

# **Board Task-related Faultlines and Firm Performance: A Decade of Evidence <sup>1</sup>**

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### **ABSTRACT**

**Manuscript Type:** Empirical

**Research Question/ Issue:** To what extent can group faultlines and their potential value-destroying effects be detected on corporate boards? Task-related attributes of the type of directorship, education, board tenure and financial background of board members are considered as directors' characteristics that give rise to the faultline phenomenon. The impact of task-related faultlines on firm performance as well as the moderating effects of busy boards, Chief Executive Officer (CEO) tenure, executive directors' (EDs) compensation structure, and the average non-executive directors' (NEDs) involvement in board committees are examined.

**Research Findings/ Insights:** Using a panel of FTSE 350 companies from 1999 to 2008, we find a strong negative effect of task-related faultlines on firm performance. Further exploration of the moderating effects demonstrates that the condition of a busy board and the CEO tenure exacerbate the negative effects of faultlines. At the same time, the executive pay-contingency is found to have a remedying effect on boardroom cohesiveness, whereas the involvement of NEDs in board committee work is not likely to make the adverse effects of board faultlines less pronounced.

**Theoretical/ Academic Implications:** Based on the arguments of the identity and social identity theory, this study shows that task-related faultlines on corporate boards have strong negative value-creating implications. The positive moderating impact of the executive compensation structure renders support to agency theory predictions about executive incentive alignment. This work also underlines the usefulness of the concept of faultlines in the corporate governance literature, because the unitary boards, where NEDs and EDs come to work together, exhibit pre-existing factions, similar to top management teams of family-controlled firms and teams managing international joint-ventures.

**Practitioner/Policy Implications:** This research points to the importance of the careful selection process of directors by the nomination committees. It also underlines the role for active leadership on boards, who should be aware of available strategies to ameliorate the negative consequences of board splits, such as accentuating superordinate board identity and/ or informal meetings.

**323 words**

**Keywords:** *Corporate Governance, Boards of directors, Faultlines, Performance*

## **INTRODUCTION**

The board of directors as a means of shareholders' indirect control has received considerable attention in academic research on corporate governance, which has been maturing as an autonomous research field in the last twenty years (Durisin and Puzone, 2009). At the same time, the literature on the concept of faultline signifying team splits has been growing since the publication of the pioneering work by Lau and Murnighan (1998), however it still remains little utilised compared to the notion of diversity in research on team effectiveness in general, and in corporate governance and board research in particular (Mathieu, Maynard, Rapp, and Gilson, 2008). For this reason, we apply the concept of faultlines from the group effectiveness literature to the study of board composition and dynamics with the underlying question of value-destroying implications of board schism.

While studies of board characteristics represent one of the most popular areas of corporate governance research (Durisin and Puzone, 2009), there is still relatively little attention to the dynamics of actually how such groups work (Huse, 2007; Leblanc and Gillies, 2005; Pye, 2002) or potential solutions when dynamics break down. The concept of faultlines, capturing the emergence of distinct sub-groups in a team and hence decrease in cohesiveness, enables the examination of consequences of such board processual shortcomings. Like its geological forebear, it refers to the potential for schism which may arise from alignment along one or more dimensions amongst members of a group, such as social category (e.g. age, gender) or deep-level attributes (e.g. values, experience), that gives rise to subgroup emergence. It is a factor common to group settings everywhere in the world although interestingly, there appears to be a dearth of literature which brings faultline analysis to the board context, hence this is the focus of our study.

In this work, we examine the phenomenon of task-related faultlines on the boards of UK largest listed companies across the time span of 1999-2008. We chose to concentrate on task-

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related attributes because they are context-relevant, which increases the likelihood that such faultlines will be activated. We find strong evidence that such board schisms are negatively correlated with firm performance. Moreover, faultlines on boards with the majority of directors holding multiple directorships at other companies and with long-tenured CEOs are found likely to be even more detrimental for firm value-creation. Finally, we report that increasing the ratio of performance-related remuneration to overall compensation for executive directors (EDs) is likely to have a remedying effect in a board setting affected by board schisms.

Our findings have relevance for both theory and practice of corporate governance. The concept of faultlines from group effectiveness literature appears a useful tool in analyzing board composition and dynamics. This is especially the case because unitary UK boards bear features of a team with pre-existing factions, similar to the top management team (TMT) of family-controlled firms or teams managing international joint-ventures. The ameliorating impact of EDs' incentive alignment on boardroom cohesiveness provides validation to the predictions of agency theory. The managerial implications of our findings suggest that nomination committees should pay attention to the distribution of board members' attributes on the entire board and be wary of the potential for faultline formation. Board leadership should also be aware of potential strategies available to curb the negative consequences of board faultlines, such as accentuating the superordinate board identity, and including informal meetings as a means of restoring board cohesiveness.

## **BOARDS AND THE GROUP FAULTLINE PHENOMENON**

### **Board faultlines**

Recent reviews or meta-analytical studies of team diversity demonstrate mixed, either positive, negative, or no direct effects of diversity on team performance (Jackson, Joshi and

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Erhardt, 2003; Webber and Donahue, 2001; Williams and O'Reilly, 1998). Among the suggested lines for future research there is an idea of more precise conceptualization and measurement of the phenomenon of diversity. Harrison and Klein (2007) proposed three ways of capturing diversity as 'separation', 'variety' and 'disparity'. Whereas the majority of work on diversity has been based on measuring diversity as variety, recent advancement in the literature, *i.e.* the concept of group faultlines, opens up the possibility of studying diversity as separation, in which splits into subgroups in a team emerge based on the group members' characteristics (Harrison and Klein, 2007; Nielsen, 2010; Van Knippenberg and Schippers, 2007). In a recent review of team effectiveness, Mathieu et al. (2008) underlined that faultlines remain little utilized compared with other compositional measures, despite the promise they hold for uncovering the dynamics that may arise from composition differences among team members.

Group faultlines are defined as hypothetical dividing lines that split a group into relatively homogeneous sub-groups based on group members' alignment along their multiple attributes (Bezrukova, Jehn, Zanutto, and Thatcher, 2009; Lau and Murnighan, 1998, 2005) and are most likely to emerge when the group diversity is moderate (Lau and Murnighan, 1998; Earley and Mosakowski, 2000; Webber and Donahue, 2001). The concept of faultlines is based on the alignment approach, which assumes a simultaneous alignment of multiple characteristics across unit members. For example, a board may split into non-executive directors (NEDs) holding a Master's degree with over 6 years board tenure and lacking a financial background on the one hand, and EDs holding a Bachelor degree with less than 3 years board tenure and an educational or professional financial background, on the other. Thanks to the notion of faultlines in this case we are able to capture the simultaneous alignment of directors' characteristics of type of directorship, education level, board tenure and educational/ professional financial background

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into two sub-groups on the board. Application of the concept of faultlines therefore allows researchers to account for interdependence of attributes of group members and to explain variance that is typically not accounted for in studies based on diversity as variety (Bezrukova, Thatcher and Jehn, 2007).

UK companies are commonly characterised by a unitary board structure in which NEDs work together with EDs, shaping the strategic direction and control of the company. NEDs are usually part time, do not have executive responsibility, are independent from the company and typically constitute at least half of the board excluding the Chairperson in FTSE 350 companies (provision A 3.2 of the UK Combined Code, 2008, which is further continued as provision B 1.2 in the UK Corporate Governance Code, 2010). In contrast, EDs have a full-time contract with the company and hold executive responsibility. Thus, even in their basic constitution, boards potentially have an extant faultline akin to other factional groups found, for example, in teams managing international joint ventures (Hambrick, Li, Xin and Tsui, 2001; Li and Hambrick, 2005).

There are other examples of teams that have pre-existing faultlines akin to the idea proposed by Li and Hambrick (2005). For example, Minichilli, Corbetta and MacMillan (2010) find that TMTs of family-owned firms divide into family and non-family members groupings, which are essentially factional. This is because the former typically share common culture, values and norms inherited from their parents and relatives as well as a common pattern of education and stronger emotional attachment to the firm, whereas the latter generally share similar external professional experiences to those of family members, however possess a common feeling of exclusion from the controlling family. In similar vein, Polzer, Crisp, Jarvenpaa and Kim (2006) put forward an idea that groups based on geographically co-located sub-groups are another

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example of a team with pre-existing factions, whereby the demarcation line goes between those sub-groups that can meet face-to-face because they are physically present. So, boards of directors represent a similar kind of team/group situation that has an in-built faultline by virtue of its composition, which merits both scholars' and practitioners' attention.

