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Competition, Outside Directors and Executive Turnover: Implications for Corporate Governance in the EU

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Editor:

Prof. Dr. Hans-Theo Normann
Düsseldorf Institute for Competition Economics (DICE)
Phone: +49(0) 211-81-15125, e-mail: normann@dice.hhu.de

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Competition, Outside Directors and Executive Turnover: Implications for Corporate Governance in the EU

Achim Buchwald [a,b]

a) Monopolies Commission, Bonn, Germany

b) Düsseldorf Institute for Competition Economics, Düsseldorf, Germany

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Abstract

This study contributes to the ongoing debate on the relevance of non-executive outside directors for corporate governance building on a large panel of European listed firms in the period 2003 to 2011. Focusing on executive turnover as an indicator for effective monitoring, the findings reveal that outside directors and product market competition are substitutes. Outsiders increase the performance-turnover sensitivity of executives exclusively if competition in the industry is relatively weak. In an environment with effective competition, outsiders do not significantly influence the decision to replace underperforming managers. In fiercely competitive markets, the higher threat of bankruptcy or hostile takeover seems to effectively limit managerial discretion for opportunistic behavior.

JEL-Classification: G34, J24, J63, L40, M00

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Contact Details:

Achim Buchwald

Monopolies Commission
Heilsbachstraße 16, 53123 Bonn, Germany
phone: +49-228/338882-39, e-mail: achim.buchwald@monopolkommission.bund.de

1. Introduction

Initiatives aiming to improve the ongoing professionalization of boards with respect to its monitoring and advising competences and in particular the role of non-executive outside directors on the board are debated at national levels, as well as at a supranational level by the European Commission. The discussion is accompanied and supported by a wide and growing body of theoretical and empirical research in the field of corporate governance and management (Adams, Hermalin and Weisbach, 2010; Hermalin and Weisbach, 2003). Evaluating the effects of outsiders on the board the literature generally provides two diverging theoretical explanations. First, outsiders could mitigate the monitoring intensity. This may be due to a lack of firm-specific knowledge regarding internal processes, strategy or a firm's environment (e.g. Aghion, van Reenen, and Zingales, 2013). Further, outside supervisors may face conflicts of interests and as a consequence have incentives and the discretion for opportunistic behavior, arising for instance from individual utility maximization or mutually exclusive objectives of the sending and receiving firms (Conyon and Read, 2006; Fich and Shivdasani, 2006). Second, in contrary to the negative assessment of outsiders it is highlighted that outsiders are more independent and a scarce capable resource contributing to improve a firm's corporate governance (Masulis and Mobbs, 2011 or Fama and Jensen, 1983).

Empirical research has approached these questions with different emphases and methods. One strand of the literature has focused on executive turnover as an indicator for effective monitoring and governance. In this context, corresponding investigations analyze the relationship between certain board characteristics and board behavior, measured by the ability to replace underperforming managers (e.g. Fahlenbrach, Low, and Stulz, 2010; Fich and Shivdasani, 2006 or Hermalin and Weisbach, 2003).

The present study aims to contribute to extend the current state of research by taking into account the moderating role of product market competition on the expected relationship between outside directors on the board and executive turnover. As a second extension of the present literature the study refers to a supranational perspective using a large panel of listed firms in 15 European member states plus Norway and Switzerland. This cross-country perspective accounts for institutional and legal differences of board structures in different countries allowing us to derive broader and more generalizable implications.

In line with previous studies proportional hazard estimations show that outside directors on the board increase the risk of executive turnover what generally points to intensified monitoring. Further, outsiders significantly increase the performance-turnover sensitivity of executives. Accounting for competition intensity which was calculated on the basis of firm-specific Lerner indices we find that the positive relation between outsiders and monitoring is exclusively significant in the case of weak product market competition. We interpret this finding as evidence that effective competition substitutes for monitoring of outside directors. High competition in a market seems to effectively limit managerial discretion for opportunistic behavior, in so far as the pressure associated with competition forces managers to maximize firm value in the interests of shareholders. However, in situations of weak competition monitoring capacities of outside directors seem to be a crucial mechanism of corporate governance. The findings are robust to different measures of firm performance and competition. The results have also implications for competition policy. Since outside directors on the board increase executive fluctuation in particular if competition intensity is low, firm linkages via multiple directorships do not point to intensified collusion.

In the next section the theoretical considerations and previous related empirical results are discussed. Section 3 provides an overview on the institutional framework,

data sources and descriptive results. In section 4 the econometric set-up is introduced and main findings based on proportional hazard estimations are provided. The concluding section 5 discusses implications for business practice and policy-makers.

2. Theoretical Considerations and Previous Empirical Findings

During the last decades, various studies have examined the importance of certain board characteristics for firm behavior and outcomes. A recent comprehensive summary is provided by Adams, Hermalin and Weisbach (2010). Among other factors, research has focused on the role of board size (Yermack, 1996), staggered boards (Bebchuk and Cohen, 2005), CEO-chairman duality (Goyal and Park, 2002) or demographic factors, e.g. age, tenure or education (van der Walt and Ingley, 2003; Carpenter and Westphal, 2001; Hambrick and Fukutomi, 1991 or Hambrick and Mason, 1984), gender (Adams and Ferreira, 2009; Croson and Gneezy, 2009; Niederle and Vesterlund, 2007) or team diversity (Talke, Salomo, and Rost, 2010; Knight *et al.*, 1999; Hambrick, Cho, and Chen, 1996). Another distinct feature of board composition is the presence of non-executive outside directors in the boardroom. This empirical phenomenon has long been the subject of debate in the political discourse and is experiencing growing attention in economic research. In the literature conflicting approaches are brought forward to explain the relevance of outside directors for monitoring. It is argued that multiple directorships reflect the outstanding and scarce skills and experiences of top-managers in a concentrated labor market (Fama and Jensen, 1983). Since only a limited number of suitable candidates meet the high requirements, firms aim to co-opt these individuals to the board. Building on a principal-agent perspective, outside directors act as intermediates to align the interests of the incumbent management and shareholders. Typical agency problems refer to management remuneration and executive appointment

or replacement decisions (Hermalin and Weisbach, 2003, 1998). It is assumed that outsiders tend to be more independent monitors since they are usually full-time professionals in an executive position of another firm (Fahlenbrach, Low, and Stulz, 2010; Masulis and Mobbs, 2011; Hermalin, 2005). Regularly, income from their main activity exceeds compensation for additional outside positions by multiples. Directors use outside mandates primarily to increase their reputation or social status, establish new business contacts but also to extend their own ability and skills (Fich and White, 2005; Mace, 1986). Therefore both sending and receiving firms might benefit from the director interlock (Conyon and Read, 2006; Rosenstein and Wyatt, 1994). Further, outside directors increase the human capital in the boardroom if they provide certain expertise (Coles, Daniel, and Naveen, 2012; Uddin, 2012; Fich, 2005). This includes academic education (Carpenter and Westphal, 2001; Erhardt, Werbel, and Shrader, 2003; Kang, Cheng, and Gray, 2007) or professional background, for instance commercial banking (Booth and Deli, 1999), political connections (Faccio, 2006; Agrawal and Knoeber, 2001) or industry-specific experience (e.g. Kor and Sundaramurthy, 2009 or Balsmeier, Buchwald, and Stiebale, 2014 for a recent discussion).

