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Abstract

Risk in financial institutions is vitally important to regulators, policy makers, investors, and the stability of the financial system, yet some critical aspects of that risk remain poorly understood. In the case of U.S. startup banks, a critical choice that can influence risk-taking behavior is which of three regulators—with varying levels of stringency—to choose. The board of directors of the new bank makes this important decision, which may result in different risk implications, depending on board's structure. Here, we examine banks' risk behavior associated with the degree of board independence and the choice of regulator. We find that the regulatory environment and board independence jointly influence new bank risk. Our evidence suggests that the intensity of regulatory scrutiny is a partial substitute for board independence in achieving an optimal level of risk. We discuss the implications of our findings for theory and policy.

Keywords

Banking, Boards of directors, Corporate governance, Regulation

Introduction

The economy is vulnerable to ‘irresponsible risk-taking by the financial institutions’ (Pathan, 2009: 1340). Banks have critical stakeholders that go beyond shareholders, including lenders, borrowers, savers, and taxpayers. Bank failure due to excessive risk taking can financially damage any or all of these stakeholders (Bhattacharya and Thakor, 1993). Banks also perform a monitoring role for any firm that has borrowed from the bank (Diamond, 1984; Sampagnaro, Meles, and Verdoliva, 2015). Because of their lending and monitoring roles, banks have a ‘multiplier’ effect on the economy. As a result, state and national governments regulate the financial sector, and provide a safety net for depositors (Alexander, 2006).

The core of a commercial bank’s business is transforming short-term, liquid deposits into long-term, illiquid loans. These loans are informationally opaque, reducing external stakeholders’ ability to assess the quality of the bank’s loan portfolio, allowing managers to pursue policies that increase bank risk. Because deposits in banks are insured, banks also enjoy ‘more implicit guarantees in the form of emergency liquidity and the possibility of capital assistance (i.e., bailouts) in times of distress’ (Srivastav and Hagendorff, 2016: 337). These guarantees reinforce the bank managers’ incentives to take risks, and reduce the incentives of depositors to monitor bank health.

New banks are especially important because they introduce new competition into a regional financial market, and they tend to lend to small businesses more than their more established counterparts (Whalen, 2012). They are also riskier in general than their more established competitors because of the ‘liability of newness,’ in addition to the other risks attendant to bank

activities. The liability of newness involves several dimensions including: new members needing to learn new jobs and their boundaries; a lack of initial trust in addition to no experience with other organizations; and few established ties with potential customers (Freeman, Carroll and Hannan, 1983; Hyytinen, Pajarinen and Rouvinen, 2015; Thornhill and Amit, 2003). Further, new banks are prone to take risky positions to create profits and establish themselves. The incentives for these behaviors are that, as mentioned above, banks benefit from implicit and explicit forms of insurance.

Regulation shapes bank risk-taking (John, De Masi, and Paci, 2016). New banks choose their primary Federal regulator at formation (in the U.S. there are three possible choices), and this choice can influence the riskiness of the positions new banks take (Whalen, 2012). Specifically, a new bank is founded by its organizers (who typically then serve as the bank's board of directors, Code of Federal Regulations of the United States of America 12 CFR Ch 1, Section 5.20: 68), and its board then selects its primary regulator. This process creates a situation of different regulatory environments under which new banks will operate as each regulatory body specifically prescribes what management can and cannot do in managing its bank (Guirlinger, 1999). Thus, boards of directors of new banks effectively select the stringency of the regulations under which they will be monitored.

New bank boards might choose the more stringent regulator to address their start-up risks for two reasons. The first reason is akin to the reason firms from economies with weak investor protection cross-list in economies with greater investor protection, also known as the bonding hypothesis. The legal bonding hypothesis (Coffee, 1999; Stulz, 1999) asserts that firms that are

assumed to have weak legal and regulatory standards can choose to accept costly, more stringent monitoring in order to demonstrate that they do not, in fact, suffer from weak governance (Ferris and Schnatterly, 2010).

The second reason is that, while the act of bonding is a credible commitment to a stronger regulatory regime, the selection of the more stringent regulator is also a signal that the board understands the importance of reassuring stakeholders of the bank's commitment to reducing risk in the operations of the bank. This signaling assures stakeholders that they can be confident in the quality of the bank's monitoring (Ippolito, 1990), or of its 'institutional fitness' (Davis, 2005: 156). These choices have risk-based implications. As such, when new bank boards choose a stronger regulator, do these banks participate in less risky activities than new banks whose boards did not choose more stringent regulators? We argue that this is the case.

Bank governance also has the potential to mitigate the risky behavior of the managers (Laeven and Levine, 2009; Pathan, 2009). Boards are the primary mechanism of governance, as they are at the apex of the firm (Dalton, Daily, Ellstrand and Johnson, 1998; Schnatterly and Johnson, 2014). Their role is to monitor and advise managers (Hillman, Nicholson, and Shropshire, 2008; Johnson, Schnatterly and Hill, 2013). The role of the board of directors of a bank is 'even more important as a governance mechanism than its non-bank counterparts' (Pathan, 2009: 1340).

Boards that have a greater ability to monitor, generally viewed as boards that are more independent (Dalton, *et al.*, 1998), may view their independence as a sufficient signal of risk-monitoring ability, and then choose not to bond themselves to a stringent regulatory regime.

Following this logic, we propose that boards that are more capable of monitoring, or that signal

that monitoring is important, will value more highly a regulator that allows greater managerial discretion. In essence, boards may tradeoff or substitute their monitoring role based on the relative strength of the regulatory environment.

The ability to substitute activities allows the board to redeploy, reallocate, and reinvest resources (that would have otherwise been invested in monitoring) in other important board activities (e.g., setting strategic direction, satisfying legal responsibilities, securing outside resources, etc.). The increased commitment to these activities may enhance the efficiency and effectiveness of its efforts as well as reduce costs. That is, a bank with a stronger, more independent board is more likely to choose a less stringent regulator than their less independent board counterparts. This decision will also have risk-based implications. As such, when new bank boards that are more independent choose a weaker regulator, do these banks participate in riskier activities than new banks whose boards chose more stringent regulators? The net board/regulator effect is an empirical question.

Our investigation uses a sample of 140 startup banks that have intra-industry variation in levels of regulation based their choice of bank regulator. The sample allows us to investigate the regulatory regime that banks' boards choose, based on the structure of the board, and their impact on risk taking. We find that new bank boards tend to prefer more stringent regulators, but that this effect is not as strong for new banks that have more independent boards. Further, new bank boards that are more independent also undertake what we argue is an optimal (or at least closer to optimal) level of risky activities.