### **Task-related attributes**

In the team effectiveness literature, scholars frequently distinguish between observable, social category, or surface-level characteristics on the one hand, and underlying, less visible, or deep-level characteristics on the other (e.g., Harrison, Price and Bell, 1998; Harrison, Price, Gavin and Florey, 2002; Jackson, Joshi and Erhardt, 2003; Milliken and Martins, 1996). The former group encompasses attributes such as age, gender, nationality, or racio-ethnicity, whereas the latter group comprises characteristics such as values, experience, and skills. According to the diversity literature, surface- and deep-level characteristics are differentially salient for group cohesiveness over time because time neutralizes the effects of surface-level characteristics and enhances the impact of deep-level attributes (Harrison et al., 1998; Harrison et al., 2002). Another similarly demarcated distinction in the literature is offered by Pelled (1996), who differentiated between highly job-related and less job-related attributes, whereby job relatedness is the degree to which the attribute captures experiences, skills or perspectives pertinent to cognitive work tasks. Job-relatedness is theoretically important because it describes the extent to which the attributes increase the task-related knowledge, skills, and abilities (KSAs) that facilitate team performance. Task-relevant attributes such as functional background, education, or tenure as opposed to less task-related characteristics such as age, gender or racio-ethnicity are therefore assumed to have a stronger impact on group processes and performance (Pelled, 1996; Pelled, Eisenhardt and Xin, 1999). Differences in job-related attributes are also more likely to

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surface in debate and become salient in work situations than less job-related characteristics (e.g., Forbes and Milliken, 1999; Jehn, Northcraft and Neale, 1999). This is the first reason for which we selected task-related attributes as a basis for studying board faultlines.

The second reason behind this choice deals with the problem of faultline activation. Rather like their earthly counterparts, group faultlines can exist and yet remain dormant when differences in group members' attributes are not perceived by group members. In order for the faultlines to erupt a trigger is needed, such as an event that activates them (Chrobot-Mason, Ruderman, Weber, and Ernst, 2009; Jehn and Bezrukova, 2010; Pearsall Ellis, and Evans, 2008). Polzer, Crisp, Jarvenpaa and Kim (2006) explain that whether faultlines remain dormant or become psychologically activated depends on whether features of the context in which a group operates highlight it (*cf.* Chrobot-Mason et al., 2009). For example, Lau and Murnighan (1998) indicated that retirement and pension problems may activate faultlines based on age, or affirmative-action topics may activate faultlines based on race. Moreover, a single, salient attribute may be sufficient to activate a faultline, such as parent company affiliations in joint ventures (Li and Hambrick, 2005), or nationality in transnational teams that meet face-to-face (Earley and Mosakowski, 2000). Accordingly, in the case of a board, factors such as whether one is a NED or ED (legal), how long one has been on the board (contractual), and the economic context in which one is working (formal), are commonly perceived by board members, and therefore faultlines based on such task-related attributes are likely to be more easily activated.

The extant faultline literature reports that group faultlines are typically related with increased intra-team conflict, lower group cohesion and therefore group process losses, which lead to decreased group performance (e.g., Li and Hambrick, 2005). However, most of these findings are drawn from research on student teams and experimental settings (e.g., Bezrukova et

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al., 2009; Bezrukova et al., 2007; Homan Hollenbeck, Humphrey, Van Knippenberg, Ilgen, and Van Kleef, 2008; Molleman, 2005; Pearsall et al., 2008; Rico, Molleman, Sánchez-Manzanares and Van der Vegt, 2007; Sawyer, Houlette and Yeagley, 2006). Only recently has the concept of faultlines been applied to the studies of a firm's upper echelons. For example, Barkema and Shvyrkov (2007) demonstrated that strong faultlines on the TMT are negatively related with the likelihood of a firm's entry into a new geographic area, which is a decision that by its nature requires the consensus of most if not all TMT members. Minichilli et al. (2010) reported that strong factions of family and non-family members on the TMT hurt firm performance. Finally, Tuggle, Schnatterly and Johnson (2010) showed that strong faultlines on a board are negatively related with the proportion of time that it devotes to the discussion of entrepreneurial issues and that the degree of meeting informality is likely to ameliorate this negative relationship to some extent. Overall, there is still a dearth of research that examines the nature and impact of faultlines in a firm's upper echelons, and boards of directors in particular.

## **HYPOTHESISING THE POTENTIAL FOR BOARD SCHISM**

### **Board functions**

Combining agency theory (Eisenhardt, 1989; Fama and Jensen, 1983) and resource-dependency theory (Pfeffer, 1972; Pfeffer and Salancik, 1978), Hillman and Dalziel (2003) proposed a succinct model of board roles in which they distinguished the board monitoring and resource provision function. The first role is enacted through activities such as monitoring the CEO, monitoring strategy implementation, planning CEO succession, and evaluating and rewarding the CEO/top managers of the firm. The common denominator of all these activities is the obligation for the board to ensure that management operates in line with the shareholders' interests. The provision of resources function, in turn, comprises activities such as providing

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legitimacy and bolstering the public image of the firm, providing expertise (including the provision of internal firm information by inside directors), administering advice and counsel, linking the firm to important stakeholders, facilitating access to resources such as capital, and aiding in the formulation of strategy or other important firm decisions. The theoretical tie for all these activities is the focus on the board as a provider of resources rather than as an evaluator of management. Hillman and Dalziel (2003) note that the variety of board functions on top of the monitoring/ control role that are distinguished in the alternative prior typologies, such as strategy and service (Zahra and Pearce, 1989) or service and resource dependency (Johnson, Daily, and Ellstrand, 1996), are indicative of the array of board resources originally theorized by Pfeffer and Salancik (1978) and therefore can be subsumed under their provision of resources role. Hillman and Dalziel (2003) further argue that the board capital, *i.e.* directors' knowledge, skills and experiences (human capital) as well as their professional networks (social capital), underpins the board's ability to perform its functions of monitoring and provision of resources effectively. At the same time they contend that board incentives, such as EDs' compensation packages, moderate the relationship between board capital and effectiveness.

### **Boardroom identities and faultlines**

McNulty, Roberts and Stiles (2005) illustrated that board effectiveness hinges upon both the ability of directors as well as their motivation to become engaged. Expanding on the latter aspect, Hillman, Nicholson and Shropshire (2008) proposed a model in which they explain how directors' identification with the organization, being a director, being the CEO, shareholders, customers/suppliers affects their performance of board functions of monitoring and resource provision.

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Any individual has many different identities that vary in salience and importance (Crisp and Hewstone, 2007). Ashforth and Mael (1989: 29) refer to this phenomenon as ‘an amalgam of identities’. Identity theory (Burke, 1980; Stryker, 1980) proposes that individuals are a collection of identities resulting from their multiple roles in society, such as being a CEO or a Chairperson in the context of the board. Each individual can be said to have an identity for each of the roles she/he plays within society and these identities provide meaning for the self because they relate specific behavioural expectations with each role and distinguish roles from one another (Hogg, Terry and White, 1995). In similar vein, social identity theory (Hogg and Abrams, 1988; Tajfel, 1974) views social categories such as nationality, education and profession, as ‘sources’ of identities for an individual. Each social group to which an individual belongs provides a definition of self based on the attributes of the given social group, which underpins her/his self-esteem (Ashforth and Mael, 1989; Hogg and Terry, 2000). Whilst identity theory discusses the relationship between individuals and their behaviour as role based, social identity concentrates on the norms and stereotypes of social group membership as influencing behaviour (Hogg et al., 1995). Moreover, social identification as a perception of oneness within a group and stemming from the categorisation of individuals underpins organizational identification, which impacts on the satisfaction of the individual with her/his role in an organization and the effectiveness of the organization (Ashforth and Mael, 1989).

Integrating identity and social identity theory, one can therefore say that identification with a role or social identity underpins the salience of that particular identity to the individual and the extent to which the identity will affect behaviour in an organization. Hillman et al. (2008) argue that if multiple identities compete with one another, identity multiplicity can be costly because it detracts from the individual’s behaviour toward the organization. Therefore,

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they propose that the alignment between context-relevant identities is critical to understanding individual behaviour in any context, such as role execution in the boardroom (*cf.* Ashforth and Mael, 1989).

Given that UK corporate board composition bears the features of a team with pre-existing faultlines and that directors hold multiple identities based on the roles they perform and social groups to which they belong, there is a great likelihood that when sub-groups emerge that are homogenous in terms of task-related attributes, a conflict of identities may also arise between them. Chrobot-Mason et al. (2009) emphasise that increased salience of sub-group identities makes power struggles and conflict among sub-groups more likely to ensue. Strong faultlines provide even greater likelihood for work groups to polarize, which highlights the importance of attributes and magnifies the effects of external forces. This is because the processes of social categorization are at the root of such splits which lead to in-group favouritism and out-group discrimination (Haslam, 2004). Moreover, in case of board faultlines, there is strong awareness of the salient out-group, which underscores the existence of these boundaries and causes subjects to assume even greater in-group homogeneity. As a result, identification with sub-groups becomes more salient for board members than identification with the board as a whole to the detriment of the cohesiveness of the board (Ashforth and Mael, 1989; Hogg and Terry, 2000).

