

# **Ownership Structure, Firm Performance and CEO Turnover: The Case of Switzerland**

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## **Abstract**

This study examines the impact of company performance and ownership on CEO turnover and tenure in Swiss companies. Swiss CEOs are dismissed for poor performance albeit only when they have no ties to family shareholders. CEOs who are members of the founding family have tenures which are, on average, 4.5 years longer than those of non-family CEOs. Size and type of shareholders is decisive for CEO changes: there is some evidence that large institutional shareholders increase the likelihood of CEO dismissal; institutions and family shareholders shorten CEO tenure provided that the CEO is not a member of the founding family.

**Keywords:** CEO Turnover, CEO Tenure, Ownership Structure, Corporate Governance, Corporate Control

CEO turnover and the length of CEO tenure have always been at the center of attention for those scholars interested in who has a say in the modern corporation. Ever since Berle and Means' (1932) frequently quoted observation of the growing "separation of ownership and control" in listed companies, scholars have been interested to know whether CEOs are fired in the event of poor performance. While the task of exercising control over top human assets lies in the hands of corporate boards, directors cannot take any action without the approval or, at any rate, the agreement of the major shareholders. This assertion is based on the premise that shareholders have power and incentives large enough to exercise their control rights and oust top executives. Therefore, forced CEO departures particularly in the case of performance declines, can be viewed as an indicator of shareholder supremacy over the CEO.

The salient questions for all corporations, thus, are: is shareholder monitoring effective or are managers insulated from corporate control? Furthermore, given that there are many different actors who are involved in corporate control, it is also important to know which shareholders actually become involved. In other words, previous research suggests that shareholder monitoring is determined by two parameters: the size of shareholdings and, more recently, also the type of the dominant shareholder. Large shareholders with great stakes in the company have financial incentives to become involved in corporate control (Admati et al., 1994; Shleifer and Vishny, 1986). In addition, as some authors have argued, shareholder incentives might differ across shareholder types (e.g. Kang and Sorensen, 1999; Thomsen and Pedersen, 2000).

Empirical findings from various studies across corporate governance systems worldwide suggest that CEOs in general do get fired for poor performance (e.g. Warner et al., 1988; Datta and Guthrie, 1994; Kang and Shivdasani, 1995; Kaplan, 1994) and that there is a non-negligible effect of the company's ownership structure including the level of stakes controlled by the CEO (e.g. Dahya et al., 1998; Denis et al., 1997; Huson et al., 2001). However, given that ownership landscapes differ across corporate governance systems (Roe, 2003; Roe, 1990), the efficiency and effectiveness of corporate control is found to be distinct across national settings (e.g. Franks and

Mayer, 2001; Lausten, 2002; Renneboog, 2000; Volpin, 2002, for some European examples). This study is, to the best of my knowledge, the first to provide empirical evidence on the impact of ownership on CEO turnover in Switzerland. As the findings suggest, Swiss CEOs do get fired for poor performance. However, this relationship does not hold true for CEOs who are founders or members of the founding family: founder CEOs are rarely fired and have a tenure that is on average 4.5 years longer than that of non-founder CEOs no matter how well or badly they perform. In addition, shareholders do have an impact on both CEO turnover and CEO tenure, albeit not only depending on the size of their shareholdings but also depending on who they are. Institutions and families appear to exert a disciplining effect: there is evidence that some institutional shareholders increase the likelihood of forced CEO departure. In addition, institutions and families are found to shorten CEO tenure. Again, however, this is only true when the CEO is not the founder or a founding family member. In conclusion, the case of Switzerland can be classified to be somewhere between the Anglo-Saxon (or market-oriented) and the Germanic (or network-oriented) corporate governance system: it has in common with the Anglo-Saxon system a strong and well-functioning stock market and it shares the above average levels of ownership concentration and stability with the Germanic system. However, in terms of corporate control it is peculiar because the salient stakeholders are neither institutions nor banks but founders, families and their descendants.

In the following, I provide a brief literature review on previous findings from the CEO turnover literature along with a short section on the Swiss corporate governance setting. Subsequently, I describe the sample and the sampling procedure employed in the empirical analysis. In the next two sections the dependent and independent variables are discussed and the descriptive statistics are presented. The data analysis section concludes with the presentation of regression models and results. The paper closes with a discussion section.

## **1. The Impact of Performance on CEO Turnover**

Company performance plays a crucial role in CEO turnover research. On the one hand, performance is viewed as being a proxy for CEO effort and, therefore, the likelihood of CEO turnover is expected to increase following financial distress and performance declines. On the other hand, the relationship between CEO turnover and company performance is viewed to mirror the efficiency of the firm's governance mechanisms since the turnover-performance sensitivity is hypothesized to be stronger when owners and their representatives on corporate boards execute their monitoring role vigilantly. The effect of performance is well documented in the literature and across international contexts (e.g. Kang and Shivdasani, 1995; Kaplan, 1994; Lausten, 2002; Renneboog, 2000; Volpin, 2002). Yet although many studies have been able to corroborate the negative relationship, there are several issues scholars appear to disagree about. Firstly, there is little unanimity regarding which performance measure is decisive with respect to dismissal decisions: while some scholars rely exclusively on shareholder value and stock returns (e.g. Coughlan and Schmidt, 1985; Fee and Hadlock, 2000; Warner et al., 1988; Weisbach, 1988) others claim that earnings and profits are equally important (e.g. DeFond and Park, 1999; Rosen, 1990). Secondly, not all studies find a significantly negative relationship between turnover and performance. For example, Dalton and Kesner (1985), Friedman and Singh (1989), Davidson and colleagues (1990) and Puffer and Weintrop (1991) failed to document any statistically significant relationship between the two variables, and Morck and colleagues (1988) reported a large and positive relationship between the two variables, indicating that CEOs might actually be hindered from leaving the company when the business is going downhill. Thirdly, some scholars claim that performance explains only very little of the variation in CEO turnover (Brickley, 2003) and that considerable performance declines are necessary before CEOs are fired (Ang and Chua, 1981; Gilson, 1989; Schwarz and Menon, 1985). It follows from this that factors other than performance such as the structure of the corporate ownership, the characteristics of the top executives and possibly also the independence of corporate boards are likely to influence CEO turnover decisions.

## **2. The Role of Shareholders in CEO Turnover Decisions**

The role of ownership structure in CEO dismissal decisions is grounded in the well-known literature of agency theory (Fama, 1980; Fama and Jensen, 1983; Jensen and Meckling, 1976). Agency theorists conceive of owners as “residual claimants” (Fama and Jensen, 1983) whose primary task is the provision of capital and the bearing of financial risk. Owners are assumed to intervene in corporate control, or as Jensen and Ruback (1983) put it, in the decision of “hiring, firing and compensating” top management, only to the extent that the benefits derived from the intervention exceed its costs. In other words, from an agency theory perspective monitoring by shareholders has public good character (Demsetz and Lehn, 1985): shareholders who actively engage in corporate control and the monitoring of managerial effort produce a good from whose benefits no shareholder can be excluded. As a result, since no shareholder owns 100% of a company’s shares, all shareholders are tempted to stay away from any intervention and to free-ride on the fellow shareholders’ action (Hart, 1995). Large blockholders, however, who bear excessive risks due to their lower levels of diversification, have larger incentives to monitor the CEO because they are unable to sell off their shares without incurring a significant loss of wealth (Shleifer and Vishny, 1986). This is due to the fact that the selling off of large blockholdings may cause dramatic decreases in the company’s share price. As a result, large shareholders’ benefits from monitoring are assumed to outweigh their costs, which is why large shareholders are attributed higher levels of CEO scrutiny (Shleifer and Vishny, 1986; Admati et al., 1994). In general, thus, the presence of large blockholders and the incidence of high levels of shareholder concentration are expected to have a positive effect on the likelihood of CEO departure. Several empirical papers have been able to corroborate this hypothesis (Denis et al., 1997; Goyal and Park, 2002; Huson et al., 2001; Pound, 1988; Warner et al., 1988).

More recently, however, some scholars have pointed to the fact that there is no direct relationship between the mere presence of a large blockholder and the likelihood of CEO turnover because not all shareholders exhibit the same propensity to become involved in

corporate affairs (Barclay and Holderness, 1991; Pound, 1988). On the one hand, as Denis and colleagues (1997) point out, a sizeable block of shares (over 25%) is necessary to increase the likelihood of CEO departure. On the other hand, the propensity to become involved in CEO turnover issues seems to depend on the type of a given shareholder. Kang and Sorensen (1999), for example, suggest that shareholder types differ in their motivation to “capture their property rights”. This is attributed to the difference in shareholder power and authority over management (Changanti and Damanpour, 1991; Dye, 1985; Kang and Sorensen, 1999) and to the extent to which they can be classified as “pressure-resistant” vis-à-vis the management (Brickley et al., 1988; O'Barr and Conley, 1992; Versteegen Ryan and Schneider, 2002). Finally, some scholars have put forward the argument of preference heterogeneity among corporate owners:

“Whereas ownership concentration measures the power of shareholders to influence managers, the identity of the owners has implications for their objectives and the way they exercise their power, and this is reflected in company strategy and with regard to profit goals, dividends, capital structure, and growth rates” (Thomsen and Pedersen, 2000: 705).

The impact of ownership on CEO turnover is thus supposed to vary across shareholder types, the size of their shareholdings, their incorruptibility vis-à-vis the CEO, and the way in which their priorities are set.

Shareholder types are most commonly classified along the following five categories (e.g. Franks et al., 2001): founder and the founding family, institutional investor (including banks, mutual and pension funds (Versteegen Ryan and Schneider, 2002)), other companies (as the outcome of horizontal or vertical integration (Williamson, 1985)), the government (frequently as an alternative to regulation (Shleifer and Vishny, 1997)), and individual shareholders. There are several studies that look into the impact of one or more of these shareholder types on the likelihood of CEO departure; however, the findings they present are rather inconclusive. For example, several scholars report that the probability of CEO dismissal is positively related to the presence of a large institutional investor (Goyal and Park, 2002; Huson et al., 2001). Others, however, find no such effect (Cosh and Hughes, 1997; Neumann and Voetmann, 2005).

