The Effect of Ownership Structures on Managerial Disciplinary Mechanisms after Privatization in Slovakia

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Abstract:

In established market economies, firm performance has typically a strong effect on the CEO's tenure in the firm, which suggests effectiveness of the internal governance structures. This paper analyzes CEO turnover and its sensitivity to poor firm performance after privatization in a transition country. Using data over 1995-98 on state-owned enterprises privatized in the large-scale privatization in Slovakia, the analysis shows that poor profitability is indeed associated with higher CEO turnover suggesting that the transfer of ownership from state to private hands had enhancing effect on the effectiveness of the internal monitoring efforts. In contrast, a market performance measure does not perform such a disciplining role. The second important finding is that concentration and nature of ownership as well as changes of major blockholders have also important impact on both CEO turnover and its sensitivity to poor firm performance.

Keywords: Corporate Governance, Management Turnover, Privatization

JEL Classification Numbers: G30, G34, J40

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1 Introduction

"Few of the tasks which good corporate governance consist of, like strategy development or control, are visible to non-insiders to the corporation. Minutes of board or committee meetings or the outcome of shareholder-management meetings are not disclosed. Hence, one of the few occasions to study corporate control actions (or the lack of them) is poor performance or a financial crisis." (Renneboog, 2000, p.1962)

This paper analyzes poor firm performance and its association with changes at the top executive levels after large-scale privatization in Slovakia and, thus, assesses the effectiveness of internal governance systems of the privatized firms. Several recent studies show that, for established market economies, top management turnover is sensitive to poor past performance (both stock return and accounting profitability) and that internal governance systems are effective in monitoring and disciplining poorly performing managers. This paper investigates the question of whether internal governance of state-owned firms improves after their privatization. In some sense, the large-scale privatization in the transition countries of Central and Eastern Europe brought about a natural experiment. With privatization effecting a significant fraction of the national economy and with companies in very bad shape requiring immense restructuring and reorganization, this privatization experiment tests whether private ownership indeed leads to the bottom line of better governance of firms. The situation is even more interesting due to the weak rule of law and lack of its enforcement leading to large potential gains from looting and tunneling. Thus, the new private owners face an interesting dilemma: they choose between (i) costly monitoring and supervision with the prospect of high potential gains due to restructuring and new viable businesses and (ii) looting and redirecting the company resources for private benefits. This analysis shows quite optimistic results that privatization in Slovakia resulted in quite viable and functioning internal governance that disciplines poorly performing management. And, thus, the results suggest that the incentives for monitoring are higher relative to the potential for looting and tunneling.

In addition, the second contribution of the paper is the analysis of the impact of ownership structure on the internal monitoring efforts. The somewhat traditional hypotheses of the effect of concentration and nature of ownership get a new dimension in the turbulent setting of a transition economy. The quest for immense restructuring and weak law enforcement make the analysis more interesting because, on the one hand, ownership concentration may be of higher importance and, on the other hand, different types of owners may function differently in this environment. Moreover, as the large-scale privatization in Czechoslovakia was often widely criticized that the immediate post-

privatization owners were not suitable for the difficult and indisputable quest of restructuring, this paper investigates the lively post-privatization market for share blocks and its association with poor firms performance and improved effectiveness of internal monitoring and governance.

The conclusions of this second part of the analysis are threefold. First, ownership concentration seems to be important for the probability of the top management turnover. However, the results indicate that for the sensitivity of management turnover to poor firm performance, contest of control between the major and the remaining blockholders is more important. Too much power in the hands of the major blockholder results in significant but unfocussed monitoring in the sense that management turnover is high but is not concentrated in the poorly performing firms. Higher concentration of the remaining blocks is associated with both high average management turnover and high sensitivity of turnover to poor past performance. Second, the analysis suggests that post-privatization block transfers are quite effective governance tools as they are followed by increased management turnover and management turnover is then significantly more sensitive to performance. Third, also nature of ownership affects the effectiveness of the internal monitoring efforts. The findings suggest that insider block ownership partially insulates top executives from internal monitoring efforts. This is because insider ownership significantly decreases the average management turnover and, importantly, also the sensitivity of management turnover to firm performance. The results also suggest that management turnover in state-dominated firms is strongly politically motivated. Outside ownership (especially by other firms, individuals unrelated to management and Investment Privatization Funds), in turn, is the most focused and significant concerning effectiveness of the monitoring efforts.

The remainder of the paper is organized as follows. The next section discuses the existing theoretical and empirical literature and derives the hypotheses. Section 3 briefly describes the privatization process in Slovakia and introduces the data. Section 4 presents the results and Section 5 concludes.

2 Existing literature and hypotheses building

This section investigates the relation between top management turnover and past firm performance. As this paper analyzes the effectiveness of the internal governance systems in Slovak firms after they were privatized, a special attention is paid to the effect of privatization on the sensitivity of the CEO turnover to past firm performance. Moreover, the following sections discus how ownership concentration, contest of control between major and minor shareholders, nature of ownership, and market in large share stakes affect the CEO-turnover/performance relationship.

2.1 Basic hypothesis

Successful governance systems should penalize managers of poorly performing firms (Coffee, 1999). Therefore, analysis of top executive turnover and of the sensitivity of top management turnover to firm performance can help to assess the effectiveness of internal corporate governance systems. A vast body of empirical literature confirms that top executive turnover is indeed sensitive to poor performance and that internal corporate governance systems are quite effective in disciplining poorly performing managers. This is so in established publicly traded firms across different market economies.[1] Nevertheless, governance systems of state-owned enterprises seem to be less effective compared to private firms as managers of state-owned firms are not fired when performing poorly (see, for example, Cragg and Dyck, 1999, for evidence on UK publicly owned firms). Moreover, Cragg and Dyck (1999) show that the sensitivity of top management turnover to firm performance significantly increases following privatization, thus, indicating that the internal governance systems function better under the private ownership. Theoretical models assign this relatively poor governance of state ownership to the lack of high-powered incentives and proper monitoring of managers (Vickers and Yarrow, 1988, and Demsetz, 1988). Private shareholders who are residual claimants to firm profits, in contrast, monitor the managers, keep them accountable and link their tenure to firm performance. An alternative explanation (Shleifer and Vishny, 1994, Shapiro and Willing, 1995) maintains that politicians' use of the public enterprises to pursue political goals results in excessive employment, poor choices of product and location, lack of investment and ill-defined incentives for managers. Moreover, several empirical papers document (for review see Megginson and Netter, 2001) that firm performance increases after privatization.

Privatization was expected to improve firm performance and introduce sound internal corporate governance systems also in transition countries in Central and Eastern Europe. Under socialism, managers were appointed according to political loyalty and their ability to meet the plan, not necessarily according to their ability to efficient production levels and profitability. Incentives were generally ill-specified. The transition reforms were introduced to change the economic environment, to bring in forces for profit maximization and effort extraction. Several empirical papers investigate the effect of privatization in transition on subsequent firm performance.[2] In general, they show that privatization per se is not enough to secure improved performance.

[1] Starting with the US, see Warner et al. (1988) and Weisbach (1988); on UK see Franks et al. (2001), on Germany Kaplan (1994b) and Franks and Mayer (2001), on Belgium Renneboog (2000), on the Netherlands Danisevska et al. (2003) and on Japan Kaplan (1994a).

[2] See, for example, Frydman et al. (1999), Estrin and Wright (1999) and Djankov and Murrell (2002).

Privatization to insiders leads to managerial entrenchment and, therefore, privatization alone is not a guarantee of improved governance and performance.

Even though top management replacements are found to increase future firm performance (Barberis et al., 1996, Claessens and Djankov, 1999), the empirical evidence on the sensitivity of top management turnover to past firm performance in the transition context is somewhat limited and inconclusive. Warzynski (2003) shows that the management-change/firm performance relationship is stronger in privatized than in state-owned firms in Ukraine. Also, Firth et al. (2002) show that low profitability is a strong predictor of managerial turnover in Chinese listed firms. In contrast, Fidrmuc and Fidrmuc (2004) document that the relationship is insignificant for the privatized Czech firms. Thus, it is interesting to see whether privatization in Slovakia resulted in properly functioning internal governance systems that discipline poorly performing managers. The basic hypothesis to be tested in this paper is the following.

Hypothesis 1: *For privatized companies, CEO turnover is negatively related to performance.*

2.2 Ownership concentration and contest of control

In this section, I derive testable hypotheses that concern the ownership-concentration effect on this relationship. Ownership concentration of the privatized Slovak companies is high and is comparable to other continental European economies (see Section 3.2). The large concentrated owners may play an important role in the governance of their firms and may have important effect on the CEO-turnover/performance relationship.

There is extensive literature on the role of concentrated ownership and its association with firm value. Large blockholders procure benefits but are also costly. They may be beneficial for firm value as they help to mitigate the free-rider problems of corporate control associated with dispersed ownership (Shleifer and Vishny, 1986) and monitor the management (Maug, 1998, and Admati et al., 1994). On the cost side, Bebchuk (1999) suggests that in countries with high concentration of ownership, private benefits tend to be large. These theoretical predictions may affect the basic hypothesis. If concentrated ownership mitigates the free-rider problems and provides better monitoring, one can expect higher sensitivity between managerial change and past firm performance in firms with more concentrated owners. If large blockholders withhold excessive private benefits, then the reverse will hold.