Thus we consider four task-related characteristics. The first two attributes reflect identities associated with directors' role in the boardroom, *i.e.* whether they are NEDs or EDs (type of directorship) and how long they have performed any role on a given board (board tenure). The remaining two task-related attributes underline directors' social identities, *i.e.* being educated at a certain level such as Master or PhD (education level) and whether or not they are specialists in the area of finance (financial background). Operationalisations of faultlines in

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studies of upper echelons have also typically been based on task-related attributes: Barkema and Shvyrkov (2007) used both education level and team tenure, whereas Tuggle et al. (2010) used board tenure in the calculation of faultlines. Inclusion of the type of directorship (NEDs and EDs) is justified by the fact that this is where the formal, legal and contractual distinction is drawn in unitary boards. Finally, we also incorporated the variable of board members' financial background, as financial literacy and expertise is increasingly recognized as a very important if not key skill of board candidates in the wake of financial crisis that started in 2008 and growing financialisation of the economy (Davis, 2009; Jeanjean and Stolowy, 2009; Walker Review, 2009). In view of considerable regulatory change and reform to international accounting standards, auditing and reporting requirements, financial literacy and expertise creates a knowledge frontier between those with and without financial background, which is likely to give rise to faultlines similar to directors' other task-related attributes.

### **Performance implications of board faultlines**

When splits into sub-groups of NEDs and EDs with different average board tenure, education level, and degree of financial background can be distinguished on a board, such faultlines are likely to be activated because they are context-relevant (Chrobot-Mason, 2009; Polzer et al, 2006). This particular alignment of task-related characteristics involves an interplay of identities. As exemplified in this case, the faultline means that there are different groupings on the board, with similar identities within each sub-group, which are however different between the sub-groups. For example, the identity of being a NED who has been appointed recently, is educated at the Master level and possesses financial qualification, is distinctly different to the identity of being a long-tenured ED who is educated at the Bachelor level and does not have financial qualification. The distinct sub-group identities resulting from the directors' mandate in

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the company, education, tenure on the board and the possession or lack of financial background become more salient than the identification with the board as a whole. Moreover, this conflicting interplay of sub-group identities based on task-relevant attributes is also likely to affect the board members' strength of identification with the company as such, or its board, or CEO or with being a director, or with shareholders. For example, NEDs' strength of identification with the company and the board may weaken, when they notice that their contribution is not recognized, whereas EDs being present at the company premises daily may exhibit greater identification with the CEO rather with than being a director and shareholders. In similar vein, long tenured directors may be withholding information from newcomers, which adversely affects the identification of the latter with their role as directors and the entire board. As a result, the boardroom dynamics resulting from this interplay of identities due to faultlines are likely to impair the board members' ability and motivation of performing functions of monitoring and provision of resources (Hillman et al., 2008). The effectiveness of board task performance ultimately has impact on the firm's internal and external value creation (Huse, 2005; Huse, 2007). Therefore, we hypothesise that such board task-related faultlines are likely to have value-destroying implications for the company (Li and Hambrick, 2005; Minichilli et al., 2010; *cf.* Tuggle et al, 2010).

*H<sub>1</sub>: The board task-related faultlines will exhibit a negative relationship with firm financial performance.*

### **Exacerbation of board faultline effects**

Scholars have highlighted the need to study variables that serve as proxies for group dynamics such as diversity and faultlines in a context, where other phenomena constitute mediating and moderating variables, so that potential contingencies and their impact can be

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accurately captured (e.g., Bezrukova et al., 2007; Bezrukova et al., 2009; Joshi and Roh, 2009; Williams and O'Reilly, 1998). Task-related faultlines are context-relevant, but are also likely to be context-dependent, therefore we sought to examine a set of board contingency variables that are likely to impact on the faultline and performance relationship. First, we consider two measures which can magnify the negative impact of board schisms on value creation: (1) the condition of a busy board, and (2) the CEO's tenure.

Busyness of directors represents a condition in which directors have many external board appointments, known as 'overboarded directors' (Harris and Shimizu, 2004) which is likely to compromise their management attention and as a result, adversely affect their ability to devote sufficient time to the board duties in the focal company. Interestingly, the literature on board busyness demonstrates that these detrimental effects do not take place when average busyness of particular directors is considered (Ferris, Murali and Pritchard, 2003; Harris and Shimizu, 2004). However, when busy directors constitute at least half of the board, considerable negative performance effects are reported. At issue here is the distribution of board seats held by NEDs, in particular, who typically have many more external directorships than EDs. Therefore, the condition of the busy board, where the majority of directors are busy, rests on the assumption of the critical mass required for the phenomenon of busyness to be problematic for the board as a whole (Fich and Shivdasani, 2006). Accordingly, in this study we consider the latter case, when busy NEDs constitute at least half of the board and refer to this as the condition of a busy board.

Directors holding multiple board seats have a greater 'amalgam of identities' related to all companies in which they are board members, which is likely to weaken their identification with the focal company. Therefore, when boards characterized by faultlines based on the non-executive and executive mandate on the board, education, board tenure and the degree of

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financial specialism are affected by the condition of a busy board, the negative effects of these divisions are likely to be even more pronounced compared with boards with similar faultlines but where the majority of directors are not busy. This is because the limited time commitment and attention that directors on a busy board are able and willing to devote to the matters of the focal company board are likely to increase the salience of divisions based on task-related attributes and the underlying conflicting identities in perception of the sub-group members will be enhanced. Such course of events is therefore additionally detrimental for the cohesiveness and communication on the board as a whole. Therefore, we hypothesise:

*H<sub>2</sub>: The relationship between the board task-related faultlines and firm financial performance will be negatively moderated by the condition of a busy board.*

Long CEO tenure is traditionally recognized as a source of expert power that is based on increased familiarity with the firm's resources and methods of operation (e.g., Alderfer, 1986; Singh and Harianto, 1989; Finkelstein, 1992). Finkelstein and Hambrick (1989:124) observed that CEOs with long tenure may acquire a 'personal mystique or patriarchy', which typically results in sanctions against those questioning the CEO's authority. Finally, the relatively longer CEO tenure compared to other board members can be also seen as an indicator of CEO power in relation to NEDs and the potential for her/his entrenchment in this position in the company, with implications for board conduct and performance (Westphal and Zajac, 1995).

Accordingly, long-tenured CEOs are likely to have strong identification with the CEO role which is not necessarily aligned with the identification with the company and its board as such, around which the mandate of NEDs is typically constructed (Hillman et al., 2008). Boards with such a powerful CEO who is strongly identifying with her/his role are therefore likely to experience even more profound effects of task-related splits compared to boards with similar

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faultlines but with the CEOs with the shorter tenure. This is because the salience of underlying sub-group conflicting identities is going to be magnified, strengthening the negative social categorization processes of in-group favouritism and out-group discrimination and fuelling the biased inter-group comparisons. Ultimately, communication and cohesiveness on the board as a whole will be adversely affected, with more pronounced value-destroying implications.

*H<sub>3</sub>: The relationship between the board task-related faultlines and firm financial performance will be negatively moderated by the CEO tenure.*

### **Amelioration of board faultline effects**

In as much as there are factors that can enhance board polarization due to faultlines, there are also elements of board structure and incentives that can serve as in-built potential corrective mechanisms for board schisms. We consider two such factors: (1) EDs' compensation structure, and (2) the proportion of NEDs involved in the work of the board committees.

The EDs' performance-related pay component is geared towards aligning the EDs' interest with the long-term interest of the company's shareholders, which NEDs are supposed to represent. In line with the predictions of agency theory (Eisenhardt, 1989; Fama and Jensen, 1983), there is an incentive for the otherwise self-interested agents (*i.e.* EDs) to behave more like shareholder stewards of the company who prioritise the long-term sustainability of the company. For example, Westphal (1999) showed that greater CEO incentive alignment positively impacts on the relationship between CEO-board friendship ties and board involvement in advice and counsel on strategic issues. Regarding faultlines specifically, Homan et al. (2008) demonstrated that the design of the reward structure in diverse teams may reduce the negative consequences of the faultlines, when the reward structure cuts through the categories (cross-categorisation) or accentuates the super-ordinate group identity (recategorisation). A greater performance-related

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pay component in executive remuneration is therefore likely to strengthen EDs' identification with the company, its board as a whole and shareholders and make it converge with the identification that is expected of NEDs by virtue of their mandate in companies.

This cross-cutting and recategorising mechanism echoes arguments from social identity literature in which there are recommendations for it as a means of reducing biased inter-group comparisons and the salience of sub-group conflicting identities which underpin the rivalry between them (Ashorth and Mael, 1989; Hogg and Terry, 2000). EDs' compensation structure with its substantial performance-related component enhances the goal commonality among directors, which cross-cuts the boundaries of faultlines based on task-related attributes and is likely to make the effects of the process of negative social categorization in terms of in-group favouritism and out-group discrimination milder. As a result, the negative effects of such divisions on boards underpinned by conflicting identities are likely to be less pronounced on boards of companies whose EDs' pay is substantially tied to performance compared to those companies with similar faultlines, in which fixed salary represents the main component of their EDs' compensation structure.

*H<sub>4</sub>: The relationship between the board task-related faultlines and firm financial performance will be positively moderated by the EDs' performance-related pay ratio.*

Consistent with its predecessors (*i.e.* all iterations of the Combined Code since 1998), the UK Corporate Governance Code (2010) recommends the establishment, composition and roles of three specific board committees to the UK listed companies, *i.e.* audit, nomination and remuneration committee. The academic literature on the antecedents and consequences of the existence, composition and process of board committees is growing (e.g., Conyon and Peck, 1998; Ruigrok, Peck, Tacheva, Greve and Hu, 2006). In this study, we consider the NEDs'

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involvement in sub-committee work as a potential moderator of the board task-related faultlines and firm financial performance relationship, because it gives NEDs additional role identities of being e.g. nomination committee Chairperson or audit committee member.

