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Published in:

Journal of Risk and Financial Management

Published: 01/09/2022

Document Version:

Final Published version, also known as Publisher's PDF, Publisher's Final version or Version of Record

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Publication record in CityU Scholars:

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Published version (DOI):

[10.3390/jrfm15090387](https://doi.org/10.3390/jrfm15090387)

Publication details:

Hrazdil, K., Kim, J-B., Tong, L., & Zhang, M. (2022). How Does Market Competition Affect Shareholder Voting? Evidence from Branching Deregulation in the U.S. Banking Market. *Journal of Risk and Financial Management*, 15(9), Article 387. Advance online publication. <https://doi.org/10.3390/jrfm15090387>

Citing this paper

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Article

How Does Market Competition Affect Shareholder Voting? Evidence from Branching Deregulation in the U.S. Banking Market

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Abstract: Exploiting interstate branching deregulations during 1994–2005 as exogenous shocks to banking market competition, we examine the impact of increased market competition on shareholder voting in the U.S. banking industry. Voting is one of the primary mechanisms through which shareholders participate in corporate governance and “voice” their opinions to company management, yet little is known about how external market environments shape shareholder voting behavior. Using a difference-in-differences design, and a sample of 596 banks (17,783 bank-year proposals), we are the first to provide large-sample, systematic evidence that the intensification of market competition leads to an increase in rates of disapproval for management proposals. We further document that the relation between the two is more pronounced among states with higher degrees of deregulation and weaker levels of pre-deregulation competition. Overall, our findings are consistent with the notion that increased competition among U.S. banks induces more shareholders to vote against management proposals.

Keywords: shareholder voting; market competition; bank deregulation; competitive pressure



Citation: Hrazdil, Karel, Jeong-Bon Kim, Lijing Tong, and Min Zhang. 2022. How Does Market Competition Affect Shareholder Voting? Evidence from Branching Deregulation in the U.S. Banking Market. *Journal of Risk and Financial Management* 15: 387. <https://doi.org/10.3390/jrfm15090387>

Academic Editors: Md Safiullah and Noor Houqe

Received: 6 August 2022

Accepted: 25 August 2022

Published: 30 August 2022

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1. Introduction

Over recent decades, there has been a growing emphasis on the role of shareholder involvement in corporate governance. Regulators have taken serious measures to strengthen shareholders' ability to vote on matters of corporate policy, such as granting shareholders the rights to initiate shareholder proposals, to vote on the makeup of the board of directors, to issue securities, to ratify auditors, and to approve stock-based compensation plans (Ferri and Maber 2013; Kimbro and Xu 2016; Barua et al. 2017). Most of the measures focus on enhancing voting-related shareholder rights, because voting is one of the primary mechanisms through which shareholders “voice” their opinions to the management (Ertimur et al. 2015), and through which they effectively influence and enhance corporate governance (Thomas and Cotter 2007). Recent literature indicates the effectiveness of these measures by documenting falling approval rates in shareholders' votes related to CEO compensation, acquisitions, turnover of management, and ratification of new auditors (Cai et al. 2009; Fischer et al. 2009; Becht et al. 2016; Ferri and Oesch 2016).

Despite the strong and growing interest in this topic, previous studies focus mainly on the economic consequences of shareholder voting in the context of internal governance outcomes such as institutional shareholding (Del Guercio et al. 2008) and the presence of say-on-pay clauses (Kimbro and Xu 2016). Surprisingly, however, this line of prior research has paid relatively little attention to what external factors, as opposed to internal factors, drive or determine active shareholders voting. As such, little is known about the role that the external market environment plays in shaping shareholder voting behaviors.¹ Stated

another way, no prior research has focused its attention on the external environment that influences shareholder voting outcomes. To fill this knowledge gap in extant literature, we provide large-sample, systematic evidence on whether and, if so, how banking market competition influences shareholder voting behavior in the banking industry. Considering the well-known conflict of interests between insider managers and outside shareholders, understanding the relation between the market environment and shareholder voting is important; it not only facilitates a firm's interpretation of shareholders voting outcomes but also helps to better predict its response to the voting outcomes.

Economic theory predicts that market competition is negatively correlated with firm profits and shareholder wealth. In a highly concentrated market, where a few firms control a large proportion of outputs, firms tend to earn higher profits than firms in a competitive market, *ceteris paribus* (Bain 1951). However, *ex ante* unclear is whether and, if so, how an exogenous increase in competition in the banking market influences shareholder voting behavior. On the one hand, an exogenous increase in banking market competition lowers the probability that an affected bank becomes profitable, which induces investors to exert greater efforts when exercising their voting rights and/or to demand a change in director personnel to keep the company profitable and avoid the disutility of liquidation (Scharfstein 1988; Schmidt 1997; Allen and Gale 2000). On the other hand, the increased competition may improve corporate governance and ameliorate agency conflicts by decreasing managerial slack; managers will be under increased pressure to exert more effort and improve efficiency in order to retain their jobs (Ross and Scherer 1980; Giroud and Mueller 2010). As such, competition may lower the marginal value of active voting, and as a result, shareholders may make *less* effort in proxy voting or demanding changes in director personnel.

Given the competing forces relating to the effect of competition on shareholder voting behavior, we examine how shareholders "voice" their opinions through proxy voting to the management after the deregulation of interstate bank branching laws. Interstate banking in the United States has been strictly regulated since its inception (Johnson and Rice 2008). Deregulation during the late 1990s and early 2000s eased the restrictions on intrastate branching, allowing out-of-state banks to enter other states without obtaining formal permission. The banking deregulation laws significantly intensified banking competition because more banks were able to compete within a state. We take advantage of this deregulation, which leads to an exogenous increase in state-level banking competition, as a natural experimental setting in which to investigate the effect of external market competition on shareholder voting in the U.S. banking industry.²

Using a sample of management proposals³ of U.S. banks that were subjected to shareholders votes from 1994 to 2007, we study the influence of increased market competition on shareholder voting. After controlling for bank characteristics, proposal types, and year and state fixed effects, we first document that the disapproval rates of management proposals significantly increase following the passage of state deregulation laws, which indicates that shareholders are more willing to express opposing opinions in proxy voting rather than vote in a "one-size-fits-all" manager when market competition intensifies. Second, in further cross-sectional tests, we find the relation between market competition and shareholder voting to be more pronounced in states with higher degrees of deregulation and weaker levels of competition in the pre-period before the deregulation. In addition, we find that the influence of market competition on shareholder voting mainly exists among high-risk banks, suggesting that the change in shareholder voting behavior is probably due to shareholders' concern about the risk and uncertainty of banks' operations. Finally, we examine the dynamic effects of banking deregulation on shareholder voting and find that the influence of intensified market competition on shareholder voting manifests in the year of deregulation only, which is consistent with the notion that the relation between increased competition and shareholder monitoring weakens as market uncertainty and bank risk induced by intensified competition diminish over time.

Our study contributes to the governance and banking regulation literature by providing the first direct evidence on the impact of banking market competition on shareholder voting behavior. Previous literature on market competition and corporate governance commonly argues that market competition, as an external governance instrument, is a substitute for internal governance mechanisms. For instance, [Giroud and Mueller \(2011\)](#) find that firms in competitive industries benefit less from good governance than firms in non-competitive industries; [Randøy and Jenssen \(2004\)](#) show that firms operating in highly competitive industries have fewer outside directors, because these firms are already “monitored” by their competitive market; furthermore, [Allen and Gale’s \(2000\)](#) model predicts that competition acts as a substitute for external governance mechanisms, especially for corporate control. Our study extends this line of research by showing that market competition not only substitutes for internal governance mechanisms, but it also exerts an indirect role of shaping internal corporate governance by fostering shareholders to engage in proxy voting more actively rather than free-ride and vote in a “one-size-fits-all” manner. Our findings have important implications for firm management in that firms should incorporate market conditions into governance considerations to better interpret voting outcomes and thereby facilitate responses to shareholders’ concerns that are more appropriate.

