor or lender that

- focuses on a single transaction rather than multiple interactions with the same contracting partner;
- involves only publicly available information.

Transaction finance may be provided directly by individual investors who buy stocks or bonds issued by firms on the capital market. In this case, the investors share directly the risks of the projects financed, relying only on public information. Typically, their available funds are too small to make costly information gathering in a single firm profitable and at the same time reduce risk by holding a diversified portfolio of investments.

Therefore, individual investors gain by delegating fund management and/or monitoring of borrowers to financial intermediaries who (1) are better informed and thus may realize a superior investment performance, (2) can diversify more broadly because they have larger funds, and (3) can reap economies of scale in investment management and/or monitoring of borrowers. In this case, direct finance is replaced by intermediated finance, where banks or non-bank financial intermediaries, so-called institutional investors, collect funds of individual investors to invest them in productive firms. The terms "financial intermediaries" and "institutional investors" are synonymous terms: institutional investors are investors in financial markets which are neither private households nor public institutions (Menkhoff 2002, p. 909). They comprise banks and non-bank financial

[1] See among others Allen/Gale (1995, 2000), Albert (1991), Guatri/Vicari (1994), Neuberger (2000). Kaplan (1994) argues that empirical findings call into question the view that the relationship oriented systems of Germany and Japan are able to ignore current measures of performance.

intermediaries like mutual funds, pension funds, insurance companies or venture capital firms.

While non-bank financial intermediaries specialize in brokerage services (like transaction services, screening, certification), banks[2] provide more services of qualitative asset transformation (like monitoring, liquidity creation and claims transformation (see Greenbaum/Thakor 1995, Bhattacharya/Thakor 1993). Thus, as shown in figure 1, intermediation by banks differs in two important aspects from intermediation by non-bank institutional investors:

- On the liability side, banks typically take funds with standard debt contracts, called deposits, which are not only risk-free (because of diversification and deposit insurance), but also highly liquid (because of liquidity insurance). Non-bank institutional investors take funds with different risk-sharing contracts (e.g. mutual fund contracts, insurance contracts) and provide risk diversification, but not liquidity transformation.

- On the asset side, banks typically provide direct loans to firms whom they screen and monitor, while non-bank institutional investors invest in publicly traded bonds and shares or in private equity of the firms which they screen and monitor.

Both types of intermediated finance also involve transaction finance, if the loans provided by banks and the investments of non-bank institutional investors are made at arm's length, without gathering of proprietary information by repeated transactions with the same contracting partner. In the case of (typically) short-term, arm's length lending by banks we speak of transaction lending, in the case of bond holdings and/or share holdings by non-bank institutional investors we speak of transaction investing. In contrast to transaction finance, we define relationship finance as the provision of financial services by an investor or lender that

- evaluates the profitability of his or her investments through multiple interactions with the same customer over time and/or across products;

- invests in customer-specific, often proprietary information (Boot 2000, p. 10).

Since such investments are typically made by financial intermediaries and not by individual savers, the term relationship finance can be equated with the term relationship intermediation.

2.2. Relationship Banking

The term relationship banking is not sharply defined in the literature.[3] Mostly, it is used to describe lending relationships of (commercial) banks, but it has also been used to address customer relationships of non-bank financial intermediaries.

We define relationship banking as

- the above defined relationship intermediation

- provided by a bank.

Since close relationships between banks and their customers typically originate from the lending business, relationship banking and relationship lending can be used as synonymous terms. In the stricter sense, the term relationship lending only involves close relationships in lending, while the term relationship banking encompasses relationship lending and close relationships from other bank services.

A bank-customer relationship arises when the frequent provision of loans, and usually also of other services, leads to benefits that accrue through time to both the bank and the customer. Often the practitioners' view of a relationship is based on concepts like "trust", "commitment", "mutual understanding" and "professionalism", without pointing out specific advantages of such a relationship relative to alternatives (Ongena/Smith 2000).

According to the modern theory of financial intermediation, the benefits of relationship banking arise mainly from a reduction of agency and information problems by unique contractual features of implicit, long-term contracts and by the use of information reusability over time. From the view of the bank, the proximity to the borrower facilitates its monitoring activity, thus minimizing the moral hazard problem of asymmetric information and providing a source of comparative advantage versus de novo lenders and capital markets who are less informed about the borrower (Boot 2000). From the view of the firm, an advantage of relationship banking is that the bank is not likely to withdraw as soon as the first problems occur, obtaining a kind of liquidity insurance over time.

Moreover, relationship banking helps to reduce financing constraints due to asymmetric information. Monitored firms can finance new projects with less informative constraints, while unmonitored firms, which cannot defend the viability of each project to individual investors, must time investments to their liquidity or internally generated funds, or to the wealth of the entrepreneur (Frohlin 1998). These benefits mainly accrue to small and medium-sized enterprises, which are informationally more opaque than large, publicly listed firms. Beyond lending, relationship banking includes various other financial services, e.g. deposits, check, clearing and cash management services. They represent both a source of revenue and information for the banks (Boot 2000), and may help to evaluate better the riskiness of lending to a firm.

The inside information accumulated by the bank in the course of a relationship represents "specific knowledge", i.e. knowledge that is transmitted between agents only at high cost[4] (Jensen/Smith 1985).

[2] The term "bank" is used for banks that provide commercial banking services. Investment banks, which do not provide these services, are considered as non-bank financial intermediaries.

[3] For reviews see Boot (2000), Ongena/Smith (2000), Elyasiani/Goldberg (2004).

[4] Without considering monetary costs it is sufficient to recall the opportunity costs of time spent by bankers in order to evaluate the project, visit the firm, keeping in touch with the entrepreneur, screening the balance sheets and so on.

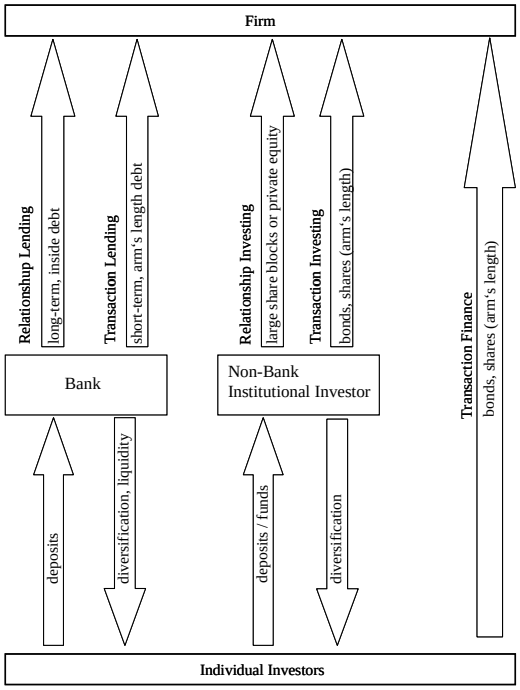

Figure 1. Intermediated vs. direct financing of firms

Let us review the benefits and costs related to information exchange. A borrower might reveal proprietary information to its bank that it would never have disclosed to the financial markets and at the same time could be "forced" to unveil some information, and to be closely monitored by the bank[5]. Because of long-term efficiency gains, the effects of bank affiliations may be more pronounced with time: for example attached firms' investment sensitivity to liquidity should be lower in the longer run, even if the evidence about this point is not unanimous (Frohlin 1998). At the same time the costs associated with the search for the most convenient bank in the retail fields are high and the expected return of search is low for most of the retail banking customers. As a consequence the demand for most of the standard retail banking services is likely to be characterized by "bank loyalty", i.e. the tendency to maintain a banking relationship after having chosen a bank (Neuberger 1998). As a matter of fact in order for the client to obtain a competitive offer from another bank, the de novo bank must be provided with references and other pertinent information, involving costs to the applicant and the bank, while the applicant cannot be sure that the savings associated with the new conditions can overcome the search costs. This is due both to the firm's difficulty in conveying information about its superior performance to other banks and to adverse selection, that makes it difficult for one bank to attract another bank's best customers without attracting first the less desirable ones (Sharpe 1990). At least three costs are borne by banks when entering into and executing a debt contract: agency costs from ex ante information asymmetries, monitoring costs linked to the control of the correspondence between the contract's clauses and the development of the financed project, and enforcement costs derived from ex post information asymmetries (Ferri/Messori 2000).

In universal banking systems, bank-customer relationships encompass commercial banking. A common source of costly information is the placement of bank directors on the firms' board of directors, as best exemplified by the German stylized tradition of having bankers on the boards of non-financial companies (Frohlin 1998). Even if Baums (1994) argues that seats on the supervisory boards don't seem to provide always better information than a large creditor has, the "information gathering activity" of the single board member is likely to differ from the information access of a large "outside" creditor. Having one or more of its managers on a client firm's board is likely to provide the financial institution access to proprietary information as well as some influence over the firm's actions (Booth/Deli 1999). The presence of bankers on boards has been considered also as a "credible message" of a close firm-bank relationship (Schäfer 2003).[6] A banker may also be appointed on the board in order to signal to other banks that an expert in bank debt is on the board to protect creditors, a role that could be performed both by affiliated and unaffiliated bankers (Booth/Deli 1999). As a matter of fact it is quite

[5] Hoshi/Kashyap/Scharfstein (1993). According to Stiglitz (1985) the nature of loan contracts enables the banks to focus their attention in information gathering about a particular set of issues, those associated with the probability of default and the net worth of the firm.

[6] The message is credible, because on the one hand the bank risks its own funds, and on the other hand the bank risks its "standing", i.e. its external image within the financial community.

difficult to distinguish between commercial bankers supplying expertise and commercial bankers monitoring lending relationships. Berglöf and Sjögren (1998) investigated the case of a bank providing loans to a borrower while an investment company, controlled by the bank[7], holds a relevant block in the borrowing company. Some authors (Albert 1991; Guatri/Vicari 1994, Albach 1997) underline another by-product of relationship banking, the stability in the control of the firm and a reduction of the myopia of some institutional investors, for example through a higher dividend retention and a lower interest in the annual and infra-annual pay out ratio, thus providing evidence for a strict preference for the "pecking order of financing".

2.3. Relationship Investing

We define relationship investing as

- the above defined relationship intermediation
- provided by a non-bank institutional investor.

The term "relationship investing" has been used to describe the shareholder activism of non-bank institutional investors in the control of publicly traded companies (Chidambaran/John 1998, Gillan/Starks 2000). Even if they mostly invest in publicly traded securities, institutional investors may obtain firm-specific, private information by multiple interactions with the same corporate customer over time. Such relationships are likely to arise, if large share blocks are held in a single corporation: they increase the incentive to invest in information gathering and monitoring through control rights and may provide special information rights by a representation on the firm's board.[8]

While this only applies to the financing of large corporations, the term "relationship investing" may also be used to describe the activities of non-bank institutional investors such as investment banks or venture capital firms in providing inside or private equity to smaller, non-listed firms. The partnership between a venture capitalist and an entrepreneur is characterized by the accumulation of firm-specific, proprietary information during the start-up and growth phase of the firm, where the venture capitalist provides screening and certification, funding, monitoring and management expertise. A venture capital contract has the following features: the entrepreneur cannot "walk away" after obtaining financing, the venture capitalist gains control of the firm after buying out the entrepreneur if a minimum performance requirement is not met, and both partners receive equity payoffs, if control remains with the entrepreneur (Greenbaum/Thakor 1995, pp.68).[9] Thus, equity contracts are the key financial instrument of relationship investing. Even if both equity and debt contracts may be written by banks as well as non-bank institutional investors, we focus on debt contracts in the case of relationship banking and on equity contracts in the case of relationship investing. While bank loans, but not investments in equity are necessary for relationship banking, investments in equity, but not bonds are necessary for closer relationships between non-bank institutional investors and firms. Non-bank institutional investors have become increasingly important as equity holders both in the American and European financial markets. The equity ownership of investment trusts and advisors and pension funds increased dramatically during the last years, and enjoys a high level of internationalization, both on the management side (the asset management companies) and on the investment side. In particular some public pensions funds began to abandon their traditional passive shareholder role and became more active participants in the governance of their corporate holdings (Gillan/Starks 2000, Woidtke 2002). Institutional investors that hold publicly traded shares use different mechanisms of corporate control: they may exercise their pressure on firms both by selling shares in underperforming firms or in firms that don't follow international recognized corporate governance standards ("Wall Street Walk") and by exercising direct control over the incumbent management of the respective firms ("voice") (Drobetsz/Shillhofer/Zimmermann 2003). Qualified investors often negotiate directly with the managers and submit shareholder proposals only if the negotiations don't have any relevant effect (Gillan/Starks 2000). When shares are held for a longer time institutions will become aware of the use and consequences of discretionary accounting, thus reducing incentives for the earning management (Chung/Firth/Kim 2002). Institutional investors are willing to pay significant premiums for well governed companies, or significant discounts for bad governed ones (McKinsey&Co. 2000). The body of the research has focused on the virtues of institutional investors in forcing management to focus on economic performance and eschewing opportunistic self-serving behavior, even if some research underlined the myopia of those who focus on the short-term performance of the firm to the detriment of its longer-term prosperity (Chung/Firth/Kim 2002)[10]. The primary emphasis of activist shareholders has been to focus on the poorly performing firms in their

[7] In particular they use the term "related ownership" in order to refer to holdings owned within a sphere of influence.

[8] However, the value of large share blocks may not only be maximized by a tighter control over managers, but also by extracting transfers from small shareholders, a process generally addressed within the frame of "private benefits of control"(La Porta et al. 1999).

[9] As a matter of fact the role performed by German housebanks at the end of the 19th century could be considered as a first kind of venture capitalism, thus representing an ideal link between relationship banking and relationship investing. Already at the beginning of 20th century Riesser (1905) provides wide evidence about the role of German banks in financing railways and iron industry, that could be considered the start-up industries of that time.

[10] For an overview on the empirical evidence see Menkhoff (2002).

portfolio and to pressure the management of such firms for improved performance, thus enhancing shareholder value (Gillan/Starks 2000). Moerland (1995) argues that the excessive functioning of the market for corporate control with practices such as corporate raiding, crude hostile takeovers or junk bonds, has lost importance having been partially replaced by active investors' diplomacy and persuasion as disciplining mechanisms. This could represent a turnover in respect of the role traditionally addressed to hostile takeovers (Manne 1965, Jensen 1986). The different types of institutional investors differ with respect to their monitoring incentives and capabilities. Pound (1988) notes that institutional investors such as banks should be effective monitors because they have frequent business contact to their clients, even if they might become entrenched and support incumbent managers. For example, business relationships between banks and management are likely to be associated with voting behavior that is conductive to continuance of the relationships, thus being supportive of management proposals, as are banks sharing one or more directors with the firm. Director interlocks between banks and firms are related to the outcome of the vote, with affiliated banks supporting management proposals, and unaffiliated ones opposing them (Payne/Millar /Glezen 1996). According to these conflicts of interests, investment or pension funds could be better monitors than banks or insurers, even if they also face some of these conflicts (Charny 1995). Empirical evidence shows that the results of negotiations and shareholder proposals are associated with the sponsor identity, which seems to sort out a leading effect, with a "leader" making the first step, and the other investors following the leader approach: this is generally recognized in the role of some prominent institutions, as for example the American CALPERS. Moreover the identity of the sponsor could be analyzed distinguishing two different groups, i.e. big individual investors and institutional investors. Proposals sponsored by the first group generally garner fewer votes, while the impact of the second group enjoys the above described lead effect (Gillan/Starks 2000).

3. Relationship Finance and Corporate Control within the Theory of the Firm

3.1. Theories of the Firm Relevant for Financial Relationships

To work out the services provided by the different sorts of financial relationships, we resort to different theories of the firm. Broadly, we may differentiate between the neoclassical and the contractual theories of the firm. In the neoclassical economic school, a firm is just described by efficient relationships between inputs and outputs, using the concept of a production function. Even if this black-box concept cannot explain the functions of intermediaries, we will use it to describe which inputs to firm production are provided by different forms of external finance. The contractual theories of the firm, which have been developed along with the theory of incomplete markets since the 1970s, yield explanations both for the existence of financial intermediaries and their contractual relationships with firms. Despite their heterogeneity, they have the common focus of explaining firms as organizations under two aspects: first, the substitution of short-term contracts on the product markets by long-term contracts between input owners, and second, the substitution of market mechanisms by hierarchy.[11] They may be broadly divided into two groups: principal-agency theory and transaction-cost theory.

The principal-agent theory deals with bilateral contractual relationships between two partners, the principal and the agent, which are affected by problems of asymmetric information, i.e. the principal cannot directly observe the activities of the agent or the agent has more relevant information than the principal.[12] The focus is on designing an optimal contract which will motivate the agent to share his private information so that the action expected by the principal will be effectively realized. The classical agency-theory problem was posed by Berle and Means in 1932 for the public company with dispersed shareholders, where the separation between owners (principals) and managers (agents) causes agency costs by suboptimal control of the management. Within this theory, firms have been considered as "…simply legal fictions which serve as a nexus for a set of contracting relationships among individuals" (Jensen/Meckling 1976, p.325). It has been applied both to explain financial intermediation as an optimal nexus of contracts and the problems of optimal corporate control. Beyond the 'nexus of contracts view' (Alchian/Demsetz 1972, Jensen/ Meckling 1976, Fama 1980), another view is that firms are characterized by more than the legal status, since they provide a solution to moral hazard in teams (Alchian/Demsetz 1972, Holmström 1982). This view emphasizes the technology of team production, where marginal products are costly to measure, and shows the circumstances under which it may be optimal to appoint a monitor who has the rights to the residual income of the team. Another view of team production has been provided by Aoki (1986) and Marschak/Radner (1972), who consider a firm as a group of input owners with a common goal. According to this view, team production does not serve to prevent opportunism, but to gather and share information under uncertainty. It emphasizes "…the image of a firm which must develop its resources by learning new informational relations before being able to use them" (Krafft/Ravix 1998, p. 248).[13]

[11] For overviews see Cheung (1983), Foss/Lando/Thomsen (2000), Krafft/Ravix (1998), Richter/Furubotn (1997)

[12] See Jensen/Meckling (1976), Alchian/Demsetz (1972), Fama (1980), Holmström (1982).

[13] This team theory has been considered as an extension instead of an alternative to the principal-agent theory, since the agents are still optimizing, making their decisions on the basis of imperfect

Since incomplete information is the central problem of external finance, we will use also this theory to study the functions of financial relationships.

The transaction-cost theory is based on the question posed by Ronald Coase in 1937: when do firms produce to their own need (backward, forward or lateral integration) and when do they procure in the market? It explains the use of markets for some transactions and the use of hierarchical forms of organization for others by transaction-cost differences between markets and hierarchies (Williamson 1988, p. 568). In contrast to the principal-agent theory, the focus is not on the ex ante incentive alignment of contracts under asymmetric information, but on the ex post governance of incomplete contracts. Since not all contingencies can be contractually covered, contracts are incomplete, and there is a need of adaptation to changing circumstances. This applies above all to long-term contracts such as the long-term loan contracts between banks and firms. Like long-term labor contracts, they are likely to be implicit.[14] An implicit contract describes complex agreements, written and tacit, which govern the exchange of services when various types of specific investments inhibit the mobility of production inputs, and opportunities to shed risks are limited by imperfect markets for contingent claims (Azariadis 1990, p. 132). It results from bargaining of the contractual partners over sharing the returns of their relationship-specific investments in various possible future circumstances (Azariadis 1990, p. 138). By forming such relational contracts, the parties generally commit to some common goal rather than to a specific course of conduct (Boatright 2002).

Within the transaction-cost theory, the property rights theory of the firm focuses on the allocation of ownership as the possession of residual control rights, i.e. rights to control the uses of assets under contingencies that are not specified in the contract. It considers a firm as a collection of jointly-owned assets (Grossman/Hart 1986, Hart/Moore 1990, Hart 1995) and is relevant for the question of optimal corporate control. The second major branch of transaction-cost theory is the governance structure approach of Williamson (e.g. 1975, 1979, 1985, 1988). Its basic idea is to assign transactions to alternative governance structures on the basis of their transaction properties, which are determined above all by the degree of asset specificity. In long-term financial relationships, asset specificity results from the acquisition of private information.

Figure 2 illustrates the relevance of the different contractual theories of the firm for the explanation of financial contracts, intermediaries and relationships, which we will review in more detail below. After a view on the neoclassical production function (3.2), we will discuss financial intermediation as a nexus of contracts (3.3), relationship intermediation as team production (3.4), corporate control rights of financiers (3.5) and the governance of incomplete financial contracts (3.6). The results are summarized in tab. 1.

3.2. Financial Contracts and the Production Function of a Firm

The usual neoclassical production function relates firm output to capital and labor inputs, which are financed by the firm's revenues. In this case of internal finance, contracts with external financiers are irrelevant. However, if the scarcity of internal funds limits production, external finance is a further production factor with positive marginal returns. Financial contracts with external financiers differ with respect to two fundamental inputs which they provide: bearing of risk and information. Therefore, we consider the more general production function

$q = f(\text{risk, information})$,

with q as output and f as the neoclassical production function.

Given that individuals are risk-averse, risk can be considered as a scarce production factor with a positive marginal productivity (Sinn 1986). Along this line of reasoning the production function coincides with the efficiency line of the capital asset pricing model. The supply of the factor risk can be increased by different risk-bearing institutions or organizations such as insurance and stock markets, financial intermediaries, but also special financing relationships. It depends on the type of the contract: in a standard debt contract, the lender has a constant interest and capital claim and bears the risk that the borrower cannot repay. In the case of insolvency, the whole property rights on the firm are transferred to the lender. In an equity contract, on the other hand, the equity owner has a state-dependent claim on the residual in solvent states, bearing the residual claim risk. As a second production factor we consider information as the knowledge or competence of the financier to allocate the funds to their best possible use. We presume that a financier is better informed if he has gathered not only publicly available information but also inside or private information about the state and the prospects of the firm. The higher this stock of information, the lower is the information asymmetry between the firm and its financier and the lower are the concomitant agency costs of external finance. Like a technical or an organizational progress, an increase in information may be described by an outward shift of the production function rather than a move along its frontier. From a macroeconomic perspective, the above production function may be used to describe the contributions of a whole financial system to an economy's production capacity.

information, where the variables designating the optimum form of organization are all known (Krafft/Ravix 1998, p. 251).

[14] According to Frank Knight (1921), labor contracts are implicit in the sense "…that inherently 'confident and venturesome' entrepreneurs will offer to relieve their employees of some market risks in return for the right to make allocative decisions" (Azariadis 1990, p. 133).

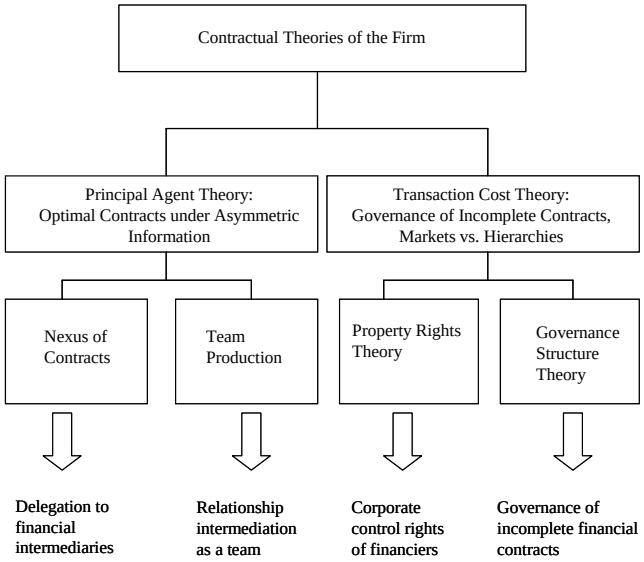

Figure 2. Explanation of financial contracts and intermedianies by contractual theories of the firm

Table 1. Comparison of Different Financing Relationships: Overview

Provision of Services	Relationship Banking	Relationship Investing	Transaction Finance
Inputs to Firm Production: q = f(risk, information) (see chapter 3.2)	insolvency risk, inside information	residual claim risk, inside information	insolvency risk or residual claim risk, outside information
Nexus of contracts by delegation (see chapter 3.3)	banks as delegated monitors: - economies of scale in contracting and monitoring - liquidity creation with disciplinary mechanism of runs - agency costs between bank and depositors	non-bank institutional investors as delegated monitors: - economies of scale in contracting and monitoring - agency costs between institutional investor and fund owners	direct contracts, no delegation
Team Production (see chapter 3.4)	cooperation between bank and borrower: - information - risk sharing	cooperation between venture capitalist and firm: - information - risk sharing	no cooperation
Corporate control (see chapter 3.5)	reduction of agency costs of debt and equity	reduction of agency costs of equity	high agency costs of external finance
Governance of incomplete contracts (see chapter 3.6)	implicit loan contracts with state-dependent claims: - intertemporal contract design - renegotiability: insurance in distress states incentives: - reputation - collateral problems: - hold-up - soft budget constraint	explicit equity contracts with state-dependent claims - - incentive: - long-run profit maximization problems: - hold-up - soft budget constraint	explicit contracts with state-independent or state-dependent claims

According to Hellwig (2000), following the way paved by Jensen (1986), the main problem of a financial system is not the scarcity of funds, but rather the misallocation of funds, e.g. by retained earnings, hidden reserves, disposal of assets or opportunistic behavior of managers in the presence of asymmetric information. In such an economy the task of the financial system is not only to channel the funds from households to firms, but also to channel the funds within the corporate system, from firms with excessive cash flow to firms with insufficient funds or from X-inefficient firms to more efficient ones. The allocative competence of a financial system thus depends on its ability to reduce information asymmetries and provide possibilities of risk sharing and information sharing.

Given the above definitions of relationship banking and relationship investing, both kinds of relationship finance are superior to transaction finance in providing inside information, while they differ with respect to the provision of risk bearing. Being based on debt financing, relationship banking

bears the insolvency risk, while the equity-based relationship investing bears the residual claim risk.

3.3. Financial Intermediation as a Nexus of Contracts

Within the agency-theoretic nexus of contracts view, firms come into existence as intermediaries that reduce the number of direct market contracts between individuals and the associated contracting and monitoring costs. Likewise, the existence of financial intermediaries, and their special relationships with contracting partners, can be explained by their functions of delegated contracting and monitoring on behalf of individual investors. If they have gathered specific information about borrowers or investment projects, the reusability of this information can be used to reap economies of scale in long-run relationships. The new theory of financial intermediation (developed since Diamond 1984, Caloromis/Kahn 1991, Allen 1990) shows that banks are financial intermediaries which can solve specific information and incentive problems in the relationships with savers and investors better than this could be done by non-bank financial intermediaries or direct financing. Within the theory of asymmetric information, Diamond (1984) shows that a special role of banks is to minimize the agency costs between borrowers and lenders by monitoring the borrowers at low cost, while Diamond and Dybvig (1983) find another special function of banks in their role of transforming illiquid assets into liquid liabilities, providing insurance against liquidity risk with private information to agents. Diamond and Rajan (2001) show that relationship lending is the best way to create efficient monitoring and maximum liquidity simultaneously. Real assets or projects are illiquid, because the entrepreneur can always threaten to withhold his specific skills in the future and thus capture a rent. A relationship lender who has gained knowledge about the project has a better liquidation threat than any other financier and thus can extract a larger fraction of the cash flows generated. When the relationship lender is a bank, issuing demand deposits, it cannot hold up depositors by not paying them the promised amount. Demand deposits are fixed claims with a sequential service constraint, where the depositors get their money back until the bank runs out of money. Any attempt by the bank to extort a rent from depositors by threatening to withdraw her specific abilities would cause a run, where the depositors demand back their money simultaneously without renegotiating. Hence, the fragility of the bank's deposits ensures that the bank provides the maximum amount of credit it can offer.[15] Non-bank institutional investors, in contrast, do not create liquidity and hence do not have this disciplinary mechanism of runs. A depositor of a mutual fund has the right to seize that proportion of assets that equals his proportion of total deposits. Thus, the holdings are marked to market and the mutual fund is run-proof. If mutual funds are actively engaged in monitoring, providing relationship investing, depositors are not able to discipline them and the managers may capture rents. This applies also to insurance firms that unlike banks, provide payments only when liquidity needs are observable and verifiable.[16] Also investment banks or venture capitalists differ from commercial banks in this respect: because their value lies largely in future transactions, they cannot be efficiently cut out of the deal, hence demand deposits are unlikely to provide discipline (Diamond/Rajan 2001, pp. 317). A problem with both relationship banking and relationship investing is that the delegation of monitoring to an intermediary involves by itself agency costs, so-called delegation costs. In the case of relationship banking, they arise from the asymmetric information between bank managers and bank depositors/shareholders, while in the case of relationship investing, they arise from the asymmetric information between institutional investors and their funds' beneficial owners. According to Diamond (1984), the delegation costs for bank depositors go to zero, if the bank is large enough to diversify its loan portfolio so that the depositors are shielded from credit risk.[17] This results from the debt contracts of banks, so that a similar conclusion cannot be drawn for the equity contracts of (non-bank) institutional investors.

While the theory of financial intermediation is unanimous about optimal debt contacts, it is indeterminate about the effects of delegated monitoring in the case of sub-optimal equity contracts (Schneider 2000, p. 215). Institutional owners function as principals to corporate managements and as agents for their beneficial owners or, in their intermediary role of monitoring for beneficial owners, as 'agents monitoring other agents'. Within this 'nexus agency model' it has been argued that institutional investors are complex organizations which pursue their own goals and the goals of their stakeholders apart from those of beneficial owners (Schneider 2000). Additional agency costs result from detrimental incentives that divert the behavior away from maximizing investment performance: especially the requirement to conform with short-term evaluations leads to short-term orientation, distorted risk consideration and

[15] In a world of uncertainty, it is optimal for the bank to finance itself not only by deposits, but also by outside capital, which is a softer claim that can be renegotiated in bad times (Diamond/Rajan 2000).

[16] Only life insurance companies may have partly demandable claims that allow withdrawal of a fixed amount even if the insurable event does not occur, making them prone to runs.

[17] In Diamond's model of financial intermediation, banks are all deposit funded. In reality, bank deposits are not risk-free and the remaining risk is borne by the bank's shareholders (and a deposit insurance fund). However, the shareholders only have the incentive to monitor the bank managers, if they hold large blocks in the respective bank. At least in Germany, where the big stock banks are mostly held in dispersed ownership, this does not seem to be the case. It is an open question whether this monitoring problem may be solved by (bank or non-bank) institutional investors.

useless activities (Menkhoff 2002). Whether these additional agency costs outweigh the cost reductions brought about by intermediation (portfolio diversification, better corporate monitoring) cannot be answered a priori, because it depends on the effectiveness of the legal and regulatory environment and the governance mechanisms in protecting the interests of the beneficial owners. Empirical studies that concentrate on non-bank institutional investors that invest in US stock portfolios show that their investment performance is usually below the market benchmark. While they realize advantages of diversification, they fail to realize information advantages. The benefits of improved corporate governance go along with costs of generating short-term strategies, increased volatility and less sensitivity toward social issues in the managed companies. The agency costs depend on the type of institutional investor, e.g. pension funds having higher agency costs than mutual funds (Menkhoff 2002, 2001, Schneider 2000).

3.4. Relationship Intermediation as Team Production

As argued by Alchian and Woodward (1987, p. 118), "…long-term, or what the law calls relational, contracts are essential to continuity of teamwork with dependent resources". Moreover, "Teamwork seldom appears without a nexus of contracts, and a nexus of contracts seldom appears in the absence of teamwork" (Alchian/Woodward, 1987, p.111). Hence, long-term contracts of financial intermediaries should involve elements of team production. According to Aoki, the capability of the firm of having positive economic returns rests on "the willingness of the employees to cooperate and the ability of the employer to adapt and monitor production effectively under uncertainty" (Aoki 1984, p.30). A cooperative team or organization could be considered a system for allocating the resources better than a sequel of unique transactions, above all due to the saving of risk cost, the reduction of shirking and the enhancement of informational efficiency in regulating the formation and utilization of the team element of human resources (Aoki 1984, p. 30). Cooperation in production is cooperation between suppliers of inputs (Alchian 1993, p. 367). Applied to relationship banking, we may consider it as cooperation within a team constituted by the bank and the firm in supplying risky capital and information. Within such a team, the borrowing firm must be willing to provide information about investment opportunities and risks to the bank, which in turn provides capital and risk bearing to the firm. According to Alchian and Woodword (1987), teams arise where information is costly: gathering information about the borrower is likely to be a very resource expensive process, and relationship banking rests on information cost savings. The informational efficiency of utilizing special human resources in lending relationships is not only brought about by the bank's inside information, but also by social interactions between loan officers and firm managers which may create mutual understanding and trust. Empirical studies on relationship lending in Germany show that such social interactions do indeed lead to more favorable lending terms for small and medium-sized firms (Harhoff/Körting 1998, Lehmann/Neuberger 2001). Differences in this sort of team production brought about by different histories or development levels might explain why we observe lending gaps between different regions of the same country (Ferri/Messori 2000, Lehmann/Neuberger/Räthke 2004). Critics of this view of relationship lending as a cooperative team argue that banks can exploit influenced firms, being able to earn profits in excess of the competitive level. According to the team theory, external agents are necessary to induce efficient equilibrium in team production settings. However, while external agents may be necessary, they cannot sustain an efficient outcome if the internal members of the team don't have some assurance that their product will not be expropriated (Falaschetti 2002). According to Köke (2001), ownership concentration and bank debt, as well as market discipline reflected by product market competition, are positively related to productivity growth. However, creditor influence depends on a strong position measured as a large fraction of bank debt. Thus, the reduction of bank lending, for example through increasing securitization or issue of corporate bonds, could negatively affect the banks' incentives or ability to monitor (Köke 2001).

Also relationship investing can involve a kind of team production, considering the cooperation between firms and institutional investors to share information and equity risks. This applies above all to the relationships of firms with venture capitalists, but less to those with institutional investors that invest only in publicly traded shares and are less likely to have long-term, social interactions with firm managers. As already mentioned above, these institutional investors do not seem to reap efficiency gains by information advantages.

3.5. Corporate Control Rights of Financiers

According to Berle and Means (1932) conflicts of interest arise between managers and residual claimants when risk bearing is separated from management of the firm. Here we face the problem that the monitoring activity has the nature of a public good. Every shareholder is aware of the fact that it is too expensive for him to exercise an effective monitoring activity on the management, and that at the same time all the other shareholders would take advantage of his efforts, giving rise to a free riding process (Stiglitz, 1985). In the public company, characterized by the so-called absent property (Galbraith 1958), the residual claimants try to solve the problem by delegating the management of the firm to a group of people who professionally do it, the managers, while their relationship is regulated by a contract, that just gives some guidelines to the directors (Berle/Means,

1932). The result of this contract is that the corporation is managed through an agency relationship between the shareholders on the one side and the managers on the other, going along with agency costs.[18] The so-called consumption of agency goods by managers may include not only the consumption of perquisite, but also avoiding effort, avoiding risk, building empires, establishing golden parachutes, subsidizing their favorite activities, discriminating in lay off and implementing strategies to increase the managers' control and to reduce the probability of takeovers. Managers' consumption of agency goods reduces the firms' financial performance and can be undertaken only to the extent that the managers are able to resist principals' disciplining. The reduction of agency costs by different control rights of the external financiers are the main objects of corporate governance studies[19]. The role of banks and non-bank institutional shareholders' activism arises due to the conflict of interests between managers and shareholders, and to the free rider problems connected with the lack of incentives for small investors in monitoring. Investors with large blocks appear to be the only ones which have the incentives to undertake such monitoring activities, as it is more likely that the large shareholders' increased return from monitoring is sufficient to cover the associated monitoring costs (Gillan/Starks 2000). When a firm is financed partially with debt moral hazard arises, because the equity holders don't bear the full consequence of negative outcomes, while enjoying the full positive consequences of their decisions. The main sources of conflicts are a redistribution from bondholders to stockholders that would arise from an increase in dividend payout, higher leverage, substitution of high-risk for low risk projects (asset substitution), and underinvestment in projects that would yield a higher benefit to bondholders (Jensen/Smith 1985). This bondholder vs stockholder conflict would not be solved simply by giving the bondholders control over the firm: bondholders would have incentives to pay too few dividends, issue too little debt, and choose projects with too little risk. Within the theoretical frame of state-dependent control, the control over the firm should be exerted by shareholders in non-default states and by creditors in default states. In the event of the borrower's default, it is efficient to delegate the control to banks, to bundle the creditors' claims and reduce costs of free-riding by bondholders (Aghion/Bolton 1992). In non-default states, corporate control should be exerted by financial intermediaries that hold large blocks, thus bundling the interests of dispersed shareholders and preventing actions of firm managers against the interests of minority shareholders and bondholders. This may also be done by banks via voting rights from equity holdings, proxy voting rights or supervisory board mandates. Equity holdings by banks reduce their incentives to pose creditor over shareholder interests, providing a solution to the bondholder vs. shareholder conflict (Stiglitz 1985).[20]

Thus, relationship banking may reduce not only the agency costs of external debt by monitoring borrowers in long-term relationships, but also the agency costs of external equity. However, given the fact that a bank's debt claims are mostly bigger than its share blocks in a firm, it is rational for it to act primarily in the creditor interests, and the effectiveness of banks as actively monitoring in the shareholder interests is still an open question (Boehmer 2000). As shown by Chirinko and Elston (1996), one of the advantages of bank influence over firms is that, at least in the German environment, banks reduce agency costs associated with corporate control and at the same time lower finance costs due to superior information and more effective monitoring of management activity. Anyway, according to Schäfer (2003) relationship banking and a bank's control over a firm "are just the two sides of the same coin": she provides examples on how this "domination" could affect the management incentives and the banks' incentives to monitor the managers of the "supposed to be" controlled company. Demsetz and Villalonga (2001) argued that the greater is the degree to which shares are concentrated in the hands of outside shareholders, the more effectively management behavior should be monitored and disciplined. This seems to be the case for the role of banks as external monitors in Continental Europe. Dherment-Ferere et al. (2001) found a positive disciplining effect of qualified banking share blocks, while Lehmann and Weigand (2000) found that financial institutions as largest shareholders of traded corporations enhanced profitability. Baums (1994) argues that the presence of major lenders in the board could represent by itself a limit of managers' ex post moral hazard. When the stock market is (ab-) used by managers the awareness of being monitored can reflect in an excessive myopia of the managers, i.e. in the willingness of improving the company's results (e.g. by creative accounting, sudden appreciation of assets, manipulation of the accounting data), in order to show their capability as business leaders. The presence of long-term shareholders prevents such behavior, at least as long as they perform a real monitoring activity. Also in market-based financial systems with less control rights of banks, relationship banking lowers agency costs of external finance. Jensen (1986) argues that debt financing reduces free cash flow and therefore has a disciplinary effect on management: managers can use high leverage to signal credibly that they maximize profits. Likewise, any disciplinary impact creditors have on management

[18]Jensen and Meckling (1976) define agency costs as the sum of the costs of structuring, administering and enforcing contracts, plus the residual loss. Agency costs include all costs frequently referred as contracting costs, transaction costs, moral hazard costs and information costs (Jensen/Smith 1985).

[19]Shleifer/Vishny (1997), La Porta et al. (1999)

[20]For a further argument in favor of simultaneous lending and shareholding by banks (Neuberger/Neumann, 1991).

should be the greatest when a large fraction of debt is bank debt. This is backed by empirical evidence: stock prices respond positively and significantly especially to announcements of bank loans (James 1987, Lummer/McConnell 1989), and the cost of issuing public securities is significantly lower for firms with borrowing relationships to banks (James/Wier 1990, Datta et al. 1999). This evidence about the uniqueness of bank loans makes clear that relationship banking is superior to relationship investing in reducing agency costs of external finance: non-bank institutional investors may only lower agency costs of external equity by active monitoring in the interest of shareholders.

3.6. Governance of Incomplete Financial Contracts

Transaction cost theory focuses on the ex post governance of incomplete contracts to answer Coase's question about the boundaries between firms and markets. Incompleteness of contracts means that not all contingencies are contractually covered, and is the more relevant the longer the term of the contract. Relationship finance is by definition long-term finance and thus carries the feature of a firm described by Coase: "A firm is likely therefore to emerge in those cases where a very short term contract would be unsatisfactory. It is obviously of more importance in the case of service- labor - than it is in the case of buying commodities" (Coase, 1937, p.392). This applies to the financial services provided by banks and non-bank institutional investors. The long-term nature of these services is above all inherent in relationship lending. Like long-term labor contracts, these loan contracts may be perceived as implicit contracts, in which banks offer to relieve their borrowers of some market risks in return for the right to make allocative decisions. They result from bargaining between the bank and the borrowing firm over sharing the returns of their relation specific (informational) investments. Within this frame relationship banking represents a specific asset whose value cannot be independent from the firm itself. The provision of risk by an implicit long-term loan contract implies that the bank's claims are no longer state-independent. One benefit of relationship lending is seen in its intertemporal contract design. The basic idea is that the long-term binding of the borrower to the bank enables the bank to compensate losses in some periods by gains in other periods.[21] This permits the funding of loans (relationship loans) that are not profitable for the bank from a short-term perspective but may be profitable if the relationship with the borrower lasts long enough (Boot 2000)[22], enabling e.g. long-term investment projects (Ongena/Smith 2000). Long-term relationships make possible value-enhancing intertemporal transfers in loan pricing, with the bank charging different interest rates according to different business situations of the borrower, even if in the long run the total amount of interests paid is equal to the case of a fix interest rate contract. Moreover when firms have financial or industrial problems they look for help by their relation bank or housebank. They know that their housebank, having made costly investments in order to build up a long-term relationship, would not have an advantage in letting the client go bankrupt (Macey/Miller 1995, Das/Nanda 1999). Indeed, housebanks are more committed to their clients, providing more finance if the firm faces sudden and temporary difficulties (Elsas/Krahnen 1998, p. 1284).[23] Another aspect of intertemporal contract design is given by the refinancing of the banks by standard debt (deposit) contracts. Through long term commitments to their borrowers, banks can compensate losses in some periods by gains in other periods, facilitating intertemporal risk diversification (Allen/Gale 2000): systematic risk may not be diversified at a specific point in time, but across generations by long-term, long living banks. Since an incomplete contract does not specify rules for each possible state of the world, the optimal contract should be structured to provide incentives to both parties to take mutual beneficial actions. In relationship lending, this is done by the possibility of renegotiations (Elsas 2001, p. 19). While in the case of arm's length debt the borrower cannot credibly commit to liquidate its firm in a distress situation, the power of its housebank to renegotiate will lead to more efficient decisions about firm liquidation or continuation (Rajan 1992). This can be interpreted as a kind of insurance service provided by the housebank: the ex ante choice of relationship lending prevents negative value effects of opportunistic behavior by one contract partner, which cannot be prevented by alternative financial arrangements (Elsas 2001). According to Chemanur and Fulghieri (1994) banks use the ability to renegotiate as a means to acquiring reputation. Reputation building provides the bank with the incentive to establish a long-term relationship with a firm.[24] In their model, banks also have the choice between liquidating the firm when distressed or renegotiating the loan contract. Banks wishing to establish a reputation for financing productive firms, monitor the firms more intensively, which in turn leads to more efficient continuation decisions in renegotiations (Ongena/Smith 2000). Bester/ Scheepens (1996) underline that the advantages connected with establishing a debt history can in the

[21] See e.g. Greenbaum et al. (1989), Petersen/Rajan (1995). For a detailed discussion of the theoretical literature see Elsas (2001, pp.56).

[22] Boot/Thakor (2000) provide a further definition of a relationship loan as "a loan that permits the bank to use its expertise to improve the borrower's project payoff".

[23] For measurements of housebanking in Germany see Elsas (2005).

[24] Generally, reputation is an incentive mechanism for long-term implicit contracts: "if somebody deviates from the terms of the contract, the deviation becomes widely known, and the deviant finds it difficult to locate trading partners in the future" (Azariadis 1990, p. 138).

long-run overcome the costs associated with an initial debt. Their result goes against the first argument of the pecking order hypothesis of Myers and Majluf (1984), according to which internal finance should be preferred to bank debt. They consider the decision to finance an investment by bank debt rather than by internal funds. In taking into account the costs associated with bank debt, side by side with the advantages of establishing a positive debt history, we expect that if the bank relationship is publicly observable, the reputation for both the bank and the firm improves as the length of the relationship increases.[25]

On the one hand, bank relationships are credible signals since the bank places its own wealth at the borrower's disposal (Collin 1997), and also its own reputation (Stiglitz 1985). On the other hand, the longevity of the relationship should not be informative for new entrants since competitors don't know the prices and the terms associated with the relationship. Thus the incumbent bank may have a long relationship with a very risky borrower only because the bank is able to be compensated by an appropriate interest rate (Greenbaum et al. 1989).[26]

Another incentive for banks to enter a lending relationship is collateral provided by the borrowing firm. Longhofer and Santos (1998) show that by increasing the seniority of the bank's debt claims, inside collateral provides incentives for efficient monitoring in distress situations, since in such states the most senior claimant benefits first from improving the quality of the firm, "…and it is in such states that the true value of relationship lending comes to light. If banks are made junior to other creditors, they will have little incentive to build a relationship that might allow them to determine the value of such an investment" (Longhofer/Santos 1998, p. 2). If there are more than one debt claimant, it may be optimal to determine the structure of seniority strategically ex ante, anticipating future renegotiations in which conflicts between the different claimants are likely to cause net welfare losses. Such losses may be reduced by allocating ex ante the strongest bargaining position to the debt claimant which is expected to have the highest bargaining power ex post, by increasing his or her seniority (Welch 1997). Banks and especially inside banks are likely to be such claimants, because they have comparative advantages vis-à-vis bondholders or outside banks in organizing distress situations, having built up law departments or special reorganization capacities. Hence, housebanks with the most inside information should obtain the highest seniority position by inside collateral (Elsas 2001, p. 191).[27] The cost of collateralization may further explain while it should be more important in long-term lending relationships. Lenders must evaluate and monitor collateral and bear the related administrative expenses. Given that evaluation costs and security registration fees represent fix costs, paid just once, the costs per unit time can be reduced by increasing the length of the lending relationship. At the same time collateralization imposes high costs to the borrower because it limits his or her freedom in using the collateral. As argued by Parlour and Rajan (2001), collateral can be considered as a commitment on the part of a borrower to accept only one contract, because usually the same collateral can be used to secure just one loan. These benefits of relationship banking, however, go along with costs due to two problems: the hold-up problem and the soft budget constraint problem. The hold-up problem results from the information monopoly the bank generates in the course of lending, that may allow it to make loans to the borrower at non-competitive terms in the future. Sharpe (1990) argues that bank relationships arise in competitive loan markets because a bank, which has privately observed customer quality, can "lock in" the customer, and charge above-cost interest rates, while Greenbaum, Kanatas and Venezia (1989) provide a further explanation when considering the costs borne by the firm in searching for competing bank offers. Because of this "central conflict between commitment and competition" (Mayer 1988, p. 1179), the informational advantage of the inside bank is a "double-edged-sword" (Rajan 1992, p. 1369, see also Elsas 2001, p. 48). The soft budget constraint problem results from the potential lack of toughness of the bank in enforcing credit contracts that may come alongside with relationship banking proximity (Boot 2000). This refers to the possibility that a relationship bank is unable to commit not to refinance unprofitable projects ex post, in particular when the borrower faces financial problems. In time of financial distress a relationship bank may extent further credit even to unprofitable projects in the hope of recovering its initial loan (Guatri/Vicari, 1994). Dewatripont and Maskin (1995) argue that multiple banking may represent a solution, as it offers a way for banks not to commit to refinance unprofitable projects, or worst, gambling for resurrection projects, while Bolton and Scharfstein (1996) show that multiple banking complicates debt renegotiations due to communication problems and asymmetry of information among the different creditors.[28] As a conse-

[25] Also the status of the committed part (e.g. an international bank vs a regional one) may be a source of reputation (Schäfer 2003), or at least of creditworthiness (Chirinko/Elston 1996, Collin 1997, Ferri/Messori 2000).

[26] Within the frame of implicit contracts a similar result may be obtained in the labor market where the unknown variable is the workers' productivity: a very low productivity can be compensated by an even lower wage. In a lot of labor intense industries, cooperatives among the workers arise, among others, due to the signaling problems connected with employees' productivity (Dow 2003).

[27] For empirical evidence on a different role of collateral in emerging and mature markets see Menkhoff/ Neuberger/Suwanaporn (2005).

[28] Alchian (1993) argues that in every situation where we find a party that depends from a single supplier the input user could protect himself through a multiple suppliers agreement, even if at higher costs than a contract that restrains the single supplier from not performing as promised.

quence Carlin and Mayer (2000) argue that multi-bank systems are superior in imposing tough budget constraints on inefficient projects but the other side of the coin is, they are too myopic and fail to sustain efficient long term projects characterized by short term uncertainty.

The feature of a long-term, incomplete contract applies also to relationship investing, however with a different contract design implying different risk-sharing and informational properties. Capital issued as public equity is a long-term claim with no other right but to liquidate the equity-financed project at any point in time. The decision to do so by selling shares is mainly based on public information. The use of private information by institutional investors is restricted by insider trading regulations, in particular in order to avoid that managers and relevant shareholders collude in order to trade at the expense of "uninformed" or "small" shareholders (Maug, 2002). Dherment-Ferere, Köke and Renneboog (2001) underline that little corporate monitoring is to be expected from institutional investors, because, due to insider trading regulation non public corporate information may temporarily reduce the liquidity of an institution's investments. In contrast to relationship banking, relationship investing on the capital markets does not go along with implicit contracts. The state-dependent claims to the residual are explicitly defined by the equity contract. Institutional investors bear equity risk (and as bondholders also debt risk) without providing insurance services by intertemporal smoothing or renegotiability.

However, by gathering information and exercising direct control over the management, they reduce moral hazard risk to the benefit of individual shareholders or fund holders, providing insurance against this risk in non-distress states. The incentive for relationship investing is likely to be long-run profit maximization rather than reputation. Since the building up of a close relationship with a firm involves costs, institutional investors should only make such relationship-specific investments if they are compensated for these costs by higher returns in the future, given by a higher shareholder value and lower losses from liquidating unprofitable investments. Reputation as an incentive mechanism may be only important in an implicit contract, if the time horizon is fairly long or the future is fairly important relative to the present (Azariadis 1990, p. 138). Even if we consider the insurance against moral hazard risk provided by relationship investing as an implicit contract, the right to liquidate the equity investment at any time is likely to shorten the time horizon relative to that of a long-term lender. Of course, this argumentation does not apply to venture capitalists or other investors in long-term, private equity. To the extent that relationship investing involves a binding of an institutional investor to a firm, the hold-up problem and the soft budget constraint problem arise here, too. Such a binding may be caused by the holding of large blocks. Traditionally one way for unsatisfied shareholders of an underperforming firm is to sell out the shares. The fact is that often the holdings are so large that the shares cannot be sold without driving the price down and suffering further losses, so they are less marketable (Chung/Firth/Kim 2002). As a consequence institutional investors face a trade off between keeping underperforming shares and suffering a long-term (comparative) loss or selling out the shares and suffering a sudden loss. If they keep the shares, they find themselves in a hold-up situation and the firm managers may exploit their lock-in by opportunistic behavior. Proponents of institutional investors' activism argue that as a consequence such activity focuses on the long term and in doing so it helps management to improve long-term performance. As in the case of relationship banking, the binding is a "double-edged-sword". The soft budget constraint problem may arise from a potential lack of toughness of the relationship investor in controlling managers on behalf of shareholders. Opponents of the institutional investors' activism maintain that the activism detracts from the primary duties of asset management's managers, which is managing money for investors or other beneficiaries (Gillan/Starks 2000).

Jarrow and Leach (1991) note that fiduciaries are confronted with conflicting interests and must determine whether to maximize their own wealth or that of the beneficiaries (Jarrow/Leach 1991): some authors note that institutions, who maintain business relationships with firms, may be biased in favor of management in matters pertaining to control[29].

On the other hand, an open question is still if relevant institutional investors have the incentives to build up relevant shareblocks and thereafter to exercise an effective monitoring activity on the company. Admati, Pfleiderer and Zechner (1994) demonstrate that in equilibrium the monitoring activity is below the optimal level. The fact is that every investor, no matter if it is institutional or private, faces a trade-off between the benefits of diversification and the benefits associated with monitoring a firm. On the contrary a shareholder which does not hold any relevant blocks cannot be considered as a suitable monitor, given the well know contrast between the private costs of monitoring and the public good feature of monitoring benefits. Maug (1998, p. 89) demonstrates that the probability of monitoring increases in the liquidity of the market, since the liquidity of markets allows also large investors to benefit from monitoring, and helps to overcome the free-rider problem.

[29] Coffee (1991). For a good example see Berglöf and Sjögren (1998) who presented a model with a bank providing loans to a borrower while an investment company, controlled by the bank, holds a relevant block in the borrowing company. Baums (1996) and Baums and König (1997) find a high correlation between the underwriting and investment policy of bank-controlled investment companies (Publikumsfunds) and the role of the bank as coordinator of the IPO.

4. Conclusion

The shift from bank intermediation to intermediation by non-bank institutional investors which we experience in continental Europe has invoked concern about the dissolution of valuable long-term bank-firm relationships and their replacement by arm's length finance. However, non-bank institutional investors are also actively engaged in the firms they finance, providing a kind of relationship finance. The present paper reviewed the literature on both kinds of relationship finance to examine their relative merits. Within the theory of the firm, we made a comparison along the following criteria: provision of the input factors risk and information; provision of delegated monitoring by intermediation; increase in productivity by team production; reduction of agency costs by corporate control; governance of long-term, incomplete contracts. We found that while relationship banking and relationship investing are both superior to transaction finance in providing these services, none of them is superior to the other in all respects. They tend to be complements rather than substitutes, their relative merits depending both on the type of the intermediary and the type of the firm to be financed. The comparative advantage of relationship investing by venture capital firms lies in the provision of equity (bearing of residual-claim risk) to innovative, start-up firms, whereas relationship banking has its comparative advantage in the debt financing (bearing of insolvency risk) of informationally opaque small and medium-sized firms in more mature markets or traditional industries. For these firms, relationship banking delivers unique monitoring and insurance services through implicit contracts. Large companies, on the other hand, may profit from relationship finance by both banks and non-bank institutional investors (insurance firms, pension funds, mutual funds), if these hold large blocks of their publicly traded shares to exercise corporate control. Here, however, non-bank intermediaries seem to be an imperfect substitute for banks: First, their incentives to actively invest in long-term relationships are lower because of a conflict between the use of inside information and the liquidity of their investments. Secondly, their disciplinary effect on management tends to be lower than that of banks. Third, since they do not provide liquidity, they are less disciplined by their depositors to provide efficient delegated monitoring. The costs of delegation to non-bank institutional investors are comparatively high, because they have more scope to pursue their own goals apart from those of their funds' beneficial owners. Finally, the pros and cons of the different forms of relationship finance depend on the liquidity of the respective financial market and on the regulatory environment. The present paper just developed a theoretical framework for more comparative research in this regard.

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THE FINANCIAL SYSTEM AND CORPORATE GOVERNANCE IN JAPAN*

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Abstract

Corporations may be said to be engines of any market economy and their proper behavior is a key to economic, hence human, security. This paper argues that one of the most important causes for the prolonged period of recessions of the Japanese economy in the 1990's is deeply rooted in the long-established financial structure of the economy and in the closely related issue of corporate governance. Although Japanese corporations have been traditionally understood that their activities are monitored and governed by "main banks," this framework has been changing over the last 10-15 years toward corporate governance driven by pressure from capital markets. This change has been necessitated by: (a) less need on the part of corporations to rely on banks in acquiring funds, (b) ongoing dissolution of cross shareholdings, (3) an increasing importance for the role of institutional investors, and (4) innovations in information and communication technologies. The change may be regarded as being one from "process innovation" toward a system conducive to "product innovation;" hence a desirable shift. There remain, however, a number of policy tasks, such as institutional improvement in securities investment trusts and the need to better define the role of institutional investors.

Keywords: corporae governance, Japan, financial system

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Introduction

For the Japanese economy, the 1990's was characterized by a prolonged period of recessions, and is commonly called "the lost decade." Upon entering the 2000's, and at present (in February 2004), it has not yet become clear whether the economy has been moving on the direction of renewed sustainable development. In a market-based economy, commercial corporations are the engines of macroeconomic activity. The pattern of long-running, or long-term, economic activities are substantially determined by how such corporations are organized and how their behavior is motivated and how disciplined it is. It is therefore no wonder that, over the last ten years or so, there has been increased interest in looking at corporations from the viewpoint of corporate governance. Since this also has much to do with public policy, research has been conducted not only by academic researchers but also by international organizations.

This paper focuses on corporate governance and aims: (a) to explain how the Japanese financial system is linked to corporate governance, (b) to show how the difficulties faced by the Japanese economy have roots in financial and corporate governance systems, (c) to evaluate recent changes in the financial system, and (d) to provide a brief prospect of what is ahead, and to point out some important, and relevant, public policy issues.[1]

After this introduction, section 1 first argues that the basic and determining factor for corporate governance are the methods of corporate financing, and then points out characteristic features of the Japanese financial system. Section 2 explains the corporate monitoring system operated by the main banks as being a traditional Japanese corporate governance system, and makes an assessment of its efficiency. Section 3 first presents two typical financial systems and the resulting corporate governance; then argues how changing circumstances necessitated a weakening of corporate discipline since the 1980's and has been experiencing further changes in recent years. The final section, section 4, presents a brief outlook on the Japanese system and points out public policies that are required.

1. Two views on corporate governance and the Japanese financial system

The term corporate governance has been used to mean a variety of things[2]. However, broadly it can be

[1] This paper draws heavily on the author's earlier paper in Japanese, Okabe (2003), with the appendix added which draws on Okabe and Fujii (2004).

[2] Many overview papers have been written on recent research on corporate governance. Okabe (2002b) is an example of a concise

classified into two kinds. The first is to view corporate governance as a framework by which shareholders ("owners") of corporations discipline or monitor managers of corporations so that an efficient operation can be maintained. This understanding may be called a "finance approach," since it is based on the authority of the provider of funds to corporations; or an "agency view" since it regards managers of corporations as agents to operate corporations on behalf of the shareholders. The second understanding is to regard the issue not simply as a shareholder-manager relationship but to first regard the corporation as a coalition of stakeholders (shareholders, managers, employees, the firm's bank, and so forth) and then regard corporate governance as a complexity of relationships through which various interests are arbitrated; thus, eventually leading to, and disciplining, the behavior of corporations. That is, the latter view regards the firm as belonging not simply to shareholders but basically to all stakeholders. It analyzes the structure of authority and responsibility among stakeholders as well as the outcome of their overall interactions. This understanding may be called a "stakeholder view," in contrast to the first type, the "shareholder view" type. The first view is based primarily on US and British corporations, while the second view on Japanese and German ones. Accordingly, research done in the US and the UK are dominated by those from the shareholder viewpoint; a typically example is the well-known survey article by Shleifer and Vishny (1997). On the other hand, the second view is more commonly found in studies of Japanese corporations or in comparative studies, for example as in Aoki (2000). It is difficult to say which approach is superior; though our view is that the way corporations are financed o provides a basis for understanding corporate governance, even if we the second view is taken. In other words, the issue of corporate governance basically comes down to corporate financing. Hence, it is appropriate that here we review the basics of Japanese finance.

Characteristics of the Japanese finance

To understand the main features of Japanese finance, it is helpful to compare it with that in the US, which provides quite a contrast in many respects. Let us begin with the supply side of funding, namely the household sector that is the largest fund-supplying sector in the economy. The composition of financial assets held by this sector, namely the form of funds provision, is shown in Figure 1. We can see that in Japan the dominant portion of savings of the household sector is allocated (invested) in the form of bank deposits. Put differently, the transfer of funds from the household sector to other sectors is channeled overwhelmingly by way of banks (deposit-taking financial institutions); implying that corporations acquire funds mainly in the form of debt, as opposed to equity. While, in the United States the share of bank deposits in the household portfolio is far smaller, and other type of assets relatively have higher shares; such as various equity-type financial assets including shares and other equities, investment trusts, or marketable bonds. This implies that US firms raise funds mostly by issuing marketable securities, rather than borrowing from banks.

Figure 1: Around here

Financing patterns are thus quite different in the two countries. However, some notes of caution are in order. First, the above statistics may overemphasize the difference between the two countries, since the price of company shares in the US has generally been on an upward trend while that in Japan has trended downward. Second, the financing pattern of corporations reflects not only institutional factors but also cyclical factors, particularly the attitude of the suppliers of funds. In particular, Japanese households have continuously shown risk-averse investment attitudes due to the prolonged economic stagnation in Japan, thus hindering the development of a somewhat riskier financing channel for the economy.

Generally speaking, the financial system of a country is a reflection of not only the demand and supply situation but also of social, cultural and historical factors. In the case of Japan, the heavy reliance on debt financing, rather than equity financing, is characterized by heavy bank-borrowing under the so-called "main bank" system, a form of close and continuous bank-firm relationship. In equity financing, also, a unique feature has prevailed: new shares are not often sold into the market to be held by those in the household sector (individuals), but rather they are allocated to financial institutions or non-financial firms, or they are mutually held in the form of "cross shareholdings" among allied companies.

These features have made Japanese corporate governance rather unique when compared with the Anglo-American style of governance. Next, let us provide an overview of the main bank system that has characterized the institutionalized Japanese corporate finance scene, and then critically evaluate how it functions for corporate governance.

2. Corporate governance in Japan (1): Monitoring by the main bank

Corporate governance in Japan has two basic distinctive features. One is that, as mentioned above, the main bank of a firm has had an important role in monitoring and disciplining the client firm. The other is that equity funding, in which shareholders are theoretically expected to discipline corporations, has had only a limited role in corporate governance, since shares have been extensively cross-held between banks and corporations or between non-bank corporations. These two features have substantial

one in Japanese; Shleifer and Vishny (1997) deals with theoretical aspects, while Bolton et al. (2002) offer a more comprehensive and recent overview. In the present paper, the term "corporations," "companies," and "firms" are used interchangeably.

limiting factors for corporate governance in Japan. Here let us review the first feature[3], while we discus the second feature later in section 3-2.

2-1. The meaning of a main bank

Financing patterns of an economy can be classified, as mentioned already, into two: indirect finance, or a bank-based financial system; and direct finance, or a market-based financial system[4]. In Japan, indirect financing has dominated the financial system for all the more than 50 years since World War II; and long-term close relationships between firms and banks have in fact been observed. For instance, even in 1993, when direct financing was gradually biting into the field dominated by indirect financing, more than 90% of large listed corporations still had a "main bank" or two (on average, 1.6 main banks).

A main bank relationship between a firm and a bank is usually characterized as having all or most of the following elements: (1) the firm continuously has had a large (or the largest) borrowing for a long period of time, (2) the bank is a main shareholder of the firm, (3) the bank carries out a variety of banking and other transactions with the firm, such as foreign exchange business and trustee function of corporate bonds, (4) the bank maintains a close human relationship by dispatching executives to the client firm, and (5) the bank often rescues the client firm when the latter is in financial distress, provided that the firm is judged as eventually being viable.

2-2. The function of the main bank and the assessment

The main bank has been understood to have had three functions. First, as an efficient provider of funds to the client firm. The reason for this is that the main bank relationship ameliorates the informational asymmetry in bank lending (since the bank is able to acquire pertinent information on the firm's financial position as well as on the risk of the investment project financing is needed for), and this makes it possible to place a loan at a lower lending rate than in the case without a main bank relationship. Second is monitoring, disciplining and, when necessary, controlling the client firm. This has been possible since a main bank, a creditor and shareholder of the client firm, is effectively in a position to monitor and control the firm on behalf of all the other shareholders. This practice has been widely recognized to have existed. Third, is the provision of 'insurance' against the client firm when the firm is in financial distress. It has been widely observed that the main bank of a firm often rescues the client firm, so long as the firm is deemed viable, by making emergency loans or by arranging a rescue package involving all creditors. To sum up, the main bank system may be said to have: (a) enabled corporations to efficiently obtain financing, favorable in both quantity and cost aspects, (b) contributed to maintaining efficient business operations by disciplining corporations, and (c) to have assisted corporations to invest in more risky projects. Thus the system was a propelling force for the post-War high-growth of the Japanese economy. In fact, the main bank system attracted a great deal of attention internationally, especially in late 1980s and early 1990s when the Japanese economy was booming due to soaring of asset prices. For instance, the World Bank initiated a large-scale international research project on this in 1990, and it publicized not only the research results but also recommendations to developing and emerging economies to introduce a more or less similar system (for instance, Aoki and Patrick 1994)[5].

However, it is important, and interesting as well to note that the assessment of main bank system by researchers has altered quite substantially over the last 10 years or so. Up until the mid-1990s, the corporate monitoring role of main bank was highly praised, as in the World Bank reports. But in recent years, number researchers have increasingly shown theoretically and empirically that the monitoring function of a main bank should, and in fact did, function not at any time but only when a set of conditions were satisfied. An econometric study reported in the Appendix shows that main banks were not performing a disciplining function as early as 1989, the peak period of the asset price bubble. The prolonged difficulty faced by the Japanese economy in a changing domestic and international environments actually provides evidence for this observation that implementation of the traditional functions is no longer expected[6]. Thus let us turn to recent developments in Japanese corporate governance.

3. Corporate governance in Japan (2): Recent developments

In this section, we discuss how Japanese corporate governance has changed, and what have been the causes that necessitated those changes. But before that, it is helpful to introduce a conceptual framework for the two kinds of financial systems. Since the mode of corporate financing determines the base of corporate governance, as mentioned earlier, the two financial systems define two types of corporate governance, as shown in Table 1[7].

[3] For detailed discussion, refer to Okabe (1999: chapters 1 and 2).

[4] This dichotomy, while quite simple and easy to understand, has an inaccuracy in one important respect: the actual US system should be described not as direct finance but as a market-based indirect financial system, and the desirable future Japanese system should also be characterized by the same terminology, as will be discussed in section 4.

[5] After this, the World Bank conducted research on what kind financial system is to be recommended to developing countries. The most recent comprehensive research outcome is compiled in Demirguc-Kunt and Levine (2001).

[6] For theoretical and empirical analyses of these functions, refer to Okabe (2002a: chapter 5).

[7] For details of the following discussion, refer to Okabe (1999: chapter 1), and Okabe (2002a: chapter 6). The most comprehensive description on this theme is probably Allen and Gale (2000).

3-1. Two types of financial system

Table 1: Around here

First type is the "Anglo-American model," or the "market-based financial system." In this, the financial transaction, in principle, takes place in an open market between the market participants keeping each other at arm's length; each transaction is theoretically independent of previous and future transactions. Here, financing takes place in the form of securities; by selling them when procuring funds and by buying them when providing funds. It is from this characteristic that this type is sometimes known alternatively as security-based finance, a market-based system, or an open-market model. In this system, firms procure long-term funds in the capital markets; depending on banks for only short-term funds, so that bank dependency is relatively low. As the relationship between a firm and a bank remains relatively weak, it becomes necessary for firms to hold abundant internal funds for conducting daily transactions and some capital expenditure.