Our work contributes to the literature on the governance of organizations in several ways. First, we examine the impact that a board's key decision has on bank risk-taking. As we have seen dire consequences of too much bank risk-taking (with implications for creditors and taxpayers (Srivastav and Hagendorff, 2016)), new insights into the role of the board in increasing or decreasing risk-taking are important. Second, by examining the role of regulation as a governance mechanism, we expand the set of tools a board can use for monitoring and bonding. Third, we provide a test of the bonding hypothesis within one country, finding that it has validity in this setting. Fourth, we explore the board's choice of regulator as a signaling mechanism regarding the board's ability to manage risk.

Theory and hypotheses

Selection of regulator by the board of directors

Because of the fragility of the banking system and its necessary role in the economy, regulation and governance need to be jointly understood with regard to appropriate monitoring of banks so that managers undertake an appropriate level of risky projects (Alexander, 2006). A new bank represents an important competitive option in their communities. They typically specialize in funding small businesses, a critical part of the economy.

However, new banks suffer from disadvantages inherent in the banking system generally, but also the liability of newness (Posen and Chen, 2013). This liability consists of disadvantages due to a lack of resources, low organizational knowledge and capabilities, inefficiencies while people learn their roles, and new or undeveloped organizational practices (Posen and Chen, 2013).

Another liability of newness is low trust in the organization (with no history), and low levels of

ties to existing organizations (Thornhill and Amit, 2003). In short, '[f]irms are at the greatest risk of failure when they are young and small' (Thornhill and Amit, 2003: 497). Many new banks bet their existence on high-risk commercial real estate loans (Whalen, 2012). In short, there are significant challenges for a new bank. However, regulation can serve as a mechanism to address the liability of newness. The new bank board is able to select among different regulators, ranging from (relatively) very strict to not very strict. Regulation will impact the bank's functioning and profitability.

Regulation impacts the environment in which the firm competes, and can affect 'firm actions and performance levels' (Reger, Duhaime and Stimpert, 1992: 191). Some researchers have argued that a firm's external regulatory environment can also play a role in firm governance (e.g., Booth, Cornett, and Tehranian, 2002). A firm's external regulatory environment, via policies enacted by regulators, can specify certain levels of financial performance, dissuade risky operating practices, curb overly aggressive growth, and limit self-dealing transactions. Bank regulation is specifically intended to ensure the soundness of the financial system and protect depositors (Alexander, 2006). Bank managers have incentives to take risky bets as they benefit managers and shareholders while costing the creditors (John, *et al.*, 2016), and are partially insured by governments for their losses (Alexander, 2006). Regulation can blunt this incentive (John, *et al.*, 2016).

When firms have the ability to choose their level of regulation, such as choosing between stock exchanges on which to list or in which state to incorporate, the choice has two effects: it bonds the management to a certain standard, depending on the stringency of regulation, and it also sends a signal about the firm's internal governance mechanisms. The choice of a stricter

regulatory agency, for example, holds management to an external, higher standard. Because new banks suffer from the liability of newness, they are disadvantaged relative to their established rivals in attracting customers and other stakeholders.

The choice a new bank board makes for its regulator can influence the bank's expected return, both through expected costs of compliance and through the tightness of supervisory constraints (Whalen, 2012). Because new banks can choose their regulator and will understand that stakeholders will be hesitant to trust the bank because of its newness, bank boards have two mechanisms to address this liability of newness, both with the same result. The bank board can bond itself to a higher standard of governance, and the bank board can signal that it understands that it suffers from the liability of newness, and can reassure stakeholders.

First, the board might choose a stronger regulator as a form of bonding to credibly subject itself to stronger standards (Ferris and Schnatterly, 2010). This legal bonding hypothesis (Coffee, 1999; Stulz, 1999) argues that firms that suffer a monitoring disadvantage but choose a credible bonding mechanism experience performance benefits, implying a fit between the firm and its environment (Ferris and Schnatterly, 2010). For example, a firm can choose to cross list on a foreign exchange with a stronger regulatory regime than they experience in its home country. Ferris and Schnatterly (2010) argue that '(c)ross-listing on exchanges with stronger shareholder protections and disclosure regulations is one way for a firm to improve its governance or to signal to investors that it currently has good governance.'

Only a few studies have investigated within-country bonding. These studies find that firms that submit to stronger monitoring standards within-country, by moving to a more selective stock exchange, or to issuing shares that are more intensely monitored, experience a positive effect on firm value (Carvalho and Pennacchi, 2012; Gleason, Madura, and Subrahmanyam, 2007).

Second, the regulatory choice of a board facing the liability of newness is a signaling mechanism to stakeholders that they can be assured of the quality of the bank's monitoring (Ippolito, 1990), or of their 'institutional fitness' (Davis, 2005: 156). New banks have boards that are unfamiliar to stakeholders. While boards are a monitor of management, they can signal, by the choice of regulator, that the bank is a safe business partner. When there is information asymmetry, the board can signal information they want stakeholders to know (Certo, 2003). Thus the choice of regulator is an important non-financial signal from boards.

For a signal to be credible, it needs to be observable and costly to imitate (Certo, 2003). More stringent regulation fulfills these criteria: the regulatory body chosen is publicly available information, and a more stringent regulator generates higher costs than a less stringent regulator. Lower quality banks would have difficulty being monitored by a stringent regulator because they would have to spend more, see less revenue, and change their practices to meet the more stringent regulations.

Because the new bank board, suffering from the liability of newness, needs to reassure stakeholders via bonding and signaling, we hypothesize the following.

H1: All else equal, new bank boards will choose to be regulated by the more stringent regulator.

Choice of regulator and bank risk

A critical task for new banks, like all banks, is managing risk. The role of regulators is to ensure that the new bank manages risk well (John, *et al.*, 2016). As this is the regulator's job, stronger regulators will push the new bank toward lower-risk activities. Stronger regulators reduce risky activities by imposing restrictions on the bank (John, *et al.*, 2016). For example, a strong regulator will more intensely monitor credit quality, bank liquidity, the quality of management, the earnings capacity of the bank, its interest rate risk, and systemic risk. Thus, our second hypothesis is:

H2: All else equal, new bank boards that choose to be regulated by the more stringent regulator will experience less risk than those that did not choose the more stringent regulator.

Board effectiveness and bank risk

Classic agency theory holds that there is an inherent conflict in managing the performance of firms. This conflict pits firm owners against firm managers. The separation of ownership and control creates an agency problem, which is of central concern because managers may have incentives to take action in which they, rather than shareholders, benefit (Jensen and Meckling, 1976).