Such sub-committee roles are likely to strengthen directors' identification with the company as such, its board, and their being a director. In addition, they create an opportunity for additional meetings and therefore socialization amongst board members, which is recommended in social identity literature as a means of reducing biased inter-group comparisons as well as in-group favouritism and out-group discrimination based on underlying identities (Ashorth and Mael, 1989; Hogg and Terry, 2000). Moreover, they confer additional and topic-specific responsibilities on sub-committee members with regard to CEO succession, executive remuneration, or internal control, and situate directors in various personal configurations with different lines of reporting and responsibility. Therefore, the boundaries of task-related faultlines on the board are likely to be permeated by sub-committee composition and work. This may reduce the salience of conflicting sub-group identities and make the negative effects of splits less pronounced in companies where NEDs are on average greatly involved in the sub-committee work, compared to companies with similar faultlines but where this level of involvement is lower.

*H<sub>5</sub>: The relationship between the board task-related faultlines and firm financial performance will be positively moderated by the average proportion of NEDs present on board committees.*

## **METHODS**

### **Dataset**

The sample consists of an unbalanced panel data set of UK companies that constituted the Financial Times and London Stock Exchange (FTSE) 350 Index as of financial year-end 2008,

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across the 1999-2008 period. The unbalanced data structure is common in longitudinal studies as firms/directors enter and exit into/from the market/firms across years. The FTSE 350 Index comprises constituents of the widely-known FTSE 100 and FTSE 250 indices, representing approximately 80% and 18%, respectively, of the market capitalisation in the UK economy (Belaire-Franch and Opong, 2005). Our sample is therefore a fair representation of the UK's largest stock-exchange listed companies across this decade, for which the impact of board faultlines on firm performance can be examined. Director information was derived from BoardEx, whilst financial performance of firms, firm and industry characteristics were derived from multiple sources: Thompson One Banker, World Scope, Fame UK, and Office for National Statistics (ONS). Due to missing information on various variables (see total number of observations in Table 1), the number of cross-sectional units varies between 263 firms in Model 1, 229 firms in Model 2, and 216 firms in Model 3 as presented in Table 2.

## **Measures**

**Firm Performance.** In order to test the hypotheses derived in the preceding theoretical section, we use the Tobin's q measure of firm performance. Stock-based measures of performance are commonly used in existing literature. (Bhagat and Bolton, 2008; Demsetz and Lehn, 1985; Guest, 2009) and capture the external response to organizational actions. Whilst accounting based measures are generally associated with the past internal efficiency of a firm, market-based measures reflect investor perceptions of the firm's past, current, and future stock returns. Board composition and actions are important for the firm's reputation in financial markets, so board proceedings have generally greater impact for stock-based than for accounting-based measures of firm performance (Haslam, Ryan, Kulich, Trojanowski and Atkins, 2010; *cf.* Oxelheim and Randøy, 2003). Therefore, we use Tobin's q as a measure of firm

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financial performance, which is a proxy estimate of investor perceptions and confidence as to how efficiently firms make use of their assets (Gompers, Ishii and Metrick, 2003) and an indicator of how effective corporate governance mechanisms of firms are. We define Tobins'q as the ratio of the firm's market value to its book value. The firm's market value is calculated as the book value of assets minus the book value of equity plus the market value of equity (De Andres and Vallelado, 2008).

**Faultline Index.** Our measure of the faultline index consists of four task-related characteristics (the type of directorship, education level, board tenure, and financial background of board members). Type of directorship is coded as either NED or ED. Education is measured according to the scale of educational achievements, which are coded as follows: 1-School/Vocational, 2-Bachelor, 3-Master, 4-Master of Business Administration (MBA), and 5-Doctor, to rank order the educational degrees. Board tenure is captured as the length of time that each member has served on a board in a given company. Financial background of board members is coded as 1 if members hold financial qualifications from higher educational institutions or professional bodies and as 0 otherwise.

Following Thacher, Jehn and Zanutto (2003) and Bezrukova et al (2009), we measure the faultline strength,  $Fau_g$ , that is how a group splits into sub-groups.

$$Fau_g = \left( \frac{\sum_{j=1}^p \sum_{k=1}^2 n_k^g (\bar{X}_{\cdot jk} - \bar{X}_{\cdot j})^2}{\sum_{j=1}^p \sum_{k=1}^2 \sum_{i=1}^{n_k^g} (X_{ijk} - \bar{X}_{\cdot j})^2} \right)_{g = 1, 2, \dots, S}, \quad (1)$$

where  $X_{ijk}$  represents the value of the  $j^{th}$  task related characteristic of the  $i^{th}$  member of sub-group  $k$ ,  $\bar{X}_{\cdot j}$  is the overall group mean of characteristic  $j$ ,  $\bar{X}_{\cdot jk}$  is the mean of characteristic  $j$  in

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sub-group  $k$ ,  $n_k^g$  is the number of members of the  $k^{\text{th}}$  sub-group ( $k=1,2$ ) under split  $g$ . We consider only group splits in which the size of each sub-group  $k$  has at minimum two members.  $Fau_g$  takes values between 0 and 1, with a maximum value of 1 when the two sub-groups are perfectly homogenous internally.

The faultline distance  $D_g$  below measures how far apart the two sub-groups are from each other.

$$D_g = \sqrt{\sum_{j=1}^p (\bar{X}_{1j\bullet} - \bar{X}_{2j\bullet})^2} \quad (2)$$

This is measured as a distance between vectors of means of each variable for sub-group 1= $(\bar{X}_{11\bullet}, \bar{X}_{12\bullet}, \bar{X}_{13\bullet}, \dots, \bar{X}_{1p\bullet})$ , and for sub-group 2= $(\bar{X}_{21\bullet}, \bar{X}_{22\bullet}, \bar{X}_{23\bullet}, \dots, \bar{X}_{2p\bullet})$ . The value of a faultline distance ranges between 0 and infinity, with larger values representing a larger distance between sub-groups 1 and 2.

Ultimately, the overall faultline index is calculated as an interaction between the faultline strength (1) and distance (2). The advantage of using the faultline index as devised by Thatcher et al. (2003) is that multiple characteristics of board members are taken into account simultaneously by measuring scores for both continuous and categorical variables. This measure also captures the entire continuum of faultline values, which is a significant improvement over measures applied in other studies of faultlines in a firm's upper echelons. This stands in contrast to Barkema and Shvyrkov (2007) and Tuggle et al. (2010) who used the 2-step methodology based on the method suggested in the seminal paper by Lau and Murnighan (1998), which involves visual inspection as a way of assessment of the faultline strength and typically limits faultline scores to strong and weak faultline settings. This is also an advancement on Minichilli

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et al. (2010) who applied the mere ratio of family members on the TMT as a measure of faultlines.

**Control Variables.** Building on the extant literature, we include various corporate governance, firm, and industry characteristics as control variables. The first set of variables focuses on governance dimensions: board size, CEO/Chair Separation, and CEO Ownership. Board size captures the capacity for effectiveness of the fulfilment of board functions, measured as the total number of EDs and NEDs on the board (Guest, 2009). Prior literature acknowledges that the type of board leadership and the role of CEO can influence firm performance. CEO/Chair separation is coded as a dummy variable taking the value of 1 if the CEO and Chairperson roles are separated, and 0 if both roles are performed by the same individual (e.g., Datta, Musteen and Herrmann, 2009). CEO ownership is operationalised as the value of equity held by the CEO. The amount of equity held by the CEO represents a proxy for an effective mechanism of aligning the incentives of managers with the performance targets expected by shareholders (Fich and White, 2005). All corporate governance variables are lagged for one period to safeguard from the potential of reverse causality.

The second set of variables refers to firm characteristics: firm size, firm age, and firm diversification, which are defined as total sales (Fich and Shivdasani, 2006), the number of years since the firm was established as an economic entity (Guest, 2009), and the number of business segments in which the firm is active classified according to the two-digit Standard Industrial Classification (SIC) codes (Fama and Jensen, 1983; Linck, Netter and Yang, 2008; Martin and Sayrak, 2003), respectively.

The final set of variables focuses on industry characteristics. We control for two heavily regulated sectors (1) financial services (SIC, edition 87: 60-64 and 67), and (2) utilities (SIC, 87:

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48-49) coded as dummy variables since government regulations of these sectors might influence the firm financial performance (*cf.* Minichilli, Zattoni and Zona, 2009). We also include the year dummy variables for our sampling period to capture any macroeconomic effects (*i.e.* financial crisis, changes in the regulatory framework and accounting standards) that may affect our analysis.