Further, it is the pressure of a hostile takeover coming from the stock market, not the bank, that monitors and controls the firm and indirectly secures the efficiency of the form's operation. Accordingly, the Anglo-American model is often called the 'outsider' model, from the viewpoint of corporate governance. Contrarily, in the second type, namely the Japanese-German model, financial transactions take place basically between banks (or other financial intermediaries) and a client firm in a bilateral manner that has a continuous element comings from the maintenance of a close long-term relationship. In this case, the main financing method is bank lending (loan), so that this system is often known alternatively as loan-type finance, bank-based finance, an institution-based system, a bank-based system, or a bilateral model. Here, banks provide not only short-term but also long-term funds, either by making a loan or by acquiring corporate bonds or equities issued by corporations; so that the firm's dependency on the bank is high. Banks may often acquire stocks issued by the client firm and hold that stock in a 'stable' manner. Accordingly, a bank is both lender and shareholder for the client firm, so that the bank comes to participate in the management of the client firm in both these capacities. Thus corporations are said to be monitored and disciplined by banks (especially main banks), rather than controlled by the pressure of the stock market. Therefore, the Japanese-German model is sometimes called the 'insider' or network-type model, again from the viewpoint of corporate governance.

For a firm, the maintenance of a close and continuous relationship with a bank means that the firm can count on timely and flexible borrowing from the bank; thus it is not necessary for the firm to maintain to hand abundant internal funds or liquidity. Further, if this kind of bank-firm relationship is maintained, it generates to the bank a large flow of information about the client firm (thus reducing the information asymmetry), and this may somewhat reduce the cost of funding for the firm since the risk premium in the borrowing rate is smaller.

Functional properties of the two financial systems

These two systems naturally display distinctive performance characteristics. In terms of information processing, the Anglo-American model is a system in which all the information is brought into the market, which tends to have well-developed systems for the acquisition and distribution of information. So the cost of information is low, and the risk involved in initiating a project is basically dispersed onto market participants. Accordingly, this system is more responsive to changes in circumstances, and is suited for riskier economic activities, such as developing new industries or new technologies. In particular, the system is suitable for establishing new firms, because such firms usually cannot borrow from banks due to a lack of physical collateral, usually a prerequisite for bank borrowing. In fact, this kind of performance nature of the system has been seen in the invention and development of railways, the computer and biotechnology. We can state here that the system is well suited to 'product innovation.'

In contrast, the Japanese-German model, which is characterized by the delegation of the funding process to intermediaries, does not work well when there is a diversity of opinion and high risk. But it is a superior system for finance in cases where agreement of opinions among stakeholders is important; because, in this system a long-term relationship is maintained and items of private information are shared among the various stakeholders. Accordingly, this system is suited for financing where a business enterprise may be redeemed as a going concern, and the firm's goal is to accelerate capital investment or to accumulating firm-specific labor skills, both of which are crucially important for mass-scale production of existing products. Thus this system is suited for financing existing products or industries where innovation and risk are relatively small, and improving technological and production efficiency is more important. This interpretation can be validated when we see that both Japan and Germany have had competitive edges in industries such as automobiles and electronics. We can state here that system is good for 'process innovation.'

In addition to the above two types, financing through venture capital needs to be noted. Venture capital is a financing institution whose main activity is to supply money to risky newly established firms by acquiring shares and to proffer advice on the business operation to those firms. Venture capital has offered a way to combine funding of high-risk projects and managerial support in a flexible way for new and innovative firms, which typically lack collateral, track record and managerial experience (CGFS 2002). Accordingly it has a character resembling the

Anglo-American or capital-market based system. Since the Japanese economy now requires product innovation, as will be discussed later, it is important for this mode of financing to grow in Japan in future.

3-2. Changing environment and weakening of corporate governance

What is the historical evolvement of main bank system based Japanese corporate governance? Up until the late 1980s, the Japanese economy seemed to be performing marvelously well, especially in the late 1980s when the economy boomed from the rise of asset prices, giving the appearance that there was no problem in the financial system. Rather, many observers, both Japanese and overseas, pointed out that the Japanese financial system was one of the factors contributing to the booming economy. However, it was in this period that the previously much praised financial system and its resulting corporate governance system began to show its limitations, and to fail to carry out the functions required of it. This fact, unfortunately, was not properly recognized by either the policy makers or academic researchers. Malfunctioning of the financial system started due to changes in the economic environment, as follows.

First, accumulation of business profits had strengthened financial positions and self financing capacities of firms; along with a decline of corporate dependency on banks. Second, blue chip firms had been able to raise funds in overseas markets (by issuing securities) more easily, in greater volumes and at less cost than in the tightly regulated domestic markets. This also lead corporations to rely far less on bank borrowing than before, so that banks had increasingly lost their basis for monitoring corporations. Consequently, in the late 1980s, Japanese corporations had lost the basis of their efficient operations and increasingly went on to speculatively acquire real estate. Banks, on the other hand, also revealed their own problems in the lack of a disciplinary mechanism, which lead to seeking business scale rather than efficiency and to insufficient screening when making loans. This situation brought about unsound bank loan practices and, after the mid-1990s, those loans turned out to be non-performing, and this continues to distress Japanese banks even today.

Put simply, changes in the economic conditions after the 1980s rendered the traditional corporate governance mode no longer workable or effective. In fact, recent research, such as Hirota (1996), Weinstein and Yafeh (1998), Horiuchi (2002), Osano and Hori (2002), in increasing numbers strongly confirm this observation. Accordingly, it has been more customary in recent years to say that one of the important causes of the bubble economy in late 1980s was the fragile nature of both the monitoring power of main banks and corporate governance of banks themselves. That is to say, it has become a general understanding that the "vacuum of corporate governance" of Japanese firms, or its weakening, emerged during the bubble period and has become an important structural problem for the Japanese economy. For a detailed discussion, please refer to Okabe (1999: chapter 2) and Okabe (2002a).

The above argument leads to the following general conclusions. First, there is no single answer to the question of what the "best" financial system is; that answer depends on various economic and other conditions. One size does not fit all nor does it even fit all the time. Second, conditions to determine an optimal financial system include such factors as the stage of economic development, effectiveness of regulation, degree of openness of the economy or of financial globalization, and information and communication technology. These factors can jointly determine an optimal financial system for a country. If given these factors, then, can we say that the Japanese financial system has been, and is, changing for the better? Let us first sort out the recent developments that have altering the Japanese financial system, and then in section 4 we hope to answer that question.

3-3. Changing environment and changes in the financial system

The weakening of corporate governance, as mentioned above, is an outcome of a mix of a variety of factors. Of these, the four factors that follow are ones that have already had an effect and are particularly important in formulating any forecast regarding the future financial system. They are: (1) changing patterns of corporate finance, (2) dissolution of cross shareholding, (3) increased role of institutional investors, and (4) effects of innovations in information and communication technology (ICT). Let us briefly review them in turn.

(1) changing patterns of corporate financing: notable, growing out of debt

How has the financing pattern of Japanese corporations, on which corporate governance is based, evolved in recent years? Statistics for 1991-2001 are shown in Table 2. From this, we can note the following: (1) the total amount of funds acquired maintained a clear downward trend throughout this period, (2) internal funds have always had an overwhelming importance, (3) acquisition of external funds declined drastically (for the period of 1998-2001 such acquisitions actually were negative; that is, there was a net repayment of debt), and (4) of all external finance sources, bank borrowing rapidly decreased while equity funding remained rather stable.

Table 2: Around here

Does negative external funding (net repayment) mean that corporate financing has lost meaning for corporate governance? Not so, for the following reasons: even though the yearly acquisition of funds, as shown in the table, is negative for these years, the aggregate amount of this flow of funds, namely the net amount outstanding (financial assets minus fi-

nancial liabilities) still show a position of net fund acquisition. In fact, the corporate sector is still the largest fund raising sector in the economy; on the basis of stock. To use the statistics as of the end of March 2002; business corporations (non-financial private corporations) had financial assets of 688 trillion yen, and with financial liabilities of 1,101 trillion yen. This is a net balance of financial liabilities of 413 trillion yen. Of the financial liabilities, 419 trillion yen was in bank borrowing, 354 trillion yen was in shares and other equities, and 81 trillion yen was in debentures and issuance of commercial papers[8]. To conclude, corporate financial structure as stock still shows net financial liabilities (and traditional indirect financing still dominates); so basically, the disciplining mechanism coming from the financial structure has not lost its validity, even though corporations rapidly decreased borrowing on a net flow basis. Of the four characteristics above, (1) is obviously a reflection of stagnant capital investment due to the prolonged economic depression. But what about items (2), (3) and (4); what do they mean to corporate governance? A fundamental theory of corporate finance, the Modigliani-Miller theorem, asserts that under a set of assumptions (perfect market, absence of tax, etc.) the value of a firm is not affected by its method of finance, whether debt financing or equity financing. But in reality this is not so. In Japan and the US, an explanation called the "pecking order hypothesis," or the hierarchy theory of financing, has been recognized as describing the actual situation[9]. According to this hypothesis, a firm is behaves in the following way: in the first place it will have an order of preference for choosing a method of finance, and then it will successively utilize the method of finance with the least cost, thus minimizing the total cost of funding. The feature (2) can be explained by this hypothesis.

But it is difficult to interpret features (3) and (4) by applying this hypothesis. The reason for this comes from the hypothesis' presumption. The pecking order hypothesis does not properly take bankruptcy risk into consideration, thus limiting its applicability. This is quite an important limitation, since bankruptcy risk has been generally rising during the long period of stagnation of the Japanese economy through the 1990s and early 2000s. In other words, when a firm tries to raise funds, its concern is more with bankruptcy risk than the cost of funds. This is because the cost of funds is Japan is extremely low due to the historically unprecedented easy monetary policy overseen by the Bank of Japan, on the one hand, and bankruptcy risk is generally high, on the other. Accordingly it becomes rational behavior for firms to reduce debt that would increase corporate risk and to increase owned capital, a financial buffer. It can be understood that the this kind of corporate behavior resulted in features (3) and (4). As seen above, corporations have rapidly decreased borrowing from financial institutions, banks in particular, and even when borrowing has not decreased, the bargaining position of banks has been substantially eroded in the extremely loose monetary environment. It is therefore natural that the monitoring authority and power of main banks has rapidly declined. A good example to demonstrate this situation is the "forbearance lending;" the behavior of banks to refinance firms even in cases where there is little prospect of firms repaying the loans extended. Various statistics show that in the first half of the 1990s banks extended further loans to, real estate and service industries whose profitability was hovering at low levels rather than force them to repay. Consequently banks assisted in slackening the business operations of these firms, still less monitored them to assist in efficient operations (Sekine, Kobayashi, and Saita 2003). This kind of bank behavior indicates that the ability of banks to discipline corporate behavior has declined drastically. It is certainly true that the disciplining function of debt has not been not lost; in as far as firms have debt outstanding. But we can see that the traditional corporate governance framework---banks monitoring client firms---has now collapsed and the disciplining function of the stock market has been gaining importance.

(2) Dissolution of cross shareholding

Another important feature of Japanese corporate finance, or of the Japanese economic system more generally, is "cross shareholding," or mutual holding of shares between banks and their client business corporations, or between non-financial business corporations[10]. When shares are held mutually, there two potentially serious problems arise. First, it is likely that the disciplining pressure coming from the capital market is relatively weak. This happens because, when shares are held mutually, managers of both corporations are likely to implicitly agree not to intervene in the management of the counterpart corporation; and because the possibility of bloc share trading or a hostile takeover is decreased. The second problem is that, when equities are mutually held between banks and insurance companies, mutual equity holding increases the systemic risk of the entire financial system (BIS 2002, p135). This is all the more likely, since in recent years the financial positions of Japanese insurance companies have been rather fragile. Further, this kind of mutual equity holding reduces the monitoring and disciplining function of insurance companies vis-a-vis banks, and tends to induce forbearance lending by banks, thus generating a serious issue regarding the efficiency of the entire economy.

[8] Author's calculation based on Bank of Japan Financial and Economic Statistics Monthly, September 2002, page 255.
[9] For details, see Okabe (1999: chapter 1, section 4).
[10] Detailed analysis of cross shareholding, including the reasons for, its effects, and the future outlook is presented in Okabe (2002a).

Figure 2: Around here

Cross shareholding, which involves the above problems, has been unraveling especially after the mid-1990s, as seen in Figure 2. This has important implications for corporate governance. When cross-held shares are released from both parties and are sold in the market, a substantial part of such shares have been acquired by Japanese institutional and foreign investors. Important here is that foreign investors have traditionally been keen on a return on equity (ROE) in their investment (see Appendix for empirical evidence), and that Japanese investors (pension trusts, investment trusts) have in recent years likewise become increasingly keen on ROE. This means that the higher the ROE of the share, the more it is preferred and consequently acquired by investors in the stock market. This kind of selective investment attitude of investors implies that Japanese corporations are likely to feel more pressure from the capital market and from shareholders; and that governance is likely to have an Anglo-American element of efficiency rather than an expansion of business volume. Accordingly, we can state that the dissolution of cross shareholding, as observed in recent years, has somewhat rectified the "vacuum of corporate governance" and has contributed to raising the efficiency of Japanese corporations.

(3) Increased role of institutional investors

When we discuss the prospect of Japanese corporate governance, we cannot dismiss the possibility of the increased role of domestic institutional investors. Institutional investors are specialized financial institutions that manage savings collectively on behalf of small investors, governed by a specific objective in terms of acceptable risk, return maximization, and maturity of claims (Davis and Steil 2001). Typical institutions include pension funds, investment trusts, and life insurance companies.

Institutional investors have shown remarkable growth in the major countries of Europe and in North America over the last ten years (Davis and Steil 2001). However, in Japan their growth has remained moderate, even though some improvements have been made in the legal framework (regarding securities investment trusts) under which they operate, and deregulation has taken place (such as allowing banks to sell investment trusts at their counters). But a great increase in growth can be expected in Japan because the kind of financial assets (instruments) that institutional investors provide have good potential for growth. Until recently, and even now, alternative financial assets available to households have been quite limited, as shown earlier in Figure 1, and households are now much more willing to diversify their portfolio than previously, as various surveys have indicated. Given these circumstances and the traditional risk-averse attitudes of Japanese households, they are more likely to choose medium-risk medium-return financial assets (such as investment trusts) rather than to suddenly invest in high-risk high-return assets. Another reason is that pension funds, already an important institutional investor, are expected to increase in size and number due to the aging of Japan's population; thus the assets held by those funds are also expected to grow.

If institutional investors grow in number and in the financial activities they participate in, corporate governance will be profoundly affected. It is because that, above all, institutional investors are subject to a fiduciary duty, the responsibility imposed upon agents (such as insurance companies and pension funds) to manage entrusted funds for the ultimate benefit of the principal (individuals). Therefore, when institutional investors choose financial assets, company shares in particular, for their portfolios, it is natural that they tend to focus on the rate of return, and to prefer shares with higher rates of return. As a result, the pressure coming from the stock market encourages corporations to operate more efficiently. In fact, in the United States, since mid-1980s a series of laws have been passed regarding financial investment by pension funds, and trustees of pension funds have been required to be actively involve in the management decisions of the corporations in which they invest (such as by exercising voting rights). As a result of this, US corporate governance has been said to have been strengthened. In Japan, on the other hand, the fiduciary duties of institutional investors are rather ambiguous, hence clarification of this situation remains an important public policy issue; nevertheless the influence of institutional investors on corporate governance is sure to steadily increase in the coming years.

(4) Effects of information and communication technology (ICT) innovation

Information and communication technology (ICT) innovation is also likely to affect the various modes of corporate governance. Since the real extent of the influence of ICT on the economy is not yet clarified, suffice it to mention here two aspects regarding financial markets. One is that ICT innovation enables the valuation of a firm, by financial markets, to be more accurate since ICT generally tends to provide financial markets with more information of all aspects of a corporation, and to provide it more efficiently ands in a more timely manner. Therefore, continually evolving situation of ICT and its effects on financial markets is conducive to promoting the operational efficiency of corporations. In fact, in the US, changes in the character of financial markets that have been driven by ICT innovation are reported to have strengthened the disciplining of corporations through the market-based corporate governance mechanism (mergers, acquisitions, and takeovers) or by restructuring business operations (Holstrom and Kaplan 2001).

The other effect is that ICT innovation has brought about a revolution in financial transactions

and financial products, since it enables instantaneous acquisition and processing of massive amounts of financial and other data. For instance, derivatives (financial contracts of trading risk or other property as derived from an underlying asset), and asset-backed securities (ABS, a marketable security that is issued by bundling, and backed up by relatively smaller assets) are good examples. If the transaction of these financial products increases in Japan, corporations will be able to rely more on market-based finance or to diversify their methods of financing; consequently risk can be more widely dispersed, from financial institutions to various economic agents (CGFS 2002). This will promote efficiency within the entire economy, and probably strengthen corporate governance by market forces.

4. Prospect and policy issues

Four factors mentioned above, namely the changing patterns of corporate finance, the dissolution of cross shareholding, the increased role of institutional investors, and ICT innovation, all have been instrumental in driving the changes that are moving Japanese corporate governance from a bank-based to a market-based corporate governance system. Thus the system is anticipated to change, from one in which disciplining pressure comes from a single institution (the main bank), to one in which various markets (such as stock, debenture, ABS, and derivatives markets) take over that role. This change in how disciplining power on corporations is exercised is likely to show three characteristics.

First, as mentioned several times, change will take place from an overall bank-centered governance to more or less a shareholder- or stock market-centered corporate governance. However, this change is not as simple as "from indirect finance to direct finance," but it is rather a change "from a bilateral or relationship centered indirect finance to a market-based indirect finance." The point is that indirect finance will probably still dominate but that market elements will increase. In reality, the US financial system should be characterized basically as "market-based indirect finance," rather than "direct finance" (Okabe 1999: chapter 1, section 2); which is precisely the system that is expected to evolve in Japan, and is the one deemed desirable (Royama 2002).

Second, corporate governance is not expected to converge to one kind of system but rather to diversify. The reason being that corporate governance systems involve a variety of aspects, not only economic but also historical, social and cultural ones; and there is probable no one universally accepted optimal model. For instance, the number of "good" Japanese companies whose top priority is that of the shareholders' interest is comparatively few (Niihara 2003). Also, the recent amendment of the Business Law (enacted in April 2003) aiming to strengthen corporate governance offers two options to choose from for a corporate governance structure[11]. This is one of the factors that will cause the Japanese corporate governance system to diversify. Further, a recent survey (Policy Research Institute 2003) covering 400 large corporations has revealed that in the manufacturing industry, diversity in terms of business areas, organizational structure, and corporate governance structure has increased since 1990.

Third, although there is a definite and strong trend for Japanese corporate governance moving toward an Anglo-American or market-based governance system, there is little possibility that it will converge on that mode. One reason is that there are two kinds of factors determining corporate governance: one is the factors that converge easily internationally, such as financial markets reflecting financial globalization, financial data, and accounting rules; the other is those that are less likely to converge, such as the social system of a nation, commercial and corporation laws that reflect history and commercial practices. Another reason is that to efficiently achieve sustainable economic growth, both institutions and markets have their own roles and either one alone would not make for an efficient system (Levine 2002, Bech and Levine 2000). This conclusion is also confirmed from an analysis (Shirai 2003) of the late 1990s economic crisis of East Asian countries and the lessons derived from the policy responses of the nations effected.

In summary, we can state that there is are indications that disciplining mechanisms are being reestablished for Japanese corporations (see Appendix for an econometric evidence), after a vacuum of corporate governance was experienced for close to fifteen years. This means that Japanese firms have been increasingly obliged to emphasize efficiency of capital, ROE, or efficiency of assets, ROA, rather than to merely expand sales volume. Financial system also may be said to have been changing to a more desirable one in two respects, commensurate with changes in economic environment.

The system may be said to have been changing from what was suitable for "process innovation" to what is suitable for "product innovation." The traditional, well-established, Japanese financial system that has historically played an important role, has now lost the validity for its functioning under a new set of domestic and international circumstances. That is, many Japanese products, such as fiber, iron and steel, chemical products and machinery, in which Japan once enjoyed comparative advantages, are now facing keen competition of China and other East Asian countries, and cannot compete on price, and

[11] In addition to the existing system, where an auditors' committee audits the board of directors, a US-type governance institution was introduced as a new option. In this, executives are stipulated to literally execute company operations, while the board of directors specializes in monitoring the company operations conducted by executives, and within which duty the board is required to establish auditing and another two committees of which half the members must be chosen from outside the corporation.

gradually on quality as well. Accordingly, Japanese industries need to shift the products toward a more technology-intensive mix to survive internationally; therefore, the financial system must change to foster such industrial change. Continuing changes in recent years can be usefully evaluated in accordance with this evolutionary trend.

Another aspect is that the changes in the system toward a market-based one may be said to be in a direction that will ensure a more stable system or to a system more resilient to various shocks. In a bank-based system, risks inevitably concentrate in banks, while in market-based system, risks are broadly dispersed to various agents within the economy. Indeed, these characteristics have been confirmed in the period of the late 1990s to the early 2000s when the stability of financial institutions (especially banks) in Europe and the US remained remarkably stable, even though a number of defaults of debentures occurred owing to some general depression. This was in sharp contrast with the bitter experiences of the late 1980s to early 1990s (CGFS 2002).

However, issues of public policy remain to be addressed, if the recent trends are to yield the expected results. One area is to nurture an environment for company shares to be held more extensively throughout the economy, and for companies to be more appropriately monitored by shareholders[12]. This would include improvements in the legal and institutional frameworks of securities investment trusts, and the establishing of a system of effective corporate governance by institutional investors. Also, there are many lessons to be learned from the drastic improvement in the US situation, regarding accounting disclosure and auditing systems; these should improve the framework of Japanese capital markets. The recent amendment of Japanese Commercial Law, enacted in April 2003, now provides an improved legal framework, but in reality there remains work to substantiate this new framework: such as adjusting monitoring capacity of boards of directors, and substantiating the contribution to come from outside directors for better corporate management and governance.

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[12] Since employees of corporations are important stakeholders, particularly in Japan, there is validity for their representatives to participate in company management. In this regard, the German system is highly suggestive (Okabe 1999: Box 2-1).

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Appendix: Corporate governance structure and company performance: an empirical study

How, and to what extent does corporate governance, in particular the ownership structure, affect the performance of companies? Here an empirical study conducted jointly by the author and his student, and reported elsewhere[13], is briefly summarized. The study aims to investigate how various “governance variables,” namely debt and the ownership structure, affect company performance or the value of the company. Specifically, the following multiple regression model was estimated:

$$TOBIN = \alpha_1 + \alpha_2 DEBT + \alpha_3 MB + \alpha_4 DIR + \alpha_5 FOREIGNER + \alpha_6 INDIVIDUAL + \alpha_7 FINANCIAL + \alpha_8 CORP + \varepsilon$$

where

TOBIN: Tobin’s *q*

Tobin’s *q* = (Total market value of issued shares + Interest- bearing debt) /(Owned equity + interest-bearing debt).

DEBT: Debt to asset ratio

Debt to asset ratio = Total debt / Total asset.

MB: Dependency on main bank

MB = Amount of lending by the top lending bank / Total debt.

DIR: Directors’ shareholding ratio

FOREIGNER: Foreigners’ shareholding ratio

INDIVIDUAL: Individuals’ shareholding ratio

FINANCIAL: Financial institutions’ shareholding ratio[14]

CORP: Other corporations’ shareholding ratio

ε: Error term

Estimations were run using cross-section accounting data of large (listed) companies for two years: 1989 (for 501 companies) and 1999 (for 499 companies). 1989 was the peak period of the “bubble economy,” and 1999 was the most recent year for which consistent statistical data is available. For the details of the data and the basic statistics of the sample[15], refer to Okabe and Fujii (2004).

Table A: around here

Estimated results, shown in Table A, are generally satisfactory with all the variables highly significant. From this, we can make following observations: (1) Debt had a steady disciplining role, as expected, for both 1989 and 1999.

(2) Having a main bank had a negative effect on company performance for both years. This implies that the monitoring and disciplining function of a main bank, if it existed, had already disappeared as early as in 1998. This result is broadly consistent with other recent research, quoted in the main text of this paper. We may interpret this result to imply that one of the causes for the asset price bubble in late 1980s was that of the vacuum of bank corporate governance.

[13] Okabe and Fujii (2004).

[14] Excluding investment trusts and pension funds.

[15] Some interesting figures are: the average of Tobin’s q is 2.31 for 1989, indicating asset price bubble, while 0.60 for 1999; the debt to asset ratios are high for both years with 68.69 and 64.36, respectively, reflecting the reliance on bank finance; and individuals’ shareholding ratio rose from 25.77 to 30.57.

(3) Shareholding by foreigners had consistently positive effects on company performance (disciplining function). This is because their motives are usually to obtain high investment returns and sometimes discipline the company with their "voice."

For the others of the four explanatory variables, the nature of the influences changed (signs of the parameter reversed) between these two years, statistically significantly. For each of these cases, the following interpretation can be made, with reasons presumably effecting the change.

(4) Directors' shareholding had a negative effect on company performance in 1989, but became positive in 1999, although the size of the parameter in the latter is quite small. The negative effect in 1989 is due probably to moral hazard on the part of directors, while the change to a positive value in 1999 is due presumably to the increase in incentives, or the tightening of the role of directors as seen in the increased amount of litigation against directors for poor or illegal company performances.

(5) Both financial institutions' shareholding and other corporations' shareholding ratios had negative effects on company performance in 1989, but both became positive in 1999. This result is rather difficult to interpret, since various theoretical analyses conclude that there is no unique direction (the sign of the parameter) for the effect of bloc shareholders. But the results indicate that bloc shareholders have positively influenced company performances in more recent years.

(6) The shareholding ratio of individuals' changed, quite contrary to the above three cases, from positive in 1989 to negative in 1999. The positive effect in 1989 is due probably to more concentrated shareholding among individuals thus having a disciplinary effect. While the negative effect in 1999 may be explained by a dispersion of shares to more individuals, implying that (smaller) individual shareholders are reluctant to monitor the company by putting in time and other resources to this end, but that they prefer a "free ride" on the disciplining activities by other types of shareholders.

All in all, the results suggest that the disciplinary effect on corporations coming from shareholders, except for shareholding by individuals holding smaller blocs, seems to have increased in recent years.

Table 1. Two types of financial systems and their properties: Anglo-American and Japanese-German models

	Anglo-American model	Japanese-German model
Main financial transaction	Open market	Bilateral transaction
Main funding instrument	Securities	Loan
Dependence on banks	Low	High
Nature of bank loan	Short term	Short term and long term
Importance of internal funds	High	Low
Shareholding by banks	Not important	Important
Major shareholders	Households Institutional investors	Banks Intercorporate shareholding
Block share trading	Frequent	Not frequent
Corporate control	Stock market	Banks (main banks)
Information processing	Market acquires and distributes diversity of opinion and risk; Information cost is low	Banks and client companies jointly own information by keeping long-term relationship; economies of scale in information acquisition
Allocation of risk to various economic agents	Risk is dispersed broadly concentrated in banks	Risk is essentially
Performance characteristics	More responsive to change	Superior at implementing corporate policies that require agreements among various groups
Suitable economic activity	Developing new industries, new technologies and starting up new businesses (Product innovation)	Improving the production process and efficiency of existing products (Process innovation)
Industry examples	Railways, computer and biotechnology	Automobiles and electronics

(Source) Okabe (2002a) Table 6.1, with some revision and expansion.

Table 2. Sources of funds of private non-financial corporations, yearly average in trillion yen

	1990-93	1994-97	1998-2001
Acquired funds total	86.2	53.0	37.7
Internal funds	52.5	48.1	43.6
External funds	33.7	4.9	-5.9
New stock issue	2.7	2.4	2.1
Debenture	2.7	-0.8	-0.7
Bank borrowing	28.3	3.3	-7.3

(Source) Calculated by the author using Financial Statements Statistics of Corporations, Ministry of Finance. <http://www.mof.go.jp/1c002.htm>

Table A. Regression results of the relative value of corporations

	1989	1999
Debt	0.05620 ***	0.00991 ***
	(77.57)	(83.81)
Main bank	-4.35247 ***	-0.64923 ***
	(-31.15)	(-33.07)
Directors' shareholding ratio	-0.02989 ***	0.00420 ***
	(-14.82)	(83.81)
Foreigners' shareholding ratio	0.07965 ***	0.02829 ***
	(24.32)	(45.60)
Individuals' shareholding ratio	0.01697 ***	-0.00704 ***
	(17.27)	(-104.77)
Financial institutions' shareholding ratio	-0.01918 ***	0.00155 ***
	(-32.79)	(12.04)
Other corporations' shareholding ratio	-0.01578 ***	0.00307 ***
	(-23.63)	(20.43)
Adjusted-R^2	0.9939	0.9983
N	501	499

(Note) t-values in parentheses; asterisks ***, **, * indicate the significance at 1%, 5%, 10% levels, respectively.
(Source) Okabe and Fujii (2004), Table 4-3.

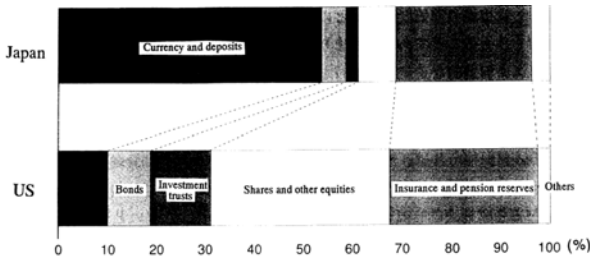

Figure 1. Financial assets held by households: Japan and the US end of March 2000

Source: Bank of Japan (2000, chart 8)

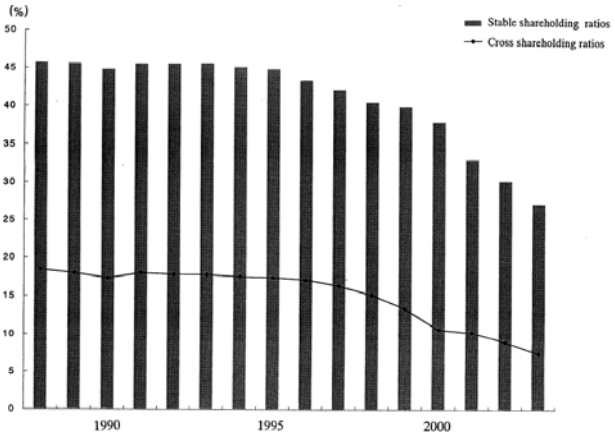

Figure 2. Stable shareholding ratios and cross shareholding ratios (in per cent, at the end of March)

Source: NLI Research Institute (2003)

MANAGERIAL DISCRETION IN NON-PROFIT ORGANIZATIONS: AN APPLICATION TO SPANISH WORK ACCIDENT MUTUALS

Eugenia Suárez Serrano*

Abstract

This paper explores the problems of managerial discretion in the non-profit sector, with special consideration to Spanish Work Accident Mutuals (MATEPs). Firstly, from Transaction Costs, Property Rights and Agency perspectives, the economic rationale of mutuals is analyzed, paying particular attention to MATEP's peculiarities and incentives in terms of competition, regulation and ownership. Subsequently, the effectiveness of governance mechanisms is discussed, showing that the status quo leaves excess power in the hands of the managers of these organizations.

Keywords: Work Accident Mutuals, non-profit sector, managerial discretion, corporate governance, Agency Theory, Property Right, Transaction Costs, Spain

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1. Introduction

The problems of managerial discretion that are usually studied in the field of corporate governance can also arise in other types of organizations in which a delegation of the capacity of decision occurs. This article analyses the possible existence of managerial discretion in Work Accident and Occupational Disease Mutual Insurance Companies (MATEPs), entities of a great economic and social significance in Spain.

MATEPs are voluntary associations of employers, which act as collaborating entities of the Social Security in the carrying out of occupational risk insurance[1]. They are financed by compulsory employer's contributions and, as a counterweight, offer to the associated companies a comprehensive service that includes: (i) preventive measures; (ii) health care for workers affected by occupational accidents and diseases; and (iii) monetary compensations in case of incapacity, disability or death. Because they manage public funds, the functioning of the MATEPs is, moreover, subject to strict and exhaustive controls

This sector, originally highly diffused and of a marked regional and sectoral nature, has experienced an intense process of realignment and concentration in the last decade, propitiated mainly by the tightening up of constitution requirements. In a short period, two out of three MATEPs disappear, allowing nearly thirty better prepared entities and of a greater geographic implantation to assume the new competences conferred on by the Social Security (Suárez and Ventura, 1999). Likewise, the government introduced, some years ago, a new Regulation of Collaboration[2] aiming to rationalize the MATEPs governance.

The paper first approaches, from the Economy of the Organizations perspective -Transaction Costs, Property Rights and Agency- the economic rationale of non-profit organizations and of the MATEPs, in particular. Next, we study and discuss in detail the MATEPs and their external and internal governance mechanisms to, finally, draw a series of conclusions regarding the degree of managerial discretion in these entities.

2. Economic Analysis of Non-Profit Sector

2.1 Economic Rationale of Non-Profit Sector

The non-profit organizations (NPOs) coexist with for-profit and the public sector. However, fixing the limits that separate such organizations from the rest is not an easy task; although private, they actively collaborate in the aiming of public objectives. Thus, the NPOs are set in the so-called Third Sector[3] con-

[1] The insurance of labour contingencies is compulsory; however, employers are free to choose between the Social Security and MATEPs. Now, the whole market is practically controlled by the latest.

[2] RD 1993/1995 December 7, in substitution of RD 1509/1976, May 21.

[3] The Third sector delimitation is in many cases confusing, as this term, of Anglo-Saxon origin, tends to be used as a synonym of the

text, as a residual group of neither capitalist nor state organizations (Mertens, 1999). However, what makes an organization be non-profit? According to Hansmann (1980), the NPOs differ in the following characteristics: a) they are not allowed to pay their surplus and b) their functions are limited to certain activities.

The importance of this sector to the economy is not questionable, since, from the eighties, its contribution to the Welfare State is increasing. However, which have been the causes that lead to this expansion? In other words, which is the economic rationale underlying this mixed form of transactions governance? The three theories taking part in the so-called Economy of the Organizations -Transaction Costs, Property Rights and Agency- will help us to explain the emergence of the NPOs[4].

According to the Transaction Costs Theory, only those organizational forms, which reduce the transaction costs derived from the asymmetries of information, will survive (Williamson, 1975). In this way, Hansmann (1980) suggests that the origin of the NPOs is based on the 'contract failure' associated to certain transactions. In his opinion, these organizations arise when a separation between the purchaser and the beneficiary takes place, when strong investments in specific assets -which generate conflicts in the appropriation of quasi rents- are required and/or when the characteristics of the product -complexity, intangibility, multidimensionality - make its evaluation difficult. Under these circumstances, the donor or the client, facing possible opportunistic behaviour from the suppliers of such services, may choose a NPO to compensate the problem of asymmetric information (Weisbrod, 1988). Although, corporations own mechanisms to protect buyers -as warranties- (Williamson, 1985), some transactions are subject to uncertainty and to which a failure in the service can be so costly that the ex-post compensation would not be enough for the client (Holtmann and Ullmann, 1991).

Another theory related to the 'contractual failure' is that of the Property Rights. The property of an asset means the right to the appropriation of the residual rent (Alchian and Demtsetz, 1972) and to the residual control (Grossman and Hart, 1986). Both concepts are linked to the absence of full contracts; otherwise, everything would be contractually specified and assigned and the residual rights would have no significance. The efficiency of the non-profit governance mechanism can be explained by the specific distribution of property rights in these organizations, as it mitigates 'contract failure' -that together with government and philanthropic failures are regrouped around the concept of 'coordination failure'- (Enjolras, 2000).

Gui (1991) and Mertens (1999) distinguish the NPOs from the rest of organizations according to two categories[5]: the 'beneficiary category', which acts as a claimant, that is, it is entitle to receive the residual rent; and the 'dominant category' on which the residual control rights lay. Whereas the investors assume both roles in corporations, in the NPOs the beneficiaries are different from the investors. In other words, facing market failures -asymmetric information, market power, public goods-, the NPOs come out as organizations where residual rent does not relay on the owners but on the consumers. Nevertheless, as Mertens (1999) explains, this definition should not confuse the NPOs with the Public Sector, since in the former the residual control is not in the State hands.

From an Agency perspective, the survival of an organizational form will depend on its comparative advantage to control agency costs resulting from the conflict of interest between the parts (Jensen and Meckling, 1976). In this way, the peculiarities of the residual claimants will help to distinguish one organization to the others and to explain their survival (Fama and Jensen, 1983b). These authors suggest that NPOs appear to be the solution to solve the agency problems derived from donations: making inalienable the right to demand residual claims and agreeing with donors that in the future, all surplus will be applied to services. Furthermore, these authors affirm that the larger the quantity of donations and the easier to separate the executive and control decisions, the more successful the organization will be.

Although all the analysed theories point to the asymmetric information problem as the factor to justify the creation and survival of the NPO, they also agree to emphasize that these organization show limits in their functioning, motivated by the ineffectiveness of the imposed restrictions on the profit-making (Figure 1)[6]. Despite the fact that surplus cannot be distributed as dividends, in practice they are distributed in other ways. From the Transaction Costs approach, the donors and clients who choose a NPO, to protect them from the suppliers' opportunistic behaviour, have some difficulty to control the managers' opportunism (Hansmann, 1980). According to the Property Rights Theory, the residual rent was placed in the client, but the reassignment of the residual control right could turn managers into the 'dominant category' (Hansmann, 1988; Gui, 1991). In that case, how can it be guaranteed that clients

French term Social Economy, which includes not only NPOs but also cooperatives and certain types of profit making mutuals.

[4] Nevertheless, many other theories are used to justify the survival of NPOs, for instance, those based in tax incentives, institutional inertia or altruism.

[5] Gui (1991) makes a distinction between NPOs and corporations; and Mertens between NPOs and public organizations.

[6] Which would explain that non profit, for-profit and public institutions survive in the same industry (Handy, 1997). For instance, the following sentence by Rose-Ackermann (1996:717) is very controversial "NPOs emerge due to, not despite of, their inefficiencies.

have more control over the managers than the shareholders do? Finally, based in the Agency Theory, Fama and Jensen (1983b) suggest that the surplus generated by NPOs is assigned, although nobody has property rights over it, and they state that donors (and/or clients) face problems of managerial discretion similar to those in other organizations subject to the separation between ownership and control. In addition, Rose-Ackerman (1966) points out that this is a particularly serious problem in the non-profit sector, since the absence of a market for corporate control does not allow disciplining the managers in a proper manner.

Figure 1

As it is not clear that the limit imposed on the profit-making leads the organizations to focus exclusively on the attention to the clients, it will be precise to find a mechanism of control to prevent managers from appropriating parts of the surplus in form of salary increase, excessive expenditure, over-investments and risky growth strategies. Easly and O'Hara (1983) affirm than it is necessary to introduce an additional restriction on managers' compensations. Fama and Jensen (1983b) suggest that, to control the managerial discretion in the NPOs, there must be an effective separation between execution and control decisions. According to Knapp and Kendall (1991), the main point is to make NPOs more transparent and able to provide disintegrated information about their activities and results, highlighting the significance of self-regulation through Codes of Good Practice. Other authors give perhaps more influence to the external mechanisms. Thus, Hansmann (1980) maintains that the competition in markets against other organizations leads the NPOs to maximize the output to satisfy their clients. In other cases, the protection of the users' rights by the government intervention is defended (Krashinsky, 1986; Gui, 1991). Nevertheless, Rose-Ackermann (1996) proposes that, even if the supervision makes sense to avoid the managers´ opportunism, there is a risk that an excessive intervention could lead to a loss of the advantages that NPOs offer in terms of quality and differentiation.

Mutuals in The Non-Profit Sector

So far the criteria used to classify the organization have been the profit restriction, distinguishing between the profit-making and non-profit organizations. Nevertheless, The NPOs might have different legal forms and seek diverse goals (Salamon, 1991). For a better understanding of the non-profit sector, we opt to divide the organization according to their objectives[7]. Thus, as we can observe in Figure 2, there are two different types of NPOs: a) the mutual interests organizations, focused in the rendering of goods and services to its members –mutuals, unions, clubs, professional associations-; and b) the public interest organizations, which contribute to the general welfare, offering services to social groups with great sanitary, cultural and educative needs.

Figure 2

According to the classification stated above, mutuals are included into the 'member oriented' NPOs; in other words, they are organizations with an 'internal projection' and with performance aim to improve their associates' welfare (Montserrat, 1991). Not all the authors include mutuals in the profit-making sector. For instance, Gui (1991) states that the lack of profit making of these organizations cannot be asserted, since they seek their associates' interests. Hasnmann (1980) goes further and declares that mutuals are even closer to the cooperatives than to the non-profit sector. On the other hand, Mertens (1999), with a more European vision, defends the explicit inclusion of mutuals into the Third Sector because although the 'dominant' and 'beneficiary' categories fall on the same person -the service's target group- this category does not have the condition of investor. In his opinion, despite the fact that the members of a mutual play a double role, they are not interested in increasing the profitability of their contributions -as associates- but in obtaining the greatest benefits -as users.

Once mutual organizations have been placed in the non-profit sector, we return to the three theories analysed in the previous epigraph. As stated by the Transaction Costs perspective, mutuals would allow solving information problems present in certain transactions. Therefore, the pursuers of a difficult evaluation product will overcome their lack of information by taking part in the donor organization (Ben-Ner, 1986). Consequently, mutuals would be a hybrid governance mechanism that, through relational contracts, would ease the control of an activity without requiring its integration. Figure 3 shows the relation of substitution between the incentives and the control proposed by Rumelt (1995), to whom relational contracts[8] are explicitly added as an intermediate solution able to generate mayor incentives than those of the hierarchy, but reaching a superior coordination to that of the market. Precisely, Kay (1991) asserts that the main advantage of mutual forms is based in the easy development of relational contracts, as it can be observed in the underlying culture of the most successful mutuals.

[7] It is commonly said that profit-making companies have private objectives, but, as showed in Figure 2, there are also certain public companies which, despite their legal form that allow them to share the surplus, their objectives are public -employment promotion, exploitation of local resources or strategic sectors protection. What usually happens in these organizations is that, in many cases, the benefits are not distributed since they are loss-making.

[8] Relational contracts appear when the recurrence of the exchange justifies an ad-hoc instrument to rule long-term and continuous relationship between the parts. Their terms are usually explicit and based on a mutual necessity of continuing the relations in the future (Williamson, 1985).

Figure 3

The Property Rights approach highlights the double role given to the clients of mutuals, as a way to solve the 'contractual failure'. Since the organization control is held by the 'beneficiary category', the clients will be in a position to ensure them that in case the surplus occurs, it will be in their benefit. This peculiarity allows mutuals to have an implicit distribution, to the detriment of explicit causes of distribution (Gui, 1991). Moreover, Kay (1991) suggests that the relative ambiguity in the distribution of the residual rent could be one of the factors that explain the success of some mutual organizations, since they are capable of accumulating substantial reserves to finance their development. Finally, the Agency Theory emphasises once more that clients have the right to demand residual claims in mutuals, which means a restrain on managerial discretion in comparison with the NPOs of general interest. Nevertheless, as maintained by Fama and Jensen (1983b), the mutuals survive due to a singular characteristic by which, each client can exercises the above mentioned right at any moment, for a value calculated according to an established regulation. This form of partial liquidation minimizes the agency costs, since it reduces the managers' control over the entity's assets[9]. Moreover, mutuals either usually limit the acceptable risk because their activities are restricted by regulatory imposition or voluntarily established in their articles of association (Kay, 1991). Therefore, the agent's margin of action is restricted so as not to deviate from the principal's objective. From the above argument, it can be stated that, mutual organizations main advantage is their capacity to facilitate the observance of the performance and, thus, to mitigate informative problems[10]. However, this type of organization is not exempt from inconvenient. Firstly, clients usually subsidize other clients; because the condition of associate guarantees their contribution is to be used as services for the members, but not entirely in their own benefit (Hansmann, 1980). Secondly, as the title of mutualist is not transferable trough a market, an improvement in the management is not immediately capitalized as the associates' wealth, which propitiates the managers´ negligence (Alchian and Demtsetz, 1972); what is more, this does not allow the existence of a market for corporate control as strong as at the public limited companies. Finally, the lack of clarity in the residual rent distribution is reflected in a less effective way of managers' accountability (Kay, 1991). In any case, if mutual forms are to survive in an increasingly global and competitive environment, they will need to adopt effective corporate governance rules to safeguard members' control (Chaddad and Cook, 2004).

3. Description of MATEPs

The uncertainty and the limitations of civil law with respect to responsibility have justified the development of labour contingencies insurances. Therefore, although the financial burden derived from the worker's accident or damage fall on the employer, the difficulties to determine the fault on the part of the company have led to substitute possible litigations for an insurance coverage. In Spain, once the Law of Work Accidents, which held companies responsible for such accidents, came into force in 1900, voluntary mutuals of employers started to be set up to share occupational risks. The asymmetries of information induced these organizations to have a rapid expansion as a more efficient formula than capitalist companies. Later, the insurance became compulsory and profit-making insurance companies disappeared from the section of occupational risks. In 1974, MATEPs were incorporated into the Social Security as collaborating entities and they have been progressively subject to an exhaustive regulation, which, not only establish tariffs but also covers from their functioning delimitation to the surplus application. This wide regulation in the sector has created a complex agency relations network, in which MATEPs act as double agents in front of the companies and the Social Security. As it can be observed in Figure 4, when an employer -responsible for the working health of his employees- chooses a MATEP, he delegates on it the necessary services caused by occupational risks, in exchange for the compulsory tariffs to be paid to the Social Security. At the same time, this institution -competent organ in the field of occupational contingencies insurance- transfers the coverage to the MATEP and, therefore, the management of such risks. Nevertheless, in case surplus occurs, mutualists will not share it by way of bonus, but -according to the regulator- by applying it to social funds.

Figure 4

To sum up, MATEPs appeared as NPOs of 'mutual interest' with the aim of safeguarding the rendering of certain services -preventive, sanitary and economic- to their members. Nevertheless, contrary to the conventional mutuals, residual claim and control rights do not exactly fall on the same people: on the one hand, employers are, along with workers, the target group of the MATEPs services and, on the other, the residual control is shared by mutualists and the Social Security. The complexity of the system generates, therefore, problems of decisors behaviour observance, closer to the ones existing in the 'general interest' than in the 'mutual interest' NPOs. The most part of the MATEPs compensations are assigned to protected workers, so employers will have difficulties to control services. Likewise, being

[9] The facility associates have to abandon the entity makes necessary a compulsory secondary market, where its assets can be exchanged and valued to a low cost. This allows explaining the reason why mutuals are typical organizations of the financial sector.

[10] Some authors have found evidence that changing form a stock to a mutual-ownership structure is on average efficiency enhancing (Mayers y Smith, 1986).

MATEPs financed by social contributions paid by companies to the Social Security, a separation between the donor of the cause -public funds- and the beneficiaries may occur. In conclusion, the carried out analysis points out that the problems of asymmetric information regarding managers will be more noticeable in MATEPs than in conventional mutual organizations, generating a greater margin of managerial discretion. However, the appearing of opportunistic behaviour will depend, in the last place, on the effectiveness of governance mechanisms, which will be discussed in the following epigraph.

4. Evaluation of The Managerial Discretion in MATEPs

There is a wide range of instruments that can condition and limit the managerial discretion[11]. On the one hand, the external mechanisms, related to the different markets capacity to discipline decisors. On the other hand, the internal mechanisms emerged from the assignment of residual control rights in the core of an organization. However, we should take into consideration that empirical research on non-profit boards suggests governance being a complex, inherently difficult and problematic activity; so only multiple theoretical perspectives allows to explain the ambiguities that these boards face (Jegers, 2002; Cornforth, 2004).

4.1 External Governance Mechanisms

Product Market Competition

If a company acts in a competitive product market, the managerial discretion will be limited, since an inadequate administration would be reflected in the entity's result. However, while the company holds certain market power, managers will have a margin to meet the principal's objectives and dedicate part of the surplus to satisfy their own utility functions (Holmstrom and Tirole 1990)

The market where MATEPs perform is very peculiar. MATEPs cannot compete through the price mechanisms, since the State, according to the occupational risk in each working post, fixes prices to the entire system. Nevertheless, as Lewis and Sappington (1988) suggest, it is necessary to establish prices that are sufficiently high enough to ensure quality services. However, if they are excessive, inefficiency and waste may occur (Pope, 1990). In the case under discussion, it is commonly agreed the existence of a gap between risks and prices (Suárez and Loredo, 2001). During the last twenty years, the pricing framework has just suffered light modifications and a 10% reduction. Despite this situation, the permanent and almost generalized generation of surplus indicates that prices, once the mutualist expectation was covered, allows a wide actuation margin to the managers. Additionally, the existence of over-investments and excessive administration costs would corroborate this affirmation (Loredo, Suárez and Ventura, 2001). The quality-price ratio will also depend on the existence of competitors. In this sense, Joskow and Rose (1989) affirm that when prices are regulated, companies tend to compete in other variables, so if these tariffs were fixed above market prices, the competition between entities would encourage a quality improvement. It seems that the MATEPs regulator has consciously opted for fixing high prices and letting competition to promote the quality of services. Thus, associates could change entity voluntarily, providing that contracts are renewed on an annual basis and applications requested a month ahead. Moreover, any mutual chosen by an employer must admit him as an associate, since MATEPs cannot openly select their risks. This situation causes a low cost change, giving the employer an advantageous negotiating position against his present mutual.

Nonetheless, this result can be achieved by giving users real freedom to choose and exercising this right properly. Several factors prevent an intense competition among MATEPs. Firstly, the strong asymmetric information employers suffer; since, in most cases, they are not aware of the advantages they have been conferred by their associate position -premiums are considered as taxes-. Similarly, mutuals have restricted actions in the commercial field, so problems of information cannot be solved. Secondly, the MATEP election, especially in the case of smaller firms, is delegated on an external labour advisor who simultaneously acts as a MATEP implicit commercial agent[12]. Thirdly, the company's geographic location can be another restriction as MATEPs are not distributed homogeneously throughout Spain and, depending on the region, some entities have certain market power[13].

To sum up, the combination of high tariffs and imperfect competition confers managers a comfortable situation, allowing them a broader degree of discretionality. The product market capacity -tariffs- to discipline managers gets complicated by the amplification of the given competences to the MATEPs, whether inside the Social Security system -temporary disability for common contingencies -or outside - preventive measures[14].

[11] The enumeration done in this sector is not meant to be exhaustive, since other governance mechanisms as the competition in the market for executives (Fama, 1980) or systems of incentives (Murphy, (1997) take place.

[12] In the segmentation done by Suárez and Ventura (1999), it is confirmed that inside the group of 'unsatisfied clients' is where a major number of employers delegated the election of entity on an external advisor.

[13] This situation could have been accented by the concentration experienced in the last years, although it is also possible that the territorial expansion process undertaken by small mutuals could have intensified the competition in certain areas.

[14] De las Heras (1997) and Sempere (1999) suggest that MATEPs could create an unfair competition with profit-making companies specialised in prevention management. Not for nothing, when a regulating entity is allowed to diversify towards a competitive market, it will tend to produce a quantity superior to the optimum (Averch and Johnson, 1962).

Market for Corporate Control

The market for corporate control allows substituting, through an acquisition offer, those managing teams that do not generate value (Manne, 1965). Given that this governance mechanism is usually costly, it is only activated once the rest have failed. A real control market does not exist in MATEPs, because the residual property rights are inalienable. If the management is inadequate, associates can either change the mutual or wait for the merging or taking over of the entity. Likewise, the concentration process this sector has come through during the last decade could be understood as a corrective action against inefficiency situations. Nevertheless, most merging and taking over actions among MATEPs seem to have been friendly, so this mechanism does not mean a clear limit for managers -it could be say that merging and taking over show the managers´ interest in expansion strategies.

Debt

Debt introduces incentives that prevent managerial discretion (Jensen, 1989). The firm is contractually bound to pay the interest and redeem the principal. Consequently, denotes a strong commitment in comparison with equity; as it reduces the amount of free cash flow available to managers, forcing them to disgorge cash rather than waste it. However, the financial debt in MATEPs is insignificant, because, the development of their projects is commonly self-financed. Therefore, the absence of debt will not restrain the managers' opportunism.

4.2 Internal Governance Mechanisms

Exit as a Governance Instrument

As we have just indicated, Fama and Jensen (1983b) see the members' exit as a peculiar internal governance mechanism that comes to replace, in mutuals, the equity market. Although in MATEPs exit, as well as in all the Spanish mutuals, the associate is regarded as a client, not as a member. The employer leaving the entity has no right to receive compensations due to accumulate assets through surplus. Accordingly, this instrument -as Fama and Jensen state- is not present in MATEPs, despite of the exit as a client will impose an external limit to the managerial discretion through the product market.

Regulator Control

The systematic supervision practised by the regulator is usually considered as an external governance mechanism (Demsetz and Lehn, 1985). Nonetheless, in the case of MATEPs, the Social Security and mutualists jointly assume the role of principal. Therefore, the regulator control should be included within the internal governance devices.

On the one hand, the State applies a group of preventive measures to avoid misgovernment situations: submission to the public budget, audit reports, permissions to undertake investments, inspections and controls by the competent institutions. On the other hand, the regulator can also correct irregularities through penalties, restructure plans, cease of governing organs, or even the entity's liquidation. Both types of control -preventive and corrective- mean a fundamental makeweight to limit the moral risk in managers' decisions inside the MATEPs.

Associates' Control

The control exercised by associates through legal established means should be the most patent device. They take transcendental social decisions by the Annual Meeting. The existence of jointly held responsibilities would encourage the participation of this organ and a greater concern about the entity good functioning. Although these incentives are undeniably present, it is also true that, as it happens in large diffused corporations, the 'free riding problem' may appear (Grossman and Hart, 1980). The supervision accomplished by an associate rewards equally the rest, including those employers who never take part in the Annual Meeting. This asymmetry between the effort and the reward obtained discourages the surveillance works. It must be taken into account that, the diffused property is maximum in MATEPs, since decision taking is based on one vote per member, regardless the contribution provided[15]. In corporations, on the contrary, the presence of large shareholders reduces managerial discretion (Shleifer and Vishny, 1986).

In conclusion, given the concentration process in this sector, as the entities size increases, the intensity of incentives to participate decreases and so the 'free riding behaviour' will become stronger.

Boards Composition and Functioning

The argument supported by San Sebastián (1996) in relation to corporations can be extrapolated to MATEPs: the centre of decision has been progressively shifting from Annual Meeting to the Board of Directors. The former holds just certain fundamental decision and delegates the real control of the organization to the managers. To avoid an excessive power accumulation by the directors, diverse modifications have been introduced in the MATEPs control boards' configuration, being all of them summarised and develop by the Regulation of Collaboration of 1995. These changes in the regulator framework have been permeable to the proposals of different Codes of Good Practice that have come out in the last decade (Cadbury, 1992; Vienot, 1995; Olivencia, 1998; Hampel, 1998; OCDE, 1999; OCDE, 2003):

[15] According to the extension of collaboration in 1996 to temporary disability for common contingencies of self-employed workers, these will not acquire the condition of associates, so they will not bear the jointly responsibility but neither could they take part in governance control organs. In fact, they act as clients of an insurance company (Panizo, 1999).

A) Firstly, a drastic separation of functions has been chosen. The Board of Directors is constituted by non-executive members and, as it will be later seen, the executive tasks fall on a single Executive Director. The Regulation of Collaboration code establishes that the components of the Board of Directors will not work for the MATEP, have a rendering service contract, or be remunerated by the entity. This measure is just taking to the extreme the recommendations from the above-mentioned Codes of Good Practise, which defend the existence of non-executive members who can balance the power relation and avoid boards being dominated by executives[16]. The former regulation allowed, instead, executive and remunerated posts, which could have originated opportunistic behaviours. On the other hand, in contrast to the previous regulation that provided the possibility of naming a manager with an associate condition in the MATEPs, the current rules governing MATEPs force these entities to name a professional Executive Director through the Board of Directors. The Executive Director independence also introduces a second separation of power, since this person cannot be the same as the Chairman. The fact that the Executive Director can attend the Board of Directors meetings without the right to vote reinforces institutional subordination of the chief executive. The last link in this segregation of functions is jointed round two organs of participative control, in which the protected workers as well as the associated companies are represented. From 1995, each MATEP should constitute a Monitoring and Control Committee[17], whose functions are to request all the necessary information regarding the mutual management and propose whatever measures aimed to best fulfil the entity's objectives. There is also a Special Social Benefit Committee, which distributes, among protected workers, the Social Assistance Fund -endowed with the 10% of generated surplus-. These organs are similar to those supervision committees in large German companies, in which workers are present. However, in the MATEPs case, the particularity lies in that the represented workers are not from the mutual, but indirectly -and through unions- from associated companies.

Overall, regarding the division of responsibilities at the head of MATEPs (Figure 5), the regulation has gone further up than in the private sector. Not even The Olivencia Report (1998) contemplates the dualism, and simply recommends non-executive members in the composition of Boards in corporations. However, in the case of MATEPs, a model combining dualist features with an almost preponderance of non-executive members has been chosen.

Figure 5

B) The size of the Board of Directors has also been limited to a maximum of twenty members. Large boards have been proved ineffective and slow. In addition, they lack the necessary cohesion and encourage passive attitudes (Yermack, 1996). Two arguments would lead us to state that MATEPs will tend to increase the Boards of Directors dimension above an optimum. On the one hand, MATEPs, to fulfil their growth targets, will offer -through a mechanism similar to the usual cooptation in Boards of Directors- posts in the Board to large employers that agree to become members[18]. On the other, the concentration through friendly or agreed merging taken place in this sector during the last years could have derived in an increase of the number of Board members, since all the components would like to be represented in the new entity. Taking this into account, if limits had not been imposed, the meetings would have been more complicated and the decision making slower. Nevertheless, we should bear in mind that the restrictions of twenty members surpasses even the Olivencia Report Recommendations for the private sector, which establishes the adequate size between five and fifteen members.

C) Finally, incompatibility, responsibility and retributions are reformed in depth to obtain a major transparency. It seems logical that the legislator, preoccupied by the public funds use, has made an effort to prevent any conflict of interests, thoroughly establishing the incompatibilities[19] and responsibilities[20] of Board members. To clarify the managers' compensations, it is forbidden, according to the 1995 Law of General Budget, to give compensations charged to public funds and the existing blinded contracts became illegal[21]. In addition, the Regulation governing MATEP Collaboration limits the administration costs according to income. This represents a strong restriction, as executive personal objectives (retributions, excessive expenditure…) are charged to this entry.

5. Conclusions

In this theoretical discussion has been showed that the restriction upon the profit-making present in mutuals does not eliminate the problems of managerial discretion. In the MATEPs case, this problem is

[16] Nevertheless, some authors disagree with this type of design and defend that, when in the Board's composition there is an only member with executive responsibilities, a strong informative asymmetry occurs regarding the entity's real situation (Johnson, Daily and Ellstrand, 1996).

[17] This control mechanism appears with the Law 42/1994, although it is later gathered in the Regulation of Collaboration.

[18] According to the Theory of Resources Dependency postulates (Pfeffer, 1972)

[19] Any person who maintains a labour service, rendering or commissioner relationship with a mutual will not be legible to become a member of the Board.

[20] The rule regarding board members responsibility is perhaps the newest. Firstly, the MATEPs constitution articles are to establish such responsibilities, although in any case could be exonerated because the Annual Meeting authorise the detrimental act. On the other hand, according to the nature of the damage, the responsibility emerges -as an individual or jointly liability form- facing employers, the Social Security or the MATEP itself.

[21] As a result, the Labour Department removed hundred compensations that MATEPs have agreed with their general and middle line managers.

particularly marked, since public intervention has been shaping a complex model in which managers act as agents regarding two principals -the Social Security and associates.

Some governance instruments that play an important role in corporations to mitigate agency costs are not plenary present: the financial debt is inexistent and the market for corporate control weak. This deficit has been compensated through a strict supervision by the regulator and facilitating the change of entity. However, the laxity of the established tariffs and the lack of effective competition have generated a comfortable environment for managers. The existence of excess in those inputs in which managerial discretion is clearly observed -assets over-investments and administration overstaffing- would confirm this argument. The associate control -underlying in the MATEPs spirit- should also contribute to restrict the manager opportunism. Originally, employers felt as a part of their MATEP and, therefore, they were interested in exercising their control rights. Nonetheless, the concentration process and the extension of competences to new activities have adversely affected the sense of identity among associates and led them to behave as clients.

Consequently, the control has been displaced towards the Boards, as in large corporations. The legislator reaction to rationalise the MATEPs governance -imposing separate functions, restricting the size of Boards and limiting responsibilities, incompatibilities and remunerations- runs in the same direction as the different proposals to reform Boards of large public limited companies.

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Appendices

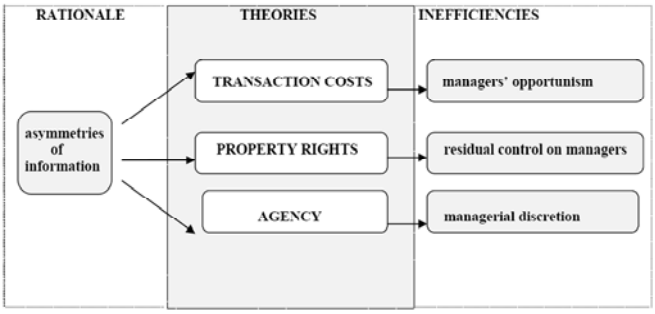

Figure 1. Economic rationale and limits of the NPOs

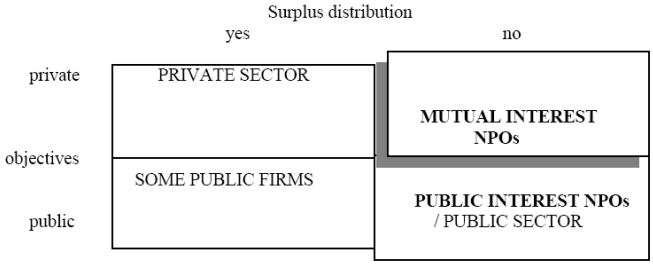

Figure 2. Classification of organizations

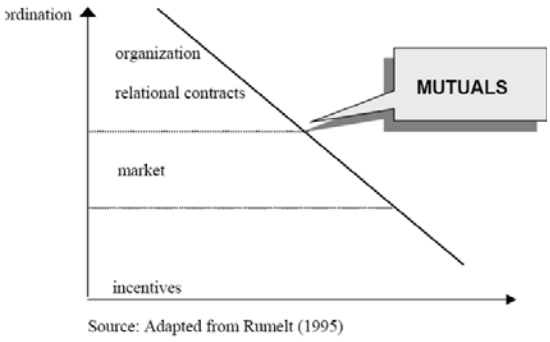

Figure 3. Relation between coordination and incentives

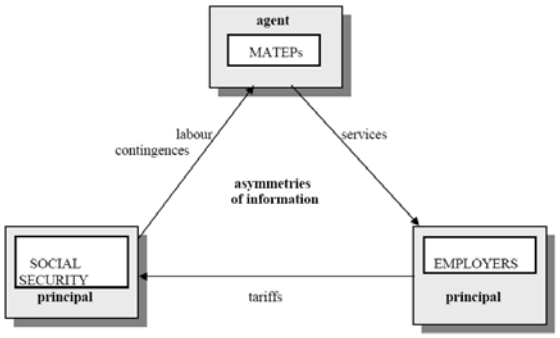

Figure 4. Agency relations in MATEPs market

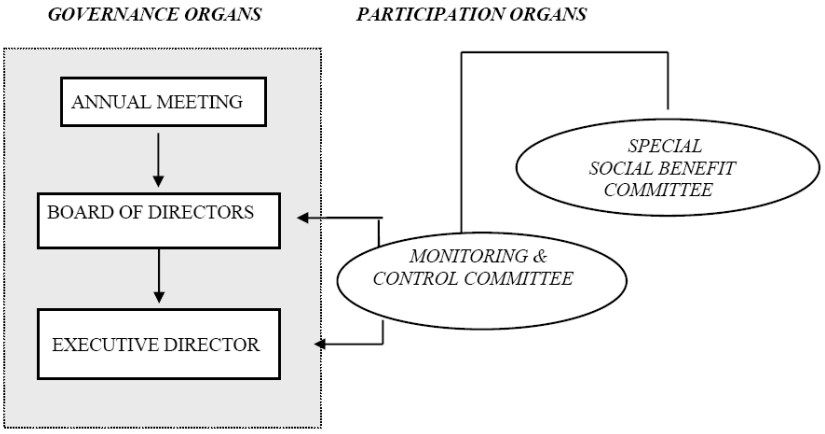

Figure 5. The MATEPs Governance

EMPLOYEE STOCK OPTION EXERCISES - AN INTERNATIONAL ANALYSIS

Steven Balsam*, Richard Gifford**

Abstract

In this paper we use a proprietary data set that consists of all stock option grants and exercises for a Fortune 100 multinational corporations from 1990 to 1999 to show that the exercise patterns of employees varies across countries. When we examine the variables overall exercise responds to we find evidence that the variables vary with culture, e.g., in general patterns in English speaking countries appear to be comparable, but not so for other countries. When we examine variables that determine the length of time an individual option is held before exercise, we also find it also varies across countries. Further analysis indicates that these differences are tied to systematic differences in national income and tax rates.

Keywords: stock options, employees, tax rates

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1. Introduction

Huddart and Lang (1996) show that, among other things, exercise patterns differ across employee levels. This paper extends their findings by showing that exercise patterns differ across countries. Like Huddart and Lang (1996) we use a proprietary data set that consists of all stock option grants and exercises for a Fortune 100 multinational corporation from 1990 to 1999.

This paper continues with section 2 which provides some background on the use of options and variables that might affect their use across the globe. Section 3 then discusses the data, and section 4 provides the empirical analysis. The paper concludes with a summary in section 5.

2. Background

Companies grant options to employees to both compensate them for previous service and to give them incentive to increase shareholder value. These options typically give the employee the right to purchase shares in his or her employer, at a fixed price, normally the share price on the grant date, over a period of time. If the share price rises above the exercise price, the employee can exercise his or her option to purchase the shares, and then either hold the shares or sell them at the then current market price.[1]

As discussed below, our data set is unique, in that one company granted a constant number of options to all of its employees (i.e., broad-based grants) across the world (25 countries with at least 200 individual grants are considered in this study),[2] at the same time with the same terms on three occasions during the 1990's. Yet at an employee level there are differences in income, wealth, education, and culture, differences that are greater when examining employees across a variety of countries than within a given country. And tax incentives, which are somewhat constant within a country, differ greatly across countries.[3]

As an example of these differences, note that income and wealth range dramatically across the globe. At their peak, an employee who was still holding the options granted in the broad-based grants (see below) was in-the-money to the tune of almost $20,000. While a substantial sum in the United States, in countries like Mexico and Brazil, where average annual manufacturing wages were $2,600 and 3,048, respectively, this sum was enormous.[4] Presu-

[1] Some companies, including the one studied in this paper, have set up programs with investment bankers that allow the employee to realize the profits from their stock options without ever taking share ownership. In these programs the employee merely calls up the broker and says that he or she wants exercise the option and simultaneously sell the shares, and the net proceeds are later deposited in his or her account.

[2] In countries where stock options were not allowed the company granted stock appreciation rights in their place.

[3] Ignoring local taxes, e.g., state taxes in the U.S., provincial taxes in Canada, etc.

[4] Unfortunately the test company did not provide us wage data for all of the countries in which they operate. Consequently average

mably the desire to exercise, for example to diversify risk, is greater in countries with lower levels of income, ceteris paribus. At the extreme an employee in one of these countries could retire on the proceeds of the option exercise.