Theoretical considerations could also derive negative aspects of multiple directorships if outsiders actually enhance agency problems of a firm. In particular, opportunistic behavior of outside directors could stem from conflicts of interests between supervisors and shareholders. Conyon and Read (2006) show that directors have incentives for exaggerated board seat accumulation to increase additional payments and to realize non-pecuniary benefits, e.g. influence, prestige or social status (Yermack, 2004 or Useem and Karabel, 1986). With an increasing number of simultaneous board mandates directors are prevented from conscientiously performing their duties in the respective firms resulting in an extenuated rate of control intensity

(Fich and Shivdasani, 2006; Perry and Peyer, 2005). Conflicts of interest might further arise from contradictory objectives of the director's home firm and the appointing firm. Dittmann, Maug and Schneider (2010) describe and empirically analyze typical conflicts in the case of bank representatives on the board of non-financial firms. Further, conflicts of interests are also relevant in the context of competition policy and in particular in the case of vertical relations. Establishing a personal connection with an up- or downstream firm, the sending firm gains influence on and access to confidential information of the target firm. It is possible that the sending firm tries to use this potential influence to maximize its own benefit at the cost of the appointing firm (see Buchwald, forthcoming for a discussion).

Other authors analyze social networks and disclose multiple directorships among officials with reciprocal relations (Cohen, Frazzini, and Malloy, 2008; Hwang and Kim, 2009). In conjunction with the finding that executives might be able to exercise influence on the appointment of new directors (Shivdasani and Yermack, 1999), outsiders on the board would thus even enhance managers' ability to escape from any efficient control (Fisman *et al.*, 2013). Finally, from a knowledge-based view one might also argue that outside directors lack sufficient information on firm-specific processes or strategy mitigating their ability to effectively supervise and evaluate executives' ability (Aghion, van Reenen, and Zingales, 2013; Balsmeier, Buchwald, and Stiebale, 2014).

The previous section has shown that theory allows opposing conclusions what illustrates the need for complementary empirical investigations. However, previous empirical findings do not reveal a uniform picture so far but often show that the assessment of the effects of outside directorships strongly depends on specific conditions. While a number of studies are interested in the relationship between outsiders and corporate financial performance (Masulis and Mobbs, 2011; Fahlenbrach,

Low, and Stulz, 2010; Jiraporn, Kim, and Davidson III, 2008; Perry and Peyer, 2005), other papers investigate their influence on board behavior. Ryan and Wiggins (2004) show that directors are more likely to receive equity-based compensation with an increasing fraction of outsiders pointing to more independent boards. In contrast, Core, Holthausen, and Larcker (1999) find that CEO compensation increases with the fraction of outside directors who simultaneously hold at least three board positions ("busy directors"). Similar, using different network measures, Barnea and Guedj (2009) show that firms with well-connected directors are characterized by higher CEO payments and lower CEO turnover-performance sensitivities and forced CEO departures. This is consistent with Fich and Shivdasani (2006) who report that firms with a majority of "busy directors" face lower turnover-performance sensitivities of CEOs indicating weaker governance. In general, executive turnover is a suitable indicator to assess monitoring abilities of the board because those events represent the potential to replace underperforming managers. Fahlenbrach, Low, and Stulz (2010) find no significant impact of the appointment of CEOs as outside directors on the turnover-performance sensitivity of the incumbent CEO. At the same time they are more likely to leave a board if they expect a decline in performance (Fahlenbrach, Low, and Stulz, 2013). Hermalin and Weisbach (2003) hypothesize that CEO turnover is more sensitive to performance when the board is more independent. This is supported by Weisbach (1988) who document higher sensitivity of turnover to performance in outsider dominated boards. Recent evidence for a sample of German firms also leads to a rather positive assessment of outside directors in terms of monitoring. Balsmeier, Buchwald and Dilger (forthcoming) find that outside directors who hold a parallel executive position significantly increase turnover of the executives they supervise. Further, they find that the relation depends on ownership concentration. Outside directors significantly increase executive turnover solely in situations of high free float. This

finding is interpreted as evidence that monitoring executed by shareholders and outside directors are substitutes. In addition, similar to Borokhovich, Parrino and Trapani (1996), Balsmeier, Buchwald and Zimmermann (2013) find that outside directors who simultaneously hold a management board position seem to facilitate the search for suitable external candidates in the case of (forced) CEO replacements and therefore contribute to improve the control intensity.

Within the scope of this investigation we consider the relevance of outside directors for board monitoring, measured by executive turnover, from a European perspective. Based on the theoretical predictions and previous empirical evidence we expect either a positive or negative influence on the monitoring intensity. Further, we are interested in the moderating effect of product market competition. One might argue that in environments with weak competition, the monitoring expertise of the board is particularly important to discipline the management. In situations of intense competition, executives should be disciplined by higher market pressure (Aghion, van Reenen, and Zingales, 2013; Karuna, 2007; Bertrand and Mullainathan, 2003; Hart and Oliver D., 1983). This may include an increased risk of bankruptcy or hostile takeover (Schmidt, 1997; Shleifer and Vishny, 1997). Supposing that outside directors enhance the efficiency of board monitoring we would expect that their influence is stronger in industries that are characterized by relative low competition. Another reasoning that is in line with the latter assumption refers to management quality. Van Reenen (2011) finds evidence that competition positively influences management quality which in turn increases productivity. This selection of more able managers in competitive environments should result in higher management quality with a lower probability of executive replacements and weaker need for monitoring by outsiders.