Furthermore, an investigation into the difference in priorities across California hospitals revealed that different hospital types (church-owned, physician- or community-owned, for profit, government-owned, district-owned and teaching-hospitals) exhibit a different turnover-performance sensitivity: while financial performance was negatively and significantly related to both board and CEO turnover for all types of hospitals, different ownership types were found to place different weights on the levels of charity care and administrative expenses. As a result, in for-profit hospitals administrative expenses were a significant predictor of CEO and board turnover while in non-for-profit hospitals this was not the case (Eldenburg et al., 2004). Finally, family ownership has been found to slightly diminish the likelihood of forced CEO departure given that families oftentimes hold a majority of shareholdings and, therefore, appoint their own descendants as CEOs. Control problems in family firms are well known in the literature, as several studies find a significantly negative relationship between CEO ties with the founding family and the likelihood of dismissal (Denis et al., 1997; Franks et al., 2001; Huson et al., 2001).

The distinction between family and non-family held firms is frequently discussed under the heading of “locus of control”. Based on the seminal work by Berle and Means (1932), this distinction expresses the dichotomization into “owner-controlled” and “management-controlled” companies depending on the extent to which dispersion of ownership has advanced and the firm is assumed to be controlled by managers (Cubbin and Leech, 1983; Leech and Leahy, 1991). Empirical studies usually center on the length of CEO tenure rather than on CEO turnover: for example, CEOs of owner-controlled firms were found to have tenures three times as long as those of managers of other firms (Mc Eachern, 1977). Furthermore, CEO tenure was found to be unrelated to firm performance in owner-controlled firms but was positively related to firm performance in externally controlled and manager-controlled firms (Allen and Panian, 1982; Salancik and Pfeffer, 1980). Finally, James and Soref (1981) investigated the impact of the “locus of corporate control” on the probability of CEO removal. Contrary to what was reported above, they found no relationship between the probability of involuntary CEO departure and the type of

corporate control (i.e., owner vs. manager control). Essentially, they found that negative corporate performance was the only predictor of CEO dismissal regardless of whether or not the firm was under managerial control.

Related to the discussion of the “locus of control” is the issue of CEO ownership. Along with the increase in the variable part of executive compensation, and the introduction of equity and stock option plans, there has been a steady increase in shareholdings held by (non-founder) CEOs. With respect to the consequences of CEO ownership two competing arguments have been put forward in the literature: in line with the traditional agency theory argument, CEO ownership is hypothesized to have a positive governance effect as it is expected to alleviate the role of information asymmetries, to prevent managerial shirking, and to align the interests of managers with the interests of owners (Jensen and Murphy, 1990; Murphy, 1997). However, these beneficial effects are attenuated by the increased risk of managerial entrenchment; that is, high levels of CEO ownership are found to result in undesirably strong security of tenure for CEOs: the higher the percentage of equity owned by management, the lower the likelihood that managers will be dismissed (Morck et al., 1988; Morck et al., 1989). In addition, high levels of managerial ownership are also found to diminish the sensitivity between turnover and performance (Denis and Denis, 1994, 1995; Kang and Shivdasani, 1995).

In sum, ownership structure vested in the presence of large blockholders or high levels of ownership concentration is expected to, firstly, have a direct impact on the likelihood of CEO turnover and, secondly, to increase the likelihood of forced CEO departure in the event of poor performance. The impact of owners is assumed to differ across owner types, while ownership by the CEO is expected to diminish the likelihood of CEO departure. In addition, CEO family ties and CEO founder status are likely to increase the length of CEO tenure despite poor performance. A small caveat, however, should be mentioned: research into the variety of corporate governance systems across industrialized nations points at the fact that there might be considerable differences with respect to ownership structure (e.g. Bebchuck and Roe, 1999; Roe, 2003; Roe,



1990), the design of property rights (Aguilera and Jackson, 2003; Gilson, 2000; Lannoo, 1999; Pochet, 2002), and even the mandatory levels of disclosure and transparency (Aguilera and Cuervo-Cazurra, 2004). All of these factors might impact the way owners assume their role as corporate watchdogs and, consequently, also on the likelihood of CEO departure in the event of performance declines. While a comparative analysis of CEO turnover across various national settings is beyond the scope of this work, in the discussion section an attempt is made to set the “case of Switzerland” in relation to other contexts with respect to ownership structure, shareholder monitoring and the likelihood of CEO departure. In the following I first provide a brief overview of the Swiss corporate governance situation before turning to data description and the empirical analysis section.

### **3. The Swiss Corporate Governance Setting**

The most distinctive features of Swiss corporate governance are a strong and well functioning capital market, a moderately high level of ownership concentration with dual-class shares and a two-tier board system. Firstly, the Swiss economy is characterized by a relatively high amount of equity financing with a strong stock exchange. Put in relation to the country’s population base (about 7.5 Million), there are a relatively large number of listed companies and an above-average number of multinational corporations found particularly in the well-developed chemical and manufacturing industries and the banking and insurance sectors. For example, in 2006 the total market capitalization of the Swiss Performance Index (SPI) companies (i.e., companies with a free-float of at least 20%) amounted to 1222 billion CHF; the number of transactions executed was almost 24.5 billion and the total exchange turnover amounted to about 2 billion Swiss Franks.<sup>1</sup>

Secondly, among the listed companies are many small and medium-sized companies, so-called “local caps”, which are frequently controlled by a dominant owner who holds a considerable number of shares. The control in these companies is frequently backed up by the adherence to

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<sup>1</sup> [http://www.swx.com/swx/key\\_figures\\_en.html](http://www.swx.com/swx/key_figures_en.html) (March 15, 2008)

dual-class shares, where the number of shares held is disproportionate to the level of voting rights associated with these shares. Thus, local caps oftentimes know the promise of capital markets while, at the same time, retaining the control over their companies. Nonetheless, Swiss shareholders have been described as rather passive by some authors as they, allegedly, lack the power, information and resources to stand up and act. In particular, institutional investors who are very active in the Anglo-Saxon market-oriented corporate governance system have been characterized as being rather passive (Schiltknecht, 2003). However, more recently there has been incremental change on the horizon: Ethos, the pension fund association that groups some 90 pension funds under its umbrella, has been regularly challenging top managers' decisions and the corporate governance of Swiss companies. More recently, for example, Ethos has pressured the Nestlé leadership to separate the CEO and the chairman position of the company's chief executive Peter Brabeck. In the same vein, Ethos has attempted to enforce a special audit at the UBS in the wake of the bank's financial crisis. Regarding ownership of Swiss companies, another feature worth mentioning is cross-shareholding. In network-oriented corporate governance systems like in Germany, cross-shareholdings are viewed as impeding to functioning of the market for corporate control. However, cross-shareholdings are not widely used in Switzerland and their transparency is guaranteed on a regulatory basis (Hofstetter, 2002).

As for corporate boards, at long last, Swiss companies legally enjoy considerable freedom with respect to the question of how to structure their boards. However, although they are legally free to install a one-tier board with executive and non-executive directors being grouped in one and the same governing body, Swiss companies typically exhibit a two-tier board system composed of a supervisory board (Verwaltungsrat) and general management (Geschäftsleitung). Traditionally, the supervisory board has been composed predominantly of independent outside directors, although the incidence of CEO duality, that is, the combination of CEO and Chairman into one position, still occurs despite the fact that this practice has been adopted somewhat less frequently in recent times.

#### **4. Sample and Data**

The Swiss sample employed in this study is drawn for the year 2003 and contains the top 200 companies ranked by market capitalization quoted on the Swiss Stock Exchange (SWX) on December 31, 2003. Next, matching data for 2000 through 2005 were collected in order to obtain an (unbalanced) panel of six years. This exact period was chosen mainly for data availability reasons: on the one hand, Switzerland introduced a directive regularizing the disclosure of corporate governance data only in July on 2002 (the “SWX Swiss Exchange Corporate Governance Directive (CGD)”). The CDG had the effect of increasing the previously rather modest (before 2002) or virtually non-existent (prior to 2000) transparency standard. On the other hand, in spring 2008 when the last regression models were run for this study, annual reports (that are usually published in spring of the subsequent year) were available only for 2006. Data from 2006 was necessary to determine CEO departures in 2005 which were then related to performance and ownership variables in 2005. Thus, this restriction defined the upper boundary of the sample.

Since the sampling procedure is based on the market capitalization criterion the argument of a bias toward good performers might be put forward. Despite the fact that this criticism is, at least to some extent, legitimate, the Swiss context and the small number of companies quoted at the Swiss exchange allowed for little alternative sampling procedures: for example, the electronic database Thomson One Banker revealed that there were only 214 quoted companies for the year 2000 and only 222 companies for 2001. Adding small caps for these years would thus result in including the population instead of a random sample. This would introduce bias with respect to both ownership and transparency because smaller companies are more likely to be controlled by families and tend to have lower disclosure standards due to their lower market visibility. Reducing the sample, on the other hand, would highly diminish the frequency of observations for the dependent variables (see descriptive statistics below). As a result, I judged the above to be the most reasonable procedure given the peculiarities of the context.

The final sample required that irrelevant companies be eliminated from the sample. In line with the convention in the field, investment trusts were excluded given their peculiar business model and governance structure. Furthermore, due to control changes, mergers and mortality over the period under investigation the final panel is made of up 1059 company years (2000: 164; 2001: 175; 2002: 179; 2003: 182; 2004: 183; 2005: 176). Unfortunately, however, the dataset contained many missing values. I checked for regularities in these values but was unable to detect any systematic pattern. Some data (e.g. performance) was missing from the Thomson One Banker Data Base. Other (e.g., CEO tenure) was not provided in companies' annual reports, regardless of, e.g., the performance levels or the ownership structure. Thus, it can be reasonably assumed that the missing values are mainly due to the lack of disclosure requirements by companies quoted at the SWX. Imputing the missing values seemed not to be a good choice: on one hand, imputing values for dummy variables is not straightforward; on the other, there is no conclusive evidence that imputed values do not result in distorted results. Therefore, I chose to run the regressions with marked-out missings. The downside of this procedure is that it considerably reduces the sample size; the upside is that it allows for comparability of models and estimates. I thus ran a series of logistic regressions with CEO turnover as the dependent variable using a panel of 656 years (2000: 73; 2001: 90; 2002: 104; 2003: 125; 2004: 132; 2005: 132) and a series of linear regressions with CEO tenure as the dependent variable using a panel of 583 years (2000: 57; 2001: 77; 2002: 96; 2003: 113; 2004: 117; 2005: 123).

