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Ownership, managerial control and the governance of companies listed on the Brussels Stock Exchange

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Abstract :

This paper examines how corporate control is exerted in companies listed on the Brussels Stock Exchange. There are several alternative corporate governance mechanisms which may play a role in disciplining poorly performing management: blockholders (holding companies, industrial companies, families and institutions), the market for partial control, debt policy, and board composition. Even if there is redundancy of substitute forms of discipline, some mechanisms may dominate. We find that top managerial turnover is strongly related to poor performance measured by stock returns, accounting earnings in relation to industry peers and dividend cuts and omissions. Tobit models reveal that there is little relation between ownership and managerial replacement, although industrial companies resort to disciplinary actions when performance is poor. When industrial companies increase their share stake or acquire a new stake in a poorly performing company, there is evidence of an increase in executive board turnover, which suggest a partial market for control. There is little relation between changes in ownership concentration held by institutions and holding companies, and disciplining. Still, high leverage and decreasing solvency and liquidity variables are also followed by increased disciplining, as are a high proportion of non-executive directors and the separation of the functions of CEO and chairman.

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1. Introduction.

Whereas in Anglo-American countries, managerial performance is maintained by the complementary intervention of both internal and external control mechanisms (see Shleifer and Vishny, 1997, for an overview), the disciplinary function of the (hostile) take-over market in Belgium, and most other Continental European countries, is limited. Recent Belgian legislative changes with regard to ownership disclosure laws and anti-take-over procedures have further reduced the likelihood of take-overs as a corporate control mechanism. Consequently, as in recent codes of good corporate governance - the Dutch Peeters report (1997), the French Viénot report (1995) and UK Cadbury report (1992) - the Belgian policy recommendations of 1998 by the Stock Exchange Commission, the Association of Employers (VBO) and the Commission for Banking and Finance focus on the effectiveness of internal corporate control mechanisms[1].

This paper investigates whether or not poor corporate performance triggers board restructuring and whether disciplinary actions are initiated by internal governance. This paper also examines whether the accumulation of shares into large blocks of shares mitigates the problems of free riding in corporate control, permitting control to be exerted more effectively. The relation between the nature of ownership and incidence of disciplinary turnover when corporate performance is poor is also studied.

Besides ownership concentration, capital structure choice may be an instrumental monitoring variable as it can be a bonding device triggering corporate control actions. Such creditor monitoring is expected to be intensified in case of low interest coverage and low liquidity.

We also analyse whether a market for share stakes arises. In Continental Europe, such a market might play a role equivalent to the role of external markets in the U.K. and the U.S. If a company underperforms, able monitors can increase their voting rights to reach a control level allowing them to nominate a new management team.

We find that poor company performance precedes increased board restructuring (turnover of executives, of the management committee and of CEO and executive chairman). This is consistent with findings reported

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[1] The recent changes in legislation on disclosure of voting rights now allow detailed corporate governance studies in Europe. Description of ownership and voting rights in Europe can be found in Barca and Becht (2000, forthcoming): Ownership and Control: A European perspective, Oxford University Press. The countries covered are Austria (Gugler, Kalss, Stomper and Zechner), Belgium (Becht, Chapelle and Renneboog), France (Bloch and Kremp), Germany (Becht and Bohmer), Italy (Bianchi, Bianco and Enriques), Netherlands (De Jong, Kabir, Mara and Roell), Spain (Crespi and Garcia-Cestona), Sweden (Agnblad, Berglof, Hogfeldt and Svancar), UK (Goergen and Renneboog), US (Becht).

by, among others, Denis and Denis (1995) and Warner et al. (1988) for the U.S., by Franks and Mayer (1998) and Kaplan (1994) for Germany and by Franks, Mayer and Renneboog (1998) for the U.K.

The composition of the board also has an important impact on the internal corporate control system. A high fraction of non-executives on the board and the separation of the functions of CEO and (non-executive) chairman increases the turnover of executive directors of underperforming companies. Weisbach (1988) also reports that outside directors of US firms play a larger role in monitoring management than inside directors. Franks and Mayer (1998) show that, in German companies with concentrated ownership, supervisory board representation goes hand in hand with ownership or large shareholdings. For Japan, Kaplan and Minton (1994) show that board appointments of directors representing banks and corporations are followed by increases in top management turnover. In contrast, Franks et al. (1998) report that non-executive directors seem to support incumbent management in the UK even in the wake of poor performance.

Consistent with Shleifer and Vishny (1986) and Grossman and Hart (1980), we find that higher board turnover is positively correlated with strong concentration in ownership which limits free riding on control. Still, this relation is limited to industrial and commercial companies and family shareholders. Considering that the ownership structure is typically complex with stakes held through multiple tiers of ownership, we find that the decision to substitute top management of poorly performing companies is taken by ultimate shareholders (industrial companies and families) who control either directly or indirectly, via affiliated companies, a large percentage of the voting rights. However, neither large institutional investors nor holding companies seem to be involved in active corporate monitoring, which further questions the role and need for ownership cascades involving holding companies.

Although, an active market in share stakes exists, it is only weakly related to performance. Specific shareholder classes (industrial and commercial companies) with superior monitoring abilities or with private benefits of control, increase their voting stake to better position themselves to replace management. Such a market for blocks of control also exists in the U.K. and in Germany, as detailed in Franks et al. (1998) and Franks and Mayer (1998). Shareholders who increase their holdings do so with a clear intention to assume an active monitoring role since management turnover significantly increases in subsequent periods.

We also find that high leverage and low interest coverage are related to increased board restructuring which suggests that creditors intervene as the risk of financial distress increases. However, because this interpretation is not corroborated in interviews with monitors; liquidity and solvency-related indicators may act as monitoring triggers for directors or shareholders.

Finally, management replacement is followed by modest improvements in growth of dividends per share over a period of two years after turnover. However, board turnover is followed by decreases in earnings. The earnings decline may result from new management's decision to expense large costs while earnings reductions can still be attributed to predecessors, thus lowering the benchmark and allowing for substantial improvements in subsequent years (Murphy and Zimmerman, 1993).

The remainder of this paper is organised as follows. Section 2 explains the hypotheses. Section 3 presents the data and methodology. Section 4 provides stylised facts about the ownership structure in Belgian listed companies and section 5 discusses the main results of the governance models. Finally, section 6 summarises our findings.

2 Relationship between disciplining and alternative governance mechanisms.

Few of the tasks which good corporate governance consists 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 corporate performance or a financial crisis. The paper studies several substitute forms of discipline and, where there is redundancy, whether some forms dominate others consistently.[2] This section provides an overview of the hypotheses after which each of these are further expanded.

Hypothesis 1: Disciplining of top management is triggered by poor company performance: directors, CEOs, top managers and executive chairmen are replaced following poor share price performance and/or low accounting earnings and dividend cuts and omissions.

Hypothesis 2: The greater the proportion of non-executive directors, the lower potential board domination by management and the higher the monitoring ability of the non-executive directors. This is reflected in increased turnover of executive directors, of the CEO and of the management committee when performance is poor. Separating the functions of CEO and chairman facilitates disciplining of underperforming management, and such dual control should lead to higher turnover.

Hypothesis 3: (a) When performance is poor, the presence of large shareholdings is followed by higher board turnover. (b) However, disciplining of underperforming management is accomplished by those large shareholders with superior monitoring abilities. Conflicts of interest dissuade institutions to monitor whereas holding companies, industrial companies, and families and individuals discipline management.

Hypothesis 4: Managerial disciplining decisions are taken by the decision maker at the top of an investor group pyramid, called 'ultimate or reference' shareholder.

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[2] Still, a priori, it is not certain whether one specific corporate governance mechanism is positively related to performance as, even if one mechanism may be used more frequently, the existence of other corporate governance devices and their interdependence may result in comparable equilibrium performance (Agrawal and Knoeber, 1996).

Hypothesis 5: *In companies without sufficiently large shareholders or with shareholders who take a passive stance concerning monitoring, poor performance gives rise to changes in the ownership structure. Hence, increases in shareholdings are associated with higher managerial turnover in the same year or the year following the monitors' disciplinary actions.*

Hypothesis 6: *Management of poorly performing companies with high leverage and poor liquidity and solvency face increased monitoring.*

Hypothesis 7: *Management and board restructuring, triggered by poor performance, results in improvements of company performance, but performance improvements are not expected in the year of management substitution but are expected in later years.*

2.1 Corporate performance and disciplinary corporate governance actions.

To the extent that share price and accounting returns are influenced by the quality of managerial inputs and actions, corporate performance provides useful information on managerial performance (Joskow and Rose, 1994). However, both market prices and accounting data present measurement problems of managerial quality. On one hand, the relation between (executive) board restructuring and share price performance may be weaker because share prices already incorporate market expectations regarding managerial replacement. On the other hand, accounting data can (temporarily) be manipulated by the choice of accounting policies (see e.g. Moses, 1987; Teoh et al. 1998)**.** Therefore, the impact of both share price returns, and levels of and changes in operating and net accounting earnings, on turnover are included in testing hypothesis 1. Besides share price and earnings performance, we also examine dividend changes. Such changes may be an important critical performance measure as management is generally reluctant to reduce dividends unless a reduction is unavoidable (Michaely et al. 1995). Consequently, dividend cuts or omissions are associated with unusually poor stock price and earnings performance (Healey and Palepu, 1985) and are expected to be negatively related to turnover.