**Moderating Variables.** In order to examine moderating impacts on the relationship between the faultline index and firm performance, we include as moderating variables the following: (1) the measure of busy boards, (2) the CEO tenure, (3) the reward structure of EDs, and (4) the average number of NEDs on board committees as a proportion of all NEDs on the board. The condition of a busy board is captured as a dummy variable, coded as 1 if NEDs holding three or more directorates constitute at least half of the board, and 0 otherwise (Fich and Shivdasani, 2006). We measured the CEO tenure as the number of years during which the current CEO served in the role in the focal firm (McKnight and Weir, 2009). We accounted for the reward structure of EDs as the average proportion of all performance-related pay to the total compensation (*cf.* Westphal, 1999). Finally, we took an average number of NEDs sitting on all board sub-committees, *i.e.* audit, nomination and remuneration (as per UK regulation), and divided it by the overall number of NEDs on the entire board (*cf.* Zhang, 2008).

## **Econometric Analysis**

The methodology of linear mixed-effect models is used for modelling the data set with firms' effects being defined as random. One of the advantages of a mixed-effect model over a simple fixed-effect model is that it allows for detecting both correlations within the firm level and heterogeneous variances (Littell, Milliken, Stroup, and Wolfinger, 1996). A mixed-effects model includes additional random-effect terms to take account of unobserved firm specific

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heterogeneity and the covariance structure of the data, allowing each firm to have its own intercept and slope. We are also interested in the marginal contribution of interaction terms over any variance explained by the main effects, so a hierarchical linear approach is more appropriate to handle moderators effectively (Chiu and Sharfman, forthcoming; Kim, Al-Shammar, Kim, and Lee, 2009). In order to adjust for inflation, all monetary values (firm performance, firm size, executive remuneration) are converted to real terms (according to 2005 prices) using industry level (SIC, edition 1992) output deflators for non-manufacturing and Producer Price Index (PPI) for manufacturing firms. For regression analysis, all variables except for the dummy coded ones are transformed into natural logarithms and the value “1” is added where variables are less than 0. Our estimated parameters are therefore interpreted as the elasticities. To take account of the potential multicollinearity issue, independent variables used to construct two-way interaction terms for testing the moderating effects are mean centred.

## **RESULTS**

The means, standard deviations, and correlation matrix of variables used in the analysis are presented in Table 1. All variables are expressed in the actual level form rather than as centered values to simplify interpretation.

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Insert Table 1 about here  
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The sample mean of the faultline index is 2.55, indicating that the divisions on the board of the largest UK companies in terms of task-related attributes across the 1999-2008 period are large. Table 2 presents the statistical estimates of a linear mixed-effects model to evaluate both the main and moderating effects of the board faultline index on firm performance.

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Insert Table 2 about here  
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Model 1 contains only control variables and explains 20 per cent of the variance ( $F = 16.84$ ;  $p < 0.001$ ). Among those control variables, we find that the coefficient of CEO ownership is significantly different from zero with a positive sign ( $\beta = 0.06$ ,  $p < 0.001$ ). This is in line with the extant corporate governance literature which indicates that the amount of equity held by a CEO has a positive impact on financial performance (Fich and Shivdasani, 2006). Firm size is statistically significant and negatively associated with firm performance ( $\beta = -0.06$ ,  $p < 0.001$ ), suggesting that larger firms are likely to have lower market valuation. Model 2 adds a faultline index variable to assess Hypothesis 1 and explains 22 per cent of the variance ( $F = 17.7$ ;  $p < 0.001$ ). As predicted, the faultline index is statistically significant and negatively correlated with the market value of firms ( $\beta = -0.14$ ,  $p < 0.001$ ). Thus, this result strongly supports Hypothesis 1. The coefficients of CEO tenure ( $\beta = 0.03$ ,  $p < 0.05$ ) and firm age ( $\beta = -0.02$ ,  $p < 0.05$ ) become statistically significant when the faultline index variable is added in model 2. Whilst CEO tenure is positively associated with firm performance, the maturity of firms has a negative impact on the market perceptions. Model 3 provides the result of augmented regression analysis by including two-way interactive terms between the faultline index and moderating variables described in the preceding section to test Hypotheses 2, 3, 4 and 5. The explanatory power of model 3 accounts for 27 per cent of the variance ( $F = 15.62$ ;  $p < 0.001$ ). As in model 2, the faultline index is significantly different from zero and a negative predictor of investor confidence ( $\beta = -0.50$ ,  $p < 0.001$ ). A two-way interaction term between the faultline index and busy boards is significant at 10 percent level and negative as predicted ( $\beta = -0.17$ ,  $p < 0.10$ ), therefore Hypothesis 2 is supported. The moderating impact of the CEO tenure on the relationship between the faultline index and firm value is statistically significant and negative ( $\beta = -0.09$ ,  $p$

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< 0.001), so Hypothesis 3 is also supported. The coefficient of the interaction terms between the faultline index and compensation structure is positive and highly significant ( $\beta = 0.08$ ,  $p < 0.001$ ). This suggests that the reward structure of EDs positively moderates the relationship between board faultlines and firm performance. Thus, the result supports Hypothesis 4. The interaction term between the faultline index and the average number of NEDs on board committees as a proportion of all NEDs on the board is not statistically significant. Hence, Hypothesis 5 is not supported.

## **DISCUSSION**

Our results reveal that the task-related faultlines based on the type of directorship, board tenure, education level and financial background of board members are substantial on the UK boards and are strongly, negatively correlated with financial performance. Faultlines in task-related attributes are context-relevant and given the type of decisions that boards generally make, e.g. approving of strategy plans, executive remuneration, they are likely to be easily activated (Chrobot-Mason et al., 2009; Polzer et al., 2006; Tuggle et al., 2010).

Faultlines also imply an interplay of identities, which are homogenous within sub-groups but differ between subgroups, such as a role of a part-time NED with a 6-year long tenure, educated to the doctorate level without any financial qualification versus a role of a full-time CEO or Finance Director with a 1-year tenure on the board, educated to the Master level and in possession of financial specialism. The evidence that we generate based on the baseline hypothesis provides validation of findings from the extant faultline literature based on student teams and experimental settings (e.g., Bezrukova et al., 2009; Homan et al., 2008; Molleman, 2005) as well as faultline studies on a firm's upper echelons (Barkema and Shvyrkov, 2007; Minichilli et al., 2010; Tuggle et al., 2010 in the novel, non-experimental context of UK

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corporate boards over time. In this setting of UK boards, we find that faultlines are likely to reduce board functionality in terms of monitoring and resource-provision, which has negative implications for a firm's value-creation.

Our contribution extends further to the analysis of moderators, *i.e.* factors that can either exacerbate or ameliorate the negative faultline effects. The augmented model showed that when NEDs holding multiple external board seats constitute the majority of a board, the negative board faultline effects can be more pronounced compared to boards characterised by similar faultlines but not affected by the condition of a busy board. This is because the identification with as well as time commitment and attention that such directors are able to devote to the matters of the focal company board are compromised, which amplifies divisions based on task-related attributes. The severity of this problem rests in the fact that the busyness condition encompasses the critical mass of board members. The second board characteristic that magnifies negative faultline effects is a long CEO tenure. Strong identification of the CEO with her/his role is likely to enhance the salience of conflicting sub-group identities due to task-related faultlines which leads to strengthening of negative social categorisation processes. As a result, the conflict of identities and asymmetry in the strength of identification with the company and its board on the one hand, and the CEO on the other, is likely to magnify board dysfunctionality and have further negative performance implications.

At the opposite end of the spectrum, we found strong evidence that in line with the predictions of the agency theory (Eisenhardt, 1989; Fama and Jensen, 1983), the incentive alignment of EDs can have a beneficial impact on the behaviour of EDs and ultimately board cohesiveness. We detect this effect through the positive and corrective impact of ED's pay contingency on the boardroom divisions as captured with the measure of faultlines. Arguably,

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such a reward structure represents a cross-categorising and/ or recategorising mechanism across sub-groups of NEDs and EDs that are characterized by different board tenure, education and degree of financial specialism (Hogg and Terry, 2000; Homan et al., 2008) and engenders incentives for EDs to increase collaboration with NEDs in the boardroom (Westphal, 1999). Finally, we did not find evidence to support the assertion that greater average involvement of NEDs in board committee work positively moderates the relationship between task-related faultlines and firm financial performance. One conceivable reason for this finding may be that although board committee work creates an opportunity for additional meetings and socialization with other board members, it does not fully serve the purpose of counter-balancing the original perceptions of salient conflicting sub-group identities by board members formed through the proceedings of the entire board.

Overall, our findings provide additional evidence of the negative consequences of faultlines to the repository of faultline empirical literature in an almost unexplored context of boards of directors (except for Tuggle et al., 2010). This study also contributes to the corporate governance literature by demonstrating how the concept of faultlines from the group effectiveness literature can be utilized as a tool for better understanding the likely board dynamics based on the board composition. Finally, our results provide validation to agency theory with regard to incentive alignment, the tangible beneficial impact of which is reflected in improved board cohesiveness.