#### **4.1 Dependent Variables**

I used three different dependent variables in the study. Firstly, I differentiated between voluntary or natural departures termed "turnover" and involuntary or forced departures termed "dismissal". Turnover occurred and the variable was coded "1" for that year whenever the CEO had changed in the subsequent year of investigation. This information was obtained by consulting companies' annual reports. I differentiated between voluntary and forced departures by recurring to a procedure first adopted by Coughlan and Schmidt (1985:48). The authors argue that in order

to be able to test the “monitoring hypothesis”, a distinction between turnover and dismissals must be made. CEO turnover is only in those cases the result of a monitoring effort where the current CEO has been forced to depart. Not surprisingly, however, this differentiation is not easily achieved as companies typically do not report the true reasons for changing their CEOs - particularly not in the case of outright dismissals. In order to circumvent this difficulty, Coughlan and Schmidt suggest analyzing press reports surrounding departures. The authors propose a list containing possible reasons companies may offer for the departure of executives. They suggest classifying death, ill health, retirement, control change and the assumption of another position in the firm as voluntary departures; the assumption of another position outside the firm, the pursuit of other interests, policy differences, poor performance, firing and the incidence where no reason is reported are suggested to be classified as forced departure. Although some scholars choose to stick to the turnover variable, and in order to exclude voluntary departure simply control for CEO age, the Coughlan and Schmidt approach has now become a standard approach for discriminating between natural and unnatural turnover (e.g. Conyon and Florou, 2002; Cosh and Hughes, 1997; DeFond and Park, 1999; Weisbach, 1988 who adopted the same approach). Therefore, I opted for the above taxonomy and analyzed press releases of the *Neue Zürcher Zeitung (NZZ)* that surrounded a CEO turnover event. Given that the NZZ is locally known as a high-quality newspaper, one can be reasonably confident that the information provided by the newspaper is reliable and that departures classified as forced are indeed non-voluntary.

Besides turnover and dismissal, in the second part of the study I also used “tenure” as an independent variable. This variable is continuous and stands for the number of years a CEO holds office. The information on tenure was obtained from the companies’ annual reports. In the year of appointment, tenure was coded as 0; every subsequent year in office was coded as plus 1 year of tenure.

## 4.2 Independent Variables

### 4.2.1 Performance

The most important dependent variable in a study of corporate control is company performance. However, as indicated previously, there is no agreement among scholars on what performance measure to use in order to test the likelihood of departure following performance declines. In general, the disagreement revolves around market- and accounting-based measures of performance and the question of which performance measure is judged by constituencies to be a better proxy for CEO effort. Several studies rely exclusively on market-based measures of performance (e.g. Conyon, 1998; Dahya et al., 1998; Warner et al., 1988). These scholars argue that shareholders are the principal beneficiaries of the company and that, therefore, negative changes in shareholder returns are most likely to trigger shareholder interventions. As Warner et al. (1988) put it: "information about management performance is reflected in stock returns and such information is used in evaluating performance". At the same time, as the advocates of the market-based measure of performance argue, it is not necessary that shareholders actually base their decisions on stock returns, but it is sufficient that the performance measures used are correlated with stock returns. As a consequence, I follow Conyon and Florou (2002) and use an index of stock returns (return index, RI) as provided by Datastream in the Thomson One Banker electronic database. This measure is defined as the 12-month stock return, assuming that dividends are reinvested. The formula employed by Datastream is the following:

$$RI_t = RI_{t-1} * (P_{it} / P_{i,t-1}) * (1 + DY_t), \text{ where}$$

$RI_t$  = the Return Index at time t

$RI_{t-1}$  = the Return Index at time t-1

$P_t$  = the Price Index at time t

$P_{t-1}$  = the Price Index at time t-1

$DY_t$  = the gross dividend yield at time t.

Since the figure provided by an index is per se meaningless, I used the change in the index relative to its previous year level by calculating the ratio of return index at time  $t+1$  over return index at time  $t$ .

On the other hand, advocates of accounting-based measures of performance argue that since stock prices are subject to speculative and exogenous shocks, they do not reflect information about the effort and skills of the CEO accurately. Instead, they suggest using accounting-based measures of performance since they are judged to be more “discretionary” measures which are more stable, less amenable to external influences and thus better able to be controlled by chief executives (Cosh and Hughes, 1997). Despite the fact that some scholars dismiss accounting-based measures as too noisy to be suitable performance indicators, Rosen (1990), for example, insists that accounting numbers cannot be worthless since they are the main source of information not only for managerial decisions but also for the stock market. Finally, although accounting measures may be subject to manipulation by managers (through, e.g., the choice of depreciation methods), Rosen emphasizes that this is not likely to occur (or at least not undetected) frequently. The most often used accounting-based measures of performance are earnings and return on assets (e.g. Denis et al., 1997; Mikkelsen and Partch, 1996; Weisbach, 1988). As a result, in order to capture the performance effect on CEO turnover as accurately as possible, I used both market- as well as accounting-based performance measures.

The accounting-based performance measure used is return on assets (ROA), defined as the ratio of earnings before interest and taxes (EBIT) and total assets (c.f. Denis et al., 1997; Fazel and Louie, 1990; Parrino, 1997). Return on assets is an indicator that reflects how well a company does in “squeezing” earnings out of the total assets employed in the business. Specifically, I used both the level of ROA as well as changes in the level of ROA ( $\Delta$  ROA). The level of ROA represents a firm’s performance in the year preceding CEO departure, whereas changes in ROA represent the trend in a firm’s performance. The data was retrieved from the Thomson One Banker electronic data base. For all measures of performance, I estimated the models using both one- and two-year

lags. However, only one-year lags, i.e., only performance in the year immediately preceding CEO departure, turned out to be decisive in terms of forced CEO exits.<sup>2</sup>

#### 4.2.2 Ownership

In order to capture the effect of ownership, I used three different ownership measures: firstly, I generated a dummy variable for those cases where there was at least one large blockholder, i.e., a shareholder with a stake higher than 5%. Secondly, I also investigated the effect of the level of the largest blockholder. Denis and colleagues (1997), for instance, used dummies for the existence of large blockholders but a continuous variable for measuring the impact of board ownership and the ownership of institutions. Similarly, Dahya et al. (1998) collected data on the number of blockholders holding more than 3% and more than 10% of shares respectively as well as data on the size of any equity stake owned by a major blockholder. Finally, in order to capture the impact of all shareholders simultaneously, I calculated a measure for ownership concentration in each company. Ownership variables were gathered from the companies' annual reports and were aligned with the information published on the SWX homepage.

With respect to the chosen ownership measure, a couple of remarks are necessary. The first concerns the definition of "blockholder": most scholars define blockholders as being those shareholders that hold more than 5% of the company's stock (Holderness, 2003). Accordingly, corporate governance disclosure rules, including the ones imposed on companies by the Swiss Stock Exchange, usually stipulate that those shareholdings that exceed the 5% percent threshold be disclosed. However, some scholars question the explanatory power of a predetermined

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<sup>2</sup> The theory of "relative performance evaluation" (RPE) (Holmstrom, 1982) suggests that executives should be evaluated in relation to firms in the same market or industry in order to account for the common external shocks those companies face. Such an evaluation of CEO effort calls for weighting the performance of a given company by its industry average. Unfortunately, the Swiss sample is too small and too diverse for meaningful industry averages to be retrieved since many industries, as defined by the four-digit SIC code, were only represented by one or two companies. However, in the context of this paper the concerns associated with industry-weighted performance measures can be eliminated, since here forced dismissal is separated from natural turnover and one can assume that shareholders wishing to oust a CEO do take sector specific performance into account in their judgment. Therefore, in the present analysis relative performance evaluation is not taken into account.



shareholdings and / or voting rights threshold. Hambrick and Finkelstein (1995), in a study on executive compensation, for example, discussed the issue of whether the double level of shareholdings can be viewed to linearly translate into the double level of monitoring. They conclude that there is indeed a threshold effect of vigilance that functions in such a way that above a certain threshold (e.g. 5%), large blockholders will invest in monitoring but that their monitoring will not double if their shareholdings double. The authors found endorsement for this though when they ran models with both categorical and continuous variables: both models were significant, but the model with the categorical variable explained significantly more variance than the model with the continuous variable.

The second remark concerns the difference between shareholdings and voting rights: given that the size of shareholdings is considered as a proxy not only for the owner's motivation but also for his power and impact, it goes without saying that such a conception of ownership presupposes a system where the one-share-one-vote principle is adhered to. In governance systems, including in Switzerland, where certain shareholder groups might hold voting rights that are disproportionate to their stakes, data on voting rights must be considered. Strictly speaking, therefore, ownership data in this study represents voting rights and not the mere level of shareholdings. Finally, the measure of concentration employed in this study is the Hirschman-Herfindahl Index, which is defined as follows:

$$HHI = \sum_{i=1}^n s_i^2$$

where  $s_i$  is the size of shareholdings of a shareholder  $i$  in a given firm, and  $n$  is the number of shareholders having more than 5% of votes. The Hirschman-Herfindahl Index ( $HHI$ ) ranges from  $1/N$  to 1, where  $N$  is the number of blockholders. Equivalently, the index can range up to 10,000 because percents of voting rights are used. In general terms, a value below 1000 indicates low concentration, one between 1000 and 1800 moderate concentration, and one above 1800 high

concentration<sup>3</sup>. Admittedly, given the SWX disclosure rules, I was only able to collect data on those shareholders that hold more than 5% of shareholdings; in return, however, the dataset includes the stake of all blockholders a firm had at the end of a given year.

Besides investigating the size of the largest blockholder and the level of ownership concentration per company, I discriminated between the types of the largest blockholders. Similar to the classification by Franks and colleagues (2001) but adapted to the circumstances in Switzerland, I classified shareholders into the following 7 categories: company, institutional investor, founder or family member, government, board member, individual, and CEO (but not founder or founding family member). This data was obtained from the companies' annual reports and was compared and aligned with the information found on the SWX webpage.

#### **4.3 Control Variables**

In order to capture effects that do not derive from the independent variables, I included a set of control variables representing those predictors that have been found to have a significant effect on CEO departure in previous studies. Firstly, given that the number of outsiders on corporate boards has been found to increase the likelihood of CEO turnover, I controlled for the impact of board structure (Hermalin and Weisbach, 1998; Weisbach, 1988) and included a variable termed "board independence", which is coded 1 when the all of board of directors were independent outsiders and 0 otherwise. Furthermore, I also included a dummy variable termed "CEO duality", which is coded 1 when the CEO and the chairman are the same person and 0 otherwise. In addition, given that the relationship between turnover, performance and ownership might differ across industries, I included the four-digit SIC code designating the industry a company operates

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<sup>3</sup> Even in a one-share-onevote system the relationship between the shareholders' voting rights and their level of control is not linear because a stake above 50% indicates majority or total control. Therefore, in order to measure shareholders' impact, some scholars have suggested using the Shapley value instead of the Hirschman-Herfindahl Index. Given the complexity of the Shapley measure and given that it is found to lead to paradoxical results under certain conditions (see Parsons et al., 1999), I opted to use the more traditional measure, which is the Hirschman-Herfindahl Index.

in. Finally, in order to control for the effect of size, I used the natural logarithm of company sales in each year. Board variables (outsider status and independence) were retrieved from annual reports; the SIC codes and sales data were gathered from Thomson One Banker electronic database.

