

**TO CONFORM OR NOT TO CONFORM: BOARD RESPONSES
TO THE FINANCIAL CRISIS**

A Dissertation

By

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ABSTRACT

The Global Financial Crisis of 2008 resulted in the failure of hundreds of banks in the U.S. alone, significant spikes in unemployment and disastrous consequences for firms and their stakeholders across numerous industries. In this context, with tremendous societal implications, this research draws on institutional theory and the strategic management literature to consider whether environmental shock alters the relationship between strategic conformity and firm performance. In doing so, this research also examines the contingency of board capital, arguing that environmental shock creates an opportunity for the board of directors to exert greater influence on the firm's strategy-setting and ultimately its performance. These predictions are tested using a sample of 348 banks who were required to report financial information to the Federal Reserve from 2005 to 2013, augmented by information on over 7,000 of these banks' directors. While the results do not support the assertion that strategic deviation becomes more valuable during crisis, I do find evidence that board composition affects the strategic conformity of the firm. Further, the industry experience of board members is associated with higher firm performance over a multi-year period following a shock. The results also indicate that other related expertise obtained outside of the industry can also prove useful to the firm during periods of environmental shock. In addition to contributing a greater understanding of when and how board capital can affect firm outcomes, this research also provides a deeper understanding of one of the most disruptive economic events of the modern era.

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I'm grateful to the anonymous sources who chose to share their stories and reflections on what they experienced as decision-makers of major institutions during the Financial Crisis. Like the people alongside whom I worked in banks, those I interviewed for this dissertation were truly generous and thoughtful and defy the stereotypes held by many.

In all the ways that one can love a place, I love Texas A&M and the community here. My academic journey here started in a special learning community with Dr. Loudder, and it's my pleasure to now move on, knowing that pursuing this academic career is the greatest compliment that I can give to the many, many professors and advisors I've had

since then, many of whom I will continue to know as friends. With over a decade accumulated here, there are too many influences to name without exploding the page count beyond reasonable limits, but I've been shaped by people from every floor in this Wehner building, from the UPO and Exec Ed on 2, Finance and the MBA office on 3, and most certainly the Deans, Accounting and Management, on 4. I've also been shaped in less beneficial ways from sitting for far too long in 405, albeit having both profound and meaningless conversations with my fellow Ph.D. students and the students from my classes.

While I could also spend many words in ode to my parents, who instilled in me a desire to pursue learning, and the rest of my family who supported me through this long journey, they, especially Bree, who inspired me to take this path and pushed me to the finish line, just want me to hit print and come home.

So, as Solomon reflected, "Of making many books there is no end, and much study wearies the body... here is the conclusion of the matter..."

TABLE OF CONTENTS

	Page
ABSTRACT	ii
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	v
LIST OF FIGURES	vii
LIST OF TABLES	viii
CHAPTER I INTRODUCTION	2
Board Human and Social Capital	7
Board Capital Depth versus Breadth	11
CHAPTER II STRATEGIC CONFORMITY	19
Competing Views of Strategic Conformity	21
Firm Decision-Makers and Strategic Conformity	27
The Board of Directors and Strategic Conformity	28
The CEO and Strategic Conformity	30
The Top Management Team and Strategic Conformity	31
Indicators and Measurement of Strategic Conformity	33
Crisis, Strategic Conformity and Firm Performance	35
CHAPTER III BOARDS AND GOVERNANCE DURING CRISIS	41
Board Capital Breadth and Depth in the Context of the Board of Directors ...	42
Crisis, Board Capital and Strategic Conformity	44
Board Capital, Corporate Governance and Firm Performance	47
Using Contingency Theory to Predict Firm Performance in Crisis	50
CHAPTER IV METHODOLOGY	63
Context and Sample	63
Dependent Variables	65
Independent Variables	67
Control Variables	68
Data Analysis	70

CHAPTER V RESULTS	72
CHAPTER VI PHENOMENOLOGICAL INTERVIEWS	83
Key Themes Regarding the Cause of the Crisis.....	84
Key Themes Regarding the Role of the Board	94
Conclusions	102
CHAPTER VII DISCUSSION AND CONCLUSION	103
Theoretical Contributions.....	107
Future Research.....	109
Limitations	114
Conclusion.....	115
REFERENCES	117
APPENDIX A-1 SUMMARY OF FINDINGS	138
APPENDIX B-1 REVIEW OF INDICATORS	139
APPENDIX B-2 BANKS WITH OVER \$100B ASSETS IN 2007	140

LIST OF FIGURES

	Page
Figure 1 Return on Assets Trend for In-Sample Banks.	43
Figure 2 The Benefit of Financial Expertise in a Crisis.	82

LIST OF TABLES

	Page
Table 1 Descriptive Statistics and Correlations	73
Table 2 Pre-crisis Strategic Deviation.....	75
Table 3 Strategic Deviation, Board Composition and Performance	77
Table 4 Board Composition	78
Table 5 The Interactive Effects of Crisis and Board Composition on Performance.....	79

CHAPTER I

INTRODUCTION

“[M]anagement scholarship has had little to say about the crisis... The paucity of papers explicitly relevant to the financial crisis was confirmed in a re-reading of the corpus of articles in AMR and AMJ from 2008 until the present. The silence of management research on the subject suggests that our research seems to have almost entirely ignored probably the biggest economic and business event of our lives... the gap in our research of both theoretical and empirical papers should surely concern us as a community of scholars.” (Starkey, 2015: 13–14)

The Global Financial Crisis of 2008 resulted in the failure of hundreds of banks in the U.S. alone, significant spikes in unemployment and disastrous consequences for firms and their stakeholders across numerous industries. Albeit with hindsight, many question, and attempt to explain, how sophisticated firms such as Lehman Brothers, Bear Stearns, and AIG failed because of their over-commitment to “toxic” assets (Bebchuk, Cohen, & Spamann, 2010; Bernanke, 2010; Levine, 2010; Saporito, 2009; Silva, 2009). Researchers point to lapses in risk management, possibly resulting from structural differences in the amount of authority given to the chief risk officer at the financial institution (Aebi, Sabato, & Schmid, 2012) and issues regarding the handling of problem loans (“written-off”) in financial statements (Staw, Barsade, & Koput, 1997). Yet, firms frequently fail even when the broader financial system is not under duress (Thornhill & Amit, 2003).

Are these business failures more likely to occur when a firm conforms to strategies prevalent in the industry? Or instead when the firm charts its own course? What role do board members play in making these decisions and charting the course for the firm? Existing theory suggests conflicting explanations. On one hand, institutional theory generally suggests that firms establish the greatest degree of legitimacy and thus improve their performance when conforming and mimicking industry leaders. In contrast, the strategic management literature assumes that organizations should seek to differentiate their strategies to improve financial performance *vis-a-vis* competitors and thereby other desired organizational outcomes, including survival. Despite these differing foci throughout management literature, a key dimension of an organization's success or failure is the extent to which its strategies either differ from or conform to industry norms. Importantly, environmental shock may alter which theoretical explanations are most salient.

I seek to resolve the ambiguity created between institutional theory and the strategic management literature by considering the importance of resource dependence theory during a crisis. Resource dependence theory (RDT), which focuses on the exchange of resources between organizations, asserts that organizations are most likely to survive when they effectively minimize their dependence on other organizations or maximize the dependence of other organizations on themselves (Ulrich & Barney, 1984). Strategic conformity increases the extent to which organizations are more likely to rely on a common pool of resources. Whereas financial resources may be abundant during times when an industry is performing well, their availability decreases during an environmental

shock. An abundance of financial resources during good times may increase competition for key resources such as human and physical capital. Further, while legitimacy may be easily obtainable via loose affiliation with an industry that is performing well, as scrutiny on an industry increases, legitimacy may be increasingly important to resource providers. For these reasons, it is unclear whether strategic conformity is more valuable when the industry is performing well (abundant financial resources, loose legitimacy expectations) or when the industry is in crisis (limited financial resources, strict legitimacy expectations).

In this context, firm decision-makers or the upper-echelons of the firm arguably play a key role in establishing firm strategies. In particular, the board of directors has long been identified as a key set of actors able to provide critical resources to the firm, notably advice, information, and access to valuable resources and legitimacy (Hillman, Withers, & Collins, 2009; Pfeffer & Salancik, 1978). As such, this dissertation research seeks to examine the role of board members in helping their firms to appropriately position themselves to avoid various types of industry traps, some of which are identified as “bubbles” in which firms or other market actors overinvest in and overvalue particular products, resources or companies.

Prior research has shown that directors, for instance through their memberships on other company boards, serve as a source of information and firm practices that can be transferred from one firm to another (Shropshire, 2010). Thus, board members and their accumulated knowledge, experience and relationships often can play a key role in the convergence of multiple firms on particular practices that result in bubbles. The

overlapping experiences of key decision-makers in the industry can result in conformity to industry recipes (Geletkanycz & Hambrick, 1997; Spender, 1989; Sundaramurthy, Pukthuanthong, & Kor, 2014) or spread of practices due to isomorphic tendencies (Fiss, Kennedy, & Davis, 2012). The practice of board members allowing or encouraging their company to imitate other firms can produce “excessive investment that is focused too narrowly on a limited number of options, with poor profit outcomes for the majority of firms. Imitation is a natural response to environmental uncertainty, but, by reducing variety, it can compound the collective risk of firms in an industry” (Lieberman & Asaba, 2006: 367).

Accordingly, extant research has increasingly examined board capital, the combined human capital and social capital of board members (Hillman & Dalziel, 2003). Thus far, research has established that board capital affects a number of firm outcomes, including strategic change (Haynes & Hillman, 2010), the innovative performance of small firms (Wincent, Anokhin, & Örtqvist, 2010), and stock market reactions to board decisions (Tian, Haleblan, & Rajagopalan, 2011). Most foundational research implicitly assumes that higher levels of human and social capital at the board level are universally desirable. However, recent research proposed that the level of overall resource availability in the environment may instead moderate the benefits of certain dimensions of board capital (Zona, Gomez-Mejia, & Withers, 2015). Indeed, “our understanding of when board composition is more or less consequential has been limited” (Almondoz & Tilcsik, *in press*: 35) and scholars have suggested that expertise can even be harmful under certain circumstances (Almondoz & Tilcsik, *in press*).

Drawing on prior research suggesting that board capital varies according to depth (concentration) and breadth (diversity) in regard to industry and functional expertise, I consider the potential for environmental shock to alter the relationship between the dimensions of board capital and a firm's performance. Rapidly-changing environments are characterized by uncertainty (Buchko, 1994), disruption as new technologies are introduced (Adner, 2002) and market turbulence in which competitive interactions are difficult to predict (Bogner & Barr, 2000). Further, these types of environments may result in greater scarcity of resources for firms which, among other effects, has been shown to heighten the benefit of board interlocks (Zona et al., 2015). Recently, in their examination of biotechnology IPOs, Sundaramurthy and colleagues (2014) show that the industry-backgrounds of board members can either be advantageous or disadvantageous depending on firm characteristics or interaction of their backgrounds with the CEO's own capital. Similarly, this research will add to our knowledge of when generally desired board member experiences can instead be a liability (Almandoz & Tilcsik, *in press*) depending upon the environmental context. However, in contrast to prior work on the liability of expertise, when an industry is highly-complex, broad general business experience may be less transferable, while particular relevant expertise may be valuable, even when not gained within the industry. I consider when such expertise may be most beneficial.

Using evidence from the context of the Financial Crisis of 2008, I introduce the concept of "board fit," the extent to which board capital is effective in a particular environment. This echoes what Pfeffer and Salancik noted, "The criticality of a resource for an organization may vary from time to time as conditions in the organization's

environment change” (Pfeffer & Salancik, 1978: 46). This concept extends the argument that strategic context is a significant moderator of the relationship between the relational capital of the board and firm outcomes (Carpenter & Westphal, 2001). Board fit as applicable to the 2008 crisis parallels the concept of “dynamic strategic fit” – the expectation that environmental and organizational factors influence subsequent changes in firm strategy and performance, proposed using the context of the U.S. Savings and Loan Crisis of the 1980s (Zajac, Kraatz, & Bresser, 2000). Like these authors, I draw on contingency theory to explain how firms adapt to changing environmental conditions. Indeed, board fit is useful to explain why board capital is not universally beneficial, but rather may be dependent on environmental contingencies. Thus, this dissertation research extends work showing that certain types of board human and social capital (breadth versus depth) can be more beneficial than others. Further, by examining the board’s influence on the strategic positioning of the firm, I answer calls by board researchers to focus on the intermediate mechanisms by which boards influence firm performance (Desender et al., 2013).

Board Human and Social Capital

The construct of board human capital encompasses multiple resources possessed by board members. Some important resources include variable education, knowledge, experience, expertise and reputation (Khanna, Jones, & Boivie, 2014). Strong board human capital is generally desired, and can contribute to competitive advantage. This may occur either by increasing their monitoring effectiveness, through the advice they provide

to management (Khanna et al., 2014), or by the decisions that board members make as a group, such as approving major strategic actions. However, as expertise rises, decision-makers are known to have blind spots, possibly resulting from hubris, which may cause them to overlook the potential consequences of their competitors' decisions (Zajac & Bazerman, 1991).

Boards are composed of individuals and thus affected by cognitive biases that include poor framing of information (Levin, Schneider, & Gaeth, 1998) and seemingly irrational decisions (Ariely, 2009). Psychological explanations for the financial crisis have indeed been posed based on such explanations (Shefrin, 2010), or on individual motivations such as greed, which may be why CEOs directed their firms to make loans that had a high probability of never being paid back (Haynes, Campbell, & Hitt, 2015). For board members, other demands on their time and cognitive capacity may reduce their contribution to the board (Khanna et al., 2014). However, individual board members are also part of a group or a team (He & Huang, 2011) and thus group attributes and processes affect how their human capital is incorporated into firm decision-making. For instance, research on the benefits of board diversity suggest that boards are subject to bias if members are too demographically similar (Triana, Miller, & Trzebiatowski, 2014), a finding reminiscent of older theories of "groupthink" (Brodbeck, Kerschreiter, Mojzisch, & Schulz-Hardt, 2007). Yet, other research suggests that board diversity may also inhibit the firm from pursuing strategic change (Goodstein, Gautam, & Boeker, 1994).

Both board members' depth and breadth are of great importance to the composition of the board. Human capital depth is the extent to which the board's collective knowledge

and experience are concentrated, for instance in the industry of focus or a particular functional expertise. Human capital breadth is the extent to which a board's collective knowledge and experience are diverse or span a wide range of industries or functional backgrounds. These "business experts" are thus able to draw on knowledge gained in other firms and industries to "supply alternative viewpoints on internal issues, providing executives with valuable information about how other firms deal with similar problems and concerns" (Hillman, Cannella, & Paetzold, 2000: 241).

Depth and domain expertise (Almondoz & Tilcsik, *in press*) can contribute to strong performance during optimal conditions, but it is unclear from prior research whether depth or breadth is more valuable in helping a firm to avoid the consequences of overexposure when the environment shifts. Certainly board human capital depth is believed to be beneficial when the firm is operating under favorable environmental conditions and can capitalize on industry-specific knowledge to outperform competitors. Yet, this expertise can potentially lead to a type of industry entrenchment and acceptance of "industry recipes" (Geletkanycz & Hambrick, 1997; Spender, 1989) that could potentially be detrimental during times of environmental shock. On the one hand, breadth of human capital might help a firm consider more alternatives and alter its strategy but on the other, this breadth might result in paralysis and inaction.

Board social capital (also referred to as relational capital) primarily describes the potential benefits to a firm resulting from the networks to which its board members belong. This is the board-level equivalent of individual social capital and can enable the board to achieve certain, particular actions because of the way in which board members are linked

into social structures (Coleman, 1988). Board social capital can be conceptualized both as a unit-level aggregate of that possessed by individual board members (Ployhart, Reilly, & Maltarich, 2014) and as a “collective ability to access information and resource networks” (Kor & Sundaramurthy, 2009: 984). While many of the benefits available to the firm come from access to the external connection of board members, social capital can also be built up within the board, between the board and executives or other employees of the firm, and between the board and other stakeholders.

A board embedded with *depth* (concentration in a certain dimension) of social capital can be helpful for increasing market share and profits when industry conditions are favorable. As others have noted, “Research on the embeddedness of the board in the focal firm’s industry is scarcer, yet, depth is a relevant and important component of board capital” (Haynes & Hillman, 2010: 1147). A board with *breadth* (diversity in a certain dimension) of social capital can conversely allow organizations to selectively capitalize on alternate or contrary information. For instance, a financial firm with access to contrary information in the lead-up to a financial crisis may be more likely to avoid high risk positions in “toxic assets” – such as collateralized debt obligations – or be more likely to promptly reduce its exposure to these positions as new information becomes available. As described by Haynes & Hillman (2010: 1145):

Access to more or better information through a variety of industry ties enables the firm to lessen the impact of uncertainty originating in its immediate industry environment. In other words, a firm whose board members have multiple ties to the firm’s main industry is better equipped to survive and thrive because it

can more quickly understand industry events and trends... A board with directors deeply embedded in industry through occupation and industry ties is likely to devise or approve strategies that converge to industry central tendencies.

However, it is also possible that outsiders, even those possessing valuable information, may be more likely to defer to industry insiders during periods of turbulence or shock.

Board Capital Depth versus Breadth

Board capital combines both board human capital and social capital. Like top management teams with overlapping backgrounds (Westphal & Zajac, 1995, 1997), board members are likely to take actions based on relatively similar philosophies and underweight the advice and ideas of those who approach problems from a different perspective or provide suggestions perceived as contrarian in nature. Thus, a board's composition and its board capital breadth and depth are likely to influence whether the firm falls into the potential trap of – and suffers the consequences of – industry-wide thinking. This tendency could also be described as industry group-think, industry logic, or excessive isomorphism.

The purpose of this study is, through empirical research, to provide powerful and timely evidence of the respective roles board capital breadth and depth play during times of environmental shock. The mechanisms through which a board member exerts influence include, for instance, level and effectiveness of both monitoring activity, an important board function central to predictions of agency theory, and resource-provision, a function central to resource dependence theory. Ultimately, environmental disruption alters the

scarcity of resources and potentially changes the extent to which board composition and function are critical to firm performance.

To test these predictions, I examined firm performance under varying economic conditions and formulated an integrated set of theoretical arguments based in resource dependence and contingency theories. In this way, I sought to understand the differing performance of some firms when assessed across the economic cycle and the role that a board can play in that positioning and performance.

More specifically, I sought to answer the following research questions:

- *How does resource scarcity affect when strategic conformity is most harmful to a firm's performance?*
- *How do board human and social capital depth and breadth influence a firm's susceptibility to environmental shock?*
- *Does a particular type of board composition allow a firm to outperform peers during times of disruption?*

By answering these questions within the context of one of the most perplexing systemic failures observed in the capitalist system, this dissertation provides several unique theoretical contributions.

First, despite its intuitive appeal, research has repeatedly failed to identify strong evidence of general board capital; studies tend to indicate weak or no effects (Dalton, Daily, Ellstrand, & Johnson, 1998). This dissertation suggests that a more nuanced approach may be required, because a board's influence may be partially contingent on the presence of certain environmental conditions, notably, as in this case, the presence of a

crisis that may heighten the opportunity for board influence. Accordingly, I integrate previously disparate research on board capital and contingency theory. Certainly the role of board capital in helping a firm deal with environmental disruption is of significant importance because board influence may be most salient during times when firm performance is at risk. For instance, research has shown that board members are more engaged when they have concerns regarding management's ability to carry out restructuring activity (Johnson, Hoskisson, & Hitt, 1993) and when the firm is in crisis (Withers, Corley, et al., 2012). As a result, the past experience of new directors affects whether management and other directors will perceive their contributions to be relevant to current strategic conditions (Carpenter & Westphal, 2001). Thus, seeking a more nuanced understanding of the relevance of different dimensions of board capital in certain circumstances, I respond to Haynes and Hillman (2010: 1159), who indicate the need for "further research models that continue to refine when board diversity can be good and when it can be bad". Consequently, I build on even more recent research which has found that domain expertise can at times be associated with firm failure (Almandoz & Tilcsik, *in press*).