Both monitoring by concentrated blockholders (the benefits) and high private benefits to large blockholders (the costs) may be very important in a transition economy. On the monitoring side, the inherited inefficiencies of the former state-owned enterprises call for deep restructuring that

requires high managerial effort and skills. Therefore, monitoring by private owners is of high value. On the cost side, as underdeveloped legal environment and poor law enforcement provide scope for looting and tunneling, the private benefits to major blockholders may be enormous. Thus, the trade-off between benefits and costs of concentrated ownership in this setting is a very interesting issue that can only be resolved in an empirical test. Nevertheless, my null hypothesis favors the monitoring effect and postulates that ownership concentration has a positive effect on the effectiveness of the internal governance systems.[3]

Empirical evidence on the effect of ownership concentration so far is mixed. Moreover, comparisons should account for institutional differences across different countries that result in different prevailing ownership and control patterns, especially between the US and UK versus continental Europe. For the US, Denis et al. (1997) show that the probability of top executive turnover and the sensitivity of turnover to performance are higher when firms have outside blockholders than when they are widely held. In contrast, Franks et al. (2001) reject such a hypothesis for the UK. The results are also mixed for the more concentrated continental economies. Renneboog (2000), for Belgium, shows that top managerial turnover is positively associated with ownership concentration. However, the sensitivity of turnover to performance is higher only for certain ownership types. In Italy, as Volpin (2002) shows, large blockholders with at least 50-percent cash-flow rights enhance the sensitivity of turnover to performance. In contrast, the concentration hypothesis is not supported by Franks and Mayer (2001) for Germany, nor by Danisevska et al. (2003) for the Netherlands.[4]

Hypothesis 2: *High ownership concentration is positively associated with CEO turnover. Moreover, ownership concentration has strengthening effect on the sensitivity of CEO turnover to performance.*

The above hypothesis considers total concentration of ownership. However, Bloch and Hege (2001) show that control power is determined not just by ownership concentration, but also by the

[3] Due to lack of information on ultimate control (voting pacts and pyramidal structures), which is not required to be disclosed in Slovakia, I concentrate on direct voting and cash-flow rights. Still, cash-flow rights play a very important motivational tool: the higher the fraction of cash-flow rights to a blockholder, the higher his incentive to monitor the management. Private benefits extraction is, however, more probable when control benefits are high and cash-flow rights are low. This is less probable in situations where direct cash-flow rights are highly concentrated, as in the case of Slovakia. Panel A of Table 2 reports that the average major blockholder holds as much as 44 percent of shares. Moreover, as cash-flow rights are usually smaller than ultimate control rights, finding support for my hypothesis is less probable.

[4] The effect of insider versus outsider ownership is discussed in the next section.

contestability of the major blockholder's position. Their model shows that the presence of multiple blockholders creates competition of control and, thus, reduces the capacity to extract private benefits. Also Gomes and Novaes (2001) and Bennedsen and Wolfenzon (2000) suggest that the presence of multiple shareholders imposes limits on the extraction of private benefits. This suggests that executive turnover may be more sensitive to performance if the major blockholder does not have absolute control over the company and is monitored by a significant minority blockholder or a group of minority blockholders. Volpin (2002) partially supports this hypothesis by showing that executive turnover is more sensitive to performance in the presence of voting syndicates (explicit agreements to vote together) between major and minor shareholders.

Hypothesis 3: *Ownership concentration of both the major blockholder and minor blockholders is positively associated with CEO turnover. Contest of control between the major blockholder and the minor blockholders has strengthening effect on the sensitivity of CEO turnover to performance.*

2.3 Market for share stakes

The above two hypotheses discus the effect of ownership concentration on CEO change and its sensitivity to performance. Now, I consider changes in shareholdings. The theoretical model of Burkart et al. (1997) proposes that equity ownership confers state contingent control. In the states of world with poor firm performance, shareholders grab control and closely monitor their firms, whereas in the states of world with adequate performance, shareholders choose not to monitor and leave managers in control because monitoring is then too costly. This may mean that when performance is poor, shareholders without a distinct interest in monitoring sell their stakes, while those with strong monitoring abilities step in and enforce control (Renneboog, 2000). If the changes in shareholdings are associated with poor performance and more monitoring, then there should be higher CEO turnover in poorly performing firms with changes in ownership. The empirical evidence mostly supports this notion. Renneboog (2000) shows for Belgium that increase of stake or acquisition of a new stake by industrial companies or families is associated with an increase in executive board turnover and the sensitivity of turnover to performance. Similarly, Barclay and Holderness (1991) for the US and Franks et al. (2001) for the UK and Volpin (2002) for Italy find increase in management turnover following block trades. However, only Volpin (2002) finds increased sensitivity of management turnover to performance following block trades. Moreover, Franks and Mayer (2001) do not find any significant relationship between management turnover (and performance) and sales of share stakes for Germany.

Since Slovak firms typically have a strong major blockholder, a change of the major blockholder is a simple proxy for changed external governance forces and should be associated with changes at the top managerial positions, especially in poorly performing firms. Moreover, the voucher privatization in Slovakia resulted in ownership structures with shareholders that were criticized for not being suitable for the necessary quest of restructuring (especially the Investment Privatization Funds). The market for large share stakes has been substantial since the privatization. Therefore, changes in shareholdings are expected to bring in new owners that are willing and able to force firm restructuring. Thus, I propose that major blockholder changes are associated with stronger internal governance mechanisms and increase in CEO turnover.

Hypothesis 4: *CEO turnover and its sensitivity to performance are higher following changes of the major blockholder.*

2.4 Nature of ownership

The incentives to monitor and correct managerial failure depend not only on the concentration of ownership but also on its nature (type of blockholder). The distinction between different blockholders is important because some may be passive in the face of poor performance while others are active (Franks and Mayer, 2001, Franks et al., 2001). Different classes of owners may value control differently as they have different abilities to extract control rents (Barclay and Holderness, 1991), different incentives to monitor their firms (Maug, 1998, Admati et al., 1994) or have different knowledge about the business environment and industry (Franks et al., 2001). Moreover, it seems to be essential to distinguish between inside versus outside ownership as insiders may use control to entrench themselves against the interest of the other shareholders. Denis et al., (1997) for the US and Volpin (2002) for Italy show that the probability of top executive turnover and its sensitivity to performance is negatively correlated with the ownership stake by officers/executives.

Hypothesis 5: *CEO turnover and its sensitivity to performance depend on the nature of ownership. Due to entrenchment, insider ownership is associated with lower sensitivity of CEO turnover to performance compared to outside ownership.*

Most empirical studies tend to distinguish between three categories of outside blockholders: corporations, institutional investors, and individuals or families unrelated to the management. Institutional shareholders are often regarded as passive and industrial companies and individuals/families as active. Corporate investors may have more knowledge about the industry than other investors and individuals may have more incentive to intervene as principals rather than

agents (Franks et al., 2001). In general, the empirical evidence is not very supportive of this hypothesis. Usually, empirical papers across different countries find little difference in nature of ownership.[5] Nevertheless, Renneboog (2000) finds some evidence that higher concentration of control by industrial companies and families is associated with higher management turnover and industrial companies increase the probability of top management change when stock returns are low. Also, Denis et al. (1997) for the US and Kang and Shivdasani (1995) for Japan show that the presence of outsiders strengthens the performance-turnover relationship. Nevertheless the familiarity of industrial companies with the industry specificities and individuals' incentives to intervene as principals rather than agents may play a somewhat stronger role in the transition period in Slovakia studied in this paper.

Hypothesis 6: *Outside ownership by industrial companies and individuals unrelated to the management is associated with the highest CEO turnover and also the highest sensitivity of CEO turnover to performance.*

In Slovakia with ongoing privatization, state is still an important blockholder. The empirical evidence for Italy (Volpin, 2002) shows that state ownership increases management turnover but does not affect the turnover/performance sensitivity. In Ukraine, state-owned firms (as opposed to privatized firms) have more management chages, however, the state-owned firms show significantly lower sensitivity of turnover to performance (Warzynski, 2003). This indicates political motivation (as opposed to efficiency) of the management turnover in state-owned firms.

Hypothesis 7: *State ownership is associated with high CEO turnover but low sensitivity of CEO turnover to performance.*

3 Data

This section describes the data set. First, however, I describe the privatization program in Slovakia as it has important implications on the players involved in corporate governance structures of the privatized firms and on the business environment in which the firms operate.

[5] See Franks et al. (2001) for the UK, Volpin (2002) for Italy, Danisevska et al. (2003) for the Netherlands, Franks and Mayer (2001) for Germany.