Taxes which influence the amount of profits retained by the employee also vary greatly. The tax rate paid by the average manufacturing worker ranged from five percent or less in Hong Kong and Thailand to over 25 percent in countries such as Australia, Canada, India, and Ireland.

3. Data

The test firm, a Fortune 100 multinational, with both a management and broad based stock option plan, has generously provided data that will permit an in-depth analysis of the exercise patterns discussed above. As noted above these plans cover both domestic and international employees.

The company made multiple management grants and three broad-based grants to its global workforce over the years 1990 to 1999. The exercise period used in this study and included in the test company database represented 1,949 trading days from February 15, 1992 to November 2, 1999, the last day on which an exercise is recorded in the database. While the size of the management grants varied, the broad-based grants were consistent, i.e., each active full-time employee received a grant of 100 options in 1991, 1995, and 1997.[5] In total our database has information on 362,989 individual grants, 294,732 of which pertain to U.S. employees and 68,257 of which pertain to international employees. Table 1 provides some descriptive information about the sample and exercise patterns by country, i.e., percentage of options exercised, as well as average age of option at exercise. In untabulated correlation analysis we find that the percentage of options exercised in a country varies inversely with national income. This is consistent with employees in low income countries exercising more quickly, as the options and the potential gains represent a larger amount of their income/wealth and hence they are more risk averse.

The vast majority of the grants in the database consist of three broad-based grants made on February 15, 1991, January 25, 1995, and January 29, 1997.[6] To some extent the broad-based grants dominate the data set as the number of employees per grant ranged from 127,027 in 1991 to 83,522 in 1997 and totaled 306,819 for the three grants. In contrast the number of management grants totaled 56,170. Consequently while analysis conducted below is reported for all grants, we verify that the results hold for both the broad-based and management grants independently. Through November 2, 1999, the last date for which the test company provided employee exercise data, 205,415 grants or 56.59 percent of the total grants had been exercised.

Insert Table 1 about here

4. Empirical analysis

The study uses regression analysis to investigate the theory suggested above. We posit that after taking other known factors into consideration, employee exercise differs across borders. We conduct our analysis using two broad models. The first model examines whether the proportion of options exercised on a given day differs across countries, after controlling for known covariates, while the second examines the time to exercise of the options. Since the dependent variable is our first regression is bounded by 0 and 1 we use a Tobit model, whereas in our second regression we utilize ordinary least squares.

Proportion Exercised = α_0 + α_1Lag Exercise + α_2Grant Recently Vested + α_3Share Price Exceeds High for Year + $\alpha_{4\text{-}7}$Prior Stock Return + $\alpha_{8\text{-}11}$Subsequent Stock Return + $\alpha_{12\text{-}35}$Country Indicator Variables + ε (1)

Time To Exercise = β_1 + β_2Employee Age + β_3Participant Management Plan + β_4Left Company Voluntarily + β_5Left Company Due To Layoff + β_6Left Company Retired + β_7Left Company Death + β_8Terminated For Cause + $\beta_{9\text{-}33}$Country Indicator Variables+ ε (2)

where the variables are described below:

Dependent variables

The dependent variable in model (1) represents the proportion of stock options exercised to options available to be exercised during a given trading day$_n$. It is calculated as follows:

Proportion Exercised = Options exercised on day n / (Σ Options granted and vested through day n - Σ Options exercised prior to day n)

The dependent variable in model (2) represents the time to exercise for a given grant of options.[7] It is calculated as follows:

Time To Exercise = Exercise date less grant date

Test and Control Variables

Since the objective of our paper is to examine exercise patterns across the globe our test variables are the country indicator variables, where we use the United States as the comparison country, i.e., its' coefficient is included in the intercept. In model (1)

gross monthly earnings, by country, for manufacturing were obtained from International Marketing Data Statistics (EUROMONITOR, 2000).

[5] The company declared a 2:1 stock split in 1997. All grants have been adjusted to 200 shares to reflect the split.

[6] The 1991 and 1995 grants vested one year from the date of the grant and expired 10 years from the date of grant. The 1997 grant vested after one year and could be exercised after the stock exceeded a hurdle price for five consecutive trading days. The hurdle price was exceeded in April, 1998. The 1997 grant also expired 10 years from the date of grant.

[7] While in theory the options in a given grant can be exercised over multiple dates, our database only provides one date per grant. The plan manager at the corporation indicates that for the vast majority of grants (remember most of the grants in the database were 100 shares) all options were exercised at the same time.

we also include the following control variables, which we believe may influence option exercise patterns. Lag Exercise the cumulative exercise over the five days prior to day n in country i is included to control for the potential autocorrelation in exercise patterns. We believe that this effect will be positive because of both information flow and herding instincts. We include an indicator variable, Grant Recently Vested, which takes the value of 1 in the 180 day window after a grant vests, because prior research, i.e., Gifford (2001), Balsam and Gifford (2004), shows that exercise activity increases in the period immediately after option vesting. This study adopts variables similar to those of Heath et al. (1999) to test for the influence of psychological variables on exercise behavior. As in Balsam and Gifford (2004) returns for each of the four five-day periods immediately prior to the exercise day (Prior Stock Return) are examined to determine if employees react to recent changes in market prices (beliefs). To determine if reference points (values) influence employee decisions to exercise, stock highs are identified for the one-year period (Share Price Exceeds High for Year) prior to the exercise day. More recent research (Balsam and Gifford 2004, Bartov and Mohanram 2004, Huddart and Lang 2003) show that stock option exercise has information about future returns, i.e., possibly revealing inside information, also found evidence that employees may also be exercising options in anticipation of future (downward) movements in stock prices. Consequently analogously to our prior return variable we include returns for each of the four five-day periods immediately after the exercise day (Subsequent Stock Return). Stock returns prior to and following exercise were calculated for the test period February 15, 1992 through November 2, 1999, as obtained from the CRSP database.

Once again, in model (2) where we examine the time to exercise for those options that have been exercised by the end of our sample period, our test variables are the country indicator variables. We also include following control variables, which we believe may influence option exercise patterns. We include Employee Age as an control variable because risk aversion with respect to financial returns increases with age (Weagley and Gannon, 1991; Schooley and Worden, 1999) as individuals anticipate retirement and other commitments that place claims on income. Accordingly, older employees may be less willing to hold options. However, options may also represent a higher proportion of a younger individual's wealth and may influence a younger individual to exercise early because of liquidity requirements. Because of these potentially conflicting motivations, no prediction of direction is made. We also include and indicator variable that takes the value of one if the employee participates in the management plan (Participant Management Plan), as these employees have knowledge about options that differ significantly from those employees who only participate in the broad based plan and in addition, are likely to hold significantly more options. Last we include control variables that take the value of one if the employee has left the company and indicate the reason he or she has left, i.e., Left Company Voluntarily, Left Company Due To Layoff, Left Company Retired, Left Company Death, and Terminated for Cause.

Results

Table 2 provides the results for model (1). Looking at the country indicator variables we see that all 24 are significantly different from zero, i.e., the base country the United States. Of these differences 23 are negative and only one, the Columbia, is positive. Consequently we observe that in terms of proportion of options exercised in a given day, there is a wide variation across the globe. Or perhaps more appropriately, the proportion of options exercised in a given day that are not explained by the control variables varies. Looking at the control variables we see that as expected the coefficients on Lag Exercise and Grant Recently Vested are positive and significant. In contrast the coefficient on Share Price Exceeds High for Year is insignificantly different from zero. In general the coefficients on the return variables are positive both before and after exercise, inconsistent with prior research indicating that individuals exercising stock options used their insider knowledge to time exercise. Of course that previous research focused on executives and the vast majority of the exercises in our sample were by non executive personnel.

Given that the results indicate differences in exercise patterns between employees in the United States and employees elsewhere we reran the model separately for each of the 25 countries omitting the country indicator variables and focusing on the relationship between the proportion exercised and control variables in each country. We found (untabulated results) that the coefficient on Lag Exercise was positive and significant in 24 of 25 individual regressions. The only time it was insignificant was in the Thailand model. This may be because Thailand had the fewest grants 284, and exercises 180, in the sample, creating a preponderance of days in which the dependent variable is zero, which may bias the coefficients on the variables towards zero.

The coefficient on Grant Recently Vested which was positive and significant in the overall regression was positive and significant in 18 of the individual regressions, negative and significant in six of the regressions, and insignificant in one. We had a hard time explaining how vesting, which gives employees the right to exercise shares, could result in lower exercise. The only explanation we could come up with was that, as noted in footnote 6, the third broad-based grant only became exercisable when the stock price hit a certain level, effectively a new high. As discussed below, individuals can have differing expectations in this situation. That is, while some take it as a selling opportunity, others expect the price to continue to rise further and consequently delay exer-

cise. To try to control for this possibility we reran our analysis stopping just prior to the vesting date for the third broad-based grant. The results were somewhat improved, as of the six coefficients that were negative and significant, one became positive and significant and two became insignificant. Three (France, Japan, and Spain) were still negative and significant.

The coefficient on Share Price Exceeds High for the year, which was insignificantly different from zero in the pooled regression, was where we found the biggest divergence in the sample. We found it positive and significant in 17 of the regressions, including the one for the United States, negative and significant in five of the regressions, and insignificant in four of the regressions. This seems to indicate that employees in different countries paid differing amounts of attention to the company's share price, and reacted differently to it. That is in all the English speaking countries, e.g., United States, United Kingdom, Canada, and Australia, employees perceived the stock price hitting a new high as a selling opportunity. In contrast in other cultures, i.e., Brazil, Columbia, France, Italy and Japan, it seems that employees held back on exercise, presumably because they expected the price to go even higher.

Insert Table 2 about here

Table 3 provides the results for model (2). In the first set of columns we present the parameter estimates and p-values for model (2) itself. Since the first set of columns shows significant variation across countries, in the second set of columns we replace the country indicator variables with average national income for a manufacturing worker and the tax rate faced by that worker to further investigate the causes of these differences.

Looking at the country indicator variables we see that 20 of the 24 are significantly different from zero, i.e., the base country the United States. Of these differences 16 are negative and four are positive. The four countries in which the time to exercise is greater than the United States are Belgium, Canada, Luxemborg, and Spain, all developed countries. The 16 countries in which the time to exercise is less than the United States are primarily developing nations, e.g., Argentina, Brazil, Columbia, and Mexico, but also include developed countries such as Germany, Netherlands and the United Kingdom. Consequently we observe that in terms of time to exercise, there is a wide variation across the globe. As noted above, in the second set of columns we replace the country indicator variables with average national income for a manufacturing worker and the tax rate faced by that worker to further investigate the causes of these differences. We observe that time to exercise increases with national income, which is what we would expect, and we also observe that it decreases with tax rate, i.e., as the after-tax benefits to additional gains decrease, employees exercise earlier. Looking at the control variables we see that time to exercise increases with employee age and employee participation in the management plan. It is also higher for employees who left the company either voluntarily, due to layoff, or because they retired, and it is lower for employees terminated for cause, probably because they had to exercise at the time of termination.

Insert Table 3 about here

5. Summary

In this paper we use a proprietary data set that consists of all stock option grants and exercises for a Fortune 100 multinational corporation from 1990 to 1999 to show that the exercise patterns of employees varies across countries. When we examine the variables overall exercise responds to we find evidence that the variables vary with culture, e.g., in general patterns in English speaking countries appear to be comparable, but not so for other countries. When we examine variables that determine the length of time an individual option is held before exercise, we also find it also varies across countries. Further analysis indicates that these differences are tied to systematic differences in national income and tax rates.

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Appendices

Table 1. Exercise by Country

Country Name	#grants	% options exercised	Age at Exercise Mean	Age at Exercise Median
Argentina	774	56.66%	25.86%	22.77%
Australia	2,790	59.61%	24.92%	19.67%
Belgium	1,730	45.82%	32.80%	29.10%
Brazil	2,705	65.33%	20.88%	13.85%
Canada	5,362	48.72%	28.95%	23.26%
Columbia	531	77.24%	21.02%	13.89%
France	2,756	57.62%	28.00%	22.23%
Germany	12,630	56.76%	27.26%	21.84%
Greece	306	75.82%	28.87%	22.40%
Hong Kong	636	50.67%	27.24%	21.88%
Ireland	914	65.23%	24.06%	19.92%
Italy	321	56.13%	29.23%	23.14%
Japan	2,169	50.42%	25.98%	20.60%
Luxembourg	4,230	47.07%	21.97%	25.26%
Mexico	4,542	68.68%	21.47%	16.82%
Netherlands	1,996	49.69%	20.78%	15.99%
Puerto Rico	1,882	66.41%	21.22%	14.37%
Singapore	1,810	52.11%	19.93%	13.01%
South Korea	840	60.63%	22.68%	16.48%
Spain	4,091	46.04%	30.21%	29.05%
Switzerland	4,019	47.73%	25.51%	19.75%
Taiwan	1,747	54.28%	20.58%	15.42%
Thailand	284	63.30%	25.53%	22.00%
United Kingdom	8,933	58.28%	19.77%	13.37%
USA	294,730	56.85%	29.93%	24.38%
Total	362,989*	56.59%	28.87%	22.79%

* Column does not sum to 362,989 because countries with less than 200 observations were omitted.

Table 2. Tobit Analysis
Dependent Variable – Proportion of Options Exercised

Variable Name	T-statistic	P-Value
Intercept	0.0057	<.0001
Lag Exercise	0.2550	<.0001
Grant Recently Vested	0.0147	<.0001
Share Price Exceeds High for Year	-0.0001	0.786
Stock return week prior to exercise	0.0356	<.0001
Stock return second week prior to exercise	0.0232	<.0001
Stock return third week prior to exercise	-0.0096	<.0001
Stock return fourth week prior to exercise	0.0220	<.0001
Stock return week subsequent to exercise	0.0005	0.7273
Stock return second week subsequent to exercise	0.0150	<.0001
Stock return third week subsequent to exercise	0.0226	<.0001
Stock return fourth week subsequent to exercise	0.0072	<.0001
Argentina	-0.0061	<.0001
Australia	-0.0064	<.0001
Belgium	-0.0063	<.0001
Brazil	-0.0063	<.0001
Canada	-0.0064	<.0001
Columbia	0.0532	<.0001
France	-0.0064	<.0001
Germany	-0.0065	<.0001
Greece	-0.0057	<.0001
Hong Kong	-0.0060	<.0001
Ireland	-0.0062	<.0001
Italy	-0.0046	<.0001
Japan	-0.0064	<.0001
Luxembourg	-0.0064	<.0001
Mexico	-0.0038	<.0001
Netherlands	-0.0063	<.0001
Puerto Rico	-0.0062	<.0001

Table 2 continued

Singapore	-0.0056	<.0001
South Korea	-0.0045	<.0001
Spain	-0.0064	<.0001
Switzerland	-0.0064	<.0001
Taiwan	-0.0054	<.0001
Thailand	-0.0047	<.0001
United Kingdom	-0.0049	<.0001

Table 3. OLS Analysis. Dependent Variable - Time to Exercise

Variable Name	Estimate	P-Value	Estimate	P-Value
Intercept	431.2699	<.0001	441.7598	<.0001
Employee Age	0.0382	<.0001	0.04021	<.0001
Participant Management Plan	350.2565	<.0001	359.3768	<.0001
Left Company Voluntarily	27.97593	<.0001	34.82606	<.0001
Left Company Due To Layoff	32.19782	<.0001	35.46106	<.0001
Left Company Retired	348.1259	<.0001	351.5472	<.0001
Left Company Death	23.47075	0.6395	22.51678	0.6552
Terminated For Cause	-135.918	<.0001	-147.063	<.0001
National Income			0.00104	<.0001
Tax Rate			-579.797	<.0001
Argentina	-176.404	<.0001		
Australia	-130.226	<.0001		
Belgium	196.7345	<.0001		
Brazil	-216.664	<.0001		
Canada	24.64217	0.0458		
Columbia	-247.313	<.0001		
France	-14.8251	0.3539		
Germany	-89.2306	<.0001		
Greece	44.95351	0.2708		
Hong Kong	-0.98064	0.9796		
Ireland	-201.977	<.0001		
Italy	48.28634	0.3055		
Japan	-76.7888	0.0001		
Luxembourg	40.04035	0.0046		
Mexico	-190.908	<.0001		
Netherlands	-298.79	<.0001		
Puerto Rico	-197.812	<.0001		
Singapore	-185.874	<.0001		
South Korea	-81.6743	0.0035		
Spain	48.92731	0.0007		
Switzerland	-118.094	<.0001		
Taiwan	-215.566	<.0001		
Thailand	-86.3563	0.0653		
United Kingdom	-300.246	<.0001		

MERGERS AND ACQUISITIONS: A REVIEW OF THE LITERATURE

Raymond A. K. Cox*

Abstract

This paper is a selected literature review of the theories and empirical evidence on mergers and acquisitions. Initially, the fundamental factors, and the underlying theories, causing mergers is explored. Subsequently, the empirical evidence is examined on: (1) the operating performance of the acquirers and the acquired firms before and after the merger, (2) stockholder wealth impact, (3) form of payment used to complete the acquisition, (4) conglomerate mergers, and (5) corporate governance affecting the firm's ownership and control.

Keywords: Mergers, acquisitions, conglomerates, corporate control, governance

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Mergers and acquisitions is an enduring phenomenon. Year after year firms acquire other firms both big and small, private and public, foreign and domestic, and inside and outside their industry. The merger decision involves corporations choosing to acquire existing companies as opposed to internal growth and expansion. Thus, in general, existing larger firms take ownership and control of other small firms. The purpose of this paper is to review the mergers and acquisition literature to answer the questions of why they occur, who benefits from them, and what is their ensuing performance.

Why do firms merge? Several reasons explain the motivation of firms to acquire other firms. The reasons for a specific merger are not mutually exclusive. That is, one or more reasons may be driving a particular combination. The causes of mergers include investment theory where the target firm to be acquired is a profitable investment in a capital budgeting sense with a positive net present value. How the target firm will generate the returns above that which is required in the capital markets is another matter. The target firm may be underpriced in the stock market causing a value creating opportunity. This underpricing, may be due to an information asymmetry between investors and the firm.

A disequilibrium in the physical asset market may be attributed to the undervaluation. That is, the Tobin's Q ratio (market value of assets divided by the replacement cost of assets) may be less than one. This would give rise to purchasing already in-place assets through merger to enjoy a cost savings versus constructing the assets onself.

Other sources of value augmentation may come from a differential efficiency between the management of the acquirer and the target company. This is where the acquirer management efficiency exceeds that of the target management efficiency. Thus, upon combining the two entities the efficiency of the combined firm increases to the higher of the two management efficiencies resulting in increased value. Another root of increased worth may be derived from synergy when the firms coalesce into one organization. These synergies may be due to the amortization of fixed costs on a greater volume level and, therefore, lowering the average cost per unit. Furthermore, the synergy may come from economics of scale or scope or both. When two firms combine and become larger, in a horizontal merger, this may enable the organization to choose a different technology or organization structure that is of lower per unit cost when the quantity produced is great. For example, a nuclear powered electrical generating plant, as opposed to a coal fired electrical generating plant, may be cheaper to operate when electrical power production levels are gargantuan. A merger with economies of scope produces a decline in per unit costs. This occurs in a congeneric merger where two firms that are allied-in-nature join. An illustration of this is when a commercial bank (doing business in deposit instruments, checking accounts, consumer and small business loans) joins with an investment bank (doing business in retail brokerage accounts, corporate fund raising, managing mutual funds). A fount of value may come from tax considerations such as in the U.S. with unused tax loss carryforwards, underutilized depreciation tax shields, interest expense tax deductions, inheritance taxes, et cetera. A market power reason for a merger is where the acquirer gains a dominating market share in the product market that the firm sells in. Because of the heightened market power, with lesser competition due to the competitor being bought out, the firm has influence if not control (for a monopoly) over market

prices and therefore can better manage its profits. This concentration of power placing the ownership and control of an industry in a few may be thwarted by government and its regulatory agencies. For example, in the U.S. the Department of Justice oversees all mergers and a regulatory agency is assigned for a particular industry such as the Federal Communications Commission in the television and radio industry. Vertical integration mergers are another form of market power, either upstream or downstream in the supply chain, giving more control to the firm to affect prices at which distribution channel point the profit is made so as to provide fiercer competition where needed.

Diversification reasons for mergers are at the heart of conglomerate mergers. If there is an amalgamation of firms whose cash flows are less than perfectly positive correlated than by their melding together the overall variance of cash flows is reduced. This diversification effect, or risk sharing, is analogous to that delineated by the Markowitz-Roy Covariance Model and Sharpe-Lintner-Mossin Capital Asset Pricing Model. Another aspect of the risk sharing effect through diversification is when there are financial distress costs. One extreme version of financial distress costs equals the expected deadweight bankruptcy costs multiplied by the probability of bankruptcy. Of course, there are other financial distress costs like lost customer sales due to uncertainty of a continued replacement parts supply, higher employee turnover, creditors unwillingness to extend further debt, suppliers discontinuing service and so on. In a conglomerate merger the likelihood of financial distress is lessened due to this co-insurance effect. This outcome brings about cost savings to the conglomerate corporation.

Large conglomerates may also provide an internal capital market for funds at a lower cost of capital (such as from reduced transaction and flotation costs) compared to securing money from the external market. This cheaper financing makes for additional investments to be considered profitable and therefore spurs further mergers and growth. The free cash flow theory is applicable to companies contemplating mergers who possess excess positive free cash flows coupled with poor internal investment opportunities. The process of acquiring other existing firms provides an outlet for this excess free cash flow. This scenario may persist in the future and accounts for a prolonged merger and acquisition binge.

As growth through mergers is an alternative to internal growth some distinction between the two is in order. Internal growth in a market expansion, or branching out to another industry, requires time to assemble the assets, hire the workforce, train the personnel, acquire government licenses and permits, develop the clientele base and so on. In addition to the potentially lengthy time the costs are somewhat unknown and uncertain. This is in contrast to a merger where the timeframe is much shorter and costs are relatively known. Simultaneously, an acquisition eliminates a competitor whereas internal growth gives notice to competitors of a firm's intentions. More importantly, there are businesses that can only be obtained by an acquisition. For example, a company that has a patent on a pharmaceutical drug. If you want to be in that drug business you can wait for the patent to expire or you can buy the firm. Another example is when a government issues a finite number of licenses to conduct business in an industry. Therefore, you must choose to buy an existing company that holds a license or not enter that business segment. Companies that occupy land with rare minerals found nowhere else on earth are prime candidates for acquisition. That is, if these scarce elements are required in some manufacturing process then this would necessitate that company being acquired by the firm desiring to be in that line of business. A fatuous rationale to effect a merger is the follow-the-herd argument. That is, as everybody else is doing it so too should we do it. We may not be able to elucidate why we are acquiring firms but so as not to look different and possibly inferior to other firms we mimic their behavior. In the least the firm, by replicating the actions of others, may mirror their average performance and not be below average achievement. Strategic planning reasons for mergers seem elusive at the consummation of the acquisition but nevertheless may be the cause. Firms aim to enter a new business line with a toehold investment to establish their presence. The actual current entry appears to have dubious value inasmuch a net present value analysis calculates a negative figure. Nevertheless, this acquisition gives the firm growth options to expand at a subsequent date. These call options have value now and possibly more so later.

Government fiat describes the rationale for some mergers especially in developing nations that necessitates the formation of a joint venture between a foreign firm, wishing to enter the country, and a local company. This proposition occurs for those craving to penetrate the market in China and to some extent in Eastern Europe and Central Asia.

The agency theory denoting the conflict between the interests of stockholders to that of managers underlies the impetus for some mergers. Managers of large firms, on average, earn higher compensation and consume greater perquisites than managers of small firms. Accordingly, in their own self interest managers have an incentive to conduct empire building. That is, growth in the size of assets or sales is pursued regardless of the prudence of the investments with the intention of maximizing manager's utility as opposed to shareholders. This gives rise to the overinvestment problem of selecting impoverished investment opportunities. There is a restraint on managerial hubris in the capital markets through hostile acquisition bids. That is, an outside investor may acquire an effective ownership stake in a bloated underperforming company and with its control status effect changes to discharge the peccant management. The impact of mergers revolves around the

subsequent operating performance of the combined entity as well as the stock market reaction to the merger surrounding the announcement date. These responses have been extensively examined in the literature. A selection of the empirical evidence is furnished. The operating performance of the acquired firm subsequent to a merger can be difficult to discern as its operations are melded and entangled with its new parent partner. Lang, Poulsen and Stulz (1995) find the combined corporation conducts asset sales following poor firm-level performance. John and Ofek (1995) ascertained that the remaining assets of the firm improve in performance after asset sales that subsequently leave the firm more focused. These results are confirmed by Maksimovic and Phillips (2001). Saffieddine and Titman (1999) display evidence where targets that terminate takeover offers significantly increase their leverage ratios, reduce capital expenditures, sell assets, reduce employment, increase focus and realize cash flows and share prices that outperform their benchmarks in the five years following the failed takeover. Heron and Lie (2002) found no evidence that the method of payment conveys information about the acquisition's future operating performance. In one of the seminal articles investigating merger buyer and seller premiums Halpern (1973) found a significant stock price increase for both buyers and sellers. These results were supported by Mandelker (1974). However, Ellert (1976) indicates only the acquired firms have statistically significant gains from mergers. The finding of significant gains to the target company only is bolstered by Langetieg (1978), Dodd (1980), Malatesta (1983), and others. Moreover, Noe and Kale (1997) found that takeovers offer target premiums that are less than post takeover value with no relation to pre-announcement stock price runups according to Schwert (1996). Nonetheless, Cotter, Shivdasani and Zenner (1997) show that target firm's independent outside directors driving takeover attempts by tender offers enhance shareholder wealth. Moeller, Schlingemann and Stulz (2005) report acquirers lose money and perform poorly afterwards. Eckbo and Thorburn (2000) discovered Canadian bidders earn significantly positive abnormal returns versus American bidders acquiring Canadian targets.

The form of payment employed to execute a merger and characteristics of the firms involved affects the returns of bidders and targets. Dodd and Ruback (1977) analyzed both successful and unsuccessful cash tender offers. Both bidders and targets earned statistically significant abnormal returns prior to the announcement date. Furthermore, the target firms earned greater excess returns than bidder companies. Moreover, successful tender offers generated even greater positive residuals versus unsuccessful tender offers but nevertheless both created significant stockholder wealth. These findings are partially supported by Bradley (1980) for the target corporations but rather negative returns for the acquirer company. Travlos (1987) reports negative abnormal returns for firms financing a takeover with common stock and no abnormal returns for those financing with cash. This outcome parallels the empirical evidence of a public offering of new equity. Faccio and Masulis (2005) promulgated results where cash payments are used by bidders when their dominant voting control is threatened. Otherwise, stock financing is employed as the bidder's financial condition weakens. For privately held targets Chang (1998) hypothesized that when the acquisitions market is uncompetitive bidding firms can reap positive gains as the probability of underpayment is high. Pulvino (1998) provided support for this concept contrasting differentially financially constrained airlines in the sale of assets. Loughran and Vijh (1997) showed that for the five-year period following an acquisition, on average, firms that complete stock mergers have significant negative excess returns and cash tender offers earn significant positive excess returns. Martin (1996) published findings that support the notion that the higher the acquirer's growth opportunities the more likely the acquirer is to use stock to finance the acquisition. Stock financing increases with higher pre-acquisition market and acquiring firm stock returns. It decreases with an acquirer's higher cash availability, higher institutional shareholdings and block holdings, and in tender offers. Lang, Stulz and Walkling (1991) present results that bidder returns are significantly related to cash flow for low Tobin Q bidders but not for high Tobin Q bidders. The former Tobin Q firms have poor investment opportunities whereas the latter Tobin Q firms have good investment opportunities. These results are amplified by Rau and Vermaelen (1998) who found poor post-acquisition performance of low book-to-market firms. Business cycle conditions can influence the choice of stock or cash. Choe, Masulis and Nanda (1993) and Taggart (1997) support a non-recession state of the economy as favorable to the use of stock to consummate a merger. Rhodes-Kroph and Viswanathan (2004) found a positive correlation between merger activity and when the stock market is high. A subfield in the merger literature is that of conglomerates. Lewellen (1971) demonstrated diversified firms enjoy greater debt capacity and debt tax shields relative to pure play firms due to lower risk. This study is confirmed by Amihud and Lev (1981) showing lower firm risk due to multiple lines of business with imperfectly correlated returns. In addition, they show managers engage in corporate diversification, even if it reduces shareholder value, to reduce their own human capital risk. In fact, mergers oftentimes are in lines of business with poor investment opportunities (Jensen (1986) and Stulz (1990)). Meyer, Milgrom and Roberts (1992), Berger and Ofek (1995) and Mansi and Reeb (2002) show that conglomerates cross-subsidize poorly performing divisions. While Stein (1997) discusses that diversification can create internal capital markets, which may increase investment efficiency, Rajan, Servaes

and Zingalesm (2000) explain that conglomerates can have internal power struggles causing resource allocation distortions. Scharfstein and Stein (2000) show how divisional managers subvert internal capital markets in their pursuit of rent-seeking investments leading to inefficiencies. Thus, Lins and Servaes (1999) and Lamont and Polk (2001) exhibit data of conglomerates priced at a discount versus comparable single line of business corporations while on the contrary Graham, Lemmon and Wolf (2002) casts doubt, based on methodology, on the conglomerate discount. Weston (1970) expounded on the ability of diversified organizations to leverage economies of scale due to their efficient and profitable operations rather than stand-alone firms.

Mergers and acquisitions play a role in corporate governance. While there are both internal controls, such as independent boards and effective executive incentive compensation plans, and external checks, such as legal protection for minority stockholders and monitoring of the firm by accountants, creditors and rating agencies, certification by investment banks and stock exchanges; nevertheless, the market for corporate control through takeovers can motivate a management with astigmatism or hyeropia. The response of managers to takeover bids is correlated to the degree of agency costs. Shleifer and Vishny (1988) show that equity-based compensation (EBC) of executives has the effect of reducing the non-value maximizing behavior of acquiring managers. Datta, Iskandar-Datta and Raman (2001) present evidence that high EBC firms experience positive stock returns versus low EBC firms suffering negative returns. Furthermore, the merger premium paid by high EBC firms is less than low EBC firms. Moreover, high EBC firms experience higher growth rates and stock return performance in the 3 year post-merger period. Berger and Ofek (1996) found that those firms who endured greater losses from diversification were more likely to be taken over. Agrawal and Walkling (1994) discovered that acquisition attempts occur more frequently in industries where chief executive officers have positive abnormal compensation. Boot (1992) furnishes proof that a takeover threat may deter a manager from persisting with a suboptimal project. Berkovitch and Khanna (1990) and DeAngelo and Rice (1983) supply results of how managers will implement defensive strategies such as crown jewel sales, lock-up options, litigation, white knight arrangements, purchases of undesirable assets, and greenmail to thwart a hostile takeover or at least extract additional rents from the potential acquirer. Sinha (1991) shows that takeover target managers repurchase stock to bond themselves to reduce agency costs of overconsumption of perquisites and underinvestment of the firm. Servaes (1994) corroborates the previous finding with evidence that takeover targets have not previously overinvested in capital expenditures. Berkovitch and Khanna (1991) create an acquisition market model to demonstrate how target shareholders must design golden parachutes for managers to foster higher payoff tender offer bids as opposed to merger bids. Kini, Kracaw and Mian (2004) show how corporate takeovers provide an external source of discipline after internal control mechanisms failed.

The preceding overview testifies to the depth and breadth of the mergers and acquisitions literature. Mergers are fascinating in their impact on competition, the upheaval in employees, the relocation of company headquarters, the gains and losses to investors, the attempts to thwart the combination, the legal machinations, and the ramifications on corporate ownership and control. Empirical evidence supporting or refuting hypothesis are ex post in nature and only ex ante studies will prove the efficacy of the theories. No matter, merger waves will continue to transform the global market far into the future.

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РАЗДЕЛ 2 КОРПОРАТИВНАЯ СОБСТВЕННОСТЬ

SECTION 2 CORPORATE OWNERSHIP

THE ASIAN CRISIS AND CORPORATE GOVERNANCE - OWNERSHIP STRUCTURE, DEBT FINANCING, AND CORPORATE DIVERSIFICATION

Masaharu Hanazaki*, Qun Liu**

Abstract

Based on firm-level analysis, this paper suggests that ownership concentration enabling controlling shareholders to expropriate other shareholders; fund raising through debt that is short of effective monitoring by creditors; and inefficiency caused by the ill effects of diversification are all associated with significantly worse performance during the Asian crisis. The region's predominant governance structure, characterized by family control and conglomerates, was considered a factor in its miraculous economic development but has been seen since the crisis as the origin of crony capitalism.

Keywords: asian crisis, ownership structure, debt financing

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1. Introduction

East Asia, the focus of the financial crisis of 1997, was a region *(see endnote 1)* that had only recently achieved unparalleled economic development. The conventional view has held that investor attitude, along with economic fundamentals, helped to cause the collapse. Also coming in for analysis have been the mechanisms which could allow a country to suffer substantial successive damage after the crisis.

However, our analysis – which used firm-level data on the East Asian area – indicated that the outbreak of the Asian crisis was followed not only by a generally negative impact on the performance of firms, but also by expanded cross-firm variation in performance. This suggests that the effects of the Asian crisis were not necessarily uniform across the corporate sector. Another possibility to be considered is that performance may have been influenced significantly by elements peculiar to individual firms.

In this paper we focus on the corporate governance problems in a firm's idiosyncratic elements. We develop our argument around the close relationship of corporate governance problems, such as immaturity and inefficiency, to the Asian crisis. We use firm-level data from the five East Asian crisis economies of Indonesia, Korea, Malaysia, the Philippines, and Thailand to study the impact of corporate governance on the performance of firms. We

examine three aspects of corporate governance in particular. We will now briefly summarize our findings on how these factors affected corporate performance during the crisis.

The first aspect, ownership structure, is one of the key determinants of corporate governance. We highlight the agency problem between large shareholders and minority shareholders and measure it in terms of the ownership concentration of controlling shareholders and the divergence between the voting rights and cash flow rights of the controlling shareholders in the firm. We find that in general, these two variables are associated with significantly worse performance during the Asian crisis.

The second aspect is debt. We examine two hypotheses here – the free-cash-flow hypothesis and the debt-overhang hypothesis. We find that the debt-overhang hypothesis is supported in a very limited number of cases, and fail to detect a mechanism by which the free-cash-flow hypothesis asserts itself. Rather, higher debt is associated with significantly worse corporate performance during the Asian crisis. This finding suggests that banks did not efficiently monitor the firms to which they lent their money, and that they tended to engage in "crony lending."

The last aspect is corporate diversification. We investigate the effects of diversification on the performance of firms and find strong evidence that diversification worked to worsen performance during the crisis, perhaps because inefficiency involving diversification surfaced at that time.

2. Macroeconomic and Microeconomic Theory on the Asian Financial Crisis

2.1. Traditional Theory on the Asian Financial Crisis

The causes of the Asian financial crisis of July 1997 have been analyzed mainly from the viewpoints of macroeconomics and international finance theory. These theories form the basis for several explanations, such as a mid-term acceleration of external debt (from the private as well as the public sector), an aggravation tendency among economic fundamentals, and panic fund recovery by some investors *(see endnote 2)*. The IMF is also accused of accelerating the crisis by insisting on conditionality involving major structural reform in its midst.

The mechanism of the Asian financial crisis

Although there are several theoretical models that dealt with the mechanism of the currency crisis *(see endnote 3)*, we focus here on the contagion model. The characteristic feature of the Asian financial crisis is that currency collapsed simultaneously with the contraction of production. Other conditions being equal, currency depreciation will enlarge external demand; this is not, however, observed here. The positive effect of relative price change on the demand side is offset completely by its negative effect on the supply side.

Kiyotaki and Moore (1997), in analyzing a dynamic economy, demonstrate that in such an economy durable assets, such as land, play a dual role. Not only are they factors of production, but they also serve as collateral for loans. The dynamic interaction between credit limits and asset prices turns out to be a powerful transmission mechanism by which the effects of shocks persist, amplify, and spill over to other sectors. The land collateral system equalizes the idiosyncratic features, such as differences in credit risk, possessed by individual firms. While it makes external financing easier for firms, the system cannot serve as an effective barrier to a macroeconomic shock that influences land prices throughout the country. Miller and Stiglitz (1999) try to explain why the East Asian crisis worsened, using the collateralized borrowing model by Kiyotaki and Moore (1997), hereafter referred to as the KM model. In their model, bankruptcy law and balance sheets play the same roles as land plays in the KM model. Bankruptcy law is designed to solve problems of creditor coordination in the absence of contracts. It aims to restructure credits so as to avoid premature liquidation and to divide up the assets in cases where liquidation is necessary.

In normal times, bankruptcy conveys a lot of information about the quality of a firm's management and the firm's long-term viability. But in the context of a system-wide failure, little information is imparted. The mechanisms designed to handle small, idiosyncratic shocks simply cannot cope with a macroeconomic shock of this magnitude. This is because when a large number of firms, say two-thirds of the firms in a country, are insolvent, there are not sufficient resources – human or pecuniary – to address each bankruptcy individually.

Moreover, the systemic nature of the bankruptcies makes sorting out net asset positions even more difficult than in normal situations, since the assets of bankrupt firms consist of claims on other firms that are also bankrupt. A further problem is the difficulty of finding new managers or trustees to oversee all of the restructured firms. In the context of the Asian crisis, therefore, even a well-managed firm could easily go bankrupt, simply because it failed to plan for a large-scale devaluation and a substantial rise in interest rates. It thus could generate large-scale connective bankruptcy as a result *(see endnote 4)*. Miller and Stiglitz suggest that the Asian crisis had a serious, uniform influence on corporate sectors in the countries concerned.

2.2. Is the Influence of the Asian Crisis Uniform?

In this section, we use firm-level data to investigate whether the Asian crisis had a uniformly negative influence on the corporate sector of each country.

Data description

We collected financial data from the Worldscope database for all firms in Indonesia, Korea, Malaysia, the Philippines, and Thailand from 1994 until 2000. The five countries suffered disproportionately in terms of currency depreciation and stock market decline (Mitton 2001). We eliminate firms for which there is not sufficient data from 1994 to 2000. We exclude the period before 1994, as Worldscope provides little data for this period. We eliminate firms that include an unusual value of financial variables even in one year *(see endnote 5)*. This process is done twice, as after the first deletion we can still find unusual values included in the data set. Data that exceed plus-or-minus three standard deviations from the average value are defined as unusual values. By performing these processes we obtain a balanced data set *(see endnote 6)*.

Since the crisis clearly began in July 1997, we compare a within-country deviation of performance index between firms before 1997 with that after 1997. If the deviation after 1997 shows little change or shrinks, we will conclude that the Asian crisis had a uniform and serious influence on the corporate sector of the country concerned. If the deviation grows larger after 1997, we will conclude that the Asian crisis had varied influences on the corporate sector in light of the idiosyncratic factors of each firm.

We use three typical performance indices for individual firms. The first is ROA (the current return on firms' total assets); the second is ROE (the net return on firms' equity); and the third is PMA (the business profits-to-sales ratio). Summarized statistics for the three indexes are shown in Table 1. We also include standard deviation, standard deviation/mean, and standard deviation/median in Table 1 as deviation indices.

Enlarged deviation

We differentiate Table 1 by performance indices. A general deterioration tendency of performance can be observed after 1997 by mean and median. However, by the indices characteristic, the deterioration of PMA is smaller than that of ROA and ROE. Except for the Philippines, performance indices in all our sample countries are negative; the Philippines was comparatively stable during the crisis period both by mean and by median. The deviation enlarges after 1997 in general, although the extent of expansion varies by country and by index. The deviation indices for Indonesia, Thailand, and Korea showed particular expansion.

On the other hand, the expansion was comparatively smaller for Malaysia. For the Philippines, standard deviation/mean, standard deviation/median expanded due to declining mean and median, but standard deviation did not. The result indicates that the Asian crisis had different influences on corporate sectors in light of the idiosyncratic factors of individual firms.

This contradicts any idea that the Asian crisis had a uniform influence on the corporate sector of a given country.

3. The Influence of the Asian Crisis Analyzed from the Viewpoint of Corporate Governance

3.1. The Features and Problems of Family Control

In the West and Japan, ownership of big firms is comparatively dispersed. East Asian firms, even large ones, are generally owned by one family or by a group corporation under the family's control. These families have close connections with the government and politicians, and dominate the national economy to a significant extent.

Claessens, Djankov and Lang (2000) indicate that families control two-thirds of firms in Indonesia and Korea, over half in Malaysia and Thailand, and 40% in the Philippines *(see endnote 7)*. To discuss corporate governance in East Asian firms, we have to take the family control problem into consideration.

Ownership of firms and the agency problem

One important issue in the organization of firms is how to solve or mitigate the agency problem that derives from asymmetric information *(see endnote 8)*. But the problems that arise when firm ownership is dispersed are different than when it is concentrated. When ownership is dispersed, as in the US, conflicts of interest between managers and shareholders are the central problem. When ownership is highly concentrated, as in East Asia, conflicts of interest between controlling shareholders and minority shareholders become the main problem. As Shleifer and Vishny (1997) point out, controlling shareholders may not have a convergence of interests with minority shareholders. A greater degree of control by controlling shareholders implies a greater ability to expropriate minority shareholders *(see endnote 9)*.

Voting rights and cash flow rights

The separation of voting rights and cash flow rights is another dominant characteristic of the ownership structure of family-controlled firms in East Asia. "Voting rights" refers the degree of control of a company, while "cash flow rights" refers to shareholdings in the firm. If, for example, a family owns 60% of Firm A's equities, and Firm A owns 30% of Firm B's equities, the family owns 30% of the voting rights but only 18% of cash flow rights in Firm B. When voting rights and cash flow rights diverge, the agency problem between large shareholders and minority shareholders becomes more serious. This is because when family-controlled firms suffer a loss,

the family is required to pay for only 18% of the loss, not 30%.

Ultimate ownership structure

Claessens, Djankov, and Lang (2000) *(see endnote 10)* show that the widespread use of pyramidal ownership structures in East Asian firms allows insiders to exercise effective control over a company even when they own relatively few of its cash flow rights. Pyramid structures *(see endnote 11)* and cross-shareholdings are two of the ways in which families tend to control firms. To clarify the ultimate ownership structures *(see endnote 12)*, therefore, we have to take pyramid structures and cross-shareholdings into consideration. Based on this view, we examine the link between ownership structure and firm performance during the crisis using firm-level data.

Survey

We discuss some relevant literature, which focuses primarily on the relationship between the Asian crisis and corporate governance.

Johnson, Boone, Breach and Friedman (2000) study country-level data and find that the extent of exchange rate depreciation and stock market performance decline are indeed correlated with aggregate measures of legal protection. Mitton (2001) studies five East Asian countries at the firm level and finds evidence that during the crisis period, firms with greater disclosure performed better than other firms; corporate diversification is associated with significantly worse performance; and the separation of cash flow rights and control rights did not affect firm performance to a significant extent. Lemmon and Lins (2001) study eight East Asian countries, also at the firm level, and find strong support for the view that firms with greater separation of cash flow rights and control rights performed worse than others.

3.2. Examination of the Hypotheses concerning Ownership Structure

In this section, we examine whether firm-level differences in corporate governance can explain differences in corporate performance during the Asian crisis. To that end, we match the initial sample of firms that we described in Section 2 with ownership data from Claessens, Djankov,Lang (2000) which contains data from the 1995/1996 time period on control rights and cash flow rights. To assess the impact of corporate governance variables on corporate performance during the crisis, we estimate the following model using the random effects method *(see endnote 13)*:

$$PER_{it} = a + b_0 \times CG_{it} + b_1 \times CG_{it} \times D95 + b_2 \times CG_{it} \times D96 + b_3 \times CG_{it} \times D97 + b_4 \times CG_{it} \times D98 + b_5 \times CG_{it} \times D99 + b_6 \times CG_{it} \times D00 + c \times LTA_{it} + \sum d_j \times DIN_j + u_{it} \quad (1)$$

in which the corporate governance variables included will change according to the specification, and other variables are defined as follows:

PER: performance indices (ROA, ROE, PMA).

CG: corporate governance variables, which will be indicated afterwards according to the specification.

D95 ~ D00：year dummies.

LTA: natural logarithm of the book value of total assets

DIN: industry dummies (based on 4-digit SIC level)

while t is time unit; i is individual firm cross-section unit; j is individual industry cross-section unit.

Formula (1) aims at measuring how the impact of corporate governance variables on corporate performance changes over time, using total firm assets and industry dummies as control variables. We particularly want to detect changes in the parameters concerning corporate governance variables just prior to and after the Asian crisis of 1997 *(see endnote 14)*.

Concentration of ownership in firms

As we have stated, family control and concomitant high ownership concentration are predominant in East Asian firms. Claessens, Djankov and Lang (2000) find that at the end of 1996, the ratio of the voting rights of the largest shareholder to total voting rights is 10% for Japan, but 35% for Thailand, 34% for Indonesia, 28% for Malaysia, 24% for the Philippines, and 18% for Korea. The following hypothesis is drawn by the existence of controlling shareholders who have substantial control and may actually expropriate minority shareholders when conflicts of interest exist between them:

Hypothesis 1: *The greater the ultimate control rights of the controlling shareholders, the more serious the agency problem between the controlling shareholders and minority shareholders, and the more inefficient the firm's management. Therefore, these kinds of firms should exhibit larger declines in performance than others during the crisis.*

We substitute the voting rights of the controlling shareholders of the firm (VR) for CG in formula (1) to investigate differences in the voting rights effect on performance before and after the crisis.

Table 2 presents the regression results. The coefficients on VR are positive and significant in Korea, Thailand and Malaysia for 1994, but not significantly different from zero in other countries. The coefficients on VR for 1995 are not significantly different from those for 1994. These results indicate that high ownership concentration may not have a negative effect on the performance of firms per se.

However, the coefficients on VR after 1997 shift downward significantly in all specifications of all countries except the one in which the dependent variable is PMA in Indonesia. The magnitude of the shift is largest in 1997 for Thailand, in 1998 for Indonesia, Korea and Malaysia, and in 1998 and 1999 for the Philippines. The downward shift continues until 2000 in most specifications.

This result should be interpreted as indicating that higher ownership concentration is correlated with poorer performance during the crisis period, a deterioration that lasts right up until 2000. This finding is consistent with our hypothesis.

Separation of voting rights and cash flow rights

The separation of voting rights and cash flow rights is another consequence of a family-controlled ownership structure. Claessens, Djankov and Lang (2000) find that compared with voting rights, cash flow rights are 20% less in Indonesia, 15% less in Korea and Malaysia, 10% less in the Philippines and 6% less in Thailand. If the separation of voting rights and cash flow rights has the potential to intensify the agency problem between controlling shareholders and other shareholders, then we hypothesize that:

Hypothesis 2: *The greater the separation of voting rights and cash flow rights, the greater the incentive for controlling shareholders to engage in expropriation and the more inefficient the firm's management. Therefore, firms of this sort should exhibit larger declines in performance than others during the crisis.*

We substitute difference of voting rights and cash flow rights (DI) of the firm for CG in formula (1) to assess how the effect on performance of the separation of voting rights and cash flow rights will differ before and after the crisis. We eliminate firms in which there is no separation of voting rights and cash flow rights. In doing so we can include in our assessment of the data set only those firms with a divergence between voting rights and cash flow rights.

Table 3 presents the regression results. The coefficients on DI are significantly positive only in some specifications of Malaysia and the Philippines before the crisis. This result is not evidence that the separation of voting rights and cash flow rights must negatively affect the performance of firms, at least before the crisis. However, the coefficients on DI after 1997 significantly shift to negative in all specifications where the dependent variables are the ROA of all sample countries. But the coefficients on DI in the specifications where the dependent variables are the ROE and PMA of Korea are not significant; neither are the coefficients on DI in 1997 significant in specifications where the dependent variables are ROE and PMA of Thailand, where separation of voting rights and cash flow rights is relatively smaller.

This result is not identical in all specifications and all countries. But most specifications proved that a greater separation of voting rights and cash flow rights is related to worse performance during the crisis period in countries where the separation of voting rights and cash flow rights is notably large *(see endnote 15)*.

3.3. The Role Played by Debt

In the previous section we analyzed the ownership structure effect, which is the central issue regarding corporate governance in East Asian firms. But other corporate governance mechanisms exist as well. In this section we discuss the role played by debt.

Free-cash-flow hypothesis

The free-cash-flow hypothesis proposed by Jensen (1986, 1989) indicates that debt exerts disciplinary mechanisms on corporate management. Excess cash flow can allow managers to pursue perquisite consumption for themselves. Firms with debt, meanwhile, will manage more efficiently under the monitoring of their creditors. East Asian firms in general are more likely to run into a certain amount of debt than to have a surplus cash flow. In fact, the average debt ratio (debt/total assets) of our sample firms at the end of 1996 was 51.3% for Indonesia, 75.0% for Korea, 44.8% for Malaysia, 39.8% for the Philippines and 57.1% for Thailand *(see endnote 16)*.

The financial situation of East Asian firms suggests that we can expect debt to exert a disciplinary mechanism on corporate management if creditors monitor their debtors effectively.

Hypothesis 3: *Firms with greater debt manage more efficiently if creditors effectively monitor their debtors; therefore, these kinds of firms should perform better than the others during the crisis period.*

Debt-overhang hypothesis

Regarding the role played by debt, however, the debt-overhang hypothesis *(see endnote 18)* suggests that firms with excessive debt have trouble attracting new investment even if they bring in a profit, because profits gained from the new investment would be appropriated first to the payment of existing debt.

Hypothesis 4: *Firms with excessive debt are likely to lapse into the problem of debt-overhang, lose opportunities to make new profits, and therefore become more fragile during the crisis.*

These two hypotheses are contradictory regarding the role of debt. The free-cash-flow hypothesis suggests that debt has a positive effect on firm performance. The debt-overhang hypothesis, on the contrary, points to the negative effect of excessive debt. We substitute one-period previous debt ratio (DA_{-1}) of the firm for CG into formula (1) to examine the relationship between debt's disciplinary mechanism and the crisis. Then we group our sample firms into three sub-samples based on the firms' debt ratio in 1996 *(see endnote 19)*. We define the firms with the lowest 20% of debt ratio as low debt ratio firms, and those with the highest 20% as high debt ratio firms. We examine the debt-overhang hypothesis by comparing the regression results of these two sub-samples. Table 4 presents the regression results. Panel A of Table 4 assesses whether debt has a positive effect on performance as suggested by the free-cash-flow hypothesis. The coefficients on debt ratio are significantly positive for 1994 in all specifications in Thailand, two specifications in the Philippines, and one specification where the dependent variable is ROE in Malaysia. This result is consistent with what the free-cash-flow hypothesis suggests, although we cannot find similar results for Indonesia or Korea. After 1997, however, the coefficients on

debt ratio become significantly negative in most specifications. These findings show that the disciplinary effect of debt becomes weaker, but still appears slightly in some specifications in Thailand and the Philippines.

But most specifications provide evidence that debt has a negative effect on corporate performance that is contrary to the free-cash-flow hypothesis *(see endnote 20)*.

We examine the debt-overhang hypotheses by comparing both the magnitude and significance of coefficients on the debt ratio of low debt ratio firms (Panel B) and high debt ratio firms (Panel C). In the Philippines, we find no significant coefficients for low debt ratio firms in specifications where dependent variables are ROA and ROE. Coefficients are significantly negative for high debt ratio firms, however, and the magnitude of coefficients becomes larger after the crisis. These findings suggest that debt-overhang problems occurred in high debt ratio firms of the Philippines.

We find no evidence that debt-overhang problems occurred in other countries. In other words, excessive debt has not necessarily had the negative influence on performance that the debt-overhang hypothesis suggests. These results are contrary to the free-cash-flow hypothesis and partly consistent with the debt-overhang hypothesis. They suggest that excessive debt did not necessarily have a negative effect on performance, but rather that the funds raised by debt were used inefficiently, due to a lack of necessary skills, or a flawed monitoring system on the part of creditors, that prevented the disciplinary mechanism from working effectively. These facts might imply the moral hazard problem of crony lending – that lending by family-controlled banks went predominantly to firms controlled by the same family *(see endnote 21)*.

3.4. Effects of Corporate Diversification

While it is not a direct corporate governance mechanism, corporate diversification could affect the expropriation problem and the effectiveness of corporate governance in the following ways. First, diversified firms offer more opportunities for expropriation through misallocation of capital, such as through cross-subsidization and over-investment.

Second, diversification may hinder corporate governance simply because of the complexity it creates. The complexity of an organization can increase the level of asymmetric information. Expropriation may be more likely if it is more difficult to detect. Third, benefits might accrue to conglomerates, particularly in countries where capital markets are less developed. Diversification is beneficial in emerging markets, because conglomerates can perform through internal markets that allow greater access to capital needed to pursue worthwhile investments. The benefits of diversification are related to capital market development.

Benefits and costs of diversification

Whether corporate diversification benefits or harms firm valuation is a main concern in corporate theory. Chandler, Jr. (1977, 1990) indicates that diversification is beneficial theoretically when merits exist in the profit or cost side, for example in economies of scope. Benefits might accrue to a firm through diversification particularly when the know-how of one industry can be exploited in other industries, or when a firm is a multidivisional structure, the overhead departments of which can be used in common by other departments.

Lewellen (1971) also indicates that conglomerates are favorable because they enable firms to save on taxes by creating more access to external debt whose interest payments are income deductible. Moreover, Stein (1997) suggests that conglomerates might achieve more efficient management by allocating capital efficiently through an internal capital market. Much of the literature, however, emphasizes the negative rather than the positive effects of diversification. Berger and Ofek (1995) and Rajan, Servaes and Zingales (2000) point to the inefficiency of cross-subsidization; Jensen (1986) stresses the evils of investing in projects that are not expected to turn a profit; and Scharfstein and Stein (2000) find that rent-seeking activities by the division managers of conglomerates cause distortion in internal capital markets. Empirical analyses of American firms find that corporate diversification harms firm valuation where, as in the United States, the problems of cross-subsidization, over- investment and inefficient allocation of capital predominate. These studies suggest that diversification is negatively related to efficiency as a consequence of over- investment *(see endnote 22)*. If similar problems exist in East Asian firms, we can make the following hypothesis *(see endnote 23)*:

Hypothesis 5: *Diversified firms exhibit more inefficient management than others. Therefore, these kinds of firms should show relatively larger declines in firm performance during the crisis.*

We substitute the numbers of segments (NS) used to measure diversification levels for CG into formula (1) to investigate how the diversification effect on performance will change before and after the crisis. We also describe the average diversification levels from Worldscope information as 3.5 for Indonesia, 3.4 for Korea, 5.0 for Malaysia, 3.4 for the Philippines and 2.7 for Thailand.

Table 5 presents the regression results. The coefficients on NS have a significantly positive effect on performance in the Philippines and Korea in 1994, but do not show any significant effect in other countries. This result does not indicate that diversification has a negative effect on corporate performance, at least before the crisis. However the coefficients on NS around 1997 have a significantly negative effect on performance in all countries, and this negative influence lasts right up until 2000. Our overall findings should be interpreted as follows: Diversifi-

cation resulted in wrongs and inefficiencies that surfaced during the crisis. This is similar to Japan's experience, where diversification advanced during the bubble period but proved a serious constraint on corporate management after the bubble collapsed.

4. Conclusion

Using firm-level data on East Asia, we have shown that cross-firm variation in performance expanded after the outbreak of the Asian crisis. Much of the disparities between firms can be explained by corporate governance problems among each firm's idiosyncratic elements.

Based on firm-level analysis, this paper suggests that ownership concentration enabling controlling shareholders to expropriate other shareholders; fund raising through debt that is short of effective monitoring by creditors; and inefficiency caused by the ill effects of diversification are all associated with significantly worse performance during the Asian crisis. The region's predominant governance structure, characterized by family control and conglomerates, was considered a factor in its miraculous economic development but has been seen since the crisis as the origin of crony capitalism *(see endnote 24)*. We find evidence consistent with this view.

Many subjects remain for further research. The first is the causality issue: Did the crisis expose corporate governance problems, or did corporate governance problems trigger the onset of the crisis? Other exogenous factors may have brought out the problems of corporate governance and the crisis. The causality is unknown in our analysis.

Second, the analysis in this paper did not encompass such country-specific institutional characteristics as corporate law, bankruptcy codes, corporate accounting standards, and corporate finance, which are important factors in regulating the rights and actions of investors and creditors.

Third, we did not provide enough analysis of the issue's political implications. Corporate governance showed many problems deriving from a lack of transparency in corporate management, the lack of sufficiently fair and efficient financial and capital markets, and weak property rights. These institutional vulnerabilities should be checked and corrected. However, little literature documents the quantitative effect of reform *(see endnote 25)*.

Our next endeavor is to deepen the economic understanding of corporate governance in East Asia, a subject which has generated much concern in recent years.

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Appendices

Table 1 Summary Statistics of Performance Indices

1. ROA

		94	95	96	97	98	99	2000
Indonesia	Number of firms	73	73	73	73	73	73	73
	Mean	9,35	9,44	7,76	0,56	-2,14	9,22	1,15
	Min	-2,31	-6,40	-6,87	-32,35	-63,65	-18,94	-43,91
	Max	26,36	26,14	22,83	26,54	66,91	44,42	42,69
	Median	8,53	8,92	7,44	3,32	0,79	7,52	3,02
	Standard deviation	5,61	5,22	5,17	11,74	23,30	12,05	17,25
	Standard deviation/Mean	0,60	0,55	0,67	20,98	-10,90	1,31	15,05
	Standard deviation/Median	0,66	0,58	0,70	3,53	29,63	1,60	5,70
Korea	Number of firms	136	136	136	136	136	136	136
	Mean	5,27	5,27	3,38	2,56	1,37	4,31	3,60
	Min	-1,63	-0,09	-6,14	-9,80	-29,29	-18,80	-29,79
	Max	12,33	12,97	12,57	8,83	16,05	26,76	31,55
	Median	5,44	5,33	3,97	3,36	4,18	5,09	3,74
	Standard deviation	2,62	2,53	3,09	3,43	8,24	6,74	9,66
	Standard deviation/Mean	0,50	0,48	0,92	1,34	6,00	1,57	2,69
	Standard deviation/Median	0,48	0,48	0,78	1,02	1,97	1,33	2,58
Malaysia	Number of firms	159	159	159	159	159	159	159
	Mean	9,29	8,51	8,20	5,55	1,80	3,18	2,46
	Min	-3,55	-5,82	-6,12	-13,77	-31,46	-35,00	-19,69
	Max	29,96	29,11	30,21	24,33	28,06	30,92	25,25
	Median	8,33	8,17	7,50	4,94	2,31	3,28	2,41
	Standard deviation	5,89	5,54	5,57	6,26	8,54	8,93	6,08
	Standard deviation/Mean	0,63	0,65	0,68	1,13	4,74	2,81	2,47
	Standard deviation/Median	0,71	0,68	0,74	1,27	3,69	2,72	2,52
Philippines	Number of firms	46	46	46	46	46	46	46
	Mean	8,41	7,36	6,48	4,89	3,07	1,84	2,29
	Min	-7,81	-6,44	-9,98	-7,76	-22,41	-10,49	-12,90
	Max	26,98	27,87	23,99	21,59	24,79	14,22	14,63
	Median	6,35	5,56	4,29	3,50	2,31	1,00	2,58
	Standard deviation	8,28	7,48	7,44	5,02	7,64	5,25	5,21
	Standard deviation/Mean	0,98	1,02	1,15	1,03	2,49	2,85	2,28
	Standard deviation/Median	1,30	1,35	1,73	1,44	3,31	5,25	2,02
Thailand	Number of firms	150	150	150	150	150	150	150
	Mean	8,59	7,97	6,09	-8,16	5,41	2,79	4,48
	Min	-9,27	-4,65	-4,56	-50,73	-24,51	-24,00	-24,92
	Max	25,88	20,62	19,71	24,25	29,72	24,28	31,41
	Median	8,19	7,55	5,92	-4,39	5,93	3,38	4,66
	Standard deviation	5,75	4,70	4,25	15,84	9,63	8,27	8,76
	Standard deviation/Mean	0,67	0,59	0,70	-1,94	1,78	2,97	1,96
	Standard deviation/Median	0,70	0,62	0,72	-3,61	1,62	2,45	1,88

Table 1 Summary Statistics of Performance Indices (*continued*)

2. ROE

		94	95	96	97	98	99	2000
Indonesia	Number of firms	57	57	57	57	57	57	57
	Mean	15,33	14,61	13,47	1,07	-22,49	21,36	1,48
	Min	-5,82	0,74	-12,50	-28,68	-417,62	-244,98	-132,70
	Max	44,85	39,75	35,09	24,69	89,41	128,30	128,24
	Median	14,14	13,82	13,03	1,76	-0,80	15,31	7,76
	Standard deviation	10,57	8,58	9,76	9,57	83,90	54,04	40,97
	Standard deviation/Mean	0,69	0,59	0,72	8,96	-3,73	2,53	27,66
	Standard deviation/Median	0,75	0,62	0,75	5,43	-105,17	3,53	5,28
Korea	Number of firms	144	144	144	144	144	144	144
	Mean	7,58	6,08	-0,28	-3,99	-15,59	-3,30	-6,49
	Min	-25,73	-35,54	-30,65	-80,14	-323,06	-426,15	-302,06
	Max	46,26	44,73	25,70	10,29	502,25	374,82	131,76
	Median	6,58	6,20	2,39	-0,31	-0,90	7,75	3,39
	Standard deviation	7,82	8,87	9,34	12,05	94,60	79,54	59,55
	Standard deviation/Mean	1,03	1,46	-33,41	-3,02	-6,07	-24,10	-9,18
	Standard deviation/Median	1,19	1,43	3,92	-38,79	-104,61	10,27	17,57
Malaysia	Number of firms	166	166	166	166	166	166	166
	Mean	14,34	14,81	13,05	7,70	-0,57	3,58	3,23
	Min	-7,94	-13,82	-16,97	-31,03	-62,15	-71,87	-111,78
	Max	47,29	47,96	41,21	40,10	58,65	108,31	109,76
	Median	12,81	14,24	12,20	7,05	1,42	5,50	3,58
	Standard deviation	10,40	9,61	9,68	10,57	13,75	26,72	23,86
	Standard deviation/Mean	0,73	0,65	0,74	1,37	-24,33	7,47	7,39
	Standard deviation/Median	0,81	0,67	0,79	1,50	9,67	4,86	6,66
Philippines	Number of firms	40	40	40	40	40	40	40
	Mean	15,16	10,71	9,10	4,54	2,09	0,63	2,35
	Min	-17,36	-11,78	-17,38	-15,05	-51,22	-53,20	-29,23
	Max	54,18	32,84	34,08	16,97	51,40	39,61	51,17
	Median	12,19	11,99	10,81	4,17	1,97	2,48	2,17
	Standard deviation	15,67	9,75	11,48	7,46	17,66	15,23	12,77
	Standard deviation/Mean	1,03	0,91	1,26	1,64	8,45	24,01	5,44
	Standard deviation/Median	1,29	0,81	1,06	1,79	8,97	6,14	5,89
Thailand	Number of firms	151	151	151	151	151	151	151
	Mean	17,91	13,93	10,26	0,65	1,93	1,08	1,76
	Min	-38,07	-21,87	-21,30	-37,52	-334,84	-290,30	-172,97
	Max	76,20	51,86	45,52	38,59	264,36	412,36	118,43
	Median	17,62	13,20	9,37	1,35	7,86	2,97	5,72
	Standard deviation	15,00	11,28	10,38	12,74	72,65	76,64	36,02
	Standard deviation/Mean	0,84	0,81	1,01	19,66	37,66	70,74	20,41
	Standard deviation/Median	0,85	0,85	1,11	9,47	9,24	25,85	6,30

Table 1 Summary Statistics of Performance Indices (*continued*)

3. PMA								
		94	95	96	97	98	99	2000
Indonesia	Number of firms	69	69	69	69	69	69	69
	Mean	14,95	14,97	13,17	12,47	13,03	10,00	9,75
	Min	1,29	0,32	-9,33	-14,40	-106,56	-62,28	-60,12
	Max	34,57	42,02	35,15	36,47	54,07	37,48	37,70
	Median	13,80	13,72	12,79	12,43	13,72	12,08	11,04
	Standard deviation	8,38	9,21	9,42	10,22	19,50	16,88	15,76
	Standard deviation/Mean	0,56	0,62	0,71	0,82	1,50	1,69	1,62
	Standard deviation/Median	0,61	0,67	0,74	0,82	1,42	1,40	1,43
Korea	Number of firms	164	164	164	164	164	164	164
	Mean	7,57	6,62	5,45	5,37	0,89	5,38	5,45
	Min	-4,42	-1,70	-9,57	-23,96	-118,09	-28,22	-54,27
	Max	24,00	19,59	18,10	20,93	25,47	32,78	48,35
	Median	7,12	5,87	5,53	5,89	5,29	5,91	5,95
	Standard deviation	4,72	4,49	4,42	6,40	16,62	8,17	10,59
	Standard deviation/Mean	0,62	0,68	0,81	1,19	18,75	1,52	1,94
	Standard deviation/Median	0,66	0,77	0,80	1,09	3,14	1,38	1,78
Malaysia	Number of firms	178	178	178	178	178	178	178
	Mean	15,81	16,57	15,96	14,51	7,34	6,29	6,80
	Min	-16,49	-25,15	-18,40	-24,44	-69,67	-107,29	-45,12
	Max	52,64	60,99	62,29	62,40	58,05	61,79	47,64
	Median	14,02	13,65	13,38	12,14	6,93	7,34	7,17
	Standard deviation	11,38	13,12	12,97	12,45	18,09	22,53	15,44
	Standard deviation/Mean	0,72	0,79	0,81	0,86	2,46	3,58	2,27
	Standard deviation/Median	0,81	0,96	0,97	1,03	2,61	3,07	2,15
Philippines	Number of firms	40	40	40	40	40	40	40
	Mean	21,25	21,39	19,93	19,06	12,26	11,87	13,64
	Min	1,61	0,20	-0,81	-37,00	-29,71	-31,22	-41,35
	Max	55,13	51,44	51,79	57,75	57,29	64,59	62,44
	Median	17,01	17,27	16,44	16,02	10,36	10,33	10,63
	Standard deviation	13,55	14,01	15,20	17,71	17,01	19,08	17,36
	Standard deviation/Mean	0,64	0,65	0,76	0,93	1,39	1,61	1,27
	Standard deviation/Median	0,80	0,81	0,92	1,11	1,64	1,85	1,63
Thailand	Number of firms	164	164	164	164	164	164	164
	Mean	13,14	12,16	10,09	5,57	1,35	1,38	5,24
	Min	-22,48	-21,25	-28,09	-36,24	-79,92	-113,10	-45,53
	Max	47,71	47,29	42,39	48,60	42,80	47,18	67,55
	Median	12,37	10,24	9,78	6,25	4,15	5,84	5,44
	Standard deviation	11,38	11,31	10,82	13,27	19,08	22,77	14,78
	Standard deviation/Mean	0,87	0,93	1,07	2,38	14,09	16,51	2,82
	Standard deviation/Median	0,92	1,10	1,11	2,12	4,59	3,90	2,72

Table 2 The Effect of Ownership Concentration on Performance

(1) Indonesia

Dependent Variables	*ROA*		*ROE*		*PMA*	
	Coefficient	Z-Value	Coefficient	Z-Value	Coefficient	Z-Value
Ownership concentration (*VR*)	0.07	0.51	-0.14	-0.08	-0.09	-1.14
*VR*D95*	0.01	0.24	-0.04	-0.17	-0.01	-0.23
*VR*D96*	-0.02	-0.32	-0.07	-0.33	-0.02	-0.44
*VR*D97*	-0.18	-2.88 ***	-0.43	-1.81 *	-0.03	-0.46
*VR*D98*	-0.20	-3.02 ***	-0.75	-2.93 ***	0.03	0.54
*VR*D99*	0.09	1.33	0.09	0.36	-0.09	-1.57
*VR*D00*	-0.13	-1.83 *	-0.54	-2.01 **	-0.08	-1.28
Log (total assets) (*LTA*)	-1.63	-1.17	2.43	0.41	-1.55	-1.41
Intercept	27.11	1.36	-0.75	-0.01	38.07	2.52 **
Overall R-squared	0.441		0.244		0.506	
Number of observations(Number of firms)	392(56)		294(42)		336(48)	

(2) Korea

Dependent Variables	*ROA*		*ROE*		*PMA*	
	Coefficient	Z-Value	Coefficient	Z-Value	Coefficient	Z-Value
Ownership concentration (*VR*)	0.12	2.24 **	0.18	0.47	0.17	2.32 **
*VR*D95*	-0.01	-0.21	-0.05	-0.14	-0.05	-1.17
*VR*D96*	-0.10	-2.74 ***	-0.32	-0.93	-0.11	-2.34 **
*VR*D97*	-0.13	-3.63 ***	-0.44	-1.27	-0.10	-2.19 **
*VR*D98*	-0.16	-4.42 ***	-0.93	-2.68 ***	-0.29	-6.09 ***
*VR*D99*	-0.05	-1.24	-0.40	-1.15	-0.09	-1.97 **
*VR*D00*	-0.08	-2.11 **	-0.34	-0.97	-0.07	-1.54
Log (total assets) (*LTA*)	0.75	2.25 **	-1.43	-0.63	1.49	3.35 ***
Intercept	-6.73	-1.15	20.01	0.50	-12.48	-1.62
Overall R-squared	0.206		0.107		0.280	
Number of observations(Number of firms)	777(111)		805(115)		812(116)	

(3) Malaysia

Dependent Variables	*ROA*		*ROE*		*PMA*	
	Coefficient	Z-Value	Coefficient	Z-Value	Coefficient	Z-Value
Ownership concentration (*VR*)	0.01	0.09	0.26	2.00 **	0.40	2.28 **
*VR*D95*	0.01	0.38	0.03	0.42	0.01	0.23
*VR*D96*	0.02	0.80	0.01	0.10	0.03	0.45
*VR*D97*	-0.02	-0.81	-0.14	-1.85 *	-0.01	-0.20
*VR*D98*	-0.13	-4.63 ***	-0.40	-5.22 ***	-0.21	-3.22 ***
*VR*D99*	-0.11	-3.85 ***	-0.30	-3.95 ***	-0.23	-3.56 ***
*VR*D00*	-0.11	-3.96 ***	-0.17	-2.19 **	-0.24	-3.66 ***
Log (total assets) (*LTA*)	-1.74	-2.95 ***	0.46	0.39	1.34	1.02
Intercept	27.48	4.73 ***	3.78	0.32	-7.54	-0.50
Overall R-squared	0.432		0.319		0.401	
Number of observations(Number of firms)	560(80)		595(85)		602(86)	

(4) Philippines

Dependent Variables	*ROA*		*ROE*		*PMA*	
	Coefficient	Z-Value	Coefficient	Z-Value	Coefficient	Z-Value
Ownership concentration (*VR*)	0.16	1.10	0.26	1.06	-0.18	-0.62
*VR*D95*	-0.03	-0.45	-0.20	-1.64	0.03	0.29
*VR*D96*	-0.09	-1.47	-0.36	-2.91 ***	-0.06	-0.56
*VR*D97*	-0.15	-2.41 **	-0.54	-4.32 ***	-0.10	-0.96
*VR*D98*	-0.29	-4.57 ***	-0.72	-5.70 ***	-0.44	-4.01 ***
*VR*D99*	-0.30	-4.68 ***	-0.71	-5.57 ***	-0.43	-3.93 ***
*VR*D00*	-0.27	-4.23 ***	-0.68	-5.25 ***	-0.32	-2.81 ***
Log (total assets) (*LTA*)	-0.02	-0.03	1.75	1.37	-0.75	-0.51
Intercept	19.31	2.52 **	-5.97	-0.48	46.78	2.96 ***
Overall R-squared	0.456		0.513		0.644	
Number of observations(Number of firms)	280(40)		252(36)		245(35)	

(5) Thailand

Dependent Variables	*ROA*		*ROE*		*PMA*	
	Coefficient	Z-Value	Coefficient	Z-Value	Coefficient	Z-Value
Ownership concentration (*VR*)	0.30	2.97 ***	0.21	0.64	0.09	0.70
*VR*D95*	-0.03	-0.61	-0.09	-0.47	-0.03	-0.40
*VR*D96*	-0.07	-1.52	-0.14	-0.71	-0.07	-0.97
*VR*D97*	-0.51	-10.82 ***	-0.46	-2.27 **	-0.16	-2.29 **
*VR*D98*	-0.10	-2.06 **	-0.19	-0.93	-0.33	-4.66 ***
*VR*D99*	-0.15	-3.21 ***	-0.68	-3.37 ***	-0.39	-5.44 ***
*VR*D00*	-0.13	-2.84 ***	-0.33	-1.64	-0.21	-2.93 ***
Log (total assets) (*LTA*)	0.59	0.56	-1.22	-0.35	-1.93	-1.22
Intercept	-14.99	-1.58	12.48	0.36	20.23	1.31
Overall R-squared	0.434		0.202		0.398	
Number of observations(Number of firms)	406(58)		427(61)		462(66)	

(Note 1), regression results of Industry dummies as explanatory variables have been omitted.
(Note 2), asterisks denote significance levels: * indicates significance at the 10%level, ** at the 5%level, *** at the 1%level.