Second, this dissertation research contributes to the literature by addressing whether strategic conformity is more or less valuable during a crisis, a question on which institutional theory and the strategic management literature offer seemingly different prescriptions. The probability of firm survival may increase for firms that diverge from strategic norms due to their ability to access and decipher information from a broader variety of board relationships. However, prior to a crisis, these firms may at times appear

to be underperforming, as the value of their superior positioning may not be immediately reflected in market assessments that are biased by the majority view. This dissertation seeks to integrate the potentially conflicting research and delineate under which environmental circumstances legitimacy-seeking versus differentiating strategies may be most successful.

Third, I draw on resource dependence theory to explain why board capital breadth and depth influence firm outcomes across different environmental conditions. It is worth noting that while a significant portion of the corporate governance literature draws on agency theory, agency explanations are incomplete for explaining the role of boards in times of firm failure. Certainly, in the context of the financial crisis, agency theory is useful in exploring why executives' interests or individual traders' interests are divorced from those of shareholders and society, resulting in the taking of outsized risks. However, to a large extent, board members are notably among the "coalition participants" who prefer to benefit from the "continued existence of the organization" (Pfeffer & Salancik, 1978: 47). Indeed, some have suggested that agency explanations for board influence may be more relevant when resources are more abundant (Zona et al., 2015). In contrast, when resources are scarce, agency concerns may be less relevant because the scarcity of resources can serve to align the interests of board members, executives, and shareholders to focus on ensuring the firm's continuity. Therefore, resource dependence theory is valuable in understanding the role of board members in positioning their firms within the marketplace and reacting to changes in environmental conditions. However, corporate governance research drawing on resource dependence theory has to date focused on the

overall value of board capital, rarely examining the dynamic environmental conditions that continuously alter which attributes of board capital will be beneficial.

I therefore extend resource dependence theory by showing that resource provision and optimization are dependent on context. Hillman and colleagues (Hillman et al., 2000: 252) found that firms “strategically alter the composition of their boards in response to new environmental demands and forces.” Resources that are beneficial in one context may be harmful in another, and high-performing firms will either be the most adept at selecting board members who can provide resources relevant to the expected conditions or more agile in changing the directors on their board to match the operating environment, perhaps aided by shorter board terms. While past work has indeed substantiated expectations that firms alter board composition in response to changes in the external environment (Hillman et al., 2000), such alterations have often been in response to predictable and announced environmental changes such as deregulation or to more recurring changes in the institutional environment (Peng, 2004) as opposed to disruption characterized as an environmental shock which creates even greater uncertainty. Economic shocks, in particular, result in capital constraints and changes in demand for a firm’s products (Chakrabarti, 2015).

This dissertation suggests that when the risk of crisis is significant, firms should seek to strengthen their board by selecting directors who augment board capital appropriately, whether that capital is obtained from within or outside the industry. In essence, firms whose board capital is not optimal may experience reduced monitoring and resource provision, potentially contributing to the firm making short-sighted decisions,

such as zealously competing for market share even when the costs of this pursuit exceed the benefit, and ultimately underperforming over a longer time horizon. Accordingly, firms should actively seek access to directors who have the necessary characteristics to appropriately monitor the CEO.

Second, firms should employ deliberate strategies to reduce the likelihood of falling into industry-wide traps and to position themselves to profit during times of industry disruption. Thus, I answer in part a call to determine if “such variances in crisis situations and diversified environments can further enrich our understanding of the value of diversity of experience between the executive and the monitoring arms of the board” (Sundaramurthy et al., 2014: 865). Firms that alter governance mechanisms to increase board fit in accordance with the more constrained resource environment may also outperform less responsive peers.

Third, while emerging research examines when resource dependency and agency theories are most relevant to explaining the role of boards in firm decision-making (Zona et al., 2015), to date, the board capital literature has not articulated a theoretical basis for *mechanisms* that explain which theoretical lens best illuminates a relationship between board roles and firm performance. I suggest that the dimensions of board capital are differentially associated with particular board functions, an area which Kor and Sundaramurthy (2009) noted would benefit from a theoretical articulation of how different types of director capital improve the performance of specific functions. Specifically, I argue, board capital depth increases the monitoring capabilities of the board and can thereby contribute to improved firm performance. Alternatively, relevant expertise from

outside the industry can allow board members to simultaneously be effective monitors while also increasing the firm's access to resources and thereby can contribute to improved firm performance. Environmental conditions, notably affecting resource availability, moderate these relationships and thereby determine which theoretical explanations are most salient in predicting firm performance.

Finally, I also make a secondary contribution to agency theory, which suggests that boards should represent owners in their decision-making. However, board members may have motivations that differ from those of principals, including a desire for entrenchment, reputational concerns, and misaligned financial incentives (Withers, Corley, & Hillman, 2012). Thus, I seek to examine *when* heterogeneous boards will make more optimal decisions on behalf of their firms. Further, I seek to contribute to an understanding of when depth of board capital may be advantageous by addressing the implications of the board capital-performance relationship, notably during periods of crisis, as called for by board capital researchers (Haynes & Hillman, 2010).

As described in Chapter IV, the sample identified from BoardEx consists of 348 banks that operated in the financial sector from 2005-2013 and were subject to filing requirements with the Federal Reserve, as well as approximately 7,000 directors that served on at least one of their boards for one or more years. These dates include time prior to the Financial Crisis, as well as time after the crisis subsided. I aggregated board and firm information from BoardEx and Compustat, respectively, to create distinct models to test the effect of board capital breadth and depth on strategic conformity, changes in board composition, and financial performance. I augmented this empirical approach with

exploratory, phenomenological interviews with industry participants and experts as detailed in Chapter VI. These interviews allowed for a more comprehensive consideration of the influences and perceptions that affected key decision-makers and the exchanges that occurred between executives and board members.

This dissertation proceeds as follows. First, I provide a review of the literature on strategic conformity and draw on theory to propose firm-level hypotheses in Chapter II. Then, in Chapter III, I develop hypotheses by drawing on theoretical frameworks and relevant board capital literature, specifically that examine the role of depth and breadth capital in board performance and thereby firm outcomes. In each of these chapters, I introduce the contextual factor of environmental shock which may alter the conformity-performance relationship and similarly may alter the role and influence of the board. Chapter IV details the methodology used to test each aspect of the model, while Chapter V provides a comprehensive discussion of the results. Chapter VI discusses key insights from the interviews. In conclusion, Chapter VII details the contributions this dissertation makes in advancing theory and providing a basis for future research.

CHAPTER II

STRATEGIC CONFORMITY

Firms should be as different as legitimately possible.

(Deephouse, 1999: 147)

Institutional theory details the many coercive and mimetic forces facing firms. Accordingly, organizations often adopt similar practices and approaches on everything from golden parachutes for CEOs (Fiss, Kennedy, & Davis, 2002) to the structure and titles of the top management team (Zorn, 2004).

Organizations also have the opportunity to mimic the actions of others in the resources they control and the competitive actions they conduct. Simply, strategic conformity is the extent to which a firm's strategies are similar to those of peer firms (Deephouse, 1996). Firms whose resource profile or strategic actions are consistent with those of other firms can be described to be strategically *conforming*, while firms whose resources or strategic actions are unique can be described as strategically *deviating*. Strategic conformity can be used as an intermediate dependent variable that is affected by board and CEO characteristics and as a predictor of firm performance. This section provides a review of the past literature on organizational conformity. Notably, providing such a review is a difficult task at times, as scholars also express significant interest in the initiation of strategic and organizational change (e.g., Lant, Milliken, & Batra, 1992). While initiation of organizational change may have many of the same antecedents as organizational deviation, their rationale and outcomes may differ. At times, these studies

are informative in understanding organizational conformity. However, at other times, because a firm can initiate numerous changes but still remain in lock-step with peers and competitors, these studies may hinder an understanding of unexplored and unknown relationships. For instance, a firm can choose a number of different courses of action that vary on three dimensions: whether to change (the company could choose to not change even when peers are changing or could choose to change when peers are not changing), direction of change, and magnitude of change (change more than peers or change less than peers).

Similarly, the literature on imitation is also highly-related to that considering strategic conformity. To some extent, conformity represents the cumulative effect of organizational imitation. Yet, it also stands apart, because when organizations are marked by conformity, specific initiation and subsequent responses may not be observable. Indeed, organizations may act in-sync with one another or gradually approach similar positioning. Ultimately, this may have been a contributing factor to the Financial Crisis Inquiry Commission's unflattering description of what occurred during the Financial Crisis:

Financial institutions made, bought, and sold mortgage securities they never examined, did not care to examine, or knew to be defective; firms depended on tens of billions of dollars of borrowing that had to be renewed each and every night, secured by subprime mortgage securities; and major firms and investors blindly relied on credit rating agencies as their arbiters of risk. (Financial Crisis Inquiry Commission, 2011: xvii)

Competing Views of Strategic Conformity

Two distinct reasons motivate the discussion of organizational conformity in the literature. First, conformity is central to institutional theory as it represents acquiescence of an organization to various pressures. For instance, organizations seek to align themselves with generally accepted industry norms and practices in order to obtain resources. Second, the potential benefits of deliberately choosing not to conform but rather to deviate from the practices of other organizations are a key focus of strategic management scholars. For example, heterogeneity can create competitive advantages for the firm. These viewpoints clash in their fundamental expectation: is conformity or deviance beneficial to an organization?

Institutional theory would broadly predict that conformity is beneficial to firms. Specifically, mimetic isomorphism has been used to explain how firms seek to be perceived as legitimate by following established strategies in line with those of key industry leaders. Indeed, these pressures result in the general expectation that “organizations embedded in the same environment, and thus subject to the same institutional pressures, tend to adopt similar practices” (Battilana & Casciaro, 2012: 382). These similar practices, and the applications of institutional theory, are wide in scope, affecting numerous firm decisions and practices. In this work, I focus on the specific groupings of actions that reflect a firm’s strategy.

Following strategies similar to those of other firms provides a firm certain benefits. It avoids the risk of adopting technologies that the rest of the industry will ignore and avoids paying the high price required of early adopters (Dowell & Swaminathan, 2006).

Further, research on strategic groups suggests that being a core or central firm contributes to increased legitimacy and thereby numerous benefits, such as superior access to resources (McNamara, Deephouse, & Luce, 2003). Similarly, scholars have demonstrated that isomorphism contributes to favorable responses from regulators and media participants (Deephouse, 1996). While firms may demonstrate some degree of strategic choice in how they decide to conform, the pressure to conform remains strong even as an organization increases in size (Goodstein, 1994). When an organization does not fully comply with institutional pressures, it is likely to disguise its deviation through a variety of approaches so as to maintain legitimacy (Oliver, 1991).

Strategic management scholarship also generally conveys an expectation that low conformity, or deviance, is a necessary condition to creating competitive advantage. Strategic conformity places a limit on the upside performance of the firm, because excess returns are not possible if the firm is acting in tandem with its peers. Breaking away from the status quo may be a key way to benefit from first-mover advantage or surprising competitors (Carpenter, 2000). For example, strategic management scholars examine the benefits of pioneering behaviors or pioneering orientation of firms, such as introducing new products before peers do (Mueller, Titus, Covin, & Slevin, 2012). Results suggest a “double-edged sword, variously serving to enable firm growth and threaten firm survival” (Mueller et al., 2012: 1543). Research in this area is also closely related to strategic change (Carpenter, 2000). For instance, recent work has sought to establish links between industry expertise and strategic change (Oehmichen, Schrapp, & Wolff, 2016). However, strategic

management scholars have also identified conditions under which strategic deviation is harmful, such as when the industry is characterized by uncertainty (Carpenter, 2000).

Two related sets of literature on the matter are particularly important in assessing the benefits of conformity. First, a number of scholars have investigated adherence to “industry recipes” (Spender, 1989). These recipes represent shared belief systems and common cognitive mappings of the boundaries and approaches within an industry that serve to cause firms to accept them in a predictable fashion (Bogner & Barr, 2000). Similarly, many participants, regardless of their home firms, may share an industry mindset and contribute to an industry culture (Phillips, 1994). While these studies are not always explicitly linked to the strategic actions of firms, it follows that participants with these shared expectations and beliefs are more likely to take actions in accordance with this conventional wisdom. In contrast, scholars have also explored early adopters and first-movers in a variety of contexts; these actions constitute a form of strategic deviation. A significant body of research has explored these effects in numerous contexts, ranging from acquisition waves (Carow, Heron, & Saxton, 2004; McNamara, Haleblian, & Dykes, 2008) to international expansion (Frynas, Mellahi, & Pigman, 2006). To the extent that existing firms undertake entry into new markets, the order of entry literature is also relevant (Shamsie, Phelps, & Kuperman, 2004). These literatures in combination contribute greater depth to the variety of factors that influence whether a strategic action is beneficial to a firm. However, they do not contribute to resolution as to whether a firm should definitely conform or deviate from its peers.

This impasse on the ultimate merits of conformity persists despite numerous valuable contributions to the literature. For instance, Deephouse (1999) proposed strategic balance as an integrative solution to the conundrum. Strategic balance examines both the conformity and differentiation propositions as paths to improved performance available to firms, as they represent distinct challenges in regard to competition and establishing legitimacy, respectively. While conformity may increase legitimacy, this legitimacy comes at the cost of competing in a market with a greater number of undifferentiated competitors and corresponds to lower profits (Deephouse, 1999).

While this conclusion acknowledges the centrality of resources, specifically considering the reactions of exchange partners, greater incorporation of resource dependence theory can help to improve both our understanding of when organizations would be expected to conform to industry norms and when conformity as opposed to deviance is valuable in its implications for firm performance. For instance, to the extent firms have consistent strategies, these organizations are also dependent upon access to resources similar to those needed by competitors, potentially vie for the same set of customers, and compete for the same pool of employees. Thus, the factors affecting one firm may influence many firms and incorporating resource dependence theory allows for explanations that more fully integrate environmental factors and the role of key decision-makers to account for heterogeneity of firm outcomes.

First, environmental factors are paramount in determining when conformity is valuable. Zajac and colleagues (Zajac et al., 2000) articulate a model of dynamic strategic fit in which environmental and organizational contingencies affect the desirability of a

strategic change. The extent to which the strategic change that is adopted matches the optimal strategic change becomes the predictor of organizational performance; strategic change must be continuous in response to environmental cues and other factors. However, this model does not directly address the extent to which the strategic changes represent conformity or deviation relative to other competitors in the industry. Firm levels of conformity may follow a punctuated equilibrium model defaulting toward convergence until interrupted by periods of poor performance (Deephouse, 1999).

Yet, few researchers have examined the value of conformity at a time of disruption. Indeed, studies that have sought to establish environmental effects on strategic change are often limited by a focus on comparing firms in one industry to another, rather than modeling a significant environmental disruption or change within an industry (e.g., Gordon, Stewart, Sweo, & Luker, 2000; Gordon et al., 2000). Because the key argument for conformity is primarily one of legitimacy, it is relevant to ask of more mature firms: when do a firm's stakeholders expect it to establish or preserve legitimacy? Therefore, while poor performance of a particular firm may incite risk-taking, environmental shock may result in many firms pursuing legitimacy rather than a more risky strategy deviating from the norm. This is consistent with results showing that strategic deviation was not beneficial in industries characterized by uncertainty (Carpenter, 2000). In these contexts, it may be helpful to incorporate recent theoretical developments in regard to the legitimacy judgment cycle (Tost, 2011), which suggest that legitimacy judgments are reassessed to affect support and resistance to change. It similarly follows that willingness to deviate

from industry norms may not be a static preference, but rather is influenced by changes in the environment that may trigger legitimacy evaluations.

In addition to environmental factors, the firm's key decision-makers significantly influence strategic positioning. Therefore, the question shifts to: when will decision-makers be most prone to undertake legitimacy-preserving actions? Recent research suggests that governance arrangements between management and ownership help determine the strategic conformity of the firm (Miller, Le Breton-Miller, & Lester, 2013). While Miller et al.'s study considered how family firms may have unique reasons for pursuing legitimacy through conformity, my sample allows me to examine how environmental factors may alter the decision-making pursued by the board and CEO of firms outside of the familial context. Recent empirical work has also suggested that individual attributes of the CEO – specifically affective traits – influence strategic conformity and performance (Delgado-Garcia & De la Fuente-Sabate, 2010). This was built on prior work examining the influence of the broader top management team's tenure (Finkelstein & Hambrick, 1990) and networks (Geletkanycz & Hambrick, 1997). Further, evidence of the CEO's involvement in strategic decision-making includes the effects of compensation and performance (Carpenter, 2000), which alter how CEOs choose to reposition their firms. Given this multiplicity of factors affecting strategic conformity, I propose a holistic model in which environmental, firm, board and top management characteristics each affect a firm's degree of strategic conformity. Ultimately, the challenge for a firm is similar to that faced by individuals seeking both to retain self-

identity as well as differentiation from others; hence the pursuit of optimal distinctiveness (Brewer, 1993).

Firm Decision-Makers and Strategic Conformity

In accordance with upper-echelons theory (Hambrick & Mason, 1984; for reviews see Carpenter, Geletkanycz, & Sanders, 2004, Finkelstein et al., 2009), key decision-makers – notably the board of directors, the CEO, and the remainder of the top management team – play a role in affecting the strategic positioning of the firm and thereby the degree to which that strategy is similar to that of other competitors. Alternatively, these decision-makers can serve as the mechanism through which dissemination of practices occurs, as they respond to outside influences (Fiss et al., 2012). The decision-makers of greatest interest include the board of directors, the CEO, and the remainder of the top-management team. Each of these parties plays a distinct role in the governance of the firm and can affect its strategic positioning in unique ways. For all roles, there is conflicting logic as to whether the decision-maker is inclined to prefer strategic deviation or strategic conformity. On the one hand, staying close to the status quo reduces concern that the decision-maker will be faulted for having made any egregious errors in judgment, and therefore, criticism may be muted. On the other hand, to the extent that observing the status quo minimizes the opportunity for out-performance, decision-makers' continuance in the role may be threatened by failure to exceed expected benchmarks for performance. Thus, individual perceptions of their role and risk preferences are likely to affect the ultimate decision. Indeed, their roles may interact with one another in either a

substitute or complementary manner (Daily & Schwenk, 1996). The next section provides a review of the literature on each of these parties in regard to how they may affect strategic conformity, including specifically addressing their response in the face of environmental shock.

The Board of Directors and Strategic Conformity

The board of directors at most firms is expected to, among other roles, oversee major strategic decisions. This may at times include providing information or other types of resources to the top management team to assist them in the execution of certain strategic actions. Notably, director experience has been associated with improved firm outcomes following significant acquisitions (Kroll, Walters, & Wright, 2008). Similarly, board members' expertise with environmental issues has been shown to improve the firm's environmental performance (de Villiers, Naiker, & van Staden, 2011).

While these experiences or other resources may be beneficial to the directors' firm, they are also likely to become conduits or standard industry practices. These past experiences also connect directors to particular networks of individuals. As a result, directors have been shown to facilitate the diffusion of practices across organizations (Haunschild, 1993).