### **Managerial implications**

Our study underlines the fact that board composition matters for boardroom dynamics and ultimately the board's ability to create value. Currently, there are calls for increasing board diversity: (1) Norway's positive discrimination in favour of achieving 40% female board

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membership, (2) the US Securities and Exchange Commission implementing a new rule obliging companies to disclose how they considered gender diversity when nominating directors; (3) UK government building on the Higgs Review provisions (2003, 10.15-10.33), the Tyson Review (2003) of board diversity, and the Davies Review (2011) of gender equality on corporate boards. In their seminal paper, Lau and Murnighan (1998) demonstrated that the emergence of faultlines implies a moderate amount of diversity, because both with no diversity and very high level of diversity, the alignment into homogeneous sub-groups is not possible. Therefore, one of the pitfalls in answering these calls of the regulator is that when diversity increases from the currently low level to moderate the likelihood of board schisms may increase, which, as we demonstrate, has negative value-creating implications. In this paper we considered faultlines based on task-related attributes, however faultlines can form based on social category characteristics and underlying social identities as well, such as age, gender, racio-ethnicity (e.g., Bezrukova et al., 2009). Nomination committees should be mindful of this danger and incorporate it as one of the relevant criteria in the director nomination and selection process.

This study shows that when there are potentially dysfunctional schisms on a board, the long CEO tenure and multiple external board appointments of the majority of NEDs are board characteristics that can be changed to improve board team performance. Similarly, an increased level of performance-related pay of EDs may reduce some of these divisive effects. These are arguably board characteristics that cannot be changed easily because perhaps the CEO is entrenched and powerful, there are not so many available NEDs that have fewer external board appointments than the incumbent directors, and because the company has a certain remuneration policy in place that has to be agreed with shareholders. However, when confronted with such board dysfunctionality, the board leadership should be aware that changing these factors, even if

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it requires more effort and some more serious structural adjustments, may improve the board cohesiveness and functionality. Moreover, the beneficial impact of EDs' compensation structure can be seen as a cross-cutting and recategorisation strategy to remedy team splits (Chrobot-Mason, Ruderman, Weber, Ohlott and Dalton, 2007). EDs' compensation structure with a substantial performance-related pay component creates commonality of interest between sub-groups of NEDs and EDs (cross-cutting) as well as accentuates the superordinate identity of the board associated with taking care of the long-term interest of the company and its shareholders (recategorisation). This is in line with the extant literature which shows that the recategorisation strategy can be a successful tool in ameliorating the negative consequences of faultlines (e.g., Homan et al., 2008; Jehn and Bezrukova, 2010). Finally, following Tuggle et al. (2010) who demonstrate that meeting informality decreases the salience of faultlines, it seems that informal meetings and conversations comprising board members crossing sub-group boundaries and creating an opportunity for additional socialization for board members may also be a viable strategy to follow in remedying board schism.

### **Limitations and future research directions**

We acknowledge the limitation of using the firm valuation as a dependent variable in this study. Arguably, board task effectiveness could be a more adequate measure to apply, instead (e.g., Huse, 2005; Minichilli, Zattoni and Zona, 2009). However, capturing the latter can be problematic as well, because it is typically achieved with some degree of subjective judgment based on the survey instrument. Moreover, sample size may also be further reduced by the common problem of low response rate. Finally, probably the main obstacle to using a survey-based dependent variable in our study is that it would include a substantial longitudinal

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dimension with data dating back as far as 1999, which makes it extremely difficult to get retrospective answers on board task effectiveness.

Secondly, in our selection of the task-related attributes we concentrated on financial expertise as an increasingly recognised and desired skill of board members (e.g., Jeanjean and Stolyow, 2009). In future research, there is potential to explore a full spectrum of functional backgrounds of directors, such as strategy, marketing, law and/ or industry experience. Inclusion of such fine-grained variables into the calculation of the measure of faultlines holds promise for an even more illuminating research and interesting findings.

Another area of future research which could build on our findings would be to explore the extent to which they are generalizable in contexts other than the UK, where boards are comprised differently. For example, in some European countries, the two-tier board structure means that the higher, supervisory board comprises different representational directors, suggesting an underlying potential for faultlines to occur based on their different interest groupings. This would provide an interesting contrasting setting in which to explore the impact of faultlines on board outcomes and/or firm performance.

Finally, a further interesting area of further research would be to explore in some depth, the micro-process variables which underpin and arise because of group schisms, such as task, emotional and group process conflict, intra-group communication as well as board task effectiveness. Ideally, this could be a complementary study, based on qualitative data from which to develop a micro-process analysis of the underlying potential for, process of, and consequences of board schism: for example, what kinds of events, such as presentation of strategy by EDs, nomination of new directors, discussion over access to capital, are most likely to cause schisms to materialize. However, it should be noted that access to boards and the sensitivity of the topic

of board schisms may well be an issue (Leblanc and Schwartz, 2007; Pettigrew, 1992; Pye and Pettigrew, 2005).

## **CONCLUSION**

By developing the concept of faultlines from group effectiveness literature in to corporate governance research, we have sought to enhance our understanding of board dynamics and their consequences for board value-creation. Since there is a dearth of research that looks at the composition of a firm's upper echelons from this perspective, we endeavoured to provide substantial empirical evidence of the UK's largest firms over a ten year period. Moreover, we attempted to elucidate that faultlines can be an important tool in understanding board dynamics, especially in unitary boards where differently contracted directors, *i.e.* executive and non-executive, work together.

Our findings demonstrate that faultlines are likely to be detrimental for boards of directors as much as they were found to be for student teams and in experimental settings where most empirical studies of faultlines have been conducted. Several conditions and characteristics of boards can either exacerbate or ameliorate the negative consequences of faultlines. When faultlines occur on boards where the majority of directors hold multiple directorships at other companies, and on boards with the long-tenured CEO, their effects are likely to be even more adverse for board value-creation. The remedying impact potential of EDs' pay highlights the tangible benefits of incentive alignment for facilitating more cohesion in the boardroom and in this analysis of faultlines, offers a different dimension to classic assumptions of agency theory.

The managerial implications arising from our study point to the importance of the director nomination process, in which directors should be mindful that increasing diversity to the moderate level also considerably increases the risk of sub-group formation on boards.

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Furthermore, the role of active leadership in ensuring board cohesiveness appears as crucial and our study opens up the agenda for more fine-grained research using the faultline concept exploring boardroom dynamics through either innovative quantitative and/or qualitative inquiry.

## REFERENCES

- Alderfer, C. P. 1986. The invisible director on corporate boards. *Harvard Business Review*, 64: 38-52,
- Ashforth, B. E., & Mael, F. 1989. Social identity theory and the organization. *Academy of Management Review*, 14(1): 20-39.
- Barkema, H. G., & Shvyrkov, O. 2007. Does top management team diversity promote or hamper foreign expansion. *Strategic Management Journal*, 28: 663-680.
- Belaire-Franch, J., & Opong, K. K. 2005. A Variance Ratio Test of the Behaviour of FTSE Equity Indices Using Ranks and Signs. *Review of Quantitative Finance and Accounting*, 24: 93-107.
- Bezrukova, K., Jehn, K. A., Zanutto, E. L., & Thatcher, S. M. B. 2009. Do workgroup faultlines help or hurt? A moderated model of faultlines, team identification, and group performance. *Organization Science*, 20: 35-50.
- Bezrukova, K., Thatcher, S. M. B., & Jehn, K. A. 2007. Group heterogeneity and faultlines: Comparing alignment and dispersion theories of group composition. In L. Thompson & K. Behfar (Eds.), *Conflict in Teams*: 57-92. The Northwestern University Press.
- Bhagat, S. & Bolton, B. 2008. Corporate governance and firm performance. *Journal of Corporate Finance*, 14(3): 257-273.
- Burke, P. 1980. The self: Measurement requirements from an interactionist perspective. *Social Psychology Quarterly*, 43: 18-29.
- Chiu, S. C., & Sharfman, M.P. *Legitimacy, Visibility, and the Antecedents of Corporate Social Performance: An Investigation of the Instrumental Perspective*. Forthcoming in the Journal of Management, doi:10.1177/0149206309347958.
- Chrobot-Mason, D., Ruderman, M. N., Weber, T. J., & Ernst, C. 2009. The challenge of leading on unstable ground: Triggers that activate social identity faultlines. *Human Relations*, 62: 1763-1794.
- Chrobot-Mason, D., Ruderman, M. N., Weber, T. J., Ohlott, P. J., & Dalton, M.A. 2007. Illuminating a cross-cultural leadership challenge: When identity groups collide. *The International Journal of Human Resource Management*, 18: 2011-36.
- Conyon, M. J., & Peck, S. I. 1998. Board control, remuneration committee and top management compensation. *Academy of Management Journal*, 41: 146-157.
- Crisp, R. J., & Hewstone, M. 2007. Multiple social categorization. *Advances in Experimental Social Psychology*, 39: 163-254.

## *Board Faultlines*

Datta, D. K., Musteen, M., & Herrmann, P. 2009. Board Characteristics, Managerial Incentives, and the Choice Between Foreign Acquisitions and International Joint Ventures, *Journal of Management*, 35: 928-953.

Davies Review. 2011. *Women on boards*. UK Department for Business Innovation & Skills (<http://www.bis.gov.uk/publications>, accessed on 2011.03.20).

Davis, G. F. 2009. The rise and fall of finance and the end of the society of organizations. *Academy of Management Perspectives*, August: 27-44.