2.2 The impact of board composition and structure on the board's ability to monitor performance.

A balanced board including both executives and non-executives reduces the potential conflicts of interest among decision makers and residual risk bearers. It also reduces the transaction or agency costs associated with the separation of ownership and control (Williamson, 1984). There are several reasons why non-executives are (ex ante) expected to exert a control task. Non-executives are legally bound to monitor due to their fiduciary duty. Moreover, in an equity market with strong ownership concentration, many non-executives are appointed by and represent large shareholders. Thus, non-executives have incentives to develop reputations as decision control experts whose human capital depends on performance (Fama and Jensen, 1983). Consequently, directors themselves face an external labour market which provides some form of disciplining for passive leadership, as reported for the U.S. by Kaplan and Reishus (1990) and Gilson (1990). Separating the role of CEO and of non-executive chairman is also

supposed to strengthen the board's monitoring ability since a non-executive chairman could ensure more independence from management.[3] Consequently, we expect both a high proportion of non-executive directors and the separation of the functions of CEO and chairman to be positively correlated with turnover (hypothesis 2).

2.3 Ownership concentration, the costs of free riding on control and superior monitoring abilities.

Monitoring management may be prohibitively expensive for small shareholders as a monitor pays all the costs related to his control efforts but only benefits in proportion to his shareholding (Grossman and Hart, 1980 and 1988; Demsetz, 1983). In contrast, the costs of shirking are shared by all the shareholders. Therefore, monitoring will only be cost effective if a single party becomes large enough to internalise the costs of corporate control (hypothesis 3a).

The incentives to monitor and correct managerial failure depend not only on the concentration of ownership, but also on its nature (category of shareholder). Specific classes of owners may value control differently as the source of the control premium is the additional compensation and perquisites the controlling security holders can accord themselves (Jensen and Meckling, 1976). Barclay and Holderness (1989) argue: "*In absence of private gains, blocks of shares ought to be sold at a discount due to the greater risk exposure and due to the monitoring costs. However, blocks are usually sold at a premium which suggests the presence of private gains.*" That different classes of owner have different abilities to extract control rents is empirically supported for the US by Demsetz and Lehn (1985), Barclay and Holderness (1991) and Holderness and Sheehan (1988). Holding companies are prevalent in Belgium and their private benefits and reasons for control accumulation are manifold: capturing tax reductions by facilitating intercompany transfers, reducing transaction costs by offering economies of scale or by supplying internal sources of funds (Banerjee, Leleux and Vermaelen, 1997). Likewise, corporate shareholders may hold substantial share stakes in a target that may be a supplier of customer, in order to influence and/or capitalise on the target's strategic decisions. In contrast, there is little or no systematic evidence of monitoring actions by institutions (investment funds, banks, insurance companies…). In Belgium, many institutions are affiliated with financial institutions and are legally obliged to avoid conflicts of interest (Renneboog, 1997). No such impediments hinder monitoring by holding companies, industrial and commercial companies, individual investors or families. We therefore expect a positive relation between turnover and ownership concentration held by holding companies, industrial and commercial firms, individuals and families and no relation between turnover and institutional shareholder share concentration (hypothesis 3b).

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[3] Such recommendations have been formulated in the U.S. Bacon report (1993), the U.K. Cadbury Committee report (1992), the French Viénot report (1995), the Dutch Peeters Commission report (1997), the Belgian corporate governance guidelines by the Stock Exchange Commission, the Association of Employers and the Commission for Banking and Finance (all in 1998).

2.4 Ultimate ownership and dilution of control.

Ownership structures are frequently complex and pyramidal, and are constructed for reasons of control leverage (Wymeersch, 1994). Therefore, decisions about disciplining management may not be taken by direct investors but rather by the ultimate shareholders[4] who control these direct shareholders directly or through multiple tiers of ownership. Monitoring is not performed by intermediate holding companies which are investment vehicles of controlling industrial companies or individuals and families, but by these industrial companies and families themselves (hypothesis 4). Hence, the relation between turnover and direct ownership (voting rights) by category of owner is expected to be less statistically significant than the one between turnover and ownership concentration whereby the direct equity stakes (voting rights) are reclassified based on the shareholder category of the ultimate owner.

2.5 The disciplining role of the market for share stakes.

Burkart et al. (1997) argue that the degree of voting right concentration acts as a commitment device to delegate a certain degree of authority from shareholders to management. They show that the use of equity implements state-contingent control: in states of the world with decreasing corporate profitability, close monitoring resulting from strong ownership concentration is desirable. In other states of the world, it may not be optimal to have close monitoring as this may reduce managerial discretion and hence management's effort (also in Bolton et al., 1998). Hence, when performance is poor, a partial corporate control market may arise, consisting of large (controlling) blocks. Furthermore, poor performance may reflect not simply poor management but also ineffective monitoring and control. If this is the case, poor performance may lead low quality monitors to sell their stakes and new (controlling) shareholders could improve future corporate performance by substituting incumbent management (hypothesis 5). Shleifer and Vishny (1986) show that once a block of shares is assembled, the position is unlikely to be dissipated. It is in the large shareholder's interest to wait until someone who values control expresses interest in this block because if the block is broken up and sold on the open market, part of the firm's value arising from the possibility of value-increasing monitoring is lost.

2.6 Leverage as a bonding device.

Creditor intervention may be expected when the probability of defaulting on debt covenants increases or when the company needs to be refinanced. The choice of gearing can be considered as a bonding mechanism for management (e.g. in Aghion and Bolton, 1992; Berkovitch et al., 1997) such that high turnover is positively related to high gearing (hypothesis 6). Dennis and Dennis (1993) infer creditor

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[4] An investor is considered to be the 'ultimate or reference shareholder' in an ownership-control chain if control is maintained through multiple tiers of ownership. Interlocking ownership via a holding company or through a more elaborate stock pyramid enables a given investor to own different quantities of voting and cash flow rights. For instance, 50.1 percent of ownership (and voting rights) held by the ultimate shareholder in an intermediary holding company which, in turn, owns 50.1 percent of an operating subsidiary could guarantee majority control on the subsidiary's board with only a 25.1 percent interest in its common stock cash flow.

monitoring from the fact that high leverage combined with managerial ownership improves shareholder returns.

<u>2.7 Post-disciplining corporate performance.</u>

For internal and external control mechanisms to be effective, the replacement of underperforming top management should be followed by performance improvements (Dennis and Dennis, 1995) (hypothesis 7). However, it is unclear which performance variables are expected to improve. As anticipations about future performance of a new management team will be reflected in share price returns at the latest at the announcement of the replacement, abnormal returns over periods subsequent to the announcement effect are not expected to be significantly positive. Furthermore, Murphy and Zimmerman (1993) conclude that 'earnings management'[5] is more likely to occur if the outgoing CEO is terminated following poor performance since it is more credible for the new CEO to blame the previous CEO for past mistakes. Moreover, by constantly overstating losses attributable to predecessors, management improves accounting expectations about the future and lowers the benchmark against which its own accounting performance will be measured (Elliott and Shaw, 1988). Hence, performance improvements are not expected in the year of management substitution but potentially only in later time periods. A competing hypothesis states that if performance leading to management replacement is poor, the success of managerial disciplining may not just be inferred from performance improvements but rather from the avoidance of bankruptcy.

3. Data and methodology.
3.1 Data sources.
<u>Sample description.</u>

The sample consists of all Belgian companies listed on the Brussels Stock Exchange during the period 1989-1994. In 1989 and 1994, respectively, 186 and 165 companies were listed.[6] Bankrupt companies and IPOs over the period 1989-94 were included until the year of bankruptcy and from the year of floatation.[7] About 40 percent of the Belgian listed companies are holding companies with multi-industry investments, 13 percent are in the financial sector (banking, insurance and real estate) and 47 percent are industrial or commercial companies.

<u>Ownership data</u>

Data on the ownership structure over the period 1989-1994 were collected from the Documentation and Statistics Department of the Brussels Stock Exchange. Ownership data are only available since 1989,

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[5] Following management changes, asset write-offs (Strong and Meyer 1987), changes to income reducing accounting methods (Moore 1973) or income reducing accounting accruals (Pourciau 1993) frequently occur.

[6] The sample size was reduced by 9 companies in 1989 and by 10 in 1994 as these listed firms, all in coal mining and steel production, were involved in a long liquidation process but were still listed.

[7] The results do not change when we exclude from the sample recent IPOs or companies that went bankrupt. Sector codes, dates of introduction and of delisting are provided by the Documentation and Statistics Department of the Brussels Stock Exchange. Companies disappearing as a separate entity following absorption by another company as a result of a merger are included until the year prior to the merger.

 following the introduction of the Ownership Disclosure Legislation (of 2 March 1989). To capture a company's ownership position at the end of its fiscal year and the yearly changes in shareholdings, about 5000 hardcopy Notifications of Ownership Change from 1989 till 1994 were consulted. With this information about major direct shareholdings and about indirect control which is complemented with details from annual reports, the multi-layered (pyramidal) ownership structures were reconstructed for each company over the period 1989-1994. As different classes of shareholders may have different information, monitoring competencies and incentives, all shareholders with stakes of 5 percent or more are categorised into 8 classes: (i) holding companies, (ii) banks, (iii) investment companies (pension funds, investment funds), (iv) insurance companies, (v) industrial and commercial companies, (vi) families and individual investors, (vii) federal or regional authorities, (viii) realty investment companies. The yearbooks of *Trends 20,000*, which comprise industry sector classification and financial data for most listed and non-listed Belgian companies, were used to classify all Belgian investors into ownership categories. Foreign investors were classified with information from *Kompass*.

Share price and accounting data.