## **5. Descriptive Statistics**

Table 1 displays the frequencies and rates of CEO turnover and dismissal: the average turnover rate in the 6 years under investigation is about 15%, the average rate of forced departure is about 5.5%:

\*\*\* insert table 1 about here \*\*\*

Over the years the frequency of turnover remained rather stable, with a smaller drop in 2002 (turnover) and 2003 (dismissal) and a re-rise in 2005 (turnover and dismissal). As displayed in table 2, the most frequent reason given for voluntary departures was retirement (59 cases; 37%). Furthermore, around two-thirds of all departures in the sample were voluntary and, accordingly, one-third was identified as forced. Among the most frequent reasons given for forced departure was poor performance (18 cases; 11%), followed by policy differences between the CEO and the board of directors (14 cases; 8.81%).

\*\*\* insert table 2 about here \*\*\*

Furthermore, as table 3 reveals, the average tenure of a Swiss CEO is about 5 years (overall standard deviation being 5.2 years); In addition, CEOs can remain in office for up to 33 years. However, this is an exception rather than a rule since the median value for tenure for the whole sample is 3 years and only the last 5 percentiles have tenures that exceed 15 years.

\*\*\* insert table 3 about here \*\*\*

Tables 4 and 5 summarize the frequencies of the main performance variables used in the study: the variable *return index* is used in the models as the ratio of its value in the year  $t$  over its value in the year  $t-1$ . As a result, the important information that can be retrieved from the measure is the level of change in points over the year. A value greater than 1 indicates a positive change (gain); a value smaller than 1, a negative change (loss).

\*\*\* insert table 4 about here \*\*\*

On average the change was positive over the period of investigation, indicating a steady increase in the stock return of Swiss companies. However, the range of change appears to vary considerably across years: in 2001 it was 1.32 points while in 2003 it amounted to 6.99 points. A closer examination of these values indicated that they were driven by single outliers. For example, the value of 6.99 in the year 2003 was driven by one single case amounting to 7.44 index points. The next smaller two values occurred in 2000 (4.24) and in 2003 (3.66). I checked for influence and leverage of these outliers and ran the regressions with and without them. The results did not change significantly.

The summary statistics for return on assets of the sample companies is provided in table 5. The measure is defined as a ratio of earnings and assets and is measured in percent. In the table below, I provide the changes in ROA as compared with the previous period. Negative values indicate a loss; positive values a gain. On average, the sample companies report a slight increase in the return on assets in the period of investigation, the only exception being the year 2001, when an average loss is reported. The range in values is equally dispersed as was the case for the market-based measure of performance: it ranged from 23.97 in 2005 to 68.47 in 2000. Similarly, the value of 61.38 was an outlier (the next smaller values amounted to 43.95 in 2004 and 42.26 in 2000). Again, these values were non-influential and did not exert leverage when included in the regression models.

\*\*\* insert table 5 about here \*\*\*

The Swiss peculiarities of the governance system manifest themselves above all when it comes to the ownership structure of the listed companies. For example, it is interesting to note that only about 11% of all companies in the sample have no large blockholder, i.e., no blockholder holding more than 5% of shareholdings; only about 17% of companies have a (largest) blockholder that holds less than 10% of shareholdings; about 9% have a (largest) blockholder that holds more than 70% of voting rights.

\*\*\* insert table 6 about here \*\*\*

As for the largest blockholder, the overall mean value for all companies is around 31.5% (see table 6). Table 6 provides summary statistics for the ownership variables: ownership concentration has remained remarkably stable over time, with fluctuations in the largest shareholder variable of only about 1.5%. Only when all shareholders are counted together does a slight increase in 2002 and a moderate drop in the concentration rate in the last year of investigation become visible.

Table 7 displays the distribution of the largest blockholder types for every year under investigation. The picture is very similar to the one discussed above: the frequencies of shareholder types have remained more or less equal during the period under investigation. Most frequently, largest blockholders of Swiss companies were institutions (e.g. banks, insurance companies, pension funds, investment trusts); founders or their families were the largest shareholders in between 23% and 26% of cases. Companies and the government were the largest blockholders in between 8% and 10% of cases. Finally, individual investors, board members, and CEOs were considerably less frequently and only in 0.7% through 4.80% of companies the largest blockholders.

\*\*\* insert table 7 about here \*\*\*

In addition, table 8 summarizes the average level of shareholdings of the largest shareholder per blockholder type and year. What becomes clear from the summary statistics of blockholder types

is the dominance of the largest blockholders because subsequent smaller blockholders hold considerably lower average levels of shareholdings.

\*\*\* insert table 8 about here \*\*\*

For example, as shown in table 6, the overall difference between the stake of the largest blockholder and the stakes of the 5 largest blockholders was only 9.5%, indicating that blockholders 2 through 5 together held on average only 9.5% of shares. As for the largest blockholder type, the most important insight gained from tables 7 and 8 is that while institutions are more frequently the largest blockholders in companies, families on average hold larger shareholdings (40.77%) than institutions (22.02%). Moreover, although the size of government shareholdings seems rather high, the importance of government ownership in Swiss listed companies is second rank. More specifically, large government stakes derive almost exclusively from the 24 cantonal banks, 21 of which enjoy government guaranty and most of which are quoted at the stock exchange. In addition, Swiss companies show a considerable degree of vertical and horizontal integration as companies on average appear to hold up to 37.6% of shareholdings in other companies. As for the rest of shareholder types, non-founder CEOs and board members hold very large stakes. However, given that their frequency of occurrence is relatively low, they are of little importance in the Swiss ownership landscape.

## 6. Regression Results

This section reports results from the empirical analysis relating corporate performance and ownership to the likelihood of CEO departure and the length of CEO tenure. For the binary outcome variables *CEO turnover* and *CEO dismissal*, I employed maximum likelihood estimation, relying on regression models for categorical dependent variable. For the continuous variable *tenure*, I used the generalized least square technique (GLS). In order to guarantee coefficient comparability, I estimated the models with marked-out missing values, which is why the samples used for the GLS-regressions are somewhat smaller than the sample used for the logistic

regression. As discussed above, I used several operationalizations of the ownership variable. However, because most of these variables are based on the same data, they tend to be highly correlated. For example, due to its formula the level of the Hirschman- Herfindahl Index is largely determined by the size of the largest blockholder, which is why there is co-linearity between these two variables (correlation coefficient: 0.96; significance: 99%; VIF>12). In linear regression models such variables are characterized by a large Variance Inflation Factor (VIF>10). Highly correlated variables introduce redundant information in a regression model and cause inflation of the standard errors, which results in imprecise coefficients. Therefore, most models are fitted using only weakly correlated variables at one time. For the same reason, full models are omitted from the regression tables.

#### **6.1 The relationship between CEO departure, company performance and ownership**

In the first part of the analysis, I investigated the likelihood of CEO departure given a set of predictor and control variables. I employed three different sets of regression models with very similar and robust results: binary logit (probit) models, multinomial logit models and bivariate probit models. Virtually all studies on CEO turnover agree on the assumption that the incidences of turnover in a sample represent independent events and thus apply a binary regression technique to a pooled sample consisting of the total of company years. Since the dependent variables (CEO turnover, CEO dismissal) are categorical, I first estimated a binary response model using logistic regression. I estimated two separate sets of models for the two independent variables (turnover and dismissal), thereby relating the probability of CEO departure to two different measures of performance and a set of ownership variables. Formally, the binary logistic regression mode is stated as follows:

$$\ln \Omega(x) = \ln \frac{\Pr(y = 1 | x)}{\Pr(y = 0 | x)} = x\beta'$$

which indicates the relation of the probability of occurrence of an event ( $y = 1$ ) to the probability of its non-occurrence ( $y = 0$ ) given  $x$ , and range from 0 when  $\Pr(y = 1 | x) = 0$  to  $\infty$  when

$\Pr(y=1|x)=1$ . The  $\Omega(x)$  is log odds or the “logit” which ranges from  $-\infty$  to  $+\infty$ , indicating that the model is linear in the logit. Given that in the event of binary outcomes the assumptions of the linear regression are violated, the ordinary least squares technique is inappropriate and the coefficients are estimated using the maximum likelihood method. Binary logit and probit models differ in their assumptions regarding the error distribution: while logit models assume a logistic distribution, probit model rely on normal errors. Logit and probit models yield very similar coefficients and the regression results of the two models are therefore interchangeable (Long, 1997).

Besides the plethora of CEO turnover studies that rely on binary logistic (or probit) regression (Conyon, 1998; Dahya et al., 1998; Denis and Denis, 1994; Franks et al., 2001; Parrino, 1997; Warner et al., 1988; Weisbach, 1988, to name but a few), more recently Huson and colleagues (2001), in their study on internal monitoring mechanisms and CEO turnover, opted for a multinomial logit and a bivariate probit model. The multinomial logit model is essentially an extension of the bivariate logit model as the multinomial logit model can be thought of as simultaneously estimating a series of binary logits. In order to do this, I created a new categorical variable with three outcomes where 1 indicates that there is no turnover, 2 indicates voluntary departure and 3 indicates forced departure. (Since the outcomes are not assumed to be ordered, the actual values taken on by the independent variables are irrelevant.) I then estimated a multinomial logit model relating the probability of the two departure categories, turnover and dismissals to the base category, which stands for “no turnover”. The advantage of this procedure is its increasing efficiency both in fitting the models and their interpretation since it allows for both outcomes to be estimated simultaneously. The formal specification of the multinomial logit model is as follows:

$$\ln \Omega_{m|b}(x) = \ln \frac{\Pr(y = m | x)}{\Pr(y = b | x)} = x\beta'_{m|b}, \text{ for } m = 1 \text{ to } J$$

where b is the base category which is also referred to as the comparison group and m are the categories under scrutiny (such as turnover and dismissal). The bivariate probit model, finally, is



somewhat different from the two models just discussed as it consists of a two-step (maximum likelihood) procedure where two regression equations are estimated simultaneously in such a way that the outcome of the second equation is predetermined by the outcome of the first equation. The covariance of the disturbances  $\rho$ , which in both equations are assumed to have a mean of zero and a variance of 1, are used for estimating the probabilities. All three models (including the binary probit estimation) consistently produced very similar results (when STATA 9.0 statistical software package is used): while the size of the coefficients varied slightly, the direction of the signs and the significance levels were (almost) exactly identical. In the following, I present the results of the multinomial logit model. The outcomes must be interpreted in relation to the base category, which is “no turnover”.