In conjunction with a director's experiences and networks that might serve to relay norms, a director's duties and incentives further augment the likelihood that she will contribute to conformity. Directors have a legal responsibility to act in the interest of shareholders, though some states' legal precedents may allow them to also consider other

stakeholders. Thus, the potential threat of legal liability may cause a director to prefer courses of action that are least questionable and most defensible in line with the recommendations that would be made by a prudent decision-maker. For each of these reasons, board members possessing significant industry-specific knowledge and tenure on the board are expected to think and act like other players within the industry. Thus, directors would be less likely to default to industry-defying strategic actions. However, having experiences in other industries and broader networks may alter what a director considers as a reasonable or prudent recommendation. Further, directors tend to vastly overestimate the actual risk of being held liable for their role in poor decisions (Black, Cheffins, & Klausner, 2006). This overestimation means that the potential risk is weighted heavily in a director's decision-making.

In addition to this legal expectation, directors are often motivated by preserving or enhancing their own reputations (Yermack, 2004). Directors who value the opportunity to serve on both the current board and additional boards in the future are more likely to act in line with norms within the industry, because deviation is more likely to be punished.

Finally, the effects of director biases for or against strategic actions are likely to be outsized due to group decision-making processes. In a recent study, the acquisition premium recommended by a board was shown to be much higher or much lower than the premiums with which individual directors had been associated in the past (Zhu, 2013). When directors deliberate as a group, they are likely to draw on their past experiences, and similar past experiences of other directors may reinforce their beliefs (Zhu, 2013). Thus, having even a few members from within the industry may serve to reinforce beliefs

common in the industry and make it difficult for outsiders to alter the trajectory of the firm.

The CEO and Strategic Conformity

In the vast majority of firms, no other single individual has as much influence over its strategic direction as the CEO. As a result, numerous attributes of the CEO may affect strategic conformity. One emergent area of research seeks to connect a CEO's personality traits to particular strategic actions and their implementation (Herrmann & Nadkarni, 2014). These authors found that emotional stability and extraversion increased the likelihood that a CEO would initiate change effectively improving firm performance resulting from strategic change (Herrmann & Nadkarni, 2014). These findings were also helpful in delineating that change requires both the decision to embark on a new course as well as the operational implementation of that choice.

The attitudes and preferences of the CEO are in turn affected by other factors. One recent model introduces the construct of CEO commitment to the status quo and incorporates firm, industry and CEO attributes to predict commitment to the status quo, and thereby an effect on future firm performance (McClelland, Liang, & Barker, 2010). In a sense, strategic conformity may be an important mediator of this relationship, for the primary mechanism through which a CEO can affect firm performance is in the strategic positioning of the firm. Further, a number of additional environmental characteristics may be pertinent. Thus, the proposed model and dissertation research extend and expand on this prior work.

The CEO's risk preferences are also important to examine. If the CEO pursues strategic conformity, the firm's performance will perhaps be similar to that of competitors (e.g., close to industry average), and, therefore draw fewer criticisms from industry observers, shareholders and other stakeholders, though they may still clamor for actions to improve performance. In essence, this reduces the idiosyncratic risks that the CEO must absorb if he or she pursues a unique strategy that fails. Beyond individual differences, governance mechanisms such as compensation practices within the firm may influence the CEO's preferences regarding strategic conformity. In one relevant study, CEO compensation was shown to be highest when firms exhibited higher levels of strategic change rather than persistence (Grossman & Cannella, 2006).

The Top Management Team and Strategic Conformity

Other members of the top management team (TMT) have the opportunity to significantly influence firm behaviors, both in their own managerial capacity and in the information and advice they provide to the CEO. Indeed, the individual characteristics of TMTs have been shown to affect a number of firm actions. For instance, the political orientation of the TMT has been demonstrated to alter a firm's observed tax avoidance (Carpenter, 2000), which can be interpreted as important evidence of how risk preferences can affect the actions of the firm. Consequently, without direction and monitoring from the CEO and the board, top management teams generally are expected to advocate and pursue strategic conformity for the firm. This is evidenced by several empirical findings. First, the greater the amount of managerial discretion in an industry, the stronger is the

relationship between top management team tenure and strategic conformity (Finkelstein & Hambrick, 1990). Second, results on the association between CEO compensation and strategic persistence suggest that the TMT, as insiders, may feel some degree of ownership of strategies already in place (Grossman & Cannella, 2006). Third, managers naturally gravitate toward simplicity and reduce their search for new options as they hone in on what has been successful for them in the past (Miller & Chen, 1996). In combination, TMTs that have longer tenure and lower risk preferences are likely to desire to satisfy industry norms such that the longer executives are with the firm, the less of an outside perspective they contribute. Consequently, they “gradually tend to make fewer strategic changes, to imitate or match strategic tendencies of the industry, and, accordingly, to be associated with firm performance that rises and falls in line with industry fortune” (Finkelstein & Hambrick, 1990: 499).

However, in certain circumstances, members of the TMT may be advocates for strategic deviation. First, heterogeneity of functional backgrounds increases the likelihood of strategic change (Gordon et al., 2000) and, in turn, a greater opportunity for the firm to move away from the practices of competitors. Second, if executives have strong personal expectations of returning to a prior or entering a different industry, they may be less inclined to ensure that the firm pursues conformity. In this case, they may seek to establish a reputation for themselves or follow a non-conforming approach. Indeed, this may to some extent be endogenous: the executive may have been hired by the CEO for the expressed purpose of drawing on experience in another industry and be given free rein to act on their knowledge gained from that experience. Finally, as participants in a

tournament, executives least likely to be named CEO may pursue higher-risk strategies in order to increase their odds of outperforming others, while executives most strongly positioned for internal promotion may feel the highest need to comply with established standards.

Indicators and Measurement of Strategic Conformity

While these decision-makers have significant influence in adopting and implementing the firm's strategies, their decisions are indisputably affected by a number of formal and informal institutional forces. Five particular groups are mechanisms by which industry norms and expected strategies are likely conveyed between firms: regulators, trade and professional bodies, investors (particularly institutional), employees and consumers.

To the extent that firms can be expected to mimic the strategies of others, it is important to determine how these strategic choices are manifest in firm behaviors. Appendix B-1 provides a categorization of strategic indicators along with proposed corresponding measurements. Each strategic indicator can serve as an input to calculate an industry norm and subsequent variance from that norm by an individual firm. Scholars have primarily used measures of resource deployment whether across functions or based on asset allocations, but have also utilized various indicators of corporate strategy and product-level indicators of imitation and mimicry. Note that at times these may represent tactical rather than strategic moves by the firm.

Scholars typically examine strategic conformity by defining a particular industry and comparing the focal firm's financial ratios to the respective industry means or median (see Appendix B-1 for examples). Indeed these would largely tend to mirror "industry-specific measures based on the need to assess both the scope and resource deployment facets of strategy" (Mehra & Floyd, 1998:514). However, this approach is becoming increasingly impractical for future research. Firms increasingly have defined their competition in a macro, cross-industry fashion; that is, their primary competitors may not always be members of the same industrial classification. For instance, Apple (SIC 3571 and 7372) and Google (SIC 7370) may perceive Facebook (SIC 2741) and Tesla (SIC 3711) as important competitors. In Google's 2015 Proxy Statement, the company identifies thirteen peer companies ranging from Amazon.com to The Walt Disney Company. Like most publicly listed companies, Google relies on a combination of industry, performance, and size conditions, as well as firms perceived to be competitors for key talent. While the primary purpose of this peer group is to determine executive compensation, it also frequently affects assessment of performance. Thus, historic measurements of conformity and deviance may be useful in determining competitive advantage of the firm or stakeholder acceptance; they may, however, be of limited value in understanding the comparisons used by firm executives and board members when making strategic choices. As a firm grows and diversifies, benchmarks for individual business lines are increasingly developed at a divisional rather than firm level, yet these data are very difficult to obtain as these granular disclosures are not mandated by regulators. Accordingly, scholars rarely are able to obtain data at this level of analysis.

The benefits of strategic conformity are highly context-specific. Scholars to some degree account for this by including resource munificence as a control variable. However, this is insufficient as it does not allow for potential interactive effects. Instead, using an environmental context can show *when* strategic conformity is valuable.

A configuration approach may be necessary to understand how a firm's conformity and deviance can differ across several dimensions. Indeed, this configuration rather than the absolute conformity may be informative. For instance, Southwest Airlines can exhibit significant strategic deviations from other airlines in its customer service, firm culture, and route selection. Yet, it can still have similar targets and financial metrics on numerous other dimensions, including a mix of business/personal travelers, pilot compensation, and value of the aircraft portfolio. Many measurements of strategic conformity would have potentially missed Southwest's decision to hedge its fuel purchases, which ultimately served as a key source of high performance in comparison to its peers. A similar concern was first raised by Deephouse (1999) who suggested that firm balance can supersede the importance of strategic balance. In light of this review of strategic conformity, I develop specific hypotheses as to how *environmental disruption* alters the relationship between *strategic conformity* and *performance*, dependent upon whether the industry environment is subject to a significant economic shock.

Crisis, Strategic Conformity and Firm Performance

Firms likely achieve certain legitimacy benefits from strategic positions that are similar to peers. However, total conformity limits the firm's ability to generate competitive

advantage, because, at best, conformity would lead to competitive parity. If strategies are highly similar, the firm must differentiate itself by superior execution. In contrast, if a firm has low strategic conformity, diverging from industry expectations, it may suffer from lower legitimacy and be penalized by various parties including employees, customers, and investors. In combination over the entirety of a business cycle including when the industry performance is high and when it is low, these competing theoretical frames may offset one another. In other words, both extreme conformity and extreme divergence carry their own risks.

Some firms' performance will be closely tied to the level of industry performance, particularly those which have adopted a strategy that is close to the mean or median strategy in the industry. As a result, when the industry is performing well, they can expect to benefit. When the industry suffers a downturn, they can expect to experience lower performance. Thus, their performance volatility is tied to industry fortunes, albeit their execution of the strategy can still distinguish them from other similarly conforming peers. However, what is perhaps more interesting is to consider this from a different perspective. Generally, low strategic conformity is likely associated with higher risk; that is, the risks and potential payoff are higher for these firms. Nonetheless, the divergence of the firm's fortunes from those of the industry should also be factored into the risk equation. Firms with low performance likely fail to obtain some of the benefits that competitors at the core of the industry receive. In turn, they are less likely to be fully exposed when the downturn occurs. On average, the peaks are lower and the troughs more shallow than for conforming firms.

Hypothesis 1: Conforming firms have higher variation in performance than deviating firms.

Contingency theory indicates that organizational performance is highest when there is a fit between the organization's characteristics, such as structure and strategy, and the situation at hand (Donaldson, 2001). The economic environment is a critical contingency that may alter the success of particular strategies.

Firms that survive within an industry may have achieved success via a number of different strategies; however, when an industry is performing well, the pressure to conform increases. Investments that deviate from those of competitors can result in poor performance, unless carefully orchestrated (Sirmon & Hitt, 2009). To improve their own performance, firms begin to mimic the strategies of successful competitors, attempting to fit with the prevailing economic and competitive conditions. Anecdotally, many banks initially had little exposure to collateralized debt obligations. As profits on these products enabled other banks to achieve strong performance, the remaining banks adopted increased exposure to such products. Failure to join the trend could mean that a bank's performance would significantly lag behind that of its peers. Thus, a firm may experience pressure to conform from numerous formal and informal institutions, particularly from investors. Employees may also be motivated to propose changes based on actions they perceive being taken by rival firms. To some degree, the success of the industry should result in the increased availability of financial resources. Still, the level of growth thus contributes to an increased level of strategic conformity among firms so financial

resources may be deployed in the same manner, even driving up the cost of pursuing the mutually desired end resources, such as human or physical capital.

Environmental disruption frequently triggers a strategic response from firms. While some participants or decision-makers may react in accordance with a threat-rigidity hypothesis, that is with no response (Staw, Sandelands, & Dutton, 1981), numerous others will believe that action is superior to inaction and seek to adjust the firm's strategies to match the changed environment. Further, in addition to this motivation, the crisis provides rationale that can be used to justify the need for action to the institutions that normally contribute to institutional isomorphism. Stakeholders are unlikely to have consistent expectations as to how a firm should react when the entire industry is in crisis. As a result, firms may react very differently to the disruption and the variance in resource conditions each firm experiences will likely influence its strategic responses. Some may sense an opportunity to acquire undervalued assets; in the financial sector that possibility may include entire portfolios or firms. Others may believe it is necessary to rapidly reduce exposure to the problem portfolios or products. Some may be suddenly short on financial resources and therefore sell off "non-core" businesses. The variety of responses available without a clear consistent framework for which response will be most beneficial, results in significant divergence.

Despite the tendency for firms in general to decrease their level of strategic conformity during times of environmental shock, the shock is likely to result in increased scrutiny and a lower supply of resources to the industry. The legitimacy of all firms may be somewhat tainted by the crisis and many parties may react with heightened skepticism.

Certain resources may be in abundance (i.e., laid off workers), yet the supply of new resources (i.e., new talent), and in particular financial capital, often declines rapidly. Firms employing strategies seen as risky or unconventional may be less likely to receive support from stakeholders. These types of stakeholders exert significant pressure on firms (Aguilera et al., 2015). Thus, firms may potentially benefit by signaling their conformity and stability. For instance, bubbles may contribute to investment in many niche areas that may not survive the disruption. Accordingly, stakeholders may wish for firms to send a signal that they are “returning to the basics” or the core of the industry, and thereby provide a safe haven for investors. This expectation is supported by previous findings which demonstrated that environmental instability was associated with firms reducing their level of diversification and simplifying firm structure (Keats & Hitt, 1988). In essence, managers seem to seek to reduce uncertainty on dimensions which they can control when operating in volatile environments.

However, this may be the most opportune time for firms with resources to obtain desirable positions. While many firms scramble to reestablish legitimacy, a valuable differentiating strategy may be to obtain human capital and other resources. Indeed, firms who practice countercyclical hiring, augmenting their workforces during an economic downturn, are more profitable than their competitors (Greer & Ireland, 1992). While other firms are experiencing pressure to choose a strategy in line with the norm of the industry, the returns available for firms on the fringe or carving their own path may increase. To achieve optimal performance, firms must respond to the changing environment and optimize their strategy accordingly. Thus, I expect:

Hypothesis 2: Crisis moderates the relationship between conformity and performance such that deviation is more valuable in times of crisis than in other environmental conditions.

Having considered strategic conformity at the firm level, the next chapter provides a more complete discussion and examination of the responses of the board that, as indicated above, have the potential to play a substantial role in monitoring and providing resources to the firm. Drawing on prior work and building theory about board reactions, the next chapter develops a set of hypotheses related to the board and when its composition may be valuable to the firm.

CHAPTER III

BOARDS AND GOVERNANCE DURING CRISIS

As discussed in the Introduction, RDT suggests that firms are constantly involved in interchange with one another, or more broadly with the external environment, in pursuit of desired resources. Certainly, this is a dynamic process because firms need to adapt to continual changes in the environment. In this chapter, I examine prior literature deriving theoretical arguments that provide an understanding of the role of a firm's board of directors in response to changes in the business environment and how particular dimensions of the board's capital affect these responses.

Because of their responsibility to shareholders, agency theory is frequently utilized as a lens to examine director behaviors. However, resource dependence theory has also emerged as a valuable perspective to explain why certain directors are selected (Withers, Hillman & Cannella, 2012) and what they provide to the firm (Hillman et al., 2000). Indeed, research has shown that RDT can be useful in explaining that a firm often replaces an outgoing board member with another board member with a similar background and expertise (Stearns & Mizruchi, 1986). Additionally, removal of board members whose reputations may be tainted by involvement on other boards is also in part dependent on the firm's need for the resources that a board member provides (Cowen & Marcel, 2011).

Board Capital Breadth and Depth in the Context of the Board of Directors

To understand the importance of board capital breadth and depth in the context of the board of directors, it is worthwhile to reexamine the role that the board of directors plays in the context of the firm. The board of directors is expected to 1) contract with and monitor the CEO on behalf of shareholders and 2) provide valuable resources to the firm, including advice and counsel to the CEO and top management teams, for instance on major strategic decisions (Hillman & Dalziel, 2003). Literature examining the first set of roles primarily draws on agency theory; while resource dependence theory has been a primary lens for exploring the latter. Both, however, are intertwined with board capital as the same human and social capital that allows a board member to provide resources may also be predictors of monitoring ability. This intuitive relationship is described by Hillman and Dalziel (2003:389):

Agency theorists have often employed measures of a board's independence without considering the heterogeneity of monitoring ability. If we compare the monitoring ability of two boards, one dominated by outside, independent directors who are CEOs of Fortune 500 firms and the other dominated by outside, independent, small local business representatives, we see the CEOs' experience, skills, and expertise are likely to make the former board more effective at monitoring than the latter."

It is worth noting that human capital is measured at an individual level (Wright, Coff, & Moliterno, 2014), based on a person's experiences, skills and knowledge, and then aggregated to the board/firm level. Because definitions of human capital inherently imply that these individual-level attributes are situationally valuable or valuable in conjunction with how they are deployed by the firm (strategic human capital), the contingency of

human and board capital remains an underexplored area (Zona, Zattoni, & Minchilli, 2013), which has recently received more attention (e.g., Sundaramurthy, Pukthuanthong, & Kor, 2014).

In the following sections, board capital dimensions are examined in terms of how they are manifest in challenging environmental conditions; the focus is on understanding how having fewer resources heightens the value of resource-dependence theory as a useful lens (Zona et al., 2015) to interpret the board's contribution to firm performance. This chapter continues to elucidate the relationships depicted in Figure 1. This figure indicates that *board capital* (breadth and depth) is expected to affect the *strategic conformity* of the firm and *performance*. I examine both depth within the industry as well as related expertise, as discussed in more detail in later sections. However, *environmental shock* is expected to alter the potential benefits of *board breadth*, *industry experience*, and *relevant expertise*.

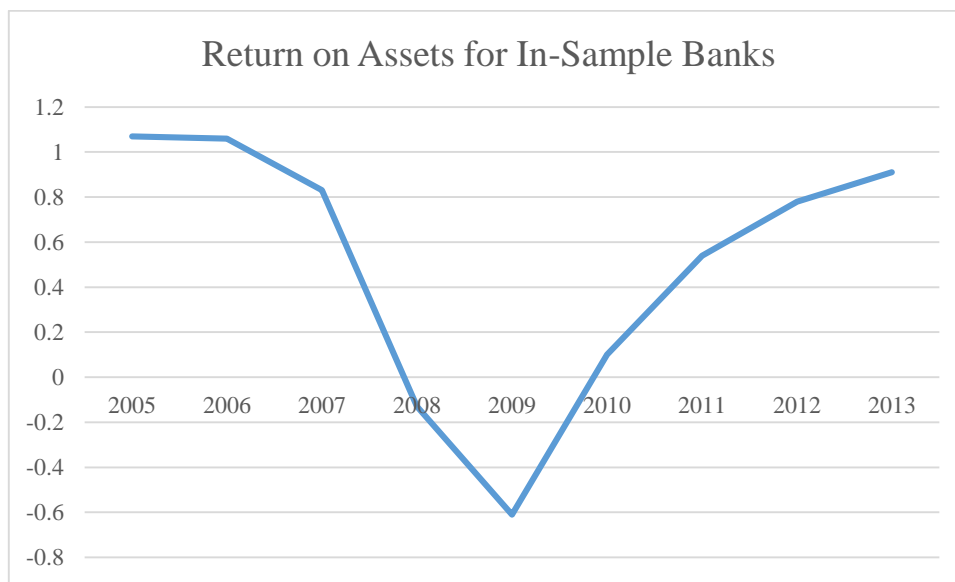


Figure 1. Return on Assets Trend for In-Sample Banks.