De Andres, P. & Vallelado, E. 2008. Corporate governance in banking: The role of the board of directors. *Journal of Banking and Finance*, 32: 2570-2580.

Demsetz, H., & Lehn, K. 1985. The structure of corporate ownership: Causes and consequences. *Journal of Political Economy*, 93: 1155-1177.

Durisin, B., & Puzone, F. 2009. Maturation of corporate governance research, 1993-2007: An assessment. *Corporate Governance: An International Review*, 17: 266-291.

Earley, P. C., & Mosakowski, E. 2000. Creating hybrid team cultures: An empirical test of transnational team functioning. *Academy of Management Journal*, 43: 26- 49.

Eisenhardt, K. M. 1989. Agency theory: An assessment and review. *Academy of Management Review*, 14: 57-73.

Fama, E. F., & Jensen, M. C. 1983. Separation of ownership and control. *Journal of Law and Economics*, 26: 301-325.

Ferris, S. P., Jagannathan, M., & Pritchard, A. C. 2003. Too Busy to mind the business? Monitoring by directors with multiple board appointments. *Journal of Finance*, 58: 1087-1111.

Fich, E. M., & Shivdasani, A. 2006. Are busy boards effective monitors? *Journal of Finance*, 61: 689-724.

Fich, E. M., & White, L. J. 2005. Why do CEOs reciprocally sit on each other's boards? *Journal of Corporate Finance*, 11: 175-195.

Financial Reporting Council. 2008. *The Combined Code on corporate governance*. London, UK: FRC.

Financial Reporting Council. 2010. *The UK Corporate Governance Code*. London, UK: FRC.

Finkelstein, S. 1992. Power in top management teams: Dimensions, measurement, and validation. *Academy of Management Journal*, 35: 505-538.

## *Board Faultlines*

- Finkelstein, S., & Hambrick, D. C. 1989. Chief executive compensation: A study of the intersection of markets and political processes. *Strategic Management Journal*, 10: 121-134,
- Forbes, D. P., & Milliken, F. J. 1999. Cognition and corporate governance: Understanding board of directors as strategic decision-making groups. *Academy of Management Review*, 24: 489–505.
- Gompers, P., Ishii, J., & Metrick, A., 2003. Corporate governance and equity prices. *Quarterly Journal of Economics*, 118 (1): 107–155.
- Guest, P. M. 2009. The impact of board size on firm performance: Evidence from the UK. *European Journal of Finance*, 15(4): 385-404.
- Hambrick, D. C., Li, J., Xin, K., & Tsui, A. 2001. Compositional gaps and downward spirals in international joint venture management groups. *Strategic Management Journal*, 22: 1033–1053.
- Harris, I. C., & Shimizu, K. 2004. Too busy to serve? An examination of the influence of overboarded directors. *Journal of Management Studies*, 41: 775-798.
- Harrison, D. A., & Klein, K. J. 2007. What’s the difference? Diversity constructs as separation, variety, or disparity in organizations. *Academy of Management Review*, 32: 1199–1228.
- Harrison, D. A., Price, K. H., & Bell, M. P. 1998. Beyond relational demography: Time and the effects of surface-and deep-level diversity on work group cohesion. *Academy of Management Journal*, 41: 96–107.
- Harrison, D. A., Price, K. H., Gavin, J. H., & Florey, A. T. 2002. Time, teams, and task performance: Changing effects of surface- and deep-level diversity on group functioning. *Academy of Management Journal*, 45: 1029–1045.
- Haslam, S. A. (2004) *Psychology in Organizations: The social identity approach (2<sup>nd</sup> edition)*. London: Sage Publications.
- Haslam, S. A., Ryan, M. K., Kulich, C., Trojanowski, G., & Atkins, C. 2010. Investing with prejudice: The relationship between women’s presence on company boards and objective and subjective measures of company performance. *British Journal of Management*, 21: 484-497
- Higgs, D. 2003. *Review of the role and effectiveness of non-executive directors*. London: The Department of Trade and Industry.
- Hillman, A. J., & Dalziel, T. 2003. Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Review*, 28: 383-396.
- Hillman, A. J., Nicholson, G., & Shropshire, C. 2008. Directors’ multiple identities, identification, and board monitoring and resource provision. *Organization Science*, 19: 441-456.

## *Board Faultlines*

Hogg, M., & Abrams, D. 1988. *Social identifications: A social psychology of intergroup relations and group processes*. London: Routledge.

Hogg, M. A., & Terry, D. J. 2000. Social identity and self-categorization processes in organizational contexts. *Academy of Management Review*, 25(1): 121-140.

Hogg, M., Terry, D., & White, K. 1995. A tale of two theories: A critical comparison of identity theory with social identity theory. *Social Psychology Quarterly*, 58: 255-269.

Homan, A. C., Hollenbeck, J. R., Humphrey, S. E., Van Knippenberg, D., Ilgen, D. R., & Van Kleef, G. A. 2008. Facing differences with an open mind: Openness to experience, salience of intragroup differences, and performance of diverse work groups. *Academy of Management Journal*, 51: 1204-1222.

Huse, M. 2005. Accountability and creating accountability: A framework for exploring behavioural perspectives of corporate governance. *British Journal of Management*, 16: 65- 79.

Huse, M. 2007. *Boards, governance and value creation. The human side of corporate governance*. Cambridge: University Press.

Jehn, K. A., Northcraft, G. B., & Neale, M. A. 1999. Why differences make a difference: A field study of diversity, conflict, and performance in workgroups. *Administrative Science Quarterly*, 44: 741-763.

Jackson, S. E., Joshi, A., & Erhardt, N. L. 2003. Recent research on team and organizational diversity: SWOT analysis and implications. *Journal of Management*, 29: 801-830.

Jackson, S. E., May, K. E., & Whitney, K. 1995. Under the dynamics of diversity in decision-making teams. In R. A. Guzzo & E. Salas (Eds.), *Team effectiveness and decision making in organizations*: 204-261. San Francisco, CA: Jossey-Bass.

Jeanjean, T., & Stolowy, H. 2009. Determinants of board members' financial expertise-Empirical evidence from France. *The International Journal of Accounting*, 44: 378-402.

Jehn, K. A., & Bezrukova, K. 2010. The faultline activation process and the effects of activated faultlines on coalition formation, conflict, and group outcomes. *Organizational Behaviour and Human Decision Processes*, 112: 24-42.

Johnson, J., Daily, C., & Ellstrand, A. 1996. Boards of directors: A review and research agenda. *Journal of Management*, 22: 409-38.

Joshi, A., & Roh, H. 2009. The role of context in work team diversity research: A meta-analytic review. *Academy of Management Journal*, 52: 599-627.

Kim, K. H., Al-Shammar, H. A., Kim, B., & Lee, S. H. 2009. CEO duality leadership and corporate diversification behaviour. *Journal of Business Research*, 62: 1173-1180

## *Board Faultlines*

- Lau, D. C., & Murnighan, J. K. 1998. Demographic diversity and faultlines: The compositional dynamics of organizational groups. *Academy of Management Review*, 23: 325–340.
- Lau, D. C., & Murnighan, J. K. 2005. Interactions within groups and subgroups: The dynamic effects of demographic faultlines. *Academy of Management Journal*, 48: 645–659.
- Leblanc, R., & Gillies, J. 2005. *Inside the boardroom: What directors, investors, managers and regulators must know about boards of directors*. Chichester: John Wiley & Sons.
- Leblanc, R., & Schwartz, M. S. 2007. The black box of board process: Gaining access to a difficult subject. *Corporate Governance: An International Review*, 15: 843-851.
- Li, J., & Hambrick, D. C. 2005. Factional groups: A new vantage on demographic faultlines, conflict, and disintegration in work teams. *Academy of Management Journal*, 48: 794-813.
- Linck, J., Netter, J., & Yang, T. 2008. The determinants of board structure. *Journal of Financial Economics*, 87: 308–28.
- Littell, R. C., Milliken, G. A., Stroup, W. W., & Wolfinger, R.D. 1996 *SAS System for Mixed Models*. Cary: SAS Institute Inc.
- Martin, J. D., & Sayrak, A. 2003. Corporate diversification and shareholder value: A survey of recent literature. *Journal of Corporate Finance*, 9: 37-57.
- McKnight, P. J., & Weir, C. 2009. Agency costs, corporate governance mechanisms and ownership structure in large UK publicly quoted companies: A panel data analysis. *The Quarterly Review of Economics and Finance*, 49: 139-158.
- McNulty, T., Roberts, J., & Stiles, P. 2005. Beyond agency conceptions of the work of the non-executive director: Creating accountability in the boardroom. *British Journal of Management*, 16: 1-22.
- Mathieu, J., Maynard, T. M., Rapp, T., & Gilson, L. 2008. Team effectiveness 1997–2007: A review of recent advancements and a glimpse into the future. *Journal of Management*, 34: 410–476.
- Milliken, F. J., & Martins, L. L. 1996. Searching for common threads: Understanding the multiple effects of diversity in organizational groups. *Academy of Management Review*, 21: 402–33.
- Minichilli, A., Corbetta, G., & MacMillan, I. C. 2010. Top management teams in family-controlled companies: ‘Familianness’, ‘faultlines’, and their impact on financial performance. *Journal of Management Studies*, 47: 205-222.