Monthly (from 1980) and weekly (from 1986) share price returns, corrected for stock splits and dividend pay-outs, and a value-weighted index of all companies listed on the Brussels Stock Exchange were provided by the *Generale Bank*. Accounting data (total assets, equity, operating income, earnings after tax, dividends per share, debt-equity structure) were collected from annual reports and from the database of Central Depository of Balance Sheets at the National Bank of Belgium.

Data on the board of directors and the management committee.

The database of the National Bank of Belgium also contains data on the board of directors. Turnover data were compiled and reasons for directors to leave the company were collected from the notes in the annual reports. Natural turnover due to retirement, death or illness is usually reported and is used to correct the turnover data. Other reasons for turnover are rarely mentioned in either the annual reports or the financial press. When no grounds or non-informative reasons[8] were given for turnover, forced turnover due to disciplining actions or due to company policy disputes was assumed. Data on size and turnover of the management committee were gathered from the annual reports. When the annual report did not explicitly mention the existence of a management committee, the yearbooks *Memento der Effecten* and the *Jaarboek der Bestuurders* (Yearbook of Directors) were consulted to determine whether or not directors had

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[8] Warner, Watts & Wruck (1988) and Weisbach (1988) also mention that reasons for turnover are often lacking. Weisbach also only excludes retirements if they are age related (63 years or older) which eliminates most of the non-linearity in the turnover-age relationship: "...companies do not announce the true reason behind their CEOs' resignations. Therefore, I ignore the stated reasons for resignation in constructing my sample. I do, however, eliminate the resignations for which I am able to corroborate the cause independently. Changes in CEO's caused by death and preceding a takeover are excluded because theses 'resignations' are totally verifiable." (p.438) This a bias is also mentioned by, among others, Dennis & Dennis (1995) and Hermalin & Weisbach (1991). Non-informative reasons found for leaving the company are of the kind: "pursuing other interests", "spending more time with the family" or "retirements" at an age of 62 or below.

executive functions. If the annual reports or other public sources did not reveal the data needed, companies were contacted by fax and phone to supplement lacking data.

3. 2 Methodology.

A panel of data is formed for the six year period 1989-94 with each firm-year representing a separate observation. The relation between board restructuring, performance, ownership, leverage, board structure is examined in the following model:

$$RESTRUC_{i,t} = \alpha_{i,t} + \sum_{k=1}^{3} \beta_{i,k} * PERF_{i,t-k} \qquad \text{Performance (lagged)}$$

$$+ \sum_{l=1}^{8} \gamma_{i,l} * CONC_{i,l,t-1} + \sum_{l=1}^{8} \delta_{i,l} * CONC_{i,l,t-1} * PERF_{i,l,t-1} \qquad \text{Ownership concentration and interaction}$$

$$+ \sum_{l=1}^{8} \gamma_{i,l} * INCCONC_{i,l,t-1} + \sum_{l=1}^{8} \delta_{i,l} * INCCONC_{i,l,t-1} * PERF_{i,l,t-1} \qquad \text{Market in share stakes and interaction}$$

$$+ \sum_{m=1}^{2} \phi_{im,l} * DEBT_{i,m,t-1} + \sum_{m=1}^{2} \eta_{i,l} * DEBT_{i,m,t-1} * PERF_{i,m,t-1} \qquad \text{Debt Policy and interaction}$$

$$+ \sum_{n=1}^{2} \varphi_{i,n,l} * BOARD_{i,n,t} + \sum_{n=1}^{2} \lambda_{i,l} * BOARD_{i,n,t} * PERF_{i,n,t-1} \qquad \text{Board composition and interaction}$$

$$+ \log (SIZE_{i,t}) + \sum_{p=1}^{15} \iota_{i,p} \text{ industry} + \sum_{q=1}^{5} \tau_{i,q} * year + \varepsilon_{i,t} \qquad \text{Size, industry and time dummies}$$

i = company, t = year, l = classes of owner, m = number of debt policy variables, n= number of board composition variables.

- RESTRUC = Board restructuring, measured by (1) executive board turnover, (2) CEO or executive chairman turnover (3) management committee turnover.
- PERF = performance variable measured by lagged (1) market adjusted returns (2) changes in earnings after tax (3) earnings losses (4) ROE (5) ROE – industry median ROE (with earnings after tax) (6) ROA (7) ROA – industry median ROA (with earnings from operations before interest and taxes) (8) changes in dividends (9) changes in ROE (9) changes in ROE – industry median of ROE changes (10) changes in cash flow on equity (11) changes in cash flow on equity – industry median of changes (12) changes in cash flow margin (11) changes in cash flow margin equity – industry median of changes.
- CONC = ownership concentration (in %) by class of owner: (i) holding companies, (ii) banks, (iii) investment companies (pension funds, investment funds), (iv) insurance companies, (v) industrial and commercial companies, (vi) families and individual investors, (vii) federal or regional authorities, (viii) realty investment companies. Both the percentages of ownership by category of owner and the percentage held by the largest shareholder are included (in separate regressions). Both direct shareholdings by category of owner are included as are the direct shareholdings reclassified into the categories of owner based on the category of the ultimate (reference) shareholder (in separate regressions). Herfindahl indices of the largest 3 shareholders by category of owner are also used as concentration measures.

- INCCONC = purchases of share stakes (in %) by category of owner. Both direct shareholdings and reclassified ones based on ultimate shareholder are included, see CONC.
- DEBT = debt policy and debt structure variables: debt/equity ratio, current ratio, quick ratio, interest coverage (EBIT/interest expenses). In each model, gearing was only included along with one of the other variables in order to avoid multicollinearity.
- BOARD = board composition (% of non-executive directors), separation of the functions of CEO and chairman (1=no separation), board size, tenure of CEO.
- SIZE = logarithm of total assets or of total employees.

Logit models are used if the dependent variable is a dummy (in the case of CEO turnover). For executive director and management committee turnover, GLS models and OLS models with a logarithmic transformation of the dependent variable are used and the estimation is conducted with heteroscedasticity consistent covariance matrix estimator (White, 1980). Tobit models are also used to address that fact that the dependent variable (executive and committee turnover) is censored. Industry and time effects are accounted for by including industry and time dummies, respectively. Corporate board size and firm size are included as control variables.[9] The relations are also tested including corporate dummies and taking innovations to remove firm-specific effects. In order to address the endogeneity problems lagged data for ownership, performance and debt policy were utilised in the models. Over- or underperformance in relation to industry peers was measured by correcting performance variables for the median industry performance. In section 5, Tobit models are shown, but tables with other estimation methods are available and the robustness of the results across estimation techniques is discussed.

4. Ownership structure and control of Belgian listed companies : stylised facts.

4.1 Ownership concentration.
In a nutshell, the characteristics of Belgian corporate ownership can be summarised as follows: (i) few-only 165- Belgian companies are listed, (ii) there is a high degree of ownership concentration, (iii) holding companies and families, and to a lesser extent industrial companies, are the main investor categories, (iv) control is levered by pyramidal and complex ownership structures and (v) there is a market for share stakes. Properties (i) to (iv) imply that Belgium can be portrayed as a Continental European blockholder system rather than a market based system (Bratton and McCahery, 1999). However, typical for Belgium is the importance of holding companies which are often part of pyramidal ownership chains and are used to lever control (Renneboog, 1997; Daems, 1998).

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[9] Including board size controls for the fact that different governance mechanisms may prevail in large versus small companies. Large companies may have a larger internal managerial labour market and have better access to an external managerial labour market.

The sum of the share stakes held by large shareholders (owning at least 5% of outstanding shares) amounts to, on average, more than 65%. The largest direct shareholder controls 43% in the average listed company. The three most important direct investor classes are holding companies, industrial and commercial companies, and families and individual investors. They own, respectively, 33%, 15% and 4% percent of the voting rights. However, taking into account ownership cascades to reclassify the direct share stakes according to the shareholder category of the ultimate owner[10] reveals that holding companies control directly and indirectly an average of 26.7% of direct voting rights in listed Belgian companies whereas the category of industrial and commercial companies controls an average stake of 11%. Individual and family investors do not generally hold shares directly in Belgian companies, but use intermediate companies[11] as investment vehicles with which they control an average shareholding of 16%.

Table 1 illustrates the high level of ownership concentration and gives the percentage of Belgian listed companies with voting rights concentration of at least a blocking minority (25%), an absolute majority and a supermajority (75% and more). Panel A reveals that a voting rights majority exists in more than half (56%) of the listed companies. In 18 percent of the Belgian companies, a supermajority gives absolute control to one shareholder(group) since blocking minorities cannot be formed. Shareholdings of 25% or more are present in 85 percent of all companies. The concentrated ownership pattern is similar in the subsamples of listed holdings companies, financial and institutional companies, and industrial and commercial corporations.

<center>Insert table 1 about here</center>

4.2 Ownership cascades and the violation of one share-one vote rule.

Table 2 shows that the ultimate ownership tier averages 2.2 (where direct share stakes are level 1-shareholdings). Ownership cascades are usually used to dilute the one-share-one-vote rule: a chain with intermediate holdings of e.g. 50% allows de facto majority control with limited cash flow rights. As a proxy for control leverage via ownership cascades, the ratio of the direct largest shareholding and its levered shareholding (the multiplication of the shareholdings on consecutive ownership tiers) is used. For instance, company A, whose shares are widely held, owns 40% of company B which, in turn, owns 40% of company C. In this example, the ultimate shareholder level is 2, the direct largest shareholding (of B in C) is 40%, the ultimate shareholding amounts to 16% (40% x 40%), and the leverage factor (largest direct shareholding/levered share stake) is 2.5 (40/16). For our sample companies, the average largest direct share stake amounts to about 55%, whereas the levered shareholding is 39%. The smaller the shareholdings with

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[10] We define a control relation between an ultimate shareholder and a target company if (i) there is a series of uninterrupted majority shareholdings on every ownership tier throughout the pyramid or (ii) if there is a large shareholding of at least 25 percent on every ownership level in the absence of other shareholders with stakes of blocking minority size or larger.