Crisis, Board Capital and Strategic Conformity

A director brings a significant amount of both human and social capital to his or her role that in aggregate comprises board capital; below follows a discussion of the potential implications of board capital depth for both human and social capital.

Human capital, as defined previously, is the extent of knowledge, skills and experience that uniquely equips the director to provide advice to the CEO (and presumably improves his/her ability to be an effective monitor). For instance, studies have often examined whether the director has previously served as a CEO of another firm as well as captured whether the director has prior work experience in the focal firm's industry (e.g. Tian et al., 2011). In that research, the market reacted more favorably to CEO selections completed by board with higher human and social capital (Tian et al., 2011). More specific experiences that board members have, such as with entry into particular markets, have also been shown to affect the firm's decision-making (Tuschke, Sanders, & Hernandez, 2014). While these attributes and experiences are possessed by individual directors, human capital can also be conceptualized at the unit-level, in this case the board (Ployhart et al., 2014).

Board human capital depth refers to the extent to which the human capital of the board members is concentrated in a particular functional area, the focal industry, or has a particular educational background. In essence, it should indicate the board members' expertise in specific areas, however, their experiences and knowledge may have significant overlap. These similarities are likely to result in commonality of thought that could affect strategic decisions of the firm.

Human capital is only one dimension of board capital depth; the other dimension is social capital. Social capital as defined previously is the network of relationships upon which board members can draw in carrying out their board responsibilities. For example, board members may access information or resources through prior contacts and relationships. Thus, the firm benefits from the board members' social capital as a key element of resource provision.

However, if social capital is characterized by depth within the industry, board members may be drawing on an overlapping set of contacts. The information each board member shares may point to similar conclusions, reinforcing the tendency of the board to gravitate toward conclusions consistent with prevailing industry logics. Thus, board members' own expectations and opinions are reinforced by the information they receive from other board members, and, in turn, the board is less likely to have reason to question or doubt the path recommended by the top management team. An actor's position in a social network provides explanation as to the flow of information from one actor to the next (Borgatti & Halgin, 2011). This may give those with experience in the industry the confidence to move forward with a strategy of their choosing, regardless of what strategies are adopted by others in the industry.

Building from this, board capital breadth may have counter-intuitive ramifications for conformity. Breadth is a description of functional diversity or job-related diversity that presumably increases the likelihood of cognitive diversity (Miller, Burke, & Glick, 1998). As indicated, board networks help to explain both the quantity of information available to the board members (and in turn provided to company executives) as well as

its perceived quality, gaining a greater number of options to evaluate (Burt, 2004) and thereby greater likelihood of success in problem-solving (Watson, Kumar, & Michaelsen, 1993). However, merely having access to novel information (bridging structural holes) is not sufficient for a firm to take action (Smith, Grimm, Gannon, & Chen, 1991). While weak ties can improve the diversity of information (McEvily & Zaheer, 1999), that information may be more credible when strong ties exist (Uzzi, 1997). Salancik pointed out that “parties interact to achieve, plan, coordinate or decide... The network structure reflects much about the functioning of organizations and, possibly, their coordination failures or achievements” (Salancik, 1995: 346).

Thus, to the extent that board members from outside the industry or typical functional background have ideas that differ from the current direction of the firm, they may seek incremental, rather than radical changes to the firm’s business model and their products. By definition, board members from outside the industry are not central to the focal industry network. At the organizational-level, research examining change has found that the centrality of a change agent alters the likelihood of initiating and implementing innovative change (Battilana & Casciaro, 2012). If this tendency also applies at the industry-level, outside board members would be less likely to pursue strategic change. However, ties or connections to other industries may be more likely to contribute to novel ideas and strategic change than connections within the industry (Geletkanycz & Hambrick, 1997), because these ties enable a director to consider a greater range of strategic alternatives (Carpenter & Westphal, 2001). In combination, while outside directors are best equipped to implement change, they may be less likely to be proactive. If board

members advocate for change, they may meet resistance in attempting to persuade the rest of the board, who may defer to the expertise of those with more time operating in the particular sector

Further, board members whose domain knowledge is low may be prone to ensure that the firm is taking actions that would seem prudent to an outsider. This may include asking seemingly helpful questions of the CEO such as “What are our competitors doing?” and “How does this compare to industry norms?” This benchmarking approach is more likely to be employed by those with lower domain-specific knowledge, because those with more experience would be more confident in charting their own course.

Thus, while outside board members are valued for their diverse expertise, they may actually contribute to isomorphic tendencies. Board members from other industries are most likely to be satisfied with strategic decisions that are in line with those of competitors.

For these reasons, I expect that board capital breadth will be associated with greater strategic conformity. In combination, I expect:

Hypothesis 3: Board composition affects strategic conformity of the firm such that board breadth (functional diversity) leads to greater strategic conformity.

Board Capital, Corporate Governance and Firm Performance

Board capital in general is expected to improve firm performance because it improves the ability of the board to carry out its functions of monitoring and advising (Hillman & Dalziel, 2003; Sundaramurthy et al., 2014). In dynamic environments, director capital that comes from experience within the industry and that gained from board seats

in other industries have been found to be complementary in nature (Kor & Sundaramurthy, 2009). Within this broad framework, I now consider more specifically the extent to which particular attributes of board capital may be associated with the effectiveness of monitoring versus resource provision, and, in turn, firm performance.

The research suggests that multiple factors must be present for effective monitoring, notably including an element of expertise or skill (Boivie, Bednar, Aguilera, & Andrus, 2016; Hambrick, Misangyi, & Park, 2014). A high degree of industry-specific human capital within the board suggests that board members are more likely to view themselves as experts in the industry, on par with or perhaps even superior to the CEO. When this perceived expertise is high, the board members are more comfortable and confident in overseeing the actions of the CEO. Their advice may be frequent in nature, either by their own initiative or at the CEO's invitation. The board collectively is more likely to be engaged and cohesive, as the members' experience within the industry suggests that they have relatively similar professional experiences. This cohesiveness may have cumulative effects, increasing the frequency of monitoring activity. Similarly, the depth of industry-specific social capital increases the likelihood that the board members have overlapping professional and social relationships. If the CEO is resistant to monitoring, this type of board, given its connections within the industry, may also be more aware of alternatives who could replace the CEO if necessary. Accordingly, high-quality boards, that is those with the governance structures that facilitate the optimal level of advising and monitoring, have been shown to help reduce the likelihood of bankruptcy (Daily & Dalton, 1994).

Board capital breadth, in contrast, I argue is most beneficial for the board's role of resource provision. Directors who have outside perspectives may be able to provide connections to potential suppliers, potential customers or other business contacts. They may have advice as to how certain situations or issues are resolved in another industry. Thus, board researchers generally expect CEOs to benefit when a board is populated by general business experts from other industries.

This potential benefit is only manifest when this general expertise is transferable to the focal industry. Board expertise is often assumed to be transferable, presumably because board members are involved at a strategic level rather than the regular operations of a company. Board members are best positioned to provide advice when they have experience developing strategy in a similar environment (Carpenter & Westphal, 2001). Accordingly, board members are often categorized based on their past experience as a CEO or in conducting particular activities, such as acquisitions or firing of a CEO (Johnson, Schnatterly, & Hill, 2013). However, past research on executives has shown that transferability and specificity represent a key trade-off, with highly specific human capital attracting higher salaries (Sturman, Walsh & Chermie, 2008). While some experiences are certainly applicable, the transferability and specificity of board capital to particular industries is an important consideration when seeking to ascertain the benefits of depth versus breadth.

It follows that the benefits of industry experience likely outweigh the benefits of breadth when board members are less able to apply their past knowledge and experience to the situations at hand. Further, the mere perception that their capital is less applicable

could reduce their likelihood to offer suggestions. As an example, the context of this research is the financial sector. The balance sheets of banks are fundamentally different than those of other industries, different ratios are used to analyze their performance, and the knowledge required to understand certain products is quite specialized. As indicated in a later chapter by one of the interviewees, even individuals who previously served as CEOs at other companies are unlikely to be familiar with derivative products, apart from currency hedging.

In this context, the benefits of breadth are less likely to be realized, while the benefits of industry experience become more salient. I hypothesize then that in these contexts, industry experience empowers a board to more ably fulfill its roles of monitoring and resource provision. Through these roles, the board has the opportunity to improve firm performance. Formally:

Hypothesis 4: In the banking industry where transferability of human capital is low, industry experience more favorably affects performance than breadth.

Using Contingency Theory to Predict Firm Performance in Crisis

Scholars have long considered the contingency factors that alter the relationship between strategic leaders and firm performance (Hoskisson, Hitt, Wan & Yiu, 1999). Environmental disruption is one key contingency that likely moderates the relationships between industry expertise and breadth and firm performance. I first review environmental shocks in general and then articulate why shocks might alter directors' contributions to firm performance.

Environmental shocks, whether due to technological innovation, changes in governmental regulation or macro-economic factors, alter a large number of “known” relationships (Tushman & Anderson, 1986). For instance, generally collaborative relationships are expected to benefit an organization; however, these relationships can increase the likelihood of failure when a shock disrupts them (Mitchell & Singh, 1996). Similarly, international diversification is generally expected to be associated with desired firm outcomes, yet Li and Tallman (2011) showed that the terrorist attacks of September 11, 2001 at least temporarily reversed this relationship.

Turning to the likely effects of environmental shocks on board members and their firms’ actions, some research suggests that changes in the environment can lead to myopic reactions from individuals who consider themselves to be experts (Ingram & Baum, 1997). In a sense, this would be equivalent to an ostrich’s reaction (ignoring the potential danger) or “doubling-down” (increasing a bet despite unfavorable information) on a coming loss. The most embedded individuals may believe that the industry will recover quickly. For instance, when oil prices dropped rapidly during 2014, board members with the longest tenure in the industry might be the most likely to interpret the price movements in light of historical context and expect future rebounds. The threat-rigidity perspective provides a theoretical justification for this response. In essence, environmental threats can induce an organization to “revert to tried and tested competencies with more predictable outcomes that limit potential losses” (Voss, Sirdeshmukh, & Voss, 2008: 152). Prior research has shown that the availability of particular resources can affect organizational responses to environmental threats (Voss et al., 2008); similarly I extend this expectation to include

differential effects for board capital and strategic change. Benner (2010) provides evidence of the tendency of industry insiders to focus on strategies consistent with existing strategic approaches, demonstrating that analysts likely reward firms by favorable commentary and upgraded stock recommendations when they persist with harvesting cash flows from existing products in the face of technological change.

Environmental conditions may heighten the organization's existing tendencies, in this case, willingness to explore alternative approaches. When a firm is faced with environmental disruption, the board is more likely to offer and more likely to be called upon to offer advice and access to resources. In contrast, when the company and industry are performing well, the board may defer to the CEO (Lorsch & MacIver, 1989). In considering the willingness to contribute resources, Boivie and colleagues (2016: 10) surmise: "punctuated events significantly increase the uncertainty (perceived or real) surrounding a firm, which generally results in a greater level of scrutiny from external observers such as stockholders, regulators and institutional investors. This increased scrutiny can threaten the legitimacy and reputation of the board, which provides incentive for directors to focus on the task at hand and to do their best to make optimal decisions." This may be the catalyst necessary to overcome the bias toward strategic persistence that comes in part from pluralistic ignorance (Miller & McFarland, 1987; Westphal & Bednar, 2005). Further, changing environmental conditions may lead the board to dedicate more attention to considering strategic change (Golden & Zajac, 2001). As He and Huang (2011:1125) describe from the opposite perspective: "the board's involvement in firm strategies is generally reduced in good times." To some extent, this is essentially a question

of how a board will react in light of negative environmental conditions. Will the board strengthen its investment into the organization?

To this point, I have examined the board's influence on strategic conformity. The discussion below more directly considers the effects of board composition on firm performance.

First, I examine existing work in a particular context which may be more generalizable to firms as a whole. Matusik and Fitza (2012) utilized the venture capital context to demonstrate the benefits of diversified knowledge, suggesting that VC firms could pursue either a strategy of focused investment within a particular industry to obtain expertise or investing broadly to gain potential benefits. In doing so, they conclude that breadth of knowledge gained from investing broadly is valuable in settings characterized by high uncertainty (Matusik & Fitza, 2012). Thus, the value of depth versus breadth is dependent on environmental conditions.

Starting with board capital depth as indicated by experience within the industry, experience should provide the firm with the knowledge and expertise and relationships to be able to successfully maneuver during times when an industry is generally performing well. This expectation is supported by past research on embeddedness and on resource management. However, when there is a proverbial rising tide lifting all boats, perhaps this experience is less needed to achieve strong organizational performance.

Embeddedness is associated with a number of desired benefits in network theory (Uzzi, 1996). For instance, firms may have the knowledge or relationships to be able to manipulate the environment to their advantage. Similarly, board capital depth may

contribute to the firm's resource management, as the firm structures its resource portfolio, bundles its resources into capabilities and then leverages these in the value-creation process (Sirmon, Hitt, & Ireland, 2007). Specifically, board depth is likely to be associated with knowledge of industry recipes that can inform management actions; these recipes are more valuable in stable environments (Sirmon et al., 2007). Together, past research on embeddedness and on resource management suggests that board capital depth generally has the potential to result in performance advantages.

However, embeddedness also has its limits, notably several myopic behaviors. The board may overlook or ignore potential opportunities as there are few diverse perspectives to challenge the CEO or the firm's strategic direction. Embeddedness also has the potential to result in path-dependence and organizational inertia, limiting the firm's ability to draw on new resources and relationships in the future (Walker, Kogut, & Shan, 1997).

Despite the potential drawbacks, there are reasons to believe that some of these advantages may be amplified during times when an industry goes through environmental shock. The board capital depth of these firms may better position them to evaluate the strategic benefits of acquiring struggling firms of the industry. Or, board capital depth may result in a firm having access to favorable opportunities to buy assets from struggling parties within the industry. Finally, they may be successful in persuading governments and other third parties to take actions that benefit them, because these other actors may defer to the expertise of firms with high board capital depth who are therefore perceived as industry leaders.

For these reasons, I expect:

Hypothesis 5: Crisis moderates the relationship between board depth of industry experience and firm performance, such that depth improves performance following an economic shock.

Environmental shock may also alter expectations regarding board breadth and firm performance. Board capital breadth may provide unique information flows that help the firm. Recent research has considered that the same structural positions can lead to different firm level outcomes (such as level of innovativeness) dependent upon the institutional environment (Vasudeva, Zaheer, & Hernandez, 2013); I similarly suggest that breadth is most advantageous under a particular set of environmental conditions. Notably, the information available to a firm with more breadth, as well as the ability of the board to decipher and interpret the relevance of that information, may be beneficial in helping to identify the onset of a crisis. Whether because of confident insight or healthy caution, the breadth of these boards may lead the firm to alter its positioning more quickly than other firms, particularly because these boards are less likely to engage in groupthink and therefore are less likely to experience path dependence. Further, the resources and connections of the board members may be beneficial if the firm decides to alter its strategic direction by diversifying into other industries or revenue sources. This coincides with the conclusion that in “older and high performing firms, more industry-specific experience is not only redundant, but it actually hurts the firm” (Sundaramurthy et al., 2014: 864). Firms that have more information that is external to the industry and are better able to weigh the credibility of information from outside of the focal industry should have better prescience in adapting in advance of disruptive innovation or more effective adaptation actions. This

capability is most valuable in times of economic duress as that is when the performance of firms following standard industry recipes are most at risk. The diversity of information within a network resulting from the breadth of board capital (sometimes measured as access to structural holes) could affect firm survival (Baum & Oliver, 1991; Gulati, 1998; Uzzi, 1996). Unfortunately, many CEOs faced with poor performance may respond by closing off their circle and becoming less likely to seek advice from those outside of their immediate circle (McDonald & Westphal, 2003), neglecting the potential benefits that breadth can provide. Thus, it is important that board capital breadth is already in place prior to the commencement of the crisis.

The benefits of group diversity should be more discernible at some points in time than others. Past research drew on upper echelons theory to focus on how heterogeneity of management teams might be a “double-edged sword,” that is beneficial in context when the benefits of diverse information exceeded the costs of obstacles to communication and working relationships (Hambrick, Cho, & Chen, 1996). Indeed, diversity in functional backgrounds can increase interpersonal conflict in top management teams and reduce the amount of strategic consensus amongst the team (Knight et al., 1999). Important contextual factors include the complexity of management decisions, the amount of time the group has to resolve disagreements, and the time that members of the group have spent working together in the past, which may allow for the development of shared understandings and routines (Carpenter, 2002). Functional diversity of top management teams was found to be more beneficial in contexts in which environmental uncertainty was high (Cannella, Park, & Lee, 2008). Drawing on this research about top management

teams, with a focus on boards and environmental disruption, I propose that environmental factors affect the benefits of board breadth for three reasons.

First, environmental conditions may affect the likelihood of valuable information being generated. For instance, research demonstrates that high levels of environmental turbulence increases the “propensity of firms to create and use knowledge”, also referred to as learning orientation (Hanvanich, Sivakumar, & Hult, 2006: 601).

Second, environmental conditions may affect whether the group chooses to act on the information provided. Some evidence suggests that diversity in groups may in general slow decision times. However, industry-wide crises share many characteristics with the high-velocity environments studied by Eisenhardt (1989). In these contexts, CEOs may be more open to greater experimentation and thus more willing to consider board suggestions. Further, boards with breadth in their role as information providers are better able to generate multiple alternatives; Eisenhardt (1989) suggested that the availability of multiple alternatives to consider is associated with more rapid and decisive decision-making.

Finally, environmental conditions may affect the value that results from acting on this information by introducing a unique opportunity for firms that respond quickly (Tushman & Anderson, 1986). By definition, acting on information that is unknown to or underweighted by other market actors places the firm in a contrarian position that opposes the current momentum of the market (Ball, Kothari, & Shanken, 1995). Similar to other contrarian investments, the full performance benefits of this position, investment or action may only accrue at a later point in time. For instance, literature on first mover advantage

finds that firms acting on superior information at the beginning of an acquisition wave generate superior returns that are only fully realized over a three year period (Carow et al., 2004). Similarly, when environments are disrupted, firms are able to use information to take decisive strategic actions and may continue to accrue performance benefits beyond the end of a particular financial reporting year.

However, some scholars have found that environmental turbulence may instead accentuate the disadvantages of board diversity. Specifically, heterogeneity may decrease the ability of the board to reach consensus (Goodstein et al., 1994), and thus contribute to strategic paralysis. In their study of hospitals in California, these authors found a negative relationship between board functional diversity and the number of strategic changes initiated (Goodstein et al., 1994). Yet, this implies a bias against action and does not examine the initial strategic positioning of the firm, strategic actions of competitors nor firm performance. Further, the design considered all years in the sample to be a time of environmental turbulence for the industry, and therefore did not allow for determining whether relationships between diversity and strategic change are indeed affected by environmental conditions. This research takes a more holistic view; a count of strategic changes may evidence board action but not necessarily the benefits that strategic positioning may yield. For example, firms may benefit from starting in a less vulnerable position when the crisis hits, fewer but more valuable strategic actions during times of crisis, and resources such as information that are helpful to the firm through other mechanisms.

In combination, I argue that board capital breadth has the greatest potential to result in performance advantages during times of crisis, because this may increase the likelihood that the board produces or identifies uniquely valuable information, the likelihood of the board acting on this information, and ultimately contribute to recognition by the market of the value of this contrarian stance. For these reasons, I hypothesize that board capital breadth has the strong potential to result in performance advantages during times of crisis.