Table 3 The Effect of Separation of voting rights and cash flow rights on Performance

(1) Indonesia

Dependent Variables	ROA		ROE		PMA	
	Coefficient	Z-Value	Coefficient	Z-Value	Coefficient	Z-Value
Separation of voting rights and cash flow rights (*DI*)	-0.09	-0.17	0.06	0.02	0.38	0.92
*DI*D95*	0.08	0.45	0.10	0.15	-0.00	-0.01
*DI*D96*	0.09	0.52	0.14	0.21	0.00	0.00
*DI*D97*	-0.29	-1.54	-0.63	-0.89	0.10	0.55
*DI*D98*	-0.47	-2.40 **	-1.51	-2.06 **	0.29	1.52
*DI*D99*	0.35	1.81 *	0.52	0.71	-0.01	-0.05
*DI*D00*	-0.12	-0.59	-0.77	-1.02	-0.03	-0.14
Log (total assets) (*LTA*)	-3.05	-1.77 *	-1.69	-0.23	-2.21	-1.37
Intercept	50.00	1.69 *	40.89	0.32	29.62	1.10
Overall R-squared	0.404		0.220		0.451	
Number of observations(Number of firms)	238(34)		182(26)		196(28)	

(2) Korea

Dependent Variables	ROA		ROE		PMA	
	Coefficient	Z-Value	Coefficient	Z-Value	Coefficient	Z-Value
Separation of voting rights and cash flow rights (*DI*)	0.32	0.90	0.46	0.25	2.82	0.53
*DI*D95*	-0.03	-0.26	-0.17	-0.17	-0.06	-0.53
*DI*D96*	-0.25	-1.85 *	-0.86	-0.88	-0.15	-1.27
*DI*D97*	-0.35	-2.51 **	-1.29	-1.28	-0.09	-0.68
*DI*D98*	-0.29	-2.01 **	-0.69	-0.68	-0.16	-1.10
*DI*D99*	-0.03	-0.23	-0.86	-0.84	-0.03	-0.24
*DI*D00*	-0.27	-1.80 *	-0.44	-0.42	-0.17	-1.17
Log (total assets) (*LTA*)	2.37	2.21 **	8.08	1.30	2.60	1.60
Intercept	-30.15	-1.79 *	-118.42	-1.23	-48.85	-0.75
Overall R-squared	0.152		0.115		0.387	
Number of observations(Number of firms)	189(27)		189(27)		161(23)	

(3) Malaysia

Dependent Variables	ROA		ROE		PMA	
	Coefficient	Z-Value	Coefficient	Z-Value	Coefficient	Z-Value
Separation of voting rights and cash flow rights (*DI*)	0.48	1.96 **	1.22	2.87 ***	0.12	0.10
*DI*D95*	-0.01	-0.11	0.05	0.17	0.11	0.51
*DI*D96*	0.01	0.05	0.01	0.03	0.06	0.28
*DI*D97*	-0.06	-0.62	-0.23	-0.76	0.05	0.20
*DI*D98*	-0.29	-2.68 ***	-0.82	-2.67 ***	-0.48	-2.07 **
*DI*D99*	-0.27	-2.48 **	-0.80	-2.59 ***	-0.59	-2.53 **
*DI*D00*	-0.19	-1.77 *	-0.16	-0.51	-0.72	-3.12 ***
Log (total assets) (*LTA*)	-0.35	-0.33	2.30	1.39	-0.00	-0.00
Intercept	2.42	0.21	-19.85	-1.63	6.91	0.15
Overall R-squared	0.414		0.280		0.537	
Number of observations(Number of firms)	182(26)		217(31)		210(30)	

(4) Philippines

Dependent Variables	ROA		ROE		PMA	
	Coefficient	Z-Value	Coefficient	Z-Value	Coefficient	Z-Value
Separation of voting rights and cash flow rights (*DI*)	0.04	0.14	0.62	0.72	2.49	2.46 **
*DI*D95*	-0.01	-0.07	-0.13	-0.25	-0.24	-0.47
*DI*D96*	0.18	1.05	-0.07	-0.13	-0.57	-1.05
*DI*D97*	-0.02	-0.13	-0.78	-1.40	-1.09	-1.82 *
*DI*D98*	-0.16	-0.81	-1.18	-2.06 **	-1.68	-2.63 ***
*DI*D99*	-0.46	-2.23 **	-1.22	-2.05 **	-2.19	-3.32 ***
*DI*D00*	-0.30	-1.32	-1.32	-2.05 **	-1.51	-2.06 **
Log (total assets) (*LTA*)	-2.29	-1.59	1.99	0.78	12.35	2.70 ***
Intercept	37.49	2.24 **	-9.91	-0.35	-110.02	-2.06 **
Overall R-squared	0.728		0.572		0.615	
Number of observations(Number of firms)	49(7)		42(6)		49(7)	

(5) Thailand

Dependent Variables	ROA		ROE		PMA	
	Coefficient	Z-Value	Coefficient	Z-Value	Coefficient	Z-Value
Separation of voting rights and cash flow rights (*DI*)	0.06	0.33	0.27	0.25	-0.00	-0.00
*DI*D95*	-0.06	-0.31	-0.30	-0.27	-0.20	-0.33
*DI*D96*	0.00	0.01	0.15	0.13	-0.36	-0.59
*DI*D97*	-0.36	-1.73 *	-0.54	-0.48	-0.56	-0.92
*DI*D98*	-0.16	-0.79	-0.07	-0.06	-0.75	-1.23
*DI*D99*	0.03	0.15	-0.55	-0.48	-0.67	-1.10
*DI*D00*	-0.06	-0.30	-0.43	-0.37	-0.28	-0.45
Log (total assets) (*LTA*)	-0.85	-0.67	-4.98	-0.74	-2.35	-0.53
Intercept	10.36	0.83	49.47	0.53	29.20	0.48
Overall R-squared	0.314		0.172		0.109	
Number of observations(Number of firms)	42(6)		56(8)		63(9)	

(Note 1), regression results of Industry dummies as explanatory variables have been omitted.
(Note 2), asterisks denote significance levels: * indicates significance at the 10%level. ** at the 5%level. *** at the 1%level.

Table 4 The Effect of Debt on Performance

(1) Indonesia

Panel A: *full sample firms*

Dependent Variables		*ROA*			*ROE*			*PMA*	
	Coefficient	Z-Value		Coefficient	Z-Value		Coefficient	Z-Value	
Debt ratio (DA_{-1})	-13,98	-3,03	***	11,23	0,57		-2,51	-0,46	
DA_{-1} *D95*	0,63	0,19		0,11	0,01		0,60	0,15	
DA_{-1} *D96*	-1,60	-0,48		-4,53	-0,34		-2,92	-0,72	
DA_{-1} *D97*	-14,17	-4,14	***	-31,13	-2,25	**	-3,34	-0,77	
DA_{-1} *D98*	-15,99	-4,77	***	-69,47	-5,09	***	-3,10	-0,72	
DA_{-1} *D99*	3,56	1,07		-2,09	-0,15		-5,71	-1,33	
DA_{-1} *D00*	-9,59	-2,83	***	-25,19	-1,81	*	-6,70	-1,53	
Log (total assets) (*LTA*)	0,42	0,50		2,79	0,84		0,43	0,35	
Intercept	15,08	1,30		-11,61	-0,23		2,50	0,56	
Overall R-squared		0,509			0,289			0,417	
Number of observations (Number of firms)		455(65)			385(55)			441(63)	

Panel B: *high debt ratio firms*

Dependent Variables		*ROA*			*ROE*			*PMA*	
	Coefficient	Z-Value		Coefficient	Z-Value		Coefficient	Z-Value	
Debt ratio (DA_{-1})	-1,83	-0,15		53,88	0,91		11,73	1,02	
DA_{-1} *D95*	0,56	0,09		3,21	0,11		2,64	0,44	
DA_{-1} *D96*	-1,31	-0,21		4,68	0,16		-3,30	-0,51	
DA_{-1} *D97*	-11,90	-1,73	*	-17,39	-0,61		-4,13	-0,54	
DA_{-1} *D98*	-21,44	-2,85	***	-100,21	-3,57	***	-0,76	-0,09	
DA_{-1} *D99*	-4,83	-0,64		11,19	0,40		-10,89	-1,27	
DA_{-1} *D00*	-12,06	-1,59		-24,88	-0,88		-9,19	-1,02	
Log (total assets) (*LTA*)	3,89	1,15		-8,45	-2,06	**	2,06	0,53	
Intercept	-38,58	-0,83		87,82	2,08	**	-22,00	-0,42	
Overall R-squared		0,382			0,335			0,493	
Number of observations (Number of firms)		91(13)			77(11)			84(12)	

Panel C: *low debt ratio firms*

Dependent Variables		*ROA*			*ROE*			*PMA*	
	Coefficient	Z-Value		Coefficient	Z-Value		Coefficient	Z-Value	
Debt ratio (DA_{-1})	-17,18	-1,28		-11,71	-0,47		-15,25	-0,62	
DA_{-1} *D95*	-3,07	-0,27		-20,03	-0,65		-1,87	-0,07	
DA_{-1} *D96*	-2,82	-0,27		-15,82	-0,59		0,48	0,02	
DA_{-1} *D97*	-13,75	-1,28		-53,51	-1,83	*	-14,85	-0,55	
DA_{-1} *D98*	-6,20	-0,61		-32,75	-1,30		-23,99	-1,03	
DA_{-1} *D99*	10,91	1,06		-18,390	-0,76		13,84	0,60	
DA_{-1} *D00*	-3,45	-0,33		-53,03	-2,10	**	7,16	0,31	
Log (total assets) (*LTA*)	-1,52	-1,64	*	9,67	1,58		2,59	0,42	
Intercept	33,03	2,76	***	-110,95	-1,19		-6,40	-0,07	
Overall R-squared		0,275			0,520			0,388	
Number of observations (Number of firms)		91(13)			77(11)			84(12)	

Note 1: Results regarding industry dummies as explanatory variables have been omitted.

Note 2: A+A1sterisks denote significance levels: * indicates significance at the 10% level, ** at the 5% level, *** at the 1% level.

Table 4 The effect of Debt on Performance (*continued*)

(2) Korea												
Panel A: *full sample firms*												
Dependent Variables		*ROA*				*ROE*				*PMA*		
	Coefficient		Z-Value		Coefficient		Z-Value		Coefficient		Z-Value	
Debt ratio (DA_{-1})	-2,69		-1,46		18,12		1,11		0,01		0,01	
DA_{-1} **D95*	-0,16		-0,17		-2,02		-0,24		-1,62		-1,54	
DA_{-1} **D96*	-2,73		-2,95	***	-11,03		-1,32		-2,94		-2,79	***
DA_{-1} **D97*	-3,84		-4,16	***	-17,07		-2,05	**	-2,82		-2,66	***
DA_{-1} **D98*	-5,04		-5,54	***	-29,04		-3,55	***	-6,24		-5,95	***
DA_{-1} **D99*	-2,08		-2,26	**	-22,70		-2,73	***	-2,90		-2,75	***
DA_{-1} **D00*	-3,51		-3,72	***	-22,85		-2,68	***	-4,59		-4,29	***
Log (total assets) (*LTA*)	0,91		3,82	***	1,23		0,62		1,38		4,25	***
Intercept	-3,67		-0,87		-24,51		-0,71		-6,86		-1,23	
Overall R-squared		0,221				0,116				0,330		
Number of observations(Number of firms)		931(133)				973(139)				889(127)		
Panel B: *high debt ratio firms*												
Dependent Variables		*ROA*				*ROE*				*PMA*		
	Coefficient		Z-Value		Coefficient		Z-Value		Coefficient		Z-Value	
Debt ratio (DA_{-1})	0,03		0,01		120,97		1,31		18,40		2,42	**
DA_{-1} **D95*	0,32		0,22		-2,16		-0,09		-3,59		-1,25	
DA_{-1} **D96*	-0,49		-0,34		-8,33		-0,35		-3,81		-1,31	
DA_{-1} **D97*	-1,99		-1,37		-20,23		-0,84		-7,80		-2,64	***
DA_{-1} **D98*	-6,33		-4,37	***	-57,98		-2,39	**	-15,56		-5,35	***
DA_{-1} **D99*	-4,36		-3,01	***	-37,74		-1,58		-7,62		-2,61	***
DA_{-1} **D00*	-3,62		-2,51	**	-53,92		-2,24	**	-6,92		-2,38	**
Log(total assets) (*LTA*)	0,38		0,69		0,22		0,02		2,80		2,21	**
Intercept	1,51		0,17		-89,53		-0,60		-40,22		-2,04	
Overall R-squared		0,428				0,177				0,356		
Number of observations(Number of firms)		182(26)				189(27)				175(25)		
Panel C: *low debt ratio firms*												
Dependent Variables		*ROA*				*ROE*				*PMA*		
	Coefficient		Z-Value		Coefficient		Z-Value		Coefficient		Z-Value	
Debt ratio (DA_{-1})	-10,22		-1,86	*	-31,64		-1,49		-4,70		-0,92	
DA_{-1} **D95*	-0,34		-0,11		-5,98		-0,39		-1,86		-0,60	
DA_{-1} **D96*	-5,08		-1,54		-18,86		-1,24		-5,49		-1,72	*
DA_{-1} **D97*	-7,03		-2,11	**	-24,36		-1,62		-3,56		-1,12	
DA_{-1} **D98*	-6,54		-2,04	**	-22,39		-1,57		-3,89		-1,26	
DA_{-1} **D99*	-3,57		-1,07		-36,15		-2,51	**	-3,79		-1,19	
DA_{-1} **D00*	-0,16		-0,05		-9,05		-0,63		-14,59		-4,60	***
Log(total assets) (*LTA*)	0,53		0,50		6,30		4,09	***	2,23		2,76	***
Intercept	2,72		0,14		-57,93		-2,51	**	-16,19		-1,07	
Overall R-squared		0,235				0,148				0,475		
Number of observations(Number of firms)		182(26)				189(27)				175(25)		
(Note 1), regression results of Industry dummies as explanatory variables have been omitted.												
(Note 2), asterisks denote significance levels: * indicates significance at the 10% level, ** at the 5% level, *** at the 1% level.												

Table 4 The Effect of Debt on Performance (*continued*)

(3) Malaysia

Panel A: *full sample firms*

Dependent Variables		*ROA*			*ROE*			*PMA*		
	Coefficient		Z-Value	Coefficient		Z-Value		Coefficient		Z-Value	
Debt ratio (DA_{-1})	-0,44		-0,25	10,31		2,41	**	-6,13		-1,65	*
DA_{-1} **D95*	-1,42		-1,05	-0,30		-0,09		0,45		0,17	
DA_{-1} **D96*	-2,13		-1,54	-5,22		-1,48		-1,39		-0,51	
DA_{-1} **D97*	-6,78		-4,86	***	-16,71		-4,76	***	-4,52		-1,62	
DA_{-1} **D98*	-13,82		-9,99	***	-35,09		-10,09	***	-17,74		-6,44	***
DA_{-1} **D99*	-11,09		-8,17	***	-28,52		-8,29	***	-19,94		-7,36	***
DA_{-1} **D00*	-10,34		-7,65	***	-24,63		-7,17	***	-15,23		-5,61	***
Log (total assets) (*LTA*)	0,16		0,49	1,64		2,44	**	2,61		3,15	***
Intercept	2,25		0,77	0,72		0,11		-0,93		-0,10	
Overall R-squared		0,434			0,348				0,439		
Number of observations (Number of firms)		1099(157)			1148(164)				1127(161)		

Panel B: *high debt ratio firms*

Dependent Variables		*ROA*			*ROE*			*PMA*		
	Coefficient		Z-Value	Coefficient		Z-Value		Coefficient		Z-Value	
Debt ratio (DA_{-1})	-2,54		-0,65	14,25		1,20		-3,14		-0,37	
DA_{-1} **D95*	-0,13		-0,07	-1,55		-0,27		0,76		0,19	
DA_{-1} **D96*	-1,56		-0,77	-6,42		-1,08		-1,13		-0,27	
DA_{-1} **D97*	-2,15		-1,03	-13,06		-2,13	**	-5,33		-1,25	
DA_{-1} **D98*	-6,70		-3,21	***	-30,75		-5,01	***	-16,48		-3,87	***
DA_{-1} **D99*	-7,34		-3,52	***	-31,17		-5,06	***	-25,84		-6,05	***
DA_{-1} **D00*	-4,88		-2,37	**	-21,59		-3,56	***	-13,65		-3,19	***
Log (total assets) (*LTA*)	0,19		0,32	3,36		1,82	*	5,29		4,16	***
Intercept	7,28		1,17	-17,12		-1,03		-25,05		-2,11	
Overall R-squared		0,293			0,417				0,465		
Number of observations A1(Number of firms)		217(31)			224(32)				224(32)		

Panel C: *low debt ratio firms*

Dependent Variables		*ROA*			*ROE*			*PMA*		
	Coefficient		Z-Value	Coefficient		Z-Value		Coefficient		Z-Value	
Debt ratio (DA_{-1})	5,67		1,20	23,13		1,64		2,48		0,21	
DA_{-1} **D95*	-2,14		-0,42	-1,18		-0,07		5,23		0,44	
DA_{-1} **D96*	-4,91		-0,96	-3,41		-0,18		3,02		0,26	
DA_{-1} **D97*	-8,89		-1,16	-25,14		-1,07		3,64		0,26	
DA_{-1} **D98*	-23,13		-3,99	***	-52,12		-3,04	***	-2,11		-0,18	
DA_{-1} **D99*	-14,71		-2,79	***	-42,51		-2,72	***	-8,19		-0,75	
DA_{-1} **D00*	-27,17		-5,14	***	-13,59		-0,91	**	-30,61		-2,79	***
Log (total assets) (*LTA*)	2,05		2,99	***	4,38		2,63	***	0,29		0,17	
Intercept	-0,50		-0,19	-26,00		-1,72	*	11,84		0,99	
Overall R-squared		0,394			0,203				0,525		
Number of observations (Number of firms)		217(31)			224(32)				224(32)		

Note 1: Results regarding industry dummies as explanatory variables have been omitted.

Note 2: Asterisks denote significance levels: * indicates significance at the 10% level, ** at the 5% level, *** at the 1% level.

Table 4 The Effect of Debt on Performance (*continued*)

(4) Philippines												
Panel A: *full sample firms*												
Dependent Variables		*ROA*				*ROE*				*PMA*		
	Coefficient		Z-Value		Coefficient		Z-Value		Coefficient		Z-Value	
Debt ratio (DA_{-1})	9,62		2,59	***	39,66		5,79	***	9,96		1,16	
DA_{-1} **D95*	-2,17		-0,89		-9,91		-2,10	**	-0,04		-0,01	
DA_{-1} **D96*	-2,86		-1,17		-12,40		-2,65	***	-2,06		-0,47	
DA_{-1} **D97*	-5,63		-2,28	**	-24,11		-5,18	***	-4,32		-0,95	
DA_{-1} **D98*	-8,42		-3,50	***	-27,80		-6,08	***	-17,45		-3,95	***
DA_{-1} **D99*	-11,19		-4,61	***	-32,81		-7,12	***	-21,17		-4,74	***
DA_{-1} **D00*	-9,24		-3,85	***	-28,04		-6,19	***	-15,34		-3,39	***
Log (total assets) (*LTA*)	-0,04		-0,06		1,06		1,02		1,22		0,91	
Intercept	1,81		0,41		-2,50		-0,32		19,93		1,79	*
Overall R-squared		0,410				0,533				0,616		
Number of observations (Number of firms)		322(46)				280(40)				252(36)		
Panel B: *high debt ratio firms*												
Dependent Variables		*ROA*				*ROE*				*PMA*		
	Coefficient		Z-Value		Coefficient		Z-Value		Coefficient		Z-Value	
Debt ratio (DA_{-1})	-22,54		-4,67	***	32,15		0,69		-135,27		-1,83	*
DA_{-1} **D95*	-0,61		-0,75		-9,07		-2,44	**	-1,68		-0,29	
DA_{-1} **D96*	0,03		0,03		-7,54		-2,00	**	-0,55		-0,10	
DA_{-1} **D97*	-1,25		-1,49		-18,86		-4,92	***	-3,79		-0,65	
DA_{-1} **D98*	-2,37		-2,86	***	-20,43		-5,38	***	-16,76		-2,89	***
DA_{-1} **D99*	-3,89		-4,60	***	-25,24		-6,41	***	-20,05		-3,38	***
DA_{-1} **D00*	-3,03		-3,58	***	-20,62		-5,21	***	-11,59		-1,95	*
Log (total assets) (*LTA*)	-0,22		-1,01		0,84		0,74		-1,32		-0,79	
Intercept	25,55		6,91	***	-13,27		-0,30		139,79		1,95	*
Overall R-squared		0,596				0,726				0,660		
Number of observations (Number of firms)		63(9)				56(8)				49(7)		
Panel C: *low debt ratio firms*												
Dependent Variables		*ROA*				*ROE*				*PMA*		
	Coefficient		Z-Value		Coefficient		Z-Value		Coefficient		Z-Value	
Debt ratio (DA_{-1})	-3,38		-0,35		22,58		1,04		8,57		0,34	
DA_{-1} **D95*	2,54		0,17		14,48		0,53		-7,83		-0,28	
DA_{-1} **D96*	13,47		0,93		48,43		1,74		-32,65		-1,33	
DA_{-1} **D97*	16,45		0,72		52,52		1,30		-54,56		-1,73	*
DA_{-1} **D98*	3,66		0,26		15,65		0,61		-74,63		-2,95	***
DA_{-1} **D99*	4,00		0,36		8,83		0,38		-35,91		-1,59	
DA_{-1} **D00*	12,03		1,26		23,87		1,12		-15,81		-0,72	
Log (total assets) (*LTA*)	-2,66		-2,38	**	-3,47		-1,76	*	1,88		1,04	
Intercept	19,02		2,53	**	24,75		1,84	*	-1,35		-0,08	
Overall R-squared		0,647				0,595				0,246		
Number of observations (Number of firms)		63(9)				56(8)				49(7)		
Note 1: Results regarding industry dummies as explanatory variables have been omitted.												
Note 2: Asterisks denote significance levels: * indicates significance at the 10% level, ** at the 5% level, *** at the 1% level.												

Table 4 The effect of Debt on Performance (*continued*)

(5) Thailand												
Panel A: *full sample firms*												
Dependent Variables		*ROA*				*ROE*				*PMA*		
	Coefficient		Z-Value		Coefficient		Z-Value		Coefficient		Z-Value	
Debt ratio (DA_{-1})	6,36		2,78	***	54,17		4,94	***	17,70		4,63	***
DA_{-1} *D95	-1,32		-0,75		-9,14		-1,08		-2,41		-0,94	
DA_{-1} *D96	-4,72		-2,73	***	-18,50		-2,22	**	-7,19		-2,84	***
DA_{-1} *D97	-31,92		-18,50	***	-37,13		-4,47	***	-15,99		-6,31	***
DA_{-1} *D98	-4,71		-2,88	***	-41,15		-5,22	***	-22,27		-9,14	***
DA_{-1} *D99	-10,04		-6,08	***	-44,21		-5,55	***	-25,30		-10,40	***
DA_{-1} *D00	-7,86		-4,72	***	-37,93		-4,73	***	-17,52		-7,16	***
Log (total assets) (*LTA*)	0,87		1,86	*	2,45		1,21		1,77		1,86	*
Intercept	-2,39		-0,65		-22,22		-1,37		-4,61		-0,61	
Overall R-squared		0,478				0,226				0,408		
Number of observations(Number of firms)		1008(144)				1043(149)				1064(152)		
Panel B: *high debt ratio firms*												
Dependent Variables		*ROA*				*ROE*				*PMA*		
	Coefficient		Z-Value		Coefficient		Z-Value		Coefficient		Z-Value	
Debt ratio (DA_{-1})	9,41		1,41		116,03		3,06	***	29,44		2,66	***
DA_{-1} *D95	-0,99		-0,26		-5,24		-0,26		-3,97		-0,57	
DA_{-1} *D96	-1,96		-0,52		-13,39		-0,67		-7,11		-1,03	
DA_{-1} *D97	-29,70		-7,97	***	-36,23		-1,81	*	-19,50		-2,85	***
DA_{-1} *D98	-5,09		-1,35		-89,29		-4,50	***	-33,54		-5,00	***
DA_{-1} *D99	-8,86		-2,37	**	-53,20		-2,70	***	-42,99		-6,39	***
DA_{-1} *D00	-8,08		-2,17	**	-35,54		-1,80	*	-22,95		-3,40	***
Log(total assets) (*LTA*)	-0,43		-1,02		-6,00		-3,02	***	-1,66		-2,44	**
Intercept	3,57		0,68		-8,27		-0,31		7,10		0,77	
Overall R-squared		0,354				0,150				0,272		
Number of observations(Number of firms)		196(28)				203(29)				210(30)		
Panel C: *low debt ratio firms*												
Dependent Variables		*ROA*				*ROE*				*PMA*		
	Coefficient		Z-Value		Coefficient		Z-Value		Coefficient		Z-Value	
Debt ratio (DA_{-1})	18,41		3,45	***	26,50		1,71	*	25,53		2,59	***
DA_{-1} *D95	-4,12		-0,82		-10,37		-0,72		-5,15		-0,66	
DA_{-1} *D96	-13,00		-2,69	***	-22,04		-1,58		-16,72		-2,24	**
DA_{-1} *D97	-40,33		-7,91	***	-50,50		-3,34	***	-27,00		-3,44	***
DA_{-1} *D98	-15,33		-3,22	***	-60,02		-4,35	***	-37,57		-5,21	***
DA_{-1} *D99	-19,43		-3,79	***	-58,93		-4,00	***	-37,13		-4,96	***
DA_{-1} *D00	-14,29		-2,85	***	-46,83		-3,23	***	-26,96		-3,59	***
Log(total assets) (*LTA*)	3,24		3,15	***	-1,03		-0,35		2,03		0,96	
Intercept	-24,30		-2,42	**	20,29		0,70		-3,60		-0,28	
Overall R-squared		0,577				0,490				0,441		
Number of observations(Number of firms)		196(28)				203(29)				210(30)		

(Note 1), regression results of Industry dummies as explanatory variables have been omitted.

(Note 2), asterisks denote significance levels: * indicates significance at the 10% level, ** at the 5% level, *** at the 1% level.

Table 5 The effect of Diversification on Performance

(1) Indonesia												
Dependent Variables		*ROA*				*ROE*				*PMA*		
	Coefficient		Z-Value		Coefficient		Z-Value		Coefficient		Z-Value	
Number of segment (*NS*)	-0,20		-0,25		0,01		0,20		1,23		1,50	
*NS*D95*	0,05		0,10		-0.00		-0,08		-0,01		-0,02	
*NS*D96*	-0,30		-0,61		-0.00		-0,25		-0,29		-0,64	
*NS*D97*	-2,15		-4.22	***	-0,03		-1.65	*	-0,26		-0,51	
*NS*D98*	-1,87		-3.58	***	-0,06		-2.98	***	-0,06		-0,12	
*NS*D99*	0,17		0,34		-0.00		-0,04		-0,90		-1.74	*
*NS*D00*	-1,86		-3.55	***	-0,03		-1,21		-0,96		-1.81	*
Log (total assets) (*LTA*)	-1,38		-1,49		-0,01		-0,19		-1,02		-0,89	
Intercept	31,99		1,97	**	0,46		0,77		22,26		1,36	
Overall R-squared		0,388				0,186				0,400		
Number of observations(Number of firms)		511(73)				399(57)				483(69)		
(2) Korea												
Dependent Variables		*ROA*				*ROE*				*PMA*		
	Coefficient		Z-Value		Coefficient		Z-Value		Coefficient		Z-Value	
Number of segment (*NS*)	0,39		1,36		0,01		0,53		0,21		0,64	
*NS*D95*	-0,03		-0,16		-0.00		-0,20		-0,24		-1,13	
*NS*D96*	-0,43		-2.56	***	-0,02		-1,06		-0,51		-2.36	**
*NS*D97*	-0,75		-4.36	***	-0,03		-1.72	*	-0,61		-2.76	***
*NS*D98*	-0,91		-5.30	***	-0,05		-3.15	***	-1,62		-7.39	***
*NS*D99*	-0,27		-1,57		-0,01		-0,96		-0,61		-2.77	***
*NS*D00*	-0,71		-4.09	***	-0,04		-2.47	**	-0,52		-2.37	**
Log (total assets) (*LTA*)	1,16		4.02	***	0,01		0,28		1,26		3.81	***
Intercept	-11,43		-2,29	**	-0,07		-0,22		-6,37		-1,08	
Overall R-squared		0,196				0,103				0,279		
Number of observations(Number of firms)		952(136)				1008(144)				1141(163)		
(3) Malaysia												
Dependent Variables		*ROA*				*ROE*				*PMA*		
	Coefficient		Z-Value		Coefficient		Z-Value		Coefficient		Z-Value	
Number of segment (*NS*)	0,17		0,62		0,01		1,24		-0,82		-1,10	
*NS*D95*	-0,15		-1,32		0,00		0,23		-0,08		-0,35	
*NS*D96*	-0,26		-2.22	**	-0.00		-1,14		-0,30		-1,31	
*NS*D97*	-0,72		-5.86	***	-0,01		-4.05	***	-0,75		-3.12	***
*NS*D98*	-1,41		-11.43	***	-0,03		-8.90	***	-2,01		-8.30	***
*NS*D99*	-1,21		-9.86	***	-0,02		-6.76	***	-2,17		-9.03	***
*NS*D00*	-1,25		-10.20	***	-0,02		-7.46	***	-2,17		-9.03	***
Log (total assets) (*LTA*)	0,58		1,41		0,02		2.04	**	3,61		4.38	***
Intercept	2,39		0,66		0,01		0,11		-4,30		-0,45	
Overall R-squared		0,437				0,321				0,406		
Number of observations(Number of firms)		1106(158)				1155(165)				1246(178)		
(4) Philippines												
Dependent Variables		*ROA*				*ROE*				*PMA*		
	Coefficient		Z-Value		Coefficient		Z-Value		Coefficient		Z-Value	
Number of segment (*NS*)	1,43		2.10	**	0,03		2.21	**	3,24		1,42	
*NS*D95*	-0,43		-1,50		-0,01		-2.19	**	0,16		0,27	
*NS*D96*	-0,57		-1.93	*	-0,02		-2.77	***	-0,31		-0,51	
*NS*D97*	-1,01		-3.33	***	-0,03		-4.74	***	-0,48		-0,74	
*NS*D98*	-1,31		-4.28	***	-0,03		-4.81	***	-1,76		-2.70	***
*NS*D99*	-1,70		-5.51	***	-0,04		-5.64	***	-2,07		-3.14	***
*NS*D00*	-1,67		-5.39	***	-0,03		-5.25	***	-1,60		-2.36	**
Log (total assets) (*LTA*)	0,18		0,27		0,02		1,28		-0,55		-0,36	
Intercept	-1,37		-0,22		-0,05		-0,50		26,97		1,61	
Overall R-squared		0,447				0,476				0,656		
Number of observations(Number of firms)		322(46)				280(40)				280(40)		
(5) Thailand												
Dependent Variables		*ROA*				*ROE*				*PMA*		
	Coefficient		Z-Value		Coefficient		Z-Value		Coefficient		Z-Value	
Number of segment (*NS*)	1,39		3.13	***	0,06		3.28	***	0,91		1,24	
*NS*D95*	-0,24		-0,79		-0,01		-0,92		-0,32		-0,69	
*NS*D96*	-0,68		-2.27	**	-0,02		-1,53		-0,87		-1.87	*
*NS*D97*	-4,66		-15.50	***	-0,05		-3.22	***	-2,15		-4.60	***
*NS*D98*	-0,83		-2.79	***	-0,03		-2.10	**	-2,78		-6.00	***
*NS*D99*	-1,49		-4.99	***	-0,02		-1,58		-2,71		-5.85	***
*NS*D00*	-1,09		-3.67	***	-0,04		-2.97	***	-2,10		-4.54	***
Log (total assets) (*LTA*)	0,32		0,51		0,01		0,52		0,74		0,78	
Intercept	2,04		0,33		-0,06		-0,35		5,29		0,73	
Overall R-squared		0,404				0,195				0,367		
Number of observations(Number of firms)		1050(150)				1057(151)				1148(164)		
(Note 1), regression results of Industry dummies as explanatory variables have been omitted.												
(Note 2), asterisks denote significance levels: * indicates significance at the 10% level, ** at the 5% level, *** at the 1% level.												

Endnotes

1. Refer to World Bank (1993). Regarding the reconsideration after the crisis, refer to Stiglitz, Yusuf (eds.) (2001).

2 .Refer to Corsetti, Pesenti and Roubini (1999) and Stiglitz(2000) for details.

3. For example, a model based on fundamentals (the first generation model) presented by Krugman (1979); a self-fulfilling speculative attacks model based on expectations of the private sector (the second generation model) by Obstfeld(1994); a crisis model by Goldfajn and Valdes (1997) analyzing the fragility of the banking sector as the cause of crisis (the third generation model).

4. They show that crisis management can, in principle, avert collapse in two ways: through forced debt rollovers in the short run; and ultimately through debt write-downs.

5. We also try to calculate deviation of performance indices including the unusual values from 1989 to 2000 and from 1994 to 2000 respectively. The results are qualitatively similar to those in Table 1. For simplicity, we only report results without unusual value.

6. Our database ends up having 564 companies for *ROA*, 558 companies for *ROE*, and 615 companies for *PMA* with a total of 2,014 companies in the 5 countries covered by Worldscope. Broken down by economies, the sample covers 73 of 220 Indonesian companies, 136 of 775 Korean companies, 159 of 541 Malaysian companies, 46 of 188 Philippine companies, and 150 of 290 Thai companies for *ROA*; 57 of 220 Indonesian companies, 144 of 775 Korean companies, 166 of 541 Ma-

laysian companies, 40 of 188 Philippine companies, and 151 of 290 Thai companies for *ROE*; and 69 of 220 Indonesian companies, 164 of 775 Korean companies, 178 of 541 Malaysian companies, 40 of 188 Philippine companies, and 164 of 290 Thai companies for *PMA*. Worldscope covers most of the listed companies in each country, providing, for example, the financial information for 750 of the total 857 Korean listed companies in 2003.

7. The calculation is based on a fixed cutoff of 10% ownership requirement. The calculation provides similar results even with a cutoff of 20%.

8. See Jensen and Meckling (1976).

9. There are several ways in which controlling shareholders might gain enough power to pursue objectives that may not coincide with the profit of the firm, at the expense of minority shareholders. They might use their control to link the business to other affiliated firms in which they hold shares. When the manager of the firm is a member of the controlling shareholders' family, the controlling shareholders might cause the firm's profits to be used inefficiently to enhance the manager's interest. Alternatively, they might purchase shares in troubled affiliated firms at artificially high prices as a form of bailout. Johnson, La Porta, Lopez-de-Silanes and Shleifer (2000) define as "tunneling" the actions of controlling shareholders to use their control to transfer resources away from the firm, and indicate that these actions have been carried out legally as well as illegally. Moreover, La Porta, Lopez-de-Silanes, Shleifer and Vishny (2000), as well as Faccio, Lang and Young (2001), study the relationship between expropriation and dividends, and provide an empirical analysis on whether dividends are raised when minority shareholders have adequate institutional protection.

10. Wiwattanakantang (2001), Khanthavit, Plsiri and Wiwattanakantang (2002) provide a detailed analysis on Thailand.

11. See Obata (2001) for examples of group firms with a pyramid structure in East Asia.

12. The study by La Porta, Lopez-de-Silanes and Shleifer (1999) is the first to look at ultimate ownership structure in many firms throughout the world.

13. We also performed the Hausman test (Hausman 1978) against each model for Hypothesis 3, 4 and 5, and could not reject the null hypothesis in all cases except for the specifications where dependent variables are *ROE* in Indonesia, *ROA* and *ROE* in Korea, *ROA* in Malaysia, *ROA*, *ROE* and *PMA* in the Philippines, and *ROE* in Thailand for Hypothesis 3; and for the specifications where dependent variables are *ROE* in Indonesia, *ROA* and *ROE* in Korea, and *ROE* in Thailand for Hypothesis 5.

14. From formula (1), it is obvious that b_0 is the coefficient on *CG* for 1994, b_1 is the difference between the same coefficient for 1994 and 1995, b_2 is the difference between the same coefficient for 1994 and 1996…and b_6 is the difference between the same coefficient for 1994 and 2000.

15. Our result is consistent with that of Obata (2001), who focuses on the relationship between firm value and the separation of cash flow rights and voting rights, and presents that the negative effect of the separation on firm value is predominant during the financial crisis, although it cannot be observed in normal times.

16. The debt ratios of East Asian firms are not particularly high compared with the average debt ratio for listed firms in Japan in 1996 (72.1%) as reported by the financial data bank of the *Japan Policy and Investment Bank*.

17. See Myers (1977), Myers and Majluf (1984).

18. The average debt ratios for *low debt ratio firms* and *high debt ratio firms* in each country at the end of 1996 are as following:

	high debt ratio firms	*low debt ratio firms*
Indonesia	74.5%	22.6%
Korea	93.9%	52.4%
Malaysia	76.3%	13.4%
The Philippines	81.9%	4.9%
Thailand	83.6%	28.7%

19. Among the three performance indices, ROE is directly influenced by debt level because of the inclusion of after-tax profit in its numerator. ROA and PMA, however, are not directly influenced by debt level because they encompass before-tax profit in their numerators.

20. See Laeven (2001), La Porta, Lopez-de-Silanes and Zamarripa (2002) and Wiwattanakantang, Kali and Charumillind (2002) about the moral hazard problem caused by crony lending.

21. See Berger and Ofek (1995), Lang and Stulz (1994), Comment and Jarrell (1995), Servaes (1996), Denis, Denis and Sarin (1997), Shin and Stulz (1998), Denis, Denis and Yost (2002), and Mansi and Reeb (2002).

22. Claessens, Djankov, Fan and Lang (2001), and Mitton (2001) study diversification in East Asian firms and show that diversified firms perform worse than other firms owing to inefficiency caused by diversification. However, Khanna and Palepu (2000) show that affiliates of diversified business groups outperform unaffiliated firms in India.

23. See Krugman (1998).

24. In a similar vein, Fan and Wong (2000) analyze the effect on corporate performance of the outside auditing systems that are a part of corporate governance.

OWNERSHIP STRUCTURE AND EXPROPRIATION IN STOCK EXCHANGE LISTED FIRMS

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Abstract

This paper analyses firms' ownership structure and corporate governance in seven countries, with an emphasis on stock exchange listed firms. This focus is, in our view, important because these firms are more representative of the economies of countries included in our sample. Our results indicate that in Canada, Europe and East-Asia, ownership structure is highly concentrated. Most of the firms are controlled by at least one large shareholder who reinforces his or her control with devices such as multiple voting right shares, pyramidal structures, cross ownership, and reciprocal holding. In the U.S., firms' ownership structure is more diffuse. The use of means to separate ownership from control is less present and the control of the large shareholder is lower than in the other sample countries. Being listed on the stock exchange can explain the firm's ownership structure. Exchange-listed firms, which are generally larger in size than unlisted firms, tend to have more diffused ownership. Further, the legal system hypothesis formulated by La Porta, Lopez-De-Silanes, Shleifer & Vishny (1998) does not hold for the countries we analysed.

Keywords: Ownership Structure, Governance, Stock Exchanges, International Comparison

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Introduction

Since Berle & Mean's research (1932), studies of firms' ownership structure has always garnered attention in the literature on finance. Through their analyses, researchers sought to know not only how firms' ownership structure was organized around the world, but what could explain different ownership structures in various countries. The general trend suggests that while U.S. firms' ownership structure is diffuse, in other countries it varies and is concentrated. While several studies have been realized on the topic, there is still room for further analyses.

The goal of this paper is to shed light on ownership structure and corporate governance by focusing on stock exchange listed firms in our view. This focus is necessary and important, for, to our knowledge, such a study has not been done before. Previous research usually has randomly selected samples in the countries analyzed, with the result that these samples where not necessarily representative of countries' economies. Conversely, stock exchanges are usually composed so as to include firms from various industries that are the most representative firms in the economy. Therefore, our exchange listed firms which highly characterize the economies of the countries included in the sample.

Our results indicate that in Canada, Europe, and East-Asia, ownership structure is highly concentrated. Most of the firms are controlled by at least one large shareholder who reinforces his or her control with devices such as multiple voting right shares, pyramidal structures, cross- ownership, and reciprocal holdings. In the U.S., ownership structure is more diffuse. The various means of separating ownership from control is less present, and control over the large shareholder is lower than in the other sample countries. There is however a large percentage of firms managed by a family member. In this country, agency problems likely stem from shareholder-management conflicts. In East-Asia and France, agency problems mainly come from conflicts opposing the large shareholder to minority shareholders, since diffuse-owned firms are less present. Most of the firms are controlled by families who appoint one of their members as management. German and Japanese firms are usually controlled by widely-held financial institutions that are able to monitor man-

agement decisions. Furthermore, the legal system hypothesis formulated by La Porta, Lopez-De-Silanes, Shleifer & Vishny (1998) does not hold for the countries analysed in this study.

The paper will proceed as follows: section 2 is a review of the literature written on the subject, section 3 presents our data, section 4 reports and discusses our results and Section 5 presents our conclusions of the study.

2. Literature review

2.1. Ownership Diffusion and Shareholder – Manager Agency Costs

Agency cost theories assume that the separation of ownership and control induces an agency problem between shareholders and managers. Although shareholders have the ultimate control rights through their votes, they are too small and too numerous to exercise this control on a day-to-day basis. They are also not usually qualified or informed enough to decide what to do. They therefore hire managers to whom they delegate the day-to-day decisions of the firm. The second issue related to a dispersed ownership is that individually, shareholders have little incentive to monitor management (Hart, 1995). Monitoring is a public good, and when one shareholder's monitoring improves company performance, all shareholders benefit. Since monitoring is costly, each shareholder free-rides in the hope that others will do the monitoring. Consequently, managers end up with substantial residual control rights over firm decisions and lack monitoring. They therefore have discretion to pursue their own interest at the expense of that of shareholders. They can, for instance, undertake projects which do not necessarily contribute to shareholders wealth maximization but from which they nonetheless derive personal benefit.[1]

2.2. Ownership Concentration as a Solution to the Shareholder – Manager Agency Problem

Several authors have argued that the presence of a large shareholder in the firm's ownership structure whose wealth greatly depends on firm performance is an effective means of controlling managers' actions. With a great proportion of his or her wealth invested in the firm, he or she is more motivated to control managers' actions and prevent opportunistic behavior. Shleifer & Vishny (1986) develop a model explaining the role played by large shareholders in a firm, arguing that they can effectively increase managers' efficiency through three mechanisms; first, they can make a public offer, take control of the firm, and replace inefficient managers; second, they can help outside investors take control of the firm and replace inefficient managers; Third, they can advise management on strategies that improve efficiency and increase firm value. Tosi & Gomez-Mejia (1994) show that in firms with large shareholders, the level of management control is high, and management decisions are more aligned to those of shareholders. Zeckhauser & Pound (1990) reach the same conclusion. According to them, firms with a large shareholder perform better than other firms when control of the large shareholder on managers' decisions is effective. Monitoring managers can be even more effective when the large shareholder is an institutional investor (Schleifer & Vishny, 1986). Compared to other investors, institutional investors have better expertise and can monitor managers at lower cost. This results in a positive relation between the firm value and institutional investors' percentage of firm capital. Barclay & Holderness (1990) find a positive abnormal return around announcements of acquisition of large block of share by external investors. McConnel & Servaes (1990) report a concave relation between firm value and large ownership which indicates that all agency problems are not necessarily solved by ownership concentration. However, La Porta, Lopez-De-Silanes & Schleifer (1999), and Facio & Lang (2000) among others, show that in firms with concentrated ownership, agency costs are not eliminated, they oppose the large shareholder to minority shareholders rather than shareholders to managers.

2.3. Ownership Concentration and Large Versus Minority Shareholders Agency Costs

The largest shareholder can inflict several costs on minority shareholders. He or she may put forward his or her own interests (which generally do not coincide with those of minority shareholders), and subsequently derive private benefits from control over firm decisions. Several techniques can be used to separate the firm's ownership from its control and increase the likelihood of minority shareholders' expropriation. Among these are:

Stock with multiple voting rights: These stocks confer more than one voting right to their owner, and are considered a means to separate ownership from control since they allow their owner to have more control over the firm's decisions than their percentage of the firm's share. Let us consider a shareholder who holds 60 shares (with 10 voting rights each) on a total of 100 in this category, and 10 shares (with 1 voting right each) on a total of 100 in this second category. His or her ownership percentage of the firm is 35% [(60+10)/(100+100], while the voting right percentage is 55.45% [(60*10 + 10*1)/(100*10 + 100*1)]. He or she then controls the firm's decisions even thought he or she does not own the majority of the firm's shares (more then 50%). Stocks with

[1] Private benefits represent perquisites of control and diversion of resources from security holders, which benefit only company insiders, such as the large shareholder or other block holders.

multiple voting rights are usually sold at premium. According to Zingales (1995) and Nenova (1999), this is evidence of the presence of private benefits enjoyed by owners at the expense of minority shareholders.

Pyramidal structure: A pyramidal structure allows a shareholder to have voting rights in a firm without necessarily holding its shares: control is practiced through another firm. If, for instance, a family directly controls 50% of firm X which in turn controls 20% of firm Y, the family will then have 20% of firm Y's voting rights [Min (50%, 20%)] and 10% of its ownership [50% * 20%]. Wolfenzon (1999) interprets the existence of pyramidal structures as a means of expropriating minority interests, as it creates a wedge between cash flow and control rights for the controlling shareholders. The separation of ownership and control in pyramidal groups generates strong incentives for the controlling shareholder to divert resource for his or her own benefit. There is evidence of such resources diversion. For instance, Bertrand, Mehta and Mullainathan (2000) report that in Indian pyramidal business groups, the diversion of resources follows the lines of ownership, flowing from firms near the bottom of the pyramid to firms near the top of the pyramid. Similar results are found by Bigelli and Mengoli (1999) for Italy. It may be surmised that external investors regard the presence of pyramids in an ownership structure as a signal of expropriation.

Cross ownership: A third tool that main shareholders can use to expropriate minority shareholders is cross-ownership. This form of ownership structure is a mix between the direct ownership of stock and indirect ownership through a pyramid. From the above example, if additionally the family directly holds 5% of firm Y's shares, it will then control 25% of its voting rights [Min (50%, 20%) + 5%] and own 15% of its shares [50% * 20% + 5%]. As proposed by Faccio & Lang (2000) and Gadhoum (2000), large shareholders use cross ownership and pyramidal structures to reinforce the control of their firms. Reciprocal holding: Reciprocal holding consists of reciprocal ownership between two firms; that is, firm X holds part of firm Z that, in turn, holds some rights in firm X. This remains an important mechanism used by ultimate shareholders to expropriate minority shareholders.

2.4. A General Look at Ownership Structure around the World

Early in 1932, Berle & Mean showed that U.S. firms' ownership structure is diffuse. Firms are usually widely held, with no investor holding important stakes and no effective control. This reality has certainly evolved with time. Holderness, Kroszner, and Sheehan (1999) find that managers' ownership in U.S. firms is now higher than in Berle & Mean's sample period. However, Holderness & Sheehan (1988) find that only a few hundred U.S. firms have a shareholder who directly owns more than 51% of shares. Ownership diffusion remains a predominant feature in the U.S. context, and several studies conducted in other international settings seem to conclude that ownership structure around the world is more concentrated than it is in the U.S..

La Porta, Lopez-De-Silanes, and Shleifer (1999) analyze ownership structure in 27 countries and conclude that in most of them, ownership structure is concentrated, with the majority of firms been controlled by families. Seventy-three percent (73%) of firms are managed by a family member, and 78.7% have a unique large shareholder. In most countries, ultimate owner voting rights are higher than their ownership rights.

Faccio & Lang (2000), analyze the ownership structure of 3740 firms in five European countries and also find a concentrated ownership in their sample. Direct or indirect control is exercised by a limited number of families (43.9%). In Canada, Rao & Lee-Sing (1995), Gadhoum (1995, 2000) and Gadhoum & Zhegal (1999) conducted similar analyses and reported that Canadian firms ownership structure is far from being diffuse. Most Canadian firms are directly or indirectly controlled by at least one large shareholder who holds more than 50% of voting rights. Concentration is more effective in family or group-affiliated firms. Gadhoum (1995) reported that Canadian firms' ownership structure is similar to that of the large Keiretsu Japanese group, and is characterized by inter-firm links exclusively controlled by a few individuals from the same family. Claessens, Djankov, Fan, and Lang (2000) extend that analysis to 2980 East-Asian firms and find that two-thirds of firms in their sample are controlled by a unique large shareholder who was also the manager. In Indonesia and the Philippines, they find that the 10 largest families controlled more than half of firms' assets (57.7% and 52.5%, respectively). An important question is what explains firm ownership structures around the world. La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) provided the legal system hypothesis. According to them, countries can be broadly classified into two categories: Common-law countries, whose legal systems are similar to those present in the United States, United Kingdom, Canada, and the former British colonies; and civil-law countries, with a legal system similar to that in France.

Common-law countries usually have a strong legal system that protects minority shareholders' interests. Consequently, it discourages ownership concentration. There is no interest in holding a large proportion of firm capital, since legal protections in place assure that voting rights cannot confer private benefits to the large shareholder. Conversely, in civil-law countries, minority shareholders' protections in the legal system are weak. This encourages block holders to increase their ownership in order to exploit minority interests.

The nature of our sample of countries, which includes both common-law and civil-law countries, allows us to test this hypothesis.

3. Data

The stock exchange listed sample of firms used in this paper consists of 1182 firms composing stock indexes in seven countries: Among them are 500 firms from the U.S. S&P500, 300 firms from the Canadian TSE300, 40 firms from the French CAC40, 30 firms from the Germany DAX, 225 firms from the Japan NIKKEI 225, 32 firms from the Hong Kong HANG SENG, and 55 firms from the Singapore STI[2]. In each country, we also consider a countrywide sample of firms for comparative purposes. We then use 3969 firms for the U.S., 1120 firms for Canada, 607 firms for France, 704 firms for Germany, 1749 firms for Japan, 583 firms for Hong Kong, and 266 firms for Singapore. All data are for 1996.

In Canada, we collected data from various sources, including The Financial Post (FP), Survey of Industrials, Survey of Mines and Energy Resources, "Liens de parenté entre sociétés (LP)", and the Stock Guide's "Corporate Profile" section. In the U.S., we used two information sources: the Securities Exchange Commission (SEC) web site and Worldscope Global database. For the other countries, we used Worldscope database and firms' own websites. For each firm in the sample, we followed the ownership chain in order to identify the ultimate owner. The ultimate owner is defined as being a shareholder who has control of a firm (minimum 10% of voting rights) without being controlled by someone else. If a firm did not have an ultimate shareholder, it was defined as being a widely held firm. The ultimate owner can be different from the largest shareholder, since part of its control may be indirect. Additionally, the largest shareholder may be controlled, while this is not the case for the ultimate owner who is at the end of the control line. In several cases, the ultimate shareholder is an entity (firm or financial institution). In such cases, we followed the ownership line of this entity until we reached an individual or a widely-held entity. When the ultimate owner was an unlisted firm, we considered it as a family[3]. The exception is an unlisted financial institution that we classified as a widely-held financial institution. In East-Asian countries, there are many firms controlled by anonymous shareholders. This does not allow us to compute all variables in these countries. Finally, we do not separate families from individuals.

Ownership and control are respectively related to rights on cash flows and voting rights. These two measures may be different due to the devices used, such as multiple voting shares, pyramidal structures, cross ownership, and reciprocal holdings.

We classify ultimate owners into five categories: 1- family (which include individuals and families) 2- government, 3- widely held financial institutions, 4- widely held firms, and 5- miscellaneous investor (i.e., a charity, a voting trust, a cooperative, a minority foreign investor, to name few).

The definition of variables used in the paper is presented in the following table:

Take in Table 1

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4. Results Analysis

Results analysis is organized as follows: First, we present the ownership structure of firms in our sample. Second, we look at the means used in the sample countries to separate firms' ownership from their control. Finally, we analyze the role of the second-ultimate owner in protecting minority shareholders from expropriation. When possible, we compared our results to those of previous studies.

4.1. Ownership Structure in the Sampled Countries

Table 2 reports the ownership structure of firms in the seven countries analyzed in this paper.

Take in Table 2

We notice from Table 2 that 25.71% of the Canadian TSE300, 18.75% of the French CAC40, and 17% of the German DAX firms are widely held firms - against 60.25% for U.S. firms. For East-Asian firms, the percentage of widely held firms is lower (6.51% in Japan, 0% in Hong Kong and 0% in Singapore). We conclude that the ownership structure in the sample countries is highly concentrated; in these countries, investors usually buy stocks in order to control firms rather than diversify their risk. It is only in the U.S. that the ownership structure is diffuse and where investors seek diversification.

Families represent the most important type of ultimate owner. On average, they control 44.08% of Canadian firms, 21.33% of U.S. firms, 21.88% of French firms, 84% of Hong Kong firms, and 82.76% of Singapore firms. In Germany and Japan, it is mostly financial institutions that control exchange listed firms, with 38% and 85.80% of ownership respectively. In Canada, financial institutions control 20% of sample firms. The percentage is 16.36% in U.S. firms and 9.37% in French CAC40 firms.

Government controls only 0.21% of U.S. firms, while the percentage is 68.97% in Singapore. Glob-

[2] The Canadian Toronto Stock Exchange index has been renamed TSX.

[3] This happens because we generally cannot identify the owners of unlisted companies. As La Porta et al., (1999) and Claessens et al. (2000), we recognize that this procedure biases our measure of ultimate ownership.

ally, government's role is minor, but its importance varies from one country to another. In Singapore, public authorities highly intervene in the economy in order to regulate market and control economic aggregates. However, in the U.S., Canada, and Japan, such intervention is insignificant.

Widely held firms represent a relatively important ultimate owner in Canada and Hong Kong as compared to the U.S., France, Germany and Japan. Specifically, they control 11.48% and 31 of Canadian and Hong Kong exchange listed firms, compared to 1.65 % in the U.S., 3.13% in France, 0% in Germany, and 3% in Japan.

In most exchange listed firms, there is a unique ultimate owner. The proportion of firms is 90.04% in the U.S., 66.12% in Canada, 76.92% in France and 37.50% in Germany. In East-Asia, this percentage is 68.55%, 55.56% in Japan, and 17.02% in HongKong and Singapore.

This first analysis shows that ownership structure is concentrated in Canada as well as in European and Asian countries. The majority of firms are family firms. In the U.S., families also control an important number of firms, but ownership is less concentrated. U.S. firms' ownership structures tend to be diffuse, and there are less block holders. In several countries, mainly in Japan and Germany, financial institutions control a high number of stock exchange listed firms.

Demsetz & Lehn (1985) show that firms' size is negatively related to concentration. The percentage of stock needed to effectively control firms decrease as size increases. Consequently, when large shareholders are individuals with limited resources and higher diversification needs, one expects a negative relation between size and concentration. Furthermore, exchange listed firms are more available to investors and possess a large number of outstanding stocks. Since these firms rely highly on external financing, their ownership structure should be less concentrated than that of unlisted firms.

U.S., European, and Japanese stock exchange listed firms seem to have a less concentrated ownership structure than the overall firms in each of these countries. Gadhoum, Lang & Young (2001) find that 38.97% of their U.S. sample firms have a diffuse ownership. Focusing on S&P500 firms, we report a diffusion percentage of 60.25%. The difference is due to the higher number and the easiness of transactions when firms are listed on exchanges. Moreover, exchange listed firms are usually larger in size than other unlisted firms. This increases the diffusion of their ownership.

Family control decreases in exchange listed firms in North America, Europe and Japan: 21.33% (44.08%) of S&P500 (TSE300) listed firms are controlled by families, against 38.27% (56.17%) of firms in the whole U.S. (Canadian) sample. These percentages are 21.88% against 70.44% in France, 10.00% against 71.64% in Germany, and 5.9% against 13.1% in Japan. However, in Hong Kong and Singapore, the proportion of exchange listed firms controlled by families is higher, at 84.00% against 64.70% in Hong Kong, and 82.76% against 52.00% in Singapore.

Excluding the U.S. and France, financial institutions hold a higher proportion of exchange listed firms than in the whole country sample. The highest percentages are found in Germany (38% of DAX firms, against 10.43% for the whole sample), and in Japan (85.80% of Nikkei firms against 38.5%). Similarly, in all countries but the U.S., government holds a higher percentage of exchange listed firms than in the whole country sample.

To conclude this section, we can globally say that stock exchange listed firms'ownership structure is less concentrated than that of the countrywide sample of firms. Family control of firms decreases and financial institutions control increases in exchange listed firms. This can be explained by the availability of their shares on financial markets (which favor diffusion) and their large size (which make them difficult to be controlled by an individual).

4.2. Means Used to Separate Ownership From Control

Table 3 reports the different means used by sample firms to separate firms' ownership from their control.

Take in Table 3

The use of multiple voting right shares is generally limited for firms in the sample. Gadhoum, Lang & Young (2001) find that only 15.98% (6.83%) of Canadian (U.S.) firms use this mean, while Faccio & Lang (2000) find 2.64% for France and 17.61% for Germany. In this paper, we also find lower percentages which are still slightly higher than those reported in these previous studies. Multiple voting right shares are used by 10.86% of S&P500 firms, 23.36% of TSE300 firms, 15.63% of CAC40 firms and 34% of DAX firms.

Pyramidal structure, cross ownership, and reciprocal holding are current means used to separate ownership from control in concentrated ownership countries. Pyramidal structure are used by 34.84% of TSE300 firms (Canada), 11.54% of CAC40 firms (France), 20.83% of DAX firms (Germany), 64.50% of NIKKEI firms (Japan), 37% of Hang Seng firms (Hong Kong) and 68.97% of STI firms (Singapore). These results are significantly higher than in the U.S. S&P500 10.35%. Cross ownership is used in 13.93% of TSE300 firms and 12.5% of DAX firms, while it is almost inexistent in the U.S. (0.83%) and France (0.00%). In the U.S., Canada, and France, the use of reciprocal holding is low, while it accounts for 12.5% of German firms. Compared to Faccio & Lang (2000), Gadhoum, Lang & Young (2001), Claessens, Djankov, and Fan & Lang (1999), our

results show that more exchange listed firms use means to separate ownership from control.

The percentage of managers coming from the family which control the firm is 48.96% in the U.S., 11.6% in Canada, 60% in France, 0% in Germany, 17.7% in Japan, 41% in HongKong and 65.52 % in Singapore. From the results for exchange listed firms in the U.S., Canada, France, Germany and Japan, we notice that when the use of means to separate ownership from control is higher (Canada, Germany and Japan), families are not obliged to name one of their member as management. The percentage of managers coming from the family which control the firm is 11.60% in Canada, 0% in Germany and 17.75% in Japan. Conversely, in countries where the use of means to separate ownership from control is low (the U.S. and France), the manager usually comes from the controlling family (48.96% of U.S. firms and 60.00% of French firms). Therefore, while in Canada, Germany, and Japan the agency costs will mainly oppose the large shareholder to minority shareholders, in the U.S. and France, it will mainly be a shareholders-managers problem. The percentage of managers coming from the family which control the firm is lower in exchange listed firms than in the overall sample in all countries. This can be explained by the fact that exchange listed firms possess a very complicated management system that commands a recourse to experimented external managers.

4.3. Expropriation and the Role of a Second Large Shareholder

In firms with concentrated ownership, the large shareholder exacts several costs on the firm and minority shareholders. He or she might favor his or her own interests, which generally do not coincide with those of minority shareholders. For instance, the control of voting rights by the large shareholder enables him or her to direct the firm's projects towards those that converge with his or her personal interests; he or she thus generates private benefits for his or her own account. This creates conflicts of interest with minority shareholders. Table 4 indicates that in the U.S. and Japan, the first large shareholder controls only a small proportion of S&P500 and Nikkei225 firms' voting rights (7.31% in the U.S. and 7.93% in Japan). In the other countries, however, control of voting rights is higher: 29.77% in Canada, 32.54% in France, 25.28% in Germany, 22.81% in Hong Kong, and 22.94% in Singapore.

The ratio of ownership rights over voting rights allows us to evaluate the level of separation of ownership from control. As the separation of ownership from control increases, the ratio decreases. In Table 4, the ratio for the first larger shareholder shows that the separation of ownership from control is higher in Canada, Germany, Japan, and Singapore (0.71, 0.74, 0.60 and 0.77, respectively). France records the lowest separation of ownership from control, with a ratio of 0.92; it is followed by the U.S. and Hong Kong (0.83). In several countries, the separation of ownership from control gives the first large shareholder the means to expropriate minority interests. Does he or she always succeed in this enterprise? Gomez & Novaes (1999) argue that the existence of a second large shareholder is a good means to control the first large shareholder in his or her potential opportunistic behavior. Ownership and voting rights allow him or her to take part in ordinary and extra-ordinary shareholders' meetings, and vote in a way that protects his or her own interests. By doing so, he or she indirectly protects the other shareholders against potential expropriation by the first large shareholder. Table 4 shows that in exchange listed firms, the persuasive power of the second large shareholder is limited. The ratio of the control of the first large shareholder over the control of the second large shareholder ranges from 1.34 to 2.82 times, which means that the first large shareholder always dominates the second in term of voting rights. Further, the ratio of ownership over voting rights of the second large shareholder mimics that of the first large shareholder. This means that the second large shareholder also widely benefits from means to separate ownership from control, and may also be attracted by the expropriation of minority shareholders.