[11] Often, Luxembourgian intermediate investment companies are used.

which control is maintained through intermediate levels and the larger the number of intermediate ownership tiers, the higher the control leverage factor or the more considerable the violation of the one-share-one-vote rule. Table 2 discloses that since 1989 the control leverage factor decreased from 3.6 to 2.7. Since the average ultimate ownership level and the ultimate levered shareholding do not change significantly over this time, the decline of the control leverage factor indicates that control on intermediate levels has become more concentrated.

Insert table 2 about here.

4.3 The market for corporate control.

Although a market for corporate control (commonly defined as a (hostile) take over market) is usually associated with the US and the UK, table 3 shows that a partial control market or a market in substantial share blocks exists in Belgium. In more than 22% of the listed companies, substantial changes (of more than 5%) in ownership concentration take place and in 7.6% of firms blocking minorities are sold. Twenty-eight majority stakes changed hands.[12] These findings suggest that this market for share stakes is not insignificant. Table 3 also discloses that the holding companies are the main sellers and purchasers of share stakes. Institutional investors, mainly banks and insurance companies, acquire 49 shareholdings of more than 5% and sell 43 stakes of similar size. Families and individuals sell 17 stakes of blocking minority size and more, while 10 such stakes are purchased. Most of the exchanges of the largest blocks of shares are negotiated deals and take place ex exchange.[13]

Insert table 3 about here.

4.4 Capital structure.

Belgian listed companies are relying to a large extent on short term debt: long term debt on equity amounts to 28% whereas short term debt (including trade credit) on equity is 53%. Holding companies carry more long term debt (39% on equity) than industrial and commercial firms (with only 12%). Average current ratios are 4.1 for industrial companies and 5.4 for holding companies.

5. Results.

Belgian companies have a one-tier board system with average board size amounting to 10 directors for the period 1989-1994 and with a median of 9. Yearly, between 9 and 12% of the directors leave the board. Annual turnover among executive directors in this period is high: between 27 and 41%, whereas only about 7% of the non-executive directors is replaced. The yearly replacement of the CEO (called 'delegated' or managing director) amounts to 18%. A third measure of top management restructuring consists of

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[12] These changes exclude shareholding restructuring within investor groups, as these changes do not have any impact on control.

[13] We find a negative correlation (significant at the 1% level) between past corporate performance and increases in ownership; the lower the performance, the larger the increases in ownership. Note that all increases, regardless of their size, are taken into consideration because some shareholders only need a small increase in the percentage of their voting rights to reach a blocking minority or a majority.

replacement in the management committee. Although such a management committee is no legal requirement, 65% of the companies mention in their annual reports such committees, which count on average 3.6 members (median of 4). The executive directors are always members of this committee and have an average of 2.4 members (median of 2). Annual turnover of the management committee totals 17%. Although managerial turnover is corrected for natural turnover related to retirement age, death or illness of directors, the turnover data may still contain some non-conflictual turnover since corporations do not generally release information regarding management replacement or do so in euphemistic terms.

5.1. Board restructuring in industrial and commercial companies.

a. Executive Board turnover

Corporate performance and disciplining of management.

A first question is whether or not turnover, corrected for natural turnover, is related to poor corporate performance and results from disciplinary actions. We also investigate when such corporate governance actions are undertaken and whether disciplining takes place at an early stage, i.e. rapidly after earnings, cash flows or share price declines or, rather late when the company is no longer able to generate profits or has to cut dividends? Including lagged performance up to three years prior to turnover allows us to investigate the reaction time of board restructuring.[14] Warner, Watts and Wruck (1988) and Coughlan and Schmidt (1985) report that U.S. boards react quickly to poor performance in their decision to replace management because share performance lagged up to two calendar years helps predict current-calendar-year management changes. Share price performance may underestimate the true relation between performance and executive turnover given that share prices reflect current profitability as well as expected future opportunities including the potential performance improvements under new management (Weisbach 1988). As accounting earnings depend on discretionary managerial accounting choices, we use a combination of accounting, dividend, cash flow measures and market adjusted share returns as performance benchmarks in the Tobit models of tables 4 and 5. Operating earnings before interest and taxes (standardised by total assets) are used as they are not sensitive to financing policy, tax regime, windfall profits or extra-ordinary losses. The use of operating income rather than net earnings after tax reduces the impact of the described 'earnings management' (Dennis and Dennis, 1994). ROE is taken after interest, extraordinary results and taxes. The industry medians are substracted from both the levels of and the changes in ROE and cash flow on equity.[15]

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[14] If the fiscal year end is e.g. March 1994, the data of this fiscal year are included in the regressions as 1993 as most of the fiscal year is in 1993. If the fiscal year end is 30 June 1994 or later in 1994, the data of the year are included in the regressions as 1994. The yearly market adjusted returns are calculated such that they coincide with the fiscal years of the corporations. Only lagged performance variables are included because a performance variable of the year coinciding with the year of turnover may be a (partial) lead variable especially if the turnover takes place early in the fiscal year.

[15] Apart from the performance measures given in tables 4 and 5, models with levels and changes of return (after interest, taxes and extraordinary) on assets (both with and without industry median correction) and cash flow margin were estimated. The results of these models are in line with the ones discussed.

Table 4 (lines 2-4) shows that, for listed industrial and commercial companies, there is a negative significant relation between executive director replacement and market adjusted performance in the three years prior to management substitution. Earnings losses over the fiscal year prior to turnover are followed by increased levels of executive board turnover. Warner et al. (1988), amongst others, confirm for the US that unless performance is extremely good or bad, their management turnover models have little predictive value. Another critical performance benchmark, substantial cuts in dividends (of at least 25%) or omissions, also precede board restructuring. Given that deviations from expectations about dividend policy usually contain signalling information, management is generally reluctant to reduce dividends unless such a reduction is unavoidable. Hence, dividend cuts are associated with unusually poor stock-price and earnings performance (Healey and Palepu, 1988; Ofer and Siegel, 1987; Marsh and Merton, 1987). Including changes in earnings or dividends into the monitoring models yields weaker correlations with board restructuring.

Levels of performance as well as changes in performance, corrected by industry medians, are analysed as it may well be that it is not just low earnings which trigger managerial disciplining but peer group (industry) underperformance. Morck, Shleifer and Vishny (1989) find that when a firm significantly underperforms its industry, the probability of complete turnover of the top management team rises. Table 4 shows that both industry adjusted levels and changes in ROE and in cash flow are negatively correlated to management changes prior to turnover, but more so for changes than for levels.

All in all, the evidence of table 4 fails to reject hypothesis 1: it shows that the poorer the performance, the higher is the turnover of the executive board. These results are consistent through different estimation techniques (Tobit and OLS with and without fixed effects). Companies only resort to substituting executive directors when accounting returns are very weak: when the company was not able to generate profits or was forced to cut dividends in prior periods. Furthermore, disciplinary actions are undertaken when the company underperforms its industry peers and when market adjusted returns are negative in the period prior to board restructuring.

<center>Insert table 4 about here.</center>

Ownership concentration.

As a single shareholder(group) controls a voting rights majority in more than half of Belgian listed companies, and as a blocking minority exists in 85% of firms, the control percentage of the largest block is included as an explanatory variable.[16] The free riding control-hypothesis predicts that large share blocks facilitate disciplining of management. However, Table 4 (lines 5-8) shows that that the presence of large share blocks held by holding companies and institutions (banks, investment funds or insurance companies)

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[16] Including the total share concentration by class of owner or Herfindahl indices, yields – expectedly - similar results. Including squared ownership does not yield robust results across models.

is not related to board restructuring. In contrast, management replacement is influenced by large industrial investor shareholdings (in 6 out of 7 models) and by blocks held by families (5 models). Piecewise regressions - with dummies indicating whether or not the largest owner holds a blocking minority, majority or supermajority (as in Hermalin and Weisbach, 1991) – reveal that minority stakes held by industrial companies are sufficiently large to exert control and to restructure the board.[17]

Table 4 (lines 9-12) also investigates whether the ownership structure plays a performance-induced disciplining role. None of categories of large blockholders seem to be involved in disciplinary actions against management when performance is poor. The lack of institutional investor involvement is in line with hypothesis 3 which states that they abstain from monitoring to avoid conflicts of interest. In contrast, the fact that the large holding companies do not seem to monitor is surprising as these often cite superior corporate governance as one of the core contributions of their stable ownership stakes as 'reference shareholders'.[18] The lack of significance of the interaction terms between large industrial and family owners, and performance, raises doubt about the fact whether board restructuring is initiated by families or industrial companies as a result of poor performance.[19] All in all, there is little evidence about the corporate control role of existing large shareholders.

The market in share stakes.

When performance is poor, shareholders without a distinct interest in monitoring sell stakes, while those with strong monitoring abilities increase their stakes in order to reinforce their position as (major) shareholder. If this were true, we would expect positive signs for the increases in shareholdings (hypothesis 3). In spite of the fact that institutions and holding companies actively trade in share stakes over 1989-1994 (table 3), ownership increases by these categories are not correlated with changes in board structure (lines 13-16 of table 4). However, there is one exception: when industrial companies and families obtain substantial share stakes, changes in management are implemented. Such board restructuring takes place (lines 19-20) when prior performance was poor (negative market adjusted returns, negative changes or levels of performance), which suggests a partial corporate control market (hypothesis 5). It can be observed

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[17] Piecewise regressions are not shown, but tables are available.