3.1 Privatization in Slovakia

Privatization was initiated in the early 1990s while Slovakia was still a part of the former Czechoslovakia. The privatization program rested on three pillars - restitution of assets to their original owners, small-scale privatization (predominantly shops and restaurants) and large-scale privatization - and utilized a combination of standard and non-standard methods. After the break-up of Czechoslovakia, large-scale privatization evolved in different directions in the two successor countries. Slovakia abandoned voucher privatization in favor of noncompetitive direct sales.

Restitution, a non-standard method, was to 'make up for the wrong-doings of the previous regime with regard to the unlawful and/or immoral nationalization and confiscation of private property'.[6] The property was to be returned in kind, or by providing financial compensation (in cases when the original property no longer existed). Small-scale privatization, which started as early as December 1990, facilitated the privatization of small premises such as shops, restaurants, service outlets, small workshops, and occasionally, small production enterprises. Public auction, a standard competitive method, was the only method used to privatize around 9 thousand small businesses with proceeds of some SKK 14 billion.[7]

Medium-sized and large enterprises were privatized within the large-scale privatization. This program involved most of the property being privatized (in terms of value), though the number of privatized units is comparable to small-scale privatization. Large-scale privatization allowed for a broad spectrum of standard as well as non-standard methods. Czechoslovakia became famous for its voucher privatization, the dominant non-standard method. Another non-standard method involved free transfer of property to municipalities or to the original owners within restitution. Nonetheless, a relatively large amount of property was transferred using standard methods: auctions, public tenders or direct sales.

The large-scale privatization was divided into two waves. The split of Czechoslovakia in January 1993 caused that only the first wave of large-scale privatization (and of voucher privatization) was implemented still within Czechoslovakia. The program continued fairly smoothly in the Czech part of the former federation with the second wave of voucher privatization executed during 1993-94. In contrast, in Slovakia, the process turned out to be quite complicated with some dramatic turns and setbacks that closely followed political developments and changes of government. The second wave, implemented after the break-up, was associated with a lack of

[6] This is the official government's line of reasoning.

[7] For more information see Fidrmuc et al. (2002).

transparency, abolition of the voucher method, and privatization deals benefiting close supporters of the leading political party.[8] Noncompetitive direct sales to a predetermined buyer (often at a very low price) was by far the most frequently used method, accounting for 83% of the property that was privatized, compared to only 9% using other standard and more transparent and competitive methods (Fidrmuc et al., 2002). Overall, the privatization process became extremely politicized and corrupt.

Still, around 78 percent of property in the first wave was privatized using vouchers. Voucher privatization was intended as a fast, efficient and morally just method of introducing private ownership into the economy. The basic idea of this unprecedented privatization method was to provide the population with virtual investment capital, and, at the same time, compensate them for the wrongdoings of communism. Every citizen above the age of 18 was eligible to obtain the *voucher book* for a small administrative fee and bid his vouchers for shares of firms in offer. Moreover, he had an option to entrust his/her shares to Investment Privatization Funds (IPFs, a special type of mutual funds that were a byproduct of the voucher privatization) that then exchanged the vouchers for shares. IPFs were entrusted to invest 70.5% of the investment points in Slovakia. The IPFs were regarded as neither the optimal nor final owners because of their lack of access to finance for restructuring and inadequate expertise (Carlin and Aghion, 1996). Therefore additional reshuffling of ownership was said to be desirable (Coffee, 1996). The next section documents that this was indeed the case.

3.2 Sample

The data were purchased from RM System Slovakia. The sample consists of 740 non-financial former state-owned enterprises privatized in Slovakia via the large-scale program for which accounting, ownership and board-of-directors composition data were available over 1993-98. The basic descriptive statistics for the data covering the period from 1993 until 1998 are presented in Table 1. For the average firm in our sample, the total book value of assets amounts to SKK 817 million (approximately 20 million Euro). This indicates that the sample represents the biggest firms in Slovakia. Over the studied period, the sample firms do not grow in size – their total assets remain relatively stable.

Profitability of the firms seems to be somewhat poor. The average net profit/loss per is SKK –4.5 million per firm. The yearly averages show that the net company result deteriorates over time from a profit of SKK 9.3 million in 1993 to a loss of SKK –38.1 million in 1998. On average, the

[8] For a detailed description of the second wave, see Olsson (1999).

firms are in red over the period since 1996 till 1998. The median net profit/loss is more stable and closer to zero. Nevertheless, it is also negative over 1995-98 indicating that more than a half of the firms finished in red. A similar trend is documented by the relative performance measures – return on assets (ROA) and operational return on assets.[9] Again, the average ROA deteriorates dramatically (from1.8 percent in 1993 to –2.8 percent in 1998) even though the median firm keeps a quite stable return around 1 percent of total assets. Operational ROA is even lower. The average values are negative over the whole sample period and drop from –2.4 percent in 1993 to –9.3 percent in 1998. The median values show a similar trend.

Table 1 about here.

Even though all these companies are traded at least on the RM System (the over the counter market), their shares are not very liquid. On average, only 23% of shares outstanding per year change their owners. Nevertheless, I use share prices as a performance indicator that reflects the market value of the firms (at least to the atomistic shareholders). The stock price dynamics are somewhat strange. The average (and median) stock price peaks in 1996 and it almost doubles in magnitude compared to 1993. The stock prices increased despite the steady decline in profits and returns on assets. The price-earnings ratio (the average as well as the standard deviation) surged in 1996-97 and then suddenly dropped dramatically in 1998. The median price-earnings ratio also drops from 0.08 percent of profit in 1997 to 0.04 percent in 1998. Market-to-book ratio, another market value measure, increases over the studied period with a slight decline at 1998.

Data concerning top management turnover are available only over the period from 1996 until 1998. Unfortunately, the data set does not provide information on the reasons for the CEO's departure. Therefore, while I can observe changes of the chief executive director, I do not know whether the previous director was dismissed or whether he/she left for other reasons (such as health problems, retirement or death). Yet, as the descriptive statistics discussed in greater detail below show, changes within the top management are so frequent that health and demographics could only account for a small fraction of them.[10] Moreover, including management change that is not forced should only weaken the results. So, in case the results suggest a significant association between past

[9] Return on assets (operational return on assets) is defined as final profit/loss (operational profit/loss) over total book value of assets.

[10] It is also not very probable that these high replacement rates were a consequence of low turnover in the pre-privatization period. In fact, Claessens and Djankov (1999) report that at least 50 percent of voucher-privatized firms in their sample replaced their managing director already in the pre-privatization period.

performance and CEO turnover, a conclusion for presence of effective internal governance should be on the safe side.

The last entry in Table 1 shows the frequency of changes at the post of the CEO (usually denoted as the general director). Compared to the available estimates of 10 percent - 12 percent for U.S. firms (Kaplan, 1994a) and 12 percent for the U.K. (Cragg and Dyck, 1999), the average CEO turnover of 19 percent is quite substantial. It ranges from 25 percent in 1996 to 15 percent in 1998. Similarly high managerial turnover is reported for newly privatized firms in the U.K. (15.4 percent per year according to Cragg and Dyck, 1999) and for East German privatized companies (around 20 percent per year, Dyck, 1997).

Table 2 provides basic information concerning ownership structure of the sample firms. The data set gives information concerning direct ownership stakes that represent five and more percent of a given share issue. Some adjustments were necessary as some companies have more than one share issue outstanding. Panel A shows that ownership is, in general, very concentrated. The major blockholder owns on average as much as 44 percent of outstanding ordinary shares. Moreover, around 25 percent of the major blockholders control more than 50 percent of their firms' shares. The second largest owner holds on average 18 percent of the shares. All blockholders with stakes of at least five percent control on average 70 percent of firms. The trend suggests still increasing concentration of ownership.

Table 2 about here.

In Panel B, I distinguish six types of the major blockholder: government, IPFs, industrial companies, individuals unrelated to management, insiders and financial institutions (e.g. pension funds, regular mutual funds, and foreign investment companies). In 1995, industrial companies were the most common major blockholders (40 percent), while state was still quite prevailing (22 percent), followed by IPFs (17 percent), individuals (8 percent), financial institutions (7 percent) and insiders (6 percent). Distribution among the ownership types changes over time. Three trends are prevailing. First, state ownership declines, which is not surprising given the ongoing privatization activities over the studied period. In 1998, only 2 percent of firms in our sample have the government as the major blockholder. Second, ownership by IPFs declines dramatically in 1996. Since then, IPFs are the major boolckholder in only 3 percent of firms. At the same time, ownership by (other) financial institutions increases in the same year. This reflects the fact that many IPFs were formally transformed into regular investment companies in order to overcome stricter regulation of IPFs. Third, industrial companies and insiders become the most frequent major blockholders (69 and 12 percent, respectively). This is probably a result of ownership

reconciliations after the voucher privatization and also a result of changes in the government policy concerning privatization that favored direct sales.