Boards characterized by a higher degree of breadth may have a higher sense of responsibility to shareholders or feel that they have less to lose in speaking out when performance is at risk. Others have pointed out that the career advancement of independent directors, who come from diverse industries, is less dependent upon the CEO and therefore they may be more sensitive to shareholder and stakeholder needs (de Villiers et al., 2011). Given their experience in other industries beyond the core industry of the focal firm, these directors may feel the need to ask questions and be actively engaged when it is clear that the firm is operating in an industry undergoing significant change. They may be sensitive to the potential for adverse effects if they are associated with a firm that has poor performance, one that is accused of misconduct, or one that ultimately fails. Their experience in other industries suggests that they may be aware of norms from those industries that could be implemented here, ranging from risk assessment to financial control (Carpenter, Pollock, & Leary, 2003). Further, boards that benefit from this diversity of views are more likely to generate and consider creative or novel ideas because they are less hampered by the need to accept prevailing logics. For instance, board members for a company such as Kodak that had less expertise in photography may have

been more likely to support the CEO's attempts to explore digital photography (Benner, 2010). In combination then, the importance of active monitoring will be heightened for a board characterized by a high degree of breadth when the firm is most at risk.

For these reasons, it would follow that:

Hypothesis 6: Crisis moderates the relationship between board capital breadth and firm performance such that breadth improves performance following an economic shock.

Prior research has established a general expectation that industry experience has an effect on board-related outcomes (Johnson et al., 2013). However, generally studies on boards treat industry experience and industry expertise as interchangeable. For instance, in a recently published study, board industry expertise is measured as the proportion of directors who also had a work role at another firm that shared the first three digits of a four digit SIC code with the focal firm (Oehmichen, Shcrapp & Wolff, 2016). In another, board member expertise is also measured through the use of 3-digit SIC overlap and expertise is defined as a director having served as a manager or board member of such a firm (Kroll, Walters & Wright, 2008). While breadth measures indicate the potential importance of functional diversity and experience outside the industry, it is also important to consider that some directors may bring a superior amount of relevant, technical knowledge to certain industries. Indeed, a limited pool of prior studies – now over a decade old – have considered the role of financial expertise as a particular type of knowledge that can be valuable to the board (Johnson et al., 2013). Research from other disciplines has primarily examined whether financial experts on the board are associated with financial

reporting quality or tax strategies (e.g., McGuire, Omer, & Wang, 2012), not their connection to overall firm performance. The financial sector is one such industry where many broad, general business experiences could be less transferrable and applicable. The complexity of financial products (as elaborated in Chapter VI) suggests that only a limited pool of individuals are likely to have the technical knowledge necessary to understand the particular instruments in which many of the banks were heavily invested.

From a resource-dependence perspective, the availability of such expertise may be a useful resource for the firm. Directors who bring breadth from other industries may find it difficult to link their experiences or social capital to the particular issues faced by a financial firm. They may feel less confident to speak up or challenge the CEO of a firm whose challenges are uniquely complex and technical, or perhaps prefer not to admit a lack of understanding about a particular issue considered. In contrast then, directors who come from outside the industry but have a high level of technical expertise from a pertinent domain (in this case finance or accounting), may prove to be effective monitors who are still able to bring valuable perspectives from outside the industry. As discussed above, environmental shock may be the contingency that is necessary to bring these perspectives to the forefront such that the directors are sufficiently motivated to engage or for the resources they can provide to become valuable. When the industry is performing well, directors are more likely to defer to management and to directors with more industry-experience. The director may risk alienation if he or she challenges a CEO who is performing well. However, when the firm and its performance are at risk, the director may

feel a greater responsibility to act, as well as believe that he or she may be able to offer valuable advice or resources.

Accordingly, I hypothesize:

Hypothesis 7: Crisis moderates the relationship between board depth of relevant expertise and firm performance, such that expertise is valuable to the firm during periods of environmental shock for the industry.

In this chapter, I have reviewed relevant literatures, presented the theoretical logic and developed hypotheses as to how board capital depth and breadth are associated with board activities, changes in board composition and ultimately firm performance. In the next chapter, I provide a description of the methodology used to test these relationships.

CHAPTER IV

METHODOLOGY

This chapter provides a description of the methodology employed to test the hypotheses outlined in Chapters II and III. I first describe the context and sample; then define the operationalization of all of the major variables use in my analysis; and finally provide an overview of the statistical tests applied.

Context and Sample

This research examines whether board-level factors can affect firm-level outcomes differentially based on environmental context, and how changes in the environment can alter the value of dimensions of board capital. Thus, the U.S. financial sector is an ideal context for three reasons. First, the financial sector recently experienced a systemic crisis which affected all firms in the sector, yet most firms either did not predict or ignored signs of this crisis coming (Reinhart & Rogoff, 2009). Thus, it provides a fertile laboratory for examination of whether board factors affected strategic responses before, during and after the crisis. Second, industry-specific knowledge is generally regarded as valuable in this industry as finance occupations have reached a high-level of professionalization (Lounsbury, 2002). Finally, the magnitude of this crisis was severe, arguably the most significant in the U.S. since the Great Depression (Financial Crisis Inquiry Commission, 2011), and therefore banks across the sector regardless of location or specialty were affected.

The empirical sample consists of depository institutions and their boards that were part of the financial sector during the period of 2005-2013. These dates include time prior to broad recognition of the Financial Crisis, as well as time after the crisis subsided (2005-2007: “Pre-Crisis, 2008-2010: “Crisis”, 2011-2013: “Post-Crisis”). To enable calculation of lead and lagged versions of key firm performance variables, I capture financial data from 2003-2015.

The sample is narrowed to entities that are subject to enhanced reporting requirements with the Federal Deposit Insurance Corporation and the Federal Reserve due to the greater quantity of financial disclosures that are available for such entities. In particular, this dissertation research draws on the lending and investment portfolio reporting that is provided on Form Y-9C and Form Y-9LP, which are filings required of bank holding companies with total consolidated assets of at least \$500 million.

This approach is consistent with previous research in accounting and finance (Ellul & Yerramilli, 2013; Wall & Peterson, 1995) that focused on bank holding companies. In addition, sampled entities must be categorized as “Banks” in BoardEx and have data for one or more corresponding firm-years in the CompuStat Fundamentals Annual dataset as matched by the identifier. These firms have two-digit SIC-codes beginning with 60 (predominantly 6020 and 6035). BoardEx provides data on board memberships and director-level attributes, while CompuStat includes firm and industry-level financial information. Director-level data is sourced from BoardEx and includes a significant amount of information on board composition, other board memberships, and committee

assignments. Further information is available regarding directors' other board service, past career experiences and non-corporate roles.

A total of 348 unique firms were identified as part of the sample along with approximately 7,000 directors who served on one or more of their boards for some period of time during the period of interest.

Dependent Variables

This dissertation research focuses on multiple firm-level outcomes corresponding to the different hypotheses. They are operationalized as follows:

Strategic conformity (deviation), a dependent variable in some models and a predictor in others, is the extent to which a firm's strategic positioning conforms to (deviates from) that of other firms in the industry. I draw on prior research that examines a firm's conformity (or conversely deviation) from industry norms in regard to key ratios (Finkelstein & Hambrick, 1990; Geletkanycz & Hambrick, 1997; Miller et al., 2013). Following other work in the financial sector (Deephouse, 1999; Delgado-Garcia & De la Fuente-Sabate, 2010), I calculate asset strategy by examining the variance of the focal firm on key asset categories (e.g. fixed assets as a percentage of total assets) compared to industry means. The percentage of assets that a bank holds in particular resources and loan products on its balance sheet represents the particular asset allocation of that bank and this may be a key determinant of its profitability. Following Miller and colleagues (2013), these measures are aggregated into a non-conformity index by 1) calculating the absolute value of the number of standard deviations from the median on each of these measures, 2)

standardizing these scores to ensure that each measure contributes proportionately, and 3) summing the standardized measures of deviation. Where appropriate, for clarity and consistency, this sum is multiplied by minus one to serve as a measure of *strategic conformity* (Delgado-Garcia & De la Fuente-Sabate, 2010). Note that while I calculate Chronbach's alpha, this index is multidimensional and formative such that each component may contribute distinctly and therefore a high value is not necessarily expected or desired (Miller et al., 2013). Following Deephouse (1999), I employ the full range of portfolio information that is available, so conformity incorporates the following items: commercial loans, real estate loans, consumer loans, agricultural loans, other loans, cash balances, overnight money, investment securities, trading assets, fixed assets and other assets.

Loan concentration is calculated using the same calculation of concentration as the Herfindahl-Hirschman index; that is, the percentage of each category to the whole is squared and summed. Higher values represent greater concentration.

Firm performance is primarily measured as *Return on Assets*. While bankruptcy might be the strongest indicator that a firm was unable to continue the path of its chosen strategy, many U.S. banks are deemed too big to fail, and accordingly the system has a number of checks and balances that result in relatively few banks experiencing bankruptcy, even in the midst of the financial crisis. In some models, firm performance is also calculated as an average of the *return on assets* observed in the subsequent three years, as some effects from changes to the strategic direction of the firm or from taking contrarian positions may take time to manifest.

Volatility of performance is calculated as the deviation in performance for a firm calculated as the sum of the squared differences between the firm's average yearly performances for the ensuing three-year period.

Independent Variables

Board industry experience (Experience) is the extent to which the board has significant past work history within the industry. This is an indicator of the depth of board capital within the focal industry, which indicates elements of both the relevant human and social capital of the directors. While this is measured in several different ways in the literature, such as the proportion of the board members that have experience in the industry (Haynes & Hillman, 2010), I calculated a continuous measure based on the total years of experience in the financial sector obtained from the work history of all board members. For incorporation in models, this variable is transformed into an average based on the number of board members and by taking the natural log to account for skewness.

Board capital breadth (*Breadth*) is the heterogeneity of a board's experiences and backgrounds, including functional backgrounds, occupational backgrounds and ties to other industries. I follow Haynes and Hillman (2010) in creating a diversity index that sums the diversity ratio for each of these three components. Blau's index is appropriate for this calculation because it indicates the extent to which interactions amongst the group are expected to be altered by the range of experiences that members bring to their role as a board member (Harrison & Klein, 2007).

Board relevant expertise (Fin. Expert) is the number of years that board members have worked in a finance-related position, indicated either by the sector, accounting or finance qualification, or job title.

Control Variables

As informed by prior research, I seek to control for a variety firm and board level factors that may influence either the performance measure or the measured network indicators.

The firm-level controls are *prior performance*, *firm size*, *capital structure* and *firm age*. A firm's performance is partly the result of past performance, so to control for *prior performance*, I include the prior year's return on assets (net income/total assets). I control for *firm size* as indicated by total assets, as this measure may indicate different levels of resources available to the firm (Josefy, Kuban, Ireland, & Hitt, 2015) and because directors of larger firms may gain prestige from their access to greater resources and involvement in more influential decisions (Withers, 2011). Additionally, size indicates the scope of transactions within firm boundaries and thereby may contribute to director expertise in decisions to expand the firm across industry lines or, in contrast, decisions to divest certain businesses (Josefy et al., 2015). A bank's returns are affected in part by the reserves it holds on its balance sheet, therefore I control for capital structure by incorporating the prior period's Tier 1 Capital Ratio. This ratio is reported by the banks on the Form Y-9C and calculated according regulatory requirements. In essence, Tier 1 capital generally includes a bank's shareholder's equity and retained earnings and this

value is divided by total risk-weighted assets. The ratio serves as a measure of capital adequacy, for instance in the event of losses on loans and depositor withdrawals. Finally, I control for *firm age*, calculated as the number of years since founding, as this may indicate advantages or differences due to the history, status and perceived stability of the financial institution.

Board-level controls include *board size*, *CEO duality*, *CEO tenure*, *board age* and *gender diversity*, *director network*, and *insiders*. *Board size*, a count of the number of board members, is included as it may affect group decision-making dynamics (Boivie et al., 2016). The power of the board relative to the CEO may affect its ability to be involved in decision-making, so I control for *CEO duality* (Krause, Semadeni, & Cannella, 2014) and *CEO tenure* (Haynes & Hillman, 2010). *Board age* is included as a control as it may influence the board's risk-taking preferences. *Gender diversity* (Female Directors), measured as the count of female directors, is controlled for because some studies have shown that board actions differ when women are involved in board decision-making (Berger, Kick, & Schaeck, 2014). *Director network* is the count (transformed as a natural log) of director ties via board interlocks, which is an indicator of a board member's overall social capital linked to other firms. *Insiders* is the number of board members who are also executives of the company, because their presence and lack of independence may affect the dynamics of board deliberations.

Industry effects are limited due to the focus on a single industry, and time effects are limited by the use of set time periods across all firms and the definition of 2008-2010

as being the years during which the effects of the environmental shock were observed in the banking sector.

Data Analysis

Because the environmental context is a key focus of my hypotheses, models are specified by classifying the firm-year observations of the sample into the three time periods of focus: pre-crisis (2005-2007), crisis (2008-2010) and post-crisis (2011-2013). This allows for the examination of the interaction of a dummy variable for crisis years with the variables of interest to ascertain whether the primary relationships are different when environmental disruption occurs. The use of interaction terms is a common method for testing contingency hypotheses, along with sub-group analysis (Boyd, Haynes, Hitt, Bergh, & Ketchen, 2012). The advantage of the interaction approach is obtaining the full statistical power of all available observations.

All OLS regression models include clustering by firm in models where this is appropriate. In each test, the control variables are entered first, then the variables of interest, and finally interaction terms. To ensure that the data appropriately reflect the primary assumptions necessary to rely on the results of multiple regression, the variance inflation factors are calculated to check the potential for multicollinearity. In a model including all base-level variables, all VIFs were observed to be less than 3.4 and multicollinearity is not believed to be a concern. For the hypothesized moderations, the base level variables are included in the model along with their product (Aguinis, Edwards,

& Bradley, 2016). For interpretation purposes however, variables are centered before generating interaction terms (Aguinis et al., 2016).

CHAPTER V

RESULTS

Descriptive statistics and correlations are presented in Table 1.

Hypothesis 1 considers the relationship between the strategic deviation that a firm pursues and subsequent variation in firm performance. These results are reported in Table 2 and provide support for the hypothesis. Strategic deviation has a negative and statistically significant coefficient ($p < .01$). As strategic deviation rises, the volatility of returns in subsequent time periods is found to decline, controlling for firm characteristics and board composition. As a robustness check, an alternate model was developed checking the relationship between strategic deviation and future performance in place of performance volatility. Deviation was shown to have a statistically significant and positive relationship with overall future firm performance, indicating that deviation is associated with additional desired firm outcomes in addition to the hypothesized relationship with lower volatility. Please see Table 2. Note that in all tables robust standard errors with firm clustering are used in significance tests and the corresponding standard errors are reported in parentheses. ***, **, and * indicate statistical significance with a p-value of .01, .05, and .10, respectively, using two-tailed tests.

Hypothesis 2 examines whether environmental shock (in this case the Financial Crisis noted in the results as ‘Crisis’) alters the relationship between strategic deviance and performance, with deviation expected to be more valuable during periods of shock. While there is a main effect for strategic deviance and performance, the interaction term

Table 1 Descriptive Statistics and Correlations

<i>Variable</i>	Mean	S.D.	1	2	3	4	5	6	7	8	9	10
1. Performance/ROA	0.005	0.16	1.000	0.610	0.110	-0.629	0.006	0.018	0.123	0.083	0.040	0.097
2. Tobin's Q	1.033	0.12	0.610	1.000	0.095	-0.604	0.066	0.004	0.122	0.101	0.066	0.106
3. RI	-0.1m	2.1m	0.110	0.095	1.000	-0.079	-0.100	0.097	-0.042	-0.062	-0.015	0.036
4. Lagged ROA	0.006	0.014	-0.629	-0.604	-0.079	1.000	0.008	-0.020	-0.099	-0.042	-0.055	-0.112
5. Lagged Assets	36.8B	207B	0.006	0.066	-0.100	0.008	1.000	0.085	0.466	0.476	0.303	0.180
6. Lagged Tier 1 Cap	.039	1.32	0.018	0.004	0.097	-0.020	0.085	1.000	-0.002	0.066	0.005	0.022
7. Firm Age	17.3	10.9	0.123	0.122	-0.042	-0.099	0.466	-0.002	1.000	0.521	0.288	0.249
8. Director Network Size	7.80	.981	0.083	0.101	-0.062	-0.042	0.476	0.066	0.521	1.000	0.489	0.219
9. Board Size	11.1	3.01	0.040	0.066	-0.015	-0.055	0.303	0.005	0.288	0.489	1.000	0.175
10. CEO Duality	.595	.491	0.097	0.106	0.036	-0.112	0.180	0.022	0.249	0.219	0.175	1.000
11. CEO Tenure	6.57	6.04	0.028	-0.032	0.032	-0.047	-0.066	-0.013	-0.048	-0.171	-0.029	0.054
12. Board Age	61.2	3.77	0.052	0.038	-0.024	-0.037	0.117	0.005	0.143	-0.056	0.026	0.052
13. Gender Diversity	1.17	1.02	0.076	0.066	0.000	-0.058	0.262	0.024	0.333	0.428	0.439	0.118
14. Insiders	1.53	.844	0.068	0.114	0.010	-0.090	0.061	0.007	0.012	0.126	0.319	0.283
15. Strategic Deviance	1.60	.545	0.160	0.202	-0.046	-0.189	-0.128	0.097	0.158	0.175	-0.073	0.117
16. Board Breadth	1.46	.278	-0.080	-0.089	0.088	0.025	-0.303	-0.072	-0.388	-0.544	-0.179	0.017
17. Industry Experience	16.8	4.48	0.063	0.023	-0.040	-0.012	0.104	-0.015	0.161	0.007	-0.065	0.045
18. Financial Expert	3.09	2.97	0.071	0.017	-0.068	-0.008	0.115	0.023	0.236	0.321	-0.040	0.111
19. Crisis	.324	.468	-0.326	-0.161	-0.086	0.180	-0.039	0.038	0.001	-0.030	-0.006	-0.019

Table 1 (continued)

<i>Variable</i>	11	12	13	14	15	16	17	18	19
1. ROA	0.028	0.052	0.076	0.068	0.160	-0.080	0.063	0.071	-0.326
2. Tobin's Q	-0.032	0.038	0.066	0.114	0.202	-0.089	0.023	0.017	-0.161
3. RI	0.032	-0.024	0.000	0.010	-0.046	0.088	-0.040	-0.068	-0.086
4. Lagged ROA	-0.047	-0.037	-0.058	-0.090	-0.189	0.025	-0.012	-0.008	0.180
5. Lagged Assets	-0.066	0.117	0.262	0.061	-0.128	-0.303	0.104	0.115	-0.039
6. Lagged Tier 1	-0.013	0.005	0.024	0.007	0.097	-0.072	-0.015	0.023	0.038
7. Firm Age	-0.048	0.143	0.333	0.012	0.158	-0.388	0.161	0.236	0.001
8. D. Network	-0.171	-0.056	0.428	0.126	0.175	-0.544	0.007	0.321	-0.030
9. Board Size	-0.029	0.026	0.439	0.319	-0.073	-0.179	-0.065	-0.040	-0.006
10. CEO Duality	0.054	0.052	0.118	0.283	0.117	0.017	0.045	0.111	-0.019
11. CEO Tenure	1.000	0.194	-0.072	0.151	0.015	0.161	0.150	-0.072	0.000
12. Board Age	0.194	1.000	-0.027	0.027	0.000	-0.001	0.471	-0.034	0.013
13. Female	-0.072	-0.027	1.000	0.017	0.003	-0.323	-0.077	0.104	-0.008
14. Inside Expert	0.151	0.027	0.017	1.000	0.083	0.383	0.127	0.032	-0.024
15. Strat. Deviance	0.015	0.000	0.003	0.083	1.000	-0.217	0.015	0.172	0.017
16. Breadth	0.161	-0.001	-0.323	0.383	-0.217	1.000	-0.004	-0.315	0.004
17. Experience	0.150	0.471	-0.077	0.127	0.015	-0.004	1.000	0.316	0.007
18. Fin. Expert	-0.072	-0.034	0.104	0.032	0.172	-0.315	0.316	1.000	-0.043
19. Crisis	0.000	0.013	-0.008	-0.024	0.017	0.004	0.007	-0.043	1.000

Table 2 Pre-crisis Strategic Deviation

DV = ROA (bp*100)		
OLS Regression	Controls	Main Effects
Intercept	-1.553 (-1.083)	-0.999 (-0.695)
Director Network Size	0.274** (2.568)	0.285*** (2.673)
Board Size	-0.128*** (-4.379)	-0.147*** (-4.941)
CEO Duality	-0.452*** (-3.192)	-0.442*** (-3.119)
CEO Tenure	0.027** (2.333)	0.029** (2.466)
Board Age	0.060*** (3.532)	0.060*** (3.446)
Female Directors	0.246*** (3.971)	0.226*** (3.624)
Insiders	0.004 (0.042)	0.067 (0.647)
Lagged ROA	-37.183** (-2.333)	-34.793** (-2.160)
Lagged Assets	-0.045 (-0.642)	-0.014 (-0.186)
Lagged Tier 1 Capital	0.000 (0.451)	0.000 (0.641)
Firm Age	0.013* (1.817)	0.013* (1.799)
Breadth	0.081 (0.243)	-0.110 (-0.337)
Experience	0.279** (2.270)	0.254** (2.034)
Fin. Expert	0.070 (0.966)	0.075 (1.037)
Crisis	-2.491*** (-15.864)	-2.479*** (-15.742)
Strategic Deviance		-0.410*** (-2.982)
Adjusted R ²	0.112	0.114
F Score (15-16, 401)	29.60***	29.41***
Observations	2,526	2,526

is not statistically significant as reported in Table 3. Thus, the hypothesis does not receive support. Please see Table 3

Hypothesis 3 consider the potential effects of board composition on strategic conformity, specifically suggesting that board breadth leads to greater strategic conformity (lower strategic deviation). As shown in Table 4 with strategic deviation as the dependent variable, this hypothesis receives support as breadth is shown to have a statistically significant ($p < .001$) and negative coefficient in the model. Please see Table 4.