Agency theory identifies governance mechanisms that 'limit the agent's self-serving behavior' (Eisenhardt, 1989: 59). One such mechanism is the board of directors. Boards make critical

organization-wide decisions that affect long-term firm performance (Judge and Zeithaml, 1992). Although a board has many responsibilities, including hiring, firing and compensating the CEO, one of its primary charges is to serve as the ultimate monitor of management (Fama and Jensen, 1983). Boards that closely monitor are more likely to limit management's ability to appropriate excessive perquisites than boards that take on a weaker role (Dalton, *et al.*, 1998; Zahra and Pearce, 1989).

Boards are arguably more important as a governance mechanism for banks than for other types of firms because the directors are responsible for not only shareholders, but they also have a fiduciary responsibility to depositors, taxpayers, and other stakeholders (Pathan, 2009).

Additionally, because bank operations are not very transparent, information asymmetry is especially high (Haggard and Howe, 2012). As a result, the signaling role that bank boards play is more significant, because other visible monitoring signals may be lacking for banks (Pathan, 2009). In fact, the Basel Committee on Banking Supervision (2009) identifies the board as an 'essential part of bank regulatory reform' (Pathan, 2009: 1341) and as a critical element of risk management.

Agency theory argues that the level of monitoring increases with the independence of a firm's board of directors, typically measured as the proportion of outsiders (board members without an employment relationship with the firm) (Daily and Johnson, 1997) and the lack of CEO/Chair duality (where the CEO does not serve as the chair of the board) (Berger, Ofek, and Yermack, 1997). An independent board is viewed as an effective monitor of management and an emblem of strong firm governance because such a board tends to have fewer potential conflicts of

interest. With fewer conflicts of interest, it can make independent assessments of managerial activity, thereby lowering managerial ability and incentives for opportunistic behavior (Dalton, *et al.*, 1998).

An alternative explanation is that board independence signals appropriate, or legitimate, behavior (Meyer and Rowan, 1977). According to this argument, agency theory is a driver of behavior because it has become the normative perspective used to interpret the value of governance practices. Boards look independent not for monitoring purposes, but to satisfy stakeholders as to the legitimacy of the firm (Davis, 2005). This dynamic, that the ‘arrangements are consistent with the normative agency logic of the capital markets’ (Schnatterly and Johnson, 2014: 1554) rather than the presence of any performance impact, has been documented, for example, in incentive compensation plans (Westphal and Zajac, 1998) and preferences for independent boards regardless of the performance implications (Schnatterly and Johnson, 2014).

Irrespective of the reason, strong and appropriate governance is desirable because the social costs of risk-taking are high. Customers and suppliers put their economic welfare in the hands of banks (Alexander, 2006). The Basel Committee on Banking Supervision statement on Corporate Governance for Banking Organizations states, ‘The importance of banks to national economies is underscored by the fact that banking is a virtually universally regulated industry and that banks have access to government safety nets. It is of crucial importance, therefore that banks have strong governance’ (Alexander, 2006: 19).

However, Baysinger, and Zardkoohi (1986) find that the shareholders of firms in highly regulated industries tend to rely less on boards and more on regulatory agencies to monitor management. Further, if shareholders rely on the regulatory agency to monitor the bank, the board (in addition to not needing to monitor management) may not need to look appropriate, or to signal that the board is paying attention to the normative agency logic of the capital markets (Schnatterly and Johnson, 2014). In sum, monitoring by regulatory bodies may provide an effective substitute for the monitoring function or monitoring signal typically undertaken by the board of the directors (Demsetz and Lehn, 1985; Kim and Prescott, 2005; Schnatterly and Johnson, 2014).

Baysinger and Zardkoohi (1986) also argue that regulatory activities carried out by regulators in an industry are an ‘additional layer of governance’ (Baysinger and Zardkoohi, 1986: 341). Boards capable of effective monitoring will not seek the burden of stricter external monitoring, but will be better able to maintain efficiency by selecting less stringent regulation. There are (at least) two reasons for this. First, overlap of monitoring activities is inefficient (Zajac and Westphal, 1994) and may generate greater cost than benefit. Second, because an independent board signals legitimacy, board members may actually undermine the legitimacy already signaled by greater regulation. Indeed, even if independent boards are not effective monitors, there is still a strong socialization in the market that more independent boards are better than less independent boards (Hillman *et al.*, 2011). Thus we hypothesize:

H3: All else equal, more independent boards of new banks are more likely to choose to be regulated by less stringent regulators than less independent boards of new banks.

Joint impact of regulation and board effectiveness on bank risk

More independent boards that choose less stringent regulators have preserved discretion for themselves. Assuming they are intent on performing well, this choice allows for an optimum level of risk.¹ In turn, optimal risk-taking can improve their chances of success (John, *et al.*, 2016). Conversely, choosing a stronger regulator represents an increase in compliance cost and a loss of discretion by a board that is already able to manage risk appropriately. Should a less independent board choose a strong regulator, they too may experience less-than-optimal risk, as they will have handed over discretion to the regulator, effectively limiting their strategic options.

A weaker board that chooses a weaker regulator is likely to experience excessive risk for two reasons. First, less board independence means lower monitoring capabilities, increasing the opportunity for managers to engage in detrimental (to the bank) or self-interested behaviors. Second, less independent boards lack legitimacy through non-adherence to the agency-theoretic norm. Thus, by choosing a weaker regulatory environment, they signal their lack of concern for establishing credibility among their stakeholders. This choice can negatively influence customers or cause customers to require a premium to justify the risk of dealing with the firm. Thus, if such firms select a weak regulatory regime, they may encounter greater managerial opportunism or signal a lack of legitimacy. We hypothesize:

H4: Less independent boards of new banks that choose to be regulated by less stringent regulators will experience more risk than (a) those that choose the stronger regulator and (b) than more independent boards that select less stringent regulators.

To summarize our hypotheses: New banks will tend to choose a stringent regulator, but this tendency will be less for new banks with strong boards. In terms of risk, a combination of a strong regulator and a strong board will lead to the lowest level of risk and a combination of a weak regulator and a weak board will lead to the highest level of risk. We believe that a strong board coupled with a weak regulator will yield an optimal (or closer to optimal) level of risk because the strong board will be less constrained by regulators and will be able to allow managers greater discretion. Finally, our only prediction about weak boards coupled with a strong regulator is that the resulting risk will be somewhere between the strong/strong and weak/weak cases.

