The Impact of Stakeholder Orientation on Bank Risk-Taking: Evidence from Natural Experiment

Woon Sau Leung[a†], Wei Song[b], and Jie Chen[a]

This version: 30 May 2016

[a] Cardiff Business School, Cardiff University, Cardiff CF10 3EU, United Kingdom.

[†] Corresponding author. Email: LeungWS1@cardiff.ac.uk. Tel: +44 (0)29 2087 6736.

[b] School of Management, Swansea University, Swansea SA2 8PP, United Kingdom.

We thank Wenxuan Hou, Michael Adams, Lynn Hodgkinson, Daniel Hemmings, Xicheng Liu, Klaus Schaeck, Martin Walker, Hans Degryse, Yiwei Fang, Zhongyan Zhu (discussant), Jonathan James, Iftekhar Hasan, Ioannis Ioannou, Jens Hagendorff, Kent Matthews, Kul Luintel, Mike Peel, Marc Goergen, Khelifa Mazouz, Kevin Evans, and Phil Murphy, as well as participants at the IFABS 2016 Barcelona Conference, 2016 Midwest Finance Association Annual Meeting, the 2016 Annual Welsh Accounting and Finance Colloquium, the finance workshop at Cardiff Business School, and the economic seminar at Swansea University for their useful discussions and comments. All remaining errors are our own.

This paper is scheduled to be presented at the 2016 European Finance Association Annual Meeting, the 2016 European Financial Management Association Annual Meeting, the 2016 Financial Management Annual Meeting, and the 2016 Financial Management European Meeting.

The Impact of Stakeholder Orientation on Bank Risk-Taking: Evidence from Natural Experiment

Abstract

Using the staggered US state enactment of constituency statutes, which permit directors and managers to consider stakeholder interests, we identify a negative causal impact of stakeholder orientation on bank risk-taking. This relationship is robust to reverse causality and the omitted variables concern relating to coincidental banking policy changes and unobserved local economic conditions. Further tests show that stakeholder orientation enhances the quality of bank risk-taking as shown by better loan quality, lower tail risk and improved risk-return tradeoff. Overall, our findings support the increasing calls to place greater emphasis on stakeholder interests in the current bank regulatory and governance reforms.

Keywords: Bank risk-taking; Stakeholder orientation; Bank risk-return tradeoff; Constituency statutes; Difference-in-differences.

JEL Classification: G01; G21; G28; G32; M14.

1. Introduction

The 2007-09 financial crisis has cast doubt on the adequacy of prevailing bank governance and regulatory frameworks, which focus primarily on shareholder value maximization (Senior Supervisors Group, 2009). Recent studies document that banks with managers whose interests are better aligned with those of shareholders and with more shareholder-friendly boards had no better performance but incurred greater losses during the crisis (Fahlenbrach and Stulz, 2011; Beltratti and Stulz, 2012), suggesting that the traditional shareholder primacy view in bank governance may conflict with financial stability considerations. To mitigate this conflict, practitioners and scholars have urged a more stakeholder-oriented approach to bank management. For instance, the founding chairman of the World Economic Forum, Mr. Klaus Schwab, notes that "The current crisis should be a warning shot for us to fundamentally rethink…the regulatory mechanisms that underpin our economy [and that] we need to embrace [the] stakeholder principle…at a national and global level as well." (*The Wall Street Journal*, 2010). In a Federal Reserve report, Macey and O'Hara (2003) argue that "…directors and officers of banks should be charged with a heightened duty to ensure the safety and soundness of these enterprises. Their duties should not run exclusively to shareholders." Further, as discussed by Laeven (2013), the proposals for current bank regulatory and governance reforms advocate that banks should place greater emphasis on value creation for stakeholders to ensure the safety of the banking sectors.

However, despite these increasing calls, in the near absence of empirical evidence, it remains unclear about *whether* and *how* a stakeholder-oriented approach may influence bank behaviors. This paper fills this gap and addresses two important policy-driven questions: Does stakeholder orientation affect bank risk-taking? Does stakeholder orientation also influence the

quality of bank risk-taking? This paper is the first to examine these research questions and to provide robust empirical evidence in support of the current policy reform proposals.

Banks are different from non-financial firms in that they are characterized by a larger range of stakeholders, including depositors, borrowers, debtholders, employees, regulators, the rest of society, etc. (Mehran, Morrison and Shapiro, 2011). In general, non-shareholding stakeholders have less incentives to take risk and tend to focus more on long-term stability than shareholders because, typically as fixed claimants, they receive only fixed income streams regardless of the firm performance. By contrast, shareholders with limited liability are entitled to most of the benefits of risk-taking but are only held accountable for losses of their invested capital, and thus are likely to push managers to take greater risks beyond the levels preferred by stakeholders (Macey and O'Hara, 2003).[1] This conflict between fixed claimants and shareholders and the problem of excessive risk-taking are especially severe among banks because of their high leverage (Jensen and Meckling, 1976), opaque assets (Morgan, 2002) and the lack of discipline from insured depositors (Demirgüç-Kunt and Huizinga, 2004), which together provide incentives and opportunities for banks to shift risks and the associated losses onto their non-shareholding stakeholders (Laeven, 2013). Likewise, drawing upon insights from the stakeholder theory (Cornell and Shapiro, 1987), bank stakeholders may ex ante prefer less aggressive policies, anticipating that banks may default on their implicit promises, such as job security, favorable relationship lending, financial stability, etc., when financial conditions deteriorate. Considered together, this argument amount to the view that bank stakeholders place greater interests in long-

[1] Although an insolvent bank will pay its fixed claimants prior to residual claimants, fixed claimants are unlikely to be paid in full (Titman, 1984). For instance, bank employees may lose pension rights, medical insurance and other benefits (Bethel and Liebeskind, 1998); borrowers who are informationally captured by the original insolvent bank may lose the cost advantages of relationship lending and incur considerable costs from switching to new lenders (Slovin, Sushka and Polonchek, 1993).

term value and stability of banks than shareholders. We hypothesize that an increase in stakeholder orientation reduces bank risk-taking and may also improve the quality of risk-taking.

Identifying a causal effect of stakeholder orientation on bank risk-taking is difficult because stakeholder engagement may reflect a bank's strategic decisions[2], and thus be endogenously determined. If excessive risk-taking lead banks to invest in stakeholder relations, our results would be driven by reverse causality. Also, our results would be biased if there are omitted factors that jointly determine stakeholder orientation and bank risk-taking. To meet these challenges, we design a quasi-natural experiment that exploits the plausibly exogenous variations in stakeholder orientation arising from the staggered enactment of constituency statutes across US states to identify the impact of stakeholder orientation on bank risk-taking.