The second part of Panel B in Table 2 shows the size of the major ownership blocks by type of owner. The government has the most concentrated major blocks with the average not falling below 50 percent. Industrial companies also like to concentrate control: their average major stake increases from 24 percent in 1995 to 54 percent in 1998. Note that industrial companies are also the most frequent major blockholder. Individuals unrelated to management and insiders hold on average 33 and 28 percent of shares, respectively, and their ownership stakes do not change much over time. Financial institutions hold quite large blocks and the size of their block increases from 28 percent in 1995 to 40 percent in 1998. When IPFs are the major blockholder, their stake is the smallest. This reflects the regulation. Each group of IPFs founded by the same parent company cannot hold more than 40 percent of shares in the same firm.

Panel C of Table 2 shows the statistics for all reported direct blocks (above 5 percent). Over time, ownership of the firms is changing very dramatically. This indicates that privatization did not result in an optimal control structure and, over time, new investors have emerged who may be more suited owners for the former state-owned firms in need of restructuring. Industrial companies turn to be the most common blockholders. They are present in 59 percent of firms in 1995. In 1998, they do not own at least 5 percent in only 15 percent of firms. Moreover, their stakes are large: on average they own as much as 51 percent of shares. Individuals unrelated to management and insiders also increase their presence as important blockholders in the privatized firms. Individuals unrelated to management are present in 9 percent of firms in 1995 and in 18 percent of firms in 1998. The size of their blocks increases slightly from 28 to 30 percent. Comparing Panel C to Panel B, one sees that even though individuals unrelated to management are not very often the major blockholders, they are frequently present in the firms as minority blockholders. Insiders increase their presence form 13 percent of firms in 1995 to 16 percent of firms in 1998. Their conditional combined stake increases from 33 percent in 1995 to as much as 45 percent in 1998. The importance of IPFs decreases: in 1995, they are still present in 52 percent of firms, whereas in 1998, it is only 19 percent. Their average block size also decreases. With an average block of only 15 percent, they are the ownership type with the smallest blocks in 1998. Financial institutions slightly increase their participation and size of the blocks. On average, they own 23 percent of shares in 22 percent of firms. Government decreases its share stakes. In 1995, the state still holds a significant stake of 47 percent in 40 percent of firms. This falls to 41 percent in 8 percent of firms in 1998.

Thus, privatization leads to lower state involvement. However, when the state stays involved, the share block is very large to ensure control.

4 Results

4.1 CEO turnover and past firm performance

The first hypothesis examines the relationship between CEO turnover and past firm performance. Significant negative relationship between the probability of CEO change and past firm performance would point toward the effectiveness of the internal corporate governance systems by showing that the top managers of the privatized Slovak firms are disciplined for poor firm performance by termination of their contracts. To provide some intuition for the relationship, Panel A of Table 3 tabulates the frequency of CEO turnover across quartiles of four performance measures: return on assets (ROA), operational ROA, stock return, and market-to-book ratio. The results indicate strong negative correlation between the frequency of managerial change and the two profitability measures (ROA and operational ROA). For ROA, the probability that a manager is replaced increases from 16 percent to 25.8 percent as a firm moves from the best (fourth) to the worst (first) quartile. The difference of 9.8 percent is statistically significant at the one-percent level. Moreover, its economic significance is also noteworthy, especially when compared to regular yearly turnover statistics in established firms in Western economies (10 – 12 percent in the US and 11.8 in the UK).[11] Operational ROA provides similar results: the difference in the CEO-change frequency in the first versus the forth quartile is 11.3 percent and is also significant at the one-percent level. Thus, the results provide confirmation of Hypothesis 1 by showing that the managers of firms in the worst performing quartile have the highest probability of being replaced and this probability decreases with each profitability quartile.

In contrast, stock return and market-to-book ratio (the two market valuation measures) are not correlated with CEO turnover. One explanation may be that the stock based performance measures reflect firm value for atomistic shareholders which may differ from firm value for large blockholders. As it is the large blockholders rather than dispersed atomistic shareholders who have influence on the decision to replace the top management, it is possible that stock market valuation is not an important metric when evaluating managerial qualities. Volpin (2002) who also finds weaker results for stock returns relative to accounting measures of firm performance in Italy argues that

[11] Kaplan (1994a) and Cragg and Dyck (1999), respectively.

stock returns may not be an ideal performance measure for his sample of Italian firms as many stocks suffer lack of liquidity and infrequent trades.

Table 3 about here.

As a next step, I estimate the relationship in a regression setting while controlling for ownership concentration, firm size, industry affiliation and individual firm and time effects. Firm performance is lagged and measured alternatively using ROA and stock return. Panel B of Table 3 shows the regression results and confirms the main findings of the univariate analysis. Model 1 shows that top management turnover is strongly associated with poor profitability. The coefficient for ROA is negative and significant at the one-percent level. This suggests that the new private owners associate firm profitability with managerial qualities and tend to penalize more the managers in firms with inferior profitability. In contrast, the coefficient in Model 2 for stock return is not significant. This indicates (as the univariate results) that stock market performance is not important when deciding about top management replacements. Results for operational ROA and market-to-book ratio are reported in Table A1 in Appendix and confirm these conclusions.

Table 3, Panel B provides interesting results also for the control variables. First, the size effect is positive and significant at fife-percent level showing that larger firms have more CEO changes. More interestingly, however, ownership concentration (measured as total stake of all reported blocks) is positively correlated with CEO turnover in both Model 1 and 2. Replacing the total stake to blockholders with Herfindhal index for ownership concentration earns the same results.[12] Thus, firms with higher concentration of control have higher CEO turnover which partially confirms Hypothesis 2. In Models 3 and 4, I replace the total-stake-to-blockholders variable by two variables. The first variable measures the size of the major block, whereas the second variable captures the size of a combined stake of all remaining blocks. This exercise reveals that both the variables are significantly positively associated with CEO turnover (though the coefficient for the remaining blocks of shares is smaller and significant only at the ten-percent level). So, it is not only the size of the major block of shares, but also presence of the remaining ownership blocks that have enhancing effect on CEO turnover. This indicates that contest of control among blockholders may be important for effective governance of firms and partially confirms Hypothesis 3.

4.2 Concentration of control and CEO turnover

The results in Table 3 show that ownership concentration is associated with higher CEO turnover. This may indicate that owners with higher ownership stakes are more involved in

[12] These results are not reported but are available upon request.

monitoring and have better knowledge about their firms' activities. Table 4 takes this idea further by testing whether concentration of control influences also the sensitivity of CEO turnover to past firm performance (the second part of Hypothesis 2).

Panel A of Table 4 provides results of the univariate analysis.[13] It shows CEO-change frequency across ROA quartiles and across different concentration measures. As seen above in Table 3, CEO turnover is the highest in the lowest ROA quartile and then gradually decreases with the lowest value in the best performing ROA quartile. Now, I am interested whether this relationship changes as concentration of control increases. Therefore, in the first part of Panel A (Table 4), I add quartiles of total concentration (total stake to all blockholders) as another dimension to the ROA quartiles. Thus, the first part of Panel A cross tabulates average values of CEO-change frequency simultaneously across ROA quartiles and quartiles of total concentration of control. The results show that the CEO-change frequency increases as total concentration of control increases from the lowest to the highest quartile (second column). The difference in CEO-change frequency between the lowest and the highest concentration quartile is 8.8 percent and is significant at the one-percent level. This is in line with the regression results in Table 3 where the coefficient for total concentration is positive and significant. Moreover, two general patterns are present in the quartile matrix. First, the CEO-change frequency increases as one moves from the lower to the higher concentration-of-control quartiles and this is so in all columns (ROA quartiles). It shows that firms with higher concentration of control have higher CEO turnover and this is regardless of their profitability. More interesting, however, is the second pattern indicating that the CEO-change frequency decreases from the lowest to the highest ROA quartile and this relationship seems to be stronger as concentration of control increases. The last column of Panel A (Table 4) documents this pattern: the difference in CEO-change frequency between the lowest versus the highest ROA quartile is equal to 8.9 percent (significant at the ten-percent level) in the first concentration-of-control quartile and increases to 13.5 percent (significant at the fife-percent level) in the highest concentration-of-control quartile. In short, the first part of Panel A shows that the relationship between CEO turnover and past firm performance gets stronger as total concentration of control increases and tends to confirm Hypothesis 2.

Table 4 about here.

The rest of Panel A (Table 4) explores the importance of concentration of the major block versus the remaining blocks for the sensitivity of CEO turnover to past firm performance and, thus,

[13] In Table 5, I report only results for ROA. Results for operational ROA are very similar to the results reported in Table 5. Stock return and book-to-market ratio do not provide any interesting patterns.

tests Hypothesis 3. The second part of Panel A investigates the effect of concentration of the major block of shares. It tabulates average CEO-change frequencies for a matrix of ROA quartiles versus low/high concentration of the major share block. It clearly shows that the concentration of control effect is not due to the concentration of the major block. The two groups of low versus high major-block concentration show similar CEO-change frequencies: 18.2 versus 19.8 percent, respectively. The difference of 1.6 percent is not statistically significant.[14] Moreover, CEO turnover is more sensitive to past firm performance when the major blockholder is less concentrated. In this group, CEO-change frequency decreases from 27.7 percent in the first ROA quartile to 13.7 percent in the forth quartile. The difference of 14 percent is statistically significant at the one-percent level. In the high major-block concentration group, the difference in CEO-change frequency between the first and the forth ROA quartile is only 5.3 percent and is not statistically significant. Still, it is important to note that in the high major-block concentration group, CEO turnover is high across all ROA quartiles and that ROA of the two groups is very similar.