5. Conclusion

This paper contributes to corporate governance literature by examining firms' ownership structure and expropriation in seven countries, with an emphasis on stock exchange listed firms. Results indicate that in Canada, Europe, and East-Asia, the ownership structure is highly concentrated. Most of the firms are controlled by at least one large shareholder who reinforces his or her control with devices such as multiple voting right shares, pyramidal structures, cross ownership and reciprocal holding.

In East-Asia and France, agency problems mainly come from conflicts opposing the large shareholder to minority shareholders, since diffuse owned firms are less present and most firms are controlled by families who appoint one of their members to management. German and Japanese firms are usually controlled by widely held financial institutions that are able to monitor management decisions.

In the U.S., firms' ownership structure is more diffuse. The use of means to separate ownership from control is less present and the control of the large shareholder is lower than in the other sampled countries. There is however a large percentage of firms managed by a family member. In this country, agency problems likely stem from shareholder-management conflicts.

Our results also show that being listed on the stock exchange can explain a firm's ownership structure. Exchange listed firms, which are generally larger in size than unlisted firms, tend to have a more diffuse ownership.

La Porta, Lopez-De-Silanes, Shleifer & Vishny (1998) attempt to explain firm ownership structure around the world through the legal system. Our results contradict this hypothesis. Canada and the U.S. belong to common law countries, however Canadian firms' ownership structure is far from being diffuse (as in the U.S.), and the use of means to separate ownership from control is frequent. Gadhoum, Lang & Young (2001) show that Canadian ownership structure is closer to that of France, than to that of U.S. or U.K. firms.

Furthermore, there is a difference in ownership structure between France and Germany, which are both civil law countries. In France, the use of means to separate ownership from control is limited, and the role of financial institutions is weak. Conversely, in Germany, the use of means to separate ownership from control is higher, and financial institutions are more present in ownership structure.

Overall, while this paper sheds light on ownership structure research, further research is necessary. A complete explanation requires complex models which associate micro and macro economic variables.

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Appendices

Table 1. List of Variables and Their Definitions

Variables	Definition
Widely held ownership	Firms with no shareholder who holds more than 10% of voting rights. This variable takes the value 1 if this is the case, or 0 otherwise.
Ultimate owner	An entity (individual or widely held firm) that holds more than 10% of voting rights in a firm.
Concentrated ownership	Firms that possess at least one ultimate owner. This variable takes the value 1 if this is the case, or 0 otherwise.
Family	This variable takes the value 1 if the ultimate owner is a family or an individual, or 0 otherwise.
Government	This variable takes the value 1 if the ultimate owner is a provincial, federal or municipal authority, or 0 otherwise.
Widely held financial institution	This variable takes the value 1 if the ultimate owner is a widely held financial institution, or 0 otherwise.
Widely held firms	This variable takes the value 1 if the ultimate owner is a widely held firm, or 0 otherwise.
First large shareholder's ownership	Ownership rights (i.e., rights on cash flows) of the first large shareholder of the firm.
First large shareholder's control	Control rights (i.e, voting rights) of the first large shareholder of the firm.
Second large shareholder's control	Control rights (i.e, voting rights) of the second large shareholder of the firm.
Pyramidal structure (%)	Is present if a firm is indirectly controlled by a firm or an individual through another firm. This variable takes the value 1 if the ultimate owner control the firm through a pyramidal structure, and zero otherwise.
Cross ownership (%)	This happens when a firm is directly and indirectly controlled by the same entity. This variable takes the value 1 if the ultimate owner control the firm through cross ownership, and zero otherwise.
Reciprocal ownership (%)	This happens when a firm X control firm Y, which in turn controls firm X. This variable takes the value 1 if there is a reciprocal holding in the firm's ownership structure, and zero otherwise.
Manager from the family which controls the firm	Takes the value 1 if the firm manager comes from the controlling family, or zero otherwise

Table 2. Distribution of Ownership in Sample Country Firms

The exchange listed sample consists of a total of 1182 stock exchange listed firms. These include the U.S. 500 S&P500 firms, the Canadian 300 TSE300 firms, the French 40 CAC40 firms, the German 55 DAX firms, the Japanese 225 NIKKEI 225 firms, the Hong Kong 32 Hang Seng firms and the Singapore 55 STI firms. In each country, we also consider a full sample of firms, for comparative purposes.

	U.S.		Canada		France		Germany		Japan		Hong Kong		Singapore	
	Index N=500	Country N=3969	Index N=300	Country N=1120	Index N=40	Country N=607	Index N=30	Country N=704	Index N=225	Country N=1749	Index N=32	Country N=583	Index N=55	Country N=266
Widely Held vs. Concentrated Firms														
Widely held firms (%)	60.25	38.97	25.71	17.79	18.75	6.26	17	4.40	6.51	42.00	0	0.6	0	1.4
Concentrated ownership (%)	39.75	60.63	74.29	81.54	81.25	93.74	83	95.60	93.49	58	100	99.4	100	98.6
Distribution in Various Classes														
Family (%)	21.33	38.27	44.08	56.17	21.88	70.44	10	71.64	5.9	13.1	84	64.7	82.76	52
Widely held financial institutions (%)	16.36	19.94	20	17.81	9.37	14.6	38	10.43	85.80	38.5	13	7.1	41.38	10.8
Widely held firms (%)	1.65	4.46	11.48	10.80	3.13	2.66	0	1.21	3	5.3	31	23.9	6.90	12.2
Government (%)	0.21	0.23	5.71	4.42	12.50	5.17	10.00	5.23	2.96	1.1	16	3.7	68.97	23.6
Miscellaneous	60.45	37.10												
Ultimate Owner														
Existence of a unique ultimate owner	90.04	77.33	66.12	62.60	76.92	63.82	37.50	66.73	68.55	87.2	55.56	69.1	17.02	37.60

Table 3. Means for Separating Ownership From Control

The exchange listed sample consists of a total of 1182 stock exchange listed firms. These include the U.S. 500 S&P500 firms, the Canadian 300 TSE300 firms, the French 40 CAC40 firms, the German 55 DAX firms, the Japanese 225 NIKKEI 225 firms, the Hong Kong 32 Hang Seng firms and the Singapore 55 STI firms. In each country, we also consider a full sample of firms, for comparative purposes.

	U.S.		Canada		France		Germany		Japan		Hong Kong		Singapore	
	Index N=500	Country N=3969	Index N=300	Country N=1120	Index N=40	Country N=607	Index N=30	Country N=704	Index N=225	Country N=1749	Index N=32	Country N=583	Index N=55	Country N=266
Pyramidal structure (%)	10.35	8.52	34.84	33.82	11.54	17.75	20.83	24.22	64.50	36.40	37.00	25.10	68.97	55.00
Multiple voting stock (%)	10.86	8.36	23.36	25.98	15.63	2.64	34	17.61	-	-	-	-	-	-
Cross ownership (%)	0.83	1.15	13.93	8.18	0	2.99	12.50	6.84	-	-	-	-	-	-
Reciprocal holding (%)	0.41	0.13	0.369	2.60	0	0	12.5	2.97	-	-	-	-	-	-
Manager coming from the control-ling family (%)	48.96	74.51	11.60	73.46	60	61.99	0	60.40	17.75	37.2	41	53.4	65.52	69.9

Table 4. Image of Minority Shareholders' Expropriation

The exchange listed sample consists of a total of 1182 stock exchange listed firms. These include the U.S. 500 S&P500 firms, the Canadian 300 TSE300 firms, the French 40 CAC40 firms, the German 55 DAX firms, the Japanese 225 NIKKEI 225 firms, the Hong Kong 32 Hang Seng firms and the Singapore 55 STI firms. In each country, we also consider a full sample of firms, for comparative purposes.

	U.S.		Canada		France		Germany		Japan		Hong Kong		Singapore	
	Index N=500	Country N=3969	Index N=300	Country N=1120	Index N=40	Country N=607	Index N=30	Country N=500	Index N=225	Country N=1749	Index N=32	Country N=583	Index N=607	Country N=266
Ownership of first large shareholder (%)	6.12	14.62	19.94	25.61	31.03	46.68	19.12	48.54	5.04	6.9	18.44	24.3	17.35	20.19
Control of the first large shareholder (%)	7.31	16.01	29.77	31.56	32.54	48.32	25.28	54.50	7.93	10.33	22.81	28.08	22.93	27.52
Ratio of owner-ship over control of the fist large shareholder	0.83	0.56	0.71	0.67	0.92	0.93	0.74	0.84	0.59	0.60	0.83	0.88	0.77	0.79
Ownership of the second large share-holder (%)	0.92	4.82	4.42	7.04	11.96		8.97	-	-	-	-	-	-	-
Control of the second large shareholder (%)	1.16	5.83	7.09	9.73	13.80		13.96	-	-	-	-	-	-	-
Ratio of owner-ship over control of the second large shareholder	0.82	0.20	0.66	0.31	0.81		0.62	-	-	-	-	-	-	-
Control of the first over the control of the second large shareholder	1.41	3.42	2.30	57.06	1.34	-	1.69	-	1.29	-	2.82	-	1.73	-

AGENCY COSTS, OWNERSHIP STRUCTURE, AND CORPORATE GOVERNANCE IN PRE-AND POST-IPO FIRMS

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Abstract

Following the approach in Ang, Cole, and Lin (2000), we estimate the impact of CEO ownership on agency costs in pre-IPO firms and again in the post-IPO period when they have become publicly traded companies. We find that CEO ownership is large in both the pre and post-IPO firms. Greater CEO ownership is associated with lower agency costs both before and after the IPO, and CEO ownership in these firms seems to dominate all other agency control mechanisms. Board composition and involvement by venture capital firms does not appear to mitigate agency costs.

Keywords: CEO, ownership, IPOs, agency costs

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1. Introduction

There has been considerable research on the effect of agency conflicts on financial decisions, but as Ang, Cole, and Lin (2000), ACL, maintain: "the actual measurement of the principal variable of interest, agency costs, in both absolute and relative terms, has lagged behind" (p. 81). To measure agency costs requires a zero agency-cost firm, where the owner and manager are the same individual(s). ACL utilize a database of small privately held companies to construct a portfolio of zero agency cost firms and find that agency costs are higher when outsiders manage the firm, higher when the number of non-manager shareholders increase, and are lower when management shareholdings are large. Singh and Davidson (2003), SD, extend the ACL analysis to large firms. They find that managerial ownership is positively related to asset utilization but does not deter excessive discretionary expenditures. Further, they show that smaller boards protect shareholders from agency costs but board composition and blockholder ownership characteristics do not.

We extend the work of ACL and SD by examining agency costs in firms that are about to go public and immediately after they do. The basic issue addressed in this paper is: Does going public increase or alleviate the agency problem and how various deterrent mechanisms influence agency costs? Theoretically it could do either. Going public diffuses ownership and further separates ownership from control, and this may increase agency costs. On the other hand, going public introduces market monitoring along with a more strict disclosure regime, as well as necessitates the need to create additional internal monitoring mechanisms such as an independent board of directors. It could, therefore, decrease agency cost.

We study a sample of 293 IPO firms to compare their pre-IPO and post IPO governance characteristics and investigate the impact of going public on agency costs. As in ACL and SD we measure agency costs in terms of both asset utilization and discretionary expenditures. Our results show that CEO ownership is quite large in IPO firms both before and after the IPO. More importantly, CEO ownership is associated with lower agency costs in both the pre- and post-IPO periods. Board composition, leverage, and ownership by blockholders and venture capital firms do not seem to mitigate agency costs.

2. Agency Costs and IPO firms

The concept of the separation of ownership and control was first introduced by Berle and Means (1932). Jensen and Meckling (1976) develop a model comparing firms with no agency costs to those run by professional managers. One of the difficulties of measuring agency costs has been finding zero-agency-cost firms as a point of comparison. ACL proxy the zero-agency cost firm using a sample of small businesses that are privately owned. In this

paper, we propose that IPO firms may provide a somewhat unique laboratory to measure agency costs. In contrast to the ACL sample, the pre-IPO firm is not a pure owner-managed company. As a result, there may be some possibilities for a pre-IPO CEO to extract rent from other stakeholders. In the pre-IPO firm, ownership is not diffused to the degree of a typical public company, and the CEOs motive to extract rent may not be as strong. The post-IPO firm, on the other hand, is a company that has recently become subject to market forces, and ownership has become more dispersed. However, ownership for the recent IPO firm is likely not as dispersed as in the SD sample. By examining agency costs and governance structure in pre- and post-IPO firms, we straddle the research in ACL (with zero-agency cost firms) and in SD who utilize large publicly traded companies. Before the IPO process, these firms are privately owned. While there is some dispersion of ownership, ownership is concentrated in the hands of a relatively small group of investors. Following the IPO, the firm is now publicly traded with greater dispersion of ownership. One could argue that the agency problems for these firms will increase since the firm is no longer privately owned, creating a greater incongruence of interests of managers and owners. However, the IPO process introduces market monitoring that may offset the agency problems attributable to greater ownership dispersion. We can then observe the changes in monitoring mechanisms designed to reduce agency costs that occur for a firm immediately after going public.

A. Management Ownership

Jensen and Meckling's (1976) argue that managerial ownership helps align the interests of managers and shareholders thus yielding a positive relation between managerial ownership and corporate performance. Empirical research shows that the relation between corporate performance and managerial ownership is more complex than illustrated by Jensen and Meckling (Morck, Shleifer, & Vishny, 1988; McConnell & Servaes, 1990 & 1995; Kole, 1995; Short & Keasey, 1999; Barnhart & Rosenstein, 1998). This research has also shown that managerial ownership's effect on firm value may be non-linear.

In terms of direct measures of agency costs, as in ACL and SD, we expect that agency costs will be inversely related to managerial ownership in general and CEO ownership in particular. A related concept is the founder status of the CEO. When founders stay involved in the corporation, there appear to be fewer agency problems (Reeb and Anderson, 2003). IPO firms are often young firms. As a result the founder often remains active and is commonly the CEO of the firm in the immediate post-IPO period.

B. Blockholder Involvement

Blockholders have the incentive and capability to monitor management. Thus, greater ownership of stock by outside blockholders may result in lower agency conflict. Empirical evidence supports this contention (Holderness & Sheehan, 1985; Barclay & Holderness, 1991; Shome & Singh, 1995; Bethel, Liebeskind & Opler, 1998; Allen & Phillips, 2000).

ACL's sample of small firms does not permit the study of the role of blockholders in reducing agency costs. However, SD find that outside blockholders have limited influence in reducing agency costs. Based on the empirical literature, we expect that agency costs will be inversely related to blockholders ownership.

C. Venture Capital Involvement

Venture capital firms invest in companies and take an active interest in their management (Sahlman, 1990). Barry, Muscarella, Peavy, and Vetsuypens (1990) find that venture capital firms hold about one-third of the board seats in companies they sponsor. Bouresli et al (2004) show that venture capital firms impact the board structure, with insiders controlling fewer board seats when there is venture capital involvement.

In other words, venture capital investors are active monitors (Baker & Gompers, 2000). Since venture capital firms are active monitors, we expect a negative relation between venture capital ownership and agency costs.

In addition, we expect an inverse relation between the proportion of the board comprised of venture capital directors and agency costs. Alternately, in the post IPO period, venture capitalists may actually use their position to further their own interests and extract rent from the corporation's other stakeholders. Thus the impact of venture capitalists on agency costs is somewhat ambiguous.

D. Board Size and Composition

Although, Fama and Jensen (1983) argue that board outsiders are the first line of defense in monitoring managers and guarding shareholder interests, empirical evidence to this effect is mixed. Dalton, Daily, Ellstrand, and Johnson (1998) conclude that there is little evidence that board composition influences firm performance.

In their literature survey, Hermalin and Weisbach (2000) reach the same conclusion. In terms of the relation between agency costs and boards, while ACL did not address this issue, SD, however, did not find a significant relation between board composition and agency costs. Despite the mixed empirical evidence, we hypothesize an inverse relation between the proportion of independent outside directors on IPO firm boards and agency costs.

E. Leverage

Jensen and Meckling (1976) point out that debt financing may restrict excessive managerial perquisite consumption. ACL and SD find evidence that agency costs are inversely related to some measures of leverage. Based on this empirical evidence we hypothe-

size that agency costs will be negatively related to the degree of leverage.

3. Data

A. Sample

We obtained our initial sample of IPOs from the SDC database for the 1995-1998. The database lists 3054 IPOs. We first eliminated 203 dual class IPOs, 126 ADRs and ADSs, 36 limited partnerships, 18 spin-offs, and 359 finance, insurance or real estate IPOs. From the remaining 2312 IPOs, we attempted to obtain financial ownership and board data. Due to non-availability of registration and proxy data 1744 firms were eliminated. We eliminated 180 firms not listed, post-IPO, on Compustat, 33 IPOs that were acquired in the first year following IPO and 62 for other missing data. This left 293 IPOs with complete information both before and after the IPO and represents 12.7% of the 2312 corporate IPOs that occurred in this period.

B. Agency Costs

Similar to ACL and SD we use the ratio of annual sales to total assets as our first measure of agency costs. When this ratio is large, it implies that there is a large level of sales for a specific level of assets. On the other hand, if the ratio is low, management has invested in non-productive assets that are not able to generate cash flows. When agency conflicts are higher, we expect firms to have lower asset turnover ratios.

For a second measure of agency costs we utilize selling, general, and administrative expenses, SG&A, standardized by total sales as a proxy for agency cost related to excessive pay and perquisites. When agency costs are high, we expect SG&A to be relatively large. Conversely, when agency costs are low, we expect SG&A expenses to be relatively small.

We designate year 0 as the IPO year. We obtain financial information manually for year – 1 from the registration statements for the 293 IPO firms. We obtain financial information for year 1 from Compustat.

-----Insert Table 1 About Here-----

Table 1 contains information on the IPO firms for year −1 and year 1. We do not analyze year 0 because the firm is private for part of the year and publicly traded for the remainder of the year. The table shows that the asset turnover drops from 1.43 in year –1 to 0.99 in year 1. This change is consistent with an increase in agency costs occurring as these IPO firms become publicly traded. On the other hand, the ratio of SG&A to sales decreases. This change is statistically insignificant with a t-test but is significant with the Wilcoxon Z. If agency costs increase following the IPO, we expect this ratio to increase rather than decrease in the post-IPO period.

C. Ownership Structure

We measure ownership as shares held by the CEO, blockholders (outside and non-venture capital stockholders with 5% or more equity holdings), venture capital firms, and directors and officers as percent of total shares outstanding.

As expected, the sample average CEO ownership drops from 28.2% pre-IPO to 16.9% in the post-IPO period. This difference is significant (at the 0.1% level). Even with the reduction in percentage ownership by the CEO, the average CEO continues to own a large proportion of the firm's stock. Similarly, average ownership by venture capital firms drops from 14.6% to 3.7%, with the change being significant (at 0.1%). However, the blockholder ownership does not change significantly following the IPO.

D. Board of Director Structure

We measure board composition in the traditional manner as in Baysinger and Butler (1985) with one modification. Since venture capital firms are involved with IPO firms, we have added them as a fourth category of directors. So our four director categories are insiders, affiliated outsiders, venture capital, and independent outside directors. We categorize directors as venture capital directors if they are employed by or represent a venture capital firm that has supplied capital to the IPO firm. As shown in Table 1 board characteristics change significantly following the IPO. Board size increases, on average from 4.9 to 6.4 members. So the average board adds approximately 1½ directors when going public. The average number of inside directors falls slightly from 1.85 to 1.75 after the IPO. The number of venture capital directors also falls from an average of 0.98 to 0.67. The largest change is in terms of outside directors, increasing on average from 0.99 to 2.82. In terms of proportional representation, the proportion of inside directors, venture capital directors, and affiliated directors decreases while the proportion of outside directors increases. All of these board changes are statistically significant. In the pre-IPO companies 47.1% of the CEOs are founders while after the IPO this ratio drops to 43.0% (significant at the 5% level).

E. Other Variables

For a levered firm, the fixed commitment to make debt payments may constrain a manager's ability to use cash (Jensen, 1986) in wasteful ventures. We expect a negative relation between the degree of debt financing and managerial agency costs. We measure leverage with the debt to equity ratio. For our sample, the average debt to equity ratio significantly falls from 21.1% in pre-IPO period to 13.8% in the post-IPO period. In our regression models, we control for firm size with the log of total assets. As shown in Table 1, while the average sample firm size as measured by total assets increases from $60 to $170

million from year −1 to year 1 the mean sales revenue increase from $69 to $140 million. These differences are significant (at the 0.1% level). We also control for industry effects with a series of 3-digit level SIC dummy variables.

4. Results

To relate ownership and board characteristics to our measures of agency costs, we estimate models with the asset turnover ratio and ratio of SG&A expense to sales as dependent variables with the independent variables as described above.

A. Agency Costs in Terms of Asset Utilization- Pre IPO

Table 2 contains the regression results with year -1 asset turnover ratio as our first proxy for agency costs as the dependent variable. Independent variables include the percent ownership by the CEO, blockholders and venture capital firms, percent independent outside directors, percent inside directors, a dummy variable taking the value of 1 if the CEO is the founder, leverage, the natural log of assets as a proxy for firm size, and industry dummies (industry dummies coefficient not reported).

-----Insert Table 2 About Here-----

The single variable regressions are models 1-8. The estimated coefficient for CEO ownership is positive and significant (at the 0.1% level) as predicted. In the pre-IPO period higher CEO ownership is associated with lower possible conflict of interest and lower agency costs. Recall that these CEOs have a considerable stake in the financial performance of the firm, and our results suggest that greater ownership by CEOs reduces agency costs in firms about to go public. On the other hand, the coefficients for ownership by outside blockholders and venture capital firms have negative estimated coefficients that are significant (at the 5% and 0.1%, respectively). Ownership by these two groups is not associated with lower agency costs and appears to have the opposite effect[2].

In pre-IPO firms, the estimated coefficients for the percent independent directors and percent venture capital directors are both negative and significant. These results run counter to our predictions in that independent and venture capitalist directors do not seem to be instrumental in lowering agency costs through improving asset quality or utilization[3]. One explanation is that dominant CEOs replace the need for outsider monitoring. In addition, at this point, the firms are still privately owned and outside director monitoring may be unnecessary.

However, the estimated coefficients for the percent of inside directors and the CEO founder dummy variable are positive. In these privately held companies, insiders on the board and a founding CEO improve asset utilization and reduce agency costs. These results are also consistent with the dominant CEO controlling the company and reducing agency costs. The estimated coefficient for leverage is positive but insignificant. The estimated coefficient for the log of assets is negative and significant at the 5% level. Smaller pre-IPO firms have better asset utilization. Regression 9 is a model that includes all of the independent variables. Only the estimated coefficients for CEO ownership and log of assets remain statistically significant. The estimated coefficient for CEO ownership remains positive and significant (at the 1% level), and the estimated coefficient for log of assets is negative (significant at the 0.1% level).

The estimated coefficients for the other independent variables are statistically insignificant in this model. One explanation for the lack of their significance would be that there is multicollinearity in the variables. However, none of the variance inflation factors are above 1.5. An alternate explanation is that since CEOs own such a large proportion of stock in these pre-IPO firms, that CEO control dominates the effect of the other variables in reducing agency costs. Shivdasani and Yermack (1999) find that more powerful CEOs have greater control over the board through selection of directors.

B. Agency Costs in Term of Asset Utilization- Post IPO

Table 3 contains the regression results for the post-IPO firms. The dependent variable is the asset turnover ratio for year 1. We use the post-IPO independent variables that correspond to the pre-IPO independent variables discussed in Table 2.

-----Insert Table 3 About Here-----

Regressions 1-8 are simple regressions with one independent variable included at a time. The estimated coefficient for CEO ownership is positive and significant (at the 0.1% level). Similarly, in regressions 5 and 6 the estimated coefficients for percent inside directors and the CEO founder dummy variables are positive and significant (at the 5% level).

The estimated coefficients for blockholder ownership and percent independent directors are negative and significant (at the 5% and 10% levels, respectively)[4]. The estimated coefficient for firm size is negative as it was pre-IPO. However, the estimated coefficient for leverage is negative and significant. Since the coefficient is negative debt does not appear to mitigate agency costs following the IPO. In regression 9, we include all of the independent variables. Only the estimated coefficients for CEO ownership and percent independent directors are statistically significant. Even after the IPO, CEO ownership remains high, averaging nearly 17% of the sample firms' equity. With such large ownership, the CEOs continue to be a dominant force in reducing agency costs. Board composition, as measured by the percent of independent directors, not only does not produce better asset utilization, but with its negative coefficient seems to result in higher agency costs. When we compare the results for pre-IPO to post-IPO, we find similar results for CEO ownership.

CEOs control a relatively large proportion of the equity before and after the IPO and, larger CEO ownership is associated with a reduced level of agency costs in both periods. Boards composed of a larger proportion of independent directors and/or venture capital directors do not have improved asset utilization. Leverage seems to mitigate the agency costs before the IPO but has no effect (after controlling for other variables) following the IPO. Recall, that leverage ratios drop significantly after the IPO. Our conclusion is that since these CEOs own such a large amount of stock, it is in their own best interests to reduce agency costs. The CEOs in the pre-IPO and post-IPO firms dominate all other agency control mechanisms.

C. Agency Costs in Term of SG&A Expenses – Pre-IPO

The second proxy for agency costs is the ratio of selling, general, and administrative expenses to sales. This ratio for year -1 is the dependent variable in the models in Table 4. The independent variables are the same as in the two earlier tables.

------Insert Table 4 About Here------

Models 1-8 are simple regressions with separate estimated models for each independent variable. Ownership by the CEO has a negative estimated coefficient which is significant (at the 5% level). The implication of these findings is that greater ownership by the CEO is associated with a lower ratio of SG&A to sales, and it, therefore, is associated with a lower level of agency costs. These findings are consistent with our earlier results where we measured agency costs in terms of asset turnover ratio. Prior to going public, ownership is not dispersed to the extent that is typical of most publicly traded corporations, and CEOs in these private firms may not have as much of an opportunity to extract private benefits from minority shareholders. More important, however, the pre-IPO CEOs with such a large percentage ownership in the firm have incentives to economize on resources to convince the market to reward a well-managed company at the time of IPO with higher price. Here, higher pre-IPO ownership by CEO would translate into higher IPO value and potential gains for the CEO. Similarly, the estimated coefficient for the percent of inside directors on the board is negative and significant (at the 0.1% level). Boards of the privately held firms that are dominated by insiders are associated with a lower level of agency costs. It may be that their large ownership stake in the company motivates them to act in shareholder interests. The estimated coefficient for ownership by blockholders is statistically insignificant. The estimated coefficient for percentage ownership by venture capital firms is positive and significant (at the 10% level). These results are not consistent with the prediction that ownership by venture capital firms is associated with lower agency costs. Instead, venture capital firms may be pursuing their own goals and agendas in the pre-IPO firms. Similarly, the estimated coefficient for the percent of independent outsiders on the board is positive and significant (at the 0.05% level)[5]. Regression 9 contains the estimated model with all of independent variables. None of the estimated coefficients are statistically significant.

Overall, these results suggest that after including all of the predictor and the control variables, discretionary expenses are not reduced by CEO ownership nor by the other agency deterrent mechanisms.

D. Agency Costs in Term of SG&A Expenses – Post IPO

We also measure the ratio of SG&A expenses to sales in year 1, following the IPO, and use it as a dependent variable. The independent variables for year 1 are as in the previous tables. These results appear in Table 5.

-----Insert Table 5 About Here-----

Regressions 1-8 are simple regressions with models estimated separately for each independent variable. Only the estimated coefficient for log of assets is significant. In regression 9, we include all independent variables. None of the estimated coefficients are significant.

5. Conclusions

In this paper we examine the extent to which CEO ownership, venture capital involvement, and board of director characteristics influence agency costs before and after IPO firms go public. For our sample firms, CEOs own over 28% of the pre-IPO firms and this ownership seems to dominate all other agency conflict control mechanisms. While average CEO ownership level drops following the IPO, it remains quite high. As a result, CEO ownership is positively related to asset utilization before and after the IPO. Firms having CEOs with higher levels of ownership have lower agency costs. In terms of discretionary expenditures, CEO ownership reduces its level prior to going public but not when the regressions control for other factors. In addition, we do not find this relation post- IPO. In the post IPO period, the CEO may consume more non-pecuniary wealth of the firm, and thus, CEO ownership does not reduce discretionary expenses. Stock ownership by non-insider blockholders as well as by venture capital firms is not associated with better asset utilization or lower discretionary expenses either before or after going public. Board characteristics such as the percentage of outside directors and the percentage of directors representing venture capitalists are not associated with lower agency costs. Our results are, therefore, similar to those in Ang, Cole, and Lin (2000) and Singh and Davidson (2003).

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Footnotes

[1] We also estimated an OLS model with non-CEO inside ownership as the independent variable. In simple regressions, its estimated coefficient is negative and significant at the 0.1% level. However, when we include it and CEO ownership in the same estimated models, multicollinearity becomes a significant problem as the correlation coefficient for CEO ownership and non-CEO inside director ownership is -0.89 (significant at the 0.1% level) in year -1 and is -0.85 (significant at the 0.1% level) in year 1.

[2] The negative relation suggests that venture capital directors do not serve other shareholder interests. The negative relation between blockholder ownership and asset turnover deserves additional attention. First, we tested several non-linear specifications, but this did not provide a suitable explanation. Then we found blockholder ownership to be significantly (at the 0.1% level) and negatively correlated with CEO ownership, director and officer ownership, and CEO founder status. CEO ownership appears to have the strongest impact on agency costs. So when CEOs own large amounts of stock and are founders, blockholders own less stock. We believe that it is not the blockholders causing greater agency costs, but the lower CEO ownership instead.

[3] We expect that in privately held companies independent directors play a very small role in corporate governance. Pre-IPO companies average less than 1 independent director. In our pre-IPO sample, 135 firms (46.1% of the sample) have no independent outside directors. In only 11 firms (3.6% of the sample) independent outsiders constitute a numerical majority on the board.

[4] The signs of these coefficients are not as expected and imply that outside directors do not reduce agency costs in firms that have recently gone public. We tested several things trying to determine the reason for this relation. For example, the percentage of outside directors is not related to the proportion of stock owned by insiders, the CEO, blockholders or venture capital companies. It is unrelated to firm size, leverage or CEO founder status. We attempted

several non-linear specifications, and the relation does not appear to be non-linear. In only 29% of the companies independent outsiders control a numerical majority of board seats. Our conclusion is that these outside directors do not reduce agency costs in newly publicly traded companies. It may be their lack of experience with the company (since most outside director join the company following the IPO), their relatively small numbers on the board, or perhaps these directors are affiliated with management in ways that our categorization procedures do not detect.

[5]As mentioned above, outside directors seem to play a very small role in the pre-IPO company. Nearly half of the pre-IPO companies have no independent directors.

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Appendices

Table 1. Descriptive Statistics and Comparisons of Pre-to-Post IPO

		Year -1	Year 1	t statistic	Wilcoxon Z	
Agency Cost Data	Asset Turnover	1.4314	0.9946	6.61***	8.27***	
Ownership Data	SG&A to Sales	0.7009	0.5379	1.63	2.89**	
	Ownership Percentages:					
	CEO	28.1769%	16.9390%	10.88**	12.08***	
	Blockholder	17.4701%	17.8773%	- 0.32	-1.17	
	Venture Capital	14.5606%	3.7251%	11.05**	9.65***	
	Director & Officer	35.6224%	17.5874%	14.52***	12.07***	
Board Data	Board Size	4.9181	6.3652	-12.99***	-10.64***	
	Director Numbers:					
	Inside	1.85	1.75	1.97*	2.00*	
	Outside	0.99	2.82	-22.00***	-13.46***	
	Venture Capital	0.98	0.67	5.90***	5.59***	
	Affiliated	1.11	1.12	-0.12	-0.13	
	Director Percentages:					
	Inside	45.08%	28.17%	11.37***	10.31***	
	Outside	16.51%	44.33%	-21.88***	-13.69***	
	Venture Capital	17.82%	10.62%	7.55***	-6.98***	
	Affiliated	20.59%	16.88%	7.41***	6.89***	
	CEO Founder	47.10%	43.00%	2.47*	2.45*	
	Venture Capital on Board	47.44%	37.54%	3.86***	3.78***	
Other Data	Leverage	21.067%	13.835%	3.79***	5.27***	
	Total Assets (millions)	$60.19	$170.28	-9.42***	14.39***	
	Sales Revenue	$69.44	$140.11	-11.35***	14.10***	

*** Significant at 0.001 or better, ** Significant at 0.01 or better, * Significant at 0.05 or better

Table 2. Regression Results: Asset Utilization in the Pre-IPO Period

Reg.	Constant	Percentage Ownership CEO	Blockholder	Venture-Capital	Percent Outside Directors	Percent Inside Director	CEO- Founr-O	Leverage	Log of Assets	18 Industry Variables	Adjusted R^2 (F)
1	0.9797 (9.30)***	0.0161 (6.30)***									11.8% (39.66)***
2	1.5711 (15.45)***	---	-0.0078 (-2.25)*								1.4% (5.1)*
3	1.6583 (16.52)***	---	---	-0.0158 (-3.75)***							4.4% (14.09)***
4	1.6300 (15.11)***	---	---	---	-1.2000 (-2.76)**						2.2% (7.63)**
5	0.7601 (5.25)**	---	---	---	---	1.4922 (5.48)***					9.1% (30.06)***
6	1.1722 (10.67)***	---	---	---	---	---	0.5481 (3.43)***				3.6% (11.74)***
7	1.3422 (13.65)***	---	---	---	---	---	---	0.0039 (1.49)			0.4% (2.3)
8	1.8966 (8.58)***	---	---	---	---	---	---	---	-0.1481 (-2.26)*		1.4% (5.12)*
9	2.7231 (6.63)***	0.0092 (2.85)**	0.0007 (0.20)	-0.0028 (-0.58)	-0.4940 (-1.00)	0.4410 (1.19)	0.1800 (1.01)	0.0036 (1.50)	-0.3622 (-5.41)***	a	28.8% (5.62)***

*** Significant at 0.001 or better, ** Significant at 0.01 or better, * Significant at 0.05 or better, † Significant at 0.10 or better

Table 3. Regression Results: Asset Utilization in the Post-IPO Period

Reg.	Constant	Percentage Ownership: CEO	Percentage Ownership: Blockholder	Percentage Ownership: Venture-Capital	Percent Outside Directors	Percent Inside Director	CEO- Four-O	Leverage	Log of Assets	18 Industry Variables	Adjusted R^2 (F)
1	0.7279 (11.66)***	0.0159 (6.68)***									13.0% (44.58)***
2	1.1091 (15.37)***	---	-0.0063 (-2.22)*								1.3% (4.92)*
3	1.0234 (18.40)***	---	---	-0.0074 (-1.25)							0.2% (1.57)
4	1.2301 (8.54)***	---	---	---	-0.5282 (-1.74)†						0.7% (3.02)†
5	0.7491 (6.27)***	---	---	---	---	0.8774 (2.28)*					1.4% (5.22)*
6	0.9070 (13.43)***	---	---	---	---	---	0.2071 (2.01)*				1.0% (4.02)*
7	1.0542 (17.56)***	---	---	---	---	---	---	-0.0045 (-1.96)†			1.0% (3.85)†
8	1.3582 (6.59)***	---	---	---	---	---	---	---	-0.0816 (-1.81)†		0.8% (3.28)†
9	2.0657 (6.11)***	0.0127 (4.58)***	-0.0005 (0.20)	-0.0009 (-0.16)	-0.4711 (-1.68)†	-0.0199 (-0.05)	-0.0065 (-0.07)	-0.0032 (-1.37)	-0.1181 -2.14	a	35.6% (7.12)***

*** Significant at 0.001 or better, ** Significant at 0.01 or better, * Significant at 0.05 or better, † Significant at 0.10 or better

Table 4. Regression Results: Discretionary Expenditures in the Pre-IPO Period

Reg.	Constant	Percentage Ownership: CEO	Percentage Ownership: Blockholder	Percentage Ownership: Venture-Capital	Percent Outside Directors	Percent Inside Director	CEO- Four-O	Leverage	Log of Assets	18 Industry Variables	Adjusted R^2 (F)
1	0.9480 (6.52)***	-0.0084 (-2.45)*									1.8% (6.02)*
2	0.6401 (4.89)***	---	0.0035 (0.79)								0.0% (0.62)
3	0.5652 (4.32)***	---	---	0.0099 (1.81)†							0.8% (3.29)†
4	0.5124 (3.71)***	---	---	---	1.1700 (2.05)*						1.2% (4.19)*
5	1.2755 (6.55)***	---	---	---	---	-1.2433 (-3.49)***					3.9% (12.17)***
6	0.7704 (5.32)***	---	---	---	---	---	-0.1511 (-0.72)				0.2% (0.41)
7	0.7852 (6.03)***	---	---	---	---	---	---	-0.0039 (-1.08)			0.1% (1.16)
8	1.3411 (4.48)***	---	---	---	---	---	---	---	-0.2000 (2.29)*		1.5% (5.25)*
9	1.0313 (1.58)	-0.0027 (-0.56)	-0.0013 (-0.18)	0.0692 (0.09)	0.0692 (0.09)	-0.8181 (-1.51)	0.1161 (0.49)	-0.0006 (-0.16)	-0.0564 (-0.54)	a	5.9% (1.65)*

*** Significant at 0.001 or better, ** Significant at 0.01 or better, * Significant at 0.05 or better, † Significant at 0.10 or better

Table 5. Regression Results: Discretionary Expenditures in the Post-IPO Period

Reg.	Constant	Percentage Ownership: CEO	Percentage Ownership: Blockholder	Percentage Ownership: Venture-Capital	Percent Outside Directors	Percent Inside Directors	CEO- Found-O	Leverage	Log of Assets	18 Industry Variables	Adjusted R^2 (F)
1	0.8700 (4.10)***	-0.0102 (-1.30)									0.2% (1.68)
2	0.6333 (2.84)**	---	0.0035 (0.40)								-0.3% (0.16)
3	0.6632 (3.87)***	---	---	0.0091 (0.49)							-0.3% (0.24)
4	0.6271 (1.40)	---	---	---	1.1554 (0.16)						-0.3% (0.03)
5	0.8380 (2.35)*	---	---	---	---	-0.5020 (-0.42)					-0.3% (0.18)
6	0.5800 (2.75)**	---	---	---	---	---	0.2640 (0.83)				-0.1% (0.68)
7	0.7585 (4.05)***	---	---	---	---	---	---	-0.0043 (-0.61)			-0.2% (0.37)
8	2.8583 (4.51)***	---	---	---	---	---	---	---	-0.4852 (-3.52)***		3.8% (12.35)***
9	1.5165 (1.21)	-0.0077 (-0.73)	0.0034 (0.33)	-0.0029 (-0.14)	-0.0428 (-0.04)	-0.8343 (-0.59)	0.5822 (1.58)	0.0063 (0.72)	-0.2822 (-1.35)	a	-0.0428 (1.32)

** Significant at 0.001 or better, ** Significant at 0.01 or better, * Significant at 0.05 or better, † Significant at 0.10 or better

OWNERSHIP STRUCTURE, LARGE INSIDE/OUTSIDE SHAREHOLDERS, AND FIRM PERFORMANCE: EVIDENCE FROM CANADA

Eduardo Schiehll*

Abstract

This study gathers additional evidence on the association between ownership concentration and firm performance, as measured by the firm's Q ratio. Using panel data from a sample of 159 Canadian public firms over a three-year period, I focus on the distinction between large inside shareholders, who directly participate in the management of the firm, and large outside shareholders, who do not. I examine whether direct and indirect monitoring on the part of large shareholders has an impact on the association between ownership concentration and firm performance. Along with the distinction between large inside and outside shareholders, this study also investigates whether concentration of voting rights is associated to firm performance, and whether the identity of the owner affects this association. The findings suggest that large inside shareholdings tend to be negatively associated to firm performance, while no association is found in firms with a majority of large outside shareholdings or firms combining large inside and outside shareholdings in its ownership structure. Concentration of voting rights is negatively associated to firm performance only in firms with a majority of large outside shareholders, suggesting that the market may not discriminate between voting rights and ownership concentration in owner-managed firms. Although the results for the identity of large shareholders are not conclusive, there is evidence that family and institutional large shareholders wield different performance impacts.

Keywords: firm performance, ownership concentration, large shareholders, Canada

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1. Introduction

Considerable attention has been devoted in both the academic literature and the business press to the impact of governance structure on firm performance, with a particular focus on ownership concentration. Theoretically, the presence of large shareholders should reduce agency costs and enhance firm performance (Berle and Means, 1932; Jensen and Meckling, 1976), since large shareholders have the incentive as well as the resources to monitor the firm's performance. The premise is that large shareholders tend to engage in closer monitoring activities, which reduce informational asymmetries between owners and managers as well as between the firm and external investors. The result is an enhanced monitoring structure and increased firm value, to the benefit of all shareholders.

The empirical evidence on the performance impact of large shareholders is, however, inconclusive. Shleifer and Vishny (1986), for example, show that concentrated shareholdings raise firm value. Pagano and Röel (1998) document the existence of a trade-off between ownership concentration and liquidity. Lehmann and Weigand (2000) suggest that, unless these large shareholders are financial institutions, their presence does not necessarily enhance firm performance. Consistent with the entrenchment perspective, the study by Claessens et al. (2002) finds that firm performance falls when the control rights of the largest shareholder exceed the cash-flow ownership of the shareholder. Overall, these studies suggest that large shareholders can impose costs on firms if they use them to extract private benefits via tunneling[1] or less than optimal investment decisions.

In addition, most studies examining ownership structure and firm performance have been conducted in the US and the UK, which are characterized by ownership dispersion and where most firms follow

[1] Johnson et al. (2000) note that large shareholders create group structures such as pyramids that enable them to transfer assets or profits to other dominated entities. These are called "tunneling" practices. Tunneling can be achieved in various ways, such as excessive compensation for positions held in the firm, advantageous transfer prices, loans at non-market rates, guarantees of other borrowing entities, or merger transactions that enhance the value of other firms in the group.

the one-share, one-vote rule. Recent studies by La Porta et al. (1999), Claessens et al. (2002), Faccio and Lang (2002), and Dyck and Zingales (2004) suggest that these types of ownership structures are not generally the norm in non Anglo-Saxon countries. Most of continental Europe and Asia is characterized by greater ownership concentration in the hands of individuals, families, governments, or industrial groups. Surprisingly, ownership structures in Canada differ from their Anglo-Saxon counterparts by exhibiting high levels of concentration. [2]

The purpose of this study is to examine the relationship between ownership structure, large shareholdings, and firm performance. Canada offers an interesting setting to examine these issues. On the one hand, the Canadian capital market is characterized by concentrated ownership through mechanisms such as dual-class shares and pyramidal structures (Amoako-Adu and Smith, 2001; Morck et al., 2000). The vast majority of these companies are family controlled. Many large Canadian companies (e.g., Power Corp., Magna Corp., Bombardier Inc., Quebecor Inc.) are still controlled by the founders or their families. On the other hand, Canada retains the corporate governance mechanisms and minority shareholder protections typically found in most Anglo-Saxon countries (La Porta et al., 1998; 1999). Furthermore, there is evidence to suggest that while Canada is believed to offer good protection to minority shareholders, large shareholders are nevertheless able to reap private benefits.[3] This study therefore adds to the literature on firm performance and specific ownership structures (La Porta et al., 2002; Claessens et al., 2002; Cronqvist and Nilsson, 2003) and the growing literature on the costs and benefits of concentrated ownership. This investigation focuses on the distinction between the presence of large inside and outside shareholders in the firm's ownership structure. We define a large inside shareholder as an individual shareholder who holds significant[4] direct or indirect ownership interest—through another company and/or family links—and who is at the same time a member of the firm's management. A large outside shareholder is defined as a person or company that holds significant direct or indirect ownership but does not directly participate in the management of the firm. Similar to the studies by Shleifer and Vishny (1997) and Claessens et al. (2002), I argue that the monitoring role and performance impact of large shareholders depend on the closeness of their association to the firm's management. The ability of large shareholders to pursue private goals unrelated to profit maximization increases with their participation in firm management. Although equity ownership may exert an important incentive to closely monitor management decisions, owner commitment and willingness to intervene may crucially depend on who they are (Lehmann and Weigand, 2000). As such, along with the distinction between large inside and outside shareholders, I differentiate between firms having a single shareholder with voting control and firms having a non-controlling shareholder, in order to examine whether the performance impact is exacerbated in the presence of a controlling shareholder in the ownership structure. I also contrast different types of large shareholders (family, industrial, and financial institution), since they may have different objectives leading to different costs and benefits. As a means to investigate these issues, I used a panel data set of 159 Canadian non-financial public firms with large shareholders listed in the *Financial Post Survey of Industrials* from 1997 to 1999. In line with the literature on corporate governance, I used the Q ratio to measure performance (McConnell and Servaes, 1990; Villalonga, 2004), while controlling for other well-documented inside governance mechanisms such as board composition and incentive structure. The findings suggest that large inside shareholdings tend to be negatively associated to firm performance, while no association is found in firms with a majority of large outside shareholdings or firms combining large inside and outside shareholdings in the ownership structure. As far as large outside shareholding is concerned, ownership concentration in the hands of large inside shareholders is apparently perceived as shareholder entrenchment, which is better able to extract value from firm performance to the detriment of minority shareholders. The negative performance effect of large inside shareholders is mitigated, however, when monitored by large outside shareholders. Concentration of voting rights is negatively associated to firm performance only in firms with a majority of large outside shareholders, suggesting that the market may not discriminate between voting rights and ownership concentration in owner-managed firms. Although the results for the identity of large shareholders are not conclusive, there is evidence that family and institutional large shareholders wield difference performance impacts. This document is structured as follows. Section two presents the literature review. Section three describes the sample and variables used in the investigation. Section four presents and analyzes the empirical findings. Finally, the document ends with conclusions and suggested avenues for further research.

[2] See for example Daniels and Halpern (1996) and Craighead et al. (2004) on concentration of ownership in Canada.

[3] Despite the legal protections offered by Canadian business law, Ben-Amar (2005) found certain forms of expropriation in Canada.

[4] Canadian securities regulations require disclosure of individual shareholdings greater than 10 percent. Firms with no individual shareholdings greater than 10 percent are considered to have diffuse ownership structure.

2. Background and hypotheses[5]

The general view is that the presence of a large shareholder in a widely held firm should have a positive effect on firm performance. Large shareholders, as opposed to small shareholders, have greater resources and incentives to acquire information and monitor managers, thus reducing some agency costs (Shleifer and Vishny, 1997). The studies by Demsetz (1983), Pound (1995) and Lehmann and Weigand (2000) have challenged this premise, however, arguing that ownership concentration does not necessarily result in protection against management entrenchment and profit dispersion. They advocate that in some circumstances, large shareholdings can actually be harmful to firm value. Aside from these conflicting perspectives, the empirical evidence on the associations between ownership concentration and firm performance is mixed and almost exclusively based on US and UK evidence.

As LaPorta et al. (1998: 1114) point out: "Law and the quality of its enforcement are potentially important determinants of what rights security holders have and how well these rights are protected." These authors show that common-law countries such as Canada generally have the strongest legal protections for investors. They further show that concentration of share ownership in the largest public companies is negatively related to investor protection, which places Canada in a unique position compared to some of its common-law counterparts.[6] La Porta et al. (1997, 1998) further developed an "antidirector rights index"[7] to capture the legal environment. Canada gets the highest score at 5 out of 6, similar to the UK and the US. La Porta et al. (1998) and Dyck and Zingales (2004) also consider the quality of disclosure standards, as measured by the quality of accounting standards and their rule-of-law enforcement, the efficiency of the judicial system, corruption, and the risks of expropriation and contract repudiation. Canada again rates above average, even for the Anglo-Saxon countries. Dyck and Zingales (2004) suggest that extra-legal institutions play an important role in constraining private benefits. They propose measures to capture levels of product market competition, public opinion pressure, internal policing through moral norms, labor as a monitor, and government as a monitor. Once again, Canadian scores are similar to those of the UK and the US.

Nonetheless, widely held firms, although the norm in the US and the U.K, are not prevalent in most other countries. In Canada, closely held firms (usually family controlled but also state controlled or owned by widely held corporations or financial institutions) dominate the economic landscape. La Porta et al. (1999), Claessens et al. (2002), Barca and Becht (2001), Faccio and Lang (2002), and Dyck and Zingales (2004) suggest that the main agency problem outside the US and the UK is not the manager/shareholder conflict but rather the risk of expropriation by the dominant or controlling shareholder at the expense of minority shareholders. Others argue that large shareholder controlled firms make less than optimal investment decisions due to a lack of diversification (they hold a great portion of their wealth in a single company[8]) (Zhang, 1998), the awarding of firm positions to associated members, and the reluctance to undertake the creative destruction of controlled but outdated technologies to make way for innovation (Morck and Yeung, 2003).

Along this line, the studies by Demsetz and Lehn (1985), Shleifer and Vishny (1997), and Schulze et al. (2001), for example, claim that large shareholders can be harmful to minority shareholders if they have the opportunity to pursue private goals unrelated to profit maximization. Further, large shareholders closely associated with management may collude to expropriate minority shareholders. Schulze et al. (2001) suggest that agency problems associated with private ownership and owner management are more difficult to resolve, due to self-regulation and problems engendered by altruism. Hellwig (2000) proposes that large shareholders combined with owner management may collude to keep minority shareholders at bay. Lehmann and Weigand (2000) find that the negative impact of ownership concentration on the firm's profitability intrinsically depends on stock market exposure and the type of control rights. Maury and Pajuste (2004) suggest that a large outside shareholder has the power and incentive to monitor management so as to reduce profit diversion to the benefit of all shareholders, while large inside shareholders may represent a controlling coalition with management or other shareholders to share diverted profits. The evidence supports the argument that potential large shareholder entrenchment and the consequent impact on firm performance may be greater and/or different in firms with predominantly large inside ownership (or owner-managed firms) than in firms with large outside shareholders.

The potential for negative impact on firm performance is even greater when large shareholders

[5] A substantial body of articles on the issue of governance in accounting and finance has been published to date. Our review rather focuses on large shareholders. See Shleifer and Vishny (1997) for a broader literature review.

[6] LaPorta et al. (1998) show that average ownership of the three largest shareholders in the 10 largest Canadian non-financial firms is 40% compared to 28%, 19%, and 20% in Australia, the UK, and the US, respectively. It should be noted that the average for English-origin countries is 43%, making the Canadian level of concentration comparable to that of Ireland, South Africa, New Zealand, and most English-origin Asian countries.

[7] The index is formed by adding 1 when (i) one share = one vote; (ii) shareholders can mail in a proxy vote; (iii) shares are not blocked before the Annual General Meeting; a cumulative vote is allowed; (iv) an oppressed minority mechanism is in place; (v) a pre-emptive right to new issues exists; and (vi) minimum shareholding to force an extraordinary meeting is less than 10%.

[8] Fama and Jensen (1985) show that undiversified large shareholders use different capital budgeting decision rules than do well-diversified shareholders.

occupy executive positions in the firm. The appointment of a significant shareholder or shareholder heir as an officer, for example, can wield a significantly negative impact if the individual does not have the talent, expertise, or competency to run the business. These individuals may lack the incentives that professional managers have to ensure their reputation in the executive labor market. The opportunity costs created by a less than optimal appointment are ultimately borne by all shareholders, thereby turning over some private benefits to the large shareholder. Furthermore, effective control of large shareholders means fewer opportunities for corporate buyouts of inefficiently managed firms. For instance, family and owner-managed firms, defined as firms having pools of individuals or families as large shareholders, are widely prevalent in Canada. These individuals and families are often company founders or their heirs who tend to directly participate in firm management. As such, individual and family shareholders are normally considered large inside shareholders, in contrast with institutional/corporate large shareholders, who are considered large outside shareholders[9] (Lehmann and Weigand, 2000; Klein et al., 2004).

Recent empirical studies have attempted to measure the potential transfer of wealth from minority shareholders and less than optimal investment decisions on the part of firms with concentrated ownership. The results contrast with evidence in the US (Agrawal and Mandelker, 1990) and the UK (Sudarsanam, 1996) showing the benefits of large shareholder monitoring. Dyck and Zingales (2004), for example, find higher benefits of control associated with less developed capital markets and more concentrated ownership in Asia, albeit these benefits are curbed by legal and extra-legal mechanisms, particularly media pressure and tax enforcement. Other studies (Zingales, 1995 and 1995(a); Nenova, 2003) show that legal environment, law enforcement, takeover regulations, and corporate charter provisions can explain cross-country variations in the measure of private benefits. Doidge (2004) further finds that US cross-listing improves the protection afforded to minority shareholders and decreases private benefits. Bertrand et al. (2002) find evidence consistent with significant tunneling in Indian firms via non-operating transactions. Ben-Amar and André (2005) and Bigelli and Mengoli (2004) find a non-monotonic relationship between the participation of large shareholders and abnormal returns for bidder shareholders in Canada and Italy, respectively.

Drawing on the literature, this study proposes to re-examine the relationship between ownership structure and firm performance in Canadian firms with large shareholders in the ownership structure. As noted above, the Canadian market offers a particularly apt setting, since it features both high levels of ownership concentration and strong legal protections for investors. More specifically, this study aims to add to the literature by investigating whether the impact of large shareholders on firm performance depends on their identity and closeness to firm management. A key contribution of this study is the attempt to differentiate the monitoring role of large inside and outside shareholders. The rationale is that direct participation in the firm's management by shareholders may represent a higher degree of control at any given level of shareholdings than the control provided by outsiders (Cubbin and Leech, 1983). In line with the previous literature, large inside shareholder is defined as either an individual or family shareholder with significant ownership interest who is also an executive of the firm, or else another company whose owner or a member of the owner's family is also a firm executive. A large outside shareholder is defined as a person or company that does not participate in the management of the firm. This classification aims to distinguish between the indirect external monitoring of large outside shareholders and the direct monitoring, or decision-making, of large inside shareholders. Similar to the study by Maury and Pajuste (2004), I take the perspective that large inside shareholders may represent a controlling coalition with management. This reasoning leads to the following hypothesis:

Hypothesis 1: The association between large shareholdings and firm performance is negative in firms with a majority of large inside shareholders in its ownership structure.

In addition, empirical studies such as La Porta et al. (2002), Claessens et al. (2002), and Cronqvist and Nilsson (2003) provide evidence that the negative effect of large shareholders is magnified when there is a substantial departure from the one-share, one-vote rule. Maury and Pajuste (2004) suggest that concentrated voting power may allow for more centralized decision-making and better concealment of profit diversion. Following this reasoning, I propose the following hypothesis:

Hypothesis 2: The negative association between the presence of a large controlling shareholder and firm performance is significantly greater in firms with a majority of large inside shareholders.

Finally, I investigate whether the identity of the owner affects the association between large shareholders and firm performance. Consistent with Claessens et al. (2002), the regulatory environment and fiduciary responsibilities of institutional/corporate shareholders render them closer monitors of management decision-making. It is equally possible that the marginal cost of private benefit extraction is higher for companies with a financial institution as a large shareholder. This argument leads to the following hypothesis:

Hypothesis 3: *The association between large shareholdings and firm performance is affected by the identity of*

[9] The literature also identifies owner-managed and non-owner-managed firms to differentiate between situations where large shareholders participate in management and where they do not.

the largest shareholder – individual or family, financial institution or industrial.

3. Methodology

Sample and data collection

The empirical testing is based on a panel set of 159 Canadian non-financial public companies with large shareholders included in the Financial Post's *Survey of Industrials* listed on the Toronto Stock Exchange (TSE) over a three-year period (1997-1999) in the following economic sectors: primary, manufacturing (non-durables), manufacturing (durables), transportation and utilities, wholesalers and retailers, and consumer services. I collected data from two separate sources.

First, information on firm governance was taken from the SEDAR[10] database, as disclosed in the firms' Management Proxy Circulars. Using corporate governance information for a given fiscal year, this database was designed to represent the corporate governance mechanisms present at the beginning and for the duration of that year. Second, to measure firm performance and control variables, financial information was obtained from the Compustat database. Nineteen companies were dropped from the target sample, either because the financial data in the Compustat database for the period under analysis was incomplete or else they were deemed outliers. After eliminating observations where no large shareholdings or governance data were involved, I retained 402 usable firm-year observations.

Firm performance

The dependent variable I examine is firm future performance, as measured by the firm's Q ratio. Firm's future performance (Qt+1), is measured at the end of the subsequent fiscal year for which the firm's governance information was obtained. The Q ratio measures firm performance in terms of company valuation, and is assumed to capture firm performance as a result of managerial decisions and governance structure quality, which tend to be reflected in market price and not in traditional accounting numbers.

The governance literature also maintains that the firm's Q ratio measures the intensity of the alignment between shareholder and manager interests. Similar to the studies by Agrawal and Knoeber (1996), Yermack (1996), and Barnhart and Rosenstein (1998), I calculated the firm's Q ratio as follows:[11]

Q = (EQUITY + LTD + STD + PFD + CV) / ASSETS

Where;

EQUITY = Market value of equity[12]
LTD = Book value of long-term debt
STD = Book value of short-term debt
PFD = Preferred stock at liquidating value
CV = Book value of convertible debt and convertible preferred stock
ASSETS = Book value of total assets

Ownership structure

Ownership information and other corporate governance data for all the firms in the sample were collected directly from the firms' Management Proxy Circulars, as contained in the SEDAR database for each fiscal year included in this investigation. This database was designed so that the corporate governance information for a given fiscal year would represent the corporate governance mechanisms present at the beginning and for the duration of that year.

Large shareholdings (LSHt) is measured as the proportion of outstanding shares directly or indirectly controlled by a group of large shareholders in the firm's ownership structure. Canadian securities regulations require disclosure of significant shareholders, both individual and institutional, which beneficially own or exercise control at least a 10 percent of the firm's outstanding shares. Therefore, only the identities of large shareholders are disclosed in the firms' Management Proxy Circulars. Two further variables were created to distinguish whether the firm's ownership structure is dominated by large inside or outside shareholders.

As defined earlier, a large inside shareholder is an individual who is also an executive of the firm, or else a company whose owner or member of the owner's family is an executive of the firm. On the other hand, a large outside shareholder is defined as a person or company that does not participate in the management of the firm. For the group of firms, the variable LSH_inst captures the overall percentage of outstanding shares held by large inside shareholders, while the variable LSH_outt captures the overall percentage of outstanding shares held by large outside shareholders. These measures are consistent with much of the prior governance empirical research, such as Coles et al. (2001), Randøy and Goel (2003) and Maury and Pajuste (2004).

It is worth noting that many firms in this sample have multiple large shareholders. For instance, the maximum number of individual large shareholders disclosed by a single firm is four. However, I identified many instances where these multiple large shareholders had family and/or fiduciary links, and were therefore classified as a group of either large inside

[10] The System for Electronic Document Analysis and Retrieval (SEDAR) is a Website that has been operated by The Canadian Securities Administration since 1997. It provides filings of publicly available documents for all Canadian public companies, in order to facilitate the electronic filing of securities information as required by the securities regulatory agencies in Canada.

[11] The Q ratio is the market value of the firm's assets divided by the replacement value of the firm's assets, and represents the firm's anticipated future earnings. Chung and Pruitt (1994) show that this simplified measure is strongly correlated with the more sophisticated measure of Tobin's Q, and has the added advantages of using information that is more readily available and preventing unduly restricted sample sizes. However, this measure is also known to produce downward-biased measures, and is prone to rank incorrectly.

[12] If a firm has more than one share class listed, I summed the market values of the different share classes.

or outside shareholders. Along with inside/outside classification, I also identified in the sample firms with concentrated voting power in the hands of a single large shareholder.

The indicator variable CONTRt captures firms having a single shareholder with direct or indirect control of over fifty-one percent of the voting capital. The study by Klein et al. (2004) uses a similar cutoff to classify a single controlling shareholder in the ownership structure.

Other control variables

Similar to many governance studies (e.g., Coles et al., 2001; Cotter and Sylvester 2003), I controlled for other governance attributes. The proportion of outside, unrelated directors on the board (OUTt) generally measures the independence of the board and its efforts to monitor top management, particularly the Chief Executive Officer (CEO). In a concentrated ownership context such as Canada, boards also monitor large inside shareholders. It follows that an outside director is independent of and unrelated to management[13] and is free of any interest and any other business or relationship which could, or could reasonably be perceived to, materially interfere with the director's ability to act with a view to the best interests of the company, other than interests and relationships arising from shareholding.[14] The studies by Core et al. (1999), Coles et al, (2001), and Klein et al. (2004) adopt a similar proxy. DUALITY is an indicator variable that captures whether the CEO simultaneously occupies the position of Chairman of the Board. CEO ownership (CEOSHt) is measured by the ratio of the number of shares directly or indirectly controlled by the firm's CEO to the firm's total amount of outstanding shares in the same period. This variable is intended to measure the ownership of professional CEOs, and therefore excludes CEOs who are at the same time large inside shareholders. As such, CEO shareholdings greater than (or close to) 10 percent and CEOs with family links to a large shareholder are considered large inside shareholders (LSH_inst). Consistent with the study by Bushman et al. (1996), the relative importance of CEO performance-contingent compensation (CCOMPt) is measured by the ratio of cash bonus plus stock options granted to the total compensation earned by the CEO in the same period. The CEO's total compensation includes salary, cash bonuses, other compensations, and stock options. Stock options are valued at 25% of their exercise price at the time of the grant.[15]

I measured additional variables to control for other factors that have been shown to impact on firm performance. Firm SIZEt is measured by the logarithm of the firm's total assets for each year, and is included in the analysis to account for potential economies of scale and the monitoring complexity that larger firms require.[16] In addition, larger firms have lower growth opportunities, implying a negative correlation between firm size and the measure of firm future performance. Similar to the studies by Agrawal and Knoeber (1996), and Randøy and Goel (2003), I control for firm use of debt financing. Debt financing (DEBTt) is measured by the ratio of the firm's book value of short- and long-term debt to total assets. The use of debt financing is in fact a governance mechanism,[17] and a high level of debt financing is assumed to negatively affect the firm's growth and profitability. A dummy variable (CROSSt) was created to capture Canadian public firms with stock traded on the NYSE, AMEX, and/or NASDAQ. Recent studies, including Doidge (2004), suggest that firms that cross-list in the US also signal their quality and willingness to comply with a stricter set of governance measures. Industries vary widely in the degree of fixed assets they carry and in the degree to which they use debt, with corresponding differences in firm value and financial performance. Accordingly, I also control for industry effects by applying dummies to the one-digit industry groups extracted from the Compustat database.[18]

4. Results

Descriptive analysis

Table 1, Panel A presents the summary statistics for the sample variables using the full sample (N=402), including means, medians, standard deviations, minimums, and maximums. Table 1, Panel B presents the variable means and standard deviations for the following sub-samples: firm-year observations for firms with a majority of large inside shareholders (LSH_inst, N=219) versus firms with a majority of large outside shareholders (LSH_outt, N=183). Column three in Table 1, Panel B presents the results of

[13] If any of the following applied to a director of the sampled firms, she/he was not classified as an outside, unrelated director: employee of the company (currently or within the last three years); executive of an affiliated company; director providing legal, auditing, or consulting services to the company; or director with family links to the firm's CEO or a significant shareholder.

[14] Definition used by the Toronto Stock Exchange (TSE – 1994), Corporate Governance Guidelines.

[15] Murphy (1999) raises some issues related to the evaluation of stock options granted to executives (distinguishing between cost of options to the firm and value to executives) and to the fact that no recognized valuation methodology has been developed to date. Lambert et al. (1993) state that evaluating options at 25% of their exercise price generates values similar to those obtained with more sophisticated evaluation models. This paper follows the stock option valuation method used by Core et al. (1999).

[16] I also used the logarithm of the sales to measure size, and the results are identical to those presented in the subsequent section. Yermack (1996) also shows robust results with diverse size measures.

[17] Further details on the level of debt financing as an internal governance mechanism can be found in Agrawal and Knoeber (1996).

[18] Similar to Morck et al. (1988), several authors also include a measure for R&D and marketing expenses. Unfortunately, the allowable capitalization for R&D expenses in Canada makes it difficult to determine this variable. In addition, Canadian firms are not required to post their marketing costs separately in their financial statements. Yermack (1996) also includes measures for current and past performance. The absence of these variables reduces the predictive power of our regression model.

a test of mean differences between the two sub-samples.

Insert Table 1, Panels A and B

The variable measuring firm's future performance (Qt+1) for the full sample of the firms has a skewed distribution with a mean (median) of 1,341 (0,844). For this variable, 25% of the firm-year observations have Qt+1 greater than 1,461, and 25% have Qt+1 lower than 0,606. As expected, most of the observations in the upper 95% percentile (Qt+1= > 5,092) represent firms with two-digit SIC 28 – Chemicals and allied products, classified in the non-durable manufacturing economic sector. Average Qt+1 are 1,235 and 1.468 for firms with a majority of large inside shareholders and large outside shareholders, respectively (Table 1b).

The proportion of shares owned by large shareholders (LSHt - Table 1, Panel A) is normally distributed with a mean (median) of approximately 50.3% (51.7%). Overall ownership by large shareholders and large inside shareholdings is greater in this Canadian sample of public companies than in US studies (e.g., Bushee, 1999). Large inside shareholder ownership is represented by the LSH_inst variable, with an overall mean (median) of 24% (12%). In the sub-sample of firms with a majority of large inside shareholders (N = 219), approximately 122 firms have as the main large shareholder either an individual who is also the CEO and/or board chairman, or else a company related to the CEO and/or board chairman. The variable LSH_outt measures overall ownership by large outside shareholders, with a mean (median) of 26.4% (15.4%). In the sub-sample of firms with a majority of large outside shareholders (N=183), the largest shareholder is either a financial institution (N = 96) or an industrial firm (N= 87). Overall, the variables LSHt, LSH_inst and LSH_outt document that this sample of Canadian firms has a greater proportion of outstanding shares held by large shareholders than the average US public firm. As mentioned above, this situation offers a unique setting to investigate whether the identity and closeness to management of large shareholders have different performance effects.

The OUTt variable measures the proportion of outside directors on the board. In the full sample (Table 1, Panel A), this variable is normally distributed with a mean (median) of 64.8% (66.7%). In the US, Barnhart and Rosenstein (1998) and Core et al. (1999) obtained results of 60.1% and 64% outside directors, respectively. Magnan et al. (1999) found an average of 66.2% outsiders in a sample comprising 139 of the 150 largest firms listed on the Toronto Stock Exchange. Table 1, Panel B documents that the average proportion of outside directors is significantly greater (71.1%) in the sub-sample of firms with a majority of large outside shareholders than that obtained in the sub-sample with a majority of large inside shareholders (59.5%) (t-test = 6.71). CEO is also the board chair, DUALITYt, in 42.0% of the firm-year observations. CEO duality is significantly higher (56.2%) in the subgroup of firms with a majority of large inside shareholders than in the subgroup of firms with a majority of large outside shareholders (25.1%) (t-test = 6.28).

As discussed earlier, CEO shareholdings greater than 10 percent and/or CEO shareholdings with family links to a large shareholder are considered large inside shareholdings (LSH_inst). CEO ownership (CEOSHt) in the full sample is skewed with a mean (median) of approximately 0.8% (0%). However, CEOSHt as a measure of professional managerial ownership is meaningful in the sub-sample of companies with a majority of large outside shareholders, with a mean (median) of 1.1% (Table 1, Panel B). This level of managerial ownership is comparable to those found in the studies by Barnhart and Rosenstein (1998) and Core et al. (1999), which found slightly higher levels in the US, with managerial ownership at mean (median) of 2.2% (0%) and 1.5% (0.0%), respectively.