Constituency statutes expand the corporate directors' and managers' fiduciary duties, which are traditionally owed to shareholders, to include the interests of a variety of stakeholders. These stakeholders include the corporation's employees, suppliers, customers, the community, the rest of society, etc., of whom their firm-specific investments are often adversely affected by corporate decisions maximizing shareholder value and not fully protected through explicit contracts. The motivation behind the development of the constituency statutes is to protect the otherwise unprotected interests of stakeholders, and to provide corporate leaders with a legal mechanism for considering the stakeholder interests without violating their fiduciary duties to shareholders (Hale, 2003). As the statutes are legally enforceable, their proponents argue that they likely play an important role in promoting a stakeholder-friendly approach in corporate management (Springer, 1999). As at 2012, 35 US states have passed the statutes (Barzuza, 2009).

[2] The literature suggests that stakeholder relations are important strategic resources that may increase moral or reputational capital (Fombrun and Shanley, 1990; Godfrey, Merrill and Hansen, 2009), customers' loyalty (Luo and Bhattacharya, 2006) and employee motivation (Flammer and Luo, forthcoming), etc.

Since the enactment of the constituency statutes does not likely reflect a bank's strategic decisions, the associated increase in stakeholder orientation is plausibly exogenous to risk-taking.

Following Bertrand and Mullainathan (2003), we formulate a difference-in-differences test design—the treatment group consists of states that pass the constituency statutes and the control group consists of states that do not in a given year—to estimate the causal impact of stakeholder orientation on bank risk-taking. Based on 939 publicly traded US Bank Holding Companies (BHCs) from 1986-2012, we find a negative and significant effect of stakeholder orientation on bank risk-taking, consistent with our hypothesis. The enactment of constituency statutes decreases bank total risk by 6.1%, idiosyncratic risk by 7.1%, bad loans to total assets ratio by 16.9%, tail risk by 5.4%, and increases Z-score by 12.4%, relative to sample means. We run a battery of robustness tests and confirm that the negative relationship is robust to alternative fixed effects, standard errors, model specifications, estimation approaches and samples, and to controlling for bank competition, state macroeconomic variables and regional time trends.

To strengthen our causal interpretation, we perform a number of additional endogeneity tests. First, we examine the dynamics of the treatment effects. We find that the significant reduction in bank risk-taking mainly occurs after the treatment, implying that the relation cannot be explained by state policymakers simply responding to changes in bank risk-taking (reverse causality). We also examine the pre-trends in bank risk-taking and find that the statute effects up to two years prior to the treatment are small in magnitude and statistically insignificant across all risk-taking models. This implies that the pre-trends do not differ between the treated and control BHCs, which satisfies the parallel trend assumption (Roberts and Whited, 2012).

Second, we run three placebo tests. The first test maintains the distribution of the statute enactment years and randomly assigns states into the enactment years. The second test keeps the

distribution of the treated states but randomizes their enactment years. The third test randomizes both the enactment years and treated states. In each placebo sample, we estimate the baseline models and store the coefficient and standard error estimates. Repeating this procedure 5,000 times, we obtain a distribution of placebo estimates for each test. Our results show that the placebo statute does not explain bank risk-taking. In the first placebo test, the actual estimate for *Constituency Statutes* is smaller than the placebo estimates in 4,995 out of 5,000 cases (99.9%) for *Z-score*, and in at least 4,569 out of 5,000 cases (91.4%) for the remaining risk-taking measures. The results for the second and third placebo tests are similar but more significant. Overall, the reduction in bank risk-taking is likely caused by the enactment of constituency statutes.

Third, our identification requires us to rule out the possibility that some other unmeasured state policy changes that have potentially influenced bank risk-taking may happen to coincide with the enactment of the constituency statutes. To address this issue, we explicitly account for the staggered *interstate* and *intrastate* banking deregulation policy changes and the staggered erection of out-of-state entry barriers to interstate banking in the baseline regressions, and confirm that these coinciding banking policy changes have little, if any, effects on our results.

Finally, a remaining concern is that our results may still be driven by unobservable changes in local economic conditions, which may jointly determine the introduction of constituency statutes and bank risk-taking. To address this concern, we perform two tests. First, we conduct a placebo test that uses the treated states' bordering states as placebo states. For each treated state, we choose the bordering state with the closest Gross Domestic Product (GDP) (pre-treatment) to increase the likelihood that the treated and placebo states share similar local economic conditions, and assign the enactment event to it. We find that the placebo constituency statutes have virtually no effect on bank risk-taking, suggesting that this concern may not be

severe. Second, we exploit the idea that local economic conditions are likely to be similar across adjacent states but the effects of the constituency statutes stop at the borderline, and analyze a subsample of treated and control BHCs that are just a border away and are geographically close to each other to difference out any confounding effects from local economic conditions. We find that the negative statute effect on bank risk-taking remains significant. Based on this evidence, we confirm that unobserved local economic shocks do not drive our results.

The inclusion restriction of our identification requires that the enactment of constituency statutes indeed leads to improved stakeholder performance. While previous studies show that the statute passage improves board and firm stakeholder engagement (Luoma and Goodstein, 1999; Atanassov, 2013; Flammer and Kacperczyk, forthcoming), perhaps less is known about the banking industry. To provide some evidence on this restriction, we show that following statute passage, BHCs are less likely to lay off employees and have higher effective tax rates, consistent with BHCs showing greater social responsibility. Moreover, our findings can be replicated with an alternative bank-level stakeholder orientation measure based on Kinder, Lydenberg, and Domini (KLD) data, suggesting that our natural experiment results are likely to be valid.

In keeping with the motivations behind this study, we next investigate whether stakeholder orientation affects the quality of bank risk-taking. Generally speaking, the reduction in risk-taking due to the statute passage may simply reflect the bank's move into safer positions, and hence, its risk-return tradeoff may be unaffected (Hirtle, 2007). Alternatively, if stakeholder-friendly banks are more reputable for honoring the commitments of the implicit contract with stakeholders, such as job security and employee welfare, their employees may be more willing to acquire firm-specific skills and to contribute effort to bank efficiency, which implies an improved quality in risk-taking (Cornell and Shapiro, 1987; Freeman, Wicks and Parmar, 2004;

Deng, Kang and Low, 2013). Moreover, managers of more stakeholder-friendly banks are held accountable to a wider range of constituencies (McDaniel, 1991). Having to consider more alternatives and tradeoffs in decision-making, they may adopt a more cautious approach when evaluating which projects to undertake, and therefore, are more likely to deter inefficient projects characterized by high-risk/low-return features, thereby resulting in better risk-return tradeoff. To test these predictions, we use the difference-in-differences model and find that the association between bank performance and risk (the risk-return sensitivity) is significantly more positive (higher) following statute enactment. This evidence is consistent with stakeholder-friendly banks managing risk more effectively or having a greater ability to deter high-risk/low-return projects.