The third part of Panel A (Table 4) repeats the exercise for the concentration of the remaining blockholders. It shows that higher concentration of the remaining blocks increases the CEO-change frequency and also the sensitivity of the relationship between CEO turnover and past firm performance. Low concentration of the remaining blocks is associated with lower average ROA and lower CEO turnover. Moreover, the difference between CEO-change frequency in the first ROA quartile versus the forth quartile is only 6.7 percent (significant at the ten-percent level) with low concentration of the remaining blocks, whereas it is 13.4 percent (significant at the one-percent level) with high concentration of the remaining blocks.

The last part of Panel A (Table 4) combines the effect of the major-block concentration with the concentration of the remaining blocks. I form four groups as combinations of major-block versus remaining-blocks concentration: low (major-block concentration) – low (remaining-blocks concentration), low – high, high – low and high – high. CEO turnover is the lowest (only 12.3 percent) in the first group with low concentration of both the major block and of the remaining blocks. ROA is also very low in this group. CEO turnover in the other three groups is significantly higher (relative to the first group) and very similar in magnitude (around 20 percent). Even though these three groups do not differ in the average CEO-changes frequency, the sensitivity of CEO turnover to ROA is the strongest in the group with low major-block concentration and high remaining-blocks concentration, thus, when contest of control is the strongest. This is in line with

[14] The median value of size of the major block is 36.8 percent.

results reported above (for major-block and remaining-blocks concentration separately) and points toward the confirmation of Hypothesis 3.

Panel B of Table 4 confirms the univariate results in a multivariate regression setting. It reports only results for ROA, corresponding results for operational ROA, stock return and book-to-market ratio are shown in Table A1 in Appendix. The basic regression model is adjusted such that ROA is replaced by a set of interaction terms of ROA with concentration of control dummies. The interaction terms, then, measure the CEO-turnover/profitability relationship for different levels of control concentration. In Model 5, ROA is interacted with four dummy variables that represent the four total-concentration quartiles (based on total stake to all blockholders). The 'plain' coefficient for total concentration is positive and highly significant, confirming robustness of the results from Table 3 that higher total concentration is associated with higher CEO turnover. All the interaction terms are negative and three of them are significant at the fife-percent level. The highest is the coefficient in the highest concentration quartile. However, the second part of Hypothesis 2 postulating that the disciplining role of CEO turnover is stronger as concentration of control increases is not fully confirmed as the coefficients do not increase with the quartiles dummies and their differences are not statistically significant.

Models 6 to 8 test Hypothesis 3 concerning the importance of contest of control among blockholders (the relative importance of the major versus the remaining blocks of shares). Model 6 shows the effect of the major-block concentration and confirms the univariate analysis that the CEO-turnover/performance relationship is stronger for firms with smaller major blockholders. The coefficient for the first interaction term is negative, relatively large and significant at the one-percent level. The second interaction term (high major-block concentration) is negative but not significant. Moreover, the difference between the two interaction terms is statistically significant on the ten-percent level. Thus, this again indicates that contest of control may be quite important for the CEO-turnover/performance relationship and also generally for the effectiveness of the internal governance systems. However, one should again note that the CEO-change frequency is very high across all firms with high major-block concentration diminishing the negative essence of this finding. The results of Model 7 also tend to point to the positive effect of the contest of control among blockholders. It shows that higher concentration of the remaining blocks strengthens somewhat the sensitivity of CEO turnover to past firm performance (profitability) as the higher-concentration interaction term is more negative. The difference of 1.1 of the two coefficients is, however, not statistically significant.

Model 8 combines the partitioning of the two previous models into four interaction terms and confirms that the sensitivity of CEO turnover to past firm performance is the strongest when the major blockholder's control is contested by other blockholders. The two of the four interaction terms that are statistically significant (and have the expected sign) are those with smaller major blockholders. Moreover, the CEO-turnover/profitability sensitivity is the strongest when the remaining blockholders are more concentrated and, thus, are able to contest the control of the major blockholder. These results provide strong support for Hypothesis 3. Note also that the overall CEO turnover and the average ROA is very high for this group of firms (see Panel A of Table 3). The coefficient of the first interaction term in Model 8 (low major-block concentration and low remaining-blocks concentration) is also significant, at the ten-percent level. However, the overall CEO turnover and also the average ROA in this group are very low showing less effective governance of these firms. The last two interaction terms with above-median major block are negative but not statistically significant indicating that too much power in hands of the major blockhoder may not be so beneficial for the effectiveness of the internal governance structures. However, the overall CEO turnover is very high in these two groups regardless of profitability and they perform with relatively high ROA. Thus, even though the results do not show that CEO turnover is sensitive to bad performance when the concentration of the major block is high, I cannot conclude that the owners do not care about results of their firms and do not monitor.

Table A2 in Appendix replicates Model 8 with the other performance measures: operational ROA, stock return and book-to-market ratio. Model A5 with operational ROA essentially replicates the results for ROA reported above. Contest of control in firms with low major-block concentration and high concentration of the remaining blocks seems to deliver the highest sensitivity of CEO turnover to past firm performance. Models A6 and A7 confirm that the market-based measures are not associated with CEO turnover.

4.3 Market for share stakes

Table 5 provides results that test Hypothesis 4 postulating that CEO turnover and its sensitivity to past firm performance is higher following changes of the major blockholder. Panel A of Table 5 provides the univariate results. It shows the average CEO-turnover frequencies across ROA quartiles for two groups of firms: firms with versus without change of the major blockholder. The results show strong differences between the two groups of firms. The average CEO-change frequency is 27.2 versus 14.4 percent for firms with versus without major-blockhodler change over the previous year, respectively. The difference of 12.9 percent is significant at the one-percent level.

Importantly, the sensitivity of CEO turnover to ROA is considerably stronger following changes of the major blockholder. In the year following the major blockholder change, CEO turnover is as high as 35.9 percent in the worst ROA compared to 20.4 percent in the best ROA quartile. The difference of 15.5 percent is significant at the one-percent level. In contrast, for firms without a major-blockholder change, the average CEO turnover is 19.7 versus 13.2 percent in the worst versus the best ROA quartile, respectively. The difference of 6.6 percent is significant at the ten-percent level. In short, the CEO turnover is both higher and more sensitive to past performance when the major blockholder changed over the previous year confirming Hypothesis 4. The regression results in Panel B of Table 5 confirm this conclusion. The coefficient for the major-blockholder-change dummy is positive and significant at the one-percent level showing that CEO turnover increases significantly immediately following the major blockholder change. Also, the sensitivity of CEO turnover to ROA is higher (more than doubled) after the change. These results indicate quite convincingly that major-block transfers are associated with increased monitoring and frequent changes in top management, which are more likely in poorly performing firms. This shows that changes of control in form of friendly transfers of major blocks of shares are very effective governance mechanisms and that these post-privatization block transfers bring about owners that are more suitable for restructuring of their firms.

Table 5 about here.

4.4 Nature of ownership

Table 6 reports results that test Hypotheses 5 to 7 concerning nature of ownership. Panel A shows again the average CEO-change frequency across ROA quartiles, now for six different owner types. The first part distinguishes the major blockholder type, the second part takes into account all blockholders. The results show that the nature of ownership is an important determinant of CEO turnover and its sensitivity to past firm performance. First, both parts of Panel A strongly support Hypothesis 5 on entrenchment of insiders. With insider ownership, CEO turnover is the lowest (around 9 percent) and, moreover, it increases as ROA increases. The average CEO-change frequency is just 4.1 percent in the worst ROA quartile. This strongly points to entrenchment of insiders, especially, when performing poorly. Second, Hypothesis 6 is also partially supported. Outside major blockholders are associated with higher CEO turnover relative to insiders with individuals unrelated to management having CEO turnover three times as high as insiders. Sensitivity of CEO turnover to performance seems to be the highest when an IPF is the major blockholder with remarkable 40- and zero-percent turnover in the worst and best ROA quartile,

respectively. Still, major blocks by industrial companies are also associated with significant (at the one-percent level) sensitivity of CEO turnover to ROA. Third, Hypothesis 7 is confirmed. As CEO turnover is very high for major state ownership and CEO turnover is not sensitive to performance, the results indicate that CEO turnover under major state ownership is politically motivated.

Table 6 about here.