Methods

Research Setting

Our context is start-up commercial banks in the United States. The process of creating a new bank typically begins with a team of investors that form the core of the board of directors. They invite others to invest and join the board. After board formation, they determine which of the three regulatory agencies will regulate the bank—a required step in the start-up process. If the board chooses a Federal charter, it is licensed and supervised by the Office of the Comptroller of the Currency (“OCC”), an independent bureau of the U.S. Department of the Treasury that charters, regulates, and supervises national banks and federal savings associations, as well as federal branches and agencies of foreign banks.

If a state charter is chosen, the bank is chartered and supervised by a U.S. state or territory (territories include Guam, American Samoa, Puerto Rico and the U.S. Virgin Islands). Further, they are subject to ongoing federal supervision, opting into oversight by either the Federal Deposit Insurance Corporation (“FDIC”) or the Federal Reserve Board. With the choice of regulator having been made, the bank then commences operations. The process is laid out in Figure 1. Importantly, our context provides a form of natural experiment with a time sequence—the board forms, then the board chooses a regulator—which aids in mitigating the endogeneity problem common in governance research.

Figure 1 about here

We note two important factors that differ for banks regulated by the OCC that might influence our findings: examination fees and proximity. The examination fees charged by the OCC are higher than those charged by state chartering authorities, in some cases more than double. The FDIC and Federal Reserve typically coordinate with the state chartering authorities and do not charge examination fees. Because our focus is on risky bank behavior and not strictly on profitability, we control inherently for the fee issues via including bank profitability (average ROE) in our models. Thus, if higher fees influence risk taking, our results will have accounted for these factors. Further, banks might feel that state authorities are more accessible than the OCC, where decisions are made in Washington, where personnel are likely less familiar with local circumstances.

Sample and Data

We begin by selecting a random sample of 600 new banks from the population of 1,367 U.S. banks chartered between 1992 and 1998. We obtain banking information from the FDIC's *Institution Directory*. Data on board and executive officer structure come from *Thomson's North American Financial Institutions Directory*. We construct performance measures using the FDIC's *Reports of Condition and Income*, accounting reports filed by all FDIC-insured banks each quarter. After dropping observations due to data availability, 140 startup banks remain. Analysis (not tabulated) of our final sample reveals no differences between the original and final samples. The original random sample of 600 comprises 64 percent nonmember state banks (FDIC banks), 25 percent national banks (OCC banks) and 11 percent member state banks (FED banks). Our final sample included 62 percent nonmember (FDIC) state banks, 29 percent national (OCC) banks and 9 percent member (FED) state banks.

We use data on new bank startups from the year 1992 to 1998. Because there has been a significant decrease in new bank charters in the U.S. over time, this choice of time frame allows us to focus on the relation between regulation and governance without the confound of changes in licensing standards. Many believe these standards have changed substantially over time, for instance, during the subprime lending crash during the years 2007 and 2008. The implication is that the crash was an indication of regulatory failure, perhaps due to too many charters being granted without sufficient due diligence on the viability of the startup banks.

Measures

Firm risk. We use two measures to assess new bank risk: *non-performing assets (NPA)*, computed as cumulative loans past 90 days due plus all assets no longer accruing interest. Non-

performing assets is a customary measure of negative bank performance (Berger and DeYoung, 1997; Hanc, 1997). We also use the *high-risk loan ratio*, the ratio of commercial real estate and commercial and industrial loans to total loans, as a measure of firm risk.

Risk measures are the average of the first three calendar years of data after the initial charter date of each bank. This minimizes differences associated with bank opening dates in the initial year of operation. The first three years of operations defines a distinctive regulatory environment for each new bank (DeYoung, 1999). Regulators believe that three years is a sufficient period of time for new banks to pass from financial fragility to financial stability after which they reduce regulatory requirements. Following the initial three years of operations, variation in the regulatory environments of new banks is less divergent, as new banks mature and become subject to normal (less restrictive) regulations faced by all banks (DeYoung, 1999).

Regulation intensity. The choice of regulatory agency largely defines the regulatory environment. There are three options: The Office of the Comptroller of the Currency (OCC), the Federal Reserve (FED), and the Federal Deposit Insurance Corporation (FDIC). Some of the more salient differences across regulations at the various regulatory agencies are in the areas of bank capital requirements, bank examination frequency, profitability requirements, and number of supervising regulatory bodies.

Prior research has indicated that the most acute differences in regulations are between FDIC banks and OCC banks, where the FDIC is viewed as the *most* stringent and the OCC as the *least* stringent (DeVaughn, 2003; DeYoung 2000). The other regulator, the FED, is considered to be in

between the FDIC and OCC.² We use a new bank's regulator as a proxy for the relative stringency of the bank's regulatory environment. Because the OCC is associated with a weaker regulatory environment, in the analysis that follows, *regulatory stringency* = 0 if the OCC is the bank's regulator, 1 if the FED is the regulator, and 2 if the FDIC is the regulator.

*Board independence.*³ We use two measures of board independence. The first measure is *board outsiders*, the proportion of outside directors on the board. Although outsiders are not necessarily always 'independent', insiders are beholden to the CEO for their jobs, so are less independent than outsiders. The use of outside directors may represent greater board vigilance or be a signal for better quality of information (Anderson, Francis, and Stokes, 1993; Fama, 1980). Outsiders may focus more on financial performance measures, which is an important component of monitoring (Fama and Jensen, 1983), and may act on that information, as boards dominated by outsiders are more likely to dismiss CEOs following poor financial performance (Coughlin and Schmidt, 1985; Weisbach, 1988). In testing our fourth hypothesis we employ a split sample analysis. To facilitate this, we measure *board strength* as a 1 if the percent of outsiders is above the median and 0 otherwise.

The second measure of board independence is *CEO/Chair duality*. Separation of the CEO and Chair roles (non-duality) allows for more objective assessment of the performance of the CEO and thus more effective monitoring by the board (Berger *et al.*, 1997). If the Chair is also the CEO (duality), the independence of these functions is reduced. Indeed, Morck, Shleifer, and Vishny (1989) and Boyd (1994) find that a CEO who is also Chair has more control over the board than the board has over the CEO/Chair. If a CEO has control over a board, the board's

independence and its ability to effectively monitor the CEO are constrained. Constraints on the board's ability to monitor reduce the possibility that the board can execute its governance role (Fama and Jensen, 1983; Kesner and Dalton, 1985; Millstein, 1992). Thus, CEO duality signals less effective monitoring (Malette and Fowler, 1992; Morck *et al.*, 1989) and equals 1 when the CEO is also Chair and 0 otherwise in the analysis that follows.

