Managerial Ownership, Controlling Shareholders and Firm Performance

Jon Enqvist

May 29, 2005

Abstract

On Swedish data I examine the relation between both managerial ownership as well as controlling shareholders and firm performance measured by Tobin´s Q. I first establish a U-shaped relation between managerial ownership and Tobin´s Q. Thereafter I find a negative effect of having a controlling shareholder on Tobin´s Q, that diminish with his equity fraction in the firm. This effect though, appear to originate from the managerial effects as a large part of the controlling shareholders also are CEOs.

1 Introduction

Several papers have empirically studied the relation between the ownership structure of a firm and the value of a firm.[1] Anglo-Saxon studies have mainly focused on managerial ownership and their diverging interest with the shareholders whereas in the rest of the world the focus has been on controlling shareholders (CS)[2] and their conflicts with smaller shareholders.[3] A plausible explanation for this division is the role of the management of the firm in the different countries. For example, in the U.S. and the U.K. the CEO is a hired professional executive without majority ownership in the firm. Since ownership is dispersed the CEO is difficult to replace unless there is a takeover. In the rest of the world however, the CEO is often identical to the controlling shareholder or easily replaced by the controlling shareholder.

Non-linear relations between managerial ownership and firm performance have been established on U.S. data by e.g. Morck et al. (1988) and McConnell and Servaes (1990). However, as far as I know little is known about the effect

---

[1] See for example Demsetz and Lehn (1985), Morck et al. (1988), McConnell and Servaes (1990), Himmelberg et al. (1999), Holderness et al. (1999), La Porta et al. (1999), Claessens et al. (2000) and Demsetz and Villalonga (2001).

[2] The expression "controlling shareholder" has many synonyms in the literature, e.g. block holder, controlling minority shareholder and large shareholder.

[3] See for example Morck et al. (1988) and McConnell and Servaes (1990) for US results on managerial ownership, Claessens et al. (2002) for corporate control in Asia and Croqvist and Nilsson (2003) for results on block-holders in Europe.

of managerial ownership in countries where large controlling shareholders are frequent. This paper explores whether there is a relation between managerial ownership and firm performance in the presence of a large controlling shareholder as well. Furthermore, is there a difference between the relation between firm performance and managerial ownership and the relation between firm performance and ownership by large blockholders. Common for these two types of ownership is that they in some way has a possibility to affect the firm performance - managers by their positions as insiders[4] and large shareholders by being in control of the firm's board of directors.

In the literature insider or large shareholder ownership is said to have two major effects on firm performance; the positive incentive effect [Jensen and Meckling (1976)] and the negative entrenchment effect [Stulz (1988) and Shleifer and Vishny (1989)]. The idea of the incentive effect is that the more capital the insider has in the firm, the more aligned is his interest with the other shareholders'. And since he or she is an insider he also has the ability to make the firm function well. However, the more the insider owns the more entrenched he gets. And with the entrenchment comes the opportunity to exploit the firm.[5] Hence, an insider with a high voting fraction of the firm - that secures his or her position as the largest shareholder - should have a negative effect on the firm performance.[6]

These two counteracting effects could result in a non-linear relation between ownership level and firm performance. Morck et al. (1988) found a piecewise linear relation where firm performance increased with managerial ownership from 0 percent to 5 percent, decreased between 5 percent to 25 percent. After 25 percent the firm performance increased with managerial ownership. McConnell and Servaes (1990) found a non-linear relation where the relation first increased and then decreased after approximately 40% to 50%. At these levels of ownership the manager has become the controlling shareholder. Hence, a crucial question given these two results is whether they capture the effects of managerial ownership or the effects of having a controlling shareholder. As mentioned above, this paper will try to separate the effects of these two forms of ownership.

It is important to make a distinction between the CS ownership and the managerial ownership and the effects of the two. The CS ownership implies that the owner has a big enough stake in the firm to be in control of the board of directors. However, it does not always imply he is an insider with the ability to affect the current business of the firm. Studies of the managerial ownership on the other hand examines the effects of the ownership of an insider, who has the executive power to directly affect the firm performance, but who not

---

[4] In the rest of the paper when I use the term insider, I refer to executives within the firm.

[5] The exploitation may take various forms; inoptimal operating strategies and financial decisions [Myers and Majluf (1984) and Shleifer and Vishny (1989)], expennsive perquisites [Jensen and Meckling (1976)], opposing of hostile takeovers that would increase shareholders' wealth [Stulz (1988)] or simply theft of the firm's resources [Johnson et al. (2000)].

[6] It must be pointed out that it is not the entrenchment in it self that is a negative effect on the firm performance, but the *opportunity* the owner gets to exploit the firm. The more secure the owner is in his position as largest shareholder, the greater the opportunity to maximize his own utility at the cost of the firm.

always owns big enough stake in the firm to control the board of directors. In this paper we compare the effects of controlling shareholders with those of controlling shareholders who are also the manager of the firm. In the rest of the paper I will refer to them as controlling managers (CMs). Sweden is a suitable country to study these effects in since not only do most of the firms have a CS, but in addition a large share of those are also a CM.[7]

To explore these issues panel data consisting of 203 publicly traded Swedish firms is used. The data stretches from 1985 to 2000, even though it is not completely balanced since all firms have not been listed during the entire period. In total the data consist of 1754 firm years. An advantage doing this study in Sweden is the good access of the firm's accounting and ownership data. This data gives us both the *voting rights* as well as *equity* share hold by the largest shareholder and of the CEO. It also gives us the opportunity to distinguish the type of the largest shareholder - if it is a foundation, family, institution, etc.

I first document a non-linear relationship between managerial ownership and firm performance in Swedish firms. This result suggests that managerial ownership also has effects[8] on firm performance in a country where large block-holders are frequent.[9] Firm performance is measured by an approximation of Tobin's Q. The relationship is convex and U-shaped which supports the similar relationship between managerial ownership and Tobin's Q received by Morck et al. (1988).

Given the result that CEOs in Sweden affect firm performance the core of the paper is to examine the relationship between firm performance and ownership by CEOs that also are controlling shareholders. A CS/CM is defined as a shareholder/CEO with more than 25 percent[10] of the firm *voting rights*.[11] This variable should capture the entrenchment effect. The incentive effect is captured by the controlling shareholder's/CEO's *cash flow rights* in the firm.

The main results of this paper show that a firm with a controlling shareholder has lower value than the firm with dispersed ownership and that this negative relation becomes even more significant if the controlling shareholder is the manager of the firm. But given a controlling shareholder that also is the manager of the firm, firm value is increasing with his cash-flow ownership the firm.

Despite the fact that this field of subject has been studied in several papers

---

[7]62.3 percent have a CS and 17.9 percent a CM of the Swedish firms. That is, almost 30 percent of the CSs are also a CEO. **These numbers are quite consistent with the American data used in Denis and Denis (1994) where "In approximately 80% of the sample majority-owned firms there is either substantial family involvement or the founders of the firm are still active managers".**

[8]The use of the word *effect* should be used carefully since the firm-fixed effect regression cannot say anything about the causality - they only establish if there is a relation. Whether the ownership level affect firm performance or vice versa is purely speculation. That is why I say that the result only *suggest* an effect.