3. Institutional Framework and Data

Most previous studies in corporate governance research that deal with the makeup and effects of boards restricted their scope of analysis to single countries and in the vast majority to the US. To be able to get a more comprehensive picture of the functioning of boards the present study extended the analysis to listed firms in 15 different European member states plus Norway and Switzerland. A corresponding cross-country research design accounts for partially existing legal and institutional national differences upon firms highlighted by Kogut (2012) or Munari, Oriani and Sobrero (2010). Noteworthy differences include monistic board structures in Anglo-Saxon countries vs. dualistic or two-tiered boards in a number of continental European countries (Heidrick & Struggles, 2014, 2011). Further aspects concern the permission of personnel overlaps between executive or non-executive board positions, director interlocks between firms, restrictions of the number of simultaneous board mandates or the participation of employee representatives and certain gender quotas (e.g. Buchwald and Hottenrott, 2015; Balsmeier, Buchwald, and Peters, 2011; Gorton and Schmid, 2004 for an overview).

While these structural differences tend to limit the comparability of firms in single governance regimes, a progressing convergence process of governance systems is observable in Europe. This finds practical expression through an ongoing internationalization of multiple directorships and the implementation of directives and guidelines published by the European Commission. For instance, the European Commission (2011) prepared a Green Paper on corporate governance practices including recommendations for an effective composition of the board of directors. The council regulation on the statute for a European company allows firms to choose between a monistic or dualistic structure for its governing bodies (European Commission, 2001). In the empirical literature it is argued that board responsibilities are

similar in both two-tiered and Anglo-Saxon one-tiered boards (Fauver and Fuerst, 2006). In addition, Kaplan (1997) finds for a cross-country study that the punishment of underperforming managers is similar in different corporate governance systems.

Director-level data is used to model the relationship between outside directors and executive duration (for a detailed description of the data collection and compilation process see Buchwald, forthcoming; Monopolkommission, 2014). The initial data is obtained from Thomson Reuter's "Officers & Directors" database which includes information on executive and non-executive directors on the boards on an individual spell-level for nearly all European publicly listed firms in the period 2003 to 2011. This information is used to indicate tenure and failure events of executive directors. Further, we rely on this source to calculate the number and fraction of outside directors on the board. A non-executive director is classified as an outsider if he simultaneously holds at least one other board mandate within the sample firms. Additional financial and ownership data on the firm-level was obtained from the "ORBIS" database of Bureau van Dijk. Table I describes all variables that have been used in this study and refers to the corresponding sources.

(Table I: Variable definitions and data sources)

During the data cleansing process all subsidiaries which are majority owned by a global parent company were excluded. The assumption behind this approach is that subsidiaries' actions, like the decision to replace incumbent managers, are often presumably determined by the ultimate owner. Financial services providers were removed to provide appropriate comparability of financial information among the sample firms. After the final correction for missing values, the baseline panel includes 3,369 different European listed firms with a total of 18,369 executive directors and 61,254 associated person-year observations during the sample period. The distribution

of firms and executive directors by country is summarized in Table II.

(Table II: Pooled distribution by country)

Further, the number of executive director spells is with a value of 18,862 larger than the number of individual directors indicating a number of follow-up spells among the sample firms. In sum, we observe 6,665 failure events. Average executive tenure amounts to 4.5 years. Table I provides the pooled descriptive statistics. The corresponding correlation coefficients are shown in Table IV.

(Table III: Descriptive statistics)

(Table IV: Correlation coefficients)

In the empirical estimations we apply a set of variables to examine the influence of firm performance on executive turnover. At this we rely primarily on accounting-based measures of corporate performance like return on assets (*ROA*), return on equity (*ROE*) or return on capital employed (*ROCE*) which are identified to be more appropriate predictors of management turnover than stock price performance (Hermalin and Weisbach, 2003). However, in alternative regressions we also use *Tobin's Q* as an indicator for market-based performance.

Another widely used predictor of director turnover is the capital structure. It is argued that capital control is relatively weak in the absence of large blockholders increasing executives' discretion for opportunistic behavior (Balsmeier, Buchwald, and Dilger, forthcoming). To account for ownership dispersion, we use a dummy variable (*Block*) if one or more shareholders own a fraction of at least 25 % of the voting rights (Czarnitzki and Kraft, 2009). The ratio of debt to equity (*Debt Equity Ratio*) controls for firm leverage. Firm size is measured by the number of *Employees*. In line with the literature, we expect that the size of the board of directors might have an influence on

the monitoring intensity (Yermack, 1996). We distinguish between the number of executive directors (*No. Executives*) and the number of non-executive monitoring directors (*No. Non-Executives*).

We rely on the work of Aghion *et al.* (2005) and Nickell (1996) to calculate a widely accepted indicator for product market competition. The competition measure is based on the Lerner Indices, a price cost margin that was available for about 730.000 European firms (Monopolkommission, 2014). This information allows us to identify if competition in a certain industry on the NACE Rev. 2 three-digit numerical code level is higher or below the median on the country-level (*Dummy High Competition*) in a certain year.

The primary focus of interest of this study is to explore the relationship between outside directors and executive turnover. Therefore, to measure outside director representation on the board we use three different variables. These are the absolute number of outsiders (*No. Outside Directors*), a dummy that equals one if at least one outside director holds a mandate on the respective board (*Dummy Outside Directors*) and the number of outsiders in relation to the total number of non-executive board members (*Fraction Outside Directors*). Figure I graphically illustrates the development of the fraction of outside directors on the country-level during the years 2003 to 2011. On average across all countries, the presence of outsiders slightly decreased from 30.7 percent in 2003 to 27.1 percent in the year 2011.

(Figure I: Fraction of outside directors on the board during the period 2003 to 2011)

4. Empirical Results

4.1. Basic Model

We adopt semi-parametric Cox proportional hazard estimations to model the impact of different factors on the probability of executive failure events. Duration analyses are a suitable econometric approach to take account of the specific spell-structure of the data at hand. In particular, the Cox proportional hazard model is useful to handle right-censored data, meaning that an executive is still in office at the end of the observation period. Further, the model does not require assumptions concerning the distribution of the hazard function (see Wooldridge, 2010; Greene, 2003 or Kalbfleisch and Prentice, 2002). Because it is likely that firms differ in their corporate employment practice, we relaxed the assumption of identical baseline hazards by stratifying all model specifications on the firm-level. This approach controls for unobserved heterogeneity across firms but also across industries and countries (Balsmeier, Buchwald, and Dilger, forthcoming). The test for the proportional hazard assumption was conducted for each covariate and the global model and was insignificant for all model specifications (Hosmer, Lemeshow, and May, 2008).