Control variables. We include control variables to account for other factors that may influence monitoring or performance. Firm-specific variables with potential effects on performance include: *initial equity* (the startup equity of a new bank, a proxy for size), *age* (months between the initial charter date and the first full calendar year reporting period), and *multi-branch location*, a proxy for the complexity of operations (1 if a new bank has more than one bank branch location at startup or 0 otherwise).

Controls to account for differences in risk across bank assets include: the *equity/asset ratio*, the ratio of bank equity to bank assets, the *high-risk loan ratio*, the proportion of the loan portfolio consisting of high-risk loans, and *non-performing assets*. The latter two are retained as controls in models in which they are not the dependent variable.

We also include controls for environmental influences on performance. The *founding density* proxies for the competitive conditions faced by new banks (number of all commercial banks in the home state of each new bank in the year in which the new bank was chartered). Growth in gross state product (*GSP*) (the state-level equivalent of the gross national product) controls for economic differences in each bank's home state.

We also control for *board size*, the number of board members. The impact of board size on the board's monitoring ability and firm performance is equivocal. Some argue that board size is associated with strong governance because the board's capacity for monitoring increases with its size, as larger boards can process information more effectively and have a broader skill basis (Alexander, Fennell, and Halpern, 1993). Alternately, a larger board can become unwieldy, effectively putting the CEO in a position of greater power (Yermack, 1996).

Indicator variables representing the *year* that each bank was founded are also included to capture unmeasured differences associated with founding year.

Analysis

We use a single-sample test of proportion (H1), OLS regression (H2 and H4), and ordered logistic regression (H3) to test our hypotheses. For H1 we compare the proportion of banks that select the FDIC, the strongest regulator, to 0.5. We test H2 and H4 using our full sample, but for H4a and H4b use a split-sample approach as more nuanced tests. Specifically, H4a is tested using only banks with boards equal to or below the median for board outsider proportion (weak boards), allowing us to examine whether weak regulation leads to greater risk for banks with less independent boards. Similarly, H4b is tested using only banks that select the weak or medium stringency regulators (FED and OCC), which facilitates the comparison of banks with more independent and less independent boards amongst those that selected weak regulation. We test H3 using ordered logistic regression to see whether strong and weak boards make distinct regulator selections.

Results

Descriptive Statistics

Table 1 displays correlations, means, and standard deviations. *Regulatory stringency* is, on average, 1.34 (slightly above median). Specifically, the sample comprises of 40 banks that selected the weakest regulator (OCC), 13 that selected the middle regulator (FED) and 87 that selected the most stringent (FDIC). On average, board outsiders constitute 81% of nine-member boards (the average board size is 9.3). CEOs are chairs in 29% of the new banks.

Board outsider percentage is negatively and significantly correlated with *Non-performing assets* and is positively and significantly correlated with *initial equity* and *average GSP growth* and *board size*. *CEO Duality* is negatively and significantly correlated with *Board size*. *Regulatory stringency* is negatively and significantly correlated with *Non-performing assets* and *Average GSP Growth*. *Non-performing assets* is also negative and significantly correlated with *equity/asset ratio*.

 Insert Table 1 about here

Hypothesis Testing

We note that we find no significant results for CEO duality in support of or against any of our hypotheses. Thus, in discussing our results for H3 and H4, we focus on the results related to our

other measure of board independence: the proportion of board outsiders. Results for CEO duality are, however, included in our tables.

To test our hypothesis that the majority of new banks will select the strongest regulator, we compared the proportion of banks that selected the strongest regulatory regime (62% chose FDIC) to 0.5. The one-sample test of proportion yielded a z-score of 2.87 ($p = .002$, one-tailed). Thus, we find strong support for H1. Alternatively, in comparing strong versus weak regulation, if we group the banks that chose the middle regulator together with the highly regulated banks, the proportion is an even stronger majority (71%). Thus, the results strongly support H1.

Hypothesis 2 posits that when banks select stronger regulators they will experience less risk compared to those that opt for weaker regulation. We test this with two measures of risk: non-performing assets and high-risk loans. In the case of non-performing assets, regulatory stringency significantly predicts the degree of bank risk ($p = 0.026$); see Table 2. However, in the case of high-risk loans, we find no relation ($p = 0.268$). Thus, we have support for H2 using one measure of bank risk, but not both. That is, new bank boards that choose the more stringent regulator experience lower non-performing assets.

Our third hypothesis suggests that more independent boards will choose to be regulated by less stringent regulators when compared to weaker boards. As seen in Table 3, the ordered logistic regression model does not provide support for H3. The proportion of board outsiders ($p = 0.598$) is not predictive of the choice for stronger regulation.

Our final hypothesis examines the joint impact of board independence and regulatory stringency on risk. We posit that the combination of a less independent board and a weaker regulator is likely to lead to greater bank risk than board/regulator combinations in which either board strength or regulatory strength is high. We test this conjecture with an interaction term in our full sample model (H4) and in split sample regression models (H4a and H4b).

In support of H4, the interaction term in our full model, with non-performing assets as the risk measure, is positive and marginally significant ($p = 0.067$). The interaction term is not predictive of high-risk loans as a measure of risk ($p = 0.934$). Figure 2 confirms that the pattern of the interaction supports our hypothesis. Specifically, banks with weak boards that also select weak regulation experience the greatest bank risk in terms of non-performing assets.

Because there are three levels of regulatory stringency in the U.S., the middle regulatory choice (FED) could be considered as either akin to the strong regulator (FDIC) or to the least stringent regulator (OCC). Thus, to explore the robustness of our results and to determine the sensitivity of our results to these possible interpretations, the H4 non-performing assets model was repeated with the middle regulator (1) grouped with the stronger regulator, (2) grouped with the weaker regulator, and (3) removed so that only the strongest and weakest remained in the model. The interaction was at least marginally significant in each ($p = 0.050, 0.092, \text{ and } 0.054$ respectively). Thus, across these four models and their various measures of strong versus weak regulatory stringency, our results consistently support H4. A simplified view of the interaction can be seen in Figure 3, in which the middle and high stringency regulators are combined.

Insert Figures 2 and 3 about here

We further test H4 with a split-sample approach. First, model H4a includes only banks with boards equal to or below the median for board outsiders. In support of this hypothesis, we find that for weak boards, regulatory stringency predicts a lower degree of bank risk, in terms of non-performing assets ($p = 0.051$); see Table 2. In the case of high-risk loans, regulatory stringency did not significantly reduce risk amongst banks with weak boards ($p = 0.152$). As with our full-sample approach to testing H4, we also test the sensitivity of our results to the alternative categorizations of what qualifies as ‘strong’ or ‘weak’ regulatory stringency. Models in which the middle regulator is grouped with the higher and lesser stringency regulator and where those banks were removed altogether were all supportive of H4a ($p = 0.038, 0.090, \text{ and } 0.022$ respectively).