[9]The result holds when either equity or vote fraction is used to run the test.

[10]The reason I choose 25 percent is that it has been used before by eg. Cronqvist and Nilsson (2003) and in some way also Morck et al. (1988).

[11]Later on in the paper I will also define the *controlling family* or *person* (CF) as a family or person being the largest shareholder owning more than 25 percent.

over the last decades I believe this paper has some contributions to the insight of how ownership structure relates to firm performance. The crucial difference from Cronqvist and Nilsson (2003) is that the dummy effect of having a CS has been separated from the continuous ownership level variable. By doing so, it is possible to distinguish two effects from ownership. The dummy and the continuous variables are obviously strongly correlated, but nevertheless they are interpreted to explain two contradicting effects; the entrenchment effect and the incentive effect discussed above. The dummy is supposed to absorb the entrenchment effect since it is the variable explaining whether the owner is a CS, and hence, an entrenched owner. The shareholders equity fraction on the other hand gives us in what grade his interests is converged with the firms and hence, it absorbs the incentive effect.

This way of using the equity fraction to capture the incentive effect was also used in Claessens et al. (2002) when they seperated the incentive effect from the entrenchment effect. However, in their paper they did not include a CS dummy to capture the entrenchment effect. Instead they used the largest shareholders difference between control rights and cash-flow rights with. However, they used a sample cut-off point at 10 percent. My belief is however that the 25 percent level used in this paper and earlier in Cronqvist and Nilsson (2003) has a more empirical foundation when looking at controlling shareholders. A more complete review of Claessens et al. (2002) and Cronqvist and Nilsson (2003) is given in 2 along with some other important papers. I Will also try to replicate Claessens et al. (2002) and Cronqvist and Nilsson (2003) in 5.3.

The rest of the paper is organized as follows. In the second chapter a literature review is given on what is written about managerial ownership and controlling shareholders. Thereafter my hypotheses are given in Section 3, followed by a section describing the data, variables and empirical framework. The results are presented and discussed in Section 5. Section 6 ends this paper with a concluding discussion.

2 Literature Review

Since Berle and Means (1932) enlightened the problems with the separation of control and ownership in a firm, several papers have been written on the subject. Common for these studies is that they look at how ownership structure affects the firm performance, even though the forms of ownership in these papers are dispersed. The focus has mainly been on two separate forms of ownership; the managerial ownership and the controlling shareholders.[12] In this section the most essential theoretical and empirical papers about managerial ownership as well as controlling shareholder will be briefly discussed.

---

[12] Other forms of ownership centred upon in literature worth mentioning is e.g. family or founder ownership (e.g. Anderson and Reeb (2001) and Burkart et. al. (2003)). These forms of ownership are connected to both controlling and managerial ownership.

2.1 Managerial Ownership

2.1.1 Theory

The agency problem induced by the separation of ownership and management of the firm was enlightened by Berle and Means (1932) and has since been the basis in most research in this field. In their book they argued that when control is separated from ownership a divergence of interest appear between the two. The corporate stockholders want to maximize the corporate profit whereas the manager aims to maximize his personal profit. They also conclude that "the interests of control are different from and often radically opposed to those of ownership".

Jensen and Meckling (1976) based a theory on this principal-agent problem; the agent (manager) does not always behave in the interests of the principal (shareholder) which induce agency costs in a firm. Their idea was that the value of the firm depends on the relative amount of shares owned by insiders and outsiders[13] in the firm. Their theory was that if the agent also becomes the principal - if the manager owns 100 percent of the firm - he or she will also get the incentives to act in a profit-maximizing behavior. Hence there is a positive incentive effect of managerial ownership; the higher share the manager owns in the firm, the better the firm performs.

Stulz (1988) studied the relation between firm performance and managerial ownership from another perspective and therefore came to another conclusion. He argued that the only reason for managers to own voting rights is to "affect the behavior of potential bidders and hence the probability of losing control". By increasing their fraction of voting rights they reduce the risk of a hostile takeover which decreases the value of the firm. However, an increase in their fraction owned also increase the premium offered if a takeover takes place. Taken these two effects together, it should be possible to find a fraction owned by the management that maximizes the firm value.

Shleifer and Vishny (1989) shed light on the entrenchment effect showing there are not only positive effects of managerial ownership. Like Berle and Means (1932) and Jensen and Meckling (1976) they based their model on the principal-agent problem between owners and managers. In their model the managers take measures to make them hard to replace. By e.g. making implicit contracts rather than explicit and doing manager-specific investments the manager makes himself too valuable and costly to the firm to replace.

2.1.2 Empirics

The theory of Berle and Means (1932) was called in question when Demsetz & Lehn (1985) examined the relation between the ownership structure and the profitability of the firm. Their main idea was that the ownership structure is an endogenous outcome of the maximizing process. They argued that in every decision concerning a change in the ownership level, the shareholder has to

---

[13]Where they defined insiders as management and outsiders as investors with no direct role in the management of the firm.

consider its consequences on the profit rate. I.e. every change in ownership level is made in order to maximize the shareholders profit. Consequently, the ownership concentration and the profit rate should be unrelated.

The counteracting forces of the incentive effect and the entrenchment effect was the main theme of the piecewise linear OLS regressions tested by Morck et al. (1988). On 371 of the Fortune 500 firms they found a piecewise linear relation between managerial ownership and Tobin's Q, where firm performance increased with managerial ownership from 0 percent to 5 percent, decreased between 5 percent to 25 percent and after 25 percent the firm performance increased with managerial ownership. Their interpretation was that the negative entrenchment effect becomes significant at 5 percent managerial, but that the marginal effect after 25 percent ownership is on a large scale zero, whereas the positive incentive effect in contrast operates throughout the whole range of ownership.

Also McConnell and Servaes (1990) used Tobin's Q as a measure of firm performance. They used a data of ~1000 American firms in two different years to establish a relation between the managerial equity fraction owned in firms and Tobin's Q. Consistent with the theories of the relation between managerial ownership and firm performance of Stulz (1988), the results showed a curvelinear relation with a maximum at 40 to 50 percent. On their data, McConnell and Servaes tested the regressions used by Morck et al. (1988) but were not able to replicate the results

Later years the focus in this field has been to enhance the econometric methods to study the relation between managerial ownership and firm performance. Himmelberg et al. (1999) re-examined the cross-sectional results of Demsetz and Lehn (1985), Morck et al. (1988) and McConnell and Servaes (1990) by using panel data. They argue that fixed effect must be used when examining the impact of managerial ownership on firm performance to get hold of unobserved firm heterogeneity. Also a number of control variables (e.g. firm size and capital-to-sale ratio) must be included to get hold of the endogeneity problem of observable firm specific characteristics affecting both the managerial ownership and firm performance. Using fixed effect and also firm characteristic control variables they find no exogenous effect in the regressions used by Demsetz and Lehn (1985), Morck et al. (1988) and McConnell and Servaes (1990).