Our paper makes the following important contributions. First, this is the first paper to investigate the impact of stakeholder orientation on bank risk-taking, which adds to a large banking literature (see, e.g., Keeley, 1990; Demsetz and Strahan, 1997; Laeven and Levine, 2009). As with any empirical study of this relationship, we face severe endogeneity problems, because stakeholder orientation is likely to be endogenous with respect to risk-taking, preventing us from deriving meaningful policy implications. We circumvent these endogeneity concerns by designing a quasi-natural experiment based on the staggered enactment of constituency statutes and identify a negative causal effect of stakeholder orientation on bank risk-taking.

Second, our paper goes beyond finding a mitigating role of stakeholder orientation on bank risk-taking, and documents new evidence that stakeholder orientation improves the quality of bank risk-taking in terms of higher loan quality, lower tail risk exposure and better risk-return tradeoff. Our findings lend strong support to the widespread calls for a greater emphasis on stakeholder interests in the bank regulatory and governance reforms to safeguard the banking system—an issue that is at the heart of the current policy debate (Macey and O'Hara, 2003;

Mehran, Morrison and Shapiro, 2011; Laeven, 2013). Further, as stakeholder orientation reflects "changes in managerial attitude, behavior and culture" (Greenley and Foxall, 1997), we also contribute to the existing understanding of the role of "risk culture" or "business model" in affecting bank risk-taking (Fahlenbrach, Prilmeier and Stulz, 2012; Ellul and Yerramilli, 2013).

Third, this paper adds to the literature on the legitimacy of stakeholder theory (see, e.g., Freeman, 1984; Cornell and Shapiro, 1987; Freeman, Wicks and Parmar, 2004). As Jensen (Agle et al., 2008) notes, "…[in] the debate about stakeholder theory versus stockholder theory…there is way too much noise, way too much sloppy thinking and way too *little* empirical evidence present". Our study is one of the few that offers robust empirical evidence to the question of whether corporations should consider social interests. We show that a shift in fiduciary duties in favor of stakeholders may contribute positively to bank performance and stability.

Three studies have used the constituency statutes or similar legal rulings as sources of exogenous variations in stakeholder orientation for identification. Using a similar difference-in-differences model, Flammer and Kacperczyk (forthcoming) document a positive impact of stakeholder orientation on firm innovation. Atanossov (2013) finds that firms incorporated in states that pass the constituency statutes are more innovative when corporate governance is good. Becker and Strömberg (2012) use the 1991 Delaware legal ruling and find that fiduciary duties influence firm equity issues, investments and risk-taking. This paper differs from these studies in that we examine the effects of constituency statutes on BHCs and derive policy implications which are relevant to the current debate on bank governance reform and systemic stability.

Our paper is organized as follows: Section 2 introduces the constituency statutes. Section 3 explains our sample and variables. Section 4 presents the results and Section 5 concludes.

2. Background on constituency statutes

The origin of constituency statutes traces back to the 1930s debate on the fundamental nature of corporation, and specifically, about whether management's duty are owed to shareholders or a broader group of stakeholders (Orts, 1992). Traditionally, under US law, corporate leaders were legally required to act in accordance with shareholder interests and were not allowed to consider stakeholder interests. Given that this shareholder primacy view prevailed in court, corporate leaders were reluctant to divert their attention from shareholder value maximization to prevent the risk of being sued by shareholders (Smith, 1998; Fisch, 2005). Nonetheless, corporate decisions, e.g., corporate restructuring, liquidations and acquisitions that favor shareholders' interests may often adversely affect stakeholders (including managers) and may impair their firm-specific investments that are not fully protected through explicit contracts (Gavis, 1990). Because corporate actions affect both shareholders and non-shareholding constituencies, proponents of the stakeholder theories argued that corporations should also consider the interests of non-shareholding stakeholders in their strategies and actions (Bainbridge, 1992). This longstanding debate eventually led to the development of the constituency statutes. As at 2012, 35 US states have passed the constituency statutes at different times (Barzuza, 2009).

Although constituency statutes differ across states, their content is largely similar in that they permit corporate directors to consider the effects on various specified constituencies when making business decisions without breaching their fiduciary duties to shareholders (Springer, 1999). Using the Minnesota statute in 1987 as an example, it specifies that when considering the best interest of the company, a director may consider the interests of (1) the corporation's employees, customers, suppliers and creditors, (2) the economy of the state and nation, (3) community and societal considerations, and (4) the long-term as well as short-term interests of

the corporation.[3] In most statutes, the specified constituencies would at least include employees and customers, and the consideration of long-term interests is also allowed (Springer, 1999).

The constituency statutes are legally enforceable and have been applied by courts in defending stakeholder interests in business cases involving takeovers and bankruptcies.[4] For instance, in *Keyser v. Commonwealth National Financial Corp* (644 F. Supp. 1130 (M.D. Pa. 1986)), a group of shareholders sued the company's board for breaching their fiduciary duties to shareholders after its directors "knowingly sacrificed dollars for social issues" in the merger with Mellon Bank Corporation. The court noted that under Pennsylvania's constituency statute, a corporate board could consider social issues in evaluating merger proposals and that the consideration of employee opportunities and the community by its directors is in compliance with their fiduciary duties. Similarly, in *Amanda Acquisition Corp. v. Universal Foods Corp* (708 F. Supp. 984 (E.D. Wis. 1989)), the court ruled that the target board's redemption of poison pill in response to the tender offer by Amanda was reasonable given its considerations of the tender offer's effect on its employees, customers and the community. Although the court did not address the extent to which directors can sacrifice shareholder value for stakeholder interests in most cases, these legal cases highlight that the statutes have likely led to changes in the understanding of fiduciary duties in the local business communities. Furthermore, even without legal enforcement, the statutes may influence business practices through changing the standards of judicial review under the duty of care for corporate decisions involving corporate control, restructuring and other shareholder derivative suits (for more details, see Orts, 1992, pp.41).

[3] *MINN. STAT. ANN. § 302A.251.*

[4] For an example of a federal bankruptcy case that involved the constituency statute, see *Kandel v. McCalla* (228 B.R. 657 (N.D. Ohio, 1998)). For other cases relating to hostile takeover contests, see, for example, *Baron v. Strawbridge & Clothier* (646 F. Supp. 690 (E.D. Pa., 1986)), *Georgia-Pacific Corp. v. Great Northern Nekoosa Corp.* (727 F. Supp. 31 (D. Me., 1989)), etc.