2. Related Literature and Hypothesis Development

2.1. Efficacy of Shareholder Voting

Over the past few decades, security market regulators have increasingly paid attention to enhancing the voting rights of shareholders ([Kimbrow and Xu 2016](#)). However, considering the high approval rate of management proposals and the limited ability of shareholders to change voting outcomes, many stakeholders cast doubt on the efficacy of shareholder voting and ask whether it is necessary and worthwhile to impose mandatory or even voluntary votes on firm issues, because firms must bear non-trivial additional costs of implementing shareholder voting as part of corporate governance ([Armstrong et al. 2013](#)). In the context of such long-standing concerns and heated debates, recent literature has provided ample evidence suggesting that, in most cases, shareholder voting plays an essential role in improving corporate governance.

One stream of literature investigates whether shareholder voting affects the compensation and turnover of management. For example, whereas [Kimbrow and Xu \(2016\)](#) document that rejection votes on executive compensation curtail the growth of CEO compensation, [Armstrong et al. \(2013\)](#) find little evidence that lower shareholder voting support for proposed equity compensation plans leads to a decrease in either the level or composition of future CEO compensation and incentives. Similarly, [Cuñat et al. \(2016\)](#) document that the adoption of the “say-on-pay” rule (a policy that increases shareholder “voice” on executive pay) has a limited effect on pay level or structure; however, the rule still serves as a disciplining device, because it can be seen as a repeated regular vote of confidence in the CEO. Other studies find that the CEO turnover rate is much higher for firms targeted by “just vote no” campaigns than other firms ([Del Guercio et al. 2008](#)); management’s failure to comply with approved shareholder proposals triggers campaigns against boards, which notably cause more subsequent votes against incumbent CEOs and lead more CEOs to resign, and the approval of anti-takeover proposals significantly increases the likelihood of value-enhancing CEOs’ departure owing to the CEO’s disagreement with the board ([Bach and Metzger 2017](#)).

Another stream of literature examines the relation between shareholder voting and auditor ratification. For instance, prior studies find that an increase in the proportion of shareholders not ratifying the auditor leads to subsequent auditor dismissals ([Barua et al. 2017](#)); shareholder voting can increase the efficacy of the audit committee, leading to improvements in audit committee structure, diligence, and financial reporting quality ([Gal-Or et al. 2016](#)), and the increased involvement of shareholders in auditor selection is associated with better audit quality and higher audit fees ([Mayhew and Pike 2004](#); [Dao et al. 2012](#)).

Other studies find that managers are more sensitive to shareholder dissatisfaction signals concerning auditor changes when firms engage a less credible auditor and when the auditor issues a going concern opinion (Sainty et al. 2002).

Finally, shareholder voting can also mitigate agency problems in mergers and acquisitions. For example, Becht et al. (2016) utilize the U.K. setting, where shareholder approval of acquisitions is imposed exogenously, to study whether mandatory shareholder voting could prevent bad acquisitions. The authors document a causal relation between mandatory shareholder voting and improved acquisition performance.

2.2. Determinants of Shareholder Voting Outcomes

To better understand the economic consequences of shareholder voting, it is important to understand the determinants of voting patterns. While prior studies document that shareholder voting plays a crucial role in corporate governance (e.g., Cai et al. 2009; Krishnan and Ye 2005), a recent strand of research provides additional insights into the determinants of shareholder voting by focusing on factors, such as firm-level characteristics, voting recommendations, and management incentives.

With regard to firm characteristics, prior studies find that financial performance, ownership structure, and internal controls significantly influence voting outcomes. For example, Kimbro and Xu (2016) document that higher “say-on-pay” approval rates are associated with better financial performance and returns, higher CEO ownership, lower institutional ownership, lower CEO compensation, lower return volatility, and better accounting quality. Ye et al. (2013) show that the disclosure of material internal control weaknesses results in greater shareholder dissatisfaction in terms of shareholder voting; Yeh (2017) documents that institutional ownership increases the support rate for shareholder proposals, whereas insider ownership reduces support; Aggarwal et al. (2015) discover that institutional investors strategically recall loaned shares to exercise greater voting rights where the recalls are associated with opposition to management or support for shareholder proposals.

With regard to voting recommendations, recent literature shows that recommendations from both proxy advisors and management significantly influence shareholders’ votes, and that proxy advisors’ recommendations are key determinants of voting outcomes (Ertimur et al. 2013). Similarly, Malenko and Shen (2016) show that a negative recommendation from the Institutional Shareholder Service on a say-on-pay proposal leads to a 25 percent reduction in voting support, and Ferri and Oesch (2016) find that management recommendations are associated with a 26 percent increase in voting support, and that the effect is smaller among firms with lower perceived management credibility. Despite the strong impact of recommendations on shareholder voting, Iliev and Lowry (2015) argue that shareholders differ in their responses to proxy advisors’ recommendations by showing evidence that mutual funds that yield higher benefits and incur lower costs of researching the items to be voted upon are less likely to rely on proxy advisors’ recommendations.

Finally, studies investigating financial performance show that there are incentives for management to manipulate voting outcomes in their favor. For example, Bethel and Gillan (2002) suggest that managers influence voting results by strategically classifying proposals as “routine” or “non-routine” and find that routine proposals receive more votes that are favorable to management than non-routine proposals; Payne et al. (1996) postulate that management tends to pressure institutional investors to vote on corporate matters in a manner supportive of management proposals and find that banks tend to vote in favor of management proposals in cases where director interlock (between banks and corporations) and income-related relationships (between the bank and the firm whose shares are voted) exist; Li and Yermack (2016) find that companies are likely to schedule meetings in remote locations when the managers have private and adverse information about future performance and wish to discourage scrutiny by shareholders, analysts, and the media; Li et al. (2018) find that acquiring firms with more severe agency problems and over-confident CEOs tend to bypass shareholder voting by increasing equity issuance and cutting payouts to raise the proportion of cash used in mixed-payment deals.

To the best of our knowledge, however, there is no prior research on whether and how the external market environment shapes shareholder voting outcomes. We therefore address this gap in the literature by examining the effect of market competition on shareholder voting activities.

2.3. The Governance Role of External Market Competition

Product market competition has long been considered an essential corporate governance mechanism (Schmidt 1997; Tian and Twite 2011; Chhaochharia et al. 2016). A growing literature provides ample evidence that market competition impacts corporate policies regarding managerial incentives, financial disclosure quality, corporate innovation, productivity, cash payouts, and corporate social responsibility.

First, the literature provides inconclusive evidence regarding the effects of market competition on managerial incentives. On the one hand, product market competition increases the probability of company insolvency, which has a positive effect on managerial effort (Cuñat and Guadalupe 2009). For instance, when industry competition is greater or increases, firms provide stronger management performance incentives (Karuna 2007) and increase the performance pay sensitivity of compensation schemes, especially for executives (Cuñat and Guadalupe 2005); firms with weak governance experience higher forced CEO turnover, whereas CEOs remaining in good governance firms receive higher incentive pay (Dasgupta et al. 2018). On the other hand, product market competition also reduces the firm's profits, which reduces the incentive for managers to give a high level of effort. Building on this multi-faceted influence of competition on managerial incentives, Schmidt (1997) provides evidence that managerial effort may increase as additional competitors enter the market, but will eventually decrease when competition becomes too intense.

Second, the evidence on how competition affects firms' financial disclosure quality suggests that firms adjust disclosure strategies in response to market competition intensification. For example, Markarian and Santalo (2014) show that high levels of product market competition provide firms with stronger incentives to engage in earnings manipulation, because reporting good earnings is particularly important in boosting market value in more competitive markets. Li (2010) shows that competition from potential new entrants increases disclosure quantity, whereas competition from existing rivals decreases disclosure quantity, and the association is less pronounced for industry leaders, consistent with the notion that industry leaders face less competitive pressure than industry followers.

Finally, other studies find that market competition positively correlates with corporate policies related to innovation, productivity, cash payouts, and corporate social responsibility (Ayyagari et al. 2011; Januszewski et al. 2002; Grullon et al. 2019; Flammer 2015). To the best of our knowledge, there is limited evidence regarding how shareholders respond to market competition intensification. Our study fills this gap in the literature by examining a unique series of exogenous shocks that allow us to test the effect of market competition intensification on shareholder voting behavior in the U.S. banking sector.