To understand what forces drive the changes in managerial ownership Holderness et al. (1999) compared the ownership level by officers and directors in 1935 and 1995. This long-term comparison also gave them the opportunity to examine the relation between firm performance and managerial ownership by replicating the piecewise linear regression made by Morck et al. (1988). Even though the managerial ownership has increased from 13 percent in 1935 to 21 percent in 1995, they found no evidence that this could be explained by the relation between firm performance and managerial ownership.

2.2 Controlling Shareholders

By a CS one do not necessary mean a majority shareholder but it could also be a shareholder with big enough share in the firm to secure his position as the

largest shareholder. E.g. according to Weston (1979) the chances of a hostile takeover becomes impracticable at 30% insider ownership and most literature refer to a controlling shareholder as 20-30% ownership.[14] As a CS you also control the board of directors and have therefore indirect control of the firm. Hence, a CS may generate both positive and negative effects in a firm. In this subsection these effects are described.

2.2.1 Theory

Fama and Jensen (1983a) connected the theories of managerial ownership and ownership of CSs. They concluded that if a concentrated group of individuals - especially if managers - own a high fraction of the firm they both have the possibility and incentive to expropriate the firm at the expense of the other shareholders. Hence, by concentrating the control and management to a few agents also the residual claims becomes restricted to these agents. This imply that there is a negative effect of CSs, and CMs in particular.

With a dispersed ownership in a firm it is unlikely that a single shareholder would have the incentive to monitor the management. Shleifer and Vishny (1986) argued that a large shareholder was a possible solution to this free-rider problem [Grossman and Hart (1980)]. With a high residual claim in the firm, the large shareholder may have both the incentives and means to monitor the firm and to initiate a takeover of the management if they are displeased with the present one.

Zingales (1994) studied the phenomenon of the large premium attributed to voting shares. His conclusion was that the magnitude of the premium must be explained by potential private benefits from being in control of a firm; there is no reason to be a large blockholder unless there is a personal benefit from it. The consequence of this conclusion is that CSs is associated with a negative effect on the profitability of the firm.

2.2.2 Empirics

Holderness and Sheehan (1988) made a comparison between firms with majority shareholders (50.1 percent ownership or more) and firms with dispersed ownership (defined as firms with no shareholders owning more than 20 percent of the shares) and their effect on Tobin's Q. Among firms traded on NYSE and AMEX over the years 1978-1984 they selected 114 majority owned firms and found no difference in Tobin's Q between those firms and the ones with dispersed ownership. This result they found inconsistent with the proposition that majority shareholders use their position to expropriate firm resources [Fama and Jensen (1983a)]. In their paper they also raised the possibility that different types of majority owners might have different motivations with their ownership.

Shleifer and Vishny (1997)
Anderson and Reeb (2001)
Claessens et al. (2002)

---

[14] A relevant fact is that in Sweden, it only takes 10 percent ownership to stop a takeover.

Cronqvist and Nilsson (2003)

3 Hypotheses

In this section, the empirical hypotheses are outlined. First, the hypothesis concerning the effect of managerial ownership in Sweden is presented. Second, the hypotheses regarding the effects of controlling shareholders and controlling manager shareholders are presented.

3.1 Hypothesis Regarding the Effects of Managerial Ownership on Firm Performance in Sweden

The relation between managerial ownership and firm performance is determined by two counteracting effects; the negative entrenchment effect and the positive incentive effect [Jensen and Meckling (1976) and Shleifer and Vishny (1989)]. At a relative small ownership level the entrenchment effect has not yet come about and is close to zero. But the closer the ownership level gets to where the manager becomes a controlling shareholder, the more intense it gets. Thereafter the intensity of the entrenchment effect diminishes. At fifty percent ownership the marginal effect of the entrenchment effect ought to be zero since a manager with fifty percent ownership is in majority and cannot be more entrenched. The incentive effect however works differently. The more a manager own of the firm, the more the manager's interest converges with those of the firm since. Hence, the incentive effect operates positively at all levels.

Together these effects should result in a first decreasing relation between firm performance and managerial ownership until the level at which the incentive effect start to dominate the entrenchment effect and the relation turns positive. If these conjectures are correct and if they also can be applied on Swedish managers, my hypothesis is:

> H1: The relation between managerial ownership and firm performance in Sweden is non-linear and U-shaped.

This hypothesis is based on the theories of Jensen and Meckling (1976) and Shleifer and Vishny (1986) and the findings of Morck et al. (1988), but contradict the idea of Stulz (1988) and results of McConnell and Servaes (1990). A plausible explanation why my hypothesis differs from Stulz theory is that his model was based on the idea that firm value depends on the risk of a hostile takeover. In Sweden however, hostile takeovers are very rare. Swedish government want long-time ownership in firms to get long-time investments. This is achieved by encouraging large block-holdings. E.g. at a takeover attempt any shareholder with more than ten percent of the control rights can block the bid.

3.2 Hypotheses Regarding the Effects of Controlling Shareholders and Controlling Managers On Firm Performance in Sweden

Above we discussed whether and how managerial ownership in Sweden is related to firm performance. If it is, it is highly possible that a *controlling manager* has different effects on firm performance than other *controlling shareholders*. In this subsection we will discuss both the relation between firm performance and the existence of a controlling shareholder as well as what happens to this relation if the controlling shareholder also is the CEO of the firm.

For firm performance, there are both advantages and disadvantages from having a CS in a firm. A CS has per definition entrenched himself by his or her high *voting* rights of the firm, which gives the opportunity to expropriate the firm [Fama and Jensen (1983a)]. But as Shleifer and Vishny (1986) pointed out, the more *equity* share the CS has in the firm, the higher share of the costs he or she pays and hence, the more incentive to maximize the firm value. From these conclusions I state Hypotheses 2a and 3a below.

What happens then if the CS also is CEO in the firm? A controlling manager has more insights in the firm and direct power and means to run the firm in the direction he or she wants. Hence, he or she is likely to have a stronger effect on the performance of the firm, whether it is a negative or positive effect. These facts allow me to state Hypotheses 2b and 3b. The hypotheses regarding the relation between firms performance and controlling shareholders as well as controlling managers are:

> H2a: The existence of a controlling shareholder is negatively related to firm performance.
> H2b: If the controlling shareholder also is CEO, the negative relation is stronger.
> H3a: The controlling shareholder's equity fraction is positively related to firm performance.
> H3b: If the controlling shareholder also is CEO, the positive relation is stronger.

It is important though to elucidate that H2a and H2b respectively H3a and H3b must be tested together to be adequate due to the strong correlation between the existence of a CS and his equity fraction.