Several studies have established that statute passage indeed improves corporate stakeholder performance. For instance, Luo and Goodstein (1999) find that constituency statutes are associated with greater board stakeholder representation. Flammer and Kacperczyk (forthcoming) and Atanossov (2013) both find that companies incorporated in states that pass the constituency statutes adopt more stakeholder-friendly policies than those in states without passage. To advance this line of inquiry, we perform two preliminary tests (unreported) on whether the statutes affect bank stakeholder performance. First, we find that passing the statutes significantly lowers the likelihood of a large reduction in the employee number of BHCs, consistent with greater job security after the enactment.[5] Second, banks may engage with the society by showing more responsibility and transparency in taxation.[6] Consistent with this view, we find that the constituency statutes significantly increases bank effective tax rates.[7]

Finally, because the constituency statutes do not likely reflect a BHC's strategic decisions, the associated increase in stakeholder orientation is plausibly exogenous to its risk-taking. Given the staggered nature of statute passage, subsets of BHCs are exogenously shocked at different times, allowing us to setup a difference-in-differences model with multiple treatment groups and

[5] Specifically, we find that the constituency statutes significantly lower the likelihood of (1) having a negative percentage change in the number of employees (significant at the 5% level), and (2) having an economically significant reduction in the number of employees (significant at the 1% level). We define an economically significant reduction in the number of employees as any negative percentage changes that are less than its 10th percentile in our sample BHCs. These results can be found in Table A.1 of the Internet Appendix.

[6] For instance, in the 2014 global citizenship report, Citi Group (2014) wrote, "…our culture of responsible finance extends to our approach to paying taxes…We emphasize both strong internal controls and transparency with global taxing authorities…"; in the 2013 sustainability report, HSBC (2013) stated that, "By running a sustainable banking business, HSBC is able to make a valuable contribution to the global economy by…[paying] tax revenues to governments in the countries and territories where we operate… HSBC does not enter into or promote tax avoidance."

[7] The effective tax rate is computed as the ratio of tax expense to pre-tax earnings. This measure is commonly used in the tax literature as a proxy for tax avoidance (see for a discussion of this measure in Hanlon and Heitzman (2010)). These results can be found in Table A.1 in the Internet Appendix.

time periods for identification. This setting helps reduce the potential biases and noise associated with difference-in-differences analysis with only a single shock (Roberts and Whited, 2012).

3. Sample formation and variable construction

We start with all publicly traded US BHCs that filed FR Y-9C reports with the Federal Reserve during the 1986-2012 period. We download the BHCs' consolidated financial information from the Bank Regulatory database and their stock information from CRSP.[8] We then supplement these data with additional firm attributes, such as states of location and incorporation, from Compustat. Our final sample consists of 9,248 bank-year observations from 939 BHCs. 166 of these BHCs eventually receive a treatment in the sample.[9]

We construct five measures of bank risk-taking. First, we measure bank total risk as the annualized standard deviation of daily stock returns for each year. Second, bank idiosyncratic risk (*IVol)* is the annualized standard deviation of the residuals from the following model (estimated for each bank-year):

$$R_{it} = \alpha_i + \beta_{1i} R_{mkt,t} + \beta_{2i} INTEREST_t + \varepsilon_{it}. \quad (1)$$

where R_{it} is daily stock returns of BHC i, $R_{mkt,t}$ is excess market returns of the value-weighted CRSP market index, and $INTEREST_t$ is the changes in the three-month Treasury bill rates. Third, following Goetz, Laeven and Levine (2016), we compute a BHC's Z-score as follows:

$$Z\text{-}score_{it} = (ROA_{it} + CAR_{it})/\sigma_{it} \quad (2)$$

[8] The stock information is merged with the bank fundamentals, using the linking table provided by the New York Federal Reserve Bank. The linking table can be accessed at: [http://www.newyorkfed.org/research/banking_research/datasets.html]

[9] These 166 BHCs contribute 2,441 bank-year observations to the full sample and have a mean (median) size of $14.2 ($3.17) billion in terms of total assets.

where ROA_{it} is the return on assets, CAR_{it} is the capital-asset ratio, and σ_{it} is the annualized standard deviation of daily stock returns over a year. *Z-score* can be interpreted as the number of standard deviations by which profit can decrease before a bank goes into bankruptcy, so that a larger *Z-score* indicates less risk. Fourth, we measure a bank's loan portfolio credit risk using the ratio of bad loans to total assets (*Bad loan/TA*). Bad loans are the sum of loans 90 days or more past due and nonaccrual loans. Finally, following Ellul and Yerramilli (2013), bank tail risk exposure (*Tail risk*) is defined as its expected loss, conditional on returns being less than some α-quintile. *Tail risk* is the negative of average return on a BHC's stock over its 5% worst return days in a given year[10], such that a higher *tail risk* indicates a larger exposure to large losses.

We control for several bank characteristics that may influence risk-taking. First, bank size is measured as the natural logarithm of the book value of deflated total assets. Bank profitability is measured by return on assets (*ROA*) and equity (*ROE*), which are calculated as earnings before taxes and extraordinary items, scaled by assets and book equity, respectively. Income from nontraditional banking activities is measured by the ratio of non-interest income to assets (*NONINT/TA*). Liquidity risk is captured by the ratio of non-core deposits to assets (*NONCORE/TA*) and the ratio of total loans to assets (*LOAN/TA*). Bank franchise value is captured by the market-to-book equity ratio (*MVBVEQ*) (Keeley, 1990).[11] Finally, we control for the frequency of trading in a BHC's stock (*FREQ),* defined as the average daily volume of shares traded divided by the number of shares outstanding. To reduce the effects of outliers, all continuous variables are winsorized at the 1st and 99th percentiles.

[10] For *Total risk*, *IVol* and *Tail risk*, we require a minimum of 60 available daily stock return observations in a given year for the estimation. The use of no minimum requirements, 30-day, or 90-day minimum requirements in the estimation do not affect our conclusions.

[11] Our results are quantitatively similar when we measure franchise value by Keeley's *q* (Keeley, 1990), computed as the sum of the market value of equity plus the book value of liabilities divided by the book value of total assets.