Similarly, model H4b includes only banks that selected the weak or medium stringency regulators. With non-performing assets as our risk measure, we find strong support for H4b. The proportion of board outsiders significantly reduces the degree of bank risk experienced by banks that chose the medium and lower stringency regulators ($p = 0.015$). We repeat the non-performing assets analysis using only banks that select the lowest regulator with similar results ($p = 0.011$). With high-risk loans as the risk measure, board independence does not predict bank risk ($p = 0.508$).

In summary, although high-risk loans are found not to be influenced by regulatory stringency, non-performing assets are consistently lower in banks that choose stronger regulation. Similarly, the board-regulator interaction influences one type of bank risk (non-performing assets), but not both.

Insert Tables 2-3 about here

Discussion

General Discussion

Our results, while mixed, provide important insights into the relation between a board's independence, its choice of regulatory environment, and their joint impact on bank risk. We find that new bank boards prefer to be stringently regulated (H1). We also find that these banks, having selected the more stringent regulator, experience less risk than banks that select less stringent regulators (H2).

We further find that board independence has little or no impact on the selection of regulator. We argue that more independent boards would view excess regulation as a cost that they need not bear. As a more independent board is presumed to be a better monitor, the board would view the additional regulation as an unnecessary cost. In opposition to this logic, board independence does not seem to influence the choice of regulatory stringency. In fact, we find that almost no variable has an impact on regulatory choice (Table 3). In essence, it is not clear why banks choose the regulators that they do. While we do find in Hypothesis 2 that variation in risk is

associated with the choice of regulator, nothing else is, including measures that control for bank complexity and initial competitive environment. This is an area that future research can explore.

The findings for Hypothesis 4 suggest an interesting relation between regulation and board independence and their impact on risk taking. Figure 3 illustrates the ordering. While we hypothesize that less independent boards that choose weak regulators will have more risk than any board that chooses a strong regulator, what does this mean? We argue here that a strong regulator is primarily interested in the bank not failing, rather than a risk level that produces profits. That is, more stringent regulators reduce managerial discretion.

When a more independent board selects a weaker regulator, they are opting for greater managerial influence on firm performance, in this case, risk taking. Assuming they themselves are intent on performing well, this combination will generate the flexibility to pursue an optimal (or near-optimal) level of risk. Optimal risk-taking can improve the likelihood of success (John, *et al.*, 2016). Should a more independent board choose a stronger regulator, there is an increase in compliance cost and a loss of discretion by a board that is already able to manage risk appropriately. Should a weaker or less independent board choose a strong regulator, they will experience a lower level of risk, but will have handed over discretion to the regulator, and therefore will experience less than optimum risk. A weaker board that chooses a weaker regulator will experience excessive risk.

We suggest a ranking of risky decisions in this argument: any bank board that selects a stronger regulator will see the lowest level of risk; more independent boards that choose the weaker

regulator will see the ‘ideal’ level of risk; and less independent boards that select the weaker regulator will see the highest level of risk. We do not find this exact relationship. However, in our sample of start-up banks we observe a difference in risk in the weak/weak (W/W) combination. In other words, the other three board-regulator combinations (S/S, S/W, and W/S) all have comparable risk levels in terms of non-performing assets. Thus, less independent boards that chose the weakest regulator had the highest level of risk. New bank boards that chose the stronger regulator had less risk than new bank boards that chose the weaker regulator. However, the more independent boards that chose the weaker regulator, thereby preserving their managerial discretion, had approximately the same risk as those stronger boards that chose the stronger regulator.

Our study provides information about the effectiveness of regulation in mitigating bank risk-taking behavior. Interestingly, and contrary to received theory, the discretion preserved by more independent boards selecting a weaker regulator does not appear to deliver the benefits of optimal risk.

Although the current study examines new banks, their boards, and the boards’ choice of regulator, future research should examine whether our results hold for more established banks, those beyond the three-year ‘seasoning’ period described by DeYoung (1999).

Another interesting avenue for future work is the practice known as ‘charter flipping.’ That is, some banks change regulator after they have become established. If our findings continue to hold once banks are well-established and move away from the liability of newness, a less

stringent regulator may be more preferred. However, there are banks that switch to and from three regulator regimes every year (American Bankers Association, 2009). In some cases, this is the result of a bank merger, but when it is not, the reason is not well understood. We suggest that this is yet another fruitful area for additional research.

Our finding of partial substitution between board independence and regulation supports the studies that consider the regulatory environment of the firm as another component on the menu of governance mechanisms. Our work, in fact, goes further than previous studies in that we address the impact of this substitution on firm risk.

One other federal regulator of financial institutions was the Office of Thrift Supervision (OTS). Its mandate was to supervise savings banks and savings and loans associations. In 1998, the OTS Director stated that goal of the OTS “is to allow thrifts to operate with a wide breadth of freedom from regulatory intrusion.” With hindsight, it is easy to say that the OTS was a lax regulator, as many institutions under its purview failed during the 2007-08 financial crisis (e.g., Washington Mutual and Indy Mac). Because the OTS did not supervise commercial banks, it is not directly relevant to our study. But its existence and regulatory philosophy underscores the varying degrees of severity with which financial institutions were (and are) regulated. Its history is also a cautionary tale; over time, as the financial distress of the financial intermediaries declines, their regulators may become complacent, creating the conditions for another financial crisis.

Finally, it should be noted that the choice of regulator is not limited to just bank boards. Firms can choose on which securities exchange to list (either within or across countries), and in which

state to incorporate. These regulatory choices can substitute for monitoring by the board, can signal legitimacy, can bond the managers to certain standards of performance, and can change institutional contexts by geographic location, all of which interact with the board's composition and influence firm performance (Ferris and Schnatterly, 2010).

Limitations

One limitation is generalizability, as our study examines a single industry. This deliberate choice involves a trade-off with two negative implications to go with our intended positive implication. First, it remains to be seen whether our findings hold in other heavily regulated industries, or in other choices boards make about their regulatory environment. Second, while we do have variance in our regulatory environment, it may be that regulatory intensity does not vary sufficiently across the three bank regulators to produce all theorized relationships. On the other hand, the benefit of using a single industry is that we have controlled for industry-level variables that can impact governance in a way that no previous study on regulation and governance has done. The cost is that our results may be understated.