4 Data and Empirical Framework

4.1 Data

The sample consists of accounting data as well as ownership structure data of 203 large Swedish non-financial firms over the period 1985-2000. Due to bankruptcies, mergers, takeovers and the fact that some of the corporations are listed after 1985, the panel data is not balanced; some firms have only two

observations while other firms consist of all 16 observations. In total, the data consist of 1754 firm-year observations. The data is received from two sources; the accounting data from "Findata Trust" whereas the ownership structure data is collected from "Owners and Power in Sweden's Listed Companies" by *DN Ägarservice* [Sundqvist (1986-93) and Sundqvist and Sundin (1994-2001)].

A small, but yet factual problem with the data is that Sundqvist (1986-93) and Sundqvist and Sundin (1994-2001) only report the 25 largest shareholders. Consequently, the ownership level of managers with a smaller ownership than the 25th largest shareholder is not available and hence, approximated to zero.[15]

Another problematic issue when constructing the ownership data is to define the owner. An owner need not be a person but could also be another corporation, a union or other organization. In this paper I will also treat families as a single unit. E.g. if there are three family members that own ten percent each of a firm's cash flow rights they will be treated as a single owner with 30 percent of the cash flow rights in the firm.

A great advantage of this data is that it includes both the equity fraction as well as the vote fraction owned by both the largest shareholder as well as by the CEO. Hence, it gives us not only the opportunity to study both the relation between firm performance and CS ownership as well as managerial ownership, but also the distinction between the relation between firm performance and *equity* ownership an the relation between firm performance and *vote* ownership. In this paper I will use this to separate the entrenchment effect from the incentive effect. In what way, I will discuss below in 4.2.

Empirical papers on ownership structure and its influence on firm performance almost exclusively use Tobin's Q as dependent variable. An alternative measure is return on assets (ROA). In this paper I use the natural logarithm of an approximation of Tobin's Q as a measure of firm performance. However, all regressions made will also be tested with ROA as dependent variable. Comments will be made if the results in those regressions diverge from those made on Tobin's Q.

The use of Tobin's Q is not entirely unproblematic. Even though it is almost indisputable as a measure of firm performance, there might arise severe measurement errors constructing the variable. Perfect and Wiles (1994) showed that both the mean and variance were very sensitive to the method used when approximating Tobin's Q. However, if the changes in Tobin's Q are studied - which is the case in my paper - there is no significant divergence between the different estimates.

As seen in Table 1 there is an obvious skewness in Tobin's Q; the mean is 1.51 whereas the median is 1.13.[16] To attend to this problem I will use the natural logarithm of Q as my measure of firm performance [Allayanis and Weston (2001)].

The control variables used in the regressions of this paper are quite similar

---

[15] This is not a severe problem since it never happens that the actual ownership level of the 26th largest shareholder exceeds one percent.

[16] Also, a Bowman-Shelton test for normality strongly indicate a skewness in Tobin´s Q. ???

to those used in e.g. Claessens et al. (2002) and Cronqvist and Nilsson (2003). The included control variables are $\ln(Firm\ size)$, *Leverage, Sales to total assets ratio, PPE to total assets ratio, Investments to total assets ratio* and $\ln(Age)$. Firm size is measured as book value of total assets. Leverage is the book value of equity to book value of total assets ratio.

[Insert Table 1 about here]

4.2 Empirical Framework

In this part of the paper the empirical frameworks is given for the hypotheses stated in Section 3. First, the hypothesis that the relation between managerial ownership and firm performance in Sweden is non-linear and U-shaped is tested and thereafter the framework for the hypotheses regarding CS and controlling managers is given. The empirical frameworks used in this paper will be based on the papers put on view in the literature review.

As stated above, similar to most modern studies of ownership effects on firm performance, Tobin's Q will be used to represent the firm value (See e.g. Morck et al. (1988), McConnell and Servaes(1990), Himmelberg et al. (1999), Holderness and Sheehan (1988), Anderson and Reeb (2001) and Cronqvist and Nilsson (2003)). Analogous to Himmelberg et al. (1999), fixed effect regressions will be used in all regressions made on our panel data. The reason is to get hold of unobserved firm heterogeneity. In Himmelberg et al. (1999) they assumed the unobserved firm heterogeneity was time-consistent. However, this assumption has been questioned by Zhou (2001) who argued there could be time variations within the firms, which could be captured by year-dummies. In this paper we test our regressions both including and excluding these year-dummies. We also suspect there might be endogeneity problems due to observable firm characteristics affecting both the firm value and controlling shareholder/manager ownership. In order to reduce these endogeneity problems we include the control variables discussed above; the logged firm size, leverage, the sales to total assets ratio, PPE to total assets ratio, investments to total assets ratio and the logged age.

4.2.1 Effects of Managerial Ownership on Firm Performance in Sweden

I begin by testing the linear relation between firm performance and managerial ownership:

$$
\begin{aligned}
\ln(Q_{it}) &= \beta_1 + \beta_2 ownership_{it} + \beta_{3-8} controls_{it} + \varepsilon_{it} \qquad (1) \\
i &= 1, ..., 203, t = 1, ..., T_i
\end{aligned}
$$

Thereafter I continue by examining the non-linear regression of managerial ownership on the logged Tobin's Q. The empirical model used is similar to the one by McConnell & Servaes (1990), even though the outcome is expected to

be some what different. The motivation for the expected result is more like the one given by e.g. Morck et al (1988). The regression is a product of two effects working in different directions, the incentive effect and entrenchment effect - the entrenchment effect with a negative effect and the incentive effect with a positive effect on firm performance. In Section 3.1 I argued the relation between firm performance and managerial ownership should be a non-linear, U-shaped relation. Hence, the regression used to test this hypothesis looks as follows:

$$
\begin{aligned}
\ln(Q_{it}) &= \beta_1 + \beta_2 ownership_{it} + \beta_3 (ownership_{it})^2 + \beta_{4-9} controls_{it} + \varepsilon_{it} \quad (2) \\
i &= 1, ..., 203, t = 1, ..., T_i
\end{aligned}
$$

Here is the variable *ownership* supposed to have a negative sign whereas the variable $ownership^2$ is supposed to have a positive sign if the hypothesis is correct. The regression is tested with both the manager's equity fraction and his vote fraction. Even though the entrenchment effect is better absorbed by the vote fraction than the equity fraction and vice versa for the incentive effect, the hypothesis should be possible to test with both variables even though the minimum point might differ in the two regressions. The minimum point should however be located somewhere near the point where the manager becomes the controlling shareholder since that is the point where the marginal effect of the entrenchment effect is the strongest.

As mentioned above, I use a fixed effect regression that also includes both several control variables as well as year-dummies.