Table V shows the results of Cox proportional hazard regressions of executive turnover. In the basic specification (a) we include the previously introduced firm- and board-specific variables. In specifications (b), (d) and (f) we control for the influence of the different covariates indicating outside director representation.

(Table V: Cox proportional hazard regressions of executive turnover)

Both higher firm performance, measured by return on assets and the competition intensity in the market have no significant influence on executive duration. If at least one shareholder owns a significant stake of a firm's equity, the risk of executive

turnover significantly decreases between 16 and 18 percent, depending on the respective specification. This finding is surprising at a first glance considering that managerial discretion is more pronounced in the absence of controlling shareholders (e.g. Balsmeier, Buchwald, and Dilger, forthcoming or Hart, 2001 for a discussion). However, the result is in line with Aghion, van Reenen, and Zingales (2013) who argue and find evidence that institutional owners protect CEOs from being fired after a short-term decline in profitability. Larger firms exhibit a significant lower risk of executive turnover. With respect to board size, we find contradictory results for the total number of executive and non-executive directors. With an increasing number of executive board members, the risk of turnover increases for each member. Concurrently, a higher number of monitoring non-executives is associated with longer tenure of the management. This finding points to efficient monitoring of smaller boards (Yermack, 1996).

Table V further indicates that all variables representing outside directors on the board increase the likelihood of executive turnover. For instance, if at least one outside director holds a non-executive mandate, the risk of executive turnover increases by more than 50 percent. Specification (d) reveals that every additional outside director increases the hazard rate of executives by 17 percent. To further investigate the influence of outside directors on the monitoring intensity, specifications (c), (e) and (g) interact return on assets with the respective indicators. The coefficients on the interaction term are negative and significant indicating that executives on boards that are monitored by outside directors are less likely to leave the firm if financial performance is higher and vice versa.

4.2. Executive Turnover and Product Market Competition

The previous results have shown that executive replacements are more sensitive to

financial performance if the board is supervised by outside directors. In this section, we further analyze the role of outside directors for corporate governance and test whether the influence of outside directors on the performance-turnover sensitivity is conditional on the intensity of product market competition. To address this question, we follow the approach of Aghion, van Reenen and Zingales (2013) and split the sample by whether competition in the firms' focal market is above or below the national industry average in a current year. In columns (a) and (b) Table VI reports the results from hazard estimations for the full sample and in columns (c) and (d) results for the subsample of firms in industries with high competition. Specifications (e) and (f) repeat the estimations for the subsample of observations with low competition.

For each sample, we use two different performance indicators to measure the performance-turnover sensitivity: continuous return on assets and a dummy that equals one if a firm's return on assets is below the annual industry average. Because all outside director indicator variables yielded similar results, the following analyses are based on the fraction of outside directors on the board.

(Table VI: Cox proportional hazard regressions accounting for product market competition)

Table VI shows that a higher fraction of outside directors significantly increases executive fluctuation in all specifications. Further, results for the full sample reveal that a higher proportion of outside directors influence the performance-turnover sensitivity. First, executive turnover is less frequently with higher return on assets and second, executives are more likely to be replaced in the case of below-average returns.

However, the comparison between the subsamples for high and low competition illustrates that the finding is driven by firms in environments with low competition. These results support the assumption that monitoring executed by outside directors is

particularly valuable in the absence of effective competition. Conversely, fierce competition associated with a higher pressure to maximize profits seems to act as an alternative mechanism of executive control.

4.3. Further Robustness Checks

As an additional robustness check Table VII repeats the previous subsample estimations using different performance measures. Supplementary to return on assets we tested the below-average dummies for return on equity, return on capital employed and Tobin's Q to measure stock price performance. The isolated effect of the respective variables is positive and significant for the observations with high competition reflecting that executive replacement decisions seem to be related to financial performance for these firms. In the subsample for low competition we find only weak evidence in the case of return on equity. Interestingly, below-average market performance has no significant effect in the case of high competition and even a negative and significant effect in industries with low competition. This finding appears to be puzzling given that lower stock price performance increases executive duration pointing to a lower market value orientation if product market competition is rather low. Further, in neither subsample the proportion of outside supervisors is significantly related to executive turnover in the Tobin's Q regressions (c) and (f). With regard to the interaction terms it appears again that the influence of outside monitors on the performance-turnover sensitivities is positive and highly significant exclusively in the subsample with weak competition. For the Tobin's Q regression (c) we derive a weakly positively significant coefficient and the magnitude of this effect is larger in the estimation for industries with a lower level of competition (f). While executive turnover is negatively related to lower market performance in the latter specification, outside directors actually seem to consider market-based performance in the context of their

monitoring activities. In sum, the findings support the hypothesis that outside directors contribute to increase the monitoring intensity in the boardroom if managers are insufficiently disciplined by effective product market competition.

(Table VII: Cox proportional hazard regressions controlling for alternative performance measures)

Finally, we tested whether the results are robust to alternative measures of competition. Table VIII shows the results for the observations with weak and strong competition using four- and more aggregated two-digit NACE industry codes to calculate the median of the Lerner index. Additionally, specifications (c) and (f) include a time-invariant measure on the three-digit level as introduced by Aghion, van Reenen and Zingales (2013). The estimations yielded similar results in all specifications. While outside directors increase executive duration, the interaction term remains positive and significant only if competition intensity is low.

(Table VIII: Cox proportional hazard regressions controlling for different measures of product market competition)

5. Discussion

This paper aims to contribute to the current debate on efficient board composition by empirically analyzing the influence of non-executive outside directors on the board of a large sample of European firms on managerial turnover. In addition to previous studies that have mainly focused on specific characteristics of outsiders, for example experiences and knowledge, time constraints or conflicts of interest, this paper addresses the moderating effect of product market competition in the relationship between outside directors and the sensitivity of turnover to corporate financial

performance. The rationale is that the principal-agent conflict between shareholders and management is intensified in environments of weak product market competition that encourage opportunistic behavior. In such an environment, independent outside monitoring directors should be of particular importance for a firm's corporate governance. In fiercely competitive markets, the higher threat of bankruptcy or hostile takeover sets incentives for managers to behave in the interest of shareholders.