Tables 9 and 10 provide the regression results for the likelihood of CEO departure using market based (return index) and accounting based (changes in ROA) performance measures. The results are nearly identical except that the accounting-based performance measures were somewhat less significant. In models 1a and 1b the likelihood of CEO departure (1a: turnover; 1b: dismissal) is related to the market based measure of performance and a set of control variables. As compared to no turnover, the estimates reveal a significantly negative relationship between CEO dismissal and the ratio of return index and its previous year value. The coefficient (-1.46) is significant at a 99%-level. By contrast, no significant relationship between market-based performance and voluntary CEO departure is revealed in the data: the sign in front of the coefficient is positive (0.56) and not significant at conventional statistical levels. In addition, the likelihood of voluntary and forced departure differs also in the event of CEO duality and in dependence of company size: CEO duality, or the simultaneous assumption of the CEO and chairman position, appears to be negatively related to the likelihood of forced CEO departure. However, the coefficient (-1.23) is only modestly significant at the 90%-level. By contrast, in the case of CEO turnover duality seems not to play a role, as is indicated by the positive and insignificant coefficient for CEO duality (0.20). Company size, on the other hand, exerts a decisive influence on the likelihood of forced CEO

departure: CEO dismissals are significantly more likely in larger companies as measured by company sales (0.36). Once more this relationship does not hold for CEO turnover, suggesting that larger companies have better monitoring mechanisms than smaller ones but not necessarily a higher fluctuation rate of CEOs. Furthermore, the coefficient for the composition of the corporate board is not significant in the first two models. However, in every other model with turnover as the independent variable, board independence is found to be significantly negatively related to CEO departure. One interpretation of this finding is that independent boards might have a positive impact on the work satisfaction of top executives and, therefore, decrease voluntary CEO fluctuations. Finally, in the logistic regression models I did not control for CEO age given that the departure reason *retirement* was accounted for in the coding of the turnover variable.

Models 2a and 2b relate CEO departure to both performance and ownership variables. In the first model only the size of the largest blockholder and dummy variables representing the most important blockholder types are included. Similarly as in the first two models, the results indicate that poor performance is negatively and significantly related to the likelihood of CEO dismissal (-1.28) but not so to the likelihood of CEO turnover (0.06). Again, size of companies seems to raise the likelihood of dismissal (0.32) but not of turnover (0.03), and CEO duality appears to impede CEO dismissal (-1.29) but not turnover (0.25). As for the ownership variables, the coefficient of the dummy variable indicating the presence of a large blockholder is positive but insignificant. Similarly, no significant effect is found for the size of the largest blockholder: in both cases (turnover and dismissal) the coefficient is very small, negative and insignificant. Only the type of the largest blockholder seems to have a small influence: while neither the coefficient for family nor the coefficient for company was significant, there is some, albeit very modest, indication that institutions might increase the likelihood of CEO dismissal (1.05) but not of turnover (0.41). (The institutional investor coefficient is larger and of higher significance in the model using the accounting-based performance measure.) This finding persists when interaction terms between

the size of the largest shareholder and the type of the largest shareholder are introduced (models 3a and 3b): in the event of CEO dismissal, the interaction term for institutions and size is modestly significant. However, the direction of the coefficient is different than expected: the size of institutional shareholdings is negatively related to the likelihood of CEO dismissal (-0.05). One reason for this puzzling result might be the heterogeneity of institutions and their relationships to the CEO and the company. As Brickley and colleagues (1988) suggest, institutions differ with respect to their pressure resistance vis-à-vis the CEO: large institutional shareholders (e.g. Banks) that provide consulting or other services to the company will shy away from intense monitoring activity out of fear of bedeviling their relationship with the CEO and endangering their businesses with the company. Given this result, I created a variable that sums all institutional shareholdings per company and a variable that sums all outside shareholdings (companies, institutional investors, the government and large individuals) and related their size to CEO departure. Both coefficients were insignificant. In addition, I also tested for the conditional effects of ownership by interacting all ownership variables with company performance.

While a number of previous studies which find that owners become active in the event of poor performance (Dahya et al., 1998; Denis et al., 1997), this was not the case in the Swiss sample. Finally, I tested for the effect of the overall ownership concentration and related the size of the Hirschman-Herfindahl Index to CEO turnover and dismissal (models 4a and 4b). The coefficient is very small, negative and only modestly significant (-0.00) and is likely to be driven by the size and the type of the largest blockholder. As suggested in the descriptive statistics section, the largest blockholders are most frequently, companies, institutions and families. Companies and institutions are likely to be rather lax monitors due to their aforementioned potential business relationship with the company. Families, on the other hand, might under certain circumstances have an outright negative effect on the likelihood of CEO departure even in the event poor performance.

\*\*\* insert tables 9 and 10 about here \*\*\*

Before I turn to the investigation of CEO family ties and family ownership, I provide additional information on the most salient of the above regression runs. Given that the logistic regression model calculates  $\ln\Omega(x)$ , the log of the odds (or, in other words, the “logit”), the estimated parameters do not provide straightforward information for understanding the relationship between the independent variables and the outcomes. In order to place the result in a meaningful economic perspective, I use models 2a and 2b and provide the odds ratio ( $e^{\beta_2}$ ) and a plot of the predicted probabilities for the three salient independent variables, return index, size of the largest shareholder, and the presence of institutions of largest shareholders.

\*\*\* insert table 11 about here \*\*\*

As shown in table 11, when the likelihood of CEO dismissal is compared to the categories voluntary departure and no departure, the signs for the coefficients are the same and of comparable size except for the shareholder type coefficient, which is larger and significant when dismissals are compared to no turnover as opposed to when they are juxtaposed with voluntary departure.

\*\*\* insert figure 1 about here \*\*\*

Not surprisingly, the same holds true for the odds ratios: relative to the category no turnover, the presence of institutions as the largest shareholder is expected to change the odds of dismissal by a factor of 2.87 as compared to the relation between dismissal relative to turnover where the odds of dismissal change only by a factor of 1.89. In addition, figure 3 provides a plot of the predicted probabilities of forced CEO departure when the largest shareholder is an institution or some other shareholder type and as the return index moves from its lowest to its highest decile. Despite the fact that the predicted probabilities are rather small, it becomes evident that the likelihood of forced CEO departure increases markedly in the event of institutional investor presence.

## 6.2 The Impact of the Founder-CEO

The next section addresses the issue of CEO entrenchment in Swiss companies. As discussed in the literature review section, ownership by the CEOs has received mixed credit: CEOs have been found to entrench themselves and to use their shareholdings as sources of power against corporate governance instruments destined to discipline them. Unfortunately, in the Swiss context, disclosure requirements with respect to executive ownership deriving from, for example, stock option and equity plans are very lax. Therefore, data on board and executive ownership is rather unreliable. Nonetheless, another way to address CEO entrenchment is to inspect the company's locus of control and to investigate whether the CEO is the founder or a member of the founding family. In table 12 crosstabs between dismissal and founder-CEO are provided. The values suggest that we can be 95% confident that CEO dismissal hardly ever occurs when the CEO is the founder or a descendent of the founding family.

\*\*\* insert table 12 about here \*\*\*

The most straightforward course of action would be to include a dummy variable in the logistic regression models indicating whether the CEO is or is not a family member. However, given that a non-founder CEO predicts the outcome of the dismissal variable perfectly, such a procedure is technically not possible. In order to obtain an idea of the efficiency of governance mechanisms in the presence of founder CEOs, I estimated a series of linear regressions using CEO tenure as the dependent variable. According to Fazel and Louie (1990:168), CEO tenure and CEO turnover are closely related: "because turnover is the event of incumbent CEO leaving office and tenure is the interval between turnover events, tenure is inversely related to the frequency of turnover. Consequently, the variables that influence the likelihood of turnover should also influence tenure, but the signs of the coefficients in the turnover model should be opposite [to] those in the tenure one." Therefore, I related corporate performance and ownership variables on the length of CEO tenure for the two groups, founder CEO and non-founder CEO, separately. Using tenure as the dependent variable allows for recurring to the least square technique and estimating a linear

model. However, given the characteristics of the dependent variable in relation to the set of predictors, pooling the cross sections together as chosen for the categorical models is inappropriate. Firstly, intercept coefficients may vary over time and, secondly, ordinary least squares may be biased because of enduring individual firm-characteristics that are not considered in the model. In addition, as previous research suggests, tenure in year  $t$  might not be independent from tenure in the year  $t-1$ , implying that the sample cannot be considered as consisting of independent observations. This concept is known in the literature as the seasons-of-CEO-tenure hypothesis: longer tenured and thus more established CEOs are more likely to remain in post than are more recently appointed ones (Hambrick and Fukutomi, 1991; Shen, 2003). In the presence of such endogenous variables, Brown (1982) and Finkelstein and Hambrick (1990), authors who have studied CEO tenure, recommend recurring to models that combine a cross sectional and a longitudinal dimension. In order to respect the panel structure of the data, these authors advocate either a fixed-effects model or a generalized least square regression including a lag of the dependent variable in order to adjust for endogeneity in the models. The F-Test, which is suitable for assessing the appropriateness of the fixed-effects model, indicated that the intercepts vary across units (firms) ( $F=0.0000$ ) but (when the dataset was “re-shaped”) not across time ( $F=0.3599$ ). In addition, several tests evaluating (panel) heteroscedasticity (e.g. the White-test, the modified Wald-test and the Lagrange-Multiplier Test) consistently indicated the presence of group-specific error variances. As consequence, using the generalized least square model (thereby correcting for heteroscedastic unit variances by weighting the betas by an inverse of the cross-section specific variation) appeared to be the best alternative, given the data. The model’s equation can be formulated as follows (Brown, 1982):

$$y_{it} = \beta_0 + \beta_1 x_{it} + \beta_2 t_{i,t-1} + \alpha_i + u_{it}$$

where  $y_{it}$  represents the independent variable with unit  $i$  at time  $t$  and  $x_{it}$  represents the set of dependent variables with the units  $i$  at time  $t$ . The coefficients  $\beta_0$ ,  $\beta_1$  and  $\beta_2$  retain their standard interpretations as intercept and slope. The term  $t_{i,t-1}$  stands for the lagged endogenous variable

“tenure”, while the term  $\alpha_i$  is an unmeasured variable that varies across units (firms) but not over time and absorbs all unmeasured firm factors related to tenure that vary across firms. Finally, the term  $u_{it}$  is assumed to be a standard random disturbance. As in the event of logistic regression models, I used both market-based and accounting-based measures of performance. Since both set regressions yielded very similar results (in models using accounting-based performance measures, the coefficients were smaller and, for the performance variable, only significant at the 90% level), I refrain from presenting the models using changes in ROA. Table 13 displays the results obtained when the market-based performance measure was used.