4.2.2 Effects of Controlling Shareholders and Controlling Managers on Firm Performance in Sweden

We now turn to look at the effects on firm performance of having a CS or a CM. In Sweden it is common that a firm is controlled by a single large shareholder and given that this CS is a person or a family it is also common that he or she is the CEO of the firm. In the data used, 62.3 percent of the observations have a CS, 36.0 percent a CF and 17.9 percent a CM. Therefore, it is not only of a great interest to examine how firm performance is related to the ownership of a CS, but also to distinguish the effects between a "ordinary" CS from the effects of a CS also being the CEO of the firm. If there is an effect of having a CS on the firm performance, does it come from the fact that he is a controlling shareholder or because he is a controlling manager?

The method used is similar to the one used by Cronqvist & Nilsson (2003) discussed in Section 2.2.2, even though it has some differences of which one is quite essential. They used the controlling owners vote fraction, i.e. an indicator variable for the existence of a controlling owner times the controlling owners vote fraction. In this paper I separate the indicator variable from the ownership variable and also, instead of using the *vote* fraction as the ownership level variable I use the *equity* fraction. The reason for these alterations is to separate the entrenchment effect of having a CS from the incentive effect of having a CS.

12

The dummy, that equals one if the largest owner in the firm owns more than 25 percent of the control rights in the firm, is supposed to capture the entrenchment effect of having a CS. If a shareholder is the largest shareholder and holds 25 percent of the voting rights, he has reached a level at which he has entrenched himself and is practically in total control of the firm.[17] The CS's equity fraction, on the other hand, is supposed to capture the incentive effect. The higher this continuous equity fraction variable is, the more the CS's interests converge with those of the firm. Due to their strong correlation[18] it is essential though that the dummy variable and the continuous variable must be used in the same regression to capture and separate the entrenchment effect respectively the incentive effect.

Before testing the hypotheses stated in Section 3.2 I separately examine relation between Tobin's Q and having a CS. First by running a regression with only the dummy that equals one if there exist a CS. Thereafter I separate the incentive effect from the entrenchment effect by running a regression including both the dummy variable and the continuous variable. The regressions used are hence

$$
\begin{aligned}
\ln(Q_{it}) &= \beta_1 + \beta_2 D(\text{CS})_{it} + \beta_{3-8} controls_{it} + \varepsilon_{it} \qquad (3) \\
i &= 1, ..., 203, t = 1, ..., T_i
\end{aligned}
$$

$$
\begin{aligned}
\ln(Q_{it}) &= \beta_1 + \beta_2 D(\text{CS})_{it} + \beta_3 e_{it}^{CS} \\
&\quad + \beta_{4-9} Controls_{it} + \varepsilon_{it} \qquad (4) \\
i &= 1, ..., 203, t = 1, ..., T_i
\end{aligned}
$$

where $D(\text{CS})_{it}$ is the dummy that equals one if there exist a CS, e_{it}^{CS} is the equity fraction owned by the CS and $Controls_{it}$ is the six control variables discussed above. i is the identity of the firm and t the year of the observation.

The next step is to examine if the relation between the logged Tobin's Q and CSs depend on the fact that he is a CS or because he is a CEO being a CS. Since a large share of the CSs also is CEOs it might very well be the case. This is first done by looking at what happens to Regression 3 and 4 if the CMs are excluded from the CSs. The regressions tested then look as follows:

$$
\begin{aligned}
\ln(Q_{it}) &= \beta_1 + \beta_2 D(\text{CS}_{exCEO})_{it} + \beta_{3-8} controls_{it} + \varepsilon_{it} \qquad (5) \\
i &= 1, ..., 203, t = 1, ..., T_i
\end{aligned}
$$

[17] Tests based on a 20 percent and a 30 percent threshold will be performed as well.

[18] The correlation is separate from one due to dual-class shares. High-voting shares are frequently used to become a controlling shareholder.

$$\begin{aligned}
\ln(Q_{it}) &= \beta_1 + \beta_2 D(\mathrm{CS}_{exCEO})_{it} + \beta_3 e_{it}^{CS_{exCEO}} \\
&\quad + \beta_{4-9} Controls_{it} + \varepsilon_{it} \\
i &= 1, ..., 203, t = 1, ..., T_i
\end{aligned} \tag{6}$$

$D(\mathrm{CS}_{exCEO})_{it}$ equals one if there exist a CS that *not* is the CEO of the firm and, accordingly, $e_{it}^{CS_{exCEO}}$ is the equity fraction owned by the CS not being the CEO of the firm.

When these regressions are made I can finally state the regressions made to test Hypotheses 2 and 3. The first regression used includes both the dummy $D(\mathrm{CS})_{it}$, used in Regression 3 and 4, an a dummy, $D(\mathrm{CM})_{it}$, that equals one if there exist a CM. Along with these dummies both the CS's equity fraction, e_{it}^{CS}, and the CM's equity fraction, e_{it}^{CM}, are included. However, whereas a CM per definition is a person while CSs might also be foundations, institutions, other corporations and so on. Therefore, it is also of interest to run a regression where controlling managers are distinguished from other *persons* being controlling shareholders. Hence, instead of the variables $D(\mathrm{CS})_{it}$ and e_{it}^{CS} I include a dummy, $D(\mathrm{CF})_{it}$, that equals one if there exist a controlling family or person and its respective equity fraction variable, e_{it}^{CF}. The two regressions used to test Hypotheses 2a, 2b, 3a and 3b are then:

$$\begin{aligned}
\ln(Q_{it}) &= \beta_1 + \beta_2 D(\mathrm{CS})_{it} + \beta_3 D(\mathrm{CM})_{it} \\
&\quad + \beta_4 e_{it}^{CS} + \beta_5 e_{it}^{CM} + \beta_{6-11} controls_{it} + \varepsilon_{it} \\
i &= 1, ..., 203, t = 1, ..., T_i
\end{aligned} \tag{7}$$

and

$$\begin{aligned}
\ln(Q_{it}) &= \beta_1 + \beta_2 D(\mathrm{CF})_{it} + \beta_3 D(\mathrm{CM})_{it} \\
&\quad + \beta_4 e_{it}^{CF} + \beta_5 e_{it}^{CM} + \beta_{6-11} controls_{it} + \varepsilon_{it} \\
i &= 1, ..., 203, t = 1, ..., T_i
\end{aligned} \tag{8}$$

We expect to find a negative effect of the dummy variables for CSs and CFs if Hypothesis 2a is correct, and if Hypothesis 2b is true - that a manager gives a stronger effect on Tobin's Q than other CS - an even more negative parameter for the CM dummy. A negative sign on the parameter for the CS would support the results of e.g. Cronqvist & Nilsson (2003). The negative signs catch the supposed negative effect of having a controlling shareholder. When the dummies are one, the shareholder has entrenched himself and become a controlling shareholder. This give him or her the opportunity to consume corporate wealth without stigmatization, lowering the firm value and hence, Tobin's Q. If the controlling owner also is a manager he is supposed to have more human capital put in the firm, augmenting the entrenchment effect. This implies an even stronger negative entrenchment effect on Tobin's Q.