The empirical results clearly suggest that outside directors and product market competition are substitutes. We find that the presence of outside directors on the board increases the risk of executive turnover. However, the influence of outsiders on the performance-turnover sensitivity of executives is positive and significant if competition in the industry is relatively low. For observations in markets with high competition, the interaction is insignificant. In addition, we do not find that competition has an impact on executive fluctuation. This finding points to a selection of better managerial talent in competitive markets or simultaneously greater managerial entrenchment in industries with lower competition.

Indeed, it could be argued that the availability of outside expertise should be particularly valuable when competition is high. This argumentation does not necessarily conflict with the previous explanation, given that in respective environments the main benefits of outsiders arise from their advising role to support the appointing firm in gaining and maintaining competitive advantages rather than from their function as independent supervisors.

The paper supplements recent publications that formulate recommendations concerning diversity of non-executive directors' profiles e.g. professional and international experience, independence and availability (European Commission, 2011) by shifting emphasis towards external factors that have obviously practical implications for corporate governance.

Assessing the results from the point of view of competition policy, the development of inter-firm relationships via multiple directorships does not point to intensified collusion. It is argued that personal interlocks may facilitate informal coordination or illegal agreements between competitors or in the case of vertical relations (Buchwald, forthcoming; Mizruchi, 1996). If this is true, one would expect – if at all – a decrease in executive fluctuation. Indeed, the issue of outside directorships is also relevant in the context of the current consultation on merger control by the European Commission (2013). In this context it might be possible that director linkages are a mechanism to exert influence on a target firm. Therefore, our findings could also reflect that firms use the potential to exert influence via outside directorships to replace incumbent managers by preferred loyal candidates.

Figures and Tables

Table I: Variable definitions and data sources

Variable	*Description*	*Source*
Firm Characteristics		
Return on Assets	(Profit (Loss) for period / Shareholders Funds) * 100	Bureau van Dijk
ROA low	Dummy indicating whether firm performance is below the average industry-adjusted ROA	Bureau van Dijk
Return on Equity	(Profit (Loss) for period / Total Assets) * 100	Bureau van Dijk
ROE low	Dummy indicating whether firm performance is below the average industry-adjusted ROE	Bureau van Dijk
Return on Capital Employed	(Profit (Loss) for period + Interest Paid) / (Shareholders Funds + NonCurrent Liabilities) * 100	Bureau van Dijk
ROCE low	Dummy indicating whether firm performance is below the average industry-adjusted ROCE	Bureau van Dijk
Tobin's Q	(Market value + Total Assets - Shareholders Funds)/Total Assets	Bureau van Dijk
Tobin's Q low	Dummy indicating whether firm performance is below the average industry-adjusted Tobin's Q	Bureau van Dijk
Dummy High Competition	Dummy indicating whether industry-specific competition intensity is above the median for each country	Bureau van Dijk
Block	Dummy variable that equals 1 if the largest shareholder owns at least 25 % of the capital stock	Bureau van Dijk
Debt Equity Ratio	(Total Assets - Shareholders Funds) / Shareholders Funds	Bureau van Dijk
Employees	Number of employees	Bureau van Dijk
No. Executives	Number of executives directors on the board	ThomsonReuters
No. Non-Executives	Number of non-executives directors on the board	ThomsonReuters
Dummy Outside Directors	Dummy indicating if at least one outside director holds a non-executive position on the board	ThomsonReuters
No. Outside Directors	Number of outside non-executive directors	ThomsonReuters
Fraction Outside Directors	Proportion of outside non-executive directors	ThomsonReuters
Individual Characteristics		
Tenure	Executives' tenure in office in years	ThomsonReuters
Failure	Dummy indicating if an executive director leaves the board	ThomsonReuters

Notes: Bureau van Dijk: "ORBIS" database. ThomsonReuters: "Officers & Directors" database.

Table II: Pooled distribution by country

Country (Iso-Code)	*No. Firms*	*Firm-year level*		*Director-year level*	
		No. Observations	*Fraction*	*No. Observations*	*Fraction*
Austria (AT)	48	236	1.4	679	1.1
Belgium (BE)	80	345	2.0	1,261	2.1
Switzerland (CH)	110	730	4.3	4,378	7.1
Germany (DE)	456	2,193	13.0	6,133	10.0
Denmark (DK)	71	358	2.1	1,102	1.8
Spain (ES)	101	483	2.9	1,049	1.7
Finland (FI)	93	682	4.0	4,344	7.1
France (FR)	412	2,025	12.0	7,912	12.9
United Kingdom (UK)	1,115	5,630	33.3	17,828	29.1
Greece (GR)	165	750	4.4	3,279	5.4
Ireland (IE)	51	252	1.5	1,193	1.9
Italy (IT)	122	434	2.6	1,322	2.2
Luxembourg (LU)	14	49	0.3	213	0.3
Netherlands (NL)	114	636	3.8	2,427	4.0
Norway (NO)	117	555	3.3	2,358	3.8
Portugal (PT)	21	70	0.4	211	0.3
Sweden (SE)	286	1,487	8.8	5,565	9.1
Total	3,376	16,915	100.0	61,254	100.0

Table III: Descriptive statistics

Variable	*Obs.*	*Mean*	*Std. Dev.*	*Min*	*Max*
Firm Characteristics (No. Firms: 3,376)					
Return on Assets	16,915	1.27	11.40	-61.52	26.89
ROA low	16,915	0.31	-	0	1
Return on Equity	16,915	2.36	28.69	-206.99	78.75
ROE low	16,915	0.27	-	0	1
Return on Capital Employed	16,915	4.52	17.57	-104.01	49.43
ROCE low	16,915	0.26	-	0	1
Tobin's Q	11,428	1.49	1.78	0.11	128.79
Tobin's Q low	11,428	0.76	0.43	0	1
Dummy High Competition	16,915	0.48	-	0	1
Block	16,915	0.35	-	0	1
Debt Equity Ratio	16,915	2	2	0	15
Employees	16,915	10,066.82	37,679.51	1	639,904
No. Executives	16,915	6.45	4.45	1	29
No. Non-Executives	16,915	5.84	3.64	1	33
Dummy Outside Directors	16,915	0.67	-	0	1
No. Outside Directors	16,915	1.64	1.83	0	14
Fraction Outside Directors	16,915	26.73	25.57	0.00	100.00
Individual Characteristics (No. Individuals: 18,369)					
Tenure	61,254	4.46	3.94	1	44
Failure	61,254	0.11	-	0	1