2.4. Hypotheses Development

The geographical expansion of banks has been restricted in the U.S., dating back to colonial times (Kroszner and Strahan 2014). It was not until the 1970s that states gradually started to ease their restrictions on intrastate branching. However, interstate banking across states remained prohibited in most states until the passage of the Interstate Banking and Branching Efficiency Act (IBBEA) of 1994, which permitted bank holding companies to commence business in other states without first obtaining permission. Under the IBBEA, states implemented their own interstate banking laws from 1994 to 2005. The deregulation has undoubtedly boosted banking competition, because more new entrants have entered the market and increased the supply of credit in the deregulated states (Black and Strahan 2002; Amore et al. 2013). Since the passing of the IBBEA, researchers have examined how the intensified competition following the banking deregulation has affected bank operations. For example, Jiang et al. (2017) find that bank risk has increased materially

following the deregulation, whereas Irvine and Pontiff (2008) provide evidence that as economy-wide competition among U.S. banks has increased, idiosyncratic return volatility has increased dramatically. Such increased risk reflects high uncertainty about internal operations and the external environment.

We argue that the increased operating risks and uncertainty following the banking deregulation attract increased shareholder attention to management, which may affect the disapproval rates of management proposals regarding governance mechanisms, on which shareholders can vote. Whether shareholders play an active role in proxy voting depends on associated benefits and costs. Previous literature suggests that shareholders have tendencies to free-ride on proxy voting, because it is costly for them to gather voting-related information and deliberate over their voting decisions. For instance, Iliev and Lowry (2015) document that mutual funds with lower benefits and higher costs for voting are more likely to vote in a “one-size-fits-all” manner and less likely to engage in voicing their opinion. Before the deregulation, the competing environment of banks involved less uncertainty and risk, banks could easily make stable profits. In this case, shareholders were more likely to free-ride in proxy voting and vote in a “one-size-fits-all” manner (e.g., by simply casting votes in favor of management proposals), because the costs of free-ride in voting are low and the benefits of active voting are limited when market competition is not severe.

Following the banking deregulation, new entrants enter the market and increase the competition faced by incumbent banks (Black and Strahan 2002; Amore et al. 2013). With more competitors entering the market, incumbent banks suffer from decreased profitability and increased probability of takeover, and their operation becomes more uncertain and challenging. Under this situation, free-ride in voting will no longer be shareholders' preference, which may lead to *higher disapproval* rates in shareholder voting.

On the other hand, managers of the incumbent banks come under pressure to reduce slack after the deregulation. No matter how strongly managers prefer to pursue their strategic objectives (i.e., those related to value-maximizing behavior), competitive pressure may force managers to focus on firm fundamentals because managers need to keep the firm from failing or being taken over (Ross and Scherer 1980). An increase in competition may therefore result in shareholders spending less effort on monitoring management and being less likely to demand change or disagree with management proposals. In this case, we would expect *higher approval* rates in proxy voting following the deregulations.

Given the two-opposing predictions above, the overall effect of competition on voting outcomes is ultimately an empirical question. To provide large-sample, systematic evidence on this unexplored issue, we propose and test our first hypothesis below, stated in alternative form:

Hypothesis 1 (H1). *Intensification of market competition changes approval rates of management proposals, all else being equal.*

Although the passage of the IBBEA opened the door to nation-wide banking and branching, state legislators still had considerable influence over the manner in which the IBBEA was implemented. Specifically, states could erect barriers to entry for out-of-state banks based on four provisions under the IBBEA: (1) the minimum age requirement, (2) an “opt-out” for de novo interstate branching,⁴ (3) an “opt-out” for the acquisition of individual branches, and (4) a statewide deposit cap limitation. First, under the minimum age requirement barrier, each state had the discretion to set a minimum age qualification (e.g., five years) with respect to how long a bank had been in existence before it entered the deregulated state. Second, under the “opt-out” for de novo interstate branching, states could also make entries by out-of-state banks more difficult by prohibiting de novo interstate branching and the acquisition of individual branches. Whereas the IBBEA permitted interstate branching through bank mergers in every state, de novo interstate branching was only permissible if a state chose to “opt-in” for this provision. If states “opted-out”

from de novo interstate branching, out-of-state banks could enter the deregulated state only through bank mergers, as opposed to setting up a new branch by themselves. This restriction effectively increases the difficulty of interstate banking and limits the entering bank's choice of location within the state. Third, if states "opted-out" of the acquisition of individual branches, out-of-state banks could only enter the deregulated state by buying an entire bank, which significantly increases the cost of entry. Finally, states could also set a deposit cap limitation to prevent a bank from entering. For example, if a state sets a deposit cap of 20%, out-of-state banks must make sure that they do not hold more than 20% of their total deposits in that state after their entry. The level of restrictions differed across states, with states such as Michigan, Ohio, Pennsylvania, Virginia, and Maine setting none of the limitations mentioned above, whereas many states took advantage of all four provisions to greatly restrict the entry of out-of-state banks. Appendix A provides detailed information about the state deregulation dates (including multiple deregulation events for some states) and the specific restrictions implemented.

By erecting barriers against out-of-state banks, states could effectively weaken the competition-induced impact of deregulation. Johnson and Rice (2008) demonstrate that states with greater restrictions had fewer interstate branches, indicating that competition was less fierce in states with one or more restrictions. Based on the discussions above, we propose and test our second hypothesis below, stated in alternative form:

Hypothesis 2 (H2). *The relationship between market competition and shareholder voting is more pronounced in states with no additional restriction(s) to entry.*

Hypothesis 2 tests how shareholder behavior varies with the magnitude of increase in market competition after deregulation. However, the level of competition before the deregulation could also affect the relation between banking deregulation and shareholder voting. Specifically, in states where banking competition was relatively weak before the deregulation, the entry of out-of-state banks would have a greater impact in intensifying competition, with a potentially greater impact on shareholding voting behavior. As a result, the influence of banking deregulation on shareholder voting is expected to be magnified in states with weak pre-deregulation competition. To provide systematic evidence on this prediction, we propose and test the following hypothesis, stated in alternative form:

Hypothesis 3 (H3). *The relationship between market competition and shareholder voting is more pronounced in states with weak competition before deregulation.*

3. Sample and Methodology

3.1. Sample Selection

The sample includes shareholder votes on management proposals of U.S. publicly traded banks from 1994 to 2007. We compile the data set from several sources. We first obtain data on shareholder voting from the Institutional Shareholder Service (ISS) database for the period from 2003 (the earliest year available) to 2007, and manually collect the data for the period from 1994 to 2002. We hand-collect bank voting data by searching the full name/ticker symbol of each bank on the Electronic Data Gathering, Analysis, and Retrieval (EDGAR) filing search tool on the SEC website, where the information on voting outcomes is disclosed in Part II (Other Information), Item 4 (Submission of Matters to a Vote of Security Holders) of 10-K and 10-Q filings. We obtain the deregulation date for each state from Rice and Strahan (2010), extract financial statement items from Compustat Bank Annual Files, and extract institutional shareholder data from the Institutional Shareholder Service (ISS) database. The sample period begins in 1994 because this is the first year for which the SEC discloses firm filings, and therefore shareholder voting data are not available prior to 1994. Our sample period ends in 2007 in order to exclude the influence of the financial crisis in 2008. We further limit our sample to a five-year window around deregulation events. After excluding observations with missing data, the final sample

consists of 596 banks and 17,783 bank-year-proposal observations. We conduct the primary analyses based on observations at the bank-year-proposal level because this allows us to control for unobserved effects related to proposal type and mitigates potential problems of correlated omitted variables.