[18] In the years following the take over battle between the French Suez group and the Italian group of de Benedetti in 1989, the Generale Bank van België or the Société Générale de Belgique, was restructured using a focus strategy on 8 industrial and financial sectors. The Group Brussels Lambert, another large holding company, has often been criticized for failing to establish a strategic plan for the companies it controlled and is often given as an example of a stalemate situation brought about by the reference shareholder model. The fact that some of these large holding companies, which control several listed (and many unlisted) companies, may fail in their monitoring role has an important impact on our conclusions regarding the governance ability of holding companies. For a discussion, see Daems (1998) and Dewulf et al. (1998).

[19] The findings described are robust across estimation methods. OLS with fixed effects yield somewhat stronger significance for the presence of large shareholdings held by industrial and commercial companies and by families: in three regressions, industrial and performance effects are significant.

that disciplining underperforming management happens in the year of turnover or in the subsequent fiscal year.[20]

Concerning the role of ownership concentration and the partial market for control, it is important to realise that above results were obtained after classifying all blocks of voting rights into ownership categories based on the identity of the ultimate or reference owners of each of these blocks. No significant results were attained in a first set of regressions where all ownership variables (levels and increases) were included by category of shareholder owner on the direct ownership level. For example, if a holding company holds 10% of the voting rights in a listed company, this 10% stake is classified as a stake owned by a holding company. The fact that the intermediate holding company may be directly or indirectly controlled by e.g. a family is ignored in this first set of regressions. However, when we reclassify all direct shareholdings (voting rights) in ownership categories based on the identity of the true (i.e. ultimate) owner – in the example above the 10% stake is a family controlled stake - we find the conclusions discussed above: significant results for the presence of industrial co's and families versus insignificant ones for institutions and holding companies. This suggests support for hypothesis 4 and implies that the ultimate or 'reference' shareholder, who controls the voting rights of a listed target company by ways of a cascade of intermediate holdings, exerts corporate control.[21]

Gearing as a bonding mechanism.

High leverage encourages management to generate sufficient funds to service the debt commitments. Consequently, a high debt-equity ratio is expected to reduce management's discretion and summon more intensive creditor monitoring, as is suggested in table 4 (line 21) where executive director replacement is positively correlated with a high gearing (6 out of 7 regressions). Executive monitoring increases especially when corporate performance is negative (negative market adjusted returns, earnings losses, level and changes in ROE and cash flow adjusted for industry medians).[22] Low interest coverage is an important indicator of financial distress; when the interest cover decreases below 2, a company typically loses investment grade. Table 4 also shows that executive board restructuring also coincides with low interest coverage (line 22), but that the interaction of poor share price and accounting performance is not correlated to executive board turnover (line 24). This implies that interest coverage may be considered as another

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[20] Unlike the models with executive and CEO turnover, regressions with management committee turnover only yielded weakly significant results. This implies that only those top managers who hold a board seat are held responsible and subject to disciplinary corporate control.

[21] Although control is exerted by the ultimate shareholder, there is evidence that when controlling stakes are held through multiple tiers of ownership and when intermediate shareholdings deviate from full ownership, ultimate investor control is diluted. For instance, sequences of majority control in the form of e.g. stakes of 50.1% throughout the pyramid might not guarantee the same degree of control a first tier majority holding would give, unless there is strong board representation on each ownership tier. Consequently, the larger the number of ownership tiers and the larger the deviation from full ownership, the weaker the relation between turnover and ownership concentration. Including levered shareholdings (see section 4) by category of owner gives similar results but reduces significance.

[22] Including changes in gearing did not give any significant results. Changes in capital structure in the form of new equity issues which took place in 40 firm-years was also included in the models but are not correlated to board turnover.

monitoring performance benchmark and important trigger for monitoring actions.[23] The strong correlation between gearing and interest cover, and performance (hypothesis 6) suggests enhanced creditor monitoring when performance is poor. Interviews with executive and non-executive directors revealed that the monitoring role by creditors is considered limited (unless there is a danger of bond covenant violation).[24]

Board composition and separation of control.

Table 4 supports the hypothesis that the board structure is instrumental for the monitoring efficiency of the internal governance mechanism (hypothesis 2). The more independent the non-executive board from management, proxied by the proportion of non-executive directors, the easier it is to replace management when managerial performance is inadequate (lines 26 and 28). The fact that the role of large ownership stakes was not supported by our model (apart from for industrial companies) may be explained to some extent by the importance of the proportion of non-executives. It may well be that the number of non-executive directors on board is a proxy for the control power of a share block and that these large shareholder representatives are performing their roles as monitors and are executing their disciplining part well. As only a few companies could (or were willing) to disclose the representative function of its board members, this hypothesis could not be tested further. Board size differs substantially across firms; some have small boards with 6 directors, while others count 15 or more. In spite of the fact that large boards may reduce efficiency, board size does not seem to influence managerial disciplining (line 29).

For the US, Weisbach (1988) finds that CEO turnover is more sensitive to performance in firms whose boards are dominated by outsiders. Outsiders are carefully defined as directors who work neither for the corporation nor have extensive dealings with that company. In a study on the performance effects of the composition of the board of directors in the U.S., Baysinger and Butler (1985) conclude that those firms with stronger independent boards ended up with superior performance records, in the form of superior relative financial performance (an industry corrected return on equity). It should be emphasised that research about the impact of U.S. board composition on CEO turnover is not directly comparable with research on Belgian boards. The emphasis in the U.S. has been put on the independence of 'outside' directors, whereas some non-executives in Belgium are large shareholder representatives and 'independent or expert' non-executive directors' appointment to the board might be subject to large shareholder approval.

Next to the strengthening of the independence of non-executive board members, another recommendation in the recent Guidelines for Good Corporate Governance (of the Cardon Commission, Stock Exchange

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[23] Current and acid ratios were significant but were not included in the model of table 4 along with gearing and interest coverage in order to avoid multicollinearity.

[24] Several directors (among others, M. Davignon (Generale Maatschappij van België/Société Générale de Belgique), M. Bodson (Tractebel), M. Samyn (NPM/SNP)) were interviewed and asked to comment on the results of this study. They confirmed the limited role of creditor monitoring unless a large refinancing takes place and emphasized the role of the large shareholders (for which we only found limited support) and of the board of directors (for which we found strong support).

Commission, Commission for Banking and Finance) is the separation of the functions of managing director and of chairman of the board, but this necessity is not upheld by the findings of this model (lines 25 and 27 of table 4).

Although larger companies may have a bigger internal managerial labour market and have better access to the external managerial labour market, corporate size is negatively related to executive board replacement (line 30).[25] Are these disciplinary actions only directed at top managers who are on the board or do these actions extend to other managers, c.q. the members of the direction committee? The results with management committee turnover (executive directors and other top managers) as dependent variable gives weaker results than with executive turnover. This implies that performance related turnover is targeting the very top management, namely predominantly those three managers appointed to the board.

b. Disciplinary actions against CEO[26].

CEO replacement in industrial and commercial companies (corrected for natural turnover) is correlated with the presence of large shareholdings held by families and individuals, institutional investors and industrial companies. The fact that the interaction terms of ownership and performance are significant (10% level) suggests that these replacements are the result of corporate governance actions (hypotheses 3 and 4). Furthermore, CEO substitution also follows increases in share stakes held by holding companies and industrial firms, but due to lack of significance in interaction terms it is questionable whether this stake accumulation is induced by poor performance (hypothesis 5). Internal governance structure like separation of the functions of CEO and chairman, and the presence of a high proportion of non-executives facilitates disciplining of the CEO when the companies results are bad (hypothesis 2).[27] Finally, there is evidence that low interest coverage leads to higher CEO turnover (hypothesis 6).

5.2 Listed Belgian Holding companies.

Table 5 investigates whether executive director replacement takes place in holding companies and what internal and external control mechanisms trigger such governance actions. Support for hypothesis 1 is presented in table 5: past poor share price and accounting performance in holding companies lead to executive board restructuring, although this relation is weaker than for listed industrial companies. Over the period 1988-1994, dividend cuts, earnings losses, low industry corrected ROE and cash flows precede executive director replacement (lines 2-4). There is evidence of leverage related monitoring (lines 18-21; hypothesis 6) as high gearing ratios result in increased managerial removal when performance is poor. In

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[25] Using the logarithm of the total number of employees as size variable, yields less significance (only 3 regressions out of 7 in table 4).

[26] Tables with logit models on CEO turnover are available upon request.

[27] CEOs with long tenure are less easily removed when performance is poor as they may have a good track record. However, this conclusion is only based on one fourth of the sample companies as these data were only disclosed for a limited number of companies.

addition, board composition does also seem to influence corporate control as high executive board turnover is positively related to a high percentage of non-executive directors on board (hypothesis 2).