Please see Table 5. The models in Table 5 provide results for testing Hypotheses 4-7. The overall models are statistically significant ($p < .001$). However, as variables are added to the model, the F score does not improve, indicating that the quality of the models may not be stronger than the base model with controls only and the findings should be interpreted with caution. The change in R-squared is tested using the Wald-test reported within STATA using the ‘nestreg’ command. Only the interaction effect for financial expertise and crisis indicates marginally statistically significant improvement ($p < .10$) over the model with controls only; the other models do not indicate a significant improvement in R-squared.

Hypothesis 4 examines whether industry experience is more valuable than breadth in this particular industry context in which the transferability of human capital is low. The model detailed in Table 5 predicts performance, again controlling for firm and board characteristics. Breadth has a statistically significant ($p < .05$) and negative relationship with firm performance, while industry experience has a marginally statistically significant ($p < .10$) and positive relationship with firm performance. These coefficients are confirmed

Table 3 Strategic Deviation, Board Composition and Performance

DV = ROA (bp*100)			
OLS Regression, n=2,526	Controls	Main Effects	Deviation Interaction
Intercept	6.430 (4.405)	7.572* (4.367)	7.724* (4.389)
Director Network Size	0.475 (0.435)	0.449 (0.428)	0.445 (0.430)
Board Size	-0.144 (0.145)	-0.099 (0.133)	-0.097 (0.134)
CEO Duality	0.716 (0.511)	0.691 (0.513)	0.692 (0.513)
CEO Tenure	0.001 (0.060)	-0.003 (0.061)	-0.001 (0.061)
Board Age	0.082 (0.078)	0.081 (0.079)	0.079 (0.080)
Female Directors	0.447* (0.239)	0.495** (0.247)	0.492** (0.248)
Inside Expert	0.714 (0.575)	0.563 (0.530)	0.580 (0.526)
Lagged ROA	-0.063*** (0.011)	-0.063*** (0.010)	-0.063*** (0.010)
Lagged Assets	-0.918*** (0.328)	-0.994*** (0.352)	-0.997*** (0.352)
Lagged Tier 1 Capital	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Firm Age	0.104*** (0.029)	0.104*** (0.029)	0.105*** (0.029)
Breadth	-1.194*** (0.433)	-1.066** (0.418)	-1.070** (0.417)
Experience	0.602* (0.335)	0.636* (0.342)	0.618* (0.349)
Fin. Expert	0.156 (0.240)	0.143 (0.240)	0.144 (0.241)
Crisis	-7.726*** (0.867)	-7.754*** (0.861)	-7.700*** (0.836)
Strategic Deviation		0.538* (0.314)	0.296 (0.363)
Strategic Deviation *Crisis			0.815 (0.668)
Adjusted R ²	0.442	0.443	0.443
F Score (15-17, 401)	50.92***	47.64***	45.05***

Table 4 Board Composition

DV = Strategic Deviation	
OLS Regression	
Intercept	-2.125** (0.912)
Director Network Size	0.050 (0.059)
Board Size	-0.084*** (0.016)
CEO Duality	0.046 (0.076)
CEO Tenure	0.006 (0.006)
Board Age	0.001 (0.012)
Female Directors	-0.089** (0.043)
Inside Expert	0.280*** (0.050)
Lagged ROA	-0.001*** (0.000)
Lagged Assets	0.141*** (0.047)
Lagged Tier 1 Capital	0.000*** (0.000)
Firm Age	0.000 (0.005)
Breadth	-0.238*** (0.061)
Experience	-0.063 (0.047)
Fin. Expert	0.024 (0.041)
Crisis	0.053* (0.028)
Adjusted R ²	0.210
F Score (15, 401)	13.08***
Observations	2,526

Table 5 The Interactive Effects of Crisis and Board Composition on Performance

OLS Regression, n=2,526	Controls	Interaction 1	Interaction 2	Interaction 3	Full Model
Intercept	7.572* (4.367)	7.453* (4.372)	7.503* (4.380)	7.454* (4.367)	7.340* (4.384)
Director Network Size	0.449 (0.428)	0.469 (0.429)	0.450 (0.428)	0.470 (0.428)	0.482 (0.428)
Board Size	-0.099 (0.133)	-0.109 (0.132)	-0.104 (0.133)	-0.105 (0.133)	-0.116 (0.132)
CEO Duality	0.691 (0.513)	0.692 (0.514)	0.681 (0.512)	0.682 (0.513)	0.679 (0.513)
CEO Tenure	-0.003 (0.061)	-0.003 (0.061)	-0.002 (0.061)	-0.001 (0.061)	-0.001 (0.061)
Board Age	0.081 (0.079)	0.082 (0.078)	0.084 (0.079)	0.082 (0.078)	0.084 (0.078)
Female Directors	0.495** (0.247)	0.486* (0.249)	0.505** (0.249)	0.498** (0.248)	0.498** (0.251)
Inside Expert	0.563 (0.530)	0.564 (0.529)	0.569 (0.528)	0.564 (0.529)	0.569 (0.528)
Lagged ROA	-0.063*** (0.010)	-0.063*** (0.010)	-0.063*** (0.010)	-0.063*** (0.010)	-0.063*** (0.010)
Lagged Assets	-0.994*** (0.352)	-0.993*** (0.352)	-0.998*** (0.352)	-0.994*** (0.352)	-0.996*** (0.352)
Lagged Tier 1 Capital	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.000)	0.001 (0.001)
Firm Age	0.104*** (0.029)	0.106*** (0.029)	0.105*** (0.029)	0.105*** (0.029)	0.107*** (0.029)
Breadth	-1.066** (0.418)	-1.066** (0.416)	-0.834** (0.422)	-1.065** (0.416)	-0.894** (0.419)
Experience	0.636* (0.342)	0.325 (0.296)	0.631* (0.342)	0.655* (0.341)	0.395 (0.293)
Fin. Expert	0.143 (0.240)	0.157 (0.241)	0.150 (0.241)	-0.227 (0.202)	-0.108 (0.200)
Crisis	-7.754*** (0.861)	-7.775*** (0.858)	-7.753*** (0.858)	-7.720*** (0.854)	-7.745*** (0.852)
Strategic Deviation	0.538* (0.314)	0.502 (0.317)	0.535* (0.313)	0.532* (0.314)	0.503 (0.317)
Experience * Crisis		1.007 (0.646)			0.812 (0.679)
Breadth * Crisis			-0.714 (0.553)		-0.525 (0.556)
Financial Expert * Crisis				1.151* (0.591)	0.832 (0.629)
Adjusted R ²	0.443	0.443	0.443	0.443	0.444
F Score (16 to 19, 401)	47.64***	46.71***	44.49***	45.38***	42.17***

to be statistically different from one another ($p < .05$) using the *suest* command in Stata. Therefore, the hypothesis suggesting that experience is more valuable to the firm than breadth receives support.

Hypothesis 5 suggests that environmental shock, in this context the Financial Crisis, will alter the relationship between industry experience and performance. The corresponding model is also shown in Table 5. The coefficient for the interaction term between experience and crisis years is not statistically significant. Thus, these results provide no support for the hypothesis. However, in subsequent testing, an alternate measure of firm performance over the subsequent three years is used. In this model, considering a longer measurement window for performance, the coefficient for the interaction term is statistically significant ($p < .001$) and positive. This suggests that industry experience benefits directors in guiding their firms through an environmental shock, though it may not be reflected in contemporaneous assessments of firm performance.

Hypothesis 6 similarly suggests that environmental shock will alter the relationship between board breadth and performance. The interaction term is not statistically significant, as indicated in Table 5, Interaction 2, and, therefore, the model does not provide support for the hypothesis. An alternate specification was completed using a split sample to test whether rather than a change in the form of the relationship there was change in the strength of the relationship between breadth and performance during crisis (Hitt, Boyd & Li, 2004). During the non-crisis period, breadth is shown to have a negative and statistically significant main effect on performance, but this

coefficient is not found to be statistically significant during crisis periods. While there are over 2,500 observations in the model, the large number of controls needed to account for prior research on firm performance and boards reduces the statistical power available to test the interaction. It is possible that with more statistical power, the interaction could be validated as hypothesized. However, an alternate interpretation is that breadth can lead to divergent outcomes; the benefits of diversity in the boardroom may help some firms to perform well while other firms pursue strategic directions that are less successful. The variance in outcomes could negate the ability to observe any benefits that may exist for having a breadth of perspectives during crisis.

Hypothesis 7 introduces the notion that relevant expertise may provide benefits to firms when an environmental shock has occurred. The interaction is marginally statistically significant and positive ($p < .10$), indicating that shock enhances the effects of expertise on performance, as indicated in Table 5. To probe this interaction, the performance of firms is plotted as shown below in Figure 2. In the plot, the mean performance for firms is shown for one standard deviation below the mean and one standard deviation above the mean, both for time periods during the crisis and outside of the crisis time horizon. The slope for expertise is tested and found to be statistically significant ($p < .01$) providing support for the hypothesis that higher levels of expertise are associated with higher levels of performance during crisis.

These findings are also summarized by hypothesis in Appendix A-1; please see Appendix A-1 for more detail.

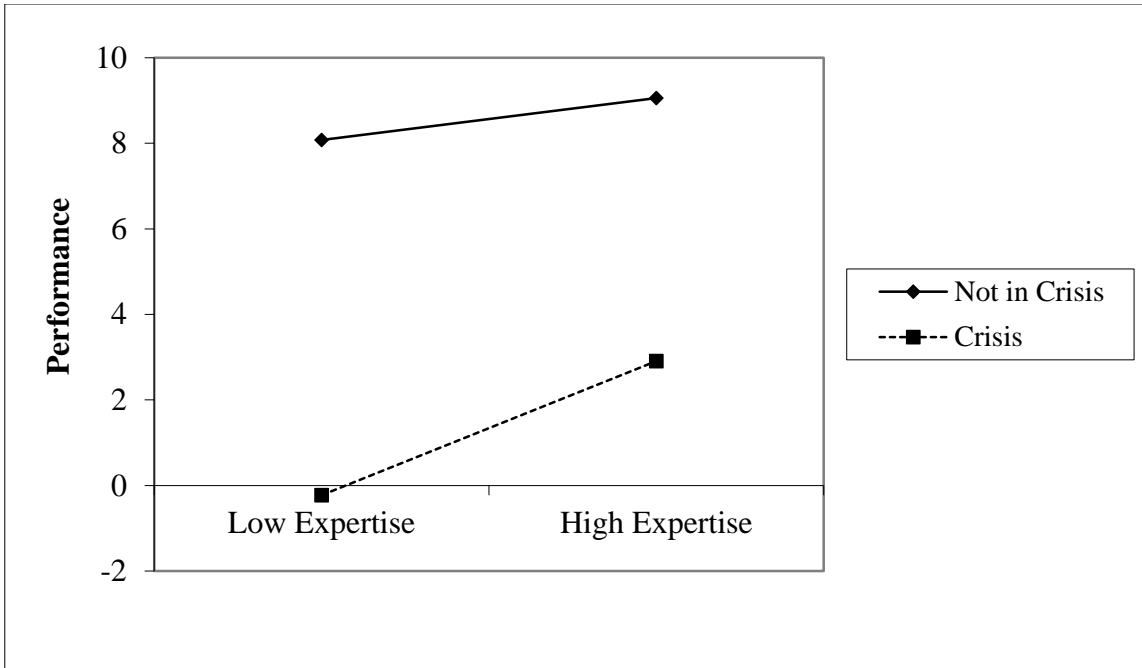


Figure 2. The Benefit of Financial Expertise in a Crisis.

CHAPTER VI

PHENOMENOLOGICAL INTERVIEWS

As elucidated in the Introduction, the Financial Crisis of 2007-2009 continues to attract significant attention from policymakers and the public because of its significant impact on the global economy and thereby people and institutions across the world. In light of the broad scope of this phenomenon, I supplement the quantitative, archival data used in this dissertation with additional qualitative data, both to help interpret the findings of the research (and perhaps validate the approach) and to identify potentially valuable research questions for future research.

Therefore, I completed five interviews with individuals who had intimate experience with the phenomenon because of the professional capacity in which they served or continue to serve. In combination, these individuals served on the boards of major financial institutions, in executive decision-making positions of focal organizations including both banks themselves and the regulators, and within organizations that could be classified as both conforming and non-conforming to the prevailing strategies at the time of the crisis. Their experiences span both organizations that were deemed by outside observers to have well-weathered the crisis and those that failed during the crisis.

In total, these interviews were over eleven hours in length and resulted in over 50 pages of notes. In addition, I supplemented knowledge gained in the interviews by reading other first-hand accounts of the crisis, reading journalists' digests of the crisis, and watching or listening to media that portrayed accounts of the crisis.

In the course of this research (interviews and archival reading/viewing), I was able to gain deeper knowledge of the products, strategies, companies and major players to which either praise or blame has been attributed.

Key Themes Regarding the Cause of the Crisis

Several key themes arose in the course of this qualitative work. This section summarizes interviewee's comments around three key themes in regard to the causes of the crisis: leverage, mortgage distribution and attitudes toward risk.

Leverage. First, most accounts focus on the key role of leverage. In research conducted well before the crisis on the consolidation wave that increased the size of bank holding companies (BHCs), Demsetz and Strahan wrote "In the past large BHCs used their diversification advantage to increase risky lending and to operate with lower capital ratios but not to operate at lower levels of overall risk. If this pattern is indicative of the behavior of banks involved in today's merger wave, then we should not expect consolidation to reduce bank risk" (1997: 301). Indeed, banks in the 2000s tended to remain highly levered, rather than to heed warnings from past crises. As one interviewee noted:

Crisis is most likely to occur when people assume it will never happen. As a result, they begin to buy with borrowed money.

Many decision-makers believed that certain factors, whether that be levels of sophistication or changes in technology, justified reduction in capital requirements. With

the benefit of hindsight, participants in my interviews focused on the fundamental risk of over-leverage within the banking system:

[The cause of the crisis was] leverage, leverage, leverage... if you have enough equity, you ride out any storm. If you don't, the boat is going to sink. We don't want the boat to sink. Don't be overleveraged. I spent years on the board of a top bank that was relatively unaffected.

Another interviewee explained how the financial products effectively ratcheted up the amount of leverage and exposure within the financial system to the original underlying loan:

When someone takes out a loan, that's essentially 1 to 5 leverage as good loans have 80% loan-to-value. Then, the originator who holds the equity would be levered 1 to 10 [10% capital holding requirement]. Then, the collateralized debt piece would be 1 to 10, as it would be the first 10 percent loss piece. Then, the CDO squared... You were leveraging existing leverage, adding some credit enhancement and then taking more leverage.

These quotes imply a mixed-level relationship, in that the axioms are implied to be true both for consumers and companies, in this case banks. Individual consumers were increasingly requesting and receiving loans with limited deposits and these were financed by banks or other financial service entities that were holding very limited assets in reserve against the risk of default. While banks are (and were) subject to minimum capital requirements, these are based on historically-derived models of how risky the loans (assets to the bank) are expected to be, and therefore lag changes in the risk in recently-originated lending portfolios.

Mortgage distribution. Second, most accounts both in the financial press and in these interviews indicate the centrality of a focus on mortgage products and a shift by many entities to an “originate-to-distribute” model (Bord & Santos, 2012). An originate-to-distribute model is one in which a firm provides a loan to a borrower and within days sells that loan to another firm. The originating entity is referred to as a correspondent and the purchaser is often a larger financial institution. At that point, the financial institution would package many loans together to create a collateralized debt obligation, and in turn sell off most, if not all, of its exposure to those underlying loans. As a result, the entities’ with direct knowledge of the individual borrowers had little incentive to complete due diligence on the loan. Originators were blinded by the general assumption that house prices would rise, pressure to avoid discriminatory lending practices, and at times incentives that resulted in the creation of fraudulent documentation, by the loan officer or the borrower or both.

If you want to blame someone, blame Barney Frank’s belief that every human being should own a home. There was an assumption that home values would increase forever. It was the way business was being done – wink, wink on the financing section.

Certainly numerous individuals, not just one, were involved in creating governmental policies that encouraged an increase in U.S. home ownership rates. Barney Frank was a congressman who served as chair of the House Financial Services Committee, which encouraged and authorized the government sponsored entities Fannie Mae and Freddie Mac to provide financing for affordable housing. Partly out of the same motivation, the Community Reinvestment Act of 1995 placed requirements on banks to

increase mortgage lending in traditionally underserved communities. As discussed above, after the loan was originated, the originating correspondent or bank would often sell responsibility for the loan almost immediately. This tendency had adverse ramifications on lending practices, as surmised by another interviewee:

In theory, there's nothing wrong with mortgages and securitization. If I'm only going to own [the mortgage] for five minutes, that's an unhealthy thing.

The consequences of this shift are depicted in the movie *The Big Short* (McKay, 2015), when Mark Baum hears accounts from lenders noting that they are originating loans to individuals based on bogus information. Baum asks his associates: "I don't get it. Why are they confessing?" only to be told: "They're not confessing. They're bragging."

Another interviewee expounded on why this phenomenon was able to persist:

Everyone needs the duration of mortgage bonds, because you can get six to seven years of duration. No other instrument gets that duration which insurance companies and pension companies need in order to complete their asset and liability matching.