3.2. Model Specifications

To investigate the influence of market competition on shareholder voting behavior, we estimate the following OLS regression:

$$\text{Vote_Against} = \beta_0 + \beta_1 \text{Post} + \beta_2 \text{Size} + \beta_3 \text{Capratio} + \beta_4 \text{Leverage} + \beta_5 \text{ROA} + \beta_6 \text{IO} + \beta_7 \text{Cash} + \beta_8 \text{Loss} + \beta_9 \text{HHI} + \delta + \eta + \lambda + \varepsilon \quad (1)$$

In Equation (1), the dependent variable is *Vote_Against*, which equals one minus the figure given by a proposal's "for" votes divided by the sum of "for", "against", "abstain", and "withhold" votes. In other words, a higher value of *Vote_Against* is indicative of the level of shareholder monitoring. This proxy for shareholder monitoring is based on the methodology of [Brown and Farber \(1951\)](#), where the degree of monitoring increases as the absolute strengths of the competing tendencies approach equality. For instance, proposal A, with 60 percent "for" votes, reveals a higher level of shareholder monitoring than proposal B, with 80 percent "for" votes, because the strengths of supporting and opposing groups are more equal in proposal A.

The key variable of interest is the indicator variable *Post*, which captures the intensification of external market competition after the deregulation. As the exact deregulation dates and voting dates are available, we can accurately define whether a proposal was voted on after the date that a state passed the branching deregulation laws. Specifically, *Post* takes the value of 1 when a vote took place in the post-period after the bank branching deregulation effective date for the state where the bank is headquartered, and 0 otherwise.⁵ The specific state deregulation dates are obtained from [Rice and Strahan \(2010\)](#) and are shown in Appendix A. The passage of state interstate bank branching includes two periods: initial passage period (1994–1997) and evolving passage period (1998–2005). The IBBEA required states to put forward initial passage laws during 1994 to 1997, where states could subsequently pass evoking laws after 1997 to further relieve or enhance the entrance restrictions. In our main analysis, we include bank-year-proposal observations five years around each passage of branching deregulation.

We control for numerous variables that may affect the voting outcome of a proposal ([Iliev and Lowry 2015](#)). Specifically, our control variables include *Size* (the logarithm of bank assets), *Capratio* (risk-adjusted capital ratio), *Leverage* (total liabilities divided by total assets), *ROA* (net income divided by total assets), *IO* (the percentage of shares held by institutions), *Cash* (total cash held and cash due from banks divided by total assets), *Loss* (an indicator variable that equals 1 when net income is negative, and 0 otherwise), and *HHI* (the deposit-weighted average of the Herfindahl–Hirschman Index (*HHI*) at the state-year level). To minimize the effect of outliers, we winsorize all continuous variables at the 1st and 99th percentiles. δ , η , and λ denote proposal-type fixed effects (*ElectDirectors*, *RatifyAuditors*, *CompensationPlans*, *IncreaseShares*, and *AmendCharters*), year fixed effects, and bank fixed effects, respectively. We include these fixed effects to control for unobserved omitted factors that could potentially be correlated with control variables ([Jiang et al. 2016, 2017](#)). All regressions are estimated with robust standard errors clustered by state. Appendix B provides detailed definitions of all variables.

To test our H2 and H3, we construct two additional variables that we interact with *Post*. Specifically, we construct *LowRestrict* and *HighHHI* to identify states with higher degrees of deregulation and lower levels of pre-deregulation competition, respectively. First, *LowRestrict* is a dummy variable indicating low entrance restrictions after deregulation, which equals 1 if a state declined to implement any of the permitted branching restrictions (the minimum age of the target institution, de novo interstate branching, the acquisition of individual branches, and a statewide deposit cap) in the post-period after the deregulation,

and 0 otherwise. Second, *HighHHI* is a dummy variable indicating *low* banking market competition before the deregulation, which takes the value of 1 when the HHI value of a state was above the median HHI in the year prior to the deregulation year, and 0 otherwise. We add *LowRestrict* and *HighHHI* and their interactions with *Post* to Equation (1) to test our hypotheses, H2 and H3, respectively.

4. Empirical Results

4.1. Descriptive Statistics

Table 1 provides descriptive statistics about all variables used in our analyses. As shown in the table, the mean value of *Vote_Against* at the proposal level is 0.0287, indicating that on average, proposals receive 97.13 percent “for” votes, which is consistent with the data in prior studies (Cai et al. 2009). As Dao et al. (2012, p. 154) note based on their interview of senior audit partners and an Advisory Committee on the Auditing Profession (ACAP) member, “everyone expects the auditor to receive 98 or 99 percent approval from the shareholders, so even if you get 90 or 95 percent approval, there are bound to be questions from the audit committee”. Cai et al. (2009, p. 2417) also argue that even though small changes in “for” vote percentages are “unlikely to have a major impact on the outcome . . . [the changes] may help to reduce excess CEO compensation and improve governance”. Bach and Metzger (2017) find that large voting support for a proposal is effective even if management refuses to implement the demanded changes. Consistent with these notions, previous studies find that the variation in “for” vote percentages in shareholder voting significantly influences CEO compensation, auditor rotation, and management turnover (Dao et al. 2008, 2012; Cai et al. 2009).

Table 1. Summary statistics.

Variable	Mean	Median	Standard Deviation	Minimum	Maximum
<i>Vote_Against</i>	0.0287	0.0072	0.0561	0.0000	0.3474
<i>Post</i>	0.6668	1.0000	0.4714	0.0000	1.0000
<i>LowRestrict</i>	0.2359	0.0000	0.4246	0.0000	1.0000
<i>HighHHI</i>	0.3916	0.0000	0.4881	0.0000	1.0000
<i>Size</i>	7.8597	7.5443	1.8505	4.9804	13.263
<i>Capratio</i>	0.1371	0.1297	0.0316	0.0929	0.2640
<i>Leverage</i>	0.9123	0.9151	0.0203	0.8306	0.9489
<i>ROA</i>	0.0107	0.0110	0.0043	−0.0069	0.0214
<i>IO</i>	0.1489	0.0551	0.1936	0.0000	0.7204
<i>Cash</i>	0.0493	0.0414	0.0313	0.0102	0.2028
<i>Loss</i>	0.0187	0.0000	0.1356	0.0000	1.0000
<i>HHI</i>	0.3148	0.2522	0.1972	0.0656	0.8744
<i>ElectDirectors</i>	0.8161	1.0000	0.3874	0.0000	1.0000
<i>RatifyAuditors</i>	0.0691	0.0000	0.2536	0.0000	1.0000
<i>CompensationPlans</i>	0.0407	0.0000	0.1975	0.0000	1.0000
<i>IncreaseShares</i>	0.0206	0.0000	0.1420	0.0000	1.0000
<i>AmendCharters</i>	0.0164	0.0000	0.1271	0.0000	1.0000

This table reports the summary statistics for the sample of 17,783 bank-year-proposal observations for the period 1994–2007. All variables are defined in Appendix B.

The mean value of the banking deregulation indicator (*Post*) is 0.6668, showing that two thirds of the proposals in our sample were voted on after the deregulation. This distribution is reasonable because the sample period starts in 1994 and many state-level deregulations took place during the period from 1995 to 1997. The values of the remaining control variables are comparable with those documented by prior studies. Finally, director-electing proposals represent the largest type of proposals and account for 81.61% of the full sample. Other proposals relating to ratifying auditors, approving/amending compensation plans, increasing shares, and amending charters account for 6.91%, 4.07%, 2.06%, and 1.64% of the full sample, respectively, and the remainder relate to miscellaneous topics.

4.2. Primary Results

In Table 2, we examine whether the intensified competition after banking deregulation is associated with shareholder monitoring. Column 1 shows the baseline results with no controls except fixed effects, whereas Column 2 shows the results with all control variables included in the regression. As shown in Column 2, the coefficient on *Post* is positive and statistically significant (0.003, $t = 2.85$), which indicates that intensified market competition leads to higher level of shareholder disapproval of management proposals. In addition to being statistically significant, the effects are also economically meaningful. For example, compared to periods before the banking deregulation, the percentage of “against” votes increased by 0.30 percentage points after the deregulation. Such an increase explains 5.35% (calculated as $0.0030/0.0561$) of the variation in *Vote_Against*, which is economically meaningful. Of the control variables, only the coefficient on *Cash* is statistically significant, indicating that banks tended to reduce their cash holdings from the pre- to the post-deregulation period.⁶

Table 2. Baseline regressions.