## *Board Faultlines*

Minichilli, A., Zattoni, A., & Zona, F. 2009. Making boards effective: An empirical examination of board task performance. *British Journal of Management*, 20: 55-74.

Molleman, E. 2005. Diversity in demographic characteristics, abilities and personality traits: Do faultlines affect team functioning? *Group Decision and Negotiation*, 14: 173-193.

Nielsen, S. 2010. Top management team diversity: A review of theories and methodologies. *International Journal of Management Reviews*, 12: 301-316.

Oxelheim, L. & Randøy, T. 2003. The impact of foreign board membership on firm value. *Journal of Banking and Finance*, 27: 2369-2392.

Pelled, L. H. 1996. Demographic diversity, conflict, and work group outcomes: An intervening process theory. *Organization Science*, 7: 615-631.

Pelled, L. H., Eisenhardt, K. M., & Xin, K. R. 1999. Exploring the black box: An analysis of work group diversity, conflict, and performance. *Administrative Science Quarterly*, 44: 1-28.

Pearsall, M. J., Ellis, A. P. J., & Evans, J. M. 2008. Unlocking the effects of gender faultlines on team creativity: Is activation the key? *Journal of Applied Psychology*, 93: 225-234.

Pfeffer, J. 1972. Size and composition of corporate boards of directors. *Administrative Science Quarterly*, 17: 218-228.

Pfeffer, J., & Salancik, G. 1978. *The external control of organizations: A resource dependence perspective*. New York: Harper and Row.

Polzer, J. T., Crisp, C. B., Jarvenpaa, S. L., & Kim, J. W. 2006. Extending the faultline model to geographically dispersed teams: How collocated subgroups can impair group functioning. *Academy of Management Journal*, 49: 679-692.

Pye, A. J. 2002. The changing power of “explanations”: Directors, academics and their sensemaking from 1989 to 2000. *Journal of Management Studies*, 39: 907-926.

Pye, A. J., & Pettigrew, A. 2005. Studying board context, process and dynamics: Some challenges for the future. *British Journal of Management*, 16: 27-38.

Rico, R., Molleman, E., Sánchez-Manzanares, M., & Van der Vegt, G. S. 2007. The effects of diversity faultlines and team task autonomy on decision quality and social integration. *Journal of Management*, 33: 111-132.

Ruigrok, W., Peck, S., Tacheva, S., Greve, P., & Hu, Y. 2006. The determinants and effects of board nomination committees. *Journal of Management and Governance*, 10: 119-148.

## *Board Faultlines*

- Sawyer, J. E., Houlette, M. A., & Yeagley, E. L. 2006. Decision performance and diversity structure: Comparing faultlines in convergent, crosscut, and racially homogeneous groups. *Organizational Behaviour and Human Decision Processes*, 99: 1-15.
- Singh, H., & Harianto, F. 1989. Management board relationships, takeover risk, and the adoption of golden parachutes. *Academy of Management Journal*, 32: 7-24.
- Stryker, S. 1980. *Symbolic Interactionism: A Social Structural Version*. Palo Alto, CA: Benjamin/Cummings.
- Tajfel, H. 1974. Social identity and intergroup behavior. *Social Science Information*, 13 (2): 65–93.
- Thatcher, S. M. B., Jehn, K. A., & Zanutto, E. 2003. Cracks in diversity research: The effects of diversity faultlines on conflict and performance. *Group Decision and Negotiation*, 12: 217–241.
- Tuggle, C. S., Schnatterly, K., & Johnson, R. A. 2010. Attention patterns in the boardroom: How board composition and processes affect discussion of entrepreneurial issues. *Academy of Management Journal*, 53: 550-571.
- Tyson Report on the Recruitment and Development of Non-Executive Directors*. 2003. London, UK: London Business School.
- Van Knippenberg, D., & Schippers, M. C. 2007. Workgroup diversity. In M. I. Posner & M. K. Rothbart (Eds.), *Annual review of psychology*, 58: 2.1–2.27. Palo Alto, CA: Annual Reviews.
- Walker, D. 2009. *A review of corporate governance in UK banks and other financial industry entities* ('Walker Review'). London.
- Webber, S. S., & Donahue, L. M. 2001. Impact of highly and less job-related diversity on work group cohesion and performance: A meta-analysis. *Journal of Management*, 27: 141–162.
- Westphal, J. D. 1999. Collaboration in the boardroom: Behavioral and performance consequences of CEO-board social ties. *Academy of Management Journal*, 42: 7-24.
- Westphal, J. D., & Zajac, E. J. 1995. Who shall govern? CEO/board power, demographic similarity, and new director selection. *Administrative Science Quarterly*, 40: 60-83.
- Williams, K., & O'Reilly, C. A. 1998. Demography and diversity in organizations: A review of 40 years of research. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior*, 20: 77–140. Greenwich, CT: JAI Press.
- Zahra, S. A., & Pearce, J. A. 1989. Boards of directors and corporate financial performance: A review and integrative model. *Journal of Management*, 15: 291-334.

*Board Faultlines*

Zhang, Y. 2008. Information asymmetry and the dismissal of newly appointed CEOs: An empirical investigation. *Strategic Management Journal*, 29: 859-872.

TABLE 1

Means, Standard Deviations and a Full Correlation Matrix for All Variables across the years 1999-2008

	Obs	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1 Board Size	2550	9.40	3.10	1.000											
2 CEO Ownership	2350	1031	2996	0.1509*	1.000										
3 CEO Tenure	2345	5.49	5.51	-0.0976*	0.017	1.000									
4 CEO Duality	2525	0.93	0.25	0.034	0.0691*	-0.1760*	1.000								
5 Firm Size	3274	3703	12671	0.4205*	0.2023*	-0.0779*	0.011	1.000							
6 Firm Age	3817	32.69	36.71	0.019	-0.030	-0.009	-0.018	0.0365*	1.000						
7 Number of Business Segments	3663	1.73	1.01	0.2275*	0.0423*	-0.022	0.035	0.2209*	0.0630*	1.000					
8 Faultline Index	1938	2.55	1.92	0.021	-0.0611*	0.4435*	-0.1345*	-0.0614*	0.2031*	0.017	1.000				
9 Busy Board	2565	0.16	0.37	-0.0591*	0.0998*	-0.1168*	-0.001	0.0909*	0.0525*	-0.021	-0.0916*	1.000			
10 EDs' Compensation Structure	1748	0.45	0.19	0.1812*	0.4571*	-0.0932*	0.022	0.1965*	-0.021	0.022	-0.1383*	0.1274*	1.000		
11 NEDs on Board Committees	2542	0.75	0.26	-0.2914*	-0.1207*	0.1039*	0.001	-0.1981*	0.028	0.018	0.1562*	-0.2067*	-0.1669*	1.000	
12 Tobin's Q	3106	1.85	2.53	-0.032	0.1016*	0.039	-0.0664*	-0.030	-0.0952*	0.018	-0.0497*	-0.037	0.1692*	0.0434*	1.000

\* Denotes all correlation coefficients significant at the 5 percent level or higher.

TABLE 2

## Linear Mixed Effects Analysis for the Board Faultline Index and Firm Performance

	Dependent Variable: Tobin's Q					
	Model 1		Model 2		Model 3	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
<b>Control Variables</b>						
Board Size	-0.01	(0.05)	0.09†	(0.05)	0.003	(0.06)
CEO Ownership	0.06***	(0.01)	0.06***	(0.01)	0.03**	(0.01)
CEO Tenure	0.02†	(0.01)	0.03**	(0.01)		
CEO Duality	0.03	(0.06)	0.03	(0.06)	0.03	(0.07)
Firm Size	-0.06***	(0.01)	-0.08***	(0.01)	-0.08***	(0.01)
Firm Age	-0.02†	(0.01)	-0.02**	(0.01)	-0.01	(0.01)
Number of Business Segments	0.03	(0.04)	0.01	(0.04)	0.004	(0.04)
<b>Main Effects</b>						
Faultlines			-0.14***	(0.03)	-0.50***	(0.12)
<b>Moderating variables</b>						
Busy Board					0.26†	(0.11)
CEO Tenure					0.13***	(0.04)
EDs' Compensation Structure					-0.23	(0.18)
NEDs on Board Committees					-0.12	(0.12)
<b>Interaction Effects</b>						
Faultlines X Busy Board					-0.17†	(0.10)
Faultlines X CEO Tenure					-0.09***	(0.03)
Faultlines X EDs' Compensation Structure					0.09***	(0.02)
Faultlines X NEDs on Board Committees					0.14	(0.10)
Constant	0.57***	(0.12)	0.75***	(0.14)	1.15***	(0.18)
Number of Firms	263		229		216	
Number of Obs.	1584		1267		1100	
F	16.84***		17.70***		15.62***	
R-Square	0.209		0.228		0.267	
Adjusted R-Square	0.197		0.215		0.250	

Sectoral (finance and utilities) and year dummy variables are included for all specifications.

Models are specified with random effects.

† p<.10

\* p<.05

\*\* p<.01

\*\*\* p<.001 (All two tailed)