The CCOMPt variable captures the relative importance of CEO performance-contingent compensation. This variable is normally distributed with a mean (median) value of 36.4% (36.5%). Analysis of the percentiles for this variable indicates that almost 17% of our sample observations have values equal (or close) to 0. This means that CEO compensation packages do not include, or have an insignificant proportion of, performance-contingent components for approximately 20% of the sample. Although not reported, note that the average cash bonus in this sample is 28%, while the value of stock options is on average 19% of the CEO's total compensation for the same period.[19] Table 1, Panel B shows no significant difference (t-test = 0.792) in the variable CCOMPt between the two large shareholder sub-samples. The CROSSt variable indicates that 26.6% of firm-year observations, or 35 firms, are cross-listed in the US (20 in the large outside shareholder group and 15 in the large inside shareholder group). The SIZEt variable for the full sample is normally distributed with a mean (median) of 12.47 (12.42). Since the measure of firm performance (Qt+1) is also a function of the firm's total assets, SIZEt is expected to be negatively associated with the Qt+1 ratio. The variable DEBTt is also normally distributed, with a mean (median) of 43.8% (44.9%). As shown in Table 1, Panel B, there are no significant differences in SIZEt among the subgroups, although the large inside shareholder group is more highly indebted DEBTt) than the large outside shareholder group.

Insert Table 2, Panels A and B here

Table 2 compares sub-groups within firms with a majority of large inside (Panel A) and outside (Pa-

[19] This result is similar to that of Magnan et al. (1999), which documents CEO average annual bonus at 31% and stock options at 25% of total compensation during 1994-1996 for the 100 largest Canadian firms.

nel B) shareholder sub-samples. Panel A contrasts large inside shareholdings in the absence of another large outside shareholder (136 of 219, or 62.1% of large inside shareholder observations, and 33.8% of the full sample) with large inside shareholdings in the presence of a large outside shareholder in the ownership structure (83 of 219, or 37.9% of large inside shareholder observations, and 20.6% of the full sample). It should also be noted that the majority of large inside shareholder firms are owned by individuals or families. The only significant difference between these two groups beyond the presence of a large outside shareholder is sole control of the firm by a large family shareholder in 40.4% percent of cases, compared to 22.9% percent when family-owned firms have a large outside shareholder.

Table 2, Panel B breaks down the majority of large outside shareholder sub-sample (183 observations) based on the identity of the largest outside shareholder: financial (96 of 183, or 52.6% of large outside shareholders, and 23.9% of the full sample) versus industrial (87 of 183, or 47.5% of large outside shareholders, and 21.6% of the full sample). These two sub-groups differ significantly. Firms with an industrial largest shareholder outperform the financial firms. Firms with an industrial largest shareholder are also larger and have fewer outsiders on the board, greater CEO contingent compensation, and less CEO duality. Table 3 presents the mean values of the Qt+1 ratio by different levels of large shareholdings for the full sample and for the sub-samples of firms with a majority of large inside and outside shareholders. Table 3 shows a decreasing and monotonic association between Qt+1 and the different levels of large shareholdings. Empirical evidence based on US samples documents a positive performance effect of large shareholders, suggesting that the presence of large shareholders increases the monitoring of managerial decision-making. In the US, however, large shareholder ownership, along with the presence of families, founders, and management among these large shareholders, is much lower than in Canadian public firms (Bushee, 1999). A decreasing and monotonic association between Qt+1 and large shareholding is also observed in the sub-sample of firms with a majority of large outside shareholders, while a curvilinear association is observed in the sub-sample of firms with a majority of large inside shareholders. In this last sub-sample, firm performance appears to increase when total large inside shareholdings reach fifty percent, or ownership control level.

Insert Table 3 here

Table 4, Panel A presents the Pearson correlation coefficients among the main variables investigated for the full sample. The proportion of ownership by large shareholders, LSHt, is negatively correlated with the measure of firm's future performance Qt+1. Surprisingly, the correlation between firm's future performance and large shareholdings is not statistically significant, for either large insider or large outsider shareholdings. As expected, Qt+1 is positively correlated with the proportion of outsiders on the board (OUTt), cross-traded firms (CROSSt), and the relative importance of CEO performance-contingent compensation (CCOMPt). Also as expected, firm future performance is negatively correlated with firm SIZEt and DEBTt. Table 4, Panel A documents a negative correlation between large inside shareholdings (LSH_inst) and the proportion of outside directors on the board (OUTt). However, this correlation is positive for large outside shareholdings (LSH_outt).

As expected, Table 4, Panel A documents a negative correlation of proportion of outside directors (OUTt) to duality, presence of a controlling shareholder, and CEO ownership. Finally, the dummy variable CROSSt is positively correlated with the relative importance of CEO performance-contingent compensation and firm size, and negatively correlated with firm's level of debt financing. Overall, these univariate results are consistent with empirical evidence in the prior governance literature (e.g., Agrawal and Knoeber, 1996; Barnhart and Rosenstein, 1998). Table 4, Panels B and C present the Pearson correlations for sample variables within the two sub-samples of large shareholders. Surprisingly, the correlation between large shareholdings and firm future performance is not significant among the sub-sample of firms with a majority of inside large shareholders. Contrary to expectation, large shareholdings are negatively correlated with firm performance in the sub-sample of firms with a majority of large outside shareholders. The positive correlation between the proportion of outside directors (OUTt) and firm performance (Qt+1) remains significant only for the sub-sample of firms with a majority of large outside shareholders (LSH_outt). As expected, CEO ownership is positively correlated with firm performance and negatively correlated with large shareholdings in the sub-sample of firms with a majority of large outside shareholders (Table 4, Panel C). These results seem to support my argument that the performance effect of large shareholders may depend on their identity and closeness to management.

Insert Table 4, Panels A and B here

Regression analysis

Similar to numerous governance studies (e.g., Claessens et al., 2002; Maury and Pajuste, 2004; Klein et al.; 2004), I estimated the following multivariate regression model:

$$Qit+1 = \alpha + \beta 1LSH\_insit + \beta 2LSH\_outit + \beta 3CEOSHit + \beta 4CONTRit + \beta 5OUTit + \beta 6DUALITYit + \beta 7CCOMPit + \beta 8CROSSit + \beta 9DEBTit + \beta 10SIZEit + Year\ dummies\ (Y97, Y98)\ ^{20} + Industry\ dummies\ (IND1\ to\ IND4)\ ^{21} + \varepsilon$$

[20] As discussed previously, the data used contains firm governance information for three consecutive fiscal years (1997, 1998, and 1999). Two dummy variables, with values of 1 or 0, were created to determine whether governance information relates to fiscal years 1997 and 1998.

where the subscript i = 1, …159 identifies individual firms, t = 1997, 1998 and 1999 denotes time periods, and
Qit+1 =firm i's Q ratio in year t+1
LSH_insit = percentage of outstanding shares held by firm i's large inside shareholders in year t
LSH_outit = percentage of outstanding shares held by firm i's large outside shareholders in year t
CEOSHit = firm i's level of CEO ownership in year t
CONTRit = dummy equals 1 if firm i has a controlling shareholder in year t
OUTt = firm i's percentage of independent board directors in year t
DUALITYit = dummy equals 1 if firm i's CEO and Chairman are the same person in year t
CCOMPit = firm i's relative importance of CEO performance-contingent compensation (total bonus and options/total compensation) in year t
CROSSit = dummy equals 1 if firm i's shares are cross-traded in year t
DEBTit = firm i's indebtedness in year t
SIZEit = firm i's log of total assets in year t

In order to test the proposed hypotheses, I estimated a panel regression model[22] using the General Least Square (GLS) method, with appropriate control for random effects. In a cross-sectional time-series sample such as this study data set, the Ordinary Least Square (OLS) assumption that all observations are independent can lead to misspecification due to serial correlation of the error terms for observations from the same firm (Baltagi, 2001). The pooled GLS technique, however, allows for cross-sectional heteroscedasticity and serial correlation, while the random-effects estimator is the weighted average effect of omitted variables that may be constant over the sampled firms. Although not reported here, I also estimated the year-by-year regression model using OLS and the pooled sample using clustered OLS. Overall, the results are very similar to the GLS estimation with random effects. Finally, I performed a Hausman test to evaluate whether fixed effects estimators would be more efficient than random effects estimators. The result of the Hausman test ($\chi^2 = 5.42$) leads to the conclusion that the GLS random estimation is as efficient as a fixed effects estimation.

Insert Table 5 here

Table 5 presents the GLS results for the regression model, which examines the main effects of large shareholdings along with other governance attributes on firm performance. In Equation (1), I examine the associations using the full sample, and do not distinguish whether the firm's large shareholdings are owned by inside or outside shareholders. In Equations (2), (3) and (4), I examine the proposed associations by looking at firms with a majority of inside large shareholders while distinguishing between inside shareholding with and without the presence of an outside large shareholder in the ownership structure. In equations (5), (6) and (7), I examine the proposed associations by looking at firms with a majority of large outside shareholders while distinguishing between financial and industrial largest shareholder. In all these analyses, the model controls for other internal mechanisms in the firm's governance structure, and proves to have significant predictive power, with adjusted r-squares ranging from 0.15 to 0.46. This compares very favorably with other governance studies, which generally explain from 5% to 10% of the performance variance.

The estimated coefficients reported in Table 5 Equation (1) document that ownership concentration, as measured by overall ownership of large shareholders, including both inside and outside shareholdings, is negatively associated with firm performance.[23] This suggests that large shareholdings tend to be harmful to firm performance in this sample of Canadian publicly-traded firms. This negative association contrasts with evidence found using a US sample (e.g. Shleifer and Vishny, 1997), and may be explained by higher levels of large shareholdings and the presence of multiple large shareholders in the ownership structures in this Canadian sample. This result is consistent, however, with the agency cost of private ownership proposed by Schulze et al. (2001), which suggests that large shareholdings compromise the efficiency of market forces as external governance mechanisms and negatively impact firm performance. In equations (2) and (5) I segment the sample and estimate the model for firms with a majority of large inside and outside shareholders, respectively. In Equation (2), the proportion of ownership by large shareholders is not significant for either large inside (LSH_ins_t) or outside (LSH_out_t) shareholder categories. Similarly, in Equation (5), the proportion of ownership by large outside shareholders is not significantly associated with firm performance. However, support for hypothesis (1) is found when the subsample of firms with a majority of large inside shareholders is segmented into two sub-groups: with and without large outside shareholders – Equations (3) and (4), respectively.

[21] According to the firms' primary two-digit SIC codes, and following Standard & Poor's Economic Sector classification, the firms included in my final sample were reclassified into six separate economic sectors: (1) Primary, (2) Manufacturing (non-durable), (3) Manufacturing (durable), (4) Transportation and utilities, (5) Wholesales and retailers, and (6) Consumer service. A dummy variable, with values of 1 and 0, was created for each of the first five economic sectors mentioned above.

[22] See, Baltagi (2001) for more details on population models that explicitly contain time- and individual-constant unobserved effects. Before performing the regression analyses, I conducted certain diagnostic tests to improve model specification and better interpret further OLS or GSLS estimates. I also performed the Breusch-Pagan (B-P-G) and Goldfeld-Quandttest tests for the null hypothesis of equal error variance in the sample (Homoscedasticity) and the Chow test for structural change.

[23] The particular interest of this study is the distinction between large inside and outside shareholders, but to provide a further contrast to the previous literature, I also present the results (Equation 1) with a variable measuring the firms' total large shareholdings.

Interestingly, in Equation (3), the coefficient of large inside shareholdings is negative and significant, while in Equation (4), neither of the large shareholdings coefficients (LSH_ins_t and LSH_out_t) is significantly associated to firm performance. More precisely, Equation (3) in Table 5 indicates that when firms are exclusively controlled by large inside shareholders, a 1% increase in the ownership by insiders leads to an average 2% decrease in firm performance, as measured by firm's Q ratio. Contrastingly, Equation (4) suggests that large inside shareholdings do not have the same performance impact when in the presence of an outside shareholder with a significant interest in the firm. Although these results do not provide direct support for hypothesis (1), the contrast between Equations (2), (3), and (4) corroborates this study's argument that the impact of large shareholdings on firm performance varies by closeness to firm management. The results suggests that ownership concentrated in the hands of large inside shareholders tends to be perceived by the market as entrenched shareholding, and therefore better able to extract value to the detriment of the firm's value to minority shareholders. This is consistent with the evidence found in the studies by Morck et al. (1988) and Claessens et al. (2002). Further, the results contribute to the evidence provided by the study by Maury and Pajuste (2004) on the coalition and performance impact of large family and institutional shareholders. In sum, I interpret these results as evidence that the controlling coalition and negative performance effect of large inside shareholders is mitigated when in the presence of monitoring by outside large shareholders.

In contrast to hypothesis (2), the results in Table 5 suggest that voting control in the hands of a single shareholder is negatively associated to firm performance only in firms with a majority of large outside shareholders in this Canadian sample. More precisely, the coefficient estimated for the variable measuring voting concentration ($CONTROL_{it}$) in Equations (2), (3), and (4) is not significantly associated to firm performance. However, this coefficient is negative and statistically significant at 90% levels in Equations (5) and (7). Although not reported here, I also estimated equations (2) and (5), making a distinction between the presence of inside and outside controlling large shareholders, with similar results. As such, I interpret the null effect of controlling shareholders on firm performance among firms with a majority of large inside shareholders as evidence that entrenchment and/or voting power concentration is already captured by the variables measuring large inside shareholdings. This is apparently the case for the sub-sample of large inside shareholders (Equation 2), since firms with large individual and family shareholdings very often have a single shareholder with direct or indirect voting control. Moreover, the existence of non-voting or subordinate voting shares is greater in the sub-sample of firms with a majority of large inside shareholders than in the sub-sample of firms with a majority of large outside shareholders. As such, contrasting to hypothesis 2, the lack of association between the variables $CONTROL_{it}$ and Q_{t+1} seems to indicate that the penalty applied to the voting control of large inside shareholders is marginal when compared to firms with a majority of large outside shareholders. Apparently, the market does not discriminate between voting control and ownership concentration in owner-managed firms.

Given that the presence of multiple large shareholders is common in the ownership structure of this Canadian sample, the lack of support for hypothesis 2 may also be interpreted as evidence that voting concentration in the hands of a single shareholder among multiple large inside shareholders may not have the same negative performance impact as it does in a less concentrated ownership structure, such as in the US and the UK. On the other hand, as documented in Table 5, Equation 5, firms with a majority of large outside shareholders are apparently penalized for having a single controlling shareholder in the ownership structure. Nevertheless, the contrast between Equations (6) and (7) suggests that this result is driven by firms with an industrial shareholder as largest shareholder. This difference may be explained by the view that the fiduciary responsibilities of financial institutions make them closer monitors, which may in turn reduce the negative performance impact of voting control.

Along this line of reasoning, hypothesis 3 investigates whether the identity of the largest shareholder affects the association between ownership concentration and firm performance. In order to investigate this hypothesis, I segmented the subsample of firms with a majority of large outside shareholders into two complementary sub-groups: firms with a financial institution and firms with an industrial as the largest shareholder in the ownership structure – Equations (6) and (7) respectively. These two categories can be contrasted with Equation (3), which was estimated with firms having individuals and families as the largest shareholder. As discussed earlier, the coefficient of large shareholdings in Equation (3) is negative and statistically significant at 95% level, while these coefficients are not statistically significant (or different) in Equations (6) and (7). Thus, the results document a performance difference between the categories of individual/family and institutional largest shareholder, but no significant difference between the two categories of institutional shareholders, financial and industrial. Although these results may be driven by the limited number of observations in each largest outside shareholder category, the results are similar to the comparison between the performance impact of large inside and outside shareholders. As such, I interpret the results in Equations (3), (6), and (7) as providing no support for hypothesis 3. Apparently, the identity of large shareholders has no effect on the performance impact of either large inside or outside shareholders.

A further contrast among the equations reported in Table 5 provides some interesting results regarding the performance impact of other governance attributes. CEO ownership, for example, has a positive performance impact within the industrial largest shareholder category, while this effect seems to be negative within firms with a financial institution as largest shareholder, and it is not statistically significant within firms with an individual or family as largest shareholder. The relative importance of CEO's performance-contingent compensation and the firm's stock being traded on another stock exchange yield a significant positive association with our measure of firm performance, but only for firms with a majority of large inside shareholders. This mechanism probably plays a counterbalancing effect in closely held firms. A practical implication of this result is that large inside shareholders hoping to reduce agency costs should strengthen alternative governance mechanisms such as those provided by performance-contingent compensation.

Surprisingly, the conventional agency wisdom on the positive performance effect of outside directors is not supported by the results reported in Table 5. This may be interpreted as support for the argument that independent directors may be ineffective monitors when serving on boards dominated by large shareholders. First, despite their impartial status and ability to offer advice on certain decisions, independent directors may have little influence on decisions involving family members or other large inside shareholder matters. Second, large inside shareholders tend to appoint to their boards outside directors who are close friends and/or happen to have a fiduciary relationship with the firm, which may compromise the directors' independence and monitoring efforts.[24] Finally, firm's level of debt financing is negatively associated with performance only in firms with a majority of large outside shareholders, confirming the expected greater use of debt financing by this sub-group. As expected, firm's size is, in general, negatively associated with the measure of firm performance.[25]

5. Discussion and conclusions

This study provides evidence of the associations between ownership concentration and firm performance, while distinguishing between the presence of large inside and outside shareholders in the firm's ownership structure. I focused on Canadian public firms with large shareholders because the presence of multiple large shareholders as well as family owners is greater in Canada than in countries with similar levels of legal protection for investors, such as the US and the UK. The empirical results provide several contributions to the literature of ownership concentration in publicly-traded firms. The results for the performance effect of ownership concentration contradict the prior governance literature, which suggests that the presence of large shareholders enhances firm performance by closely monitoring management actions and influencing management decisions to the benefit of all shareholders. The evidence documented in this study suggests the contrary. In this sample of closely held Canadian public firms, large inside shareholdings tend to be negatively associated to firm performance, while no association is found in firms with a majority of large outside shareholdings in their ownership structure. Consistent with the entrenchment perspective, I interpret the results as evidence that firm performance of closely held firms tends to be negatively affected when the presence of large inside shareholders, supported by officers and directors appointed by the dominant shareholder, threatens to capture private benefits to the detriment of residual owners. In addition, given the greater proportion of family owners among the large inside and outside shareholders in this Canadian sample of public firms, the results support the argument that conflicts of interest, combined with the effects of external market failures, threaten market performance in this type of privately held firm. The evidence seems to support the argument that owner management in closely held firms is not the governance panacea that agency theory assumes it to be (Schulze et al., 2001).

As to the distinction between large inside and outside shareholders, this study also investigates whether concentrated voting power in the hands of a single shareholder is associated to firm performance, and whether the identity of the owner affects this association. Concentrated voting power is negatively associated to firm performance only in firms with a majority of large outside shareholders. This could be because, relative to firms without a single controlling shareholder, voting rights by outsiders may represent a coalition between management and shareholders designed to efficiently divert profit to themselves. The results regarding the identity of the owners are not conclusive, but apparently a different performance impact exists between family and institutional large shareholders. Although I believe this study represents an important first step in the examination of the association between ownership concentration and firm performance, while distinguishing between inside and outside large shareholdings, it is important to point out the limitations inherent in this empirical investigation. I assume that large shareholders not directly participating in the firm's management are outsiders, and therefore independent monitors of management decision-making. Thus, a caveat should be noted, since an outside shareholder may have a certain amount of influence in the management through the appointment of managers and participation on the board of directors. Also, given the use of non-voting shares and the presence of multiple large

[24] See for example the studies by Zeckhauser and Pound (1990) and Barnhart and Rosenstein (1998).

[25] For instance, sensitivity analysis shows that debt financing is negatively associated to firm performance only within the sub-group of firms with diffuse ownership and a majority of large outside shareholders.

shareholders in the ownership structure of this Canadian sample, further research might consider refining the classification of large inside and outside shareholders to take into account the different voting rights and fiduciary duties of large shareholders in the ownership structure. Finally, a number of important empirical issues undoubtedly remain to be investigated regarding the potential cost of large shareholders. One interesting extension of this study would be to examine the sensitivity of the firm's performance-contingent payouts to firm performance, while distinguishing between inside and outside control. This may provide some answers to the question of whether entrenched insiders use performance compensation packages to extract non-justified pecuniary benefits.

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Appendices

Table 1 Panel A Descriptive Statistics for a sample of Canadian firms with Large Shareholders from 1997-1999

Variables	N	Mean	Median	Std. Deviation	Minimum	Maximum
Q_{t+1}	402	1.341	0.844	1.394	0.033	8.588
LSH_t	402	0.503	0.517	0.247	0.090	0.988
LSH_out_t	402	0.264	0.154	0.283	0.097	0.970
LSH_ins_t	402	0.240	0.121	0.278	0.097	0.937
OUT_t	402	0.648	0.667	0.181	0.200	1.000
$DUALITY_t$	402	0.420	0.000	0.494	0.000	1.000
$CONTR_t$	402	0.343	0.000	0.475	0.000	1.000
$CEOSH_t$	402	0.008	0.000	0.018	0.000	0.089
$CROSS_t$	402	0.266	0.000	0.443	0.000	1.000
$CCOMP_t$	402	0.364	0.365	0.258	0.000	0.954
$SIZE_t$	402	12.470	12.425	1.699	7.012	17.301
$DEBT_t$	402	0.438	0.449	0.180	0.013	0.799

Panel B. Means and mean difference between the sub-samples of Canadian firms with a majority of large inside shareholders and a majority of large outside shareholders

	Sub-sample of firms with a majority of large INSIDE shareholders			Sub-sample of firms with a majority of large OUTSIDE shareholders			Mean difference between firms with a majority of large INSIDE and OUTSIDE shareholders	
Variables	N	Means	Std-Deviation	N	Means	Std-Deviation	*t*- statistic	*p*- value
Q_{it+1}	219	1.235	1.122	183	1.468	1.657	1.676	0.094
LSH_t	219	0.524	0.229	183	0.477	0.264	1.907	0.057
LSH_out_t	219	0.087	0.146	183	0.475	0.261	18.804	0.000
LSH_ins_t	219	0.440	0.231	183	-	-	-	-
OUT_{it}	219	0.595	0.178	183	0.711	0.164	6.710	0.000
$CEOSH_{it}$	-	-	-	183	0.011	0.021	-	-
$CCOMP_{it}$	219	0.355	0.265	183	0.375	0.250	0.792	0.428
$DEBT_{it}$	219	0.474	0.183	183	0.395	0.166	-4.472	0.000
$SIZE_{it}$	219	12.471	1.706	183	12.468	1.694	-0.016	0.987
							z- statistic	*p*- value
$DUALITY_{it}$	219	0.562	0.497	183	0.251	0.435	-6.276	0.000
$CONTR_{it}$	219	0.338	0.474	183	0.350	0.478	0.249	0.804
$CROSS_{it}$	219	0.242	0.429	183	0.295	0.457	1.199	0.230

Qit+1 = firm i's Q ratio in year t+1; LSHit = percentage of outstanding shares held by large shareholders of firm i in year t; LSH_outit = percentage of outstanding shares held by large outside shareholders of firm i in year t; LSH_insit = percentage of outstanding shares held by large inside shareholders of firm i in year t; OUTt = firm i's percentage of independent directors on the board in year t; DUALITYit = dummy equals 1 if firm i's CEO and Chairman are the same person in year t; CONTRt = dummy equals 1 if firm i has a controlling shareholder in year t; CEOSHt = firm i's level of CEO ownership in year t; CROSSt = dummy equals 1 if firm i's share is cross-traded in year t; CCOMPt = firm i's relative importance of CEO's performance-contingent compensation in year t; SIZEt = firm i's log of total assets in year t; DEBTt = firm i's indebtedness in year t.

Table 2.

Panel A. Canadian firms with a majority of large inside shareholders: Sample means and tests of difference between the sub-group of firms having only large inside shareholders and the sub-group of firms combining large inside and outside shareholders

Variables	Firms with only large inside shareholders			Firms with large inside and outside shareholders			Mean difference between the two sub-groups	
	N	Means	Std-Deviation	N	Means	Std-Deviation	*t*- statistic	*p*- value
Q_{t+1}	136	1.261	1.134	83	1.192	1.107	-0.441	0.659
LSH_t	136	0.504	0.227	83	0.557	0.231	1.659	0.098
LSH_out_t	136	-	-	83	0.229	0.155	-	-
LSH_ins_t	136	0.506	0.219	83	0.331	0.209	5.836	0.000
OUT_t	136	0.594	0.192	83	0.598	0.154	0.200	0.842
$CCOMP_t$	136	0.366	0.268	83	0.337	0.260	-0.770	0.442
$DEBT_t$	136	0.480	0.183	83	0.465	0.185	-0.561	0.576
$SIZE_t$	136	12.596	1.809	83	12.265	1.510	-1.396	0.164
							z- statistic	*p*- value
$DUALITY_t$	136	0.551	0.499	83	0.578	0.497	0.388	0.698
$CONTR_t$	136	0.404	0.493	83	0.229	0.423	-2.664	0.007
$CROSS_t$	136	0.279	0.450	83	0.181	0.387	-1.654	0.098

Panel B. Canadian firms with a majority of large outside shareholders: Sample means and tests of difference between the sub-group of firms having a financial institution as largest outside shareholder and the sub-group of firms having an industrial as largest outside shareholder

Variables	Firms with Financial Institution as largest shareholder			Firms with Industrial as largest shareholder			Mean difference between the two sub-groups	
	N	Means	Std-Deviation	N	Means	Std-Deviation	*t*- statistic	*p*- value
Q_{t+1}	96	1.247	1.329	87	1.712	1.935	1.909	0.058
LSH_t	96	0.484	0.286	87	0.469	0.238	0.361	0.718
LSH_out_t	96	0.484	0.286	87	0.469	0.238	0.361	0.718
OUT_t	96	0.741	0.154	87	0.677	0.169	-2.681	0.008
$CEOSH_t$	96	0.012	0.022	87	0.010	0.019	-0.476	0.634
$CCOMP_t$	96	0.329	0.261	87	0.426	0.229	2.664	0.008
$DEBT_t$	96	0.382	0.165	87	0.410	0.167	1.138	0.256
$SIZE_t$	96	12.128	1.626	87	12.844	1.698	2.912	0.004
							z- statistic	*p*- value
$DUALITY_t$	96	0.302	0.462	87	0.195	0.399	-1.661	0.097
$CONTR_t$	96	0.312	0.466	87	0.391	0.491	1.109	0.267
$CROSS_t$	96	0.323	0.470	87	0.264	0.444	-0.867	0.386

Q_{it+1} = firm i's Q ratio in year t+1; LSH_{it} = percentage of outstanding shares held by large shareholders of firm i in year t; LSH_out_{it} = percentage of outstanding shares held by large outside shareholders of firm i in year t; LSH_ins_{it} = percentage of outstanding shares held by large inside shareholders of firm i in year t; OUT_t = firm i's percentage of independent directors on the board in year t; $CEOSH_t$ = firm i's level of CEO ownership in year t; $CCOMP_t$ = firm i's relative importance of CEO's performance-contingent compensation in year t; $DEBT_t$ = firm i's indebtedness in year t; $SIZE_t$ = firm i's log of total assets in year t; DUALITYit = dummy equals 1 if firm i's CEO and Chairman are the same person in year t; CONTRt = dummy equals 1 if firm i has a controlling shareholder in year t;; CROSSt = dummy equals 1 if firm i's share is cross-traded in year t.

Table 3. Q ratio by different levels of large shareholdings

Level of Large Shareholdings	Q_{it+1} Ratio					
	Full sample		Sub-sample of firms with a majority of			
			Large outside shareholders		Large inside shareholders	
	(LSH_t)		(LSH_out_t)		(LSH_ins_t)	
	N		N		N	
10-30%	107	1.837	58	1.883	78	1.519
30-50%	88	1.197	34	1.661	50	0.884
>50%	207	1.152	91	1.132	91	1.184
Total N	**402**		**183**		**219**	

LSH_{it} = percentage of outstanding shares held by large shareholders of firm i in year t; LSH_out_{it} = percentage of outstanding shares held by large outside shareholders of firm i in year t; LSH_ins_{it} = percentage of outstanding shares held by large inside shareholders of firm i in year t.

Table 4 - Pearson Correlation Matrix Panel A – Full sample (N=402)

	Q_{t+1}	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. LSH_t	-0.173 ***										
	0.001										
2. LSH_ins_t	-0.077	0.396 ***									
	0.124	0.000									
3. LSH_out_t	-0.078	0.454 ***	-0.626 ***								
	0.117	0.000	0.000								
4. OUT_t	0.105 **	-0.255 ***	-0.315 ***	0.089 *							
	0.035	0.000	0.000	0.074							
5. $DUALITY_t$	-0.136 ***	0.068	0.275 ***	-0.198 ***	-0.101 **						
	0.006	0.177	0.000	0.000	0.043						
6. $CONTR_t$	-0.039	0.658 ***	0.301 ***	0.276 ***	-0.135 ***	-0.021					
	0.437	0.000	0.000	0.000	0.007	0.669					
7. $CEOSH_t$	0.079	-0.091 *	-0.108 **	0.002	-0.114 **	0.027	-0.024				
	0.116	0.069	0.031	0.962	0.023	0.594	0.630				
8. $CROSS_t$	0.195 ***	0.018	0.039	-0.031	0.070	-0.045	0.003	0.100 **			
	0.000	0.716	0.439	0.538	0.160	0.364	0.949	0.046			
9. $CCOMP_t$	0.169 ***	-0.056	-0.005	-0.058	0.068	-0.019	0.001	0.057	0.107 **		
	0.001	0.259	0.918	0.244	0.173	0.712	0.992	0.259	0.033		
10, $SIZE_t$	-0.119 **	0.153 ***	0.124 **	0.004	0.089 *	-0.036	0.227 ***	-0.204 ***	0.179 ***	0.367 ***	
	0.017	0.002	0.013	0.934	0.073	0.472	0.000	0.000	0.000	0.000	
11. $DEBT_t$	-0.303 ***	0.101 **	0.192 ***	-0.089 *	-0.091 *	0.100 **	0.032	-0.119 **	-0.164 ***	-0.071	0.317 ***
	0.000	0.043	0.000	0.074	0.068	0.045	0.517	0.017	0.001	0.154	0.000

Table 4 - Pearson Correlation Matrix, continued
Panel B – Sub-sample of firms with a majority of large inside shareholders (N = 219)

	Q_{t+1}	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. LSH_t	-0.054										
	0.424										
2. LSH_ins_t	-0.030	0.762 ***									
	0.658	0.000									
3. LSH_out_t	-0.054	0.273 ***	-0.364 ***								
	0.429	0.000	0.000								
4. OUT_t	-0.005	-0.087	-0.143 **	0.096							
	0.945	0.202	0.034	0.156							
5. $DUALITY_t$	-0.144 **	0.101	0.061	0.110	-0.045						
	0.034	0.136	0.372	0.105	0.504						
6. $CONTR_t$	0.045	0.667 ***	0.688 ***	-0.034	-0.037	-0.011					
	0.504	0.000	0.000	0.619	0.586	0.872					
7. $CEOSH_t$	-0.028	0.052	0.014	-0.027	-0.274 ***	-0.082	0.062				
	0.684	0.443	0.833	0.692	0.000	0.225	0.358				
8. $CROSS_t$	0.288 ***	0.163 **	0.196 ***	-0.090	-0.012	0.048	0.205 ***	0.231 ***			
	0.000	0.016	0.004	0.183	0.862	0.480	0.002	0.001			
9. $CCOMP_t$	0.124 *	0.079	0.056	-0.009	0.026	-0.063	0.132 *	0.133 **	0.152 **		
	0.068	0.246	0.407	0.901	0.706	0.356	0.050	0.049	0.025		
10, $SIZE_t$	-0.119 *	0.257 ***	0.271 ***	-0.055	0.063	0.001	0.321 ***	-0.098	0.208 ***	0.327 ***	
	0.080	0.000	0.000	0.420	0.357	0.986	0.000	0.151	0.002	0.000	
11. $DEBT_t$	-0.199 ***	-0.003	0.044	-0.035	-0.019	-0.001	-0.019	-0.101	-0.089	-0.137 **	0.292 ***
	0.003	0.971	0.522	0.610	0.780	0.994	0.776	0.135	0.190	0.043	0.000

Table 4 - Pearson Correlation Matrix, continued Panel C – Sub-sample of firms with a majority of large outside shareholders (N = 183)

	Q_{t+1}	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. LSH_t	-0.247 ***										
	0.001										
2. LSH_ins_t	.	.	.								
3. LSH_out_t	-0.248 ***	1.000 ***	.								
	0.001	0.000									
4. OUT_t	0.165 **	-0.412 ***	.	-0.412 ***							
	0.026	0.000		0.000							
5. $DUALITY_t$	-0.099	-0.032	.	-0.032	0.063						
	0.182	0.668		0.668	0.397						
6. $CONTR_t$	-0.110	0.660 ***	.	0.660 ***	-0.288 ***	-0.029					
	0.138	0.000		0.000	0.000	0.700					
7. $CEOSH_t$	0.127 *	-0.184 **	.	-0.184 **	-0.070	0.247 ***	-0.108				
	0.086	0.013		0.013	0.348	0.001	0.146				
8. $CROSS_t$	0.121	-0.112	.	-0.112	0.135 *	-0.126 *	-0.223 ***	-0.027			
	0.102	0.131		0.131	0.069	0.088	0.002	0.713			
9. $CCOMP_t$	0.211 ***	-0.199 ***	.	-0.199 ***	0.104	0.075	-0.166 **	-0.028	0.049		
	0.004	0.007		0.007	0.163	0.313	0.024	0.711	0.509		
10, $SIZE_t$	-0.124 *	0.045	.	0.045	0.137 *	-0.093	0.116	-0.311 ***	0.148 **	0.419 ***	
	0.094	0.544		0.544	0.065	0.212	0.119	0.000	0.046	0.000	
11. $DEBT_t$	-0.394 ***	0.182 **	.	0.182 **	-0.030	0.088	0.109	-0.083	-0.238 ***	0.038	0.368 ***
	0.000	0.014		0.014	0.688	0.239	0.143	0.267	0.001	0.614	0.000

Qit+1 = firm i's Q ratio in year t+1; LSHit = percentage of outstanding shares held by large shareholders of firm i in year t; LSH_outit = percentage of outstanding shares held by large outside shareholders of firm i in year t; LSH_insit = percentage of outstanding shares held by large inside shareholders of firm i in year t; OUTt = firm i's percentage of independent directors on the board in year t; DUALITYit = dummy equals 1 if firm i's CEO and Chairman are the same person in year t; CONTRt = dummy equals 1 if firm i has a controlling shareholder in year t; CEOSHt = firm i's level of CEO ownership in year t; CROSSt = dummy equals 1 if firm i's share is cross-traded in year t; CCOMPt = firm i's relative importance of CEO's performance-contingent compensation in year t; SIZEt = firm i's log of total assets in year t; DEBTt = firm i's indebtedness in year t

Table 5. GLS Regressions on the association between firm performance (Q_{t+1}) and large shareholdings for a sample of Canadian firms over the period 1997-1999

Independent Variables	(1) Full Sample	(2) Firms with a majority of large inside shareholders	(3) Firms with only large inside shareholders	(4) Firms with large inside and outside shareholders	(5) Firms with a majority of large outside shareholders	(6) Firms with financial institution as largest shareholder	(7) Firms with industrial as largest shareholder
LSH$_t$	-0.708 **						
	(2.09)						
LSH_ins$_t$		-0.669	-1.852 **	1.577			
		(1.14)	(2.32)	(1.62)			
LSH_out$_t$		-0.257		0.265	-0.141	0.117	-0.758
		(0.46)		(0.31)	(0.24)	(0.18)	(0.60)
CEOSH$_t$					20.569 *	-6.679	25.405 *
					(1.85)	(0.850	(1.70)
CEOSH$_t$*FIN					-29.927 **		
					(1.98)		
LSH_out$_t$*FIN					0.121		
					(0.48)		
CONTR$_t$	0.000	0.349	0.353	0.221	-0.511 *	0.049	-0.849 *
	(0.00)	(1.52)	(1.12)	(0.61)	(1.75)	(0.17)	(1.80)
OUT$_t$	0.256	0.171	-0.156	0.398	-0.045	0.597	-1.069
	(0.69)	(0.39)	(0.26)	(0.65)	(0.07)	(0.91)	(0.85)
DUALITY$_t$	-0.061	-0.199	-0.057	-0.379	0.259	-0.122	0.667 *
	(0.43)	(1.12)	(0.24)	(1.52)	(1.07)	(0.48)	(1.65)
CCOMP$_t$	0.360 *	0.505 *	0.110	0.685 *	0.175	-0.073	0.53
	(1.72)	(1.89)	(0.29)	(1.68)	(0.56)	(0.31)	(0.76)
CROSS$_t$	0.617 ***	0.774 ***	1.124 ***	0.518	0.200	-0.317	0.663
	(2.73)	(2.96)	(3.52)	(1.21)	(0.54)	(0.79)	(1.040
DEBT$_t$	-0.357	0.805 *	0.706	0.166	-2.731 ***	-2.312 ***	-3.554 **
	(0.97)	(1.91)	(1.24)	(0.26)	(4.18)	(4.35)	(2.50)
SIZE$_t$	-0.159 ***	-0.218 ***	-0.143 *	-0.233 **	0.007	-0.227 **	0.242
	(2.76)	(3.24)	(1.67)	(2.10)	(0.07)	(2.02)	(1.44)
	Year and industry dummies variables not reported						
Constant	3.02 ***	3.614 ***	3.11 ***	3.721 ***	1.321	3.492 **	2.324
	(4.08)	(4.35)	(2.84)	(2.88)	(0.97)	(2.40)	(0.87)
Number of observ.	402	219	136	83	183	96	87
N of id_cg	159	85	59	40	79	44	41
AdjR-Sq	0.153	0.157	0.217	0.395	0.239	0.321	0.456

* significant at the 10 percent level; ** significant at the 5 percent level; *** significant at the 1 percent level.

Table 5, continued

The regressions are performed using a random-effects specification in which all observations within a firm are collapsed into one observation. Numbers in parentheses are t-statistics. Dependent variable is Qit+1 = firm i's Q ratio in year t+1. Independent variables are; LSHit = percentage of outstanding shares held by large shareholders of firm i in year t; LSH_insit = percentage of outstanding shares held by large inside shareholders of firm i in year t; LSH_outit = percentage of outstanding shares held by large outside shareholders of firm i in year t; CEOSHt = firm i's level of CEO ownership in year t; CEOSHt*FIN= firm i's level of CEO ownership in year t interacting with a dummy variable for firms with a financial institution as largest shareholder; LSH_outit*FIN= percentage of outstanding shares held by large outside shareholders of firm i in year t interacting with a dummy variable for firms with a financial institution as largest shareholder; CONTRt = dummy equals 1 if firm i has a controlling shareholder in year t; OUTt = firm i's percentage of independent directors on the board in year t; DUALITYit = dummy equals 1 if firm i's CEO and Chairman are the same person in year t; CROSSt = dummy equals 1 if firm i's share is cross-traded in year t; CCOMPt = firm i's relative importance of CEO's performance-contingent compensation in year t; DEBTt = firm i's indebtedness in year t; SIZEt = firm i's log of total assets in year t.

РАЗДЕЛ 3 КОРПОРАТИВНОЕ УПРАВЛЕНИЕ В ГЕРМАНИИ

SECTION 3 NATIONAL PRACTICES OF CORPORATE GOVERNANCE: GERMANY

EXTRATERRITORIAL IMPACTS OF THE SARBANES-OXLEY ACT ON EXTERNAL CORPORATE GOVERNANCE – CURRENT EVIDENCE FROM A GERMAN PERSPECTIVE*

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Abstract

The Sarbanes-Oxley Act (SOX) has not only had tremendous impact on the U.S corporate governance system, but also on other countries with companies subject to SOX. The paper analyzes the major direct impacts of SOX on the European Union (EU) and Germany as a Member State. The focus of the analysis is on rules concerning external corporate governance instruments, i.e. the auditing professions' oversight, auditors' independence and auditing standards. Additionally, the paper investigates whether the contemporary regulatory activities in the EU and Germany concerning external corporate governance can be explained as indirect institutional consequences of SOX. Although the EU Commission says for the record that it has an own long-term strategy of modernizing corporate governance, the paper demonstrates that several rules of SOX quite obviously served as a model for the EU regulatory activities. The same phenomenon can be observed for the new German regulations of external corporate governance.

Key words: Sarbanes-Oxley Act, external corporate governance, auditing, Germany

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Introduction

The Sarbanes-Oxley Act (SOX) and related rules of the SEC are a direct reaction of the U.S. regulatory system to a series of obvious malfunctioning of the established corporate governance system in the U.S. SOX had a huge impact on companies and auditors in the U.S. However, the focus of the paper is on the extraterritorial impacts. The objective of the paper is to reveal, analyze and explain this impact on the European Union (EU) and on one particular country, namely Germany.

The structure of the paper is determined by the assumption that the impact might be two-fold. First, due to the explicit scope of SOX a direct influence of its rules is obvious on companies listed on the U.S.

securities market as well as on the auditors of such companies. Second, because of its strict and somehow revolutionary content, SOX might be used by national regulators and auditing professions as an example or model to tighten up national corporate governance regulations in order to better protect the interests of share- and stakeholders. This will be referred to as indirect influence.

Based on this view of a direct and indirect impact of SOX the first section investigates the major direct impacts on Germany and uncovers arising conflicts with national regulations. In the second section the regulatory activities in Germany which have been undertaken since the adoption of SOX are depicted. As the regulations of the EU Member States have to comply with the rulings of the EU, the post SOX regulatory activities of the EU are described as well. In order to allow a deeper analysis, the paper focuses only on specific topics regulated in SOX, in particular those which are related to the function of auditing within the external spheres of corporate governance; those are the public oversight over the auditing profession, the auditors' independence and auditing standards. The last section of the paper discusses whether the regulatory activities of the EU and the German regulating institutions may be regarded as "spill over effects" and/or indirect institutional consequences of SOX.

Direct Extraterritorial Impacts of SOX

Applicability of SOX

The Sarbanes-Oxley Act of 2002 applies to any company ("issuer") registered on U.S. stock exchanges under either the Securities Act or the Securities Exchange Act, irrespective of the country of the company's domicile or incorporation (see Sec. 2(7) of SOX). The Act itself does not contain exemptions for foreign private issuers[1]. Therefore, SOX has an impact on all U.S. and non-U.S. companies that are registrants with the Securities and Exchange Commission (SEC) (see Perino, 2003, p. 221). Besides the registered companies, SOX addresses the auditors of those companies and financial analysts and covers issues of internal and external corporate governance, financial disclosure and criminal penalties for the concerned companies and people. Figure 1 gives an overview of the major provisions of SOX.

Concerning the auditors, SOX requires that any public accounting firm[2] involved in the preparation of audit reports of any issuer listed on a U.S. stock exchange is subject to the provisions of the Act and to the oversight of the Public Company Accounting Oversight Board (PCAOB). This includes non-U.S. public accounting firms performing auditing services for registrants on the U.S. capital markets (see Sec. 106(a)(1) of SOX). As the extraterritorial impact of SOX may provoke conflicts for non-U.S. companies and auditors with their national regulations, the SEC, and the PCAOB, subject to the approval of the SEC, are empowered to exempt any foreign accounting firm from any provision of SOX when they determine necessary or appropriate in the public interest or for the protection of investors (Sec. 106(c)). Moreover, SOX gives the SEC the authority to promulgate rules and regulations in considerations of the public interest, the protection of investors and the purpose of the Act (Sec. 3(a)). This provision allows for exemptions for foreign private issuers. Nevertheless, there is no specific directive requiring the SEC to create such exemptions. SOX departs from the traditional policy of the SEC to provide accommodations and exemptions for foreign private issuers and their auditors (for details refer to Perino, 2003, p. 8). One reason for this might be that general exemptions for non-U.S. issuers would have created loopholes and therefore were politically unacceptable (see Morrissey, Bostelman and Clayton, 2003, p. 14). Another reason might be that Congress did not consider the impact of SOX on the affected companies, accounting firms and regulators because it wanted to react quickly to the financial breakdowns in the U.S. As evidence for this hypothesis the fast legislative process (29 days) and the very few references to this issue in the Congressional Record (see Perino, 2003, p. 9-11) could be cited. The next section depicts the major impacts of SOX on the German auditing profession as well as German companies and explains resulting conflicts with existing national rules. As already noted, the focus is only on external corporate governance issues covered by SOX: those are rules on the auditing profession's oversight, on auditors' independence and auditing standards. This restriction of the investigation does not mean that all the other issues referred to in SOX have no influence on German entities or do not provoke conflict with national German rules.

Auditors' Profession Oversight

SOX established the Public Company Accounting Oversight Board (PCAOB), an independent private non-profit organization under the control of the SEC.

[1] The term „foreign private issuer" is defined as any issuer, that does not have more than 50 percent of its outstanding voting securities held by U.S. residents and that does not satisfy any one of the following conditions: (1) the majority of directors or executive officers are U.S. citizens or residents; (2) more than 50 percent of the issuer's assets are located in the U.S.; or (3) the issuer's business is administered principally in the U.S. (see 17 C.F.R. Art. 240.3b-4(c) (2003).

[2] SOX uses the term "public accounting firm" for any proprietorship, partnership, incorporated association, corporation, limited liability partnership, or other legal entity that is engaged in the practice of public accounting or preparing or issuing audit reports (see Sec. 2(11) of SOX). In contrast the proposed modernization of the 8th Directive of the EU Commission uses the term "audit firm", which means an entity that is approved in accordance with the provisions of the Directive by the competent authorities of a Member State of the EU to carry out statutory audits regardless of its legal form. Both terms, "public accounting firm" and "audit firm", are used synonymously in this paper.

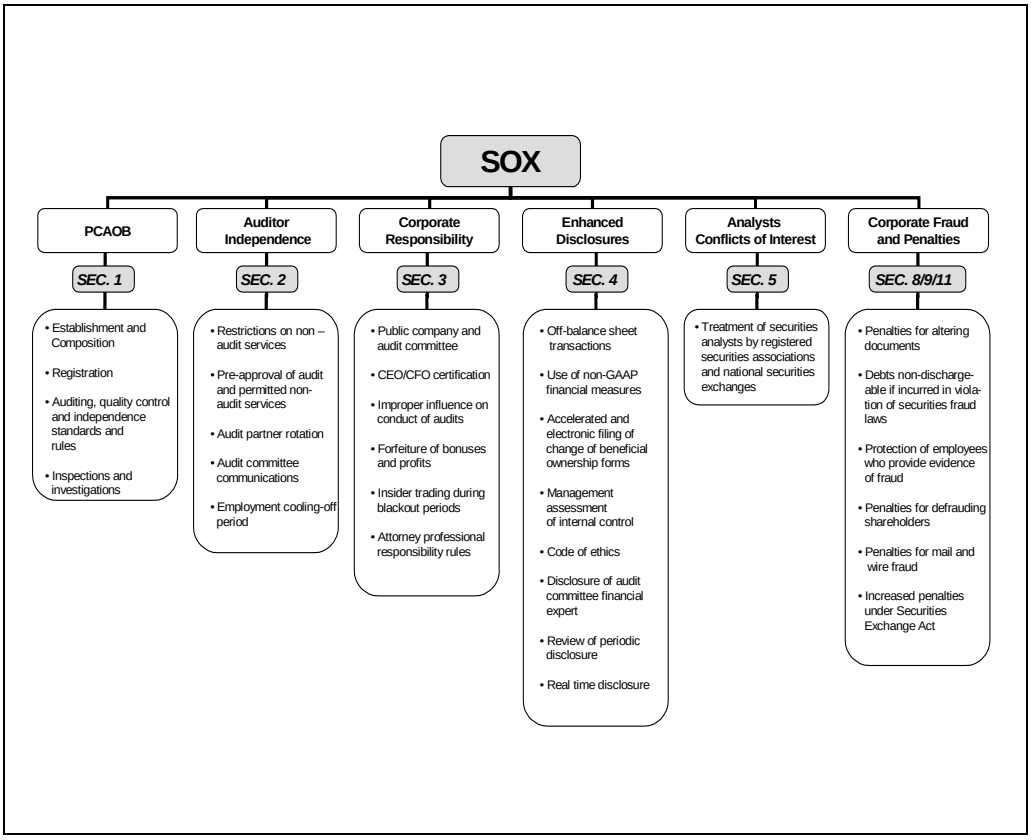

Figure 1. Major provisions of SOX

The remainder of the Sections of SOX covers technical details concerning the resources and the authority of the SEC (Sec. 6), requires several studies to be conducted (Sec. 7) and states a sense of the Senate regarding the singing of corporate tax returns (Sec. 10). Since these Sections do not refer to issues of corporate governance they are omitted in the figure.

As mentioned above, the PCAOB has to oversee the auditors that are engaged to provide audit services for companies subject to the Act or play a substantial role in such audits. The Act clarifies that this applies to U.S. as well as to foreign public accounting firms (see Sec. 106(a)(1) of SOX). These accounting firms are required to register with the PCAOB (see Sec. 102 of SOX). SOX directs the PCAOB to conduct inspections and investigations at least once every three years to assess the degree of compliance of a registered accounting firm with the Act, the rules of the SEC and the PCAOB or professional standards. Thereby the Board has to evaluate the sufficiency of quality control system of the firm and the manner of the documentation and communication of that system and has the authority to impose disciplinary or remedial sanctions (see Sec. 104 and 105 of SOX).

This registration with the PCAOB imposes – in general – a considerable pressure on the particular public accounting firm. A failure results directly in the loss of all clients which are subject to SOX (see Sec. 102(a) of SOX). Additionally the registration and obeying of SOX and PCAOB requirements cause direct costs, which may not completely be outweighed by higher auditing fees. In addition, there may be indirect costs due to conflicts with national rules and standards. Such conflicts arise concerning the transfer of information and data to the PCAOB, because registration of accounting firms with the PCAOB includes a consent to cooperate and comply with any demand by the Board for testimony or the production of documents in the case of requested information about particular clients (see Sec. 102(b)(3) of SOX). This consent could contravene the German auditors' legal duty to maintain strict confidentiality (see Art. 323 Para. 1 of German Commercial Code (*Handelsgesetzbuch*, HGB), Art. 404 Para. 1 of the German Stock Corporation Act (*Aktiengesetz*, AktG) and Art. 9 of the German Law Regulating the Profession of Auditors (*Wirtschaftsprüferordnung*, WPO)). A breach of this duty may result in sanctions being imposed by professional disciplinary proceedings and in fines or imprisonment under Art. 203 of the German Criminal Code (*Strafgesetzbuch*, StGB), unless the client has given permission to the auditor to disclose the information. Moreover, German auditors are entitled and even have the duty to refuse to give evidence in lawsuits (see Art. 383 Para. 1 of the German Code of Civil Procedure (*Zivilprozessordnung*, ZPO), Art. 53 Para. 1 of the German Code of Criminal Procedure (*Strafprozessordnung*, StPO)). The management board of a company can release the auditor from these duties by giving an explicit permission (see Hilber and Har-

tung, 2003, p. 1056). However, the management board is required to balance the benefits and costs of all decisions. Declaring releases for a company's auditors from their duty to maintain strict confidentiality and to refuse evidence in lawsuits could conflict with this requirement of the German Stock Corporation Act in case the company has no direct advantages of the decision, e.g. the company is not an foreign issuer itself but a subsidiary of a foreign issuer (see Kersting, 2003, p. 241).

Another problem might result from the information required to register with the PCAOB about criminal, civil, administrative or disciplinary proceedings against the applicant or its associated persons including employees involved in performing audits at least ten hours for any company subject to SOX during the last calendar year (see PCAOB, Rule No. 001, Section 001-3). The accounting firm has to request such information from its employees and to ask for a written permission to disclose it to the PCAOB according to the Federal Data Protection Act (*Bundesdatenschutzgesetz*). These requests lead to mandatory involvement of the workers' council which could be a time-consuming process (see IDW and WPK, 2003, p. 6). Moreover, data shall not be given to persons or institutions outside the EU without a guarantee that the data are treated confidential accompanied by an approval by German authorities in charge (see Art. 4b of Federal Data Protection Act). These additional costs and conflicts with national regulations obviously had not been considered and no regulatory counterpart in Europe or elsewhere had been consulted before SOX came into effect on July 30, 2002. Realizing the potential impacts of SOX the EU Commission made an effort to obtain exemptions for EU companies and public accounting firms (see Van Hulle and Lafermann, 2003, p. 103). Due to the lobbying of the EU commission and of single Member States and professional groups of the EU the SEC and the PCAOB promulgated accommodations for foreign companies and public accounting firms (see Engelen, 2004 p. 42-46). Another reason for granting exemptions might be the SEC's delayed perception of the economic and political impacts on the affected parties. Concerning the registration requirements, File-No. PCAOB 2003-3 allows accounting firms to withhold information from its application for registration with the PCAOB when disclosure of the information would force them to violate non-U.S. laws. In this case the applicant has to submit a copy of the relevant portion of the conflicting non-U.S. law, a legal opinion that there would be a conflict and an explanation of the applicant's efforts to eliminate the conflict (see File-No. PCAOB 2003-3, Rule 2105). Furthermore, foreign public accounting firms need to disclose information on criminal, civil and administrative proceedings not for all employees associated with issuers subject to SOX (like U.S. public accounting firm have to). They need to disclose these information only for their proprietors, partners, principals, shareholders, officers or managers providing audit services to issuers (see File No. PCAOB 2003-03, July 16, 2003). In Germany there has been a system of self-regulation carried out by the Chamber of Public Accountants (*Wirtschaftsprüferkammer*) which operates under the oversight of the Federal Ministry of Economics and Labour. In 2001 a system of external quality assurance came into effect. According to this system, all auditors and public accounting firms have to submit themselves to quality assurance based on peer review methodology every three years (see Art. 57a WPO). Recently, Germany has established a system for the registration and professional oversight of auditors (for details see 3.3.1. of this paper). Therefore, German accounting firms subject to SOX are affected by both the U.S. and the German professional oversight systems. To prevent conflicts of laws the SEC and the PCAOB developed criteria to determine to what extent the PCAOB could rely on a non-U.S. oversight system. Therefore, the PCAOB will evaluate the level of independence and rigor of the non-U.S. oversight systems in the countries of registered auditors. Depending on this evaluation the PCAOB will determine the degree to which it may rely on inspections, investigations and sanctions of particular non-U.S. oversight system (see Release No. 34-50047, July 20 2004). At present the outcome of an assessment of Germany's (new) oversight system by the PCAOB remains unclear.

Independence of Auditors and Auditing Standards

SOX states independence requirements for auditors. According to Section 201, public accounting firms are obliged not to provide certain enumerated non-audit services contemporaneously with the audit. The list includes, inter alia, bookkeeping, valuation and actuarial services, internal audit as well as legal or human resource services. Other non-listed services, as for example tax services, may be provided only if pre-approved by the audit committee of the particular company. In addition, SOX requires the audit committee of a company to pre-approve all audit and non-audit services. In Germany it is also unlawful for accounting firms to be involved in the bookkeeping and/or preparing of the annual accounts of a client (see Art. 319 Para. 2 No. 5 HGB) and – due to the Accounting Law Reform Act (*Bilanzrechtsreformgesetz*, BilReG) – in several other services. However, it is not forbidden to provide human resources, and legal services not related to the audit. Therefore German accounting firms have to limit their services provided to companies subject to SOX.

To assure a personal independence within the client-auditor relationship, the Act prescribes a mandatory audit partner rotation. A public accounting firm is not allowed to provide audit services to a company if the lead audit partner, or the audit partner responsible for reviewing the audit, has performed audit services for that company in each of the five previous years (see Section 203 of SOX). Final rules

of the SEC extend this requirement by imposing a five year cooling off period on rotated partner (which means that the rotated partner must step down from the particular audit for a period of at least five years). In addition, the rules require audit partners that have responsibility for significant accounting and auditing matters (e.g. assessment of the internal control system or review of major positions of the annual accounts) to rotate after no more than seven years and they are subject to a cooling off period of two years (see SEC, Release No. 33-8183). Taking into account that in many jurisdictions audit partners until now have not been subject to rotation requirements the SEC has made accommodations to this rotation requirements for foreign public accounting firms. In contrast to U.S. public accounting firms 2004 constitutes the first of the five year rotation period for partners of foreign public accounting firms, without regard to the time period the partners had previously served in a company (see SEC, Release No. 33-8183). According to a new provision of the German Commercial Law (introduced by the BilReG, see section 3.2.), an auditor having expressed an opinion on the financial statements of a listed company more than seven times is not allowed to provide audit services to that company for a cooling off period of three years (Art. 319a Para. 1 No. 4. HGB). Prior to the BilReG an auditor was not allowed to express an opinion more than six times in ten years.

Pursuant to Section 206 of SOX a public accounting firm shall not provide audit services for a company, if a CEO, CFO, CAO or controller of that company was employed by the public accounting firm and performed audit services for that company during a one year period preceding the initiation of the audit. Final Rules of the SEC expand this cooling off period to each member of an audit engagement team that has a direct responsibility for, or oversight of, the preparation of a former client's financial statements and related information (see SEC, Release No. 33-8183). The German Commercial Law prescribes no such cooling off period.

Section 103 of SOX provides that the PCAOB shall amend, modify or alter auditing and attestation standards, quality control standards, and ethics standards for public accounting firms. Based on this authorisation the PCAOB has already promulgated auditing standards. In Germany independence, quality control and ethics standards are specified in the German Commercial Code and especially in the Law Regulating the Profession of Auditors (WPO), the by-laws (*Berufssatzung*) and the Auditing Standards of the German Institute of Auditors (*Institut der Wirtschaftsprüfer,* IDW), which are based on, but in a few respects still not completely equal to the International Standards on Auditing (ISA) of the International Auditing and Assurance Standards Board (IAASB), which is an independent standard setting body under the control of the International Federation of Accountants (IFAC). Its mission is to establish worldwide high quality auditing, assurance and quality control standards. If these standards differ from the requirements that are provided or will be provided by the PCAOB, legal conflicts may arise for German public accounting firms subject to SOX.

Certain requirements are directly stipulated by SOX. For example the PCAOB shall promulgate requirements demanding that each public accounting firm shall prepare and maintain, for a period of at least 7 years, audit work papers, that an audit report is reviewed and approved by a concurring or second partner, and that in each audit report the scope of the auditor's testing of the internal control structure and procedures of the client are described. Moreover, SOX provides a framework for the audit report on an issuer's internal control system and for auditor quality control standards (Sec. 103 of SOX). In Germany similar requirements concerning the review of a second partner, the report on the internal control system and the quality control exist. However, there is no duty to maintain audit work papers for a specified period. Thus, SOX imposes an additional duty on auditors which are registered under PCAOB.

Post SOX Regulatory Activities in the EU and Germany

The EU – a European Regulatory Institution

The European Union (EU) is the result of a political vision to prevent war within Europe and to create a large prosperous economic and social community of separate states. This vision was formally promulgated by the Treaty of Rome in 1957 and has been fostered by a series of subsequent treaties. The number of Member States has augmented from 6 to now 25. Over its existence the Member States have delegated more and more of their sovereignty to "European institutions", although keeping their identities and still a large portion of independence. Therefore, the EU form a political construct , based on treaties between individual countries, which is more than a confederation of countries but less than a federal state. One aim of the EU is to create an equal level playing field for all participants on economic markets in order to reach a single market within Europe with equal competition (European Union, 2002). In order to meet to this objective the EU has gained a vast legislative power during the last almost 50 years of its existence and has exercised this power through three legal instruments, which are Regulations, Directives and Recommendations. Those differ primarily in their degree of binding. Regulations become directly EU law after their approval and are hence automatically binding for the Member States, whereas Directives have to be transformed into national laws by the individual national regulators and very often contain options to allow country specific particularities in this transformation. Finally Recommendations are of a non-binding nature but Member States are encouraged to implement them into national law. The major political institutions,

which are engaged in this legislative process are the EU Commission (detects the necessity of rulings, develop ideas and prepares drafts), the EU Parliament (discusses, and comments and adopt the rules) and the Council of the European Union (gives the final approval to the rules) (for details about the European Union see European Union – Delegation of the European Commission to the United States, 2004). Besides a lot of other areas, the EU published several legislative enactments dealing with accounting, auditing, corporate governance and company law in the past.

EU's Regulatory Initiatives Concerning Auditing

The first official response after SOX was a communication paper headlined "reinforcing the statutory audit in the EU" in May 2003 (see European Commission, 2003, p. 2 -13). The introduction of this publication contains a clear reference to the fact that beside other things SOX forced the EU to reconsider its priorities on statutory audits (see European Commission, 2003a, p. 2). In this communication a ten point action plan was developed which was divided into short term priorities planned to be fulfilled until 2004 and mid term priorities with a planning horizon until 2006.

Table 1. Overview Action Plan Statutory Audit

Short Term Activities (until 2004)	Mid Term Activities (until 2006)
Ensuring a comprehensive, principle based basis for statutory audits by modernising the 8th Directive	Introducing and improving a system of disciplinary sanctions for statutory auditors
Reinforcing regulatory infrastructure	Enhancing transparency of international networks of audit firms
Strengthening public oversight	Strengthening the role of audit committees and internal control systems
Required application of ISA for all statutory audits	Introducing a code of ethics for statutory auditors (in dialogue with SEC or PCAOB)
	Removing restrictions constricting the internal market for audit services
	Analysing economic impact of auditor liability

Parallel to the communication concerning statutory audit the EU Commission published another communication titled "Modernising Company Law and Enhancing Corporate Governance in the European Union – A plan to Move Forward" (see European Commission, 2003a). This was the first publication of the European Commission dealing solely with the issue of corporate governance (see Haller and Geirhofer, 2005, p. 18). Basis of the communication is the report of a high level group of company law experts chaired by Jaap Winter (European Commission, 2002a).

In accordance with this so called "Winter Report", the communication points out that there is no need for an EU corporate governance code or precise standardized rulings. However, the Commission considers that a common approach should be adopted by the Member States and only a few essential rules should be established to ensure an adequate coordination of corporate governance within the EU (see European Commission, 2003a, p. 12). A direct result of those two communications of the Commission, which are only political statements without legal effect and which were perceived as essential steps towards restoring confidence in capital markets in the public consultation process (see European Commission, 2004a), is the proposal for a Directive on statutory audit of annual accounts and consolidated accounts and amending Council Directives 78/660/EEC and 83/349/EEC (so called modernized 8th Directive)[3] published on March 16th 2004 (see European Commission, 2004), in which a considerable amount of the short- and mid-term actions of the two plans were incorporated (see Annex 2). The modernized 8th Directive is supposed to be approved by the end of 2005. It is left up to the Member States of the EU to substantiate the regulations and to carry out the options included in the Directive (see Haller and Geirhofer, 2004, p. 24).

Reform of Public Oversight

While public oversight for statutory auditors was not in the focus of pronouncements of the EU prior to SOX, the proposal of a modernized 8th Directive (in the following only referred to as "the proposal") covers this issue (see European Commission, 2004, Articles 31-34) as a consequence of the ten point action plan of 2003.

Article 31 of the proposed Directive defines the principles of public oversight and provides a framework for possible national public oversight systems. As the European Commission does not give a detailed prescription, the Member States will be able to

[3] The 8th Directive dates back to the year 1983. The modernization initiative revises and enlarges its content considerably.

create public oversight systems tailor made to their individual legal and economic situation. However, the Member States shall ensure that the cooperation between their national oversight activities is effective (see European Commission, 2004, Article 32).

Although the proposal leaves discretion to the Member States, it nevertheless mentions that exchange of information and cooperate investigation activities are planned as well as the supply of information required for the oversight of statutory audits. Moreover, the public oversight authority of a Member State A should be allowed to communicate the malfunctioning of statutory auditors based in a Member State B to the competent authority in Member State B. How the coordination of the national authorities will be organized and to what extent the coordination will take place is not provided in the proposal (see FEE, 2004).

The public oversight authority shall not only be responsible for approval and registration of statutory auditors but also for the adoption of standards on ethics and internal quality control as well as continuous education and the quality assurance process. The competent authority shall also be in charge of other investigation and sanctions. The activities of the public oversight authority will have to be published annually to ensure transparency.

Finally, the proposal requires that the funding of the authority must safeguard its independence from the auditor profession (see European Commission, 2004, Article 31).

Additionally to the public oversight regime, Article 29 of the proposed Directive obliges the Member States to establish a quality assurance system which is also subject to the public oversight as described above. The quality assurance system is part of the self regulation of auditors but has to assure independence from the reviewed auditor. The quality assurance has to take place at least every six years and a report containing the main conclusions of the review has to be given.

The proposal contains special regulations for statutory audits of public interest entities. Those are "...entities that are of significant public relevance because of the nature of their business, their size or their number of employees, in particular companies governed by the law of a Member State whose securities are admitted to trading on a regulated market of any Member State..., banks and other financial institutions and insurance undertakings" (Article 2 of the proposed Directive).

According to these special regulations, audit firms carrying out statutory audits have to publish an annual transparency report on their website. This report should among other things include an indication when the last quality assurance review took place. Furthermore statutory auditors of public interest entities have to undergo the quality assurance at least every three years (Article 38 of the proposed Directive).

Independence of Auditors and Auditing Standards

The proposal deals with auditor's independence mainly in the Articles 23–25. Member States shall ensure independence of statutory auditors from the audited entity. The proposal does not define activities compromising the independence of statutory auditors, instead it follows a principle based approach (see Schildbach, 2004, p. 252). Thus, any relationship causing possible dependence or bias leads the auditor not to carry out the statutory audit. The statutory auditor shall document possible threats to independence and safeguards to mitigate them in the working papers (in case of a public interest company the auditor has to discuss those with the audit committee and has to confirm its independence to the audit committee annually; see European Commission, 2004, Article 40)).

Statutory auditors (for audit firms the key audit partner responsible for the statutory audit) of public interest entities (only) will be subject to an internal rotation at least in a five years turn or alternatively to an external rotation in a seven year turn. Furthermore, the proposal establishes a "cooling off" period of two years for statutory auditors and respectively key audit partners of audit firms carrying out statutory audits. These persons shall not be allowed to take up a key management position in the audited entity of public interest within the cooling off period.

Another measure to safeguard auditor's independence is the requirement to ensure that audit fees are adequate to allow proper audit quality and are not based on any form of contingency especially not by provision of additional services.

Additionally the audited entity has to disclose fees paid to the statutory auditor for audit and non-audit services (see European Commission, 2004, Article 50 Nr. 1 a).

The proposal also focuses on auditing standards. According to Article 26 of the proposal, the European Commission shall adopt generally accepted auditing standards. The auditing standards have to pass an endorsement process by the European Commission accompanied by an audit regulatory committee (Article 49 of the proposal).

The explanatory memorandum to the proposal states out that the International Standard on Auditing will be subject to this endorsement process. Member states will be allowed to introduce auditing standards additionally to the ones endorsed only if these follow from specific requirements (Article 26 (3) of the proposal). The Member States have to communicate those measures to the European Commission.