The regression results in Panel B of Table 6 lead to similar conclusions. Model 10 maps the effect of the major blockholder type, Model 11 accounts for all blockholders. The basic model is augmented by a set of dummy variables measuring differences in CEO turnover for different owner types (insider ownership is the reference category) and a set of interaction terms of the dummy variables with ROA measuring the differences in sensitivity of CEO turnover to performance. All the dummy variables are positive indicating that CEO turnover of the reference category – major insider ownership – is the lowest.[15] Individuals unrelated to management have the highest coefficient that is significant at the one-percent level. The financial institution dummy is also significant, at the ten-percent level. Sensitivity of CEO turnover to performance is the highest for IPFs (though the coefficient is significant only at the ten-percent level). This is reflection of the fact indicated in Panel A that CEO turnover is very high in poorly performing firms with major IPF ownership and non-existent in well-performing firms. Industrial companies also turn to have negative and highly significant interaction term. The interaction terms for state ownership, individuals unrelated to management, insiders and financial institutions are not significant. In summary, the regression results support Hypothesis 5 as CEO turnover is the lowest when insiders are the major blockholders and, at the same time, it is not sensitive to performance. Also Hypothesis 6 is (at least partially) supported for industrial companies where CEO turnover is strongly and significantly associated with poor performance. In contrast, ownership by individuals unrelated to management is somewhat weak in this respect even though CEO turnover is then, on average, relatively high. Surprisingly, institutional owners – IPFs and financial institutions perform relatively well. The former show high sensitivity of CEO turnover to performance and the latter high average CEO turnover. This is in contrast with findings of other studies for established market economies that usually document low involvement of institutional investors in monitoring. These findings for Slovakia are perhaps a reflection of the generally bad situation in the firms that shows strong need for restructuring and monitoring. Finally, the results show support also for Hypothesis 6: CEO turnover in state dominated firms is high and is not sensitive to performance. Results of Model 11

[15] All firms in the sample have at least one blockholder holding at least 5 percent of shares outstanding.

accounting for all blockholders and their types (as opposed to the major blockholder type in Model 10) are somewhat weaker. Models A8 to A10 in Appendix replicate Model 10 using the other three performance measures. Model A8 with operational ROA shows results that are very similar to Model 10. Models A9 and A10 confirms again that the stock-market based measures are not associated with CEO turnover.

5 Conclusions

In this paper, I address the question whether top managers in large privatized Slovak companies are kept responsible and accountable for performance of firms under their control. Such an analysis explores the effectiveness of internal governance systems of firms after they were privatized. Table 7 provides a summary of the hypothesis and of the main findings. The basic result is encouraging: CEO turnover is sensitive to performance (at least to accounting profitability) documenting that privatization has lead to improved internal governance of firms. Moreover, the results of the paper show that ownership structure and its changes matter for the CEO turnover as well as its sensitivity to poor past performance. The main conclusions are threefold. First, concentration of control seems to increase CEO turnover. However, further analysis shows that contest of control among the blockholders may be a more important determinant of the CEO-turnover sensitivity to performance. In particular, my results show that the sensitivity of CEO turnover to performance is the highest when the major blockholder is smaller and is contested by concentrated remaining blocks of shares. This is, I believe, a very interesting result. Second, market for share stakes turns to be very important for both average level of CEO turnover as well as its sensitivity to past performance. This suggests that the active post-privatization market for share blocks is quite effective in delivering blockholders that are actively involved in monitoring of their firms. Finally, nature of ownership is also important. Insider ownership hinders CEO turnover and results in managerial entrenchment. Outside ownership, especially ownership by other firms, is associated with high sensitivity of CEO turnover to poor past performance. Surprisingly, also ownership by IPFs shows high sensitivity of CEO turnover to performance. Lastly, state ownership is associated with high turnover but low sensitivity of CEO turnover to performance indicating political motivation of the top managerial changes.

In general, the findings of this analysis seem to be somewhat stronger compared to other studies analyzing established market economies. This may indicate that control and governance structures and their changes have more of an effect in a setting with higher net rewards for monitoring and

active involvement of shareholders. Despite of fears that major shareholders would engage in looting and tunneling, these results suggest that the shareholders involve in monitoring.

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TABLE 1: SUMMARY STATISTICS

	1993	1994	1995	1996	1997	1998	total
Total assets (SKK million)							
number of observations	467	515	560	611	640	564	3357
mean	832	790	795	781	820	887	817
median	189	171	157	153	149	149	158
st. deviation	4,101	4,164	4,353	4,853	5,583	6,578	5,062
Profit/loss (SKK thousands)							
number of observations	465	506	559	609	639	563	3341
mean	9,291	6,020	7,237	-2,741	-5,442	-38,112	-4,547
median	319	105	-34	-55	-222	-524	-2
st. deviation	279,607	105,876	221,673	166,596	104,897	478,150	258,160
Return on assets							
number of observations	467	509	559	610	637	564	3346
mean	0.018	0.009	0.003	-0.005	-0.024	-0.028	-0.006
median	0.026	0.016	0.013	0.011	0.010	0.011	0.014
st. deviation	0.098	0.085	0.093	0.113	0.245	0.226	0.163
Operational return on assets							
number of observations	465	506	559	609	639	563	3341
mean	-0.024	-0.022	-0.034	-0.047	-0.066	-0.093	-0.049
median	0.003	0.001	0.000	-0.002	-0.003	-0.005	0.000
st. deviation	0.094	0.084	0.091	0.165	0.311	0.391	0.231
Average price (SKK)							
number of observations	473	532	612	666	726	740	3,749
mean	327	323	661	704	719	467	552
median	194	132	137	219	172	126	159
st. deviation	395	455	4,309	4,135	4,100	1,498	3,136
Price-earnings ratio (in percentage points)							
number of observations	366	436	553	610	635	562	3162
mean	0.13	0.03	0.53	1.79	1.90	0.05	0.85
median	0.12	0.09	0.07	0.08	0.08	0.04	0.07
st. deviation	2.31	5.06	11.04	43.05	40.14	7.78	26.78
Market-to-book value							
number of observations	467	513	560	611	640	564	3355
mean	0.482	0.491	0.578	0.654	0.695	0.661	0.601
median	0.455	0.450	0.527	0.584	0.615	0.572	0.535
st. deviation	0.234	0.276	0.297	0.366	0.685	0.481	0.440
CEO change (in percentage points)							
number of observations				538	490	512	1540
mean				25%	17%	15%	19%
median				0	0	0	0
st. deviation				43%	38%	36%	39%

Note: Return on assets is defined as total profit/loss over total assets. *Operational return on assets* is defined as operational profit/loss over total assets. *Price-earnings ratio* is equal to average price per year over operational profit/loss per share. *Market-to-book ratio* is defined as market capitalization plus book value of debt over total assets.

TABLE 2: OWNERSHIP STRUCTURE

	1995	1996	1997	1998	total
PANEL A: SIZE OF OWNERSHIP BLOCKS					
Major share stake					
number of observations	609	660	719	722	2710
mean	41%	43%	46%	48%	44%
st. deviation	26%	25%	26%	26%	26%
median	30%	34%	41%	43%	37%
Second largest share stake					
number of observations	485	541	576	557	2159
mean	17%	18%	19%	19%	18%
st. deviation	10%	10%	9%	9%	9%
median	15%	15%	17%	18%	16%
Total stake to blockholders					
number of observations	609	660	719	722	2710
mean	65%	69%	72%	73%	70%
st. deviation	23%	22%	21%	21%	22%
median	65%	69%	72%	75%	70%
PANEL B: MAJOR BLOCK BY TYPE OF BLOCKHOLDER					
Frequency by type of the major owner[a]					
government	22.0%	7.6%	3.3%	2.1%	8.2%
ipf	17.2%	3.0%	2.6%	2.8%	6.1%
industrial company	40.1%	61.7%	67.5%	69.4%	60.4%
individual	7.9%	7.9%	7.2%	6.1%	7.2%
insider	6.2%	10.3%	11.5%	11.9%	10.1%
financial institution	6.6%	9.5%	7.8%	7.8%	7.9%
Average block by type of owner [b]					
government	61.3%	66.6%	68.0%	54.3%	62.7%
ipf	22.3%	22.6%	24.5%	23.7%	22.7%
industrial company	24.0%	46.7%	51.1%	53.9%	49.5%
individual	35.1%	32.9%	30.9%	31.7%	32.6%
insider	27.7%	28.8%	27.8%	28.4%	28.2%
financial institution	28.3%	31.2%	39.0%	39.7%	34.9%
PANEL C: ALL BLOCKS BY TYPE OF BLOCKHOLDER					
Frequency by type of blockholder present [c]					
government	40.2%	21.7%	11.8%	7.6%	19.5%
ipf	52.4%	33.8%	24.5%	19.0%	31.5%
industrial company	58.6%	75.8%	82.1%	85.0%	76.1%
individual	9.3%	14.0%	16.9%	17.5%	9.6%
insider	12.8%	15.5%	15.2%	16.0%	9.9%
financial institution	17.4%	26.7%	21.3%	21.2%	21.7%
Average block by type of owner [d]					
government	47.2%	45.5%	45.0%	41.5%	45.8%
ipf	26.8%	16.9%	16.8%	15.1%	20.3%
industrial company	36.5%	48.4%	55.3%	58.1%	51.2%
individual	28.4%	31.0%	31.9%	30.1%	30.4%
insider	32.9%	38.7%	41.3%	45.1%	40.4%
financial institution	19.5%	22.8%	25.3%	24.9%	23.4%

Note: Ipf stands for Investment Privatization Fund. *Financial institution* covers banks and investment companies other than IPFs. [a] shows the fraction of firms with the given type as the major blockholder. [b] shows the conditional average

of the size of the major block. [c] shows the faction of firms with given type of owner present among the nine largest (reported) stakes. [d] indicates the total (cumulative) stake to all blockholders of the given type.