Although some holding companies are widely held, most of the others are controlled by families or other holding companies. Contrary to hypothesis 3, there is no consistent relation between the presence of large share blocks and executive board restructuring of listed holding companies. The evidence in table 5 even hints (in 3 out of 7 models) that less monitoring is expected in the presence of a controlling holding company (negative correlation in line 5).[28] Furthermore, the negative parameter coefficient in line 13 reveals that when there is poor performance and increases in share stakes controlled by holding companies, there is a reduced managerial disciplining. This raises the question why holding companies with controlling stakes or holding companies acquiring large stakes do not monitor. Like in France (Banerjee, Leleux and Vermaelen 1997, hence BLV), holding companies in Belgium may enhance wealth creation by offering a internal capital market to the companies they control, by offering the possibility to invest indirectly in non-listed companies to individual investors, by smoothing tax liabilities of the group or by lowering bankruptcy costs by facilitating workouts. However, both the BLV study (1997) for France and Daems (1998) for Belgium fail to find wealth creation by holding companies. The share price of Belgian holding companies is even estimated to be 35 to 39% lower than the market value of all their participations.[29]

The potential corporate governance benefits by holding companies consist of the supply of strategic advice and a reduction in agency costs due to economies of scale in monitoring. Still, BLV state that *'holding companies can create agency problems of their own and, with well-diversified portfolios, it is unclear why they would be willing or be able to engage in costly monitoring activities for each of the companies they control. The quality of their monitoring activities has never been ascertained, not has it ever been compared to that provided by other large shareholders, the external market for corporate control,…"* The findings in this paper corroborate this statement as controlling holding companies or holding companies which acquire large share stakes in listed Belgian industrial companies (table 4)[30] and in listed Belgian holding companies (table 5)[31] do not seem to be involved with performance correcting governance actions. Furthermore, listed Belgian holding companies may suffer from the very agency problems they pretend to solve for the companies they control because the controlling shareholders in holding companies do not seem to discipline holding companies' underperformance.

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[28] The probability that the CEO of listed holding companies is replaced increases with the degree of family control. This is especially the case when the market adjusted return is low and when the company faces losses and has to reduce dividends. In contrast to the capital structure, board composition is again a determining factor. Both a large percentage of non-executive directors and the separation of the functions of CEO and non-executive chairman increases the probability of CEO substitution.

[29] De Standaard of 7-8 August 1999.

[30] See lines 5,9,13,17.

[31] See lines 5,9,13,16.

This conclusion about holding companies can be extended to the quoted financial institutions – in this paper defined as a rather heterogeneous sample of banks, insurance companies and real estate firms.[32] Most of these institutions are part of a holding group of which the monitoring abilities have been questioned. Bank Brussels Lambert (BBL) is often mentioned as an example of the break down of 'reference' or ultimate shareholder monitoring. Over whole time period of the paper (1989-94), BBL is controlled by the Group Brussels Lambert who holds a direct stake of 13% (the largest stake) and controls indirectly via the Royal Belge insurance group another 9.3%. In spite of the need for the development of an international expansion strategy and the call to form one large Belgian commercial bank (merger with the Generale Bank), GBL has not favored such strategies.[33] All in all, the system with strong ownership concentration comprises important drawbacks (see also Daems (1998) and De Wulf et al. (1998)).

<center>Insert table 5 about here.</center>

5.3 Post-disciplining performance.

The effectiveness of the corporate control mechanism could be assessed by analysing performance following the installation of new management (hypothesis 7). Improved performance after executive board restructuring would confirm that the ousted directors and management had underperformed and that the monitors were able to attract a management better suited to reorganise the company. The post-disciplining earnings evolution is analysed by industry[34]: for the companies in which more than 25% of the executive board or the CEO resigned, the returns on equity two years prior and two years subsequent to executive board restructuring are compared. Prior and subsequent ROE are calculated as deviations from the ROE of companies which did not experience executive board restructuring of 25% or CEO replacement. Even after the executive board restructuring, the level of ROE in most industries subsequent to the board restructuring is still lagging the ROE of companies without board restructuring. There is little evidence of ROE improvements in time windows subsequent to board restructuring with exception of the industry of consumer goods/health/pharma. This finding may not come as a surprise as it is a well documented fact that in U.S. and U.K. companies, a decrease in earnings often follows the departure of the CEO because new CEOs often write off as many expenses as possible during their first year (Murphy and Zimmerman, 1993). Moreover, the success of corporate governance actions, may not be visible in subsequent performance because, in specific cases, earnings stabilisation at a low level or avoidance of further financial distress or even bankruptcy may be considerable achievements.

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[32] Note that the reason why the proposed governance model does not fit the financial companies is not due to lack of turnover. The dependent variable executive turnover is between 22 and 37% depending on the year, which is similar to turnover in industrial and commercial companies.

[33] A similar example of a reference shareholder hampering a fair M&A competition between Fortis and ABN Amro for control of the Generale Bank in 1997 has been detailed extensively in the financial press.

[34] Due to sample size limitations, several sectors are added (based on NACE industry classifications) to form industry subsamples: holdings companies, energy and utilities, chemical and materials (metal and non-ferro), electrical and electronics, consumer products and health care/pharma. services (transport, leasing, hotel, …). The utility sector was subsequently deleted due to small sample size.

Dividend policy (changes in dividends per share) are also compared for periods two years prior and two years subsequent to board restructuring. Similarly, changes in dividends are defined as the difference in changes of high turnover companies from the benchmark, namely dividend changes of companies with low board restructuring (less than 25% of executive board turnover and no CEO turnover). For the sectors of electrical equipment and electronics, and services, there is a significantly higher growth in dividends per share after board restructuring than prior. For holding companies, and the sector chemicals and materials, this effect is only marginally significant. This result may indicate that, as changes in dividends tend to have a permanent character, increases in dividends reflect some more confidence in future profitability after managerial disciplining.

6. Conclusion.

In this paper the importance of several internal and external mechanisms of corporate governance was analysed in terms of disciplining management of poorly performing companies. There may be substitute forms of discipline, and even if there is redundancy, one form may dominate the other consistently. Disciplinary actions against management are taken when market adjusted share returns are negative and when the company generates operating earnings' losses or resorts to substantial cuts in dividends in the years prior to the restructuring. There is also evidence that companies with levels of and changes in ROE and cash flows below those of industry peers are subjected to increased monitoring. These performance-turnover relations are much stronger for listed industrial and commercial companies than for listed holding companies and financial institutions.

Belgian equity markets are characterised by few listings, a high degree of ownership concentration held by holding companies and families, and to a lesser extent industrial companies. Furthermore, control is levered by pyramidal and complex ownership structures and there is an important market for share stakes. Little relation was uncovered between ownership structures and the disciplining of top management in listed industrial and commercial companies. However, the presence of large industrial shareholders (and to a lesser extent of family shareholdings) is related to high executive board turnover when performance is poor, whereas no evidence was found for a monitoring role by institutions or holding companies.

A fraction of the market for share stakes may be considered as a corporate control market because industrial and commercial companies increase their shareholding (or purchase large share blocks) in listed poorly performing industrial companies in which there is, subsequently, increased conflictual management

replacement. In the light of disciplining actions undertaken by industrial companies (who are often in the same industry as the target company), the lack of active corporate control in the wake of poor performance by holding companies is striking. High ownership concentration held by a holding company group can lead to strategic deadlocks for quoted companies, as illustrated by the BBL case with the Group Brussels Lambert as reference shareholder. Daems (1998, p. 65) illustrates this deadlock with another example: 'A reference shareholder [belonging to a holding group] will tend to concentrate on the interests of the group as a whole. He might be tempted to divide its markets over its subsidiaries such that they do not compete too intensively with each other. Hence, [the French holding group] Suez, could have an interest in dividing the international [utility] markets over its subsidiaries, [the French] Lyonnaise des Eaux and [the Belgian] Tractebel. This limitation of strategic freedom of the subsidiaries is not in the interest of minority shareholders and investors who are participating in the group via the stock exchange.'

Although high leverage also seems instrumental to replace poorly performing management, there is no direct evidence that it is bondholders or banks who force underperforming management out. Interviews with non-executive directors disclosed that high leverage or low interest coverage stimulate actions by the (non-executive) board (and as such the shareholders) rather than creditor intervention. We find that the role of the non-executive directors is important in the disciplining process: a high proportion of non-executive directors leads to increased executive board turnover. Given that companies usually do not reveal the representation of the shareholders of the board of the directors, the percentage of non-executive directors was used as a proxy for independence of the board from management, but the board structure may very well be influenced by ownership concentration. Furthermore, a higher probability of CEO replacement was found when the tasks of CEO ('delegated' director) and (non-executive) chairman are separated.

Corporate governance relations in holding companies and especially financial institutions are much weaker than in listed industrial companies. Board composition and leverage have a substantial impact on board restructuring, but neither ownership concentration nor a partial market for share stakes leads to increased disciplining in holding companies. Belgian listed holding companies may to a large extent suffer from a lack of corporate control and seem to have discharged themselves from efficient monitoring of the companies they control, as seems also be the case for French holding companies (Banerjee, Leleux and Vermaelen 1997). In spite of the presence of a large shareholder in a vast majority of Belgian listed companies and of the breakdown – both in terms of performance and governance - of the ownership cascade system involving holding companies, it is problematic that the recent codes for good corporate governance do not encompass any recommendation with regard to large shareholder monitoring[35].

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[35] See also Meeus (1998) and Wymeersch (1998) for a discussion of the content of the codes of good corporate governance.

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Table 1 : Blocking minority, majority and supermajority shareholdings.

Percentage of the sample companies with a minority, majority or supermajority shareholdings held by the main shareholder categories. MIN = % of companies with a stake of 25% or larger, MAJ = % of companies with a stake of 50% or larger, SUP = % of companies with a stake of 75% or larger.

Direct stands for the direct shareholdings. Dir. and indirect refers to the fact that the direct shareholdings are classified according to the shareholder class of the ultimate investor: direct shareholdings belonging to the same ultimate investor group were subsequently summed. Ultimate control (direct and indirect) is control based on (i) a majority control (minimal 50% of the voting rights) on every ownership tier of the ownership pyramid or (ii) shareholdings of at least 25% on every tier in the absence of other shareholders holding stakes of 25% or more. A chain of fully owned subsidiaries are considered as one single shareholder.