Variables	Vote_Against	
	(1)	(2)
Post	0.003 *** (2.96)	0.003 *** (2.85)
Size		0.000 (0.04)
Capratio		0.138 (1.52)
Leverage		0.111 (0.90)
ROA		0.064 (0.22)
IO		0.019 (1.58)
Cash		−0.167 * (−1.86)
Loss		0.002 (0.32)
HHI		0.004 (0.37)
Constant		−0.021 (0.44)
Proposal type	Yes	Yes
Year FE	Yes	Yes
Bank FE	Yes	Yes
Clustered by State	Yes	Yes
Observations	17,783	17,783
Adjusted R ²	0.445	0.447

This table reports OLS regression estimates for the baseline regressions. Observations are at the firm-year-proposal level for period 1994–2007. All variables are defined in Appendix B. T-stats are reported in parentheses. Significance at the 1% and 10% levels is denoted by *** and *, respectively.

Table 3 presents the results for Hypotheses 2 and 3; specifically, *LowRestrict*Post* in Column 1 tests Hypothesis 2 regarding the influence of low restrictions to entry on shareholder voting; similarly, *HighHHI*Post* in Column 2 tests Hypothesis 3 regarding the effect of pre-deregulation competition levels on the relationship between banking deregulation and shareholder voting. As shown in Column 1, the coefficient on *LowRestrict*Post* is positive and statistically significant (0.016, $t = 2.65$), indicating that the impact of banking deregulation on shareholder voting is more pronounced (relative to the pre-deregulation period) in states that apply no restrictions to interstate branching. This finding is consistent with the prediction that more intense deregulation engenders greater dissenting voting.

Furthermore, the coefficient on *HighHHI*Post* is also positive and highly statistically significant (0.007, $t = 2.13$), consistent with the prediction that the relation between banking deregulation and shareholder voting is more pronounced in states where banking competition was relatively weak prior to the deregulation. Overall, these findings support H2 and H3, respectively.

Table 3. Deregulation degree and pre-deregulation competition level.

Variables	Vote_Against	
	(1)	(2)
Post	0.001 (0.81)	−0.001 (−0.23)
LowRestrict	−0.011 ** (−2.47)	
LowRestrict*Post	0.016 ** (2.65)	
HighHHI		−0.003 (−1.21)
HighHHI*Post		0.007 ** (2.13)
Constant	0.001 (0.01)	−0.016 (−0.11)
Proposal type	Yes	Yes
Year FE	Yes	Yes
Bank FE	Yes	Yes
Clustered by State	Yes	Yes
Observations	17,783	17,783
Adjusted R ²	0.449	0.448

This table reports the empirical results regarding the influence of deregulation degree (column 1) and pre-deregulation competition (column 2) on the relationship between banking deregulation and shareholder voting. Observations are at the firm-year-proposal level for the period 1994–2007. All variables are defined in Appendix B. T-stats are reported in parentheses. Significance at the 5% level is denoted by **.

4.3. Additional Tests

Our main results find that the disapproval rates in management proposals increase after the branching deregulation. Such findings indicate that shareholders engage in proxy voting and express opposing opinions more actively as market competition intensifies. Such changes in shareholder voting behavior are probably due to shareholders' concern about the risk and uncertainty of bank operation after the deregulation. If this is the case, we should find the influence of deregulation on shareholder voting to be more pronounced for high-risk banks.

To test whether bank risk plays a role in shareholders' response to market competition in proxy voting, we conduct an additional test by constructing a variable capturing whether bank risk is relatively high (*Risk_High*) and adding its interaction with *Post* to Equation (1). We define *Risk_High* based on two measures of bank risk (*Total_Risk* and *Asset_Risk*). Specifically, *Risk_High* is a dummy variable that takes the value of 1 if the average of bank risk before the deregulation (*Risk_Pre*) is above the sample median and equals 0 otherwise. *Risk_Pre* equals the average of *Total_Risk* (*Asset_Risk*) from year $t-3$ to year $t-1$ from the deregulation year. *Total_Risk* and *Asset_Risk* are constructed following Jiang et al. (2017). *Total_Risk* is log (standard deviation of annualized daily stock returns on a bank's stock over the year *100), *Asset_Risk* is log (standard deviation of annualized daily stock returns on a bank's stock over the year *100) divided by $(1 - \text{book value of equity} / \text{total assets})$.

Table 4 presents the results of how bank risk affects the relation between market competition and shareholder voting. Columns (1) and (2) show the results using the bank risk measure constructed based on *Total_Risk* and *Asset_Risk*, respectively. As we can see in the table, the coefficients on the interaction terms *Risk_High*Post* are significantly positive in

both columns (1) and (2), indicating that the influence of market competition intensification on shareholder voting is more pronounced in high-risk banks.

Table 4. The role of bank risk on shareholders’ response to market competition.

Variables	Vote_Against	Vote_Against
	(1)	(2)
Post	−0.001 (−0.26)	−0.001 (−0.22)
Risk_High	−0.002 (−0.62)	−0.002 (−0.74)
Risk_High*Post	0.012 * (1.76)	0.012 ** (2.04)
Constant	0.429 (1.14)	0.415 (1.12)
Controls	Yes	Yes
Proposal type	Yes	Yes
Year FE	Yes	Yes
Bank FE	Yes	Yes
Clustered by State	Yes	Yes
Observations	4945	4945
Adjusted R ²	0.302	0.302

This table reports the empirical results regarding how bank risk (Total_Risk in column 1 and Asset_Risk in column 2, respectively) affects the relationship between banking deregulation and shareholder voting. Observations are at the firm-year-proposal level for the period 1994–2007. T-stats are reported in parentheses. Significance at the 5% and 10% levels is denoted by ** and *, respectively.

As bank deregulation induces greater competitive pressure on banks, one may expect that bank managers would put forward more proposals in response to intensified competition. We empirically test the influence of bank deregulation on the number of proposals voted on by regressing *Post* on *Total_Proposal*. *Total_Proposal* equals the logarithm of the number of proposals voted on in year *t*. In this test, we use a sample consisting of bank-year observations during our sample period. The results are presented in Table 5, where the number of proposals voted on significantly increases after the banking deregulation, and such association is more pronounced in states with higher levels of banking deregulation.

Table 5. Bank branching deregulation and the number of proposals voted on.

Variables	Total_Proposal	Total_Proposal	Total_Proposal
	(1) Baseline Regression	(2) Deregulation Intensity	(3) Pre-Deregulation Competition
Post	0.048 ** (2.50)	0.037 * (1.89)	0.044 (1.08)
LowRestrict		−0.122 *** (−3.09)	
LowRestrict*Post		0.140 *** (3.02)	
HighHHI			0.024 (0.62)
HighHHI*Post			0.008 (0.16)
Constant	1.973 (1.11)	2.069 (1.17)	1.953 (1.09)
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes
Clustered by state	Yes	Yes	Yes
Observations	2465	2465	2465
Adjusted R ²	0.649	0.649	0.648

This table reports the influence of bank deregulation on the number of proposals voted on. Observations are at the bank-year level for period 1994–2007. T-stats are reported in parentheses. Significance at the 1%, 5%, and 10% levels are denoted by ***, **, and *, respectively.

4.4. Robustness Tests

To ensure the reliability of our findings, we conduct several robustness tests. First, we rerun our models using an alternative research sample that includes both management proposals and shareholder proposals. There are two types of proposals voted on in firms’ annual meetings, namely, management proposals (sponsored by management) and shareholder proposals (sponsored by shareholders). In our main tests, we only include management proposals in the sample for two reasons. First, we do not use shareholder proposals as our sample because shareholder proposals are scarce during our early sample period, and if we only focus on shareholder proposals, we are unable to implement the DID test because we do not have sufficient pre-event observations. Second, the disapproval rates of shareholder proposals are much higher than those of management proposals. Since the number of shareholder proposals increases over the post-event period, our results that disapproval rates become higher may be driven by the increase in shareholder proposals later in the sample period if we also include shareholder proposals in our main research sample.