Regulatory Initiatives in Germany

Formally independently from the EU initiatives – which become obvious by the timing – the German government unveiled a ten point program to foster the integrity of companies and investor protection

(*10-Punkte-Programm zur Stärkung der Unternehmensintegrität und Anlegerschutzes*) on February 25, 2003 (Ministry of Justice, 2003). This plan was a concretion of the government's strategy to establish an effective regulatory framework to improve financial reporting, corporate governance and capital market conditions. It covers various issues like the strengthening of shareholders´ rights, enhancing responsibilities of directors and members of the supervisory board, regulation for financial analysts and market transparency, aggravating criminal law for white collar crime. Major contents are the introduction of IFRS into the German accounting system (see for detail Haller and Eierle, 2004), the establishment of an independent enforcement body for German accounting practices and the quality enhancement of statutory audits.

The major portion of the issues covered in the action program of the German government has already been adopted through revision or amendment acts or already published proposals to those acts. Table 2 gives an overview of the recent legal activities in 2004 and 2005.

Table 2. Recent Regulations in Germany Concerning Accounting, Auditing, and Corporate Governance

Accounting Law Reform Act (*Bilanzrechtsreformgesetz*, BilReG), December 2004
Financial Reporting Control Act (*Bilanzkontrollgesetz*, BilKoG), December 2004
Law on the Supervision of Auditors *(Abschlussprüferaufsichtsgesetz*, APAG), December 2004
Law on Model Proceedings concerning Investors' Actions for Damages (*Kapitalanleger-Musterverfahrensgesetz*, KapMuG), July 2005
Law on Corporate Integrity and Modernization of the Right of Avoidance (*Gesetz zur Unternehmensintregität und Modernisierung des Anfechtungsrechts*, UMAG), July 2005
Law on Publication of Officers' Remuneration (*Vorstandsvergütungs-Offenlegungsgesetz*, VorstOG), July 2005

Reform of Public Oversight

As a direct result of the German government's ten point program, the public oversight of auditors became recently regulated by a law on the supervision of auditors *(Abschlussprüferaufsichtsgesetz*, APAG) which passed the German Parliament unanimously on 3rd December 2004. This law establishes a private board called *Abschlussprüferaufsichtskommission* (APAK), comparable to the PCOAB, and marks the (partial) end of self regulation of the auditor profession in Germany. Although that the modernization of the 8th Directive is not yet approved, the content of APAG anticipates the rulings contained in the proposal (see above).

Previously the Chamber of Public Accountants (WPK) was the authority within the profession to ensure the audit quality. The oversight system was established in the Law Regulating the Profession of *Wirtschaftsprüfer* (WPO). Since a law from 2000 (coming into effect in 2001) statutory auditors haven been obliged to do a peer review by another auditor who is certified by the WPK for being a peer reviewer at least every three years. Because of this, statutory auditors haven been obliged to engage a peer reviewer until 2004. An advisory council for quality assurance was established within the WPK overseeing the self regulation (see Art. 57a-h WPO).

Although slightly modified by the APAG, the quality assurance system established by the WPO remains the same, which means that the statutory auditors have to undergo a peer review at least every three years. Inter alia the modification forces statutory auditors to name three possible peer reviewers to the WPK. Then the WPK is allowed to reject one or more of the proposed peer reviewers.

APAK now replaces the advisory council for quality assurance of the WPK. The members of the APAK are supposed to have experience in either accounting, finance, economics, science or jurisprudence. They must not have been a member of the WPK within the last five years before they became member of the APAK. This measure should obviously ensure the independence of the APAK.

In contrast to the post-SOX U.S. system, the accounting profession through the Chamber of Public Accountants (WPK) is still in charge of the oversight of German statutory auditors in the first step. But the APAK is the final decision authority when it comes to quality assurance of statutory audits. Therefore the APAK has information and inspection rights. The APAK has the right to return decisions back to the WPK with the obligation to modify them.

Furthermore, the APAK is the competent authority for cooperation with public oversight authorities within the EU and other countries. This means the APAK will be the counterpart to the PCAOB for cooperation (see Heininger and Bertram, 2004, p. 1740). Figure 2 gives an overview of the new quality assurance and oversight system for auditors in Germany.

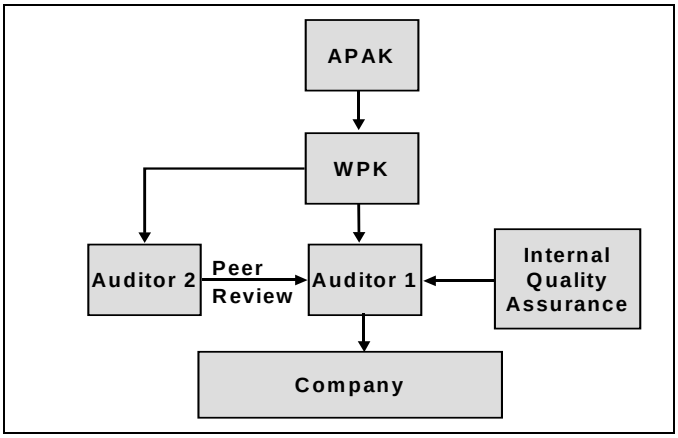

Figure 2. New Quality Assurance and Oversight System for Auditors in Germany

Independence of Auditors and Auditing Standards

The German regulations on auditor independence were substantially modified by the Accounting Law Reform Act (*Bilanzrechtsreformgesetz*, BilReG) from October 2004, which became effective for all fiscal years which begin after 1 January 2005. The BilReG amends the rulings on independence, which are based on a previous Guideline on auditors´ independence of the EU Commission (see European Commission, 2002) and also anticipate parts of the modernized 8th Directive.

The German regulator states that an auditor shall not carry out a statutory audit if his business, financial or personnel relationships cause a lack of objectivity. In addition to this general principle the BilReG explicates – in contrast to the modernization proposal of the EU – reasons for disqualifying from carrying out statutory audits. Besides financial interests in or a position in the board of directors (or supervisory board) of the audited entity or its subsidiaries, the following activities will result in preclusion from carrying out a statutory audit: involvement in bookkeeping and/or preparing of the annual accounts, involvement in internal revision, engagement for management or financial services or material actuarial or other valuation services. Apart from these threats of independence the German regulator regards the income structure of auditors as an essential characteristic of the ability to remain independent. Therefore the BilReG restricts auditors from earning more than thirty percent of the total income from one audited entity and its subsidiaries within the last five years.

Like the proposal of the modernized 8th Directive the BilReG distinguishes between "ordinary" entities and "entities of public interest". However, the definition of the latter differs from the one of the EU Commission. Public interest entities in the sense of BilReG are entities raising capital in an organized market. Statutory auditors of those entities will not only be subject to aforementioned regulations but also to even more restrictive specific rules. The income threshold of thirty percent is lowered to fifteen percent for them. Additionally, the prohibited activities will be extended by tax and legal advisory services with material effect on the true and fair view of the net assets, financial position and results. Furthermore participation in the development, customization and implementation of accounting software systems within the audited company is not allowed (Art. 1 Nr. 24 BilReG).

Statutory auditors will be subject to internal rotation in a seven years turn (see Art. 1 Nr. 24 BilReG). The auditor might be engaged again after a cooling off period of three years. Again, the German BilReG differs from the proposal of the EU, because as described above, the EU proposes a five years cycle for internal rotation or alternatively seven years with external rotation. In contrast to the proposal of the 8th Directive the BilReG defines a cooling off period which misses in the Directive.

German public interest entities are also obliged to disclose the fees paid to the statutory auditor distinguishing between audit fees, acknowledgment and valuation fees, tax advisory fees and other fees for non-audit services for the audited entity or its subsidiaries (see Art. 1 Nr. 18 BilReG).

Until 2005 there was no explicit binding regulation for using certain auditing standards. However, the auditing standards of the IDW (so called IDW AuS) have been virtually binding, because the WPO (2004) states out that, an auditor has to fulfill the obligations of the profession diligently (Art. 43 WPO). According to the IDW, this diligence can only be achieved by applying the IDW AuS. The IDW is member of the International Federation of Accountants (IFAC) and has therefore begun several years ago to transform ISAs into IDW AuS. The APAK oversees this transformation process (Art. 66 (1) WPO).

Due to the above described proposal for a modernized 8th Directive auditing standards endorsed by the European Commission will be directly applicable in the Member States. Therefore the oversight function of the APAK concerning auditing standards will

be limited to necessary additional standards because of national peculiarities. As another consequence, the IDW AuS will loose to be the basis for diligent auditing in Germany.

Analysis of the Impacts

The EU Commission is eager to point out that it had started to develop a long term strategy to improve financial accounting, auditing and corporate governance rules to safeguard shareholders rights, third party protection and efficiency as well as competitiveness already long before the approval of SOX (Van Hulle and Lanfermann, 2003, p. 102; for an overview of the EU strategy concerning financial reporting see Haller, 2002, p. 153-168). Looking at the chronology of legal pronouncements (see Annex 1) gives some evidence to this position. Although it also becomes obvious that the speed of announcements has increased considerably since the emergence of the American and European accounting and auditing scandals and the subsequent major breakdowns of public listed companies in the U.S. and Europe. Those had put political pressure on the EU as well as the regulators of the Member States to expand on existing regulations concerning auditing and other corporate governance issues (Van Hulle and Lanfermann, 2003, p. 102 and 106). Therefore, some commentators argue that at least some of the regulatory measures taken on the EU and Member State level concerning auditing and corporate governance issues are a direct effect of SOX (see e.g. Kulms, 2004, p. 4).

As a starting point for an examination of this argument the following table synoptically enumerates the major rules concerning external corporate governance in the three jurisdictions and thus summarizes sections 2 and 3.

As can be seen from the table, many of the post-SOX regulations that have been promulgated or will be promulgated by the EU and by Germany resemble or are even identical to the provisions of SOX. Especially the move towards a substantive regulation of the auditors' profession induced by SOX (see Ribstein, 2003, p. 4-8) is acceded by the European and German regulators.

Therefore, it is very obvious that SOX does not only have direct extraterritorial impacts on public accounting firm and the internal corporate governance of companies (as shown in section 2) but also indirect influences on European and German regulators. Consequently, SOX can be regarded as a typical example of regulatory spill-over effects, i.e. regulations in one country have consequences beyond national borders (see Engelen, 2004, p. 43). In the case of SOX these spill-over effects concern market participants (e.g. auditors and companies in Germany) as well as regulators (European Commission and German legislator). Figure 3 illustrates this multiple impact of SOX which is a direct one on companies and auditors as well as on the EU and Member States regulators and at the same time an indirect one on the Member States' legislators through the EU legislation and on auditors and companies within the EU through national and EU legislation.

However, the EU as well as Germany do not intend to give up their rulings and concepts of which they are convinced that they are favourable. In Continental Europe the conceptual view of a firm is still based on the stakeholder concept, notwithstanding the shareholder concept has gained importance due to market pressures.

One example for this assumption is that most of the new auditing rulings are not restricted to audits of "issuing companies" but to all statutory audits. In addition, Germany is not willing to give up its strict rules to protect individual rights concerning personal data or the confidentiality of client related data of auditors. Another major difference is the fact, that the primary professional oversight is still left to the auditors' profession (peer review and WPK), whereas in the U.S. the profession has lost this function totally.

Despite this reluctance of change of the EU and Member States in particular areas, a considerable convergence could be observed between the U.S. on the one hand and the EU and its Member State Germany on the other hand. Concerning the investigated issues of external corporate governance, it is a one-sided convergence process with the EU and Germany as a Member State shifting towards the rules of SOX.

Conclusions

The paper demonstrates a two-fold impact of SOX in referring to regulations concerning the auditors' profession oversight, auditor independence and auditing standards.

On the one hand due to the applied market place approach SOX had direct impacts on non-U.S. auditors of companies subject to SOX in terms of conflicts of law and additional costs. The conflicts of law have been lessened by exemptions granted by the SEC and the PCAOB. Nevertheless, the auditors have direct costs in terms of additional duties and restrictions and indirect costs in terms of a high risk because a non-compliance will result in a loss of an auditor's clients subject to SOX.

On the other hand the investigation of external corporate governance issues reveals that SOX has indirect impacts on the German and European legislation serving as a model for new regulations. This finding is to some extent in conflict with the statement of the EU Commission prevailing that it has an own long-term strategy of modernizing corporate governance and therefore does not consider their regulatory activities as direct consequences or even a copy of SOX.

Table 3. Comparison of SOX and Corresponding EU and German Regulations

	Sarbanes-Oxley Act	EU	Germany
Public Oversight	Establishes the PCAOB Registration of all public accounting firms subject to the Act with the PCAOB Investigations by the PCAOB to ensure compliance (Title 1)	Requires establishment and cooperation of public oversight boards in each Member State (Chap. 1 Art. 31-34 Modernized 8th Directive): Registration of statutory audit firms in a public register (Chap. 3 Art. 15-20 Modernized 8th Directive); General principles for investigations and sanctions (Chap. 8 Art. 30 Modernized 8th Directive)	Establishes the APAK (§ 66a WPO due to the APAG) Registration of auditors with the WPK (§ 37 f. WPO) Investigations and sanctions directly by the WPK with the APAK as final decision body (§§57a, 61a WPO, § 67 pp. WPO)
Major differences: Concerning public oversight, SOX applies to auditors of publicly listed companies, the European and German regulations to all auditors. In the EU and in Germany the public oversight is mainly based on the performance and results of the mandatory peer review as well as oversight activities of the WPK. Hence, the degree of the involvement of the auditors' profession in the EU and in Germany is stronger than in the U.S..			
Auditor Independence Prohibited Activities	Specifies non-audit services (bookkeeping, information systems design, valuation, actuarial, internal audit, management, broker or dealer and legal); pre-approval of all audit and non-audit services by the audit committee (Sec. 201 p.)	Services that might compromise the statutory audit firms' independence (Chap. 5, Art. 23 Modernized 8th Directive); Review and monitoring non-audit services by the audit committee (Chap. 11, Art. 39 Modernized 8th Directive); No pre-approval is required.	Specifies non-audit services for all companies (bookkeeping and preparing annual accounts, internal audit, management, financial and material actuarial and valuation) (§ 319 III No. 3 HGB due to the BilReG); Other specified material non-audit services for public interest companies (material legal and tax services, except plain consulting, information system) (§ 319a HGB due to BilReG); No pre-approval is required.
Rotation	Internal rotation after 5 years for lead partners and partners reviewing the audit with a cooling off period of one year (Sec. 203)	For public interest companies internal rotation after 5 years or alternatively external rotation after 7 years with no explicit cooling off period (Chap. 11, Art. 40 Modernized Directive)	For public interest companies internal rotation after 7 years with a cooling off period of 3 years (§ 319a I No. 4 HGB)
Cooling Off Period	Prohibits audit services for one year if an auditor becomes a CEO, CFO, CAO or controller of a client (Sec. 206)	Prohibits for public interest companies key managements positions for two years if an auditor changes to a client (Chap. 11, Art. 40 Modernized 8th Directive)	No cooling off period
Major differences: Concerning the prohibited activities, SOX applies to audits of publicly listed companies, the European regulations to all statutory audits, and Germany has a two level approach for audits of public interest companies (i.e. companies having securities listed) and all other companies. Concerning the other independence requirements, SOX applies to audits of publicly listed companies, the European and German regulations (if existent) apply to public interest companies. Thereby, according to the German regulations, public interest companies include all companies having securities listed at a regulated market and according to the European regulations, additionally all banks, other financial institutions and all companies that are of significant public relevance. Only SOX requires pre-approval of audit and non-audit services by the audit committee.			
Auditing Standards	PCAOB amends and alters auditing and attestation standards, quality control standards, and ethics standards; Specifies certain auditing standards (retention period of 7 years for audit work papers, provision of second partner review, framework for internal control system and quality control standards) (Sec. 103); No reference to the ISA.	Requires auditors' compliance with auditing standards adopted by the EU commission and with ethics standards enacted by the Member States and based on standards of the IFAC (Chap. 6, Art. 26 Modernized 8th Directive)	Standards (in accordance with ISA) issued by a private professional body (IDW) approved by the WPK (§ 4 Art. 1 WPO due to APAG)
Major differences: The auditing standards in Germany are only virtually binding, according to SOX and the European regulations the standards are mandatory. In contrast to the German and the European regulations, the auditing standards promulgated by the PCAOB pursuant to SOX are not necessarily based on the ISA (since the PCAOB is not a body of the accounting profession).			

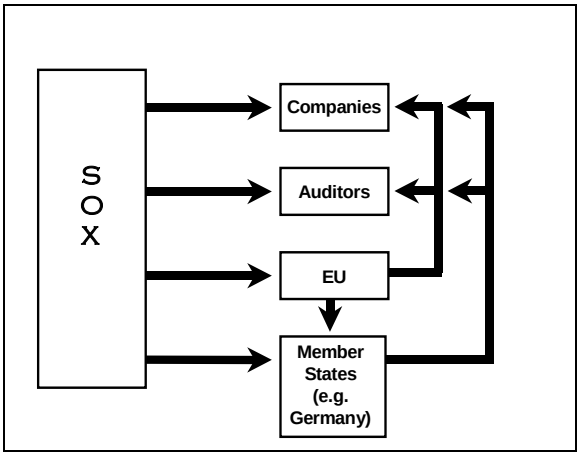

Figure 3. Impacts and influences of SOX

Although differences in the concept of the firm and in the concept of stakeholder vs. shareholder orientation prevail, a one-sided process of convergence between the U.S. and Europe is going on with regard to external corporate governance. The indirect influences of SOX on foreign regulations foster a convergence of the Continental European corporate governance systems towards the U.S. system.

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Appendices

Annex 1. Regulations of the EU Concerning Auditing and other Corporate Governance Issues

Year	Title of Pronouncement	Area
1984	Eighth Council Directive 84/253/EEC based on Article 54 (3) (g) of the Treaty on the approval of persons responsible for carrying out the statutory audits of accounting documents	Auditing
1998	Commission Communication "Statutory audit in the European Union, the way forward"	Auditing
2000	Commission Recommendation 2001/256/EC on quality assurance for the statutory audit in the European Union	Auditing
2002	Commission Recommendation 2002/590/EC Statutory Auditors' Independence in the EU: A Set of Fundamental Principles	Auditing
2003	Communication COM/2003/286 "Reinforcing the Statutory audit in the European Union"	Auditing
2004	Proposal for a Directive on statutory audit of annual accounts and consolidated accounts and amending Council Directives 78/660/EEC and 83/349/EEC	Auditing
Year	Title of Pronouncement	Area
1968	First Council Directive 68/151/EEC on co-ordination of safeguards which, for the protection of the interests of members and others, are required by Member States of companies within the meaning of the second paragraph of Article 58 of the Treaty, with a view to making such safeguards equivalent throughout the Community	Corporate Governance
1976	Second Council Directive 77/91/EEC on coordination of safeguards which, for the protection of the interests of members and others, are required by Member States of companies within the meaning of the second paragraph of Article 58 of the Treaty, in respect of the formation of public limited liability companies and the maintenance and alteration of their capital, with a view to making such safeguards equivalent	Corporate Governance
1978	Third Council Directive 78/855/EEC based on Article 54 (3) (g) of the Treaty concerning mergers of public limited liability companies	Corporate Governance
1982	Sixth Council Directive 82/891/EEC based on Article 54 (3) (g) of the Treaty, concerning the division of public limited liability companies	Corporate Governance
1989	Twelfth Council Company Law Directive 89/667/EEC on single-member private limited-liability companies	Corporate Governance
1989	Eleventh Council Directive 89/666/EEC concerning disclosure requirements in respect of branches opened in a Member State by certain types of company governed by the law of another State	Corporate Governance
2001	Directive 2001/86/EC supplementing the Statute for a European company with regard to the involvement of employees	Corporate Governance
2003	Directive 2003/58/EC amending Council Directive 68/151/EEC, as regards disclosure requirements in respect of certain types of companies	Corporate Governance
2004	Directive 2004/25/EC on takeover bids	Corporate Governance
2004	Commission Recommendation Directors' pay – Commission sets out guidance on disclosure and shareholder control	Corporate Governance
2004	Commission proposes collective board responsibility and more disclosure on transactions, off-balance sheet vehicles and corporate governance	Corporate Governance
2004	Commission Recommendation to ensure a strong role for independent directors	Corporate Governance
2004	Commission proposes to simplify the formation, maintenance and alteration of companies' capital	Corporate Governance

Annex 2. Content of the Proposal for a Modernized 8th Directive

Subject Matter and Definitions (Articles 1 and 2)	Subject matter are only statutory audits by community law Defining auditor and audit firm separately Defining public interest entities
Approval, Continuous Education and Mutual Recognition (Articles 3 to 14)	Enhancing compatibility with internal market rules and allowing fully integrated EU audit firms Prescribing an aptitude test for the approval of statutory auditors from other Member States Requiring compulsory training on IFRS and ISA
Registration (Articles 15 to 20)	Facilitating a public electronic register containing information about statutory auditors and audit firms
Professional Ethics and Professional Secrecy (Article 21 to 22)	Defining the code of ethics adopted by IFAC as starting point for professional ethics of EU statutory auditors and audit firms
Independence (Articles 23 to 25)	Establishing the principle of independence Defining independence of audit firms Establishing principles for adequate audit fees
Auditing Standards and Audit Report (Articles 26 to 28)	Establishing uniform audit standards for the EU Introducing principle of full responsibility of the group auditor for the audit report
Quality Assurance (Article 29)	Introducing requirements for quality assurance Defining criteria for quality assurance systems
Investigations and Sanctions (Article 30)	Setting up general principles of investigation and sanctions Demanding effective and dissuasive sanctions and disclosure of sanctions to the public
Public oversight and regulatory arrangements between Member States (Articles 31 to 34)	Introducing a system of public oversight Regulating the EU coordination mechanism in terms of public oversight Establishing principle of mutual recognition of public oversight of Member States
Appointment, Dismissal and Communications (Articles 35 to 37)	Regulating appointment to ensure independence Regulating dismissal for significant reasons Ensuring documentation of communication between entity and its auditor
Special Provisions for the Statutory Audit of Public Interest Entities (Articles 38 to 43)	Establishing a transparency report Establishing audit committees Additional regulations on independency Additional regulation on quality assurance Additional regulation on public oversight Assistance of the audit committee during the nomination process
International Aspects (Articles 44 to 47)	Regulating the mutual recognition of auditors Regulating registry information for auditors and audit firms of other countries Cooperation with authorities of other countries
Transnational and Final Provisions (Articles 48 to 45)	Founding of an audit regulatory committee Regulating disclosures of fees paid for audit and non-audit services

CORPORATE GOVERNANCE OF GERMAN GROWTH COMPANIES. EMPIRICAL ANALYSIS OF THE CORPORATE GOVERNANCE QUALITY AND THE STRUCTURE OF SUPERVISORY BOARDS OF COMPANIES LISTED ON TEC-DAX

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Abstract

This article analyses the importance of corporate governance for growth companies, derives specific requirements for them and evaluates the corporate governance quality for companies listed on Tec-Dax. Growth companies' characteristics imply a comparatively high importance of corporate governance due to a high level of business and agency risk. Several corporate governance elements are therefore particularly important for growth companies. Overall, the empirical results imply a high conformity of the Tec-Dax companies with the GCGC criteria with some exceptions for specific companies and criteria. But the analysis of the quality of their supervisory boards delivers a differentiated result as in some of the analysed companies the effectiveness of the supervisory board is questionable.

Keywords: corporate governance, supervisory board, TEC-DAX

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Introduction

Although corporate governance is of particular importance for growth companies and therefore, also of interest for their investors, most governance research is focused on large and mature organisations (Markman et al. 2001:278; Van den Berghe/Levrau 2002: 125)[1]. In order to foster the progress of knowledge on this topic, this article is aimed at presenting the findings of previous research and new empirical results from Germany. Therefore, the article analyses the particular importance of corporate governance for growth companies and defines specific requirements for the implementation of effective corporate governance in these companies. Furthermore, the implementation of good corporate governance among German growth companies is evaluated. Due to the limited knowledge on the corporate governance of growth companies the article is of an explorative nature.

After this introduction, the theory and existing literature on the corporate governance of growth companies is analysed. First, the comparatively high importance of corporate governance for these companies is explained. It is caused by a high level of business and agency risk, which increases the likelihood of opportunistic behaviour of the managers and the severity of the consequences of wrong decisions alike. From the characteristics of growth companies specific requirements for their corporate governance are derived. These (requirements) enable the realisation of the growth potential and diminish the risk of agency problems. In the next paragraph the corporate governance quality of German growth companies is analysed empirically taking the criteria of the German Corporate Governance Code (GCGC) as a measure. After this broad perspective, the quality of the supervisory boards is analysed in detail since they represent a core element of corporate governance. In the conclusion the main findings are summarised and discussed.

Importance of Corporate Governance in Growth Companies

The importance of corporate governance is dependent on the probability of both uncertainty and opportunism (Williamson 1975: 20). Thus, the importance of good corporate governance depends on one hand, on the level of business risk that determines uncertainty as well as the likelihood of opportunism and

[1] For an overview of literature on governance of growth companies see Dailey at al. 2002.

on the other hand, on the level of agency risk that determines the possibility of opportunism. (Barney et al. 1989: 64; Van den Berghe/Levrau 2002: 125) Due to their specific characteristics[2] growth companies possess a relatively high level of business risk as well as agency risk. On this basis, specific requirements for corporate governance in growth companies are derived.

Corporate Governance

Corporate Governance is the framework of management and control of a company. (Grundsatzkommission Corporate Governance 2000: 1; Bassen 2002: 20)

Bases are principal-agent-problems between the owner and the manager of a company. They occur because of diverging interests: whereas the owner has the value maximisation of the company as a target, the manager also has personal interest that may interfere with the former. (Jensen/Meckling 1976: 308 ff.) When the agent takes decisions that are inconsistent with the interests of the owners then he is acting opportunistically. (Frederiksen/Klofsten 2001: 204) Opportunistic behaviour is enforced by asymmetric information because the principal cannot recognise the quality of the agents' actions. (Smith/Watts 1992: 275)

Opportunistic behaviour of the managers can cause four generic problems for investors:

- Managers are not working hard to maximize value
- Managers know more about their quality and capabilities than the investors
- Situations in which investors and managers disagree

Important managers could hold-up the investors by threatening to leave the company (Kaplan/ Strömberg 2004: 2177-2178)

Effective corporate governance can reduce these problems that are particularly severe in growth companies as explained in the next paragraphs. Many of their characteristics increase the likelihood of opportunistic behaviour, even the unity of ownership and management.

High Business Risk

Business risk is determined by the probability of survival of a business, which is predominantly determined by its profitability. Therefore, the level of business risk is a function of the uncertainty of profitability, which again is determined by the return on investment (Barney et al. 1989: 64; Porter 2004: 5 ff.). In particular, the following three characteristics of growth companies imply a comparatively high level of business risk. Growth companies normally operate in highly dynamic environments. To succeed in these industries and to realise high growth, constant change is required, which leads to a high degree of internal dynamic. They are often exploring markets where competitive equilibriums among buyers, suppliers, potential entrants, current competitors, and product/service substitutes have not been established (Porter 2004: 215 ff.; Fiet 1995: 555; Küting 2000a: 597). Growth companies normally cannot take advantage of a high profile in the market, which makes them more vulnerable. Additionally, they typically are built on the challenging assessment and government of innovation, which has become even more difficult during the last decades as information technologies and the globalization of industries have blurred industry confines and severed competition. (Prahalad/Hamel 1994: 5 ff)

As the environment of growth companies is so dynamic and their markets are highly competitive, they are required to respond quickly to changing conditions in order to succeed. For this a great extent of flexibility is important, which leads to a high degree of internal dynamic. (McGuire, 2000: 33). The internal processes undergo constant change rather than being firmly established, which increases the risk. (Auge-Dickhut et al. 2000: 4.3.2.1)

Growth companies are highly dependent on their managers. Their management consists in many cases of the founders that still own parts of the company. (Bessler et al. 2001: 254; He/Conyon 2004: 53 ff.) They have specific and unique knowledge about the companies' opportunities and assets as well as the capabilities to exploit them. (Kirzner 1997: 67ff.) Moreover, they possess information about the day-to-day business and the future prospects (Markman et al. 2001: 275). That means that the success of the business is highly dependent on the entrepreneurs or managers and their personal knowledge and experience, which can have four negative consequences: First, the management of growth companies make great demands on the capabilities of the managers. The team is often small and its experiences are limited, but there are always more problems than the managers can handle at any given time. (Fredriksen/Klofsten 2001: 203) Thus, the quality of the managers constitutes an important risk factor for the success of the company. Second, there might be negative consequences if the managers leave the company as they take key knowledge and experiences with them and leave the company without leadership as the organisation is in many cases centred around them. Third, the possibility of opportunistic behaviour is very high, as the managers possess information that the owners lack. (Shane/Cable 2002: 365) They can make use of this information and act against the interest of the outside owners. Finally, the likelihood of opportunism is increased as the managers mainly make the decisions and might be more risk averse than the owners of a company. (Coffee 1987: 18; Jensen/Meckling 1976: 349) This is because managers invest most of their non-

[2] Growth companies are characterised by the exploitation of new opportunities, high capital requirements, scarce resources, a high degree of intangible assets, a short history, a high dependence on the managers, a high internal and external dynamic and low diversification. (Küting 2002a, Küting 2002b, Hayn 1998)

diversifiable and non-tradable capital in the growth firms, whereas the owners can more easily diversify risk by investing parts of their wealth in different companies. (Markman et al. 2001: 280) So managers might be reluctant to invest in risky but cash flow positive projects. But this risk-averse decision-making might lead to lower returns for the owners. (Gomez-Mejia et al. 2000: 9). Growth companies generally have a low level of diversification as they only operate in a small number of business areas, producing and offering few product lines. (Küting 2000a: 600 f.) In high technology firms, new products for example count for more than 50 % of their annual sales. (Schilling/Hill 1998: 67 ff.) This increases the business risk of a company, as its survival is dependent on only a few products. (Küting 2000a: 600 f.). A highly dynamic environment, dependence on the managers, and little diversification are three important factors that cause a high level of business risk. And this business risk enforces the importance of corporate governance not only because of severe consequences of poorer decision making by the managers, but also because of an increased likelihood of opportunistic behaviour by the managers. The next chapter will analyse the high level of agency risk, which facilitates opportunistic behaviour due to asymmetric information between the owners and the managers.

High Agency Risk

Agency risk concerns the probability that managers will make decisions that do not maximise the wealth of the investors. (Jensen/Meckling, 1976: 308f.) Growth companies are built on special opportunities. The entrepreneurs or the management of growth companies must recognise and capitalise on opportunities that others cannot yet see in order to gain high growth (Shane 2000: 448). The very characteristics of growth companies cause their relatively high level of agency risk. More specifically, the following four characteristics of growth companies determine the associated agency risk. The business of growth companies stands out because of its high specificity. As innovation increases, the complexity also increases. This demands higher information processing capabilities, which increases the agency problems (Markman 2001: 289). Owners of companies that lack such high information processing capabilities might not be able to fully understand the business, its associated risks and the information on its development. Additionally, the management is reluctant to fully disclose specific information in order to prevent others from pursuing opportunities the company is building on. (Shane/Cable 2002: 365) This makes it even more difficult to closely follow and control the development of a growth company and thereby facilitates opportunistic behaviour by the managers who possess the specific knowledge.

A comparatively great part of the companies' assets are intangible or difficult to quantify such as patents, rights and specific know-how. (Küting 2000b: 674) But a high importance of immaterial assets makes control of the management even more difficult as their existence, value and development is difficult to judge. This increases the possibility of intentional misinformation of the owners by the managers. (Gompers/Lerner 2001: 155)

Due to their short history, growth companies lack a track record and a high profile. (Hayn 1998: 15) That means little information is available about the previous development of a business, making it hard for outside owners to evaluate it. Moreover, without historic information, managers can more easily present a false picture of the business. (Smith/Smith 2000: 399; Achleitner/Bassen 2002: 1194). The characteristic of managerial ownership of growth companies can strengthen or weaken the associated agency risk. There are two different hypotheses – both empirically supported – that predict either positive or negative consequences of a partial ownership of the management.

According to the convergence of interest hypothesis, management ownership should increase a company's value by aligning the interests of owners and managers. (Morck et al. 1988: 294) As the managers are also owners of the company, they should target value maximisation of the company just as the other owners do. Supporting this hypothesis, the likelihood of opportunistic behaviour, especially consumption on the job, increases with the amount of outside equity. (Jensen/Meckling 1976: 346) This shows that the managers have incentives to maximise the firm value when they own a part of the company. In contrast to this, the entrenchment hypothesis predicts that managers with a substantial share in the company can have negative effects on the value of the firm for the owners. By means of influence and voting rights, they can guarantee their employment at attractive conditions rather than increase the value of the company. (Morck et al. 1988: 294) According to this hypothesis, managers prefer to increase their living standards by taking advantage of their employment rather than by increasing the value of their shares of the company. Baker and Gompers (1999) present an overview of different consequences of managerial ownership of the company: The managers might be immune to career concerns (Fama 1980: 288 ff.; Holstrom 1999: 169 ff.), the discipline of the product market (Hart 1983: 366 ff.), monitoring by large shareholders (Shleifer/Vishny 1986: 461 ff.), and value enhancing takeovers (Jensen/Ruback 1983: 5 ff.; Franks/Mayer 1990: 189 ff.). This hypothesis is corroborated by analysing the relationship between the firm value and the managerial voting power that is related to their ownership. It can be shown that the firm value is positively related to voting power if this is small, but negatively related to voting power if it becomes large. (Stulz 1987: 32 f.) Empirically it is shown for large firms that a management ownership has a positive effect on the firm value if the stake is smaller than 5 %; it has a negative effect if the stake is be-

tween 5 and 25 % and the effect becomes positive again for stakes over 25 %. This supports the entrenchment hypothesis for stakes between 5 and 25 % as such an ownership level is associated, among others, with increased voting power and dominance of inside directors. (Morck et al. 1988: 300 f.). The specificity of the business, the importance of immaterial assets, the companies' short history and the managerial ownership all cause a high level of agency risk that enforces the possibilities of the managers to act opportunistically. Together with the consequences of the high level of business risk, this explains the great importance of effective corporate governance for growth companies. In the next chapter specific requirements for growth companies are derived.

Specific Requirements

Taking the particular characteristics of growth companies into account, there are specific requirements ~~to~~ for their corporate governance. They concern four specific elements that have a higher importance for these companies compared to the more traditional companies at which most of the recommendations – such as the different national and international corporate governance codes – are targeted. But this does not imply that other corporate governance elements are of minor importance for growth companies.

Figure 1 about here

Effective control by the supervisory board is of utmost importance for growth companies. It constitutes an important and formal mechanism for monitoring top managers. (Fama 1980: 294) Furthermore, it has a consulting function, which is especially important in the case of growth companies where human resources are scarce and the experience of managers limited. (Rössler 2001: 221 f.; Küting 2000a: 597) In order to fulfil these functions effectively, two basic requirements apart from the required effort have to be accomplished: independence and qualification of the supervisory board members. The effort needed for effective monitoring and consulting of the management in growth companies is comparatively high as the work is very demanding. Because of this, it is advised to limit the number of offices of the board members. Four or five offices seem to be a reasonable number for members. (Van den Berghe/Levrau, 2002: 131).

Given the ownership and voting rights of the managers, they might also decide on members of the supervisory board. But effective control requires critical monitoring of the managers, which might not be assured if family members or friends of the managers take over this function. (Grundei/Talaulicar 2003: 194) But also former management board members and representatives of the parent company might not be able to independently monitor and consult the managers. (Du Plessis 2004: 1149)

Moreover, the supervisory board must have comprehensive qualifications in order to be able to monitor and consult the management board. (Markman et al. 2001: 286) Dynamic growth companies cannot be effectively controlled with easily quantified performance objectives but instead require greater knowledge and judgement. (McGuire 2000: 33) Because of the high likelihood and possibility of opportunistic behaviour, the supervisory board also needs experience in controlling managers. Therefore three key qualifications are needed in a company's supervisory board: professionalism, leadership, and control competence. Because of this high importance of qualified supervisory board members, research from countries with a one-tier-system propose a greater number of inside board members as more suitable for growth companies. They possess an in-depth knowledge of the firms' capabilities and its environment that is very valuable for the effective control function. (McGuire 2000: 35; Morck et al. 1998: 307; Baysinger/Hoskisson 1990: 76 f.) Members of German supervisory boards are outsiders on the contrary.

Adequate incentives for managers may contribute to the convergence of interests between the managers and outside owners and thereby contribute to a positive business development. There are two reasons for the particular importance of suitable incentive structures for the members of the management board. First, the fixed salary as well as the cash granted is recommended to be adequate to the companies' financial resources. As growth companies – especially young ones – often have liquidity as a bottleneck because of their scarce resources and high capital needs, too high fixed cash salaries might worsen the companies' financial situation. (Küting 2000a: 597). A more contingent compensation of the management would increase the business risk of the company. (Kaplan/Strömberg 2004: 2203) Second, incentives for the managers can contribute to the exploitation of the growth potential, which often requires a longer time perspective. Therefore, a stronger emphasis on longer-term incentives could foster the investment in longer-term projects and give managers the flexibility required to exploit such projects. (McGuire 2000: 34) A higher level of long-term pay in the mix of total compensation is said to overcome some of the problems arising from the divergence of interests. (Markman et al. 2001: 281)

In order to decrease the business risk that arises from the very characteristics of growth companies, an effective risk management is of highest importance. The particular risk factors of businesses have to be identified and appropriate ways to measure and track them have to be developed. Because of the high importance of immaterial assets and the great internal and external dynamic, the evaluation of the risk is a difficult task. The continuous monitoring requires effective systems for early detection of threats for the business. (Töpfer 2005: 218; Schneider 2001: 197). Given the high business risk and the high agency risk of the growth companies a high level of transparency is required, both internally in regard to

the supervisory board and other members of the company, as well as externally in regard to investors and other stakeholders. On one hand, extensive and detailed information on the development of the company and its markets is important for the stakeholders in order to judge the associated business risk. Given the specificity of the businesses, detailed explanations are often required for their-understanding. Especially the members of the supervisory board depend on a high level of transparency in order to fulfil their control function effectively. (Baysinger/Hoskisson 1990: 77). On the other hand, an open information policy can send a positive signal to the outside owners and potential investors by reducing the information asymmetries. Better information signals that the managers are acting openly and refraining from opportunistic behaviour. This might increase the attractiveness for investors and thereby the chances of the companies to obtain further financing, which is crucial for the exploitation of their growth potentials. (Kurzich/Rautenstrauch 2004: 85 f.). From the characteristics of growth companies effective control by the supervisory board, incentives for the managers, effective risk management, and high transparency have been derived as key corporate governance elements. Particular attention should be paid to their implementation.

Empirical Analysis of the Corporate Governance Quality

In this chapter the corporate governance quality of German growth companies is analysed empirically. Given the high importance of corporate governance for these companies, their ideally high commitment is expected to be reflected in a good corporate governance quality, especially in regard to the four elements that were identified as particularly important. The analysis is done on the basis of the GCGC that is introduced first. Then the conformity with the criteria of this code is analysed in two ways: the level of conformity for single companies is determined as well as critical criteria for all companies. Finally, the quality of the growth companies' supervisory boards is analysed in detail because of their particular importance. The chapter closes with a discussion of the results.

Corporate Governance Code as Instrument

The GCGC is the main instrument for the implementation and evaluation of the corporate governance quality of public German companies. It is aimed at enabling the companies and the capital market alike to implement good corporate governance. In this paragraph its development and elements are introduced. The first internationally accepted standards for good corporate governance are the OECD Principles of Corporate Governance that were published in 1999 and revised in 2004. They describe shareholder rights, equal treatment, disclosure, and transparency. (OECD 1999: 16) Being the basis for other guidelines, national distinctions such as different financial and juridical systems require national adaptations. (Hopt 1999: 901 f.)

For Germany the GCGC[3] is the authoritative instrument. Its first version was published in February 2002 by the corresponding government commission. The objective of the code is to enhance the transparency of the German corporate governance structure for national and international investors, and to set standards for good corporate governance. (Government Commission German Corporate Governance Code 2003: 1)

The GCGC covers six chapters and criteria with different levels of binding character: existing law, shall-recommendations, and should-suggestions. Companies can deviate from the shall-recommendations and should-suggestions. In the case of shall-recommendations, companies are legally required to follow the comply-or-explain principle, (§ 161 Stock Corporation Law) meaning the management and supervisory board must disclose deviations yearly. In the case of deviations from should-suggestions, disclosure is voluntary. So the GCGC is not a law but a flexible framework that follows the idea of a responsible organization, which uses the code in a flexible manner for transparent management and control. (Cromme 2003: 139 ff.) Until now the code has been adapted twice: in November 2002 and in May 2003.

The six chapters of the GCGC can be grouped under the following three headings:

Management: This comprises the chapters "Cooperation between the Management Board and Supervisory Board" and "Management Board" and includes criteria that are related to the structure, the incentives and the tasks of the managers. On one hand, criteria concern the supply of information to the supervisory board so that it can effectively control the company. On the other hand, criteria ask for incentives for the management that are aligned to the success of the company. Further criteria concern, for example, the independence of the managers and the publication of a corporate governance report.

Internal Control: The chapter "Management Board" comprises four topics that are grouped under this heading. First, the structure of the supervisory board is a key element. Qualification, independence and continuity should be considered when members are selected. Moreover, the supervisory board should possess comprehensive control and decision rights,

[3] After two different initiatives created guidelines for good corporate governance in Germany, namely the German Panel on Corporate Governance and the Berlin Initiative Group, the federal Government established the German Government Commission on Corporate Governance in 2000. This commission proposed a reform of the German corporate governance system including among others the development of a GCGC. (Baums 2001: 63) This was done by the implementation of the Government Commission of the German Corporate Governance Code that comprised in the majority by managers that were complemented by academics and capital market participants.

for example when it comes to the appointment and the compensation of the managers. The third element is a goal-oriented compensation of the supervisory board members. Finally, the efficiency of the supervisory board should be assured by a good information basis and the implementation of commissions.

External Control: The chapters "Shareholders and the General Meeting", "Transparency", and "Reporting and Audit of the Annual Financial Statements" under this heading include the following four elements: The exercise of information and decision rights by the shareholders at the general meeting should be facilitated by several criteria. A transparent information policy asks for extensive disclosure of information such as information on the shareholdings of managers and members of the supervisory board as well as for equal treatment of all shareholders. The third element concerns accounting according to the rules. Finally, the code asks for an independent annual audit. The GCGC includes many of the criteria that are relevant for growth companies. Nevertheless, the code does not cover all the important aspects or covers them only partially as some criteria are not specific enough to fully capture the described requirements.

The independence of supervisory board members is included in the criteria but it does not, for example, specify the personal relationship to members of the management board as a problem. Furthermore, according to the criteria the compensation of the members of the management board should be appropriate and include variable parts with short and long-term perspectives. But neither the adequacy of the compensation is operationalised nor is the level of fixed compensation to be oriented to the financial power of the company. This could be a limitation in the use of the GCGC for the evaluation of the corporate governance quality of growth companies.

Therefore, a more detailed analysis of the supervisory board is undertaken apart from the analysis of the conformity with the GCGC criteria.

Methodology

The empirical study is undertaken for the German companies listed on Tec-Dax, Deutsche Börse's segment for high-technology companies on the basis of information from the year 2003, if possible from 31.12.2003. The segment of the stock exchange was selected as its listed companies have most of the described characteristics of growth companies. In order to determine the corporate governance quality of growth companies, the conformity with the criteria of the GCGC – in the version from 21.05.2003 – as well as further corporate governance information were collected. Only 23 of the 30 companies listed on Tec-Dax are analysed because the other seven companies either did not publish their annual report between 01.06. and 31.12.2003 or did not have their headquarters in Germany so that the underlying version of the GCGC does not apply to them. In order to allow a comparison of the results to those of more mature companies, the same analysis was also undertaken for the 30 German companies listed on the Dax segment and the 43 German companies listed on the M-Dax segment. Assuring maximum objectivity, only publicly available information that informed investors can receive is analysed, like annual reports, corporate governance reports or agendas of annual meetings. The data collection was undertaken following a fixed retrieval strategy. The corporate governance quality is computed as a function of the conformity with all 67 shall-recommendations and 16 should-suggestions. Every single criterion within these two groups possesses the same weighting. For the analysis of the effectiveness of the supervisory boards, the profiles of the members were screened, evaluating their independence and qualifications. As the sample size is very small, it is not possible to use elaborate statistical methods. Furthermore, this article is of an explorative nature as the knowledge on this topic is still very limited. Therefore, only descriptive results can be shown at this point.

Conformity of German Growth Companies

In the next two paragraphs the results of the conformity of German growth companies with the 83 shall-recommendations and should-suggestions are presented. First, the overall level of conformity for the 23 Tec-Dax companies is described. After that, the critical criteria that are not fulfilled by more than 50 % of the companies are addressed.

Level of Conformity

The analysed companies possess an average conformity of 83 % with all criteria of the GCGC. The spread between the companies with the highest level and the lowest level of conformity is 28 points[4], which indicates that different levels of attention are dedicated to corporate governance among the companies. Three of the companies have a very good corporate governance quality with six or less deviations from the 83 criteria, representing a conformity level of at least 93 %.

These results compare to an average conformity of 90 % in the Dax segment and of 83 % in the M-Dax segment. The higher average corporate governance quality among the more mature and bigger Dax companies can be interpreted twofold: either the commitment of those companies to good corporate governance is higher or the criteria of the GCGC might be more suited for bigger companies.

There are clear differences when looking at the conformity with the criteria in the three areas management, internal control, and external control. The highest average conformity is 93 % for external control, which represents only 2,2 deviations from the 29 criteria under this heading. In contrast to this,

[4] For detailed information on the results including the rankings for the companies see Bassen et al. 2004.

the average conformity with the criteria in management and internal control is lower with 81 % and 75 % respectively. This means that especially the criteria associated with the effectiveness of the work of the supervisory board – which has a special importance in the case of growth companies – are not comprehensively fulfilled.

This indicates that the overall conformity of Tec-Dax companies is relatively high but two restrictions exist: Particular companies have a low overall conformity and many companies have a low conformity with criteria concerning the internal control. It might be that the commitment to good corporate governance differs between the companies. Some companies attain a very high level of conformity and show their commitment by publishing comprehensive corporate governance reports. In contrast to this, other companies comply only with a number of the criteria, often without a sufficient explanation why they do not fulfil all criteria. There are even some companies that misinterpret the character or the content of criteria, may it be intentional or unintentional. These companies should pay more attention to their corporate governance and the publications on this topic in order to respond to its high importance.

Critical Criteria

A critical criterion is a recommendation or a suggestion that is fulfilled by 50 % or less of the analysed companies. There are eleven of the 83 criteria that are critical for Tec-Dax companies; all of them are should-suggestions. The shall-recommendations have an average fulfilment of 93 %, which means that 1,6 of the 23 companies on average do not fulfil a specific criterion. The lowest level of fulfilment is 52 %. In contrast to this, the fulfilment of the 16 shall-recommendations is much lower with an average of 40 %, which relates to 13,9 companies that do not fulfil a specific criterion. The number of critical criteria is comparatively higher than among the Dax companies, where only four criteria are critical. On the M-Dax the number is equally eleven. Among the critical criteria only one is particularly relevant for growth companies. It concerns the variable compensation of the members of the supervisory board that should include long-term elements with risk character. This relates to the specific requirement that the incentives of the managers are recommended to support a long-term focus. Only 30 % of the companies on the Tec-Dax fulfil this criterion. The other critical criteria are also of importance, but do not concern the specific requirements of growth companies that were introduced in chapter 2.2. Among them are, for example, two criteria that concern the compensation and the structure of the supervisory board, which is important for all companies.

Figure 2 about here

Overall, the analysis of the critical criteria also supports the result that the corporate governance of the Tec-Dax companies is of high quality if measured by the conformity with the criteria of the GCGC. These findings permit the question ~~if~~ whether the GCGC and the corresponding reporting are well suited for the requirements of growth companies. These doubts arise because the code was primarily targeted at bigger public companies without including specific criteria for particular types of companies. For example, the code asks for the establishment of committees for different topics. But given the small number of members in growth companies' supervisory boards, this requirement can be considered to be inefficient. This example shows that adaptations of the GCGC to the characteristics of growth companies as a whole and to the situation of the specific company are required.

Quality of Supervisory Boards

Because of the high importance of an effective supervisory board in growth companies and the fact that the effectiveness is not fully covered by the GCGC criteria, a more detailed analysis is done on the quality of the supervisory boards of the Tec-Dax companies. The analysis is undertaken based on the particular requirements of the control function of the supervisory boards of growth companies, namely the independence and the qualification of its members.

An effective supervisory board should have independent members that complimentarily possess the three qualifications control, professional and leadership competence. Independence comprises professional, personal and economic independence, which means that the members should not be former members of the management board, family members or friends of the managers or representatives of the parent company. (Markman et al. 2001: 285) Control competence means that the supervisory board members possess experience from supervisory boards outside the group. Professional competence can be proven by a management position in a company in a related industry or from research in a related area. Finally, members with leadership positions in other companies provide competence in leadership, a requirement to be able to evaluate the business development. (The Telecommunication Development Fund 2002: 9 f.) As the members of the board can complement each other, it is sufficient if the different competences are represented by at least one member. A supervisory board is evaluated as being effective if the independent members as a group have control, professional, and leadership competence. Only independent members were screened for the qualifications because dependent members might not effectively execute the monitoring function. (Grundei/Talaulicar 2003: 192 f.; Bassen 2002b: 158 ff.). The results indicate that of the 152 supervisory board members only 18 can be considered limitedly independent. These 18 members are from boards of eleven companies. So the qualifications were analysed only for the remaining 134 fully independent members. The results imply that seven supervisory boards, which represents 30 % of the total, lack at

least one of the three competences: One supervisory board does not include a single independent member with control competence, meaning that no member is part of a supervisory board out of the group. In six boards there are no independent members with professional experience, neither from practice nor from research. And three boards lack members with competence in leadership as they do not include an independent member that acts or acted as manager in another company.

Figure 3 about here

These results indicate inefficiencies in a number of supervisory boards, which does not reflect their high importance in growth companies. The high number of boards that lack professional competence is particularly serious as specific knowledge is required to understand and judge growth companies that are associated with a high level of specificity.

The analysis delivers findings that contravene the results from the analysis of the conformity with the GCGC criteria as both, independence and qualification of the supervisory board members were explained to be fulfilled by all companies. As the GCGC does not operationalise the two concepts, different interpretations are possible, which could explain the contradictory results. That leads to the situation that there might be different understandings not only between different companies, but also between the company and the financial markets. There are two possible reasons for this: an imprecise formulation of the recommendations in the GCGC or inefficiencies in the companies' reporting on their corporate governance.

Conclusion: Summary

This article gives an overview on the corporate governance of German growth companies. Because of their very characteristics this topic is of high importance for growth companies. High business risk increases the likelihood of opportunistic behaviour by the managers and at the same time the severity of the consequences of wrong decisions. High agency risk in turn increases the possibilities of opportunistic behaviour. Therefore, the owners of growth companies have a particular interest to implement good corporate governance in their companies. There are different elements that are especially important for these companies, namely effective control by the supervisory board, incentives for the managers to increase the firm value, effective risk management and high transparency. Against this background the corporate governance quality of German growth companies is analysed empirically. The results imply an overall high conformity of the Tec-Dax companies with the GCGC criteria with some exceptions for specific companies and criteria. The results of the empirical analysis indicate that the corporate governance quality of German growth companies measured by the conformity of Tec-Dax companies with the GCGC criteria is relatively high. This is shown by the average level of conformity of the companies as well as by the analysis of the critical criteria. Looking in detail at the quality of the supervisory board, a differentiated result arises: In some of the analysed companies the effectiveness of the supervisory board is questionable as it may lack sufficient independence and qualifications. Overall, there are great differences between the conformity among the single companies as well as between the fulfilment of specific elements. These restrictions can be explained by two different approaches. They can either be caused by a limited commitment of the companies or by the fact that the GCGC and the relevant reporting by the companies might not be perfectly appropriate for growth companies.

Finally, a possible limitation of the analysis must be noted as Tec-Dax companies best represent growth companies but possibly do not possess all of their characteristics. Moreover, the sample size is rather small so that the generalizability of the results may be questioned.

Outlook

Based on the findings of earlier research and this empirical analysis, no final conclusion on the corporate governance of German growth companies can be drawn. The current level of knowledge does not suffice to precisely define the specific requirements for the corporate governance of growth companies and analyse its quality. Therefore, further research has to undertaken. This article might serve as a basis for the hypothesis of a larger scale analysis.

Apart from the need for action on the part of researchers, the growth companies themselves as well as the policy makers should increase their commitment to this topic. The companies that do not yet possess effective corporate governance should improve their structures and processes in order to secure a positive business development as poor corporate governance might prevent potential investors from investing in the company and thereby weaken its growth potential. Apart from that, policy makers should consider adaptations of the GCGC for growth companies. Better-suited specific recommendations can help companies and the investors alike to better evaluate and improve the corporate governance. This is in the best interest of all, as it might add to a positive business development.

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Appendices

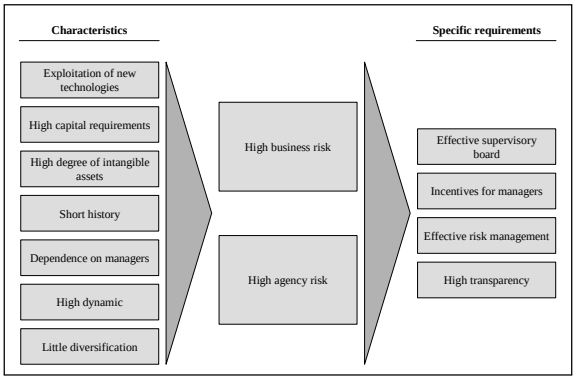

Figure 1. Derivation of specific requirements

Figure 2. Critical GCGC criteria

Tec-Dax 30 - Critical Criteria		
Criteria	Deviations	Fulfilment
Explanation of deviations from "should-suggestions"	21	9 %
Parts of compensation of supervisory board members related to long-time business success	19	17 %
Transmission of entire general meeting over Internet	19	17 %
Staggered supervisory board	19	17 %
Accessibility of the voting representative during general meeting	17	26 %
Chair of audit committee not chairman of supervisory board	17	26 %
Variable compensation of management board members with short- and long-term elements with risk character	16	30 %
Delegation of preparation and decision to commissions of supervisory board	15	35 %
Implementation of commission of supervisory board for appointment and compensation of management board members	14	39 %
Meeting of supervisory board without the management board if required	13	43 %
Existence of commissions for specific topics (strategy, compensation, investments, etc.)	13	43 %
n = 83 criteria **Ø**	**13,9**	**40 %**

Figure 3. Quality of the supervisory boards

Tec-Dax 30 – Quality of Supervisory Boards	
Requirements	Deviations
n = 23 supervisory boards	
Independence	0 supervisory boards
Control competence	1 supervisory board
Professional competence	6 supervisory boards
Leadership competence	3 supervisory boards
Deviations from at least one of the four requirements	7 supervisory boards

VOLUNTARY ADOPTION OF IFRS IN GERMANY: A REGULATORY IMPACT STUDY

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Abstract

From 2005 onwards, consolidated financial statements of listed European companies have to comply with IFRS (IAS). Many German companies began adopting those standards in the 1990s, on a voluntary basis, because of their need to access international capital markets. A broader and more dispersed investor community could be achieved only by accepting significant regulatory consequences.. The purpose of this paper is to analyse the financial impact of initial IFRS adoption on the statement of changes in equity and the income statement of German companies. Our analysis comprised all non-financial DAX groups applying IFRS plus additional listed companies in two selected industrial sectors. The two sectors are chemical pharmaceutical and fashion where, apart from the DAX companies quoted, we have studied other relevant companies in each sector. The analysis of the reconciliations of the retained earnings and income statement has been developed both from company and type-of-adjustment perspective, classifying items in similar accounting categories. The results are that the impact of initial adoption of IFRS was, both individually and overall, significant. In relation to the specific sectors analysed, impact is also relevant, although not as much as in DAX companies, but differs between the sectors.

Keywords: IFRS adoption, capital market access, Germany, IFRS adjustments, chemical-pharmaceutical sector, fashion industry.

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1. Introduction

From the beginning of 2005, public companies in Europe have to apply international accounting standards. However, 2005 is not the first year in which the impact of this change in accounting rules can be assessed. Early adoption on a voluntary basis was observable from the 90s in several EU member countries. This voluntary adoption of International Financial Reporting Standards (IFRS, including old IAS) is a disclosure choice, which has been studied intensively in recent times. Many scholars have examined the usefulness of accounting information when different accounting principles are adopted. The main focus of these studies is on the implications coming from voluntary adoption on financial market efficiency (e.g. see Verrecchia, 2001 for a literature review on the topic). For instance, Ashbaugh and Pincus (1998) discovered for a sample of non-US firms that adopted IAS between 1990 and 1993 a significant increase in the accuracy of the analysts forecast in the year of adoption. Other researchers emphasize that our understanding of the information asymmetry problem must be based on the institutional framework of the IFRS disclosure as a choice. Several empirical studies distinguish the benefits coming from early adoption for companies traded on the stock market. Evidences suggest that firms adopting IFRS are typically internationally oriented with multiple stock listings and considerable cross-border activities (e.g. Dumontier and Raffournier, 1998).

The focus of this study is on those German companies which voluntary adopted IFRS in the period 1994-2003. In the 1990s some German firms started adopting IFRS as their accounting policy. In 2001, as some studies show (e.g. Renders et al., 2005), German firms which voluntarily reported under IFRS, were predominant amongst voluntary adopters on the European stock market (69 out of 108 firms from Austria, Belgium, Denmark, France, Germany, Italy and the Netherlands). The objective of this empirical study is different from the studies mentioned above. It aims at distinguishing those e accounting items that are most significantly influenced by early IFRS adoption. The underlying idea is that the institutional environment, i.e. national GAAP, is country-specific and national differences

are observable not only on industry, but also on a country-level. For instance, recent studies suggest that the most significant effects of the change to international standards in UK will be the recognition of all derivatives on the balance sheet at fair value, restrictions on the use of hedge accounting, the full recognition of pension deficits, and revised accounting for mergers and acquisitions (Cairns, 2004). Although there are numerious empirical arricles on the impact of the institutional framework on the properties of the accounting earnings (e.g. Ball et al, 2000), the rational behind this study is that a careful examination of the national accouting principles is necessary to make a more comprehensive analysis of the IFRS adoption at cross-country level. Since the institutional differences influence the reconciliation effect, we present first a comparison between IFRS and HGB in Section 2. In Section 3 we examine the IFRS effects on German companies in the DAX Index[1]. As explained later, the focus on the DAX companies is due to their international importance, high accounting complexity and accounting policy based on transparency. To provide more comprehensive analysis of the IFRS effect on the firm account in Sections 4 and 5 we analyse in details the accounting differences after the reconciliation prepared by the German companies in two key industries: chemical-pharmaceutical and fashion. Section 6 summarises the main conclusions[2].

2. German GAAP (HGB) to IFRS: main differences

Since one of the main objectives of this study is to describe and quantify IFRS effects on German companies, we provide a framework in relation to the main differences[3] between IFRS[4] and German GAAP (including HGB). The difference, which has been widely recognized in the literature, is the origin of both accounting systems. The German accounting model is considered to be more conservative compared to the IFRS accounting model. The latter is clearly based on Anglo-Saxon traditions where the principle of relevance[5] prevails over others (Lamb et al., 1998). This divergence explains many of the accounting implications drawn below. Accounting regulations in Germany are not as developed as in the countries with Anglo-Saxon legal origins. Often, specific applications of this conservatism do not come from specific legal rules in HGB, but from well-established practices. Differences detected can be classified into several different categories (Nobes, 2001). The current empirical study applies a classification developed by Nobes (2001). Some new categories have been added and explained in the context. The results are summarized under two broad categories: a) assets and liabilities: recognition and measurement and b) consolidation procedures.

2.1. Assets and liabilities: recognition and measurement

A careful examination of the HGB accounting rules in comparison with the IFRS has been conducted. The differences in the recognition and measurement of assets and liabilities were found to be mainly in those accounting criteria followed by HGB, which do not meet the ones required by IFRS.

Under HGB, trading, available-for-sale and derivative financial assets and trading and derivative liabilities are not marked to market as they are under IFRS. Internally-generated intangible assets, which are expected to provide ongoing service to the company, must not be recognized under HGB, while IFRSs state that they should be recognised as long as they are able to generate profit for the company and they can be reliably quantified. In particular, this applies to development costs. Under HGB, foreign currency monetary balances are generally translated at the worse of transaction and closing rates so as to avoid the recognition of gains on unsettled balances. Under IFRS, positive and negative exchange differences must be recognized in the income statement although they have not yet been settled.

Under HGB, impairment tests on fixed assets are based on market replacement costs and much less on their value in use (net cash flow of the corresponding cash generating unit) due to the absence of an accepted methodology at the time of computing that value. Under IFRS, the higher of net realisable value and value in use is considered.

Leases are normally classified according to tax rules and therefore are seldom considered as finance leases following HGB. IFRS define finance leases widely, including cases where the acquirer does not ultimately buy the asset.

Under HGB inventories can be valued at the lowest of cost, net realizable value and replacement cost and they may include attributable portions of general administrative overheads although traditionally they have included only direct costs. IFRS only refer to cost and realizable value and always include general manufacturing overheads portions in cost.

Start-up costs may be capitalised and amortised under HGB and that is not possible under IFRS.

The recognition of provisions under IFRS is much more restrictive than under HGB.

[1] We have excluded financial companies because of their special features.

[2] Appendix A lists all the companies analysed together with some key financial data.

[3] We have considered only differences in measurement and valuation, which may lead to differences in equity or net income of the companies. We are not going to refer in this section to differences in disclosure as those are not subject for adjustments and therefore are not a purpose of the paper.

[4] It is worth mentioning that IRFS considered in this section are those endorsed by the EU at the time this paper has been written, that is, those included in 1725/2003 law, published in the EU official Diary on the 13th of October 2003, plus IAS 32 and 39, since they are likely to be endorsed as well.

[5] See IASB Conceptual Framework (1989).

Under IFRS, pension provisions must be estimated using the projected unit credit method, whereas companies applying HGB use tax determined rates of interest, and do not take into account future salary and pension increases. Actuarial losses are often immediately recognized in Germany while under IFRS they can be deferred. Under HGB, German companies do no take into account all temporary differences (they account only for timing differences), nor tax effects of the tax loss-carryforwards for deferred tax computations (unless compensatable with recognised deferred tax liabilities) or the effects of the other recoverable differences. Recognition of revenues on construction contracts. Under HGB the completed contract method is used while under IFRS the percentage of completion is used.

2.2. Consolidation procedures

We conducted a comparative assessment of the HGB and IFRS accounting principles, which determine the consolidation procedure. The distinction between the models can be summarised as follows:

Under HGB the acquisition date may be identified as the date of first time consolidation of the subsidiary while under IFRS acquisition date is always the date when control becomes effective.

Certain business combinations may be accounted for as pooling of interests under HGB even though an acquirer can be identified and that is not possible under IFRS. However, in fact this method is used very rarely in Germany.

Consolidation goodwill can be deducted immediately against equity under HGB while under IFRS it must be recognised as an asset,amortized and tested for impairment when considered necessary. Following HGB measurement of assets and liabilities acquired in a business combination at their fair values must not exceed the cost of acquisition, while IFRS state that those values exceeding fair value of the items acquired in a business combination must be recognised as negative goodwill.

The recognition of provisions in business combinations following IFRS is more restrictive than under HGB.

3. IFRS effect on German companies: DAX sample

3.1. Sample selection

The empirical analysis of this study is based on a sample of German companies included in the DAX Index that apply IFRS. Currently the index comprises 30 companies, of which 6 provide financial services. The companies in the financial sector were excluded from the data analysis because of their specific accounting principles (For details and sample statistics, see Appendix B).

Table 1. Sample selection: DAX index

Number of all listed companies in DAX	30
Less financial sector	(6)
Final sample	24
Less companies not applying IFRS	(10)
Final sample of IFRS implementing companies	14

For the 14 DAX companies in the sample we analysed the IFRS effects at different levels: company, accounting area, and combined for the whole sample.For each company we analysed the IFRS statements of the first year of IFRS application with a special focus on the reconciliation of retained earnings (RE) and income statement (IS).

The companies in the sample started applying IFRS in different years, from 1994 to 2001. During that time IFRS evolved, the evolution has been taken into account in the data analysis. For this purpose, we distinguish and present in the table below three periods: before 1999, 1999-2000 (revised IAS 17 and 19; new IAS 36 to 38; SIC 8) and 2001 (IAS 39). It is worth mentioning that the IFRS evolved further after 2005. Since it does not have an implication on the IFRS effect in the time of adoption, we disregard these amendments in the data analysis.

Table 2. Classification by year of IFRS adoption

Year of IFRS adoption	Company
Before 1999	TUI, HENKEL, MAN, LUFTHANSA, ALTANA, BAYER, SHERING, DEUSTCHE POST, ADIDAS
1999-2000	METRO, RWE, WELLA, ESCADA
2001 on	VW, BMW, LINDE, STADA, HUGO BOSS.

SIC 8 deals with first-time application of IFRS as the primary basis of accounting, stating that new IFRS statements "should be prepared and presented as if the financial statements had always been prepared in accordance with the Standards and Interpretations effective for the period of first-time application" (paragraph 3). SIC 8 became effective on 1 August 1998. Before SIC 8 there was not specific guidance on first-time application of IFRS. However, IAS 8, paragraphs 46 to 48, referred to changes in accounting policies made on the adoption of an International Accounting Standard. Since SIC 8 uses the same retrospective principle as IAS 8, we understand that all companies in the sample, whether they started applying IFRS before or after August 1998, followed a similar retroactive basis.

IAS 8, paragraph 49, when defining the benchmark treatment of changes in accounting policies (including changes from an adoption of a new International Accounting Standard) states that any resulting adjustment should be reported as an adjustment to the opening balance of retained earnings. It is generally understood that, in accordance with the retroactive principle, the adjustment is net of tax effects[6]. Consequently we assume that, unless otherwise specified by the companies, the IFRS effects are shown net of taxes.

3.2. Analysis of the effects by company

Appendix B summarises the RE and IS reconciliations for the 14 DAX companies, and discloses totals and percentages by reconciling item (or adjustment type) and by company. Totals and percentages shown are not homogeneous. However, as discussed below, the effects of those inconsistencies are minor and, thus, do not affect the conclusions of our analyses. As shown on Exhibit 2, the companies started applying IFRS in different years, and so impacts were different. For companies adopting IFRS before 1999 or between 1999 and 2000, we reviewed the impact of subsequently applying the new or revised IAS of 2000 and 2001, respectively, in the statement of changes in equity (exceptionally, in IS), and confirmed that those subsequent effects were, in general, minor (see appendices B, C and D). One of the reasons for the effects of application of new or revised IAS being minor is that often there are transitional rules lessening the degree of retroactivity. However, as shown in appendix B, the application of IAS 39 in 2001 had significant effects. The different starting dates theoretically affect the comparability of the totals by company and adjustment type because of the price changes. However this effect is also considered minor: most companies in the sample started applying IFRS on or after 1998, and, in any case, inflation in Germany has been consistently low. On the other hand, we often measure the IFRS effects in relative terms by reference to RE and IS of the same year without any time factor to consider. Companies disclose different levels of analysis of the nature and amounts of the reconciling items, and the information is in the form of a reconciling list or in the form of comments in the notes, but never as "double entries" disclosing all the financial statements lines affected[7]. So we could only understand the IFRS effects on a piecemeal basis, and often explanations were very scarce and rather cryptic. We tried to grasp the significance of the IFRS adjustments reading the RE and IS reconciliations together with the full financial statements, specially the disclosures in the notes.