In models 1 through 4 I ran separate regressions for founder and non-founder CEOs. The columns “a” display the estimates for non-founder CEOs, while the columns “b” display the estimates for founder CEOs. In model 5 I regress tenure on performance, control variables and a dummy variable coded 1 when the CEO is the founder or a member of the founding family. As displayed in table 13 the beta coefficient for the dummy variable was positive and significant, indicating that, holding all other variables constant, founder-CEOs on average have a tenure of over 4.5 years longer than non-founder CEOs. In addition, the coefficient for the return index is negative, small and insignificant, which suggests that performance does not have a significant effect on the length of tenure when the CEO founder-status is controlled for. In models 1a and 1b the regressions for the two groups are run separately: in companies where the CEO is not the founder or a family member, performance is positively and significantly related to CEO tenure. In other words, for a one-point increase in the return index relative to its previous year’s value, CEO tenure increases by over half a year. By contrast, the relationship between tenure and performance in companies with a founder CEO is fairly large, negative and significant. This indicates that founder CEOs not only do not get fired, but that they remain in post regardless of the negative performance of their company. This finding is consistent throughout the models 1-4: non-founder CEO tenure is significantly and positively related to company performance while founder tenure is significantly negatively related to it. A similar pattern is revealed for previous

tenure. The coefficient for previous non-founder CEO tenure is in general smaller, positive and significant. This finding appears to support the hypothesis on the “seasons of CEO tenure” (Hambrick and Fukutomi, 1991), according to which established CEOs who have been in post for a while do not quit as readily as more junior and less established CEOs. On the contrary, the coefficient for previous tenure of founder CEOs is in general larger, significant but negative. This suggests that founder CEOs terminate their tenure because they remain in post for a long time until retirement.

\*\*\* insert table 13 about here \*\*\*

Models 2 and 3 include a dummy variable for the presence of a large blockholder and a continuous variable measuring the size of the largest blockholder. Both coefficients were positive and significant for founder CEOs. For example, in companies where a large blockholder is present, all else being equal, founder CEOs have tenures that are 0.4 years longer than of CEOs in companies with no large blockholder. The same relationship holds true for the size of the largest blockholder: for every additional share or voting right, founder CEO tenure increases by 0.03. This result, surprising at first, becomes more self-evident when the type of the large blockholder is taken into account. Among the 63 companies in the sample with a founder CEO, the largest shareholder is most frequently (36 or 57.1%) the founding family, followed by institutions (14 or 38,9%) and companies (6 or 9.5%); finally, in 6 (9.5%) of companies there was no blockholder at all (crosstabs of shareholder type by incidence of founder family member:  $\chi^2$ : 166.84,  $p < 0.000$ ). Thus, the positive association between CEO tenure and the incidence and size of the largest blockholder derives from the fact that family member CEOs enjoy protection by their family even in the event of poor performance. (The coefficient for the return index in models 2b and 3b is -1.0 and -1.49, indicating a significantly negative relationship between CEO tenure and company performance.)



Against this background it is less surprising that in the case of a non-founder CEO, both the dummy variable for the presence of a blockholder and the continuous variable for the size of the largest blockholdings is negative, albeit smaller and insignificant. More precisely, in the case of a non-founder CEO, the largest blockholders are most frequently institutions (33.5%), followed by families (21.5%) and companies (16.5%). This finding suggests that both institutions and families exert a disciplining role but only when the CEO is not a member of the founding family. In order to confirm this result, I ran regressions, including dummy variables for the three most dominant shareholders types: as revealed in column 4a, all three shareholder types included in the model (family, institutional investor and company) have a significantly negative impact on the length of non-founder CEO tenure. For example, the presence of large family shareholdings reduces non-founder CEO tenure on average by 1.27 years (large institutional shareholdings: 0.64 years; large company shareholdings: 0.56 years). In the subsample of founder CEOs (column 4b), by contrast, only the coefficients for the blockholder types “institutions” and “company” are significant; the coefficient for family blockholders is negative but small and insignificant at conventional statistical levels. Interestingly, the presence of large company blockholders seems to have the largest disciplining effect on founder CEOs: their presence reduces founder CEO tenure on average by two years (-2.0). However, in order to test whether the coefficients in the two subsamples are indeed significantly different, I re-ran regressions 1 through 4 using the entire sample but included an interaction term of the dummy variable for founder CEO and each of the ownership variables. As columns 6 through 8 indicate, only the interaction terms, including the size of the largest shareholders and the founding family as the type of the largest shareholder, are significant. This suggests that the two subsamples differ significantly only with respect to the impact of the largest shareholder and the founding family on the length of CEO tenure. By contrast, the effect of the presence of a large blockholder as well as of institutions and companies appears not to be significantly different in the two subsamples. Last but not least, I ran regressions including interaction terms of performance and all ownership variables used but found no significant effects.

Finally, a look at the coefficients of the control variables reveals a consistently positive and significant impact of duality on CEO tenure: both founder and non-founder CEOs remain considerably longer in post when they simultaneously act as the company's chairman. Moreover, there is some evidence that outsider boards might exert a disciplining function in companies with a founder CEO: in models 2 and 3 the coefficient for the outsider board dummy is negative and significant, indicating that outsider boards reduce the founder CEO tenure by up to 2.29 years on average. However, this effect disappears in the subsequent models when ownership variables are added although the sign of the coefficients remain the same. In addition, as was the case in the logistic regression, company size seems to have a significantly negative effect on both founder and non-founder CEO tenure, indicating that in larger companies stronger governance mechanisms might be in place. Somewhat surprisingly, CEO age seems to have a positive effect on CEO tenure in both founder and non-founder CEO subsamples. Although intuitively one would expect that, due to the increased chance of retirement, older CEOs would have shorter tenures, that finding seems to support the seasons-of-tenure-hypothesis (Hambrick and Fukutomi, 1991): older CEOs are more difficult to remove, possibly also because of mutual adjustments between them, the board of directors (Lynall et al., 2003) and the organizational environment (Miller, 1991). Finally, as opposed to the logistic regression in linear regression models, industry differences seem to play an important role. Because the variable SIC is not continuous, the size of coefficients cannot be readily interpreted.

## **7. Discussion and Conclusion**

In this paper I set out to answer three questions related to corporate ownership and control in Swiss listed companies: the first question concerns the effectiveness of shareholders in removing poorly performing CEOs. The second question concerns the differences in owner types regarding issues of control. Finally, the third question touches upon the similarities and differences between Switzerland and other corporate governance settings. In light of the empirical findings, the most clear-cut answer can be provided to the first question: Swiss CEOs do get fired in the event of

poor performance; Shareholder response to both stock return and profit declines follows immediately and one-year lags of the performance variables are sufficient to detect a significantly negative association with CEO dismissal. As for the second question, there is some modest evidence that the presence of some (most likely pressure-resistant) institutions increases the likelihood of forced CEO departure. However, the impact of institutions is found to be direct and not conditional on performance as all interaction terms between performance and ownership are insignificant. In addition, there is no conclusive evidence of any association between board independence and the likelihood of forced CEO departure. In other words, the board of directors seems not to have a great influence in CEO dismissal decisions. On the contrary, Swiss CEOs seem to be well-insulated from internal monitoring particularly when they simultaneously assume the role of chairman. Finally, monitoring mechanisms seem to function better in large companies as size is found to be negatively related to forced CEO departure.

A closer look at CEO tenure reveals a high level of entrenchment by those CEOs who are the company founders or descendants of the founding family. Founder CEOs remain in post event when performance is persistently poor. Moreover, large blockholdings held by family shareholders enhance CEO entrenchment as family stakes are found to be positively related to CEO tenure regardless of negative performance levels. On the other hand, when the CEO is not the founder and not kin to the founding family, corporate governance mechanisms seem to function more efficiently as there is (some modest) evidence that both families and institutions reduce CEO tenure.

With respect to the third question asked in this paper, Switzerland, on one hand, lives up to its reputation of being ranked between the Anglo-Saxon and the Germanic corporate governance system. On the other hand, when it comes to the efficiency of corporate control mechanisms, the situation in Switzerland seems to parallel that in countries with high levels of family owner dominance such as Denmark or Italy. For example, the average turnover rate of 15% for Swiss CEOs is similar to what is reported worldwide: DeFond and Hung (2004:283) find the average

turnover rate for the US and UK to be 14% and 16% respectively. In the Benelux countries, companies exhibited a turnover rate of between 12% and 17%; in Scandinavia, between 16% and 20%. In Spain the average turnover rate has been found to be 15% and, finally, in Germany it amounted to 19% (DeFond and Hung, 2004). However, when it comes to the levels of forced CEO departure, with an average dismissal rate of 6%, Swiss CEOs are much “better off” than their Anglo-Saxon counterparts. In the US, the rate of forced departure appears to be considerably higher than in Switzerland. Huson et al. (2001), for instance, report a dismissal rate of 16% in large public US firms listed on the New York Stock Exchange in the period between 1971 and 1994. Nonetheless, CEOs are dismissed for poor performance in most countries no matter the structure of the companies’ internal and external governance mechanisms (see e.g. Dahya et al., 1998; Huson et al., 2001; Kang and Shivdasani, 1995; Kaplan, 1997; Renneboog, 2000; Warner et al., 1988).

This unconditional relation between CEO turnover and company performance is somewhat surprising given the rather distinct levels of ownership concentration around the world. For example, in the Anglo-Saxon context, where regulation prevented the build-up of large positions by single shareholders, the number of companies with a large blockholder is typically much lower than in continental Europe. In his political analysis of corporate governance systems, Marc Roe (2003) provides a comprehensive list of the portion of mid-sized companies without a blockholder holding 20% of the stakes: in Austria, Italy and France all mid-sized companies have such a blockholder; In Germany, the Netherlands and in Sweden 90% of all companies do so; the percentage of companies in Belgium, Finland and Norway is 80%, and in Australia, Denmark and Japan it is 70%. The number for the UK and Canada is 60% and, at the outer end of the continuum, there is the United States, with only 10% of companies exhibiting such a blockholder. In Switzerland, according to Roe, the number of mid-sized companies with and without a 20% blockholder is 50%. Thus, the situation in Switzerland can be said to mirror its position on a

continuum between the network- and the market-oriented corporate governance systems as the concentration of ownership in Swiss companies rank on an intermediate level.