TABLE 3: PERFORMANCE AND PROBABILITY OF MANAGERIAL CHANGE

PANEL A: UNIVARIATE ANALYSIS

Performance measure	average performance	CEO change by performance quartiles				difference 1st –4th quartile
		1st quartile	2nd quartile	3rd quartile	4th quartile	
return on assets	0.0106	25.8%	17.6%	16.8%	16.0%	9.8%***
operational return on assets	-0.0217	26.6%	19.2%	15.3%	15.3%	11.3%***
stock return	-4.61%	17.9%	19.4%	17.7%	20.2%	-2.2%
market-to-book ratio	0.6177	18.4%	19.2%	19.6%	18.9%	-0.5%

PANEL B: REGRESSION RESULTS

	return on assets			stock return		
	coef.	st.e.	sign.	coef.	st.e.	sign.
	Model 1			**Model 2**		
constant	-1.704	0.338	***	-1.559	0.337	***
performance measure (lagged)	-2.118	0.539	***	0.035	0.058	
total concentration	0.636	0.213	***	0.626	0.213	***
size (fixed assets)	0.057	0.026	**	0.044	0.026	*
year dummies	yes			yes		
industry dummies	yes			yes		
chi^2	56.56	***		42.89	***	
number of observations	1495			1497		
number of firms	601			601		
	Model 3			**Model 4**		
constant	-1.907	0.347	***	-1.754	0.345	***
performance measure (lagged)	-2.055	0.541	***	0.033	0.077	
major-block concentration	0.775	0.218	***	0.755	0.218	***
remaining-blocks concentration	0.529	0.290	*	0.511	0.289	*
major-blockholder change	0.449	0.082	***	0.450	0.082	***
size (fixed assets)	0.050	0.026	*	0.037	0.026	
year dummies	yes			yes		
industry dummies	yes			yes		
chi^2	83.94	***		71.04	***	
number of observations	1495			1497		
number of firms	601			601		

Note: Panel A shows the average CEO turnover by quartiles of performance. In Panel B, all models are estimated by probit with random effects. The dependent variable is a binary variable equal to one if managing director changed in the given firm-year. *Return on assets* is defined as net income after interest and taxes over total assets. *Operational return on assets* stands for operational profit over total assets. *Stock return* is the return on stock from January till December in year *t-1*. *Market-to-book ratio* is defined as the sum of market capitalization and book value of debt over the book value of total assets. All the performance measures are as of the beginning of the calendar year and are truncated at the fifth percentile. *Total concentration* is measured as the sum of all reported ownership stakes (over 5%). *Major-block concentration* refers to the size of the major block. *Remaining-blocks concentration* is the sum of all reported ownership stakes minus the major stake. *Major-block change* is set to one if the major blockholder changed within (*t-,1 t*) and zero otherwise. *, **, and *** denotes significance at the 10, 5, and 1 percent level, respectively.

TABLE 4: OWNERSHIP-CONCENTRATION EFFECT

PANEL A: UNIVARIATE ANALYSIS

	average ROA	CEO change	CEO change by ROA quartiles				difference 1st –4th quar.
			1st quartile	2nd quartile	3rd quartile	4th quartile	
Total concentration							
1st quartile	0.0055	13.9%	19.5%	13.8%	10.8%	10.5%	8.9%*
2nd quartile	0.0110	18.2%	24.7%	18.3%	12.4%	16.8%	7.9%
3rd quartile	0.0179	21.1%	30.4%	19.3%	17.9%	18.8%	11.6%*
4th quartile	0.0082	22.8%	30.8%	18.5%	25.2%	17.2%	13.5%**
difference 4th – 1st quar.	0.0027	8.8%***					
Concentration of the major block							
low	0.0104	18.2%	27.7%	18.8%	12.8%	13.7%	14.0%***
high	0.0108	19.8%	23.8%	16.7%	20.7%	18.5%	5.3%
difference high – low	0.0005	1.6%					
Concentration of the remaining blocks							
low	0.0076	17.2%	21.4%	14.2%	17.9%	14.8%	6.7%*
high	0.0132	20.6%	30.4%	20.4%	16.1%	17.1%	13.4%***
difference high – low	0.0057	3.4%*					
Combination major-block/remaining-blocks concentration							
low – low	-0.0001	12.3%	17.6%	7.5%	12.8%	8.2%	9.5%
low – high	0.0142	20.4%	33.1%	22.3%	12.9%	15.4%	17.7%***
high – low	0.0107	19.2%	23.4%	16.3%	20.0%	17.2%	6.3%
high – high	0.0112	20.9%	24.6%	17.3%	21.8%	21.3%	3.2%
difference h-h vs. l-l	0.0112	8.7%***					

PANEL B: REGRESSION RESULTS

	coef.	st.e.	sign	coef.	st.e.	sign	coef.	st.e.	sign	coef.	st.e.	sign
	Model 5			**Model 6**			**Model 7**			**Model 8**		
constant	-1.735	0.340	***	-1.680	0.340	***	-1.698	0.339	***	-1.678	0.340	***
total concentration	0.638	0.214	***									
major-block concentration				0.640	0.214	***	0.631	0.214	***	0.636	0.216	***
remaining-blocks concentration				0.655	0.286	**	0.632	0.285	**	0.651	0.288	**
ROA * tot. concentration quar.1	-2.775	1.231	**									
ROA * tot. concentration quar.2	-1.940	0.990	**									
ROA * tot. concentration quar.3	-1.309	0.936										
ROA * tot. concentration quar.4	-3.086	1.226	**									
ROA * major-block conc. low				-3.026	0.757	***						
ROA * major-block conc. high				-1.158	0.771							
ROA * rem.-blocks conc. low							-1.572	0.751	**			
ROA * rem.-blocks conc. high							-2.667	0.758	**			
ROA * mbc low, rbc low										-2.736	1.501	*
ROA * mbc low, rbc high										-3.123	0.874	***
ROA * mbc high, rbc low										-1.144	0.879	
ROA * mbc high, rbc high										-1.211	1.535	
size (fixed assets)	0.059	0.026	**	0.054	0.026	**	0.057	0.026	**	0.054	0.026	**
year dummies	yes			yes			yes			yes		
industry dummies	yes			yes			yes			yes		
chi^2	57.92	***		58.75	***		57.64	***		58.90	***	

Note: Panel A shows the average CEO turnover by quartiles of performance and different measures of ownership concentration. In Panel B, all models are estimated by probit with random effects. Number of observations is 1495,

number of firms 601. The dependent variable is a binary variable equal to one if managing director changed in the given firm-year. and zero otherwise. *ROA, mbc and rbc* stand for return on assets, major-block concentration and remaining-blocks concentration, respectively. All variables are as defined in Table 3. *, **, and *** denotes significance at the 10, 5, and 1 percent level, respectively.

TABLE 5: EFFECT OF THE MAJOR BLOCKHOLDER CHANGE

PANEL A: UNIVARIATE ANALYSIS

	average ROA	CEO change	CEO change by ROA quartiles				difference 1^{st} –4^{th} quar.
			1^{st} quartile	2^{nd} quartile	3^{rd} quartile	4^{th} quartile	
without change	0.0106	14.4%	19.7%	11.7%	13.0%	13.2%	6.6%*
with change within (t-1,t)	0.0106	27.2%	35.9%	28.8%	24.4%	20.4%	15.5%***
difference with – without	-0.0001	12.9%***					

PANEL B: REGRESSION RESULTS

	coef.	st.e.	sign.
	Model 9		
constant	-1.940	0.347	***
major-block concentration	0.781	0.219	***
remaining-blocks concentration	0.556	0.292	*
major blockholder change	0.458	0.082	***
ROA * without major-blockholder change	-1.269	0.696	*
ROA * with major blockholder change	-3.241	0.864	***
size (fixed assets)	0.052	0.026	**
year dummies	yes		
industry dummies	yes		
chi^2	87.48	***	

Note: Panel A shows the average CEO turnover by quartiles of ROA in two groups of firms: firms without a change of the major blockholder versus firms with a change of the major blockholder over the last year. In Panel B, the model are estimated by probit with random effects. Number of observations is 1495, number of firms 601. *ROA* without major blockholder change* is equal to ROA in all cases when no major blockholder change occurred within (*t-1, t*) and is equal to zero otherwise. *ROA* with major blockholder change* is equal to ROA if the major blockholder changed within (*t-1, t*) and is equal to zero otherwise. All other variables are defined as in Table 3. *, **, and *** denotes significance at the 10, 5, and 1 percent level, respectively.