3.2.1. Effects on retained earnings (RE)

We comment below on the numerical information regarding the RE reconciliations disclosed in Appendix B: The quantative effects are very different from company to company. There are some visible general patterns, but company-specific factors were predominant. There is no relationship between the size of the IFRS effects and the year of first application. This reinforces observations made above. The categorisation of companies in the sample by the significance of the net effect (either plus or minus) expressed as a percentage on HGB RE is as follows:

Eight companies in the sample show percentages below 10 %

Three companies, between 14 and 29 %

Three companies show percentages above 50 %.

d) However, the analysis must be made also on a gross basis, computing the positive and negative adjustments separately. From that perspective, for example, eight companies had positive effects higher than 30% on RE.

e) The four companies with the highest net effect on RE all disclosed some specific large adjustment, as shown in Exhibit 3. It is worth mentioning that two of the four companies with the highest net effect belong to the automotive industry, and both show a big adjustment for the capitalisation of development costs (IAS 38). The third automobile company in the sample –MAN- did not have such an effect, because it first applied IFRS before IAS 38 went into effect; and, when it adopted it, the effect was minor, either because of circumstantial reasons or because of the transitional provisions of the new standard.

f) Despite the significance of company-specific factors, it is worth considering the combined IFRS effect for the 14 companies. The first application of IFRS by the 14 companies meant a net increase of combined RE by a € 15.2 billion, representing a 26 % increase on HGB RE.

[6] See for example PricewaterhouseCoopers (1998), page 12-24.

[7] For example, part of the adjustment to the provision for pensions might have resulted not in a salary expense, but in an increase in the value of inventories because of the increased labour cost, and this effect is not disclosed separately, but on a net basis.

Table 3. Companies with highest IFRS effects (*)

Company	Positive adjustments	Negative adjustments
TUI	PPE depreciation	Goodwill
VW	R&D	Deferred taxes
	PPE depreciation	Pensions
	Write-back provisions	
BMW	R&D	Financial instruments
	PPE depreciation	
DEUTSCHE POST	Write-back of provisions	Pensions

* Both in absolute and in % terms. PPE from now on means Property, Plant and Equipment

3.2.2. Effects on IS

In Appendix B there is also an analysis of the IFRS IS reconciliation[8], except in the cases when no information was available and could not be estimated. The information was only given for the first year of IFRS application and not for the comparative year. Given the very limited amount of information disclosed, it has not been possible to deepen our analyses of the IS conciliation. Below we make some quantitative remarks at company level, whereas the analysis by adjustment type is presented in the next subsection:

By inspection of the Appendix B, we can see that there is no relationship between the IS and the RE adjustments referred to above. Moreover, in about half of the 9 companies disclosing the IS reconciliations, the sign (positive or negative) of the reconciliation is the same as for the RE reconciliation, and in the other half the sign is different.

The significance of the reconciling items as measured against the HGB net earnings varies sharply from one company to another (from a –16% to a +25%), but they are not as large as for RE.

The distinction between gross/net effects we made in the previous section on RE is valid for IS: all companies disclose a combination of positive and negative IS adjustments.

Two companies disclosed a relatively big positive effect: BMW and RWE for reasons summarised in Appendix B.

The combined net positive IFRS effect for the nine companies totals € 411 million, representing a combined increase of 10 % on HGB combined net profits.

Analysis by type of adjustment

We suggest that, for extrapolation purposes, the analysis by type of adjustment is the most useful. As indicated, the adjustments are supposed to be net of the tax effects. Again we note that there might be cases where the same reconciling item affects both assets and liabilities, although the effects are not separately disclosed in the RE conciliations:

Below we summarise the numerical content in Appendix B (RE portion):

Increase in intangible assets from capitalisation of some development costs by € 6,3 billion, basically traceable to VW and BMW as mentioned in the previous subsection. Decrease in PPE accumulated depreciation by € 6,4 billion: a number of companies had applied accelerated tax depreciation methods or rates for HGB purposes. The main adjustments correspond, once again, to VW and BWM, two heavy industrial groups, but also to TUI, a service company. RWE, on the other hand, shows a negative amount, for undisclosed reasons.

Decrease in other provisions by € 4,8 billion. The fact that almost all of the companies share this type of adjustment reflects the traditional philosophy of German companies, fuelled by a generous tax system, toward creating hidden reserves by, among other things, inflating provisions. It is not possible to quantify the incremental factor caused by IAS 38 going into force for 2000 beyond the observation that most (although not all) of the companies that started applying IFRS after 1999 disclose higher effects.

Deferred tax also caused a big net effect of € 4,6 billion. This originated from different causes: computing all temporary differences regardless of their recurrence or date of reversion, as well as taking into account tax loss-carryforwards (this is the most frequently quoted reason) and other tax recoverable differences. All the companies have foreign subsidia-

[8] From our point of view, nature and extent of the reconciling items must come from two related causes: original distance between HGB and IFRS and balance sheet IFRS adjustments. For example: companies might have provided for future maintenance expense for HGB purposes. If so, the provision had to be written back following IFRS. The net IFRS effect on IS would then be an increase in the year expense for not having provided for them before, and a decrease for not providing for the next period. Also the IS adjustments are likely to reflect the net effect of a combination of different IFRS impacts. Again an example: the adjustment in the depreciation expense for the year may reflect concurrently or on a net basis the effects of having fair valued the subsidiaries' PPE following an acquisition, and the change of the useful lifes (versus tax allowed estimates) and/or of the depreciation method.

ries with different tax systems: the specific mix of subsidiaries is one of the key factors in determining the adjustment. On the other hand, assuming that the other IFRS adjustments are shown net of taxes, the item should not incorporate the tax consequences of the conversion to IFRS.

Inventories increased by € 2,3 billion, usually because of the application of full cost. We included under that heading the effect, much less, of applying the percentage of completion method.

Pension liabilities increased by € 10,7 billion, the single most important reconciling item, affecting all companies, except BMW. In relative terms this single item absorbed 18 % of the combined HGB retained earnings. It is not possible to identify the incremental (or decremental) effect of the revision of old IAS 19 that went into effect in 1999. In any case, the reconciliation affects practically all the companies regardless of the year of first application of IFRS. Almost all companies, whether the first application took place before, on or after 1999, adopted the projected unit credit method, changing a number of actuarial assumptions, such as the rate of interest or estimated future increases in salaries and pensions. Companies do not specify whether or not actuarial losses were deferred; however, considering the predominant practice in Germany, we can assume that there was a full recognition of them.

Financial instruments: the companies showing effects from applying IAS 39 were, of course, the ones that started applying IFRS in 2001 onwards (D. Post, that started in 1998, is an exception). Appendix B also details the effect from the subsequent application of IAS 39 by the other companies. The IAS 39 effect varies from company to company for three possible reasons: the circumstantial risk exposure (both in absolute and in hedging terms), fair values prevailing at the end of 2001 and transitional provisions of IAS 39.

As per IS effects, the adjustment types are of the same nature as the ones found in the RE conciliations. We can summarise our comments in subsections 3.2 and 3.3 as follows:

Company-specific factors are predominant when explaining IFRS effects for the 14 DAX companies.

However there are a number of relatively common characteristics, as shown in Appendix B:

In ten companies the conversion to IFRS meant an increase in RE, and in the remaining four the net negative adjustment is mostly due to an increase in the pension liability. The basic explanation is simple: HGB accounts reflected the prudent philosophy in German accounting. The combined effect is huge.

That mentality had created hidden reserves in PPE (excess of depreciation), provisions (overstatements), deferred tax assets (exclusion of tax effects of tax-loss carryforwards), inventories (use of direct cost methods), intangible assets (expensing all development cost most notably in the automotive industry). But also it has been found that pension provisions were understated by a big amount.

The financial situation, including working capital, improves under IFRS, and is represented on a more solid basis in IFRS accounts, as compared with the HGB accounts.

Statistical test

This section summarizes the results of the statistical test performed. The objective is to distinguish whether the effect of the international accounting principles is significant for the group in the sample. The main difficulty when performing the test was that the companies under review used a different format for their accounts, i.e. different categories for different revenues and expenses. The difference in the reports does not allow presenting a comprehensive account-by-account comparison for the companies in the sample. However, three accounts have been reported publicly in the same category. The results of the statistical test are presented in the table below. The initial hypothesis, which has been tested with a paired-sample for means, is that the adoption of IFRS does not have a significant effect on the group accounts. For example, several companies reported the year after the enforcement of the international standards an increase in the goodwill value, although for the majority of the companies in the sample the change was negative. The statistical test allows confirmination of a significant effect of IFRS adoption on some accounts, as revealed in the statements of the overall 13 companies (for one company the accounts were not clear enough to include them in the data analysis).

Table 4. Statistical test: before and after the IFRS adoption[+]

Accounting item:	Mean; standard deviation	p-value (two-tales)
Shareholder's equity	23.05% (0.37)	0.044**
Goodwill	8.26% (0.15)	0.074***
Provisions for pension	-6.49% (0.07)	0.004*

[+] The test has been performed as follows. The percentage increase or decrease of the value has been calculated from the firm's reports. The null hypothesis was that the firm's account before and after the adoption is the same, i.e. the group has been compared with a group, for which mean and standard deviation values are zero.

*Significant at 1%; ** Significant at 5%; *** Significant at 10%;

The conclusion of the statistical test is that a variation for three accounts is observable, i.e. both positive and negative values were registered. However, the difference before and after the introduction of IFRS for the group is significant. The sample is not large enough to make the conclusions more generalizable. The reconciliation data from 13 companies, nevertheless, shows that the change in the shareholder's equity, the goodwill and the provisions for pension after the implementation of international reporting was significant.

4. IFRS effects on chemical and pharmaceutical industry in Germany

As explained in the introductory section, the main criteria for selecting a particular industry for our research was the availability of quoted German companies within the industry that apply IFRS, together with the availability of quoted Spanish companies in the same industry. The chemical and pharmaceutical (*Ch&Ph*) was one of them. This denomination encompasses a broad set of industrial and trade activities: all types of chemical products for manufacturing and agricultural industries, pharmaceutical, cosmetic and other consumer products. Most of the companies in the sample produce and market a wide range of products in separate business lines. The most visible example is Bayer, with its multi-industry strategy. This breath of products and activities blurs any strong industry feature and makes it less likely that there are major accounting singularities.

4.1. The sample

The sample comprises all seven Ch&Ph quoted companies that used IFRS, of which five belong to the DAX index and, so, have been already analysed in Section 3. Only two non-DAX companies –Stada and Wella- that used IFRS were clearly in the Ch&Ph industry, and are new in the sample. Appendix A lists the companies and supplies some numerical information on them. Appendix C discloses the RE and IS reconciliations using the same format as Appendix B, that was the basis for our analysis in the preceding DAX section. Many observations are similar to the ones arrived at in the preceding section. However, since the companies with the highest reconciling items in the preceding section belong to other industries –automobiles and other- the combined IFRS effects in the Ch&Ph industry are lower than the combined effects in the DAX sample. The net combined effect represents only the 2 % on HGB RE. This effect by company ranges from -6% to 26 %. A characteristic of the sample is the different years of first application (see *Exhibit 2*). Two companies –Bayer and Schering- pioneered the IFRS application, since 1994. Both disclose the IFRS effects through IS[9]. The reconciling items for both companies are shown as RE adjustments in Appendices B and C for consistency with the other companies in the sample.

4.2. Comments by adjustment type and company

The main effects by adjustment type and company are as follows:

4.2. 1. Goodwill

Goodwill appears as a RE adjustment in three companies[10]. Two of them –Linde and Altana- explicitly state that, under HGB, goodwill had been written off against reserves on acquisition, and that, under IFRS, they wrote-back it in the balance sheet on a partial retroactive basis for acquisitions made before 1995 (as permitted by the old version of IAS 22). Consequently with the write back of the goodwill as an asset, in a number of companies there is a charge to IS caused by amortisation of goodwill that appears as a reconciling item in the first year of application.

4.2.2. Development costs

Only three companies in the sample –Linde, Wella and Stada- started applying IFRS when IAS 38 was already in force. Linde and Stada wrote back as intangible assets some previously expensed development costs (maybe because it referred to a business combination). The remaining companies kept expensing those costs, as permitted then. Altana justifies it with reference to uncertainties in clinical approval procedures.

4.2.3. PPE depreciation

Four companies out of the seven disclose that, for IFRS purposes, they changed retroactively the depreciation methods from tax-inspired ones to the straight-line method, although one of them, Linde, does not show any RE reconciling item (probably for reasons of immateriality). The companies disclose different effects on IS, depending –we understand- on the asset mix and their situation regarding their remaining useful life.

4.2.4. Pensions

Only Wella did not mention pensions in the RE reconciliation. All the others revised their pension provision following the application of the projected unit credit method. Linde discloses additionally the preceding method: the age of entry normal method. With one exception, the companies did not disclose the deferral method –if any- of actuarial differences.

4.2.5. Deferred taxes

The main reason quoted by the five companies in the sample for creating a deferred asset adjustment is the recognition of the tax effects of tax loss-carryforwards.

[9] Schering claimed to comply with both HGB and IFRS for all topics except pensions, for which it departed from HGB

[10] Bases for GW amortizations differ from company to company: Henkel (15-20 years), Stada (10 years), Altana (5-10 years), Linde (10-20 years except for a recent acquisition with an estimated useful life of 40 years), Schering (10-15 years).

4.2.6. Provisions

For reasons already explained in the Section 3, most companies in the sample reduce the balance of provisions. Wella increased it for the recognition of some tax risks, not recognised before.

4.2.7. Hedge accounting

Henkel, Bayer, Wella and Altana explain in the notes that they hedge risks (usually associated with foreign currency or/and with interest rates) and that they apply some kind of hedging accounting, without supplying further details. Of the two companies – Stada and Linde - that started applying IFRS when IAS 39 was already in force, the second discloses a positive reconciling item in the financial instruments line.

4.3. Final remarks

As explained, most companies in the sample show a wide variety of reconciling items. On a combined basis, most have a positive sign: either increase the value of assets (goodwill and other intangible assets, PPE, inventories, financial instruments, deferred taxes) or reduce the balances of provisions. The main exception is, once more, the pension liability amounting to € 0,9 billion, and balancing most of the positive net combined adjustments that total € 1,3 billion.

Although the combined net effect on RE and on IS is minor, individual effects on various items in the balance sheet and the IS are significant: both statements must represent the financial situation and the results in a more meaningful way under IFRS.

The differences in the year of the application (from 1994 to 2001) might have had impacts on the IFRS adjustments, considering that four companies out of the seven started applying IFRS before 1999, when SIC 8 took effect, and considering the fact already mentioned in section 3 that often the application of a new or of a revised standard for a company already using IFRS is softened by transitional provisions. All companies except Wella and Schering disclose net positive RE adjustment

As for development costs few companies believe that they meet the conditions for capitalising them for industry- specific reasons.

5. IFRS effects on fashion industry in Germany

5.1. Specific comments

The fashion industry was selected because there are three German quoted companies applying IFRS and three Spanish quoted companies in the same industry. All companies produce and trade fashion apparel and other goods. Appendix A lists the companies in the sample, and supplies some quantitative information. Appendix D, that has the same structure as Appendices B and C, summarises the RE and IS reconciliations and discloses totals and percentages by company and by adjustment types.

Out of the three German companies, only Adidas belongs to the DAX Index and was, therefore, already analysed in Section 3.

As for the reconciliations disclosed in Appendix D, the following points are worth emphasis:

The three companies share few common accounting characteristics. The main common one is that most reconciling items are working capital adjustments, consistent with the industry characteristics. This is the main differentiation from Ch&Ph.

H. Boss and Escada disclose moving from a direct cost to a full cost system for inventory valuation, and adopting the projected unit credit method for pension computation.

Adidas, the biggest company of the sample, has few reconciling items (see final remarks).

Escada, the smallest company, shows a variety of negative adjustments both in IS and in RE reconciliations, as if its conversion to IFRS coincided with a general cleaning exercise.

The negative adjustment in H. Boss affecting intangible assets is the net effect of capitalising some past development costs, minus expensing some expansion costs previously classified as intangible assets. The other two companies in the sample do not mention either development cost or expansion expenses.

Only Escada discloses a reconciling item regarding goodwill.

5. 2. Final remarks

As indicated at the beginning of the section, company-specific features exceed common industry characteristics. Adidas, the biggest in the sample, in theory should generate the biggest IFRS adjustments. However, this is not case. It made the conversion back in 1994 when a number of current IAS were not yet in force. Appendix D indicates that subsequent adjustments were not relevant, probably, again, because of the softening factor represented by transitional provisions of new or revised standards. In any case, disregarding the reclassification of minority interest, Adidas and, to a larger extent, H. Boss show positive adjustments to RE for IFRS purposes, in line with our observations on the DAX sample and on the Ch&Ph industry.

6. Conclusions

Taking the German experience as an example of early adoption of IFRS, the objective of our paper was to assess the IFRS effects in Germany - at a DAX level and for two main industries: Chemical-Pharmaceutical and Fashion.

The IFRS effects on German Corporations were important and often they meant a significant increase in retained earnings in the first year of adoption of IFRS. The main reason for those effects was the highly conservative philosophy of HGB leading to understatements of some assets (namely PPE, inventories, deferred taxes) and to an overstatement of

some provisions. However, most of the German corporations had also understated pension liabilities by a large amount. The specific analysis of the IFRS effects by industry lead to similar conclusions, with some nuances: in the chemical and pharmaceutical industry effects on non-current assets and liabilities were relatively more important, whereas in the fashion industry the effects were mostly on working capital. That would be reasonable taking into account the different balance sheet expected structure of those said sectors.

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Appendix A. Some key data on selected companies

Company	DAX	Ch-Ph (2)	Fashion	Equity	Sales	Assets	Net Profit
Adidas	x		x	1.356	6.267	4.188	260
Altana	x	x		1.445	2.735	2.532	345
Bayer	x	x		12.213	28.567	37.445	-1.361
BMW	x			5.254	36.881	19.482	392
Lufthansa	x			2.653	15.957	16.732	-984
Deutsche Post	x			6.106	41.220	155	1.309
Henkel	x	x		3.311	9.436	9.362	530
Linde	x	x		3.851	8.992	11.915	108
Man	x			2.784	15.021	9.955	110
Metro	x			4.161	53.595	26.580	496
RWE	x			7.013	43.875	99.142	953
Schering	x	x		2.902	4.828	5.389	443
TUI	x			2.767	19.215	12.989	275
Volkswagen	x			24.430	87.153	119.136	1.095
Stada		x		613	745	955	44
Wella		x		655	3.312	2.519	122
Hugo Boss			x	399	1.054	755	82
Escada			x	73	621	438	-78

APPENDIX B-1

IFRS EFFECTS IN GERMAN DAX COMPANIES (million €) - RETAINED EARNINGS

	ADIDAS	ALTANA	BAYER	BMW	D. POST	HENKEL	LINDE	LUFTHANSA	MAN	METRO	RWE	SCHERING	TUI	VW	TOTAL	% effect on local RE	% effect on total Adjst (negative)	% effect on total Adjst (positive)
Year 1st aplication	*1.994*	*1.998*	*1.994*	*2.001*	*1.998*	*1.997*	*2.001*	*1.998*	*1997 / 8*	*1.999*	*1999 / 00*	*1.994*	*1997 / 8*	*2.001*				
R E per HGB	**422**	**1.302**	**5.205**	**4.896**	**1.671**	**2.360**	**4.276**	**5.339**	**4.058**	**4.133**	**9.453**	**1.884**	**3.135**	**9.811**	**57.945**			
Goodwill		80					12			218			-831		-521	-0,9	4	
Changes in consolidated group								134							134	0,2		0
R & D, and other self devel/format exp				2.054	191		105							3.982	6.332	10,9		23
PPE-gross value		38				173				-301					-90	-0,2		0
Deprec methods			121	669	831					228	-723		1.834	3.483	6.443	11,1		24
Finance leasing (lesse)	3			306				-722		-387					-800	-1,4	7	
Finance leasing (lessor)														1.962	1.962	3,4		7
Inventories			92	691							888			653	2.324	4,0		8
Orders by completion stage							-119		185				271		337	0,6		1
AR, AP, Cash		27		169	-431	-20					274				19	0,0		0
Financial instruments other				-1.074	258		113							897	194	0,3	-2	
Pensions		-74	-274		-3.544	-312	-221	-1.088	-591	-217	-3.250	-65	-358	-633	-10.627	-18,3	87	
Other provisions/deferred income		34	28	673	1.089	5	101	202	185		313		174	2.022	4.826	8,3		18
Deferred taxes		74	17	723	835	217	89	568	347	892	2.282		-92	-1.345	4.607	8,0		17
Translation reserve			32												32	0,1	0	
Other	17			325				63	-6	-117			-92	283	473	0,8		2
Reclassifications of minority interest	-19				-229									-197	-445	-0,8	4	
RE per IFRS	**423**	**1.481**	**5.220**	**9.432**	**671**	**2.423**	**4.356**	**4.496**	**4.178**	**4.449**	**9.237**	**1.819**	**4.041**	**20.918**	**73.144**		100	100
TOTAL EFFECT BY COMPANY	**1**	**179**	**15**	**4.536**	**-1.000**	**63**	**80**	**-843**	**120**	**316**	**-216**	**-65**	**906**	**11.107**	**15.199**			
% EFFECT ON HGB RE	**0**	**14**	**0**	**93**	**-60**	**3**	**2**	**-16**	**3**	**8**	**-2**	**-3**	**29**	**113**	**26**			
														Total negative adjustments	**-12.168**			
														Total positive adjustments	**27.366**			
															15.199			
Subsequent impacts																		
Application of IAS 36 to 38	Immaterial	Immaterial	Immaterial	N/A	Immaterial	Immaterial	N/A	Immaterial	Immaterial	N/A	N/A	Immaterial	Immaterial	N/A	**0**			
Application of IAS 39	-1	7	1.434	N/A	393	13	N/A	375	0	-1	-242	96	12	N/A	**2.086**			
% EFFECT ON HGB RE (1st apl. year)	0	0	27	N/A	59	1	N/A	8	0	0	-3	5	0	N/A	**3**			

APPENDIX B-2

IFRS EFFECTS IN GERMAN DAX COMPANIES (million €) - IS

	ADIDAS	ALTANA	BAYER	BMW	D. POST	HENKEL	LINDE	LUFTHANSA	MAN	METRO	RWE	SCHERING	TUI	VOLKSWAGEN	TOTAL	% effect on local IS	effect on total Adjst (negative)	effect on total Adjst (positive)
	1.994	*1.998*	*1.994*	*2.001*	*1.998*	*1.996*	*2.001*	*1.998*	*1997 / 8*	*1.999*	*1999 / 00*	*1.994*	*1997 / 8*	*2.001*				
Net HGB earnings	**128**	**161**	**N/A**	**1.026**	**N/A**	**263**	**289**	**N/A**	**612**	**365**	**1.130**	**350**	**N/A**	**N/A**	**4.324**			
Goodwill		-10					-6			89					73	2		5
R&D and other intangible assets		33		236			8								277	6		18
Inventories and long term contracts-Cost of sales				69			-33		92		15				143	3		9
Deprec methods PPE		8		198		69	-17			30	411				699	16		46
Finance leasing				242						-1					241	6		16
AR/liabilities - revenue				55					-83						-28	-1	3	
Pensions						-11				-25	-111				-147	-3	13	
Other provisions		11		-485							104				-370	-9	34	
Financial instruments				56											56	1		4
Deferred taxes		-27		-186		-37	-15			-131	-154				-550	-13	50	
Income taxes (tax loss carryforward)									12						12	0		1
Forex adjustments	-5														-5	0	0	
Minority profit share	-3														-3	0	0	
Other	-3			-2			20			-22	20				13	0		1
Net earnings per IFRS	**117**	**176**		**1.209**		**284**	**246**		**633**	**305**	**1.415**	**350**			**4.735**		100	100
Net effect on P&L	**-11**	**15**		**183**		**21**	**-43**		**21**	**-60**	**285**	**0**			**411**			
% of adjustments on net HGB earnings	**-9**	**9**		**18**		**8**	**-15**		**3**	**-16**	**25**	**0**			**10**			
												Total negative effects			**-1.103**			
												Total positive effects			**1.514**			
												Net effects			**411**			

APPENDIX C-1

IFRS EFFECTS IN GERMAN CHEMICAL AND PHARMACEUTICAL QUOTED COMPANIES (million €) -RETAINED EARNINGS

	ALTANA	BAYER	HENKEL	LINDE	SCHERING	STADA	WELLA	TOTAL	% effect on HGB RE	% effect on total Adjst (negative)	% effect on total Adjst (positive)
Year 1st aplication	*1.998*	*1.994*	*1.997*	*2.001*	*1.994*	*2.001*	*1.999*				
RE per HGB	**1.302**	**5.205**	**2.360**	**4.276**	**1.884**	**202**	**474**	**15.703**			
Goodwill	80			12		40		132	0,8		10
R & D, and other self devel/format exp				105		13		118	0,8		9
Deprec methods	38	121	173					332	2,1		25
Inventories/ Orders by competion stage		92		-119			-1	-28	-0,2	3	
AR, AP, Cash	27		-20			6	-61	-48	-0,3	5	
Financial instruments other				113				113	0,7		8
Pensions	-74	-274	-312	-221	-65	-1		-947	-6,0	91	
Other provisions/deferred income	34	28	5	101			-63	105	0,7		8
Deferred taxes	74	17	217	89		-4	83	476	3,0		36
Conversion reserve		32						32	0,2		2
Other						-1	31	30	0,2		2
Reclassifications of minority interest							-18	-18	-0,1	2	
RE per IFRS	**1.481**	**5.220**	**2.423**	**4.356**	**1.819**	**255**	**445**	**15.999**		100	100
TOTAL EFFECT BY COMPANY	**179**	**15**	**63**	**80**	**-65**	**53**	**-29**	**296**			
% EFFECT ON HGB RE	**14**	**0**	**3**	**2**	**-3**	**26**	**-6**	**2**			
					Total negative adjustments			**-1.042**			
					Total positive adjustments			**1.337**			
					Net adjustments			**296**			
Subsequent impacts											
Application of IAS 36 to 38	Immaterial	Immaterial	Immaterial	N/A	Immaterial	N/A	N/A	**0**			
Application of IAS 39	7	1.434	13	N/A	96	N/A	3	**1.553**			
% EFFECT ON HGB RE (1st apl. year)	0	27	1	N/A	5	N/A	1	**10**			

РАЗДЕЛ 4
УГОЛОК ПРАКТИКА

SECTION 4
PRACTITIONER'S CORNER

HOW INDEPENDENT SHOULD THE BOARD BE? CORPORATE BOARD STRUCTURE FROM A VOTING PERSPECTIVE

Haiying Huang*

Abstract

This paper proposes a model of corporate voting in which private information and individual preferences of board directors drive the board decisions. The optimal board structure and optimal firm value are solved numerically and their dependence on director and firm characteristics are studied. The optimal board structure is determined by outside and inside directors' relative informedness about the firm, insiders' bias, outsiders' advisory ability as well as the characteristics of the projects that the firm have. Voting rules other than the majority voting rule are considered. It is found that the majority rule often is not the optimal rule and it is optimal for a firm to have more inside directors while adopting a tougher voting rule. By studying strategic voting equilibria theoretically, insights about how board directors vote strategically are also provided.

Keywords: Board Composition, Private Information, Heterogeneous Preferences, Voting Rule, Sincere Voting, Strategic Voting.

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1. Introduction

When the residual claims to a corporation are diffused among many people, it becomes hard for the shareholders to exert their control right on the management of the firm, due to both the difficulty in communication and coordination and the possible conflict of interests. Therefore, as clearly explained in Fama and Jensen (1983), it is the common practice for the shareholders of public modern firms to delegate most of their decision control rights to boards of directors. Corporate boards take on their shoulders such great responsibilities as steering the direction of the corporation, making decisions in mergers and acquisitions and other strategic plans, and firing and hiring of CEO's. For this reason, both researchers and practitioners have been interested in the problem that how corporate boards should be structured so that they protect the best interests of shareholders and maximize the valuation of companies.

Corporate defaults and scandals in 2002 renewed the debates on the functioning of corporate boards. The Congress, through the Sabanes-Oxley act (SOX), and organizations such as the National Association of Corporate Directors and the Business Roundtable, through their publications, made requirement and recommendations on the structure of corporate boards, with one of the best-known recommendation being that corporate boards have a majority of independent directors.

Empirical evidence on the effectiveness of majority-independent boards has been mixed (see endnote 1). In fact, despite the scandals, there are still debates of the effectiveness of the U.S. corporate governance system. Weidenbaum (2005) points out "When it comes to regulating corporate governance, the 'magic of the marketplace' will work just fine". Holmstrom and Kaplan (2003) also casts doubt on the claim that the scandals imply failure of the US corporate governance system.

Theoretical studies on the board structure are therefore useful in clarifying questions about how the board should be constituted. In this work, I construct a model of corporate board based on the following observations.

First, insiders are needed on the board due to their superior knowledge of the firms' operations and projects proposed by CEO's. This is reflected in the model by letting insiders have more accurate private information than outsiders. Secondly, independent directors (outsiders) can provide valuable advice to the CEO, (e.g., see Baker and Gompers (2003) and Lehn, Patro and Zhao (2003)), thanks to their diverse background and expertise. This is reflected in the model by assuming outsiders can improve the distribution of the project that the CEO may propose. Furthermore, outsiders are not influenced by the CEO and their interests are better aligned with shareholders than insiders. This is reflected in the different utility functions of outsiders and insiders. Finally, the board holds a vote to aggregate information and preferences of all directors.

Our first results are about the dependence of optimal board structure and maximum firm value on the characteristics of directors and the firm. These results come with intuitive explanations. For example, the more knowledgeable outsiders are, the more outsiders are needed in the optimal board composition, and the greater the firm value is.

The next result is about the optimal voting rule. Instead of assuming only majority rule, the model can be used to study what is the optimal voting rule for the board. It turns out that majority rule is often not the best. It is often optimal to have a tougher voting rule, which would require more directors to vote yes for the CEO-proposed project to be accepted. And under such a voting rule, the number of insiders are more than that under the majority rule and the firm value increases substantially.

Finally, I carry out a preliminary study of strategic voting for corporate boards. In spirit, the last part is related to theories of games with private information and the strategic voting literature in economics and political sciences (e.g., Austen-Smith and Banks (1996) and Feddersen and Pesendorfer (1997)). I obtain existence of equilibrium and show that in a strategic voting equilibrium, insiders will take a more biased stand and outsiders will take a tougher stand toward the CEO.

In a theoretical and experimental study, Gillette, Noe and Rebello (2003) constructs an information revealing equilibrium by introducing penalties on insiders if their votes differ. Another theoretical work by Raheja (2004) introduces the possibility to succeed the current CEO as an incentive for insiders to reveal information. Their models all assume that insiders have full information and outsiders have no information.

What's new in my approach is that private information of both outsiders and insiders are quantified and are both valuable to the firm. Furthermore, each director votes individually based on private information. So my model put more emphasis on the role of the voting procedure in aggregating information both from insiders and outsiders. This focus is motivated by the observation that no deliberation before voting can eliminate the differences in opinions and preferences of the directors (for example, think about legal or political debates) and thus individual voting is ultimately an important way to express specific opinions. My model also considers the advisory role together with the independence of outsiders.

In an interesting paper, Hermalin and Weisbach (1998) formulate a model that gives board structure as the result of negotiations of existing directors with CEO's, where the bargaining power of the CEO comes from his perceived ability relative to replacement candidates. My model focuses on the internal interactions of the board, instead of the relation between the board and the CEO and thus is complementary to their study.

The structure of this paper is as follows. Section 2 introduces the model setup. Section 3 presents the main results on optimal board composition and optimal voting rules. Section 4 introduces the concept of strategic voting. Section 5 gives theoretical results on strategic voting equilibria. Section 6 concludes.

2. The Model

I will consider a model of the board making a decision on a project proposed by the CEO (see endnote 2). This will cover many of the typical board tasks. This is a two-period model. For simplicity, I assume that everyone (directors and shareholders) is risk-neutral and the interest rate is 0. In the first period, the CEO proposes a project, which will generate a cash flow $s > 0$ in the second period. S is not known precisely to any person. However, in the first period, each director i receives a private signal ti about s. The board then meets together to make decision on

the project, each member casting her vote based on her individual information and preference. The decision is then made according to the majority rule (see endnote 3): if at least half of the directors accept the project, then the project is passed; otherwise, it is rejected.

Before I go into further details of the model, I want to plot out the main features of the model here. Aside from the CEO himself, the other directors are divided into two classes: outsiders (or independent directors) and insiders (or inside directors). From the perspective of firm value maximization, outside and inside directors both have their advantages and drawbacks.

Outside board directors can offer important advice to the management based on their specific expertise, and they are the key in ensuring an independent opinion of the board from the CEO; their disadvantage is that they lack the in-depth knowledge of the firm that insiders and CEO have. Having a superior knowledge of the firm's operations and prospects than outsiders, insiders in the board can contribute to a sensible decision of the board; however, their positions in the firm imply that they would generally not want to ruffle the feathers of CEO's and that will be a problem when the CEO proposes a money-losing project (which can bring private benefits to the CEO either through perks, empirebuilding motives or career embellishments). Since outsiders and insiders have distinct objectives and furthermore, each director has her individual private information, it is only through the voting procedure that their information and preferences are aggregated into a decision of the board as a whole (see endnote 4).

The questions are: given the above consideration, what will be the optimal composition of a board? How the optimal composition is affected by the various factors? Answers to these questions will not only shed light on how regulators should make corporate governance laws, but also provide predictions for empiricists to test. The following gives details of the model setup.

2.1. The Project and the CEO

A project generates a deterministic cash flow *s* if the project is accepted and implemented. If the project is rejected, the firm has cash flow 0. The project proposed by the CEO has distribution

$$s \sim N(\mu_0, \sigma_0^2),$$

i.e., the CEO may have proposed a project with any cash flow *s* from the normal distribution. μ_0 is the expected payoff among all the projects. The cash flow *s* can be either positive or negative, reflecting the CEO's ability and private preference. The standard deviation σ_0 reflects the range of possible projects that the CEO may propose. Assume that ¹0 has the the following form,

$$\mu_0 = m_0(1 - \frac{1}{1+n_B}),$$

where *m*0 > 0 is a constant and *nB* is the number of outsiders. Note here μ_0 is increasing with *nB*, but the marginal increase to μ_0 becomes smaller as *nB* gets larger. This is motivated by the following. Outside board members can make advice that complements the CEO's knowledge. This advisory role of outsiders increases the "goodness" of the projects that the CEO may propose by increasing μ_0. However, as the number of outsiders get larger, the increase to project value due to advisory roles of outsiders are likely to decrease. The constant *m*0 can be thought of as the indicator of outsiders' advisory abilities.

2.2. Insiders

There are *nA* insiders (in addition to the CEO) (see endnote 5), labeled by $i \in \{1, \ldots, n_A\}$. Each insider has a private signal *ti* of the project

$$t_i = s + \varepsilon_i, \quad \varepsilon_i \sim N(0, \sigma_A^2)$$

Hence an insider's information is unbiased and the noisiness of the signal is σ_B. The smaller σ_B is, the more knowledgeable the insider is about the project. Let *{Accept;Reject}* denote the events that the project gets accepted, or rejected respectively. Although they receive unbiased signals, insiders have biases toward the CEO, which is reflected in their utility functions. Insider *j*'s utility function is given by.

$$U_i(Accept; t_i) = E[s + b|t_i] = b + E[s|t_i],$$

$$\text{and } U_i(Reject; t_i) = 0$$

Here *b* > 0 is a constant and represents the bias of insiders toward the CEO. An insider will OK the CEO's project as long as his perception of the expected cash flow $\bar{s} = E[s|t_i] \geq -b$, i.e., if he thinks that the project will not lose money by more than *b* dollars.

2.3. Outsiders

There are *nB* independent directors, labeled by $j \in \{n_A + 1, \ldots, n_A + n_B\}$. $n = n_A + n_B$is the

total number of directors in addition to the CEO. Each outsider receives a private signal *tj* about the project

$$t_j = s + \varepsilon_j, \quad \varepsilon_j \sim N(0, \sigma_B^2)$$

In general, $\sigma_B > \sigma_A$so that insiders have more accurate information about the project than outsiders.

Outsiders' utilities are completely aligned with those of shareholders, i.e., they maximize firm values (see endnote 6). The utility function of outsider *i* is

$$U_j(Accept; t_j) = E[s|t_j], \quad \text{and } U_j(Reject; t_j) = 0$$

In contrast with insiders, an outsider will OK the project only if her estimate of the expected cash flow $E[s|t_j] \geq 0$. In addition to being unbiased in judgment, outsiders contribute to the firm in their advisory role, as summarized in (1).

2.4. Valuation of the Firm

Without loss of generality, assume the firm has a single project and the project is the only source of cash flow of the firm. In making decision on the project, the directors cast votes simultaneously and each director votes according to his/her own private information. Therefore, from above and the Bayesian updating formula for normal distributions, an insider *i* votes for the project if and only if

$$E[s|t_i] = \frac{\sigma_0^2 t_i + \sigma_A^2 \mu_0}{\sigma_0^2 + \sigma_A^2} \geq -b$$

i.e.

$$t_i \geq \mu_A = -\mu_0 \frac{\sigma_A^2}{\sigma_0^2} - b(1 + \frac{\sigma_A^2}{\sigma_0^2})$$

Similarly, an outsider *j* will vote for the project if and only if

$$t_j \geq \mu_B = -\mu_0 \frac{\sigma_B^2}{\sigma_0^2}$$

The project is accepted if and only if at least half of the directors vote for the project (see endnote 7). Hence the event the project getting accepted is

$$Accept(t_1, \ldots, t_n) = \{\#\{i : t_i \geq \mu_A, 1 \leq i \leq n_A\} + \#\{j : t_j \geq \mu_B, n_A+1 \leq j \leq n = n_A+n_B\} \geq \frac{n}{2}\}$$

The firm's value is then given by (as there is no cash flow if the project is rejected)

$$U = U(n_A, n_B; \sigma_A, \sigma_B, b, m_0, \sigma_0) = E[s \cdot 1_{Accept(t_1,\ldots,t_n)}]$$

3. Optimal Board Composition

After setting up the model of a corporate board, the central question that concerns us is to find the optimal board composition that maximizes the firm value. To be precise, we want to solve the following problem.

$$U^* = U^*(n, \sigma_A, \sigma_B, b, m_0, \sigma_0) = \max_{n_A} U(n_A, n_B; \sigma_A, \sigma_B, b, m_0, \sigma_0)$$
$$\text{s.t. } n_A + n_B = n$$

Let $n_A^* = n_A^*(n, \sigma_A, \sigma_B, b, m_0, \sigma_0)$ be the optimal number of inside directors, fixing other parameters and the size of the board (see endnote 8). The analytical expression of the firm value in (6) is a very complicated multiple integral as the cash flow *s* and the private signals *ti* are correlated random variables. This expression can be written down explicitly but solving the optimization problem (7) using this formula seems impossible. However, the firm value is an expected value and the Monte Carlo method is well-suited to find such values when there are no easy-to-calculate explicit formula.

Therefore, for a set of parameters $(n, \sigma_A, \sigma_B, b, m_0, \sigma_0)$, I solve problem (7) by computing the firm value *U* for each choice of composition *nA* by Monte Carlo methods and then finding the maximum value U^* at $n_A = n_A^*$.

In the following, I first report the optimal board composition for a typical set of parameters. Then, I investigate the effects of changing the characteristics of the firm and the directors on the optimal board. Throughout the analysis, we should keep in mind that an optimal board composition will balance the benefits and costs of having insiders and outsiders.

3.1. Choice of Parameters and Methodology

The following table gives my choice of the parameters for the base case and the solution to the optimal board composition problem (7).

U^*	n_A^*	n	σ_A	σ_B	b	m_0	σ_0
0.852	4	10	0.5	2	0.5	0.2	2

The board size *n* (excluding the CEO) is fixed at 10, based on the fact that an average corporate board in the U.S. has 11 members. The accuracy of insiders' and outsiders' information are fixed by setting $\sigma_A = 0.5 < \sigma_B = 2$, meaning insiders have better information about the project than outsiders. The bias of the insider is set at *b* = 0:5 (if *b* is too large, then insiders are of no use to the board, as we shall see later). The prior distribution of projects have mean $\mu_0 = m_0(1 - \frac{1}{n_B+1}) = 0.2(1 - \frac{1}{n_B+1})$ and variance $\sigma_0 = 2$. Here *m*0 is taken at a value so that outsiders have reasonable advisory abilities and $\sigma_0 = 2$ is close to σ_A and σ_B so that the prior distribution have some effects but will not have too much effects on the decision of directors (see endnote 9).

For each *nA*, I simulate *N* = 100000 observations of the cash flow and directors' private information $\{s, t_1, t_2, \ldots, t_3\}$ based on their joint distribution. In each observation $1 \leq k \leq N$, whether the project is accepted or not (1*Accept;k*) is computed and then by Monte Carlo method, the firm value is computed as

$$U(n_A) = E[1_{Accept} s] = \frac{1}{N} \sum_{k=1}^{N} s_k \cdot 1_{Accept,k}$$

U¤ and *n*¤*A* are then computed by maximizing *U*(*nA*) over *nA* = 0*; : : : ; n* = 10. Next, I will present the effects of changes in firm and director characteristics on the optimal board composition and optimal firm value.

3.2. Informedness of outsiders

More knowledge about the firms' operations of outsiders increases the attractiveness of having more

outsiders sitting on board. Outsiders may be more informed about the firm's operations if they work or have worked in related industries, have sat in the board of other firms in related industries, or have related education background. On the other hand, if outsiders have never had experiences directly related to the firm's specialized field, they will have less knowledge about projects of the firm.

Figure 1 shows the optimal board composition and optimal firm value at different levels of informedness of the outsiders. First, clearly, the firm value (*U*¤) and the optimal number of outsiders (10 - *n*¤*A*) increase with the informedness of outsiders $(1/\sigma_B)$. Second, note that it is optimal to have no insiders on the board if outsiders have comparable knowledge about the project with insiders. In fact, in Figure 1, if $\sigma_B < 1.4$ (recall that$\sigma_A = 0.5$), the optimal board would be all outsiders. The intuition is simple: when outsiders are about as knowledgeable as insiders, insiders are strictly worse than outsiders due to their biases in preferences.

Third, note that although when outsiders get less informed (σ_B increases), the optimal number of outsiders decreases, it does not decrease to zero. This is because outsiders have advisory abilities, which cannot be replaced by insiders' more accurate information, no matter how many insiders we add.

3.3. Informedness of insiders

Insiders' knowledge about the firm's operations are likely to be better than outsiders in general. The extent of an insider's informedness about the firm may depend on the number of years he has worked in the firm or related firms, his rank and position in the company, his educational background as well as his particular capabilities and achievements. Figure 2 displays the effects of insiders' knowledge about the project on the optimal board composition and the firm value. Firms with more knowledgeable insiders, *ceteris paribus*, would have an optimal board structure with a higher proportion of insiders. Firm's value also increases with the extent of knowledge of insiders, everything else equal. Intuitions for these facts are similar to those for the effects of outsiders' informedness.

3.4. Bias of insiders

The tendency of insiders to uphold the decision of the CEO can depend on the degree of entrenchment of the CEO, the private benefits to insiders from the project, the concern about the overall health of the company, and the moral characters of insiders. Figure 3 shows the dependence of optimal board composition and firm value on the bias of insiders. The more biased insiders are, the less insiders the optimal board will include, and the less the firm value will be. This is because if the inside board directors are more biased, the CEO's proposal will get passed with higher probability. While some good projects get passed more frequently, which is good for the company, the increase in the probability that a bad project get passed is greater. Thus, the overall effect of increased insiders' biasedness on the firm value is negative and this will cause the optimal board to admit fewer insiders.

3.5. Advisory ability of outsiders

Outsiders have stronger advisory abilities if they have expertise in specialized fields related to the project. By providing advice to the CEO before he make decisions, outsiders can increase the expected profitability of the proposed project. Figure 4 presents the influence of outsiders' advisory function on optimal board structure and the firm's value. The optimal board include more outsiders if they are more capable advisors. However, since the value-enhancing effects of outsiders' advisory role has decreasing returns on the number of outsiders, insiders' superior information is useful when there are already a significant number of outsiders and we do not usually see a board that consists fully of outsiders (see endnote 10).

3.6. Range of available projects

A young, growth, or R&D intensive firm might have a greater range of potential projects to choose from than a mature firm. A wider range of selectable projects can mean both challenge and opportunity. With a capable CEO and an effective board, more profitable projects can be sieved from a wider selection and the firm value is enhanced.

Figure 5 displays the dependence of optimal board composition and firm value on the range of potential projects. The first relationship is not monotone. When the range of projects is very small, the prior knowledge about the project is so precise that insiders' superior information is of little use. Therefore, when the range (σ_0) is small, optimal number of insiders increases with the range. When the range of projects becomes bigger, insiders' information advantage to outsiders becomes less important while insider's bias and outsider's advisory function persist; hence the optimal number of insiders is eventually decreasing with the range. Insiders' superior information is most useful when the range (σ_0) has a moderate value (here around $0.7 \sim 0.8$). Note also from Figure 5 that the firm value is increasing with the range of projects, due to the wider selection of projects offered by a greater range σ_0 (see endnote 11).

3.7. Flexible voting rules

Majority voting rule is most commonly used in corporate boards. However, other voting rules are not uncommon in reality, e.g., the two-thirds rule in major U.S. Senate decisions and the unanimous rule in jury decisions. So a natural question is, what is the optimal voting rule for corporate boards? Does changing the voting rule help to make the board

more effcient? I define a *voting rule* to be a number $0 \leq \lambda \leq 1$. The board makes its decision according to voting rule λ if the project is accepted if and only if at least fraction λ of the board members (aside from the CEO) vote for the project. For example, the majority voting rule would be the voting rule given by $\lambda = 0.5$. And a voting rule $\lambda = 0.6$ in a 10-member board (excluding the CEO) would mean that for the project to get accepted, at least 6 board members should vote for the project. This will be a tougher rule than the majority rule from the CEO's point of view. In the flexible voting rules setting, the optimal voting rule λ^* together with the optimal board composition n_A^* are solved. Figure 6 compares the optimal board composition and optimal firm value under the majority voting rule, and under the flexible voting rules. First, we see that the optimal voting rule λ^* is 0.6 for $\sigma_B > 1$, so that the majority voting rule is not optimal when outsiders are not very well informed.

Second, in the optimal board structure, there are more insiders with flexible voting rules than with the majority voting rule. This comes from the following intuition. Under a voting rule $\lambda > 0.5$, the outsiders can veto the project more easily than under the majority rule. Therefore, the negative impact of having more biased insiders on the board are diminished. And due to the positive effect of having more informed insiders, the optimal board will consist of more insiders. Instead of requiring a majority of independent directors on board, we may recommend companies to have a tougher voting rule against the CEO and have more tolerance on the proportion of inside directors. According to the results here, such recommendation will suit the interests of shareholders better. From the second figure in Figure 6, the increase in firm value due to flexible voting rules can be substantial (see endnote 12).

The author also considers the possibility that assigning more voting weights to outsiders than insiders, while maintaining the majority rule, i.e., one vote from an outsider counts more than one vote. This will have somewhat similar effects as the flexible voting rules and indeed produce similar results to above in certain setups (unreported here). However, giving more weight to a director than another seems to be unfair and induce greater incentives for collusion. So it is less practical than allowing flexible voting rules.

4. Strategic Voting

In the setup of the board model, the board members' utility depend on their own private information (see (2) and (3)), but not on the private information of other board members. In other words, we assume board members vote *sincerely*, in the terminology of the voting literature. These assumptions were made to avoid the consideration of complicated equilibrium strategies in games with private information (see endnote 13). In this section, I will consider the possibility that directors use all available information strategically. To be precise, redefine the utility functions of outsiders and insiders as follows. For an insider *i*,

$$U_i(Accept; t_i) = E[s + b|Accept, t_i] = b + E[s|Accept, t_i], \quad \text{and } U_i(Reject; t_i) = 0$$

For an outsider *j*,

$$U_j(Accept; t_j) = E[s|Accept, t_j], \text{ and } U_j(Reject; t_j) = 0$$

Definition A collection of voting strategies of the board of directors is a *strategic voting equilibrium* if these strategies form a Bayesian Nash Equilibrium, with the utility functions given by (8) and (9).

In strategic voting (pivotal voting), the board members consider the consequences of their voting on the final decision and then on their own utility through the final decision and maximize their expected utility given other members' strategies. Thus, in strategic voting, a board member only cares about the case when he/she is *pivotal*, i.e., when his/her vote changes the final result, given others' votes, because only then his/her action will affect his/her utility. Feddersen and Pesendorfer (1997) shows that strategic voting can fully aggregate information when the number of players goes to infinity and sincere voting does not always aggregate information fully. Therefore, I would like to look at strategic voting equilibrium in the board (see endnote 14).

5. Some results on strategic voting equilibria

In this section I will focus on the existence and properties of the strategic voting equilibria, rather than on the optimal board composition (see endnote 15). The basic assumptions are essentially the same as those in Section 2, except that here I make different assumptions about the distributions of the project's cash flow and private signals of board directors for theoretical convenience. The firm has a project *s* with distribution $s \sim F(s)$. There are $n_A \geq 1$insiders and $n_B \geq 1$ outsiders on the board and the board votes by majority rule (see endnote 16).

Assumption 1 $1)$ $t_1, t_2, \ldots, t_n$ are independent conditional on *s*.

$2)$ $s, t_1, t_2, \ldots, t_n \in T$, where $T \subset \mathbb{R}$is bounded.

3) For each *i*, *s* and *ti* satisfy Monotone Likelihood Ratio Property (MLRP).

These are standard assumptions in the theoretical literature. Note that 2) requires that the distributions have bounded support, which is not satisfied by the normal distribution. A (mixed) strategy of director *i* is a function $\pi_i : T \to [0, 1]$. $\pi_i(t_i) = p$ means that *i* vote for the project with probability *p*. A *monotone pure strategy* is a strategy π_i such that

$$\pi_i(t_i) = \begin{cases} 0, & t_i \le c \\ 1, & t_i > c \end{cases}$$

for some constant *c*. *c* is called the cutoff point of the strategy.

Theorem 1 *With Assumption 1, there exists a monotone pure strategy strategic voting equilibrium.*

The proof uses the usual fixed point theorem. I'll omit it here and refer the reader to the proof in Feddersen and Pesendorfer (1997). A slight modification of their proof will suffice.

Recall that with full information, outsiders will vote for the project if and only if $s \ge 0$, and insiders will vote for the project if and only if $s \ge -b$. For our next result, we need

Assumption 2: There exists $0 < a < b/4$ such that for all i, $|t_i - s| < a$.

This assumes that directors have sufficiently accurate signals.

Theorem 2 *(1) If nA > nB, then there exists a monotone pure strategy equilibrium in which outsiders always vote sincerely, and insiders use a monotone strategy with a cutoff point* $c_A \in (-b-a, -b)$.

(2) If nA < nB, then there exists an equilibrium in which insiders always vote sincerely, and outsiders use a monotone strategy with a cutoff point $c_B \in (0, a)$.

(3) If nA = nB, then there exists an equilibrium in which insiders use a monotone strategy with cutoff point $c'_A \in (-b-a, -b)$ *and outsiders use a monotone strategy with a cutoff point* $c'_B \in (0, a)$.

Proof. 1) Suppose that *nA > nB*. Consider an outsider *j*. If *j*'s signal *tj* is not in (- *a; a*), then by Assumption 2, *j* knows with certainty the sign of *s* (which is the same as the sign of *tj*). Hence *j* will vote according to the sign of *tj* as she needs no further information about the true state *s*. If on the contrary $t_j \in (-a, a)$, then by Assumption 2 *j* knows that $s \in (-2a, 2a)$. And *j* also knows that any insider *i*'s signal $t_i > s - a > -3a > -b + a$. Hence *j* knows that *i* will know with certainty that *s* > ¡*b* and *i* will vote for the project. Now *nA > nB*, so *j* knows the project will get passed and *j*'s vote doesn't matter. Hence we may assume *j* votes sincerely in this case without harm. In summary, sincere voting will be a best response strategy for *j*.

Now consider an insider *i*. By Assumption 2, he votes sincerely (according to the sign of *ti* +*b*) if *ti* is not in (- *b* - *a;*- *b* + *a*). When $t_i \in (-b-a, -b+a)$, similar to above, *i* knows that all *nB* outsiders vote against the project. So *i* is pivotal only when $n_B + k - 1$ or $n_B + k$ other insiders vote for the project and *k* other insiders vote against it. Here $k = [(n_A - n_B)/2]$. But this tells *i* that more insiders voted for than against the project and there is no information from outsiders' voting since they all vote no here. Hence *i* should accept the project more readily with this additional information and would use a voting strategy with a cutoff point *cA* < - *b*.

On the other hand, the cutoff point *cA* > - *b* - *a*, because at *ti* = - *b* - *a*, *i* knows with certainty that the true state $s \le -b$ and sometimes is greater than *b*, hence he would vote against the project.

2) and 3) may be proved in a similar way. Intuitively, the theorem says that with strategic consideration, the directors adopt a modified voting strategy. Outsiders will adopt a tougher stand in accepting the project and insiders will adopt an easier stand in accepting the project. This kind of phenomena is similar to what happens in negotiations, where both parties of the negotiation initially take stands biased away from their opponents' preferences (see endnote 17).

6. Conclusion

The current work serves as an effort in theoretically modeling the key features of corporate board and study the optimal board composition problem. For further research, it would be interesting to test the predictions of the current model. Indeed, many predictions of this model can already be checked with previous empirical work, e.g., Lehn, Patro and Zhao (2003). One main difficulty in testing such models lies in that we do not know whether firms in the real world choose optimal board structure or not. This problem is partially solved by the methodology of Lehn, Patro and Zhao (2003), in which they look at long-lived firms, which presumably have better governance.

Another difficulty is the measurement and control of the parameters of the model. Suitable proxies should be considered for the various characteristics of board directors and the firm. While the current model incorporate many important factors of corporate board, it is far from complete. The most notable omission is the interaction between the board and the CEO. A natural next step could be to extend the current model to a dynamic model with interactions with CEO, borrowing the ideas of Hermalin and Weisbach (1998). Another possible direction of theoretical extension is further investigation in strategic voting equilibrium, including dynamic models. It is the hope that this work and potential future work in this area will help us, in particular, regulators and business leaders, to understand better the problem of board composition and makebetter regulations and policies.

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Endnotes

1. See Bahgat and Black (1999) for example.
2. While one can imagine that it might be better for the CEO to propose several alternatives and the board selects the best of them, it is more commonly the case that CEO makes a proposal and the board then makes a yes-or-no decision.
3. The majority rule seems to be the norm for most board decisions. Later I will discuss the possibility of allowing flexible voting rules and its implications.
4. One can imagine other mechanisms of decision-making, say, a game of information revealing and negotiation, and equilibria can be studied in that setting. However, in reality, voting is the preferred mechanism. Voting also has the benefit of being a simple and clean mechanism in multi-person decision making.
5. Since the CEO always vote yes for the project he proposed, we exclude the CEO in the following consideration.
6. Here I ignore the possible agency conflicts between debtholders and shareholders. With such agency conflicts, the board, in maximizing shareholder values, may not be maximizing the firm value. However, this is a secondary issue when we consider optimal board composition and will not affect my argument.
7. For simplicity, assume that $n = nA + nB$ is even, so when there is a tie, the CEO will break the tie and pass the project. The assumption about tie-breaking does not affect the results.
8. In fact, I do not consider any size related costs here, hence a bigger board is always better than a smaller board in my model as there will be more accurate information aggregation. As pointed out in other theoretical and empirical studies (e.g., Lehn et al (2003) and Reheja (2004)), there are size-related costs, such as coordination and free-riding costs. It is easy to extend my model to consider such costs and study optimal board sizes. Such studies are likely to confirm the stylized results. For simplicity, I focus on the composition of board here and keep board size $n = nA+nB$ fixed.
9. Despite the arbitrary nature of the choice of the base parameters, the qualitative results on board composition do not depend on these particular choices.
10. An all-outsider board can be optimal if insiders are too biased to be of any benefits to the board; such a situation may happen but is likely to be rare.
11. Here σ_0 should not be confused with the volatility of a project's cash flow. In fact, each project's cash flow is deterministic, and σ_0 (roughly) represents the range of *all* possible projects.
12. Of course, such recommendations have to be based on relating the parameters in my model to realistic settings. Nevertheless, this points to the possibility of increasing the effectiveness of corporate boards by relaxing the requirements on boards, e.g., by SOX.
13. See Austen-Smith and Banks (1996) for a very nice introduction to strategic voting.
14. However, we should keep in mind that sincere voting is more robust than strategic voting; each board member's decision depends only on his/her opinion and hence is not subject to errors of estimation of parameters of the game. So in reality, considering the difficulty of measuring the parameters precisely, the board of directors may well be voting sincerely. This is also the reason why this paper is mainly focused on sincere voting results. Whether home strategic voting behaviors actually happen in the board room is an empirical issue.
15. The optimal board composition under strategic voting is a more tricky problem as there could be multiple equilibria.
16. Note that in a board with all insiders or all outsiders, everyone will vote sincerely in the equilibrium as they have the same preferences. Hence to study strategic voting I assume there are both outsiders and insiders on the board.
17. Although Assumption 2 is required in the proof of Theorem 2, there is reason to believe that this kind of phenomenon is quite common in strategic voting equilibrium. This is confirmed by unreported Monte Carlo computation of the strategic equilibria.

Appendices

Figure 1: **Effects of informedness of outsiders**

This figure examines the dependence of the optimal number of insiders (n_A^*) and the optimal firm value (U^*) on the informedness (σ_B) of outsiders about the firm's project. The other parameters of the model are the same as in the base case (see Section 3.1), $(n, \sigma_A, b, m_0, \sigma_0) = (10, .5, .5, .2, 2)$.

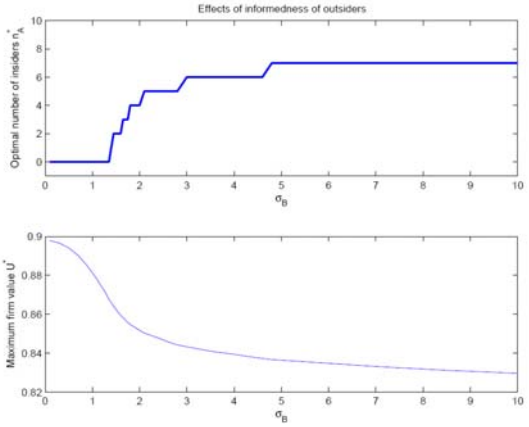


Figure 2: **Effects of informedness of insiders**

This figure examines the dependence of the optimal number of insiders (n_A^*) and the project value (U^*) on the informedness of insiders (σ_A). The other parameters of the model are the same as in the base case (see Section 3.1), $(n, \sigma_B, b, m_0, \sigma_0) = (10, 2, .5, .2, 2)$.

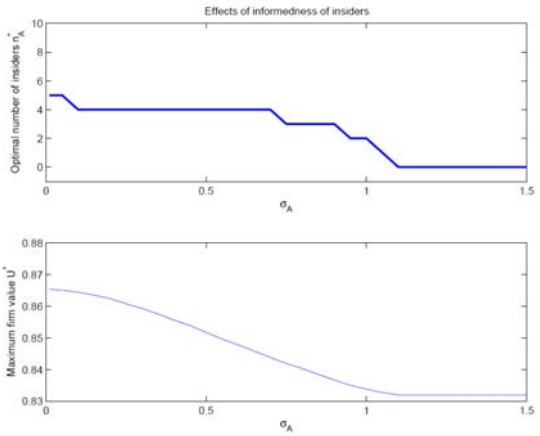


Figure 3: **Effects of insiders' bias**

This figure examines the dependence of the optimal number of insiders (n_A^*) and the project value (U^*) on the bias of insiders (b). The other parameters of the model are the same as in the base case (see Section 3.1), $(n, \sigma_A, \sigma_B, m_0, \sigma_0) = (10, .5, 2, .2, 2)$.

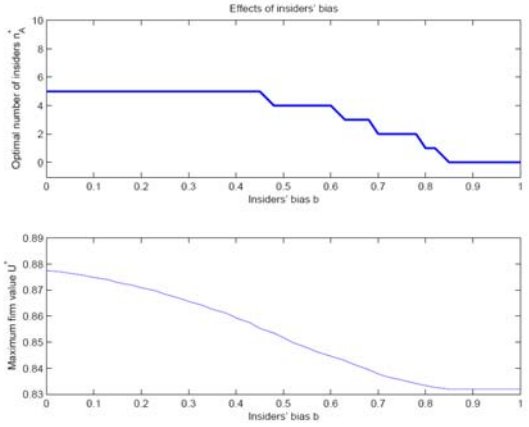


Figure 4: **Effects of advisory ability of outsiders**

This figure examines the dependence of the optimal number of insiders (n_A^*) and the project value (U^*) on the advisory ability of outsiders (m_0). The other parameters of the model are the same as in the base case (see Section 3.1), $(n, \sigma_A, \sigma_B, b, \sigma_0) = (10, .5, 2, .5, 2)$.

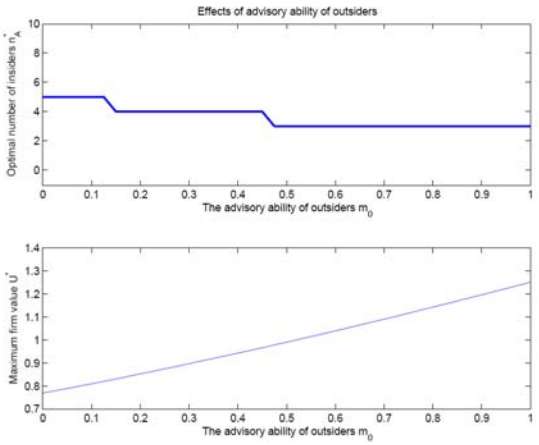


Figure 5: **Effects of range of selectable projects**

This figure examines the dependence of the optimal number of insiders (n_A^*) and the project value (U^*) on the range of possible projects (σ_0). The other parameters of the model are the same as in the base case (see Section 3.1), $(n, \sigma_A, \sigma_B, b, m_0) = (10, .5, 2, .5, .2)$.

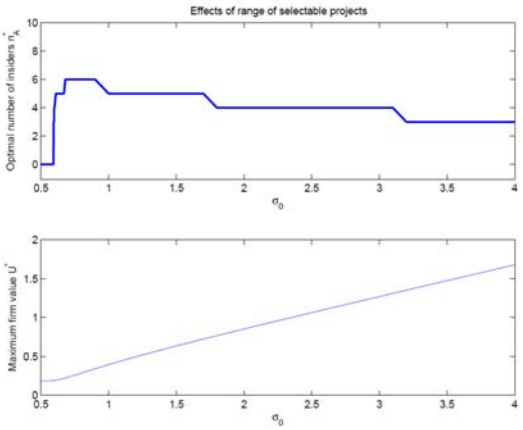
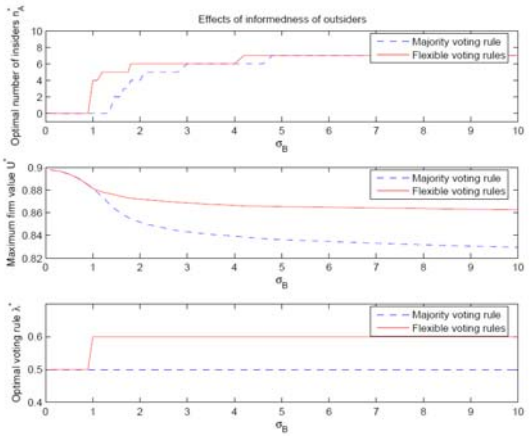


Figure 6: **Comparing the majority voting rule with flexible voting rules**

This figure compares the dependence of the optimal board composition and optimal firm value on the informedness of outsiders σ_B, under the majority voting rule and flexible voting rules settings. The other parameters of the model are the same as in the base case, $(n, \sigma_A, b, m_0, \sigma_0) = (10, .5, .5, .2, 2)$.



РАЗДЕЛ 5 НОВОСТИ КОРПОРАТИВНОГО МИРА

SECTION 5 CORPORATE WORLD NEWS

USA

January 2006. Board Analyst reports that median Total Board Compensation was $801,500 for the 2,000 of the largest US corporations based on proxies filed through November 2005, up 19.62% between 2003/04 and fiscal 2004/05. Compensation for individual directors is up 16.5%.

January 2006. The SEC is likely to propose rules requiring discolsure of:

- A total compensation figure for executives
- Dollar value of stock options for top execs in summary conpensation table
- All perks if the total aggregate value is $10,000 or more (instead of $50,000 or 10% of total annual salary and bonus)
- Dollar amount of payments agreed to for future change in control or responsibilities
- Table to cover details of retirement plans, including annual payments and benefits
- Director compensation table, similar to exec compensation table, to comprise all payments received by directors in a given year

January 2006. The National Association of Corporate Directors (NACD) has released the Report of its twelfth Blue Ribbon Commission, which was chaired by Weil Gotshal senior partner E. Norman Veasey, retired Chief Justice of the Delaware Supreme Court. The Report, entitled Director Liability: Myths, Realities, and Prevention, provides guidance and reassurance to conscientious corporate directors in three major ways:

1. clarifying the risks attendant to serving on a board by dispelling common myths about liability, explaining the legal framework in which liability is determined and exploring the ways that directors can serve effectively while protecting against liability risks;
2. explicating board roles, organization, information flow and processes that will help directors to navigate the current liability environment to meet and exceed compliance requirements; and
3. describing specific best practices that directors may consider adopting to guide their conduct at various stages of board service.

UK

January 2006. London Business School and Oracle announced a center for corporate governance to lead international thinking and serve the needs of business and policymakers. The new center is backed by Oracle, Freshfields Bruckhaus Deringer and Prudential, and aims to provide independent research and recommendations of value to policy makers, corporations, investors and other interest groups. The center will examine contentious issues surrounding corporate governance, including shareholder activism, measuring CEO and board effectiveness, valuing corporate social responsibility, and the new demands on boards and how these demands can be improved by information management and systems.

European Union

January 2006. The European Commission has presented a proposal for a Directive to facilitate the cross-border exercise of shareholders' rights in listed companies, through the introduction of minimum standards. The proposed Directive seeks to ensure that shareholders, no matter where in the EU they reside, have timely access to complete information and simple means to exercise certain rights – notably voting rights – at a distance. On average, about one third of the share capital of EU listed companies is held by non-residents.

Japan

January 2006. Wharton finance professors Ayako Yasuda and Franklin Allen write about changes in Japanese corporate governance in How Two Young Japanese Internet Companies Are Shaking Up Corporate Governance in Japan. Japan's Pension Fund Association voted against 25% of all proposals at shareholders' meetings in the past year. Whereas 46% of all listed Japanese equities were held as cross-shareholdings by related companies in 1992. By 2004, cross-shareholdings had dropped to 24%. During the same period, equities held by foreigners rose from 6% to 22%.

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