The interviewee continued, explaining how this distorted the manner in which banks earned income (note that a tranche refers to the different levels within a collateralized debt obligation; higher tranches had higher credit ratings due to greater protection against defaults since they were paid first):

You were making more money from trading [division than from traditional lending]. Nobody cared about the value or the risk. These managers whole business was buying bonds to sell into tranching cash flows and they made their money by charging a management fee. You could make even more money from issuing the CDO (credit default obligation).

Another interviewee, who served a board member of a bank, expressed concern that the many banks developed an unhealthy obsession with a particular class of products which were all related to the same underlying pool of mortgages. He or she described the risk that resulted as follows:

To put every chip we have on one product – mortgages – those things can bite you. There's very intricate layering [in mortgage-backed securities and related derivatives]. A board member should be able to know that the CEO is betting the firm on one product.

While there were many different types of derivative products – RMBS, CMBS, CDO, CDS, ABS, CDO2 – many of them were ultimately based on the performance of underlying mortgage portfolios originated in different parts of the country. The risk was ultimately inter-related, as explained by a “chef” in *The Big Short*:

I ordered my fish on Friday, which is the mortgage bond that Michael Burry shorted. But some of the fresh fish doesn't sell. I don't know why. Maybe it just came out halibut has the intelligence of a dolphin. So, what am I going to do? Throw all this unsold fish, which is the BBB level of the bond, in the garbage, and take the loss? No way. Being the crafty and morally onerous chef that I am, whatever crappy levels of the bond I don't sell, I throw into a seafood stew. See, it's not old fish. It's a whole new thing! And the best part is, they're eating 3-day-old halibut. **That** is a CDO.

As banks increasingly focused on distribution and appeared to be less dependent on the quality of originations, the quality of originations from correspondent channels deteriorated as incentives increasingly rewarded origination, as discussed further in the next theme.

Attitudes towards risk. A third theme was changing attitudes toward risk:

[Some decision-makers] believed that a hedge protects the [profit and loss] account, but there's no perfect hedge. You pay the cost for the protection, but you then have a new set of risks, notably credit risk. Not everyone fully appreciated that.

This demand led to the creation of “flow” contracts, where lenders would agree to originate a certain value of mortgage loans during a particular time period and pass to other entities to bundle the mortgages for securitization. These entities were referred to as “manufacturers”, because they were creating the raw material (mortgage loans) that was necessary for other financial products to be created.

Because of the high demand for underlying mortgages and the related securitized products, one participant indicated that “[as a trader] you were doing someone a favor to give them a bond.”

To combat this perceived scarcity, some firms in the industry began to pursue vertical integration, by purchasing origination and servicing entities that could serve as correspondents and originate specifically for the usually larger entity that wished to continue to produce securitized products. This integration could also provide more direct insight and earlier warnings when borrowers began to miss payments and default on loans.

As recounted by an interviewee:

I remember some friends in the industry who travelled to Las Vegas. They knew the underlying loans related to some of the deals they were part of were there. So when they saw for sale signs everywhere, they started to wonder. After that, some of the people at the loan servicers who actually get the checks in the mail started noticing that payments were getting unusually light. You have to remember there were track homes in the middle of nowhere and construction was very levered. Investors might be able to last for four or five months (without selling a house) but for construction companies they need to sell less than two months after [the house] is done. These [construction companies] started defaulting.

While these observations may have allowed some parties to recognize the crisis much sooner, some banks were generally less exposed to begin with. Interviewees speculated on factors that may have been important in this more conservative risk-appetite.

[Thinking about banks that weathered the crisis well,] culturally they may have chosen a more conservative path, more of a commercial banking, conservative mindset.

One interviewee recalled a tag line from a 1979 Smith Barney commercial with John Houseman: “They make money the old-fashioned way; they earn it.” While historically banks might accrue earnings over time by lending over a long duration, the short-term focus on earnings meant that many banks shifted to obtain a greater portion of their earnings from fee-based products. One interviewee described a particular investment bank as follows:

[That company] was part of the machine. It goes to culture. Investment bankers are a bunch of aggressive assholes. [They were] more like Enron-aggressive. They thought they were doing right. They’d start to chase a complex transaction halfway down the alley. The CEO managed by fear and had no idea how severe the run on the bank would be. If it hadn’t been them, it could have easily been [one of the other investment banks].

Similarly, another interviewee suggested:

Like every investment bank, [a bank that failed] was trying to be Goldman Sachs.

In summary, interviewees suggested that banks took more aggressive risk positions, some of which can be described as a shift from a traditional-banking mindset to more of an investment banking mindset. This meant that bank earnings were increasingly dependent on income from fees rather than interest and were arguably more focused on

trading activity than on holding loans on their own balance sheet until maturity. In simplifying this perspective, one interviewee defined the objectives of the two different approaches as follows:

Traditional banking is simply loan and repayment. Investment banking is about creating instruments or securities to hopefully sell into the market place.

This represented a substantial shift for many of the banks that traced their history to traditional or commercial banking. One long-time executive interviewee explained:

Historically, you didn't get rich off of commercial banking. You had a nice life and could afford everything you needed and then have a nice retirement, but you didn't get 'wealthy.' Over time that began to change. You had people realize you could really make more money from financial transactions [than from interest on loans]. In seeking profits, banks began to pay for people who were willing to successfully take more risk. I saw in the industry a willingness to pursue market share and revenue growth. We became more tolerant of losses.

This executive indicated a belief that while it is common in banking to evaluate risk-return trade-offs, that banks eventually began to take more risk than they were being compensated for in the pursuit of short-term profits. The shift also came with a different set of rules and expectations. Because investment banks were believed to fulfill a role of 'market-making', they could legally create and market securities even if they did not believe in the long-term viability of the security. Many commercial banks were more likely to have policies to not market any securities to clients if the bank was not willing to continue its own ownership. The previous legal restrictions of Glass-Steagall were altered by the Gramm-Leach-Bliley Act in 1999, removing previous limitations that separated the

different roles of commercial banks from those of investment banks. In the words of an interviewee:

Regulators allowed Citigroup to go forward [with acquiring Salomon Smith Barney] and that allowed investment bankers to begin to utilize the balance sheet of a commercial bank. That gave them tremendous power in the market place. They could tell clients, “You don’t have to worry; we’ll park it until it sells.” Regulatory bodies didn’t grow with this change and now they were looking at transactions about which they had no clue. For bank examiners, it was like the difference between examining a giraffe instead of a cow.

These changes initially led to higher reported bank earnings, both as the industry consolidated, and as banks reaped the benefits of this new stream of fee-based earnings. One interviewee recounted that at times when market volatility was high, segments of the bank could make their entire budgeted earnings for the year in only a month or two. These earnings were less predictable as the trades also could have resulted in significant losses and because they were not necessarily repeatable in future periods. While banks generally preferred to establish “relationship earnings” with long-standing customers who were also large borrowers, when the U.S. economy was performing well, trading and securities revenues contributed a significant portion of profits for many banks. Ultimately then, the crisis was essentially unexpected by most industry participants:

Residential mortgage backed securities make a big assumption that correlation is low between the loans – they are the pure, ultimate correlation product. That was always the assumption. Since you were buying from different shelves and different geographies, you thought you’d be okay and the models all assumed a distribution of correlations. All of the models used historic data. Before this, there was never a nationwide house price decline. That had never happened, so it wouldn’t go into the model. Maybe if interest rates were going up, you’d be concerned, but they stayed down from 9/11 on.

Similarly, another interviewee reflected on how bankers were caught unaware:

In the financial industry, people knew the risks. It's like a radar screen for a pilot – you're only good as far your radar goes. When your mind's on something else, you don't focus on some of the indicators you're seeing that suggest there might be a storm later in your path. We've always had crises. It was real estate in '74-'75, country defaults in the 80's, and then savings and loan, then the tech bubble of 2002. Each one caught the banks by surprise, but they were all driven by different motivations. The most recent crisis I would say was driven by the short-term nature and perspective of management. I would say that [many banks] shifted to a greater risk-taking culture, moving from a focus on long-term to short-term results. In some ways, it's the difference between a commercial banker and an investment banker.

In many ways then, the success of mortgage-related products sowed the seeds for its downfall. As demand for underlying mortgages increased in the financial system, originators increasingly responded to the rewards available for continued origination. The normal checks and balances that existed within institutions failed to maintain origination standards due to faulty assumptions that 1) real estate prices would generally continue to rise; 2) correlations between defaults would remain low, which presumed the factors driving some borrowers to default were independent of circumstances facing other borrowers; and 3) adequate cushions could be put in place to protect certain “investment-grade” tranches of collateralized mortgage-related products. Retrospectively, a number of representations in the process have been deemed to be fraudulent and/or illegal.

Key Themes Regarding the Role of the Board

Those whom I interviewed indicated multiple considerations for the role of the board. In this section, I summarize their comments regarding the board's interaction with the CEO, industry expertise, desirable qualities, and influence on firm performance.

Interaction with the CEO. Management practice and the management literature are generally consistent in the expectation that board members are not pseudo-managers of the company. Instead, the board is expected to be a group of individuals who hold several key mandates, including to monitor the company's performance, to assess the CEO's performance and to be involved in strategic decision making. This view was reflected in the views of the interviewees:

The board has to let management run the company. Our job is to pick the CEO and know when to fire him. [Board members] can have talent in business but if those businesses are unrelated it's harder to evaluate financial instruments and other technical stuff like the level of concentration, risk management and hedging strategies. You could have a really successful CEO from industry who is battle tested but has only ever done currency hedging. It's going to be harder to know when to intervene.

The statement reflects the belief that currency hedging is one of the more simplistic derivative products that a bank would create, market and trade as part of its operations. Currency products are common because many companies conducting business in more than one geography would have motivation to limit their exposure to more volatile currencies. Board members from other industries would have had few opportunities to observe the performance credit default swaps, credit default obligations and other asset-

backed securities. These products had significant influence on the overall performance of the bank, yet unfamiliarity might have limited board members from exercise oversight over these portfolios or knowing when their bank's performance was at risk as a result.

While CEOs are held accountable, interviewees acknowledged the limited ability of even the chief-decision maker to consider all of the pertinent facts:

The CEO is important, but not the sole decider of governance. He or she can't know everything either within the organization or within the board.

Active monitoring by a board is an important function. One individual who served as a bank CEO during the crisis noted that high levels of monitoring can at times feel like having multiple bosses:

[As a CEO], it's draining to work with an attentive board, but it made my job easier because the board members were [helping identify potential issues].

Indeed, the same interviewee acknowledged that this is a key shift compared to earlier in his/her career.

A good board member needs to be challenging the CEO and the executive committee. The days of joining a board to get paid a fee and go to four meetings are over, or they should be.

In thinking more specifically about what role boards could have played in helping to avert the major bank failures that occurred during the Financial Crisis, one interviewee suggested that: "Boards were too reactive and not anticipatory." Another felt that boards were complicit in decisions that were not beneficial to their shareholders.

When subprime came unglued, you had [banks] step forward and acquire [entities] who had sold hundreds of billions in mortgage-related products

that still had remaining liability. It's like eating Typhoid Mary and hoping we don't catch it. That's a curious way to protect your shareholders. The board (and the Fed) should have said no."

Multiple interviewees downplayed the role of changing compensation schemes as having any ability to fix or change the issue going forward.

When you get to this level, you usually don't need the monetary compensation that comes with it. For me I'm driven by that appetite to learn. We have a robust discussion about what's going on in the world [on the board]. Frankly, the compensation doesn't make a difference in my lifestyle.

While the management literature has continued to theoretically and empirically examine how compensation is a tool for incentive alignment, this director's statement is consistent with recent observations in the literature that directors have multiple motivations for their service (Boivie et al., 2012).

Industry experience and relevant expertise. As discussed in previous chapters, industry experience is a potentially valuable aspect of the human and social capital that a board member can contribute through their service on the corporate board. Industry expertise was a key theme in the interviews. One participant conveyed the typical view that broad business experience is necessary on a board:

You need at least one independent expert and then fill it out with good business guys.

This was a more accommodating stance than most interviewees expressed, for instance, one said:

I don't think that to be on our board you needed to be a banker, but you should have a fairly good knowledge of finance. It's important to be able to understand the strategies and intent of the different [lines of banking] businesses. Otherwise, you're just another independent set of eyes. There's nothing wrong with being another set of independent eyes if you're doing your homework, but there's a lot of nuance for understanding a bank and what can happen to a bank's assets.

In particular, most participants noted the complexity of financial instruments and of the banks as well. This complexity presented a difficult challenge for board members that, in the opinion of some, requires a particular industry experience.

Financial instruments are so big and so complex. I've been [a bank executive] for a number years and still don't know if I'm in a position to ask the hard questions. And, what we do here in the U.S. is the most vanilla [simplistic version of derivatives]. London has more complex [derivatives] and the really exotic is in Switzerland.

Participants reflected on how much industry expertise that board members should have, and tended to have similar views.

Should there be industry expertise? I'm never going to complain about more experience [in financial services]. Others can't know just because they have experience in other industries – it's too complex. But there is a role for a fresh perspective. I don't know what the right balance is.

Another interviewee expressed much more strongly a need for financial expertise:

When serving [on the board at] a global bank, if you have knowledge of finance, it allows you to understand the balance sheet of the institution much better than if you don't and that's also true for the P&L [income statement]. [It's a risk] if you don't have the background to ask "Why are these off-balance sheet transactions and are they going to come back [to affect us in the future]?" Changing values of a security position can affect [a bank's] capital base and sometimes those questions weren't being asked. A CEO of a manufacturing company is not used to dealing with those issues; a Chairman of a technology company is not used to dealing with those issues. They may be an engineer or have creative skills, but they'd

generally rely on someone else to look at those factors in their own business.

Another respondent suggested a balance between expertise and outside perspectives:

There need to be people on the board that tie to the expertise of the company. Then maybe have a couple of free agents with a different perspective.

Potentially, the exact expertise may need to be tailored to the particular institution.

[This bank] had a large portfolio of derivatives, so you need someone who understood those.

To some extent, the issues facing board members of banks were still similar to those experienced in other industries of large scale and scope.

The magnitude and complexity of [the bank I worked for] was immense. [Like several of the other large banks], we were in over 100 countries and I had over a dozen direct reports. Because of our size, the board of governors [of the Federal Reserve] was very worried and wanted to know what we were doing to correct and address the risks we were facing.

In combination, all of the interviewees communicated their belief that banking was uniquely complex, even above and beyond what is experienced in other large institutions and that a particular skill set was necessary. While noting at times the potential benefits of diversity – including gender diversity for instance – these individuals communicated a strong preference for a majority of directors to have specific knowledge of the financial sector.

Qualities of a good director. Another theme that emerged from the interviews was participants' views on what qualities were essential for a good director to possess. These thoughts are in line with prior literature examining board dynamics. For instance, interviewees applauded the willingness to speak up and voice an opinion:

My definition of a good director is someone, I don't know, who will voice their opinion. Usually there's 2-3 board members who will speak their mind and others go along with the strongest voices. The beauty of a good board is that it has 11 opinions – good brains. They have a good healthy debate and then reach a conclusion. When that's present, odds are we will make a good decision. Ninety-percent of decisions are unanimous, but the crucial ones are where it's most important.

Second, participants were critical of the key of director independence as traditionally defined:

The most important characteristic is backbone. Independence is mostly meaningless. There are lots of independent Americans; very few of them should be on the board of a large sophisticated bank.

This is not dissimilar to a progression in the literature that has now shifted to a focus on board composition characteristics with less emphasis on director independence (Johnson, et al., 2013). However, others did note that directors with prior relationships with the CEO or possessing another form of celebrity status were less likely to be effective.

People on the board need to ask questions. They need to be on the board because of something that they bring to the table, not because they are a neighbor or a celebrity.

Another interviewee reflected on the complications in trying to assess whether a particular director is truly independent.

You have to ask “what’s their relationship to the chairman of the board or with the CEO?” To get a sense of an independent board. You can look to see if they’re taking tough decisions regarding compensation. Do they react to the performance of the company [and change CEO pay]?

Have they been around [on the board] for a long-time? If it’s more than 10-12 years, they bring expertise but the risk is that some of that expertise might not be put into practice. But at the same time, I’m working with one chairman who has been there 15 years and is the most independent board member I know.

Third, directors indicated the need for a certain level of time commitment and effort on the part of a good director.

Are they people who understand your company and are they investing the amount of time necessary? The idea of a busy board member – that is a truism. If you’re going to do it right, you’re going to have to invest time. For me it’s a matter of personal pride, and I never want someone in the company to think that I would show up unprepared.

On firm failure and too big to fail. Participants also reflected on the theme of the board as it pertains to firm failure or the notion of “too big to fail.” Participants did believe that the board could play an important role in firm governance.

Governance is critical to the success or failure of an entity. It’s when things go wrong that you really need the board.

However, this did not mean that they ascribed to the view that boards should be considered responsible for the fate of the company.

I’ve worked with good boards that ended up in bankruptcy, maybe because of product life cycle or union issues. Good companies have fallen and it’s not necessarily because the governance was bad. Others sometimes just didn’t have the right people in the driver’s seat.

Certainly this connects to the overall direction of this research: are there certain environmental contexts under which the board is most able to exert influence?

Alternatively, are there certain situations in which the board composition is irrelevant because the firm's situation is too dire to salvage? Can the failure of a firm be traced back to a key strategic decision that should have been made differently or a point in time when the board should have intervened, for instance by replacing the CEO?

Finally, at least one participant believed that banks have indeed grown 'too big to manage.'

We have enough regulation; the pendulum has swung too far. The theme is that these banks are too big and too complex to manage. No one human being can be CEO of such a massive enterprise. Even GE Capital almost brought down [Jack] Welch.

Another interviewee voiced concern that market participants and regulators have not sufficiently learned from or altered their practices in light of the past Financial Crisis.

Very limited learning has taken place. Are we in 2005 or 2006? Maybe, but for different reasons. Our economy and what underpins it are still being propped up by various tools and those haven't been withdrawn. It won't be housing in Las Vegas or mortgage-backed securities, but there are other events that could shake our financial system down to its roots again. While there are those who take comfort in Dodd-Frank and plans that have been drawn up to liquidate banks in an emergency or a crisis, we will find those measures to be lacking. The imbalances in regulation mean that there are now many unregulated counterparties that form essentially a shadow-banking system. The SIFIs [systematically important financial institutions] are still making the financial system shaky and now the Fed [Federal Reserve], the lender of last resort, is more restricted than before and less able to act quickly in a crisis.

Conclusions

These interviews, focusing on the experiences of key individuals during the crisis and their reflections on the role of the board, provided valuable direction for refining and interpreting the empirical results and evaluating avenues for future research. The information gleaned from these interviews confirms that strategic norms are likely to evolve in an industry that are difficult to challenge. The interviews suggest mixed feelings as to whether there are any particular board characteristics that can be known *a priori* to be more beneficial than others in seeking to avert firm failure. Further, the interviews suggest a lack of consensus as to how much industry experience is necessary to add value in the boardroom. The results from the quantitative analysis in this dissertation provide evidence as to the value of industry experience. However, there may be other qualities of directors from outside the industry that increase their ability to provide a valuable contribution to the board's performance, in this case financial expertise. In turn, a board that fulfill its roles of monitoring and resource provision can contribute to improved firm performance.

CHAPTER VII

DISCUSSION AND CONCLUSION

Past research on board attributes has provided only limited support for the theoretical expectation that boards affect the performance of the firm (Boivie et al., 2016). Accordingly, some scholars have recently led the charge to examine “how outside directors’ contributions to boards may vary based on their skills, experiences, and other relevant credentials” (Kor & Sundaramurthy, 2009: 982), as these “varied knowledge bases, experiences and connections can determine how effectively they question, assess, inform and influence managerial action” (Kor & Sundaramurthy, 2009: 1098).