Another potential limitation involves the performance time horizon of the banks in this study—the first three full calendar years after startup. Although this time horizon is central to the design of our study (the initial three years of bank operations delineates a distinct regulatory environment for the different types of new bank charters), it also has the potential to be limiting because it considers only the early performance of each new bank and may not be fully indicative of future performance. However, a new bank's performance during this critical window often foreshadows its eventual performance during more mature stages (Lamb 2001; Rosenstein 1983).

We cannot observe directly the board's decision process, or their reasons for selecting the regulator(s) that they do. We hypothesize based on theory. Interviewing board members or observing the deliberations of bank founders as they go through this process might resolve these limitations while imposing others. We encourage future research to go deeper into this process.

Additionally, we do not have an exhaustive set of governance variables. Although we do have critical board-related variables, we do not have ownership. As our sample consists of new, private, banks, the lack of data is unavoidable. However, as close industry observers note, major investors in the bank typically dominate boards of new banks. Therefore, the outsiders on the board are likely to represent a controlling interest in the bank. As a result, the impact of ownership has already been taken implicitly into account.

Finally, we focus exclusively on the monitoring role of the board (as monitors or as a signal of legitimacy). Boards have many jobs, including advice giving and a resource dependence role (Hillman, Cannella, and Paetzold, 2000; Hillman and Dalziel, 2003). However, as we investigate boards in the context of a regulated industry, we focus on the monitoring task specifically. It may be that boards that are less independent have made a choice that values the advice role more highly than the monitoring role.

Conclusion

Our study makes several contributions to the literature on the management and governance of organizations. The results of our study suggest that, while regulation and governance do partially

substitute for each other, the impact of governance and regulation on risk is not straightforward. Our contribution goes beyond the understanding that regulation and governance are partial substitutes by including their joint impact on risk. Further, our study context and sample of small, newly established, privately held banking firms, which is atypical of governance studies, advances our understanding of governance in such environments.

We also make a contribution to understanding the importance of considering the regulatory environment in governance research. Although we do not find results consistent with all of our predictions, our findings strongly suggest that regulatory conditions matter. Prior work has only looked at the effect of regulation and governance on performance independently, rather than jointly.

Moreover, we also contribute to a public policy debate. Policies that are based on the assumption that all industries have the same external governance influences will be flawed. Finally, we also contribute to practice, in that boards for new firms need to understand the nature of their regulatory environment, and what that means for their firm's risk.

Notes

1. 'Optimum' within the constraints that remain, e.g., the agency costs that exist at all levels of the firm (Jensen & Meckling, 1976).
2. The magnitude of the differences in regulatory stringency is corroborated by information from the policy statements of these agencies. For example, FDIC banks are required to maintain a ratio of capital to assets of at least 8 percent during their first three years of operations, while similar OCC banks are only required to be 'well capitalized' during the same period, standards that allow these banks to maintain a ratio of capital to assets of as low as 4 percent.
3. Director ownership is often included either as a control variable or a variable capturing the incentives of outside directors to monitor management. In our study, this variable is unavailable, as these are private firms whose director ownership is not disclosed. However, in most startup banks, all directors have some level of ownership stake, and the bank is closely held and owner-managed (Myers and Padget, 2004).

References

- Alexander, J. A., Fennell, M. L., & Halpern, M. T. (1993). Leadership instability in hospitals: The influence of Board-CEO relations and organizational growth and decline. *Administrative Science Quarterly*, 38, 74-99.
- Alexander, K. (2006). Corporate governance and banks: The role of regulation in reducing the principal-agent problem. *Journal of Banking Regulation*, 7, 17-40.
- American Bankers Association. (2009). *Charter Shopping? Not Likely*. November, available at <http://www.aba.com/NR/rdonlyres/71949FE8-BA04-40B8-BC61-AF9F612C679A/63647/CharterchoiceReasons.pdf>.
- Anderson, D., Francis, J. R., & Stokes, D. J. (1993). Auditing, directorships and the demand for monitoring. *Journal of Accounting and Public Policy*, 12, 353-375.
- Baysinger, B., & Zardkooh, A. (1986). Technology, residual claimants and corporate control. *Journal of Law, Economics and Organization*, 2, 339-349.
- Berger, A. N., & DeYoung, R. (1997). Problem loans and cost efficiency in commercial banks. *Journal of Banking and Finance*, 21, 849-870.
- Berger, P. G., Ofek, E., & Yermack, D. L. (1997). Managerial entrenchment and capital structure decisions. *Journal of Finance*, 52, 1411-1438.
- Bhattacharya, S., & Thakor, A. V. (1993). Contemporary banking theory. *Journal of Financial Intermediation*, 3, 2-50.
- Booth, J. R., Cornett, M. M., & Tehranian, H. (2002). Boards of directors, ownership, and regulation. *Journal of Banking and Finance*, 26, 1973-1996.
- Boyd, B. K. (1994). Board control and CEO compensation. *Strategic Management Journal*, 15, 335-344.

- De Carvalho, A. G., & Pennacchi, G. G. (2012). Can a stock exchange improve corporate behavior? Evidence from firms' migration to premium listings in Brazil. *Journal of Corporate Finance*, 18, 883-903.
- Certo, S. T. (2003). Influencing initial public offering investors with prestige: Signaling with board structures. *Academy of Management Review*, 28, 432-446.
- Coffee, J. C. (1999). The future as history: The prospects for global convergence in corporate governance and its implications. *Northwestern University Law Review*, 93, 641-708.
- Coughlin, A., & Schmidt, R. (1985). Executive compensation, management turnover and firm performance: An empirical investigation. *Journal of Accounting and Economics*, 7, 43-66.
- Daily, C. M., & Johnson, J. L. (1997). Sources of CEO power and firm financial performance: A longitudinal assessment. *Journal of Management*, 23, 97-117.
- Dalton, D. R., Daily, C. M., Ellstrand, A. E., & Johnson, J. L. (1998). Meta-analytic reviews of board composition, leadership structure, and financial performance. *Strategic Management Journal*, 19, 269-290.
- Davis, G. F. (2005). New directions in corporate governance. *Annual Review of Sociology*, 31, 143-62.
- Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of the Political Economy*, 93, 1155-1177.
- DeVaughn, M. (2003). *Regulatory protectionisms and learning in the U.S. commercial banking industry: An exploration of survival-enhancing learning in new banks*. PhD Dissertation, University of Wisconsin: Madison, WI.
- DeYoung, R. (1999). Birth, growth, and life or death of newly chartered banks. *Economic Perspectives*, 23, 18-34.