Table IV: Correlation coefficients

		(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*	*(15)*	*(16)*	*(17)*	*(18)*	*(19)*
(1)	Return on Assets	1.00																		
(2)	ROA low	-0.66	1.00																	
(3)	Return on Equity	0.86	-0.64	1.00																
(4)	ROE low	-0.64	0.81	-0.64	1.00															
(5)	Return on Capital Employed	0.94	-0.64	0.88	-0.63	1.00														
(6)	ROCE low	-0.64	0.78	-0.61	0.80	-0.65	1.00													
(7)	Tobin's Q	0.09	-0.07	0.08	-0.05	0.08	-0.05	1.00												
(8)	Tobin's Q low	-0.22	0.16	-0.22	0.12	-0.21	0.13	-0.37	1.00											
(9)	Dummy High Competition	-0.04	0.09	-0.04	0.10	-0.04	0.11	-0.07	0.02	1.00										
(10)	Block	0.00	0.02	-0.02	0.03	0.00	0.01	-0.05	0.06	0.00	1.00									
(11)	Debt Equity Ratio	-0.08	0.13	-0.13	0.09	-0.01	0.03	-0.08	0.12	0.07	0.07	1.00								
(12)	Employees	0.07	-0.10	0.11	-0.11	0.08	-0.10	-0.03	0.05	0.05	-0.05	0.17	1.00							
(13)	No. Executives	0.12	-0.10	0.12	-0.10	0.12	-0.11	0.01	-0.03	-0.04	0.03	0.06	0.26	1.00						
(14)	No. Non-Executives	0.10	-0.11	0.13	-0.11	0.10	-0.11	-0.03	0.03	0.03	0.03	0.15	0.46	0.30	1.00					
(15)	Dummy Outside Directors	0.08	-0.09	0.11	-0.08	0.09	-0.09	0.04	-0.08	0.03	-0.10	0.04	0.18	0.18	0.34	1.00				
(16)	No. Outside Directors	0.11	-0.13	0.15	-0.13	0.12	-0.14	0.00	-0.03	0.02	-0.08	0.12	0.49	0.34	0.62	0.59	1.00			
(17)	Fraction Outside Directors	0.08	-0.09	0.11	-0.08	0.09	-0.10	0.03	-0.08	0.02	-0.15	0.04	0.19	0.18	0.11	0.71	0.73	1.00		
(18)	Tenure	0.09	-0.08	0.08	-0.08	0.08	-0.06	0.02	-0.04	0.01	0.01	-0.04	-0.03	-0.04	-0.04	-0.05	-0.06	-0.06	1.00	
(19)	Failure	-0.05	0.06	-0.04	0.06	-0.04	0.05	0.00	0.02	0.00	-0.02	0.01	0.01	0.03	0.02	0.04	0.03	0.04	-0.03	1.00

Notes: The table presents the correlation coefficients between the variables used in the study (n=61,254).

Table V: Cox proportional hazard regressions of executive turnover

	Model						
	(a)	***(b)***	***(c)***	***(d)***	***(e)***	***(f)***	***(g)***
Return on Assets	-0.000	-0.000	0.005	-0.001	0.004	-0.001	0.004
	(-0.05)	(-0.20)	(1.48)	(-0.44)	(1.46)	(-0.41)	(1.44)
Dummy HighCompetition	0.003	-0.004	-0.009	-0.003	-0.004	0.001	-0.001
	(0.06)	(-0.08)	(-0.19)	(-0.06)	(-0.08)	(0.02)	(-0.02)
Block	-0.194***	-0.195***	-0.198***	-0.178***	-0.182***	-0.179***	-0.182***
	(-3.10)	(-3.08)	(-3.14)	(-2.84)	(-2.89)	(-2.86)	(-2.91)
Debt Equity Ratio	-0.032*	-0.031*	-0.030*	-0.032*	-0.031*	-0.032*	-0.030*
	(-1.82)	(-1.77)	(-1.72)	(-1.76)	(-1.74)	(-1.77)	(-1.68)
Log Employees	-0.370***	-0.358***	-0.358***	-0.380***	-0.383***	-0.369***	-0.370***
	(-5.49)	(-5.28)	(-5.27)	(-5.56)	(-5.58)	(-5.43)	(-5.42)
No. Executives	0.257***	0.257***	0.257***	0.253***	0.253***	0.254***	0.254***
	(24.24)	(24.31)	(24.28)	(23.97)	(23.92)	(24.02)	(24.00)
No. Non-Executives	-0.041**	-0.053***	-0.053***	-0.083***	-0.084***	-0.034*	-0.034*
	(-2.28)	(-2.85)	(-2.85)	(-4.22)	(-4.26)	(-1.86)	(-1.89)
Dummy Outside Directors		0.431***	0.426***				
		(6.67)	(6.58)				
ROA x Dummy Outsiders			-0.008*				
			(-1.92)				
No. Outside Directors				0.157***	0.165***		
				(7.78)	(8.06)		
ROA x No. Outsiders					-0.003***		
					(-2.74)		
Fraction Outside Directors						0.009***	0.009***
						(7.74)	(7.73)
ROA x Fraction Outsiders							-0.000**
							(-2.49)
No. Spells	18,862	18,862	18,862	18,862	18,862	18,862	18,862
No. Failures	6,665	6,665	6,665	6,665	6,665	6,665	6,665
No. Observations	61,254	61,254	61,254	61,254	61,254	61,254	61,254
Pseudo R^2	0.048	0.050	0.050	0.051	0.052	0.051	0.051
Log Likelihood	-9,653	-9634.824	-9,633	-9624.024	-9,621	-9627.870	-9,625
Akaike Information Criterion (AIC)	19,319.33	19,285.65	19,284.74	19,264.05	19,260.40	19,271.74	19,268.93
Stratified (firm-level)	yes	yes	yes	yes	yes	yes	yes
Global Test of PH Assumption (χ2)	6.32	6.71	6.64	6.82	7.24	6.33	6.72

Notes: The table reports estimations of executive turnover likelihoods using Cox proportional hazard models. The dependent variable is the hazard rate. Positive coefficients imply an increase of the hazard rate and thus a higher risk of turnover while negative coefficients imply a longer expected tenure of the executives in the sample. Z-statistics (in parentheses) are calculated using heteroskedasticity-robust standard errors that allow for autocorrelation at the firm-level. All estimations stratified on the firm-level to control for unobserved heterogeneity across firms. *, **, *** denote significance at the 10%, 5% and 1% levels, respectively.