In this stream, scholars have been able to demonstrate that additional board capital isn’t universally beneficial, thus far primarily concentrating on the potential “liability of expertise” or potential issues that can arise because boards are a group of people and therefore group dynamics are relevant. However, boards may indeed have an important, positive influence on the performance of their firms – it just may be limited to particular situations and require a particular set of skills appropriate to be valuable in those circumstances.

The mixed findings of this dissertation research both aid and confound the efforts of scholars to understand board effects. Board composition was shown to be associated with particular types of firm strategies and the industry experience of board members was shown to be more valuable than breadth in this industry in which the transferability of general human capital is categorized as low. This is further augmented by the finding that

financial expertise was valuable following an environmental shock; importantly, this benefit is shown to be distinct from industry experience alone. On the other hand, the lack of findings in regard to environmental shock as a moderator of depth or breadth suggest that the contribution of directors may be limited compared to the overriding nature of environmental and firm effects. Even a board with optimal composition may struggle to exert meaningful influence over the firm's actions and strategic positioning. This requires careful interpretation as to the types of decisions on which a board is likely to be involved.

Certainly, a number of studies have focused on the board's role in the key decision of hiring or firing the CEO, a key responsibility indicated by participants in the interviews. Yet, boards may increasingly exert influence on strategic decision-making of the firm, serving either to support or challenge the CEO. The findings in this research suggest that board composition may indeed be associated with the extent to which firm strategies conform or deviate from industry norms.

Importantly, this research also provides evidence to suggest that some effects may only be observable over a longer horizon. Different strategies come with their own risks such that a focus on absolute performance in the near-term may obscure the benefits obtained from alternate strategies. In this context, strategic deviation is associated with lower volatility of returns in future periods. These results suggest that firms that choose to conform to industry norms are then most buffeted by the economic cycle of that industry. Firms that chart their own paths may be able to secure returns that are less subject to the industry's trajectory. However, we should consider whether firms in other industries with

much smaller total capital at their disposal experience similar benefits. Notably, implicit government guarantees may also distort these risk-return relationships.

These findings also highlight an intriguing interchange. These results indicate that related expertise (in this case finance and accounting background) can be valuable, alongside industry-specific experience. Considering board dynamics has led a considerable portion of the research to focus on the trade-offs that may exist between board breadth and board depth, mostly considering whether board members should be industry insiders or industry outsiders. To some extent, this mirrors more macro-level past research on director independence. As indicated in the previous chapter, participants in the sector note that independence alone may be insufficient for predicting the ability of a board member to be an effective monitor. Determining whether someone has sufficient expertise to serve as a monitor and resource provider becomes more complex when the board faces situations in which general broad business knowledge may not be sufficiently applicable. One novelty of this research, then, is in the examination of how industry experience diverges from potentially applicable expertise.

Scholars may thus need to consider a more nuanced classification of directors that sets a higher bar than breadth alone. Certainly, many facets of diversity that contribute to cognitive diversity will continue to be beneficial in the boardroom, as research on gender diversity and racial diversity has shown. But, achieving an equal-mix of functional or industry backgrounds, which is at times implied by breadth calculations, may indeed be harmful to the board and in turn to the firm. Past research has indicated that most executives could be classified as generalists and that “types and effects of experience may

be more complex than previously suggested” (Hitt & Tyler, 1991: 345). Continuing to develop a more nuanced view as to what types of past experience are pertinent for board members to bring to bear on the firm’s environment may remain a fruitful line of inquiry.

This research also emphasizes the importance of the availability of resources. Resources are frequently abundant or munificent during times of industry growth and expansion. In these settings, the availability of resources may increase concerns that they may be appropriated or that the various stakeholders, including management, may have divergent interests. Accordingly, agency concerns are paramount as governance mechanisms are used to align interests where possible and guard or protect the firm’s resources. To the extent that contingency theory is predictive, firms will dynamically adapt to this environment by properly developing their governance structures to fit this environment. Firms are best served when resources are available to appoint board members who increase the ability of the board to carry out its monitoring function; therefore, changes in board composition should lead to increased board capital depth. A pertinent research question then is: Will firms be more likely to improve the board’s ability to monitor by appointing board members who increase board capital depth during periods of growth for the industry?

In contrast, an environmental disruption or shock is likely to be characterized by scarcity of certain resources. Firms may no longer be able to rely on past resource streams and earnings and capital positions may suffer. In the absence of resources to monitor or disburse, agency concerns become less paramount. Instead, the ability of the board to contribute unique and valuable resources may become focal. Board members’ interests are

likely to be increasingly in sync with one another, the top management team and shareholders, as there may be stigma for the directors and executives associated with the company that fails and shareholders suffer significant financial loss. Despite this alignment, monitoring may still increase relative to normal operating conditions as the board actively seeks to ensure survival of the firm. However, the board may have a heightened sense of responsibility and commitment to contributing their skills and information for the firm's benefit. From the firm's perspective then, the diversity of the resources that the board can provide becomes more beneficial than before. Again, from the perspective of contingency theory, prior research suggests that the firm should dynamically adapt to fit this environmental condition, including by altering board composition to best manage resource scarcity. The breadth of board capital increases the access, flow and novelty of information to the firm. However, future research may consider whether the board members who are adding breadth to the board have sufficient relevant expertise to be able to leverage that access, flow and novelty in this particular context. Indeed, in highly complex industries, if breadth of human capital is achieved at the detriment of relevant expertise, firm performance may suffer.

Theoretical Contributions

This dissertation contributes to contingency theory as well as to the corporate governance literature. First, contingency theory is an important lens for understanding how a firm's positioning and profile fit with certain environments and thereby affect firm performance. Contingency theory suggests that firms would alter their strategies or other

characteristics to perform better when the environment changes. This research suggests that a firm's performance may also be affected by attributes or resources of the firm that were already in place, but not readily apparent. Specifically in this context, the financial expertise of directors is a resource that is shown to be valuable to the firm in some circumstances, and not in others. Thus, changes in the firm's fit for the environment may not require change by the firm. Literature drawing on contingency theory can benefit from a better understanding of how a firm may preemptively fit future environments how a firm must consider more than only the current environment. While dynamic strategic fit may involve adaptation to rapidly-changing environments, it may also be possible to be prepared for other environmental situations that could arise.

Second, the corporate governance literature has increasingly focused on the contingency of capital. This dissertation contributes to that discussion by identifying that environmental conditions are a critical factor to consider when examining board human and social capital, including breadth of backgrounds, depth of industry experience, and relevant expertise. The board compositions that are valuable in one context may not be suitable to optimize a board's performance when the environment changes. Further, these results suggest that boards may benefit from specific rather than general capital, whereas a significant portion of past research assumes that most board capital is broadly transferable.

Future Research

In contemplating the implications of this dissertation, there are several questions that are derived from and natural extensions of this work.

First, board qualities may interact with other non-board attributes relevant to the context, such as those of the CEO. While in general, boards may be seeking new recipes during crisis, the threat-rigidity expectation may apply in specific scenarios. One such scenario is whether the board is likely to dismiss the CEO. As previously indicated, boards with greater depth may be more embedded or entrenched in the industry. As such, even in the face of shock, crisis and turbulence, these board members may believe that the market will eventually return to its prior state. They may particularly value the expertise of industry insiders and discount the expectations of those with lower levels of expertise. Accordingly, I expect board depth to affect the assessment of the CEO's performance and whether the firm's performance is internally or externally attributed. These board members may identify closely with the CEO and believe that there is little the firm could have done to have avoided the disruption because it affected most firms in the industry. Therefore, I expect they will be less likely to dismiss the CEO and continue to hold that the CEO's expertise will be valuable in navigating the crisis.

Second, while the board monitoring function has long been a key focus of research on boards, the resource provision function is also of vital importance (Hillman, Nicholson, & Shropshire, 2008; Hillman et al., 2009). For instance, young firms have been shown to benefit from the relevant industry experience of outside directors, which may substitute for a lack of such experience amongst the top management team (Kori & Misangyi, 2008).

Empirically, scholars have utilized various measures to explore the extent to which board members are likely to provide valuable resources. These include board size, directors who serve on other boards, directors who are CEOs of other firms, directors with specific functional experiences, and directors with accumulated tenure on the board (de Villiers et al., 2011).

Perhaps even more than monitoring, resource provision by directors is difficult to observe. Thus, I focus on actions taken by the firm that would indicate a desire to increase the ability of the board to provide resources during periods of environmental disruption compared to non-crisis periods. Specifically, I suggest further consideration of a firm's appointment of new directors.

Firms have been shown to alter the membership of the board of directors in order to deal effectively with their environmental conditions (Hillman et al., 2000). Further, directors may choose to exit a firm when it is in crisis (Withers, Corley, et al., 2012), resulting in an opportunity to replace the outgoing director. In addition, environmental dynamism can increase the likelihood that a board member will exit from his/her current appointment and also reduce the likelihood of joining additional boards (Withers, 2011). Finally, firms may alter the composition of their board to send signals to the market (Sundaramurthy et al., 2014).

Third, despite this significant body of work on director appointments (Withers, Hillman, & Cannella, 2012) and director exit (Boivie, Graffin, & Pollock, 2012), little empirical evidence exists to predict how the environmental context may alter a firm's board appointments and subsequent performance. Similarly, while there is considerable

work on director human and social capital of individual director selections, less attention has been given to how depth and breadth affect subsequent changes to the board based on board-level characteristics. For directors who serve on multiple boards, board interactions may be different based on the strategic context (Carpenter & Westphal, 2001) such that these directors are more likely to increase their engagement with the firm through either monitoring or resource provision during times of crisis and their experiences are more likely to be considered valuable.

Generally speaking, director turnover is a relatively infrequent event, because elections are held no more frequently than once per year and terms often are for multiple years. Even for firms that hold annual elections for all directors, which is generally considered a corporate governance best-practice, many directors are consistently re-elected; for example, average board tenure for U.S. Fortune 500 firms is 8.4 years (Spencer, 2014).

Similar to the logic presented earlier herein, the environmental conditions which affect the availability of resources are also likely to change firms' approaches to board composition. Both rational and social perspectives affect director selection (Withers, Hillman, et al., 2012). In the rational perspective, a firm is believed to appoint directors who fulfill particular needs of the firm and that best improve the firm's likelihood of success. In contrast, the social perspective suggests that social processes influence which director is appointed; for instance, the power of the CEO may influence appointments. Thus, holding known social influences constant, environmental factors can be expected to

alter selection processes. Generally, one key factor that can vary in regard to environmental factors is the availability of resources, ranging from abundant to scarce.

Finally, this dissertation suggests that certain board characteristics may “fit” a particular environmental context and thereby are associated with higher performance in those contexts. Indeed, the key desired outcome of fit is improved firm performance (Volberda, van der Weerdt, Verwaal, Stienstra, & Verdu, 2012). The role of fit as a key tenet of contingency theory (and other related theories) is to suggest that the organizations having attributes that are most congruent with the current operating environment outperform those organizations with attributes that are less congruent (Volberda et al., 2012). A significant amount of recent research on fit in the strategic management literature relies on cross-sectional samples in which environmental variables (e.g. environmental dynamism) vary across industries (Volberda et al., 2012). However, contingency theory also is focused on the response of the organization. While board composition is generally stable, firms may benefit from altering their board composition to increase board capital breadth. Stated differently, is it the absolute *level of fit* or the *change in fit* that best predicts an organization’s likelihood to weather a change in conditions?

A significant amount of the research on organizational adaptation to changes in the environment is centered on the discussion of an organization’s structural inertia (Hannan & Freeman, 1984). For instance, research on organizational change has examined the benefits and drawbacks of structural inertia, suggesting that disrupting established routines can reduce an organization’s likelihood of survival (Amburgey, Kelly, & Barnett, 1993; Hannan & Freeman, 1984). However, environmental shocks can increase failure; in a

sample of Finnish newspapers, these shocks included a civil war (Amburgey et al., 1993). Accordingly, scholars pose the question: “Can organizations learn about their environments and change strategies and structures as quickly as their environments change?” (Hannan & Freeman, 1984: 151). A stronger but dynamic view of environmental determinism would lead to the same implication: strategic changes of the organization can be predicted based on the relevant environmental forces (Zajac et al., 2000).

One key question herein is whether organizations alter the composition of their board to match the shifting environment. This may depend in part on whether the board was perceived as strong or weak when the crisis hit. In a sample of German orchestras, environmental changes that altered resource contingencies had differential effects such that organizations that were already weak were more likely to replace existing leaders, while organizations already in a position of strength would be more likely to rely on existing leadership (Allmendinger & Hackman, 1996).

An additional question is whether performance advantages accrue to firms that alter board composition to be responsive and adaptive to the changing conditions. Research on strategic fit indicates that fit (or misfit) affects organizational performance (Zajac et al., 2000). This relationship is notable in the case of environmental shocks; a particular type of disruption during which the fit or misfit of the organization for the environment may change rapidly. A slow response by the organization, or a failure to respond at all, can have devastating consequences if the firm is properly aligned for the new business environment. In contrast, the degree to which firms that are responsive to the environment – in this case, specifically by altering their board composition – will

influence the degree to which they experience an improvement in performance relative to similar firms whose boards remain constant; this effect would be above and beyond the performance predicted by fit alone.

Limitations

There are a number of limitations to this study that also highlight opportunities for future research. First, while the hypotheses were theoretically-derived without regard to industry, this research was executed in a single-industry study and with a focus on a particular crisis. It would not be appropriate to generalize these findings to other industries without undertaking additional studies. This limitation is particularly important because, as highlighted, banking and financial services have a number of distinctive features as compared to other sectors. The importance of specialized knowledge suggested within this context may be less critical to the extent that human capital is more general and transferable from one sector to another. Similarly, the economic shock that is the focus of this research was of far greater magnitude than most, with contagion effects to numerous other countries and with ramifications across most sectors of the economy. This may result in different effects than would occur in more isolated shocks or other cyclical downturns. Rather than the intended effect in the research design of being able to identify whether board members rise to the occasion, the severity of this crisis could mean that there is little precedent for board members to on which to rely and their experience or expertise that would be valuable in most situations is rendered irrelevant.

Second, bank boards may also differ substantially from the boards of other companies because banks are some of the largest organizations in the world and are subject to intense regulation and scrutiny. This belief seems to be held by board members within the industry, who, in interviews, indicated that banks require a particular type of expertise. Thus, the pool from which individuals may be selected already has significant range restrictions even when compared to the board members of publicly-listed firms. This may limit the ability to determine how variation of human and social capital can influence firm outcomes.

Third, scholars have recently indicated limitations that boards may face in executing their monitoring responsibilities (Boivie et al., 2016). Because the current research is not able to determine the effort expended by the directors or any limitations they faced in executing their responsibilities, an alternate explanation is that those factors could override the potential influence of board characteristics.

Conclusion

This research further contributes to the understanding of the contingency of board capital by providing evidence that 1) a primary mechanism for board influence is when the board is mobilized to influence the strategic direction of the firm, 2) environmental conditions significantly affect whether board effects are manifest, 3) the benefits of certain board composition and characteristics are variable, contingent upon the time span over which performance is measured, and finally 4) greater nuance may be necessary to consider when certain types of expertise can be valuable even when not obtained from

experience within the industry. Enhancing theory around how boards can help avert strategic conformity and exposure to asset bubbles has the potential to generate valuable insights for both scholarship and practice.

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APPENDIX A-1
SUMMARY OF FINDINGS

Hypothesis	Summary	Finding
1	Conforming firms have higher variation in performance than deviating firms.	Supported.
2	Crisis moderates the relationship between conformity and performance such that deviation is more valuable in times of crisis than in other environmental conditions.	Main effect is present such that deviation is associated with higher firm performance; however, the interaction term is not significant hence there is no support for strategic deviation becoming more valuable during times of crisis.
3	Board composition affects strategic conformity of the firm such that board breadth (functional diversity) leads to greater strategic conformity.	Supported.
4	In the banking industry where transferability of human capital is low, industry experience more favorably affects performance than breadth.	Supported.
5	Crisis moderates the relationship between board depth of industry experience and firm performance, such that depth improves performance following an economic shock.	Not supported when performance is measured for one year. However, the interaction effect is significant in additional tests that examine performance over a longer time frame.
6	Crisis moderates the relationship between board capital breadth and firm performance such that breadth improves performance following an economic shock.	Not supported. Even over a longer time frame, breadth is found to have a negative relationship on future performance.
7	Crisis moderates the relationship between board depth of relevant expertise and firm performance, such that expertise is valuable to the firm during periods of environmental shock for the industry.	Supported

APPENDIX B-1
REVIEW OF INDICATORS

Review of Indicators Used in the Literature to Assess Strategic Conformity		
Strategic Indicator	Example of Measurement	Relevant Studies
Resource Deployment		
Across functions	Advertising intensity, capital intensity, plant and equipment newness & R&D intensity, overhead efficiency, financial leverage, (also dividend policy and unsystematic risk)	Geletkanycz & Hambrick (1997), Finkelstein & Hambrick (1990), Geletkanycz & Hambrick (1997)
Asset allocations	Percentage of assets across bank product markets (e.g., commercial loans, real estate loans, cash, fixed assets, etc.)	Delgado-Garcia & De la Fuente-Sabate (2010), Deephouse (1999), Haveman (1993)
Financing Approach	Financial leverage, dividend policy	Miller et al. (2013)
Product Related		
Introductions	Imitation	Semadeni & Anderson (2010)
Variety	Range across genres, programming similarity	Miller & Shamsie (1999), Wang & Shaver (2014)
Pricing	Product margins are similar across firms	
Competitive Reactions	Mimicry, rivalry	Chen & Miller (2012)
Corporate Strategy / Diversification		
Acquisitions	Number of acquisitions	Haunschild (1993)
International entry	Mimetic influence of prior entries by competitors	Gimeno, Hoskisson, Beal, & Wan (2005), Belderbos, Van Olfen, & Zou (2011)
Market Responses	Unsystematic risk	Miller et al. (2013)

APPENDIX B-2
BANKS WITH OVER \$100B ASSETS IN 2007

BoardEx ID	Company	Assets per Form Y-9C	Tier 1 Capital	ROA%	Fees
		<i>Billions</i>			as a % of NII
6930	CITIGROUP INC	2,187.63	4.1%	0.17%	27%
4504	BANK OF AMERICA CORP	1,720.69	4.8%	0.87%	32%
17528	JPMORGAN CHASE & CO	1,562.15	5.7%	0.98%	63%
33003	WACHOVIA CORP (De-listed 12/2008)	782.90	5.6%	0.81%	32%
33264	WELLS FARGO & CO	575.44	6.4%	1.40%	49%
20426	METLIFE INC	558.56	5.5%	0.77%	180%
31946	US BANCORP	237.62	7.4%	1.82%	54%
29586	SUNTRUST BANKS INC	179.57	6.4%	0.91%	32%
5734	CAPITAL ONE FINANCIAL CORP	150.59	8.2%	1.72%	68%
21537	NATIONAL CITY CORP (De-listed 12/2008)	150.38	6.2%	0.21%	28%
29131	STATE STREET CORP	142.94	5.0%	0.88%	127%
550049	REGIONS FINANCIAL CORP	141.04	6.0%	0.99%	34%
24669	PNC FINANCIAL SERVICES GROUP IN	138.98	5.6%	1.06%	62%
3718	BB&T CORP	132.62	6.9%	1.31%	35%
324	FIFTH THIRD BANCORP	110.96	8.0%	0.97%	37%