When the prominence of shareholder types is compared across contexts, the disparities are more pronounced: in the Anglo-Saxon context institutional investors typically are the most dominant shareholder types both on an aggregate as well as on the single firm level (Denis et al., 1997; Franks and Mayer, 2001; Huson et al., 2001). By contrast, in the Germanic (also termed: network-oriented) corporate governance systems, pyramidal ownership by companies and large banks is found to be most characteristic (Franks and Mayer, 2001; Kang and Shivdasani, 1995). Not surprisingly, these are the shareholder types who are found to exert the largest disciplining function. Dahya and colleagues (1998) and Huson et al. (2001), for example, find a significantly positive impact of institutional investor shareholdings in the Anglo-Saxon context. In addition, in the Anglo-Saxon context much smaller blocks of shares seem to be sufficient for efficient monitoring to take place. In Germany, by contrast, little association between the likelihood of CEO turnover and ownership concentration is found. Instead, disciplining seems to occur as a result of changes in large blocks of shares, which are traded on a rather active and surprisingly liquid market for share blocks (Franks and Mayer, 2001; Köke, 2000).

The situation in Switzerland is different as compared to both Germany and the US and UK. As indicated above, although institutions do have some disciplining effect on Swiss CEOs, the Swiss ownership landscape is clearly dominated by founders and their families who more often than not appoint their own people and virtually insulate them from any control mechanisms. Similar findings are reported from Denmark, Italy, and for the 70s and 80s, also in the US. Lausten, for example, finds that family ties reduce the turnover of Danish CEO significantly (Lausten, 2002). Similarly, Brunello and colleagues (2003) report that the conditional probability of turnover in Italian firms is close to zero when the CEO is at the same time the firm's owner. Furthermore, studies on locus of control and the length of CEO tenure in the US context report a similar level of CEO entrenchment as in Switzerland: Salancik and Pfeffer (1980) find no relationship between

company performance and CEO tenure in owner-controlled firms. Alan and Panian (1982:546) report that CEO ties with the controlling family increase tenure and reduce the likelihood of turnover. They conclude that profitability is not the only goal of the large corporation and that families might be willing to sacrifice some degree of corporate profitability in order to retain some degree of direct family control.

The similarity of these findings with the “case of Switzerland” is surprising for two reasons: on the one hand, the ownership landscape and, therefore, also the levels of CEO entrenchment have changed considerably since the publication of the studies by Salancik and Pfeffer and Allan and Panian in the early 80s. As a result, over 25 years later one can reasonably expect less family entrenchment and shorter CEO tenures in the US context. On the other hand, Switzerland has a stronger stock exchange and a more active stock market than Italy. Against this background, the similar levels of CEO entrenchment and the sustained dominance by family shareholders are rather astonishing.

Given that alternative governance mechanisms (such as corporate boards) do not mitigate the control problem in Swiss family firms, it seems appropriate to ask the question about the boon and bane of family ownership: what about corporate governance and control in family firms? What are the constraints of non-value maximizing behavior by family CEOs? Extant research on the matter provides rather inconclusive results. While some scholars find evidence that family-owned companies underperform relative to those which are not under family control (Holderness and Sheehan, 1988; Morck et al., 1988), others are unable to support this finding (Anderson and Reeb, 2003; Denis and Denis, 1994). For example, Claessens et al. (2002) report that the detrimental effect of ownership concentration on firm performance is contingent on the type of majority owner. While concentrated ownership by companies and institutions is not associated with value discounts, managers in companies dominated by family or governmental ownership are found to be more likely to divert benefits to themselves. In addition, the detrimental effect of family ownership is found to be exacerbated in contexts with low minority shareholder

protection (La Porta et al., 1999; Maury, 2006). This is consistent with my findings with respect to Swiss CEO labor markets as institutions, and, to some extent, companies were also found to increase the likelihood of forced CEO departure and to shorten CEO tenure. Denis and Denis (1994), on the other hand, argue that family ownership can be an efficient form of organizing when organization-specific skills and knowledge are concentrated in a small number of individuals. In such instances, the consolidation of decision management and decision control can be efficient as it allows families to preserve their organization-specific capital by avoiding the possibility of mistakenly being replaced by less efficient managers. However, more recently Villalonga and Amit (2006) urged scholars to differentiate between the ownership, control and management of family firms. They find that family ownership creates values when the company's founder holds the position of CEO. By contrast, when family firms are run by second-generation descendants, firm value is destroyed and minority shareholders are expropriated. Kang (1998) has termed this phenomenon the "Buddenbrooks Effect", a reference to a novel by Thomas Mann in which the story about the dissipative behavior of the second generation Buddenbrooks is told.

In the light of this more recent discussion, no conclusive judgment about the situation of corporate governance and control in Switzerland can be made. On the one hand, the somewhat patchy dataset and the rather modest significance of the empirical results notwithstanding, the governance and control mechanisms seem to function efficiently. On the other hand, Swiss CEOs with family ties seem to be largely isolated from any monitoring and control. This situation is exacerbated by the circumstance of dual class shares, low protection of minority shareholder and the still rather low levels of transparency and disclosure with respect to corporate governance in Switzerland. Chances are high, therefore, that in some of the listed family firms, value is destroyed and minority shareholders are expropriated due to the self-serving behavior of family CEOs. In order to confirm this assumption, further research on CEO turnover and tenure should discriminate between ownership, control and management of family firms. Above all, future

research on the matter should examine in far greater detail the characteristics of the CEO and CEO ties with the founding family should be examined with greater care and scrutiny.



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## Tables and Figures

**Table 1: Summary Statistics for CEO Turnover and Dismissals**

Year	Turnover		Dismissal	
	frequency	Percent/year	frequency	percent/year
2000	26	15.85	8	4.88
2001	26	14.86	13	7.43
2002	24	13.41	11	6.15
2003	27	14.84	7	3.85
2004	27	14.75	10	5.46
2005	29	16.48	11	6.32
Total 2000-2005	159	15.01	60	5.68

**Table 2: Reasons for Departure**

	Reported Reason	Frequency	percent
Dismissals	assumes other position outside company	0	0.00
	pursues other interests	8	5.03
	Fired	9	5.66
	policy differences	14	8.81
	no reason reported	11	6.92
	poor performance	18	11.32
Total Dismissals		60	37.74
Voluntary Departures	Death	2	1.26
	control change	14	8.81
	ill health	6	3.77
	Retirement	18	11.32
	assumes other position inside company	59	37.11
Total Vol. Departures		99	62.26
Total Turnover		159	100

**Table 3: Tenure of CEOs**

Year	Nr. Of Observations	Tenure		
		Mean	Min.	Max.
2000	57	5.67	0	33
2001	77	3.81	0	29
2002	96	4.34	0	30
2003	113	4.23	0	27
2004	117	4.38	0	28
2005	123	4.85	0	25
total 2000-2005	583	4.55	0	33

**Table 4: Return Index**

Year	Nr. Of Observations	Return Index Ratio ( $RI_t / RI_{t-1}$ )			
		Mean	Min.	Max.	Range
2000	73	1.20	0.58	4.24	3.66
2001	90	0.78	0.16	1.48	1.32
2002	104	0.79	0.14	2.20	2.06
2003	125	1.45	0.45	7.44	6.99
2004	132	1.21	0.29	2.28	1.99
2005	132	1.34	0.78	2.92	2.14
total 1999-2005	656	1.13	0.40	3.43	3.03

**Table 5: Return on assets**

$\Delta$ Return on Assets ( $ROA_t - ROA_{t-1}$ )					
Year	Nr. of Observations	Mean	Min.	Max.	Range
2000	72	2.81	-7.09	61.38	68.47
2001	89	-4.27	-56.20	7.70	63.90
2002	103	0.39	-17.83	19.45	37.28
2003	125	1.73	-39.31	41.55	80.86
2004	132	1.26	-23.18	43.96	67.14
2005	131	0.34	-9.08	14.89	23.97
total 1999-2005	652	0.38	-25.45	31.49	56.94

**Table 6: Yearly averages of largest blockholder, the sum of 5 largest blockholders; H.-H.-Index**

Year	Largest Blockholder	Largest 5 Blockholders	Hirschman-Herfindahl
2000	31.08%	38.39%	1716.78
2001	30.92%	39.52%	1735.96
2002	32.60%	42.70%	1880.74
2003	32.57%	43.44%	1857.68
2004	31.29%	41.83%	1717.14
2005	31.17%	40.63%	1680.55
2000-2005 average	31.61%	41.09%	1764.81

**Table 7: Percentage of largest blockholder types 2000-2005**

Blockholder Type	2000	2001	2002	2003	2004	2005	Average
No Blockholder	10.96	13.33	6.73	8.00	8.33	8.33	9.28
Company	19.18	14.44	17.31	19.20	15.91	14.39	16.74
Institution	32.88	32.22	32.69	32.00	36.36	34.09	33.37
Founder / Family	23.29	26.67	26.92	22.40	22.73	25.00	24.50
Government	9.59	7.78	8.65	8.80	9.85	9.85	9.09
Board Member	1.37	2.22	1.92	1.60	2.27	2.27	11.65
Individual	1.37	1.11	1.92	3.20	0.76	3.03	1.90
CEO, not Founder	1.37	2.22	3.85	4.80	3.79	3.03	3.18
Total %	100	100	100	100	100	100	100

**Table 8: Shareholdings of largest blockholder type in % 2000-2005**

Blockholder Type	2000	2001	2002	2003	2004	2005	Average
Company	33.53	44.33	39.95	39.88	41.40	35.35	39.07
Institution	22.49	21.44	19.23	21.54	20.10	23.01	21.30
Founder / Family	39.40	38.70	41.50	44.24	39.02	37.45	40.05
Government	65.02	61.87	64.76	59.93	59.64	58.79	61.67
Board Member	50.50	36.19	35.49	37.87	42.04	48.89	41.83
Individual	12.00	12.00	15.05	12.96	12.00	30.17	15.70
CEO, not Founder	72.13	66.81	42.77	37.94	42.29	34.88	49.47