Table 2 reports summary statistics. Panel A shows that BHC size, as measured by deflated total assets, is highly skewed and ranges from a minimum of $111 million to a maximum of $2.07 trillion.[12] The mean (median) BHC size is $17.7 ($1.40) billion. For bank risk-taking, the means (medians) of *Total risk*, *IVol*, *Z-score*, *Bad loan/TA*, and *Tail risk* are 40.9% (34.3%), 38.2% (31.9%), 0.298 (0.273), 0.7% (0.3%), and 5.4% (4.5%), respectively. The mean (median) *ROA*, *ROE*, and *NONINT/TA* are 1.1% (1.3%), 12.1% (15.7%), and 1.2% (1%), respectively. The average non-core deposits to total assets, loan-to-assets ratio, market-to-book ratio and frequency of trading are 12.6%, 64.9%, 1.48, and 0.2%, respectively. Panel B reports the pairwise correlations and the absolute correlation coefficients are well below 0.40.

****Insert Table 2 about here****

4. Empirical results

4.1 Stakeholder Orientation and Bank Risk-Taking

To investigate whether stakeholder orientation influences bank risk-taking, we follow Bertrand and Mullainathan (2003) and formulate a difference-in-differences test design in a multiple treatment groups and time periods setting, based on the staggered passage of constituency statutes across states. The regression model is written as follows:

$$Risk_{ist} = \alpha_t + \beta_i + \lambda \times Constituency\ Statute_{st} + \delta X_{ist} + \varepsilon_{ist}, \quad (2)$$

where i is a BHC, s is the state of incorporation, and t is year. $Risk_{ist}$ is *Total risk*, *IVol*, *Z-score*, *Bad loan/TA*, or *Tail risk*. $Constituency\ Statute_{st}$ is a treatment dummy variable, which equals one if a BHC is incorporated in state s that has passed a constituency statute by year t and zero otherwise. X_{ist} is a vector of control variables (see Section 3). Bank (β_i) and year fixed effects (α_t)

[12] In our sample, the maximum total deflated assets of 2.07 trillion refers to Citigroup Inc. in 2007 while the minimum total deflated assets of 111 million refers to American Bancorporation in 1987.

are included to control for unobservable firm characteristics and economy-wide shocks on bank risk-taking. Standard errors are clustered at the bank level to control for serial correlation.

The average treatment effect of stakeholder orientation on bank risk-taking is captured by the estimated coefficient on *Constituency Statute*, λ. Including both bank and year fixed effects allows λ to be estimated as the *within-state* differences before and after the passage of constituency statute as opposed to the before-after differences in states where there are no changes in statute in the same period (Imbens and Wooldridge, 2009).

To illustrate, assume we are interested in estimating the effect of constituency statute in Indiana in 1989 on bank risk-taking, we can subtract the bank risk before 1989 from the bank risk after 1989 for BHCs incorporated in Indiana. However, it is difficult to identify a causal statute effect because bank risk-taking may also be influenced by other events or economy-wide shocks happening around 1989. To control for these confounding effects, we can use a control state where there is no change in constituency statute in the same period. We then calculate the difference between the difference in bank risk in Indiana before and after 1989 with the same before-after difference in bank risk in the control state. This difference in the two differences is an estimate of the effect of constituency statute in Indiana. The regression framework extends this example to account for the fact that there are many constituency statutes staggered over time.

Table 3 reports the results of the regressions. In columns 1 to 5, the estimated coefficients of *Constituency Statute* are negative and statistically significant for *Total risk*, *IVol*, *Bad loan/TA* and *Tail risk*, and is significantly positive for *Z-score*. The statutes' negative effects on risk-taking are not only highly statistically significant; their economic magnitudes are also sizable. Specifically, the passage of constituency statutes decreases bank total risk by 6.1%, idiosyncratic risk by 7.1%, loan portfolio credit risk by 16.9% and tail risk by 5.4%, and increases *Z-score* by

12.4%, relative to their mean values. These findings are consistent with the hypothesis that stakeholder orientation mitigates bank risk-taking.

****Insert Table 3 about here****

4.2 Robustness

Table 4 presents additional tests to verify the robustness of our difference-in-differences results. For brevity, we report only the coefficients and robust standard errors for *Constituency Statute* and present them in rows rather than columns.[13] First, we use alternative standard errors clustered at the state of incorporation and the state of location levels, obtaining similar results (see rows 1 and 2). Second, to account for serial correlations in the error terms, we use the two-step procedure following Bertrand, Duflo and Mullainathan (2004). In the first step, the bank risk-taking measures are regressed on the bank controls and fixed effects as in equation (2) without the treatment dummy. We then extract the residuals from these regressions for the treated BHCs and then average these residuals for the pre- and post-treatment periods to obtain a two-period panel data. In the second step, we regress these average residuals on *Constituency Statute* with White robust standard errors. The results remain qualitatively similar (see row 3).

In rows 4 and 5, we control for state of location and state of incorporation fixed effects, respectively, to account for any persistent differences across states, such as differences in the banking industry structure or differences in the relative market power of large versus small banks (Rice and Strahan, 2010), etc., that may influence bank risk-taking. Our results continue to hold.

In row 6, we include additional state-level macroeconomic variables that may potentially affect bank stakeholder engagement and bank risk-taking. Specifically, we obtain state-level real

[13] The unabridged version of these robustness results is available upon request.

GDP growth and logarithm of population from the US Bureau of Economic Analysis (BEA) and include them as controls in the baseline model. Our results remain qualitatively similar.

In our sample, some states have more bank-year observations and treated BHCs than others, and hence, our results may be driven by the possible over-representation of these states. To address this concern, we estimate weighted least squares (WLS) regressions with weights calculated as the inverse of the number of bank-year observations in each state of incorporation, thus allowing each state to receive equal weights in the estimation. Our results are not much affected and have become slightly stronger in both magnitude and significance (see row 7).

Next, we exclude states (in total 15 states) with no enactment of constituency statutes to avoid potential concerns about selection—BHCs incorporated in states with constituency statute passage may be systematically different from those incorporated in states without, based on unobservable variables that are related to bank risk-taking—and estimate the baseline regressions. As can be seen in row 8, our results remain robust.

In row 9, we account for time-varying regional differences in bank risk-taking and interact a region indicator with year dummies in the regression. Following the US Census Bureau, the BHCs are grouped into four regions—Northeast, South, Midwest, or West—based on their states of location. Our results are only marginally affected by the regional time trends.

Furthermore, economy-wide shocks may cause bank characteristics to affect risk-taking differently at different periods. Rows 10 to 16 examine whether the statute effects are sensitive to controlling for such differences. We interact the right hand side variables, one at each time, with the year dummies in the baseline model and find that our results remain robust.

Since the majority of the constituency statutes were enacted between 1984 and 1990 (in 25 out of 35 states between 1986 and 1990) and that our sample covers the 1986-2012 period, we

have more "after treatment" than "before treatment" years. Row 17 checks whether our results are sensitive to this imbalance and presents the results based on a restricted sample ending in 1995.[14] The subsample results are qualitatively similar.