TABLE 6: NATURE OF OWNERSHIP

PANEL A: UNIVARIATE ANALYSIS

	average ROA	CEO change	CEO change by ROA quartiles				difference
			1st quartile	2nd quartile	3rd quartile	4th quartile	1st –4th quar.
Major blockholder type							
government	0.0012	29.6%	33.3%	20.0%	30.8%	36.4%	-3.0%
ipf	-0.0114	18.2%	40.0%	16.7%	0.0%	0.0%	40.0%**
industrial company	0.0104	18.7%	26.5%	17.9%	15.8%	15.3%	11.2%***
individual	-0.0035	29.0%	32.1%	31.0%	25.0%	25.9%	6.2%
insider	0.0180	9.7%	4.1%	9.3%	13.3%	12.9%	-8.8%*
financial institution	0.0227	25.9%	32.0%	15.4%	30.4%	26.3%	5.7%
Blockholder type							
government	-0.0037	25.6%	31.3%	20.0%	29.3%	20.7%	10.6%
ipf	0.0068	18.6%	25.3%	20.7%	14.3%	14.3%	11.0%*
industrial company	0.0013	19.0%	26.8%	17.7%	16.3%	15.5%	11.3%***
individual	0.0094	22.0%	23.8%	22.7%	20.0%	20.8%	3.0%
insider	0.0184	9.3%	2.6%	11.5%	13.0%	10.4%	-7.9%**
financial institution	0.0137	22.7%	37.3%	19.8%	22.8%	15.2%	22.2%***

PANEL B: REGRESSION RESULTS

	major blockholder			any blockholder		
	coef.	st.e.	sign.	coef.	st.e.	sign.
	Model 10			**Model 11**		
constant	-2.036	0.359	***	-1.952	0.360	***
major-block concentration	0.785	0.230	***	0.900	0.236	***
remaining-blocks concentration	0.521	0.293	*	0.568	0.311	*
major blockholder change	0.437	0.085	***	0.473	0.085	***
owner type (insiders are the reference category)						
government	0.375	0.240		-0.014	0.132	
IPF	0.014	0.348		-0.081	0.097	
industrial company	0.102	0.145		-0.207	0.108	*
individual	0.547	0.186	***	0.191	0.111	*
financial institution	0.330	0.192	*	0.149	0.098	
return on assets by owner type						
ROA * government	0.519	2.672		-0.973	1.644	
ROA * IPF	-7.201	3.979	*	-2.096	1.363	
ROA * industrial company	-2.719	0.716	***	-1.881	0.815	**
ROA * individual	-0.194	1.414		-0.114	1.203	
ROA * insider	-0.496	1.561		-1.027	1.320	
ROA * financial institution	-1.882	1.728		-1.165	1.204	
fixed assets	0.049	0.028	*	0.058	0.028	**
year dummies	yes			yes		
industry dummies	yes			yes		
chi^2	100.70	***		101.46	***	

Note: Panel A shows the average CEO turnover by quartiles of performance and different ownership types. In Panel B, all models are estimated by probit with random effects. Number of observations is 1495, number of firms 601. *Owner type* is a set of dummy variables for a type of the major blockholder in Model 10 and for the presence of a given type of blockholder among the nine major (reported) blockholders in Model 11. Insiders are the reference type. All other variables are defined as in Table 3. *, **, and *** denotes significance at the 10, 5, and 1 percent level, respectively.

TABLE 7: SUMMARY OF FINDINGS

Hypothesis	Expected effect	Result	
		profitability	stock return
H1: past performance is associated with CEO turnover	negative relation	strong effect	no effect
H2: ownership concentration affects CEO turnover	positive	positive	positive
ownership concentration affects CEO-turnover/performance sensitivity	more negative	weak effect	no effect
H3: contest of control affects CEO turnover	positive	positive	positive
contest of control affects CEO-turnover/performance sensitivity	more negative	strong effect	no effect
H4: major-block change affects CEO turnover	positive	positive	positive
major-block change affects CEO-turnover/performance sensitivity	more negative	strong effect	no effect
H5: insider ownership affects CEO turnover	negative	negative	negative
insider ownership affects CEO-turnover/performance sensitivity	less negative	no effect	no effect
H6: outsider ownership affects CEO turnover	positive	positive for individuals and fin. institutions	positive for individuals and fin. institutions
		no effect for industrial companies and IPFs	no effect for industrial companies and IPFs
outsider ownership affects CEO-turnover/performance sensitivity	more negative	negative for industrial companies and IPFs	no effect
		no effect for individuals and fin. institutions	
H7: state ownership affects CEO turnover	positive	weakly positive	positive
state ownership does not affects CEO-turnover/performance sensitivity	no effect	no effect	no effect

APPENDIX

TABLE A1: BASIC HYPOTHESIS: OTHER PERFORMANCE MEASURES

	operational return on assets			market-to-book ratio		
	coef.	st.e.	sign.	coef.	st.e.	sign.
	Model A1			**Model A2**		
constant	-1.832	0.343	***	-1.502	0.337	***
performance measure (lagged)	-2.216	0.580	***	-0.082	0.136	
total concentration	0.630	0.213	***	0.658	0.229	***
size (fixed assets)	0.060	0.026	**	0.042	0.026	*
year dummies	yes			yes		
industry dummies	yes			yes		
chi^2	55.51	***		42.58	***	
number of observations	1495			1498		
number of firms	601			601		
	Model A3			**Model A4**		
constant	-2.034	0.352	***	-1.722	0.346	***
performance measure (lagged)	-2.130	0.584	***	-0.042	0.142	
major-block concentration	0.767	0.219	***	0.776	0.236	***
remaining-blocks concentration	0.531	0.291	*	0.518	0.292	*
major-blockholder change	0.449	0.082	***	0.451	0.082	***
size (fixed assets)	0.053	0.026	**	0.036	0.026	
year dummies	yes			yes		
industry dummies	yes			yes		
chi^2	82.70	***		70.90	***	
number of observations	1495			1498		
number of firms	601			601		

Note: All variables are as defined in Table 3.

TABLE A2: CONTEST OF CONTROL AND NATURE OF OWNERSHIP: OTHER PERFORMANCE MEASURES

	operational ROA			stock return			market-to-book ratio		
	coef.	st.e.	sign.	coef.	st.e.	sign.	coef.	st.e.	sign.
	Model A5			**Model A6**			**Model A7**		
constant	-1.833	0.347	***	-1.610	0.339	***	-1.445	0.390	***
major-block concentration	0.710	0.225	***	0.679	0.216	***	0.750	0.314	**
remaining-blocks concentration	0.578	0.300	*	0.661	0.287	**	0.425	0.374	
perf. * mbc low, rbc low	-2.051	1.454		0.262	0.190		-0.456	0.367	
perf. * mbc low, rbc high	-3.989	0.927	***	-0.135	0.114		0.323	0.242	
perf. * mbc high, rbc low	-1.187	0.959		0.130	0.134		-0.127	0.189	
perf. * mbc high, rbc high	-0.503	1.330		0.396	0.221	*	-0.267	0.214	
fixed assets	0.057	0.026	**	0.046	0.026	*	0.045	0.026	*
year dummies	yes			yes			yes		
industry dummies	yes			yes			yes		
chi^2	61.58	***		49.14	***		49.49	***	
number of observations	1495			1497			1498		
	Model A8			**Model A9**			**Model A10**		
constant	-2.094	0.360	***	-1.845	0.352	***	-1.848	0.493	***
major-block concentration	0.781	0.230	***	0.759	0.228	***	0.798	0.248	***
remaining-blocks concentration	0.535	0.294	*	0.479	0.292	*	0.517	0.298	*
major-blockholder change	0.435	0.085	***	0.440	0.084	***	0.439	0.085	***
major blockholder type									
government	0.376	0.258		0.431	0.238	*	0.053	0.503	
IPF	-0.142	0.392		0.273	0.291		-0.108	0.537	
industrial company	0.030	0.146		0.119	0.143		-0.087	0.309	
individual	0.554	0.195	***	0.572	0.184	***	0.309	0.411	
financial institution	0.265	0.194		0.337	0.188	*	-0.245	0.384	
return on assets by blockholder type									
perf. * government	-0.705	2.759		0.075	0.458		0.207	0.601	
perf. * IPF	-5.846	3.272	*	-0.031	0.416		0.335	0.872	
perf. * industrial company	-2.602	0.747	***	0.066	0.096		-0.091	0.162	
perf. * individual	0.507	1.732		-0.117	0.240		0.044	0.536	
perf. * insider	0.339	2.099		0.155	0.238		-0.495	0.560	
perf. * financial institution	-2.273	1.794		0.013	0.244		0.984	0.587	*
fixed assets	0.050	0.028	*	0.032	0.027		0.030	0.027	
year dummies	yes			yes			yes		
industry dummies	yes			yes			yes		
chi^2	97.91	***		84.63	***		87.72	***	
number of observations	1495			1497			1498		

Note: All variables are as defined in Table 4.