1994	all investors			holding co's			families			indus. co's			Belgian investors			foreign investors		
	MIN	MAJ	SUP	MIN	MAJ	SUP	MIN	MAJ	SUP	MIN	MAJ	SUP	MIN	MAJ	SUP	MIN	MAJ	SUP
PANEL A : ALL SAMPLE COMPANIES (N=157)																		
Direct	82	45	14	48	23	5	2	1	1	21	12	5	63	36	9	19	9	5
Dir. and indirect	85	56	18	41	26	6	23	14	3	15	8	5	51	33	9	34	23	10
PANEL B : HOLDING COMPANIES (N=64)																		
Direct	79	39	14	50	23	8	5	2	2	17	9	2	59	31	11	20	8	3
Dir. and indirect	83	59	20	50	36	13	22	13	2	9	6	3	45	30	11	38	30	13
PANEL C : FINANCIAL SECTOR (BANKING, INSURANCE, REAL ESTATE) (N=20)																		
Direct	75	50	10	35	15	0	0	0	0	5	5	5	62	40	10	13	10	0
Dir. and indirect	80	55	15	40	15	0	5	5	0	5	5	5	48	33	10	32	22	5
PANEL D : INDUSTRIAL AND COMMERCIAL COMPANIES (N=73)																		
Direct	86	47	15	48	25	4	0	0	0	28	15	8	66	37	7	20	10	8
Dir. and indirect	93	55	16	34	19	3	29	18	4	24	11	7	61	37	8	32	18	8

Source : Own calculations based on BDPart and Ownership Notifications.

Table 2 : Largest direct and ultimate (direct and indirect) levered shareholdings, and the control leverage factor.

This table presents the ultimate ownership level, defined as the highest level of ownership in an uninterrupted control chain (direct shareholdings are level 1).
Ultimate control is control based on (i) a majority control (minimal 50% of the voting rights) on every ownership tier of the ownership pyramid or
(ii) shareholdings of at least 25% on every tier in the absence of other shareholders holding stakes of 25% or more. A chain of fully owned subsidiaries
are considered as one single shareholder.

The direct largest shareholding is the average direct largest share stake of at least 25%. The levered shareholding is calculated by multiplying the share
stakes of subsequent ownership tiers. The control leverage factor is the ratio of the direct shareholding divided by the ultimate levered shareholding. For
instance, company A, whose shares are widely held, owns 40% of company B which, in turn, owns 40% of company C. The ultimate shareholder level is
2, the direct largest shareholding (of B in C) is 40%, the ultimate shareholding is 16% (40% x 40%), and the leverage factor is 2.5 (40/16).
There was no direct shareholding of at least 25% in 17 sample companies, which were not included in this table. Standard deviation in parentheses.

	1989	**1990**	**1991**	**1992**	**1993**	**1994**
sample size	160	156	156	156	156	158
ultimate ownership level	2.2	2.2	2.1	2.1	2.0	2.0
	(1.364)	(1.290)	(1.188)	(1.159)	(1.098)	(1.020)
direct largest shareholding	55.1	56.4	57.2	57.8	56.3	55.6
	(19.737)	(19.509)	(19.923)	(20.632)	(20.341)	(19.987)
levered shareholding	38.0	38.5	40.3	41.7	42.0	39.4
	(22.524)	(22.906)	(23.988)	(24.600)	(23.657)	(21.4540
control leverage factor	3.6	3.6	3.0	2.9	2.8	2.7
(direct/levered shareholding)	(8.391)	(8.650)	(6.756)	(6.710)	(6.432)	(6.356)

Source : Own calculations based on data from the BDPart database and the Notifications of Ownership.

Table 3 : The market in share stakes over the period 1989-1994.

This table gives the size distribution of purchases and sales of large shareholdings by category of owner over the period 1989-1994. All changes are given excluding changes in government stakes and real estate as these categories are minor. Purchases and sales are calculated by comparing the share stakes of a shareholder category of a fiscal year to the shareholdings of previous year. Institutional investors consists of banks, investment and pension funds and insurance companies. Total number of firm years over the period is 1024.

1989-1994 — Number of increases and decreases stakes

	[1%-5%[	[5%-10%[	[10%-25%[	[25%-50%[	[50%-100%[	Total
PANEL A : PURCHASES FOR ALL SAMPLE COMPANIES						
Purchases: all shareholders	113	103	66	40	21	343
Purchases: holding companies	50	51	26	22	4	153
Purchases: institutional investors	39	25	13	5	6	88
Purchases: industr. & commerc. co's	10	14	13	7	7	51
Purchases: families and individuals	14	13	14	6	4	51
PANEL B : SALES FOR ALL SAMPLE COMPANIES						
Sales: all shareholders	119	78	81	45	33	356
Sales: holding companies	40	47	46	17	20	170
Sales: institutional investors	49	13	15	12	3	92
Sales: industr. & commerc. Co's	5	4	7	3	6	25
Sales: families and individuals	25	14	13	13	4	69

Source : Own calculations based on BDPart and Ownership Notifications.

Table 4: Tobit model of the determinants of executive board restructuring in listed industrial and commercial companies.

Performance =	Par.Estim P(Chi) Market adj.return (%)		Par.Estim P(Chi) Operating earnings losses (-1=yes)		Par.Estim P(Chi) Dividend cuts (-1=yes)		Par.Estim P(Chi) ROE-indus.median (%)		Par.Estim P(Chi) Δin ROE – Δin industry median		Par.Estim P(Chi) Cash flow on eq. - industry median (%)		Par.Estim P(Chi) Δin CF/Eq –Δin industry median	
1 **Intercept**	-1.59057	* 0.09	-1.27277	** 0.04	-2.59715	** 0.03	-5.26084	*** 0.00	-2.24604	** 0.02	-2.35075	** 0.01	-4.40507	*** 0.00
2 **Performance t-1**	-0.78401	*** 0.00	-0.31887	* 0.09	-0.29769	** 0.05	-0.00470	0.23	-0.05700	* 0.09	-0.01383	0.61	-0.08407	* 0.10
3 **Performance t-2**	-0.35742	* 0.08					-0.09706	* 0.08			0.00136	0.70		
4 **Performance t-3**	-0.56100	* 0.07												
Share stake held by the largest shareholder by category of owner at t-1:														
5 **Holding co's**	0.00346	0.60	-0.01271	*** 0.00	0.00457	0.51	0.01330	0.07	0.00180	0.75	0.00123	0.85	0.00668	0.11
6 **Institutions**	0.00549	0.44	-0.01753	*** 0.00	0.00246	0.72	0.00006	0.99	0.00590	* 0.09	-0.00143	0.85	0.00344	* 0.10
7 **Indus. and comm. co's**	0.02212	* 0.06	0.00347	0.26	0.01100	** 0.02	0.01164	** 0.01	0.01087	*** 0.00	0.00987	** 0.04	0.02046	*** 0.00
8 **Families and individuals**	0.02297	* 0.08	0.01192	* 0.09	0.02706	0.17	0.01456	* 0.07	0.01491	** 0.02	0.00087	0.90	0.01169	** 0.03
Interaction between share stake held by the largest shareholder by category of owner at t-1 and performance at t-1:														
9 **Holding co's**	0.05232	0.11	0.00001	0.77	0.00016	0.37	-0.00015	0.68	0.00019	0.66	-0.00007	0.85	0.00037	0.11
10 **Institutions**	-0.00696	0.81	0.00016	*** 0.00	0.00000	0.98	-0.00097	0.16	0.00058	0.50	0.00011	0.64	-0.00018	0.35
11 **Indus. and comm. co's**	-0.06148	** 0.05	-0.00002	0.32	-0.00007	0.44	-0.00042	* 0.08	0.00037	0.21	-0.00034	0.15	0.00035	* 0.10
12 **Families and individuals**	0.11505	** 0.03	-0.00007	0.31	-0.00066	* 0.10	0.00061	0.36	0.00100	* 0.06	-0.00047	0.32	-0.00043	0.43
Increases in ownership concentration by category of owner within (t-1,t):														
13 **Holding co's**	0.01521	0.28	-0.00259	0.63	-0.00224	0.76	0.00971	0.18	0.02284	** 0.01	0.00863	0.17	0.01869	*** 0.00
14 **Institutions**	1.61149	0.23	0.01714	0.82	0.02262	** 0.03	-0.02440	0.77	-0.03032	0.73	-0.05295	0.65	0.03464	0.59
15 **Indus. and comm. co's**	0.05496	* 0.06	0.02296	** 0.02	0.04032	*** 0.00	0.02014	** 0.02	0.01267	** 0.04	0.01573	** 0.01	0.01007	*** 0.00
16 **Families and individuals**	0.04521	** 0.04	-0.03342	0.31	0.00648	0.56	0.01877	0.30	0.00968	0.77	-0.05741	0.26	-0.00367	0.92
Interaction between increases in ownership concentration by category of owner within (t-1,t) and performance at t-1:														
17 **Holding co's**	0.07118	0.11	-0.00007	0.16	-0.00056	0.15	-0.00123	0.22	-0.00181	** 0.03	-0.00098	* 0.07	0.00059	* 0.08
18 **Institutions**	15.90586	0.23	-0.00002	0.98	-0.03886	0.35	0.00054	0.55	-0.00088	0.41	0.00067	0.38	-0.00063	0.23
19 **Indus. and comm. co's**	-0.15238	** 0.02	-0.00024	** 0.01	-0.00071	*** 0.00	-0.00086	** 0.03	-0.00148	** 0.01	-0.00093	* 0.09	-0.00144	*** 0.00
20 **Families and individuals**	-0.13707	** 0.01	-0.00019	* 0.08	0.04401	0.43	-0.00075	0.35	-0.00023	0.80	-0.00640	* 0.10	0.00336	0.33
21 **Debt/equity at t-1**	0.00890	** 0.04	0.01401	*** 0.00	0.00681	** 0.03	0.02231	*** 0.00	0.00533	0.24	0.01118	** 0.01	0.02212	*** 0.00
22 **Interest coverage at t-1**	-0.00056	** 0.01	-0.00034	** 0.01	-0.00016	0.60	-0.00074	*** 0.00	-0.00011	0.54	-0.00019	* 0.06	-0.00098	*** 0.00
Interaction between debt variables and performance at t-1														
23 **Debt/equity at t-1**	-0.09332	*** 0.00	-0.00059	* 0.07	0.00002	0.91	-0.00059	* 0.10	-0.00100	** 0.02	-0.00735	** 0.05	-0.00066	* 0.06
24 **Interest coverage at t-1**	0.00354	*** 0.00	0.00000	0.32	0.00000	0.62	0.00007	* 0.08	0.00004	0.22	0.00002	0.23	-0.00001	0.39
25 **Chair ≠ CEO (1) at t**	0.29686	* 0.10	0.14492	0.34	0.08951	0.64	0.18795	0.31	0.14951	0.38	0.04767	0.80	-0.14957	0.20