Still, we consider it necessary to conduct a robustness test using a sample that includes both management proposals and shareholder proposals. The results are shown in Table 6, and indicate that our main results for H1 and H2 still hold after we include shareholder-sponsored proposals in the sample.

Table 6. Sample including shareholder-sponsored proposals.

Variables	Vote_Against	Vote_Against	Vote_Against
	(1) Baseline Regression	(2) Deregulation Intensity	(3) Pre-Deregulation Competition
Post	0.003 * (1.75)	−0.000 (−0.17)	−0.001 (−0.39)
LowRestrict		−0.014 *** (−2.79)	
LowRestrict*Post		0.022 *** (2.98)	
HighHHI			−0.006 (−1.43)
HighHHI*Post			0.008 (1.42)
Constant	0.171 (0.67)	0.197 (0.77)	0.173 (0.67)
Controls	Yes	Yes	Yes
Proposal type	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes
Clustered by state	Yes	Yes	Yes
Observations	18,479	18,479	18,479
Adjusted R ²	0.478	0.480	0.478

This table reports the results using an alternative sample that includes both management proposals and shareholder proposals. Observations are at the bank-year-proposal level for period 1994–2007. T-stats are reported in parentheses. Significance at the 1% and 10% levels is denoted by *** and *, respectively.

Second, we restrict the sample period to a three-year event window around the deregulation events.⁷ The results of testing for our three hypotheses are presented in columns (1), (2), and (3) of Table 7, respectively, and show that the influence of banking deregulation on shareholder monitoring remains both statistically and economically significant in this alternative specification.

Table 7. Sample with a 3-year event window.

Variables	Vote_Against (1)	Vote_Against (2)	Vote_Against (3)
Post	0.003 ** (2.28)	0.002 (1.28)	−0.001 (−0.54)
LowRestrict*Post		0.008 ** (2.30)	
HighHHI*Post			0.008 *** (3.54)
LowRestrict		−0.004 * (−1.82)	
HighHHI			−0.002 (−0.67)
Constant	−0.022 (−0.15)	−0.010 (−0.06)	−0.025 (−0.17)
Controls	Yes	Yes	Yes
Proposal type	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes
Cluster by State	Yes	Yes	Yes
Adjusted R ²	0.515	0.515	0.516
Observations	11,771	11,771	11,771

This table reports regression results using a restricted sample based on a three-year event window around the deregulation events. Observations are at the bank-year-proposal level for the period 1994–2007. All variables are defined in Appendix B. Significance at the 1%, 5%, and 10% levels is denoted by ***, **, and *, respectively.

Third, based on the notion that banking deregulation may impact shareholder voting by increasing uncertainty arising from increased competition in the banking market, the effect of interstate banking deregulation on shareholder voting should be greatest immediately after the passage of deregulation laws, and may weaken over time after the deregulation as the uncertainty following deregulation gradually diminishes over time. Accordingly, we examine how the rates of voting against (dissenting vote) or the disapproval rate evolve after the deregulation was enacted. Specifically, in Table 8, we test the dynamic effects of increased competition associated with branching deregulation using a specification following Amore et al. (2013). We construct a dynamic DID model that includes a set of year indicators that lag and lead around the year of passage of deregulation (denoted as *Post0*). To test the influence of banking deregulation on *Vote_Against* over periods, we replace *Post* in Equation (1) with a set of indicator variables, that is, two lag years before deregulation (*Pre2*, *Pre1*), year of deregulation (*Post0*), and four lead years (*Post1*, *Post2*, *Post3*, and *Post4*) after deregulation. We also consider *Post2+* (*Post3+*) denoting two (three) years and onward after deregulation. Note here that *PreN* (*PostN*) has the value of one N year before (after) deregulation and zero otherwise. *Post2+* (*Post3+*) has the value of one for observations in the second (third) year and onward following a deregulation until the end of the window, and zero otherwise.

As shown in Table 8, we use three different combinations of the lead indicator in the post-deregulation period. For example, in column (1) of Table 8, we replace *Post* in model 1 with four one-year increment year indicators (*Pre2*, *Pre1*, *Post0*, and *Post1*) and the indicator *Post2+*. Table 8 shows that estimates for *Post0* yield the only positive and statistically significant coefficients in any of the three models. This finding suggests that there was no systematic relation between market competition and shareholder voting behavior prior to the banking deregulation, indicating no violation of parallel trend assumption in the pre-period before deregulation. In short, the results of our dynamic analysis reveal that the influence of intensified market competition on shareholder monitoring manifests largely in the year of the deregulation.⁸

Table 8. Year dynamic effects.

Variables	Vote_Against (1)	Vote_Against (2)	Vote_Against (3)
Pre2	−0.005 (−1.31)	−0.005 (−1.33)	−0.005 (−1.33)
Pre1	0.001 (0.25)	0.001 (0.30)	0.001 (0.30)
Post0	0.005 ** (2.02)	0.004 ** (2.03)	0.004 ** (2.03)
Post1	−0.000 (−0.11)	−0.000 (−0.02)	−0.000 (−0.03)
Post2		−0.002 (−0.84)	−0.002 (−0.84)
Post3			0.002 (0.72)
Post2+	0.000 (0.94)		
Post3+		0.003 (0.98)	
Post4			0.003 (1.22)
Constant	−0.011 (−0.07)	−0.008 (−0.05)	−0.007 (−0.05)
Controls	Yes	Yes	Yes
Proposal type	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes
Cluster by State	Yes	Yes	Yes
Observations	17,783	17,783	17,783
Adjusted R ²	0.448	0.448	0.448

This table reports regression results using a dynamic specification. Coefficients are relative to the period of regulatory change (denoted by zero). Observations are at the bank-year-proposal level for the period 1994–2007. Significance at the 5% level is denoted by **.

Our main analysis includes bank-year-proposal observations five years around each passage of branching deregulation, which includes both the initial passage and the evolving passages. Therefore, for banks headquartered in states that experienced multiple passages of branching deregulation, the bank-year-proposal observations may appear multiple times in our research sample (i.e., sometimes as pre-event observations and sometimes as post-event observations). As the fourth robustness test, we re-estimate the regressions using a sample that only includes the first instance of deregulation legislation in each state. The initially passed laws are supposed to have the most significant effect, as states relaxed interstate branching for the first time, while the following passages only adjust the entrance restrictions of branching. This restriction reduces our sample to 12,689 observations. Table 6 displays the results using this reduced sample, which allows us to test our three hypotheses, H1, H2, and H3, in columns (1), (2), and (3), respectively. As shown in Table 9, we find that the coefficients on *Post*, *LowRestrict*Post*, and *HighHHI*Post* are all positive and significant at the conventional levels, which is consistent with the predictions in hypotheses H1, H2, and H3, respectively.

Fifth, another potential concern about the reliability of our results is that there may be some omitted variables coinciding with the introduction of deregulation that drive our results. If this is the case, the changes in shareholder monitoring that we attribute to banking deregulation may reflect a mere association rather than a causal relation. Our baseline identification strategy employs exogenous shocks that affect different states at different times, making it unlikely that an omitted variable would coincide with deregulatory events in different states in a high proportion of instances. Therefore, our strategy of using staggered banking deregulation across states mitigates the omitted variables concern.

Table 9. Sample with only first instance of deregulation for each state.

Variables	Vote_Against		
	(1)	(2)	(3)
Post	0.004 * (1.91)	-0.002 (-0.97)	0.000 (0.01)
LowRestrict*Post		0.017 ** (2.65)	
HighHHI*Post			0.011 ** (2.11)
LowRestrict		-0.010 (-0.44)	
HighHHI			0.060 ** (2.53)
Constant	-0.151 (-0.88)	-0.124 (-0.71)	-0.143 (-0.81)
Controls	Yes	Yes	Yes
Proposal type	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes
Cluster by State	Yes	Yes	Yes
Adjusted R ²	0.457	0.459	0.458
Observations	12,689	12,689	12,689

This table reports the baseline regression results for a sample of firms with only first deregulation in every state. Observations are at the bank-year-proposal level from 1994 to 2007. All variables are defined in Appendix B. Significance at the 5% and 10% levels is denoted by ** and *, respectively.