The shareholders equity percentage, however, is supposed to have a positive sign to support Hypothesis 3a. As the CS's equity fraction increases, his interest converges with those of the firm. Hence, he operate the firm the more optimal, the higher equity fraction he owns. If the controlling owner is a manager, he is also supposed to have the power to run the firm closer to his preferences. Therefore, a CM's equity ownership should boost the firm performance even higher than for outsider CSs or CFs and should therefore have an even higher parameter than the one of the CS or CF to support Hypothesis 3b.

The dummy variable of the owners voting rights and the continuous variable of the owners equity share are, of course, highly correlated. If the voting rights increase, so does the equity share. This multicollinearity could induce some problems with inefficient estimates. These problems appear in the form of high R^2-values but insignificant t-ratios. In Section ?? we will find out if the correlation is a problem in our regressions.

5 Results

5.1 Effects of Managerial Ownership in Sweden

The results discussed in this section is found in Table 2. This subsection will give the results of whether there is a relation between managerial ownership and Tobin's Q. The results from Regressions 1 and 2 is tested, using both the managers equity fraction and his vote fraction, are tested. The results from the linear relation tested in Regression 1 suggest a negative relation between managerial ownership and the logged Tobin's Q. As expected the relation is more negative when the managers vote fraction is used. This goes hand in hand with the idea that the entrenchment effect is better absorbed in the vote fraction than in the equity fraction, and the incentive effect better absorbed in the equity fraction than in the vote fraction.

[Insert Table 2 about here]

Moreover, we can read from Table 2 that Regression 2 supports Hypothesis 1 - there is a non-linear relation between firm performance and managerial ownership in Sweden. This holds for both the equity share and the vote fraction hold by the manager. The parameters β_2 and β_3 received from the regressions can also tell us the minima points for the respectively regressions. As seen in Table 2 the minima are 34.6% when the equity is used and 49.1% when the vote is used. The difference between the two minima is explained by the fact that the managers vote fraction in mean exceeds the equity fraction. The remarkable with the minima points are that they coincide with the means and medians of the CS and CM ownership. The CS's mean and median equity fraction is 35.6% and 33.1% and vote fraction 54.1% and 50.9%. The correspondingly mean and median of the equity and vote fractions of the CM is 35.8% and 33.8% respectively 59.5% and 60.8%. Hence, todays ownership structure in Swedish firms is de facto the worst-case-scenario.

5.2 Effects of Controlling Shareholders and Controlling CEOs

In the last subsection we established that there is a relation between firm performance and the CEO's ownership in the firm. This imply there might also be different effects on Tobin's Q of having an "ordinary" CS from a CS also being the CEO of the firm (i.e. a CM). In this subsection we test Hypotheses 2 and 3 - that there is a negative entrenchment effect of CSs but a positive incentive effect from his equity ownership and that these counteracting effects intensifies if the CS is a CEO.

All the results in this section is found in Table 3 and 4. When we first examine if there is a relation between firm performance and the existence of a CS we find, as expected, a significant negative relation in Regression 3. In Regression 4 when we add the CS's equity fraction into the regression, an even stronger negative relation between the CS dummy and Tobin's Q is documented whereas the equity parameter shows a positive sign. This is expected and can be explained by the separation of the negative entrenchment effect (captured by the CS dummy) and the positive incentive effect (absorbed by the equity fraction).

[Insert Table 3 about here]

By my revision of the regressions used in Cronqvist and Nilsson (2003) I have confirmed the negative effect of having a CS as they found. But by separating the existence of a CS from his equity fraction owned I have also shown that there might be a positive effect of CS ownership. Moreover, at a first glimpse these result might seem to differ from the ones in Holderness and Sheehan (1988) that majority owned firms do not affect firm performance differently from firms with dispersed ownership. It must be consider though that they looked at majority owned firms (50.1 percent ownage or more), excluding those firms with the owners that have the most negative effect on Tobin's Q; those with enough shares to have control of the firm (25 percent ownership), but yet not much cash-flow rights that would give them incentive effects.

Given the results in Table 3 the question emerge if the effects CS's have on firm performance stem from his position as CS or the fact that a great part of the CSs are also CEOs. In Regression 5 and 6 the CMs are excluded from the CSs, resulting in non-significant parameters. The conclusion is that the CS effects in regression 3 and 4 on Tobin's Q is managerial effects - and not the effects of having a large shareholder.

The natural continuation after the results in Table 3 is to run a regression including both CSs and CMs. In Regression 7, the results from including both the CS and the CM show significantly negative relation between Tobin's Q and the dummies. This goes in line with Hypotheses H2a and H2b, i.e. there is a negative entrenchment effect of having a CS and when the CS also is the CEO, the effect intensifies. But as we can see in Table 4 the result of the regression indicates that H3a is rejected; the positive incentive effect of the CS that is supposed to be absorbed by his equity fraction. However, as we can see in Table 4 is the CM's equity significantly positive at the ten percent level,

16

supporting H3b. The conclusion is that only the manager has efficient enough means to affect the firm in a positive way - the indirect control of the firm a CS possess by his control of the board is not efficient enough. Neither do the incentives to monitor the firm increase with his equity share enough to have a positive effect on firm performance.

[Insert Table 4 about here]

Regression 8 could be seen as an additional test of my hypotheses. It is much similar to Regression 7 except that all the foundations, corporations and other non-persons are excluded from the CSs (i.e. we look at the effects of CFs). Taking this measure result in a quite dramatically change in the results. The regression shows no significant relation between firm performance and CFs. That is, a person being in control *per se* does not have an effect on firm performance. The effects of having a CM remains however and even grow compared to Regression 8. Hence, we conclude that both the entrenchment effect and incentive effect of having a CS is not at all an effect of having a CS as such, but they come from a managerial effect.

A notable deduction from the results of Regression 4 is that it takes more than 74.7 percent equity ownership by the CS for the net effect of his presence as a CS to have a positive effect on Tobin's Q. Correspondingly, Regression 7 and 8 show that the same level of equity ownership (75.5 and 74.1 percent respectively) is required by the CM for a positive net effect.

5.3 Replication of Earlier Empirical Results

In this part I will try to replicate the results of Morck et al (1988), Claessens et al. (2002) and Cronqvist and Nilsson (2003)

6 Conclusions

In this paper I examine both the effects of managerial ownership, the effects of CS ownership on the performance of Swedish firms and also I examine the effects of the alliance between the two forms of ownership. Five hypotheses are stated and then tested concerning the effects of managerial and CS ownership on firm performance. My first hypothesis, that there exist a relation between firm performance and managerial ownership and that it is non-linear and U-shaped, is confirmed by the regressions made.

Thereafter I confirm the expected negative entrenchment effect of having a CS in a firm. However, this effect does not remain if the non-persons are excluded from the group. Moreover, I verify the hypothesis that the entrenchment effect increases if the CS also is a CEO.