Finally, the extant literature acknowledges that bank competition may affect risk-taking. For instance, Martínez-Miera and Repullo (2010) show theoretically that a non-linear ("U-shaped") relationship exists between bank competition and risk.[15] To control for these effects, in row 18, we include the Herfindahl Index (*H-index*) of loan concentration and its squared term as additional controls and find that our results hold.[16, 17]

****Insert Table 4 about here****

4.3 Additional endogeneity tests

A potential endogeneity concern is that banks may strategically lobby for the enactment of constituency statutes. For instance, banks with excessive risk-taking may see a greater need to engage with stakeholders in seeking "insurance-like" protection against future losses.[18] While

[14] Our results remain similar in magnitude and significance when we restrict the sample to end in 2005.

[15] The non-linear relationship arises because of two competing effects. The first effect is the "risk-shifting" effect, whereby bank competition lowers loan rates, firm default probabilities, and bank risk. The second effect is the "margin" effect, whereby lower loan rates reduce firms' interest payments and thus overall bank revenues, leading to potentially greater bank risk and failures. As the risk-shifting effect dominates in concentrated markets, while the margin effect takes over as competition increases, a U-shaped relationship between competition and bank risk is found to capture their net effects.

[16] Following Claessens and Laeven (2004), *H-index* is defined as the sum of BHCs' squared market shares in total loans within the state of location in a given year. Our results remain robust when *H-index* is defined as the sum of BHCs' squared market shares in total loans within the state of incorporation in a given year.

[17] In untabulated results, the estimated effects of *H-index* and $H\text{-}index^2$ on bank risk-taking are negative and positive, respectively, for all risk-taking models, and those based on states of location are significant. This documented concave U-shaped relationship between bank competition and risk-taking is consistent with Martínez-Miera and Repullo (2010). The unabridged version of these results are available upon request.

[18] Godfrey, Merrill and Hansen (2009) argue that firms may cater to stakeholders seeking "insurance-like" protection against future negative events. When negative events occur, stakeholders respond by penalizing the firm, e.g., boycotts, badmouthing, revoking the right to do business, etc. Firms that engage in social responsibility will be less severely punished because the moral capital derived from these engagements may act as a mitigating factor. In

this concern predicts a positive relationship between stakeholder orientation and risk-taking, our finding of a negative relationship excludes this explanation. Second, if banks that are deleveraging and actively engaging with stakeholders (as one may expect in a recession) tend to be successful in lobbying for statute enactment, our results would be biased. We search for press releases in *Factiva* showing that US BHCs lobbied for constituency statutes over our sample period. We are unable to find such evidence and thus believe that this concern is unwarranted.

To carefully address the reverse causality concern, we follow Bertrand and Mullainathan (2003) and examine the dynamic treatment effects by estimating the following model:

$$Risk_{ilst} = \alpha_t + \beta_i + \lambda_1 \times Before^{-2\ or\ -1}{}_{st} + \lambda_2 \times Current^{0}{}_{st} + \lambda_3 \times After^{+1}{}_{st}$$

$$+ \lambda_4 \times After^{>=+2}{}_{st} + \delta X_{ilst} + \varepsilon_{ilst}, \qquad (3)$$

where $Before^{-2\ or\ -1}{}_{st}$ is a dummy variable equal to one for each of the two years preceding enactment of a constituency statute, $Current^{0}{}_{st}$ is a dummy variable equal to one for years of statute enactment, $After^{+1}{}_{st}$ is a dummy variable equal to one for the year after statute enactment, and $After^{>=+2}{}_{st}$ is a dummy variable equal to one if it is two or more years after a statute enactment. The estimated coefficient for $Before^{-2\ or\ -1}{}_{st}$, λ_1, is of particular interest as its magnitude and statistical significance would indicate whether the pre-trends (in risk-taking) are systematically different between the treated and control BHCs.

Table 5 presents the results of the dynamic treatment analysis. We find that the estimated coefficients for $Before^{-2\ or\ -1}{}_{st}$ are in general small in magnitude and statistically insignificant for all risk-taking measures, indicating no significant differences in pre-trends between the treated

---

the banking industry, bank shareholders have incentives to demand banks take on excessive risk (Saunders, Strock and Travlos, 1990). In case of negative events, in light of the large bankruptcy costs and systemic consequences, bank stakeholders, especially the government, may bail out troubled banks. Therefore, BHCs are likely to have incentives to strategically engage with stakeholders to build moral capital that would improve their chances of receiving financial support from stakeholders during future negative events.

and control BHCs. The coefficient estimates for $Current^{0}_{st}$ and $After^{+1}_{st}$ show negative effects of statutes on risk-taking at and in the year following their passage and are significant for *Z-score* and *Bad loan/TA*. The coefficient estimates for $After^{>=+2}_{st}$ are larger and statistically significant for all risk-taking measures, suggesting that the negative statute effect becomes stronger in the longer-term. Overall, these tests confirm that reverse causality is unlikely to drive our results and that the treatment and control BHCs are likely to be on similar trends before treatment, which satisfies the parallel trend assumption required for identification (Roberts and Whited, 2012).

****Insert Table 5 about here****

4.4 Placebo tests

To strengthen our causal interpretation, we conduct three placebo tests that randomize the assignment of constituency statutes. In the first placebo test, we keep the empirical distribution of the years of statute enactment unchanged and randomly assign states into each of these enactment years (without replacement)[19], thus allowing any unobservable shocks occurring at about the same time as the statute passage to remain in the analysis. In the second placebo test, we randomize the enactment years among the 35 treated states. In other words, this test maintains the distribution of the treated states but disrupts the timing of the treatments, which allows any unobservable persistent state effects (if any) to continue driving our results. The third placebo test randomizes both the enactment years and the states (with no replacement for states).

Within each placebo sample, we estimate the baseline models of bank risk-taking and store the coefficient and standard error estimates of the placebo statute. We repeat this procedure

[19] For instance, in 1990, the constituency statutes were passed in Mississippi, Pennsylvania and Rhode Island. In the remaining 48 states, we randomly choose three states and assign a treatment event to them. We do this for each year with at least one statute passage and are careful not to assign a treatment to states which have already been treated (i.e., with no replacement).

5,000 times to obtain a distribution of the coefficient and standard error estimates for the placebo statute for each test. Based on these placebo estimates, we first examine whether the placebo constituency statutes explain bank risk-taking (as falsification tests). We then compare the actual estimates (from real data) for *Constituency Statute* with the distribution of the placebo estimates.