Nevertheless, we further address this potential concern by conducting a placebo test. Specifically, we disrupt the proper assignment of deregulation dates to states by randomly assigning a deregulation date to each state (without replacement). After the disruption, the distribution of deregulation dates remains the same as in our baseline regressions. If an unobservable shock drives our results, we would therefore expect to obtain statistically significant results even after we randomize the deregulation dates across the states. However, if no such shock exists, our random assignments of deregulatory dates to states should not yield statistically significant results.

We conduct random assignments of deregulation dates across states 1000 times and rerun our baseline regression. Figure 1 shows the distribution of the 1000 estimated t-values on *Post*. As shown in Figure 1, most t-values are distributed around 0, indicating no statistical significance. As such, our main results are unlikely to be driven by any potential endogeneity associated with omitted variables coinciding with banking deregulation.

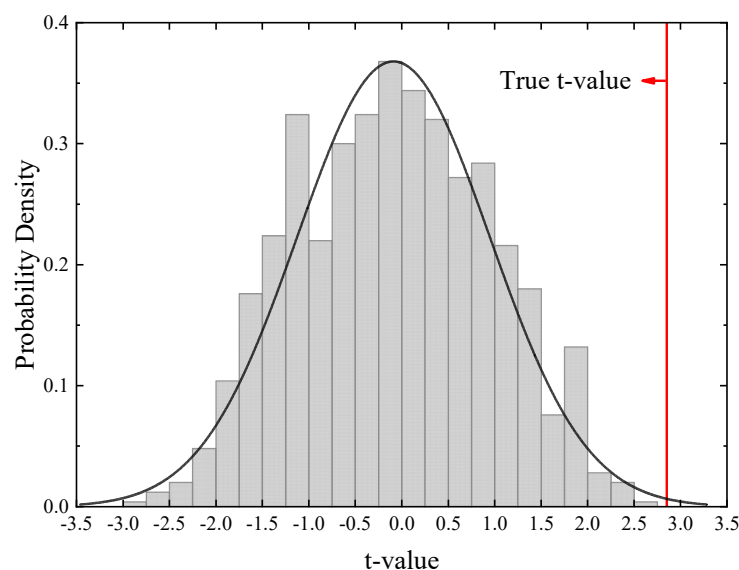


Figure 1. Distribution of t-values in placebo tests.

Sixth, we partition our total sample into six subsamples based on proposal type, and then estimate our baseline regression in Equation (1) for each subsample. Table 10 reports the regression result for each of the six subsamples. As shown in Table 10, because nearly 82 of our sample proposals relate to director elections, it is not surprising that the impact of competition on shareholder voting behavior is most pronounced for this type of proposal (column 1). We further find that intensified competition has a significant impact on voting behavior related to auditor ratification (about 7% of our sample proposal as in column 3). We find, however, that the increased competition associated with branching deregulation is not significantly associated with voting behaviors related to compensation plan (about 4% as in column 2), amending chapters (less than 1% as in column 4), or increasing shares (less than 1% as in column 5). These insignificant results may be due to the small sample size in columns (2), (4), and (5).

Table 10. Sub-samples based on proposal type.

Variables	Vote_Against				
	(1) Elect Directors	(2) Compensation Plans	(3) Ratify Auditors	(4) Amend Charters	(5) Increase Shares
Post	0.004 *** (2.77)	−0.008 (−0.76)	0.005 * (1.85)	−0.005 (−0.77)	0.008 (0.79)
Constant	−0.056 (−0.36)	0.026 (0.03)	−0.229 (−1.07)	−3.856 (−1.50)	−0.369 (−0.22)
Controls	Yes	Yes	Yes	Yes	Yes
Proposal type	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes
Cluster by State	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.425	0.468	0.505	0.609	0.503
Observations	14,513	723	1228	292	366

This table reports the baseline regression results for sub-samples based on proposal types. Observations are at the bank-year-proposal level for the period 1994–2007. All variables are defined in Appendix B. Significance at the 1% and 10% levels is denoted by *** and *, respectively.

Finally, we re-estimate the models using an alternative sample consisting of bank-year observations, in contrast to the main analyses in our study which are based on a sample of bank-year-proposal observations. In this robustness check, we conduct tests at the bank level and calculate the average value of *Vote_Against* across all votes for the bank and year as the proxy for shareholder voting. Though not tabulated for brevity, we find that the average percentage of “against” votes significantly increases after banking deregulation. Untabulated results further show that the influence of intensified competition on dissenting voting is more pronounced in states with higher levels of banking deregulation; however, we find that the coefficient of *HighHHI*Post* is not statistically significant.

5. Conclusions

Although the governance role of shareholder voting has received much attention from academics and policymakers, evidence on the impact of market environment on shareholder voting behavior is scarce. We exploit the passage of interstate banking deregulation in the U.S. as a series of exogenous shocks to market competition in the banking industry to examine its impact on shareholder voting behavior.

Our main results are consistent with all of our hypotheses and show that the intensified banking market competition leads to an increase in the percentage of “against” votes of management proposals. Furthermore, we find that the effect is more pronounced in states with more intense deregulation and those with weaker competition prior to the deregulation. These findings indicate that the intensification of external market competition increases shareholders’ cost of free-ride in proxy voting and promotes shareholders to vote

in a more active manner rather than in a “one-size-fits-all” manner. Our study contributes to the literature by shedding light on the real effects of banking competition and the determinants of shareholder voting. Our findings also have practical implications in that they show that external market environment should be taken into consideration when interpreting and responding to shareholder voting outcomes.

We should point out, however, that our study does not provide evidence on whether the changes in shareholder voting behavior after the intensification of market competition are beneficial to the firm. On the one hand, a higher level of disapproval rates in proxy voting could reflect greater shareholder involvement in corporate governance, which may enhance firm value. On the other hand, too much disapproval opinion from investors may result in ineffectiveness in management decision making and bring extra costs to the bank. Although examining market reactions to the disclosure of voting outcomes may provide some insights, it is difficult to identify the element of the market reaction that is attributable to the shareholders rather than to the proposal itself. Therefore, we leave the nature of market reactions to shareholder voting as an open question for future research. Further, as the focus of our study is on a single industry and single territory, this provides ample opportunities for future research to analyze other industries and territories to establish the generalizability of the main findings.

Author Contributions: Conceptualization, M.Z. and L.T.; methodology, L.T.; software, M.Z.; formal analysis, L.T.; investigation, K.H., J.-B.K. and M.Z.; resources, K.H. and L.T.; data curation, L.T.; writing—original draft preparation, M.Z.; writing—review and editing, J.-B.K.; visualization, L.T.; supervision, M.Z.; project administration, M.Z.; funding acquisition, K.H. and M.Z. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by the Social Sciences and Humanities Research Council of Canada, grant number R640084, and by National Natural Science Foundation of China, grant number 71902009.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data are available from the corresponding author upon reasonable request.

Acknowledgments: We thank Douglas Cumming, Brian Lucey, Haluk Unal, David Levi-Faur, Ray Zhang, and Geert Bekaert for valuable comments and suggestions. Any errors are ours.

Conflicts of Interest: The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results.

Appendix A

The following is a list of the effective dates of interstate branching deregulation and the restrictions set by each state. Restriction (1) denotes the minimum age of the institution for acquisition; Restriction (2) denotes allowance of de novo interstate branching; Restriction (3) denotes allowance of interstate branching by acquisition of a single branch or portions of an institution; Restriction (4) denotes statewide deposit cap on branch acquisitions. Source: [Rice and Strahan \(2010\)](#).

Table A1. State Interstate Bank Branching Laws: 1994–2005.