Table VI: Cox proportional hazard regressions accounting for product market competition

	Model					
	Full Sample		***High Competition***		***Low Competition***	
	(a)	***(b)***	***(c)***	***(d)***	***(e)***	***(f)***
Return on Assets	0.004		0.001		0.009**	
	(1.44)		(0.27)		(2.20)	
ROA low		0.100		0.203**		-0.166*
		(1.53)		(2.04)		(-1.66)
Dummy High Competition	-0.001	-0.012				
	(-0.02)	(-0.25)				
Block	-0.182***	-0.182***	-0.375***	-0.367***	-0.219**	-0.217**
	(-2.91)	(-2.89)	(-3.72)	(-3.64)	(-2.23)	(-2.22)
Debt Equity Ratio	-0.030*	-0.042**	-0.031	-0.050*	-0.016	-0.023
	(-1.68)	(-2.36)	(-1.15)	(-1.81)	(-0.54)	(-0.77)
Log Employees	-0.370***	-0.381***	-0.226***	-0.252***	-0.476***	-0.468***
	(-5.42)	(-5.56)	(-2.94)	(-3.33)	(-3.30)	(-3.25)
No. Executives	0.254***	0.252***	0.222***	0.219***	0.263***	0.266***
	(24.00)	(23.88)	(11.86)	(11.69)	(17.96)	(18.08)
No. Non-Executives	-0.034*	-0.034*	-0.106***	-0.103***	0.031	0.028
	(-1.89)	(-1.89)	(-4.15)	(-4.06)	(1.18)	(1.07)
Fraction Outside Directors	0.009***	0.008***	0.008***	0.007***	0.009***	0.006***
	(7.73)	(5.87)	(4.57)	(3.69)	(4.76)	(2.89)
ROA x Fraction Outsiders	-0.000**		-0.000		-0.000***	
	(-2.49)		(-0.36)		(-3.28)	
ROA low x Fraction Outsiders		0.004**		0.003		0.010***
		(2.57)		(1.07)		(4.08)
No. Spells	18,862	18,862	9,058	9,058	9,804	9,804
No. Failures	6,665	6,665	3,156	3,156	3,509	3,509
No. Observations	61,254	61,254	29,229	29,229	32,025	32,025
Pseudo R^2	0.051	0.052	0.044	0.046	0.053	0.054
Log Likelihood	-9,625	-9,614	-3,753	-3,745	-4,355	-4,351
Akaike Information Criterion (AIC)	19,268.93	19,245.06	7,522.44	7,505.71	8,726.61	8,718.77
Stratified (firm-level)	yes	yes	yes	yes	yes	yes
Global Test of PH Assumption ($\chi 2$)	6.72	6.33	2.52	2.38	11.16	12.02

Notes: The table reports estimations of executive turnover likelihoods using Cox proportional hazard models. The dependent variable is the hazard rate. Positive coefficients imply an increase of the hazard rate and thus a higher risk of turnover while negative coefficients imply a longer expected tenure of the executives in the sample. Z-statistics (in parentheses) are calculated using heteroskedasticity-robust standard errors that allow for autocorrelation at the firm-level. All estimations stratified on the firm-level to control for unobserved heterogeneity across firms. *, **, *** denote significance at the 10%, 5% and 1% levels, respectively.

Table VII: Cox proportional hazard regressions controlling for alternative performance measures

	Model					
	High Competition			*Low Competition*		
	(a)	*(b)*	*(c)*	*(d)*	*(e)*	*(f)*
ROE low	0.251**			0.176*		
	(2.50)			(1.68)		
ROCE low		0.317***			-0.147	
		(3.20)			(-1.33)	
Tobin's Q low			-0.211			-0.695***
			(-1.29)			(-4.26)
Block	-0.350***	-0.374***	-0.306**	-0.223**	-0.218**	-0.129
	(-3.43)	(-3.68)	(-2.56)	(-2.28)	(-2.23)	(-1.00)
Debt Equity Ratio	-0.049*	-0.053**	-0.078**	-0.042	-0.019	-0.043
	(-1.77)	(-1.97)	(-2.04)	(-1.41)	(-0.62)	(-1.29)
Log Employees	-0.246***	-0.252***	-0.104	-0.481***	-0.475***	-0.089
	(-3.33)	(-3.46)	(-1.05)	(-3.32)	(-3.29)	(-0.55)
No. Executives	0.222***	0.217***	0.201***	0.264***	0.265***	0.275***
	(11.86)	(11.64)	(8.08)	(18.01)	(18.02)	(14.11)
No. Non-Executives	-0.103***	-0.097***	-0.118***	0.023	0.028	0.017
	(-4.06)	(-3.79)	(-3.66)	(0.88)	(1.06)	(0.51)
Fraction Outside Directors	0.008***	0.008***	0.004	0.007***	0.007***	0.005
	(4.26)	(3.87)	(1.09)	(3.77)	(3.49)	(1.46)
ROE low x Fraction Outsiders	0.001			0.006**		
	(0.22)			(2.48)		
ROCE low x Fraction Outsiders		0.003			0.008***	
		(1.20)			(3.10)	
Tobin's Q low x Fraction Outsiders			0.006*			0.008***
			(1.69)			(2.61)
No. Spells	9,058	9,058	6,975	9,804	9,804	7,619
No. Failures	3,156	3,156	2,275	3,509	3,509	2,472
No. Observations	29,229	29,229	24,479	32,025	32,025	26,978
Pseudo R^2	0.046	0.048	0.035	0.055	0.053	0.050
Log Likelihood	-3,747	-3,738	-2,743	-4,347	-4,355	-3,035
Akaike Information Criterion (AIC)	7,509	7,493	5,501	8,709	8,726	6,086
Stratified (firm-level)	yes	yes	yes	yes	yes	yes
Global Test of PH Assumption ($\chi 2$)	2.59	2.74	3.07	11.49	12.10	12.40