The hypothesis of a positive incentive effect of a CS's equity fraction was not confirmed unless he or she also is a CEO. My interpretation is that you need to be an insider to be able to affect the firm business positively - it is not enough to have indirect power of the firm via the control of the board of directors.

My conclusion from the results is that the effects of having a CS are not at all an effect of having a CS as such, but they come from an insider effect. The data and the regressions also indicates that managers often use dual-class shares to entrench themselves, resulting in a reduction in firm performance.

7 References

Allayannis, G. and Weston, J.P., 2001. "The Use of Foreign Currency Derivatives and Firm Market Value". The Review of Financial Studies 14, 243-276.

Berle, A.A. and Means, G.C., 1932. "The Mordern Corporation and Private Property". New York, MacMillan Publishing CO.

Burkart, M., Panunzi, F. and Shleifer, A., 2003. "Family Firms". The Journal of Finance 58, ???-???.

Claessens, S., Djankov, S and Lang, L.H.P., 2000. "The Seperation of Ownership and Control in East Asian Corporations". Journal of Financial Economics 58, 81-112.

Claessens, S., Djankov, S., Fan, J.P.H. and Lang, L.H.P., 2002. "Disentangling the Incentive and Entrenchment Effects of Large Shareholdings". The Journal of Finance 57, 2741-2771.

Cronqvist, H. and Nilsson, M., 2003. "Agency Costs of Controlling Minority Shareholders". Journal of Financial and Quantitative Analysis 38, 695-719.

Demsetz, H. and Lehn, K., 1985. "The Structure of Corporate Ownership: Causes and Consequences". Journal of Political Economy 93, 1155-1177.

Denis, D.J. and Denis, K.D., 1994. "Majority Owner-Manager and Organizational Efficiency". Journal of Corporate Finance 1, 91-118.

Fama, E.F. and Jensen, M.C., 1983a. "Seperation of Ownership and Control". Journal of Law & Economics 26, 301-325.

Fama, E.F. and Jensen, M.C., 1983b. "Agency Problems and Residual Claims". Journal of Law & Economics 26, 327-349.

Grossman, S.J. and Hart, O.D., 1980. "Disclosure Laws and Takeover Bids". The Journal of Finance 35, 323-334.

Himmelberg, C.P., Hubbart, R.G. and Palia, D., 1999. "Understanding the Determinants of Managerial Ownership and the Link Between Ownership and Performance". Journal of Financial Economics 53, 333-384.

Holderness, C.G. and Sheehan, D.P., 1988. "The Role of Majority Shareholders in Publicly Held Corporations". Journal of Financial Economics 20, 317-346.

Holderness, C.G., Kroszner, R.S. and Sheehan, D.P., 1999. "Were the Good Old Days That Good? Changes in Managerial Stock Ownership Since the Great Depression". The Journal of Finance 54, 435-469.

Jensen, M.C. and Meckling, W.H., 1976. "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure". Journal of Financial Economics 3, 305-360.

Johnson, S., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A., 2000. "Tunneling". The American Economic Review 90, 22-27.

La Porta, R., Lopez-de-Silanes, F. and Shleifer, A., 1998. "Law and Finance". Journal of Financial Economics 106, 1113-1155.

La Porta, R., Lopez-de-Silanes, F. and Shleifer, A., 1999. "Corporate Ownership Around the World". Journal of Finance 54, 471-517.

McConnell, J.J. and Servaes, H., 1990. "Additional Evidence on Equity Ownership and Corporate Value". Journal of Financial Economics 27, 595-612.

Morck, R., Shleifer, A. and Vishny, R.W., 1988. "Management Ownership and the Market Valuation". Journal of Financial Economics 20, 293-315.

Myers, S.C. and N.S. Majluf, 1984. "Corporate Finance and Investment Decisions when firms have information investors do not have". Journal of Financial Economics 13, 187-221.

Perfect, S.B. and Wiles, K.W., 1994. "Alternative Construction of Tobin's Q: An Empirical Comparison". Journal of Empirical Finance 1, 313-341.

Shleifer, A. and Vishny, R.W., 1986. "Large Shareholders and Corporate Control". Journal of Political Economy 94, 461-488.

Shleifer, A. and Vishny, R.W., 1989. "Management Entrenchment: The Case of Manager-Specific Investments". Journal of Financial Economics 25, 123-139.

Shleifer, A. and Vishny, R.W., 1997. "A Survey of Corporate Governance". The Journal of Finance 52, 737-783.

Stulz, R.M., 1988. "Managerial Control of Voting Rights: Financing Policies and the Market for Corporate Control". Journal of Financial Economics 20, 25-54.

Weston, J.F., 1979. "The Tender Takeover". Mergers and Acquisitions, 74-82.

Zhou, X., 2001. "Understanding the Determination of Managerial Ownership and Its Relationship to Firm Performance". Journal of Financial Economics 62, 559-571.

Zingales, L., 1994. "The Value of the Voting Right: A Study of Milan Stock Exchange Experience". The Review of Finanacial Studies 7, 125-148.

Table 1: Descriptive Statistics

	CS		No CS		Diff.	
	Mean	Median	Mean	Median	t-test	Wilcoxon
Q	1.45	1.13	1.97	1.29	(0.000)	(0.000)
CS equity	35.6%	33.1%	-	-		
CS vote	54.1%	50.9%	-	-		
CS v/e-1*	0.95	0.49	-	-		
CEO equity	9.2%	0%	2.1%	0%	(0.000)	(0.000)
CEO vote	14.9%	0%	3.8%	0%	(0.000)	(0.003)
CEO v/e-1*	0.27	0	0.39	0	(0.000)	(0.000)
Leverage	0.34	0.31	0.43	0.40	(0.000)	(0.000)
Sales/Total assets	1.01	1.07	1.16	1.18	(0.000)	(0.000)
PPE/Total assets	0.47	0.45	0.43	0.40	(0.001)	(0.000)
Inv./Total assets	0.11	0.09	0.11	0.08	(0.258)	(0.144)
ln(Age)	3.60	3.87	3.37	3.51	(0.000)	(0.000)
n	1434		357			

This table reports descriptive statistics of the 203 Swedish firms over the years 1985-2000, used in the regressions of this paper. The sample is divided into two sub-samples; one in which there is a CS in the observed firm and one in which there is not. In the last two columns a t-test and a Wilcoxon test are made to see if the mean or the median differ between the two samples. An approximation of Tobin's Q is reported followed by both the equity fraction and the vote fraction owned by the CS (if there is one) and of the CEO in the observed firm. Also, CS v/e-1 and CEO v/e-1 (the ratios between the vote share and the equity share minus one) are included to give an insight in what degree the CS/CEO uses dual-class shares. Last, the statistics of the control variables are reported. The numbers in the parantheses are the p-values of the t-test and the Wilcoxon-test.