State	Effective Date	Restriction (1)	Restriction (2)	Restriction (3)	Restriction (4)
Alabama	31 May 1997	5 years	No	No	30%
Alaska	1 January 1994	3 years	No	Yes	50%
Arizona	31 August 2001	5 years	No	Yes	30%
Arizona	1 September 1996	5 years	No	No	30%
Arkansas	1 June 1997	5 years	No	No	25%

Table A1. *Cont.*

State	Effective Date	Restriction (1)	Restriction (2)	Restriction (3)	Restriction (4)
California	28 September 1995	5 years	No	No	30%
Colorado	1 June 1997	5 years	No	No	25%
Connecticut	27 June 1995	5 years	Yes	Yes	30%
Delaware	29 September 1995	5 years	No	No	30%
DC	13 June 1996	No	Yes	Yes	30%
Florida	1 June 1997	3 years	No	No	30%
Georgia	10 May 2002	3 years	No	No	30%
Georgia	1 June 1997	5 years	No	No	30%
Hawaii	1 January 2001	No	Yes	Yes	30%
Hawaii	1 June 1997	5 years	No	No	30%
Idaho	29 September 1995	5 years	No	No	None
Illinois	20 August 2004	No	Yes	Yes	30%
Illinois	1 June 1997	5 years	No	No	30%
Indiana	1 July 1998	5 years	Yes	Yes	30%
Indiana	1 June 1997	No	Yes	Yes	30%
Iowa	4 April 1996	5 years	No	No	15%
Kansas	29 September 1995	5 years	No	No	15%
Kentucky	22 March 2004	No	No	No	15%
Kentucky	17 March 2000	No	No	No	15%
Kentucky	1 June 1997	5 years	No	No	15%
Louisiana	1 June 1997	5 years	No	No	30%
Maine	1 January 1997	No	Yes	Yes	30%
Maryland	29 September 1995	No	Yes	Yes	30%
Massachusetts	20 August 1996	3 years	Yes	Yes	30%
Michigan	29 November 1995	No	Yes	Yes	None
Minnesota	1 June 1997	5 years	No	No	30%
Mississippi	1 June 1997	5 years	No	No	25%
Missouri	29 September 1995	5 years	No	No	13%
Montana	1 October 2001	5 years	No	No	22%
Montana	29 September 1995	N/A	N/A	N/A	18%–22% *
Nebraska	31 May 1997	5 years	No	No	14%
Nevada	29 September 1995	5 years	Limited	Limited	30%
New Hampshire	1 January 2002	No	Yes	Yes	30%
New Hampshire	1 August 2000	5 years	Yes	Yes	30%
New Hampshire	1 June 1997	5 years	No	No	20%
New Jersey	17 April 1996	No	No	Yes	30%
New Mexico	1 June 1996	5 years	No	No	40%
New York	1 June 1997	5 years	No	Yes	30%
North Carolina	1 July 1995	No	Yes	Yes	30%
North Dakota	1 August 2003	No	Yes	Yes	25%
North Dakota	31 May 1997	No	No	No	25%
Ohio	21 May 1997	No	Yes	Yes	30%
Oklahoma	17 May 2000	No	Yes	Yes	20%
Oklahoma	31 May 1997	5 years	No	No	15%
Oregon	1 July 1997	3 years	No	No	30%
Pennsylvania	6 July 1995	No	Yes	Yes	30%
Rhode Island	20 June 1995	No	Yes	Yes	30%
South Carolina	1 July 1996	5 years	No	No	30%
South Dakota	9 March 1996	5 years	No	No	30%
Tennessee	17 March 2003	3 years	Yes	Yes	30%
Tennessee	1 July 2001	5 years	Yes	Yes	30%
Tennessee	1 May 1998	5 years	No	Yes	30%
Tennessee	1 June 1997	5 years	No	No	30%
Texas	1 September 1999	No	Yes	Yes	20%
Texas	28 August 1995	N/A	N/A	N/A	20%
Utah	30 April 2001	5 years	Yes	Yes	30%
Utah	1 June 1995	5 years	No	Yes	30%
Vermont	1 January 2001	No	Yes	Yes	30%
Vermont	30 May 1996	5 years	No	Yes	30%
Virginia	29 September 1995	No	Yes	Yes	30%
Washington	9 May 2005	5 years	Yes	Yes	30%
Washington	5 June 1996	5 years	No	No	30%
West Virginia	31 May 1997	No	Yes	Yes	25%
Wisconsin	1 May 1996	5 years	No	No	30%
Wyoming	31 May 1997	3 years	No	No	30%

* Denotes increases 1% per year from 18% to 22%.

Appendix B

Table A2. Variable definitions.

Variables	Definition
Dependent variable	
Vote_Against	One minus the figure given by a proposal's "for" votes divided by the sum of "for", "against", "abstain", and "withhold" votes.
Independent variables	
Post	A dummy variable that takes the value of 1 when a proposal was voted on after the deregulation effective date for the state where the bank is located, and 0 otherwise.
LowRestrict	A dummy variable indicating low entrance restrictions after the deregulation, which equals 1 if a state declined to implement any of the permitted branching restrictions (the minimum age of the target institution, de novo interstate branching, the acquisition of individual branches, and a statewide deposit cap) after the deregulation, and 0 otherwise.
HighHHI	A dummy variable indicating low banking competition before the deregulation, which takes the value of 1 when the HHI value of a state is above the median HHI value in the year prior to the deregulation year, and 0 otherwise.
Control variables	
Size	The logarithm of the bank's total assets.
Capratio	Combined risk-adjusted capital ratio, defined as total capital (Tier1 + Tier 2) divided by risk-weighted assets.
Leverage	Total liabilities divided by total assets.
ROA	Net income divided by total assets.
IO	The percentage of shares held by institutions.
Cash	Cash holdings, defined as total cash held and cash due from banks divided by total assets.
Loss	An indicator variable that equals 1 when the net income is negative, and 0 otherwise.
HHI	The deposit-weighted average of the HHI indexes at the state-year level.
Proposal type dummies	
ElectDirectors	An indicator variable that takes the value of 1 when a proposal is about electing directors, and 0 otherwise.
RatifyAuditors	An indicator variable that takes the value of 1 when a proposal is about ratifying an auditor, and 0 otherwise.
CompensationPlans	An indicator variable that takes the value of 1 when a proposal is about approving or amending compensation plans (e.g., salary plans, stock option plans, incentive plans, etc.), and 0 otherwise.
IncreaseShares	An indicator variable that takes the value of 1 when a proposal is about increasing shares (e.g., authorized common stock, preferred stock, etc.), and 0 otherwise.
AmendCharters	An indicator variable that takes the value of 1 when a proposal is about amending corporate articles, bylaws, charters, or regulations, and 0 otherwise.

Notes

- ¹ For example, there is little direct evidence on whether and how shareholders react to changes in a competitive landscape. Existing studies mainly analyze investors' reactions to competition indirectly, by analyzing managerial incentives, managerial compensation contracts, or the effect of product-market competition on managerial incentives (e.g., Cuñat and Guadalupe 2009; Cuñat et al. 2016).
- ² As shareholders' voice is likely to be endogenous with different firm and market characteristics, a statistically significant correlation between market competition and shareholder voice may be spurious and reveal little about the causal effect of competition on shareholder reaction. Exploiting changes in interstate banking deregulation as exogenous shocks to competition in the U.S. banking industry alleviates these endogeneity concerns.
- ³ We limit our sample to management proposals because shareholder proposals are extremely sparse during our sample period, especially during the pre-deregulation period.
- ⁴ In contrast to a bank that has been acquired or merged from an existing institution, a 'de novo' bank entry is chartering a subsidiary in a desired state.
- ⁵ In addition, we delete banks that experienced the branching deregulation before 1995, because our sample period begins in 1994, and we need at least one previous year data to implement the DID regression.
- ⁶ The coefficients on the remaining control variables are mostly insignificant and different from Iliev and Lowry (2015), who document that firm size and profitability are negatively associated with Vote_Against. This difference is possibly due to our model including bank fixed effects.
- ⁷ The three-year window refers to [year − 1, year + 1], where −1 refers to one year before the deregulation and +1 to one year after the deregulation.
- ⁸ The non-significant coefficients on *Pre2* and *Pre1*, together with the statistically significant coefficient on *Post0*, can be viewed as an indication that the parallel trend assumption in the pre-period before deregulation is not violated.

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