	Coef	Sig	p	Coef	Sig	p	Coef	Sig	p	Coef	Sig	p	Coef	Sig	p	Coef	Sig	p	Coef	Sig	p
26 **Percent. of nonexecs**	5.31115	***	0.00	3.80638	***	0.00	3.44586	***	0.00	5.20913	***	0.00	3.85480	***	0.00	4.17495	***	0.00	4.46604	***	0.00
Interaction between board variables and performance at t-1																					
27 **Chair ≠ CEO (1) at t**	-0.30067		0.14	0.00118		0.42	-0.00401		0.58	0.02899		0.19	-0.02100		0.19	0.01779		0.19	-0.03277	***	0.00
28 **Percent. of nonexecs**	4.66866	**	0.01	0.00133		0.28	-0.00414		0.81	0.02346		0.38	0.00236		0.89	0.04264		0.28	0.00260		0.82
29 **Tot. number of directors**	0.00453		0.87	0.00057		0.67	0.00650		0.55	0.00046		0.61	-0.00851		0.88	0.00032		0.30	0.00152		0.64
30 **Size (Log of tot. assets)**	-0.21246	***	0.00	-0.15899	***	0.00	-0.05734		0.35	-0.04384		0.32	-0.10365	**	0.01	-0.11967	***	0.00	-0.04889	*	0.08
Zero or neg. response	195			192			197			197			197			197			197		
Log likelihood Weibull	-16.773			-20.874			-28.567			-27.947			-24.859			-26.924			-26.924		

(1) A dummy variable equal to 1 is included if the functions of CEO and chairman are combined by one person.

Table 5: Tobit model of the determinants of executive board restructuring in listed holding companies.

Performance =	Market adj.return (%)		Operating earn. losses (-1=yes)		Dividend cuts (-1=yes)		ROE-indus.median (%)		Δin ROE – Δin industry median		Cash flow on eq.- industry median (%)		Δin CF/Eq –Δin indus. median	
	Par.Estim	P(Chi)	Par.Esti	P(Chi)	Par.Estim	P(Chi)	Par.Estim	P(Chi)	Par.Estim	P(Chi)	Par.Estim	P(Chi)	Par.Estim	P(Chi)
1 Intercept	-2.37284	* 0.09	-3.68603	0.12	-0.34073	0.97	-1.36375	0.54	-0.42521	0.83	-1.51379	0.31	-1.85787	0.31
2 Performance t-1	-1.30870	0.38	-0.30066	* 0.09	-0.74106	*** 0.00	-0.00229	0.48	-0.30803	** 0.01	-0.10645	0.32	0.01220	0.20
3 Performance t-2	-0.02472	0.75					-0.14491	* 0.10			-0.20236	* 0.02		
4 Performance t-3	-1.08528	** 0.01												
Share stake held by the largest shareholder by category of owner at t-1:														
5 Holding co's	0.00067	0.93	-0.01075	0.24	-0.00906	** 0.01	-0.02882	*** 0.00	-0.01048	0.14	-0.03187	** 0.00	-0.01475	0.12
6 Institutions	0.00973	0.41	0.01048	0.68	0.00248	0.82	-0.02129	* 0.10	-0.03376	0.17	-0.02671	* 0.06	-0.00557	0.59
7 Indus. and comm. co's	0.02852	** 0.01	0.12457	0.24	-0.02773	0.50	-0.06358	** 0.01	0.01492	0.56	-0.22205	** 0.01	-0.02355	0.52
8 Families and individuals	0.00109	0.89	0.01489	0.16	-0.01479	*** 0.00	-0.03182	*** 0.00	-0.00506	0.67	0.03388	** 0.01	0.01417	0.47
Interaction between share stake held by the largest shareholder by category of owner at t-1 and performance at t-1:														
9 Holding co's	0.03150	0.20	0.00007	0.38	-0.00094	*** 0.00	0.00395	*** 0.00	0.00059	0.38	0.00325	*** 0.00	-0.00007	0.94
10 Institutions	0.01317	0.19	0.00017	0.41	-0.00048	0.45	0.00287	* 0.05	-0.00035	0.50	0.00329	*** 0.00	-0.00053	0.54
11 Indus. and comm. co's	0.07345	* 0.10	0.00160	0.24	-0.00028	0.80	-0.00570	** 0.03	0.00761	*** 0.00	-0.01645	0.27	-0.03967	* 0.06
12 Families and individuals	-0.03263	* 0.07	0.00001	0.71	-0.00024	** 0.05	0.00464	** 0.01	0.00071	0.33	0.00890	** 0.00	-0.00132	0.72
Increases in ownership concentration by category of owner within (t-1,t):														
13 Holding co's	0.00455	0.87	-0.01338	0.44	-0.06775	*** 0.00	0.01735	0.34	-0.00591	0.74	-0.02383	0.39	-0.04158	* 0.06
14 Institutions	-11.49972	0.16	24.25648	0.29	-1.68032	0.59	22.30041	0.35	-7.97964	0.14	-4.48663	* 0.08	6.95358	0.41
15 Families and individuals	1.34751	* 0.07	-5.21520	0.29	-0.00545	0.82	-1.53244	0.29	1.01566	0.16	-1.77376	** 0.04	-1.52486	0.40
Interaction between increases in ownership concentration by category of owner within (t-1,t) and performance at t-1:														
16 Holding co's	0.16037	** 0.01	0.00042	** 0.02	0.00170	*** 0.00	-0.00395	** 0.04	-0.00231	* 0.09	-0.00046	0.93	0.00461	0.38
17 Families and individuals	16.25936	0.16	-0.06893	0.30	0.05833	0.56	-0.67105	0.36	-0.16702	0.12	0.37400	* 0.06	-0.17474	0.44
18 Debt/equity at t-1	0.00981	* 0.08	0.00974	** 0.04	0.01531	** 0.01	0.00096	0.76	0.00772	** 0.01	0.02260	** 0.01	0.00022	0.94
19 Interest coverage at t-1	0.00014	0.84	-0.00239	** 0.04	0.00113	0.21	-0.00214	** 0.04	-0.00419	** 0.03	0.00519	0.12	-0.00307	0.25
Interaction between debt variables and performance at t-1														
20 Debt/equity at t-1	0.02280	0.11	-0.00008	** 0.05	-0.00092	*** 0.00	0.00001	0.97	-0.00058	*** 0.00	0.00232	** 0.01	-0.00075	** 0.04
21 Interest coverage at t-1	-0.00211	0.59	-0.00001	0.11	-0.00011	0.56	0.00019	0.51	0.00018	** 0.03	-0.00096	*** 0.00	0.00012	0.39
22 Chair ≠ CEO (1) at t	-0.07816	0.73	-0.88579	** 0.00	-0.79457	*** 0.00	-0.08235	0.75	-0.93319	** 0.04	-0.45780	* 0.06	-0.61100	0.32
23 Percent. of nonexecs	5.97179	*** 0.0	6.03862	** 0.00	4.05689	*** 0.00	4.44313	*** 0.00	6.79918	*** 0.00	6.28175	*** 0.00	5.72372	*** 0.00
Interaction between board variables and performance at t-1														
24 Chair ≠ CEO (1) at t	0.65725	0.40	-0.00131	0.46	-0.02154	*** 0.00	-0.07418	0.11	-0.03945	0.11	-0.02876	0.26	0.03356	0.37

25 **Percent. of nonexecs**	-7.71821	**	0.04	-0.01051	**	0.02	-0.01853		0.19	0.03948		0.74	0.34014		0.11	-0.14793		0.38	-0.10907	**	0.05
26 **Tot. number of directors**	0.00042		0.77	-0.00073		0.59	0.00079		0.71	0.00110		0.47	-0.00361		0.61	0.00235		0.32	0.00079		0.91
27 **Size (Log of tot. assets)**	-0.20213	*	0.05	-0.07609		0.63	-0.27650	***	0.00	0.00408		0.97	-0.25987	*	0.07	-0.26303	***	0.00	-0.12670		0.33
Zero or neg. response	150			148			143			160			160			160			160		
Log likelihood Weibull	-12.297			-22.042			15.165			-10.436			-20.635			-12.893			-19.897		

(1) A dummy variable equal to 1 is included if the functions of CEO and chairman are combined by one