Table 2: Effects of managerial equity and vote ownership on ln(Q)

| | ln(Q) when using: | | | |
| | Regr. 1 | | Regr. 2 | |
	equity	vote	equity	vote
constant	0.395	0.420	0.488	0.437
	(0.037)	(0.026)	(0.010)	(0.021)
ownership	-0.0016	-0.0020	-0.010	-0.008
	(0.036)	(0.000)	(0.000)	(0.000)
$(ownership)^2$	-	-	0.00015	0.00008
			(0.000)	(0.001)
ln(Firm size)	-0.010	-0.014	-0.018	-0.012
	(0.585)	(0.464)	(0.351)	(0.517)
Leverage	0.528	0.527	0.540	0.533
	(0.000)	(0.000)	(0.000)	(0.000)
Sales/Total assets	0.030	0.030	0.029	0.034
	(0.317)	(0.314)	(0.323)	(0.254)
PPE/Total assets	-0.167	-0.157	-0.155	-0.158
	(0.012)	(0.017)	(0.019)	(0.016)
Inv./Total assets	0.250	0.253	0.240	0.258
	(0.001)	(0.001)	(0.002)	(0.001)
ln(Age)	-0.071	-0.068	-0.084	-0.076
	(0.045)	(0.054)	(0.018)	(0.032)
Yeardummies	yes	yes	yes	yes
R^2	0.227	0.224	0.209	0.216
N	203	203	203	203
n	1754	1754	1754	1754
Hausman-test	75.51	74.35	52.76	66.40
	(0.000)	(0.000)	(0.000)	(0.000)
F-test	17.19	17.74	17.30	17.52
	(0.000)	(0.000)	(0.000)	(0.000)
Minimum point	-	-	34.6%	49.1%

Table 2 reports estimated effects of CEO ownership on the natural logarithm of Tobin's Q. The first column reports the result of Regression 1 using the CEO's equity fraction to describe managerial ownership. The second column report the result of the same regression but where the vote fraction has been used. Column three and four report the results of 2 using first the equity fraction and then the vote fraction. After the ownership variables, the results of the control variables are reported. Year dummies for the years 1986-2000 are used in the regressions. N is the number of firms, whereas n is the number of total observations of the 203 firms over the years 1985-2000. The Hausman-test is made under thenull-hypothesis of no correlation between the regressors and the firm-specific effects. Finally the minimum point of the non-linear regression is reported.

p-values are reported in parentheses.

Table 3: Effects of CSs on ln(Q) including and excluding CEOs from the CSs

	Regr. 3 ln(Q)	Regr. 4 ln(Q)	Regr. 5 ln(Q)	Regr. 6 ln(Q)
Constant	0.446	0.435	0.369	0.366
	(0.019)	(0.022)	(0.052)	(0.054)
$D(\text{CS})$	-0.071	-0.127	-	-
	(0.007)	(0.001)		
$D(\text{CS}_{exCEO})$	-	-	0.014	-0.013
			(0.518)	(0.721)
e^{CS}	-	0.002	-	-
		(0.032)		
$e^{CS_{exCEO}}$	-	-	-	0.001
				(0.352)
ln(Firm size)	-0.012	-0.011	-0.008	-0.008
	(0.529)	(0.563)	(0.664)	(0.682)
Leverage	0.521	0.536	0.531	0.537
	(0.000)	(0.000)	(0.000)	(0.000)
Sales/Total assets	0.027	0.026	0.030	0.029
	(0.367)	(0.381)	(0.313)	(0.330)
PPE/Total assets	-0.179	-0.171	-0.173	-0.170
	(0.007)	(0.010)	(0.009)	(0.010)
Inv./Total assets	0.249	0.247	0.254	0.251
	(0.001)	(0.001)	(0.001)	(0.001)
ln(Age)	-0.068	-0.072	-0.075	-0.076
	(0.056)	(0.072)	(0.034)	(0.032)
Year dummies	yes	yes	yes	yes
N	203	203	203	203
n	1754	1754	1754	1754
Hausman-test	51.69	63.63	76.80	64.13
	(0.000)	(0.000)	(0.000)	(0.000)
F-test	17.31	16.80	16.96	16.26
R^2	0.230	0.218	0.220	0.217

Table 3 reports estimated effects of the existence of a CS and of the CS's ownership
on the natural logarithm of Tobin's Q. D(CS) is a dummy that equals one if there exist
a CS at all and e^{CS} is his or her equity fraction in the firm. In D(CS$_{exCEO}$) and
$e^{CS_{exCEO}}$ however, the CEOs are excluded from the CS group. I.e. when a CS also is a
CEO the dummy equals zero. After the dummies and the equity ownership variables,
the results of the control variables are reported.Year dummies for the years 1986-2000
are used in the regressions. N is the number of firms, whereas n is the number of total
observations of the 203 firms over the years 1985-2000. The Hausman-test is made
under the null-hypothesis of no correlation between the regressors and the firm-specific
effects. The F-test is made to test if the firm fixed effects are jointly significant.
p-values are reported in parentheses.

Table 4: Effects of CSs' and CMs' ownership on ln(Q)

	Regr. 7 ln(Q)	Regr. 8 ln(Q)
Constant	0.480	0.455
	(0.011)	(0.017
D(CS)	-0.082	-
	(0.034)	
D(CF)	-	-0.026
		(0.537)
D(CM)	-0.221	-0.246
	(0.000)	(0.000)
e^{CS}	0.001	-
	(0.262)	
e^{CF}	-	0.0002
		(0.801)
e^{CM}	0.003	0.003
	(0.055)	(0.029)
ln(Firm size)	-0.017	-0.017
	(0.369)	(0.374)
Leverage	0.536	0.535
	(0.000)	(0.000)
Sales/Total assets	0.0258	0.0272
	(0.379)	(0.355)
PPE/Total assets	-0.161	-0.162
	(0.014)	(0.014)
Inv./Total assets	0.252	0.257
	(0.001)	(0.001)
ln(Age)	-0.073	-0.073
	(0.040)	(0.038)
N	203	203
n	1754	1754
Hausman-test	58.99	65.30
	(0.000)	(0.000)
F-test	16.33	16.12
	(0.000)	(0.000)
R^2	0.217	0.217

Table 4 reports estimated effects of the existence of a CS, CM and CF and of his or her ownership on the natural logarithm of Tobin's Q. D(CS), D(CM) and D(CF) is a dummy that equals one if there exist a controlling shareholder, manager or family/person at all and e^{CS}, e^{CF} and e^{CM} are their equity fraction in the firm. After the dummies and the equity ownership variables, the results of the control variables are reported. Year dummies for the years 1986-2000 are used in the regressions. N is the number of firms, whereas n is the number of total observations of the 203 firms over the years 1985-2000. 7 explain the effects of the CS and the CM on Tobin's Q whereas 8 explain the effects of the CF and the CM. The Hausman -test is made under the null-hypothesis of no correlation between the regressors and the firmspecific effects. The F-test is made to test if the firm fixed effects are jointly significant. p-values are reported in parentheses.