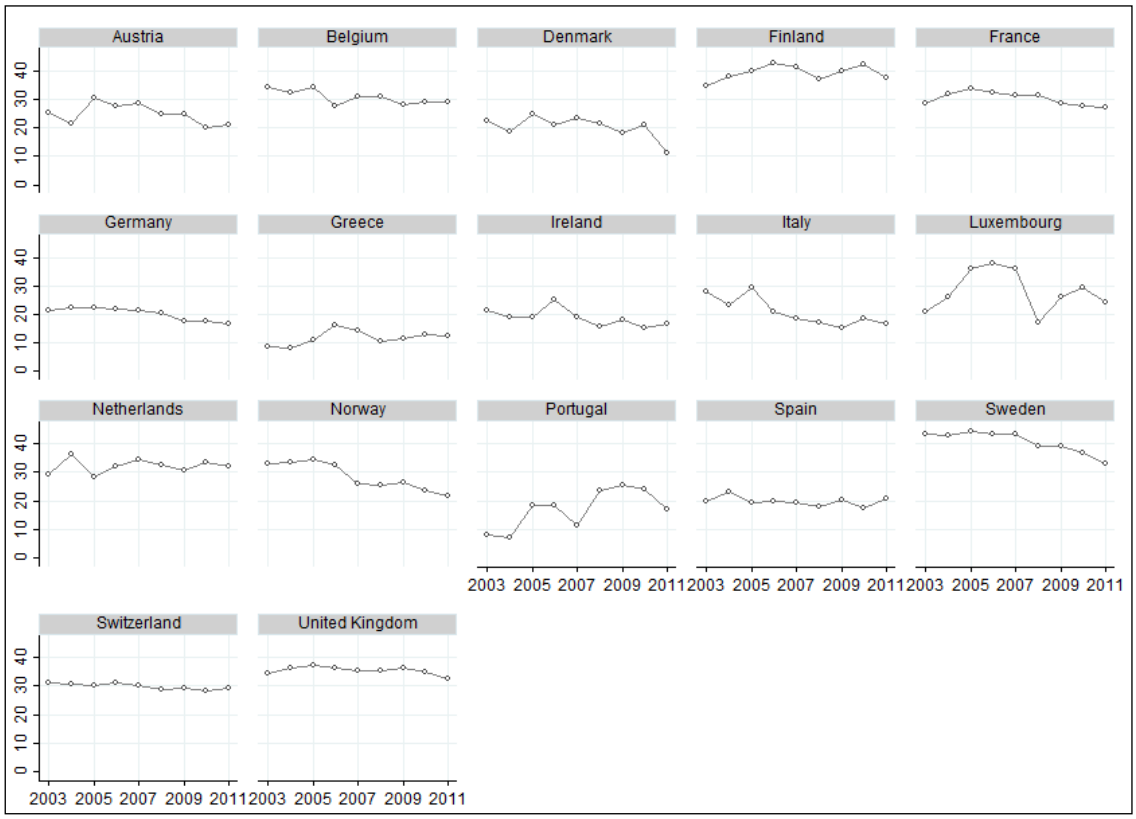
Notes: The table reports estimations of executive turnover likelihoods using Cox proportional hazard models. The dependent variable is the hazard rate. Positive coefficients imply an increase of the hazard rate and thus a higher risk of turnover while negative coefficients imply a longer expected tenure of the executives in the sample. Z-statistics (in parentheses) are calculated using heteroskedasticity-robust standard errors that allow for autocorrelation at the firm-level. All estimations stratified on the firm-level to control for unobserved heterogeneity across firms. *, **, *** denote significance at the 10%, 5% and 1% levels, respectively.

Table VIII: Cox proportional hazard regressions controlling for different measures of product market competition

	Model					
	High Competition			***Low Competition***		
	(a)	***(b)***	***(c)***	***(d)***	***(e)***	***(f)***
Measure of competition	*varies*	*varies over time*	*constant*	*varies*	*varies over time*	*constant*
Industry Classification			*NACE Rev. 2*			
	2-digit	*4-digit*	*3-digit*	*2-digit*	*4-digit*	*3-digit*
ROA low	0.444***	0.298***	0.296***	-0.277***	-0.145	-0.116
	(4.38)	(2.99)	(3.06)	(-2.70)	(-1.32)	(-1.30)
Block	-0.343***	-0.337***	-0.068	-0.161	-0.158	-0.308***
	(-3.52)	(-3.39)	(-0.77)	(-1.60)	(-1.53)	(-3.45)
Debt Equity Ratio	-0.018	-0.070**	-0.050**	-0.007	-0.003	-0.025
	(-0.75)	(-2.49)	(-2.04)	(-0.24)	(-0.09)	(-0.89)
Log Employees	-0.244***	-0.316***	-0.177***	-0.640***	-0.481***	-0.599***
	(-3.14)	(-3.88)	(-2.85)	(-6.47)	(-2.96)	(-4.77)
No. Executives	0.228***	0.215***	0.234***	0.278***	0.270***	0.264***
	(11.49)	(12.02)	(14.06)	(18.71)	(17.77)	(19.94)
No. Non-Executives	-0.030	-0.078***	-0.093***	0.052**	0.039	0.009
	(-1.01)	(-3.19)	(-3.92)	(2.42)	(1.46)	(0.35)
Fraction Outside Directors	0.013***	0.010***	0.010***	0.006***	0.005**	0.006***
	(6.23)	(4.91)	(5.21)	(3.38)	(2.21)	(3.10)
ROA low x Fraction Outsiders	-0.002	0.001	0.001	0.010***	0.010***	0.007***
	(-0.88)	(0.52)	(0.51)	(4.24)	(3.96)	(3.03)
No. Spells	8,996	8,950	9,046	10,141	9,674	9,822
No. Failures	3,152	3,179	3,192	3,633	3,377	3,479
No. Observations	29,321	28,496	29,222	32,920	31,671	32,041
Pseudo R^2	0.048	0.049	0.051	0.060	0.054	0.055
Log Likelihood	-3,810	-3,711	-4,417	-4,638	-4,123	-5,072
Akaike Information Criterion (AIC)	7,636	7,438	8,850	9,293	8,262	10,160
Stratified (firm-level)	yes	yes	yes	yes	yes	yes
Global Test of PH Assumption ($\chi 2$)	5.80	3.38	3.47	8.50	8.16	12.70

Notes: The table reports estimations of executive turnover likelihoods using Cox proportional hazard models. The dependent variable is the hazard rate. Positive coefficients imply an increase of the hazard rate and thus a higher risk of turnover while negative coefficients imply a longer expected tenure of the executives in the sample. Z-statistics (in parentheses) are calculated using heteroskedasticity-robust standard errors that allow for autocorrelation at the firm-level. All estimations stratified on the firm-level to control for unobserved heterogeneity across firms. *, **, *** denote significance at the 10%, 5% and 1% levels, respectively.

Figure I: Average proportion of non-executive outside directors on the board by country in the period 2003 to 2011



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