****Insert Table 6 about here****

Panel A of Table 6 reports the average coefficient and standard error estimates for the placebo statute. In all three placebo tests, the effect of the placebo statute is small and insignificant. As shown in Panel B of Table 6, in the first placebo test, the actual estimate for *Constituency statutes* is larger than the placebo estimate in 4,995 out of 5,000 placebo samples (99.9%) for *Z-score*, implying a 0.1 out of 100 chance of randomly observing the actual estimate when the null of no statute effect is in fact true (Rosenbaum, 2002). For the remaining risk-taking measures, the actual estimate is larger than the placebo estimate in at least 4,569 of 5,000 (91.4%) cases. The results for the second and third placebo tests are similar but more significant. These results are presented graphically in Figures A.1 to A.3 in the Internet Appendix.

Overall, we confirm that the placebo constituency statutes do not explain bank risk-taking and that unobserved market-wide shocks, persistent state effects and the imperfect structure in the standard error matrix of the regressions do not drive our results.

4.5 Coincidental banking policy changes

In this section, we perform additional tests to rule out the possibility that some omitted variables which have potentially influenced bank risk-taking may happen to coincide with the passage of constituency statutes. Note that our identification relies on the staggered passage of constituency statutes, and hence, such omitted variables have to be similarly staggered across states and years

to confound our results. The most likely candidates for such staggered omitted variables that influenced bank behaviors are the banking deregulation policy changes.

During the 1970-1990s, the US states deregulated *interstate* banking and *intrastate* branching activities. These staggered bank policy changes across states may have influenced our results if the increased geographical expansion of banks due to deregulation has affected their business models, competition and thus risk-taking. In addition, while the Interstate Banking and Branching Efficiency Act (IBBEA) (in 1999) removed all remaining federal restrictions on interstate banking as of 1995, it also allowed states to have their own discretion to erect out-of-state entry barriers to interstate branching. Such staggered erection of entry barriers may also affect bank risk-taking through changing the competitive environments of the banking sector.

To address this concern, we first compare the timing of the passage of the constituency statutes with the *interstate* and *intrastate* deregulation policy changes and the staggered erection of out-of-state entry barriers. As can be seen in Panel A of Table 7, we find only three (out of the 28) enactments of constituency statutes (Wisconsin in 1987; Louisiana in 1988; and Indiana in 1989) coincided with the policy changes of the *interstate* and *intrastate* deregulation, affecting 13 BHCs in total (7.8% of the total treated BHCs). As a first test, we exclude BHCs that are incorporated or located in these three states (thus removing 522 obs.) and re-estimate our risk-taking regressions. In section (1) of Panel B, our results remain significant and similar in magnitude, suggesting that policy changes in these three states do not drive our results.

****Insert Table 7 about here****

Further, we explicitly control for these coincidental banking policy changes in the regression models. Following Cornaggia, Mao, Tian and Wolfe (2015), we construct two indicator variables, *Inter* and *Intra*, which equal zero before the interstate and intrastate banking

deregulations, and one otherwise, and include them as controls in the baseline model. Section (2) of Panel B shows that our results are unaffected after controlling for *Inter* and *Intra*. Next, we use the Rice and Strahan (2010) index (*RS index*), which ranges from zero (the least restrictive) to four (the most restrictive), to measure the state branching restrictions.[20] Section (3) shows that our results are robust to controlling for *RS index*. Finally, in section (4), we jointly control for *Inter*, *Intra* and *RS index* in the models and find that our results hold. Together, we confirm that other coincidental banking policy changes have little, if any, effects on our results.

4.6 Unobservable confounding local economic conditions

A remaining concern is that unobservable changes in local economic conditions, driving both the introduction of constituency statutes and bank risk-taking, may bias our results. A plausible example is that politicians tend to be more successful in introducing a constituency statute in a booming economy (Flammer and Kacperczyk, forthcoming), and such favorable economic conditions may also influence bank risk-taking. We perform two tests to address this concern.

First, we run a placebo test which uses the treated states' neighboring states as placebo states. For each treated state, we choose a neighboring state that is closest in GDP (pre-treatment) and assign to it a pseudo statute passage. The details of the placebo states are provided in Table A.2 of the Internet Appendix. Given that these treated and placebo neighboring states are likely to experience similar economic conditions, if we continue to find significant statute effects with these placebo states, the significant statute effects documented earlier could not have been caused by the enactment of constituency statutes. As can be seen in Table 8, the coefficient

[20] Following Rice and Strahan (2010), we add one to *RS index* if a state has any one of the following provisions, (i) the minimum age of the target institution, (ii) de novo interstate branching, (iii) the acquisition of individual branches, and (iv) a state-wide deposit cap.

estimates for the placebo constituency statute treatment variable are all small in magnitude and statistically insignificant in all risk-taking models, thus increasing the confidence that the statute effect we observe are indeed produced by the passage of constituency statutes.

****Insert Table 8 about here****

Second, we follow Heider and Ljungqvist (2015) and exploit the discontinuity in the effects of constituency statutes on bank risk-taking between the treated BHCs and the control BHCs located in neighboring states just across the border. Since local economic conditions tend to spill across state borders (Heider and Ljungqvist, 2015), it will therefore be the case that if the constituency statutes are driven by unobserved changes in local economic conditions, and these changes (rather than the statutes) also affect bank risk-taking, the treated and neighboring control BHCs would spuriously appear to respond to the statutes. Thus, this concern predicts no significant differences in risk-taking between the treated and neighboring control BHCs.

We match each treated BHC to a control BHC that is located in an adjacent state without constituency statute, and is closest in size.[21] For each matched pair, we keep the year before and after the statute passage for analysis.[22] Another concern is that the treated and neighboring control BHCs are more likely to subject to *different* local economic shocks the further apart from each other. Thus, we first remove all matched pairs that have a distance of more than 500 miles (from 166 matched pairs down to 130). We then further restrict the distance between the treated

[21] Of the 166 treated BHCs, 10 of them are located and incorporated in different states. For consistency, the matching procedure for these 10 BHCs is the same as the other treated BHCs, that is, we match each of these 10 BHCs with a control BHC located in an adjacent state just across the border. For robustness, we match each of these 10 BHCs with a control BHC located in the same physical state but incorporated in another state and confirm that our results are unaffected.

[22] We use two sample *t*-tests to examine whether bank size is indistinguishable between the treated and control BHCs prior to the treatment year. We find that across the two groups of BHCs, the mean and median differences in total assets are $260 and $7 millions, respectively, both statistically insignificant at conventional significance levels.

and control BHCs to be within 250 miles (down to 99 pairs) and 125 miles (down to 44 pairs)[23] to increase the likelihood that they experience similar local economic shocks. We then estimate equation (2) with bank and year fixed effects on each of the distance-restricted matched samples.