**Table 9: Multinomial logit model regressing CEO turnover / dismissal on return index and ownership**

Variable	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)
Constant	-2.67*** (0.81)	-4.51*** (1.01)	-3.05*** (0.91)	-4.64*** (1.21)	-3.15*** (0.98)	-5.02*** (1.31)	-2.83*** (0.84)	-4.53*** (1.12)
Return Index	0.56 (0.24)	-1.46*** (0.50)	0.06 (0.24)	-1.28*** (0.49)	0.07 (0.24)	-1.25*** (0.49)	0.07 (0.25)	-1.30*** (0.01)
Largest Blockholder Size			-0.00 (0.00)	-0.01 (0.00)	0.00 (0.01)	0.00 (0.02)		
Largest Blockholder: Family			0.29 (0.43)	0.34 (0.73)	0.08 (0.10)	0.80 (1.46)		
Largest Blockholder: Institution			0.41 (0.40)	1.05* (0.40)	0.66 (0.59)	1.90*** (0.75)		
Largest Blockholder: Company			0.35 (0.47)	0.83 (0.68)	0.65 (0.73)	1.97** (0.98)		
Size Block x Family					0.00 (0.02)	0.02 (0.03)		
Size Block x Institution					-0.00 (0.02)	-0.05* (0.023)		
Size Block x Company					-0.00 (0.02)	-0.05 (0.03)		
Largest Blockholder: Outsider							0.34 (0.30)	0.72 (0.44)
Hirschman- Herfindahl							0.00 (0.00)	-0.00 (0.00)*
Outsider Board	-0.72 (0.33)	-0.35 (0.40)	-0.65* (0.34)	-0.21 (0.41)	-0.66* (0.34)	-0.26 (0.43)	-0.75*** (0.33)	-0.31 (0.42)
Duality	0.20 (0.31)	-1.23* (0.66)	0.25 (0.35)	-1.19* (0.67)	0.22 (0.35)	-1.29* (0.68)	0.23 (0.35)	-1.23* (0.67)
Logsales	0.03 (0.08)	0.36*** (0.01)	0.03 (0.08)	0.32*** (0.10)	0.30 (0.08)	0.30*** (0.11)	0.03 (0.08)	0.11* (0.07)
SICcode	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Number of Observations	656		656		656		656	
Chi <sup>2</sup>	0.000***		0.000***		0.000***		0.000***	
Pseudo R <sup>2</sup>	0.0582		0.0724		0.0845		0.0703	

\*\*\*: p<0.01; \*\*: p>0.05; \*: p<0.1; standard errors in parentheses.

Note: in models “a” the dependent variable is turnover; in models “b” the dependent variable is dismissal.  
The base category is: no turnover.



**Table 10: Multinomial logit model regressing CEO turnover/dismissal on changes in ROA and ownership**

Variable	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)
Constant	-2.60*** (0.76)	-6.40*** (0.97)	-2.97*** (0.90)	-6.30*** (1.14)	-3.01*** (0.93)	-6.64*** (1.24)	-2.73*** (0.77)	-6.23*** (1.04)
$\Delta$ ROA	-0.00 (0.20)	-0.04* (0.02)	-0.00 (0.02)	-0.04* (0.29)	-0.00 (0.02)	-0.04* (0.02)	-0.00 (0.02)	-0.03* (0.20)
Largest Blockholder Size			0.00 (0.00)	-0.01 (0.01)	0.00 (0.10)	0.00 (0.02)		
Largest Blockholder: Family			0.30 (0.44)	0.31 (0.73)	0.01 (0.80)	-0.89 (1.51)		
Largest Blockholder: Institution			0.41 (0.40)	1.17*** (0.53)	0.66 (0.60)	2.06*** (0.75)		
Largest Blockholder: Company			0.35 (0.47)	0.78 (0.68)	0.65 (0.73)	1.87* (0.99)		
Size Block x Family					0.00 (0.02)	0.20 (0.03)		
Size Block x Institution					-0.01 (0.02)	-0.52* (0.03)		
Size Block x Company					-0.00 (0.02)	-0.05 (0.03)		
Largest Blockholder: Outsider							0.34 (0.30)	0.80* (0.44)
Hirschman- Herfindahl							0.00 (0.00)	-0.00* (0.00)
Outsider Board	-0.72*** (0.33)	-0.35 (0.40)	-0.65* (0.34)	-0.23 (0.41)	-0.66* (0.34)	-0.28 (0.44)	-0.76*** (0.33)	-0.31 (0.42)
Duality	0.20 (0.35)	-1.15* (0.67)	0.25 (0.35)	-1.13* (0.67)	0.22 (0.35)	-1.21* (0.67)	0.23 (0.35)	-1.16* (0.67)
Logsales	0.03 (0.08)	0.40*** (0.01)	0.03 (0.08)	0.35*** (0.10)	0.03 (0.08)	0.34*** (0.11)	0.03 (0.08)	0.36*** (0.00)
SICcode	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Number of Observations	656		656		656		656	
Chi <sup>2</sup>	0.000***		0.000***		0.000***		0.000***	
Pseudo R <sup>2</sup>	0.0479		0.0650		0.0776		0.0620	

\*\*\*: p<0.01; \*\*: p>0.05; \*: p<0.1; standard errors in parentheses.

Note: in models “a” the dependent variable is turnover; in models “b” the dependent variable is dismissal.  
The base category is: no turnover.

**Table 11: Coefficients and Odds Ratios**

Comparison		Return Index	Coefficients for:	
			Size of the largest shareholder	Largest shareholder is an institution
Dismissal   Turnover	$\beta_{(\text{Diss} \text{Turn})}$	-1.35	-0.01	0.64
	$e^{\beta_{(\text{Diss} \text{Turn})}}$	0.26	0.99	1.89
	P	0.01	0.20	0.32
Dismissal   no Turnover	$\beta_{(\text{Diss} \text{No T})}$	-1.29	-0.00	1.05
	$e^{\beta_{(\text{Diss} \text{No T})}}$	0.28	0.99	2.87
	P	0.00	0.18	0.05

**Table 12: Dismissal and Founder-CEOs**

Dismissal	CEO is Founder or Family Member		
	No	Yes	Total
No	534	68	602
Yes	33	0	33
Total	567	68	635

Note: Pearson  $\chi^2(1) = 4.17$ ;  $p=0.041$

**Table 13: GLS Regressions estimating the impact of market based performance and ownership on the length of CEO tenure**

Variable	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)	(5)	(6)	(7)	(8)
Constant	-7.78*** (0.67)	-6.33*** (3.14)	-7.90*** (0.75)	-6.29*** (3.20)	-8.03*** (0.71)	-5.63* (3.05)	-7.19*** (0.80)	-2.67 (2.62)	-5.85*** (0.73)	-5.13*** (0.83)	-6.26*** (0.75)	-4.35*** (0.81)
Tenure Lag	0.04*** (0.01)	-1.33** (0.07)	0.04*** (0.01)	-0.12* (0.70)	0.05*** (0.17)	-0.11 (0.08)	0.05*** (0.00)	-0.16** (0.08)	0.03*** (0.01)	0.03*** (0.01)	-0.04*** (0.01)	-0.04*** (0.07)
Return Index	0.64*** (0.17)	-1.06*** (0.46)	0.73*** (0.17)	-1.00*** (0.47)	0.67*** (0.18)	-1.49*** (0.54)	0.50*** (0.16)	-1.42*** (0.54)	-0.04 (0.09)	-0.02 (0.09)	-0.06 (0.01)	-0.04 (0.07)
Blockholder			-0.24 (0.29)	0.40* (0.66)						-0.54* (0.33)		
Largest Blockholder Size					-0.00 (0.00)	0.03*** (0.01)					-0.00 (0.00)	
Largest Blockholder: Family							-1.27*** (0.19)	-0.30 (1.01)				-1.07*** (0.23)
Largest Blockholder: Institution							-0.64*** (0.18)	-1.50* (1.13)				-0.97*** (0.23)
Largest Blockholder: Company Founder							-0.56*** (0.23)	-2.00*** (1.36)				-0.89*** (0.27)
Founder x Blockholder									4.58*** (0.42)	3.48*** (1.44)	1.87*** (0.62)	2.47*** (1.13)
Founder x Size Blockh.										1.22 (1.51)		
Founder x Family											0.01*** (0.01)	
Founder x Institution												4.07*** (1.20)
Founder x Company												0.32 (1.44)
Outsider	0.28 (0.18)	-2.20*** (1.11)	0.28 (0.18)	-2.29*** (1.08)	0.32* (0.18)	-0.61 (0.97)	0.14 (0.20)	-0.30 (0.77)	0.51*** (0.18)	0.49*** (0.19)	0.49*** (0.18)	0.30 (0.19)
Board Duality	0.62*** (0.28)	13.34*** (0.67)	0.72*** (0.28)	13.16*** (0.70)	0.70*** (0.29)	13.24*** (0.63)	0.27 (0.30)	12.61*** (0.60)	2.41*** (0.34)	2.50*** (0.35)	2.42*** (0.34)	2.26*** (0.36)

Logsales	-0.51*** (0.50)	-2.90*** (0.13)	-0.51*** (0.05)	-2.92*** (0.14)	-0.50*** (0.05)	-2.75*** (0.12)	-0.52*** (0.05)	-2.83*** (0.12)	-0.61*** (0.05)	-0.63*** (0.06)	-0.54*** (0.06)	-0.60*** (0.05)
SICcode	0.00*** (0.00)	-0.00*** (0.00)	0.00*** (0.00)	0.00*** (0.00)	0.00*** (0.00)	-0.00*** (0.00)	0.00*** (0.00)	0.00*** (0.00)	0.00*** (0.00)	0.00*** (0.00)	0.00*** (0.00)	0.00*** (0.00)
age	0.25*** (0.01)	0.70*** (0.05)	0.24*** (0.01)	0.71*** (0.05)	0.25*** (0.01)	0.67*** (0.05)	0.25*** (0.01)	0.69*** (0.04)	0.24*** (0.01)	0.24*** (0.14)	0.24*** (0.01)	0.23*** (0.01)
Number of Observations	473	61	473	61	473	61	473	61	534	534	534	534
Chi <sup>2</sup>	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***

\*\*\*: p<0.01; \*\*: p>0.05; \*: p<0.1; standard errors in parentheses.

Note: in models “a” the CEO is not the founder; in models “b” the CEO is the founder. The base category is: no turnover.

**Figure 1: CEO Dismissal, Performance and Institutional Investor Presence**