- DeYoung, R. (2000). For how long are newly chartered community bank financially fragile?' *Federal Reserve Bank of Chicago. Working Paper Series WP-00-9.*
- Diamond, D. (1984). Financial intermediation and delegated monitoring. *Review of Economic Studies, 51*, 393–414.
- Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review, 14*, 57-74.
- Fama, E. F. (1980). Agency theory and the theory of the firm. *Journal of Political Economy, 2*, 189-223.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics, 26*, 301-325.
- Ferris, S. P., & Schnatterly, K. (2010). International corporate governance and convergence. In Baker, H. K., & Riddick, L. A. (Eds), *International Finance: A Survey*. Oxford University Press.
- Freeman, J., Carroll, G. R., & Hannan, M. T. (1983). The liability of newness: Age dependence in organizational death rates. *American Sociological Review, 48*, 692-710.
- Gleason, K. C., Madura, J., & Subrahmanyam, V. (2007). Stock exchange governance initiatives: Evidence from the Italian STARS. *Journal of Banking & Finance, 31*, 141-159.
- Guirlinger, M. (1999). Chartering a new bank. *Independent Banker, 24*, 60-64.
- Haggard, K. S., & Howe, J. S. (2007). Are banks opaque?. *International Review of Accounting, Banking and Finance, 4*, 51-72.
- Hanc, G. (1997). *History of the eighties: Lessons for the future: An examination of the banking crises of the 1980s and early 1990s. Volume 1*. Federal Deposit Insurance Corporation: Washington, DC.

- Hillman, A. J., Cannella, A. A. Jr., & Paetzold, R. L. (2000). The resource dependence role of corporate directors: Strategic adaptation of board composition in response to environmental change. *Journal of Management Studies*, 37, 235-255.
- Hillman, A. J., & Dalziel, T. (2003). Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Review*, 28, 383-397.
- Hillman, A. J., Nicholson, G., & Shropshire, C. (2008). Directors' multiple identities, identification, and board monitoring and resource provision. *Organization Science*, 19, 441-456.
- Hillman, A. J., Shropshire, C., Certo, S. T., Dalton, D. R., & Dalton, C. M. (2011). What I like about you: A multilevel study of shareholder discontent with director monitoring. *Organization Science*, 22, 675-687.
- Hyytinen, A., Pajarinen, M., & Rouvinen, P. (2015). Does innovativeness reduce startup survival rates? *Journal of Business Venturing*, 30, 564-581
- Ippolito, P. M. (1990). Bonding and nonbonding signals of product quality. *Journal of Business*, 63, 41-60.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305-360.
- John, K., De Masi, S., & Paci, A. (2016). Corporate governance in banks. *Corporate Governance: An International Review*, 24, 303-321.
- Johnson, S. G., Schnatterly, K., & Hill, A. (2013). Board composition beyond independence: Social capital, human capital and demographics. *Journal of Management*, 39, 232-262.
- Judge, W. Q. Jr and Zeithaml, C. P. (1992). Institutional and strategic choice perspectives on

- board involvement in the strategic decision process. *Academy of Management Journal*, 35, 766-794.
- Kesner, I. F., & Dalton, D. R. (1985). The effect of board composition on CEO Succession and organizational performance. *Quarterly Journal of Business Economics*, 24, 3-20.
- Kim, B., & Prescott, J. E. (2005). Deregulatory forms, variations in the speed of governance adaptation, and firm performance. *Academy of Management Review*, 30, 414-425.
- Laeven, L., & Levine, R. (2009). Bank governance, regulation and risk taking. *Journal of Financial Economics*, 93, 259-275.
- Lamb, E. C. (2001). New charters here to stay. *ABA Banking Journal*, 93, 28-32.
- Mallette, P., & Fowler, K. L. (1992). Effects of board composition and stock ownership on the adoption of poison pills. *Academy of Management Journal*, 35, 1010-1035.
- Meyer, J., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83, 340.
- Millstein, I. (1992). *The Limits of Corporate Power: Existing Constraints on the Exercise of Corporate Discretion*. Macmillan: New York, NY.
- Morck, R. A., Shleifer, A., & Vishny, R. W. (1989). Alternative mechanisms for corporate control. *American Economic Review*, 79, 842-852.
- Myers, F. (2004). Corporate governance: Where do Tenth District community banks stand?. *Financial Industry Perspectives*, Fourth Quarter, 39-56.
- Pathan, S. (2009). Strong boards, CEO power and bank risk taking. *Journal of Banking and Finance*, 33, 1340-1350.
- Posen, H. E., & Chen, J. S. (2013). An advantage of newness: Vicarious learning despite limited absorptive capacity. *Organization Science*, 24, 1701-1716.

- Reger, R. K., Duhaime, I. M., & Stimpert, J. L. (1992). Deregulation, strategic choice, risk and financial performance. *Strategic Management Journal*, 13, 189-204.
- Rosenstein, J. (1983). Comptroller may tighten chartering process. *American Banker*, October 12.
- Sampagnaro, G., Meles, A., & Verdoliva, V. (2015). Monitoring in small business lending: How to observe the unobservable. *Journal of Financial Research*, 38, 495-510.
- Schnatterly, K & Johnson G. S. (2014). Independent boards and the institutional investors that prefer them: Drivers of institutional investor heterogeneity in governance preferences. *Strategic Management Journal*, 35, 1552–1563.
- Srivastav, A., & Hagedorff, J. (2016). Corporate Governance and bank risk-taking. *Corporate Governance: An International Review*, 24, 334-345.
- Stulz, R. (1999). Globalization, corporate finance, and the cost of capital. *Journal of Applied Corporate Finance*, 12, 8–25.
- Thornhill, S., & Amit, R. (2003). Learning about failure: Bankruptcy, firm age, and the resource-based view. *Organization Science*, 14, 497-509.
- Weisbach, M. S. (1988). Outside directors and CEO turnover. *Journal of Financial Economics*, 20, 431-460.
- Westphal, J. D., & Zajac, E. J. (1998). The symbolic management of stockholders: Corporate governance reforms and shareholder reactions. *Administrative Sciences Quarterly*, 43, 127-153.
- Whalen, G.W. (2012). Recent de novo bank failures: how important is supervisor choice? *OCC Economic Working Paper No. 2012-1*, Office of the Comptroller of the Currency, Washington, DC.

Yermack, D. (1996). Higher market valuation of companies with a small board of directors.

Journal of Financial Economics, 40, 185-211.

Zahra, S. A., & Pearce, J. A. (1989). Boards of directors and corporate financial performance: A

review and integrative model. *Journal of Management*, 15, 291-334.

Zajac, E. J., & Westphal, J. D. (1994). The costs and benefits of managerial incentives and

monitoring in large US corporations: When is more not better?. *Strategic Management*

Journal, 15, 121-142.