****Insert Table 9 about here****

Table 9 reports the results for all five bank risk-taking measures. In Panel A, with a 500-mile distance restriction, we find that the estimated coefficients for *Constituency Statute* are significant at the 5% level or better for all models except for bad loans. The coefficient signs are in line with our main results which show a negative statute effect on bank risk-taking. Panels B and C restrict the distance to be within 250 and 125 miles. While the power of the tests becomes more constrained the smaller the sample, our results are nonetheless similar. In particular, in Panel C, where the distance requirement is the most restrictive, we still find a significantly negative statute effects on three bank risk-taking measures, suggesting that our results are not likely to be driven by unobserved confounding effects of the local economic conditions.

4.7 Evaluating the inclusion restriction

The inclusion restriction of our identification requires that the passage of constituency statutes indeed improves stakeholder engagement. As discussed in Section 2, several studies find empirical support for this restriction (Luoma and Goodstein, 1999; Flammer and Kacperczyk, forthcoming; Atanassov, 2013). However, since these studies examine only non-financial firms, it is questionable as to whether these findings can be generalized to the BHCs. Therefore, this

[23] The restrictions of 250-mile and 125-mile correspond to the 75th and 50th percentiles of distance in the final matched sample. We do not further restrict the distance to be within 100 miles (the 25th percentile, observations drop to 124) to avoid the small sample problem.

section presents further evidence on this restriction and shows that our earlier findings can be replicated with an alternative bank-level measure of stakeholder orientation based on KLD data.

KLD rates firms on how well they care for their stakeholders along several dimensions, such as community, natural environment, employees, diversity, etc. For each dimension, KLD provides binary ratings for a number of "strengths" and "concerns" indicators.[24] Following Deng, Kang and Low (2013), we use a two-step procedure to construct an overall KLD rating (*KLD*) for each BHC.[25, 26] After merging *KLD* with the BHC sample, we obtain a sample of 1,557 bank-year observations from 316 BHCs over the 1991-2010 period.[27]

****Insert Table 10 about here****

Table 10 presents the results of tests regressing the bank risk-taking measures on *KLD*. The bank control variables are the same as the baseline model and standard errors are clustered at the bank level. Panel A reports the results of the bank fixed effects regressions. Consistent with the natural experiment results, we find a negative and significant association between *KLD* and bank risk-taking for all models. Panel B estimates change-on-change regressions in which all variables in Panel A are replaced by their respective changes, yielding similar results.

[24] For example, in the employee relations dimension, a rating of one is assigned to "Union Relations Strength" if a firm has a good union relationship that is beneficial to its employees and zero otherwise. In the environment dimension, KLD assigns one to "Ozone Depleting Chemicals Concern" if a firm produces ozone-depleting chemicals that cause harm to the natural environment.

[25] First, in each of the five dimensions—community, natural environment, product quality, employees and diversity—we standardize the number of strengths and concerns by the corresponding number of strength and concern indicators. Second, we sum the standardized ratings across the five dimensions for strengths and concerns, respectively. *KLD* is the difference between the standardized total strength and the standardized total concern scores.

[26] We check our results to alternative approaches in constructing *KLD*, including no standardization, the inclusion of the human rights and corporate governance dimensions and the use of indicator variables that are only available throughout our sample period, and confirm that our results are robust. These results are available upon request.

[27] The summary statistics of this KLD-merged BHC sample can be found in Table A.3 in the Internet Appendix.

A potential concern is that the relationship between bank risk-taking and stakeholder orientation may be dynamically endogenous—past risk-taking may influence both current risk-taking and stakeholder engagement (see Wintoki, Linck, and Netter, 2012). To address this concern, we use an one-step dynamic panel system Generalized Method of Moments (GMM) estimator developed by Arellano and Bover (1995) and Blundell and Bond (1998) that allows us to control for lagged risk-taking measures in the regressions, and to use the BHCs' distant past information as instruments for identification.[28] Panel C shows that after controlling for the one period lagged dependent variables, the negative association between *KLD* and bank risk-taking remains significant for all models. Moreover, the Hansen tests of over-identifying restrictions under the null hypothesis of the validity of instrument cannot be rejected for all models.

To summarize, we again find a significantly negative relationship between stakeholder orientation and bank risk-taking with an alternative bank-level stakeholder orientation measure based on KLD data, suggesting that our natural experiment results are likely to be valid.

4.8 Stakeholder orientation and bank risk-return tradeoff

Our results thus far show that stakeholder orientation significantly reduces the amount of risks BHCs take on. This section further investigates whether the constituency statutes also affect the quality of bank risk-taking by examining their risk-return sensitivity. Using the same difference-in-differences methodology, we interact *Total risk* with *Constituency Statute* to explain bank performance. We measure bank performance with four proxies, including return on assets (*ROA*),

[28] Under the system GMM approach, the model is estimated at both levels and first-differences and uses instruments in first-differences for the level regression and instruments in levels for the first-differenced regression. We treat all independent variables as endogenous (except the year dummy) and instrument them with two- and all-further-period lagged bank risk-taking measures and one- and all-further-period lagged independent variables for the difference equation and their lagged differences for the regression in level.

return on equity (*ROE*), market-to-book equity ratio (*MVBVEQ*), and annual stock returns (*Annual returns*). The estimated coefficient on the interaction term, *Total risk×Constituency Statute*, captures the influence of the constituency statutes on the BHCs' risk-return tradeoff relative to the control states. We include the same controls (except *MVBVEQ*) and fixed effects as in the baseline model and cluster the standard errors at the bank level.

****Insert Table 11 about here****

Table 11 presents the results. In columns 1 to 4, the estimated coefficients for *Total risk×Constituency Statute* are positive and significant in all models. These findings show that bank risk-return tradeoff has significantly increased following the statute passage, consistent with stakeholder-friendly banks managing risk more effectively. These findings are also in line with our baseline results that the passage of constituency statutes enhances the BHCs' loan quality and their ability to mitigate large losses, or to curtail tail risk exposures.

For robustness, we replace *Total risk* with the other four risk-taking measures in the performance regressions and obtain qualitatively similar results (unreported). We also re-estimate the performance regressions using *KLD* as an alternative stakeholder orientation measure (based on the KLD-merged sample). In line with our difference-in-differences results, the coefficient estimates on *Total risk×KLD* are positive and highly significant in all bank performance models, suggesting that our natural experiment estimates are likely to be valid.[29]

5. Conclusion

The 2007-09 financial crisis has cast doubts on the adequacy of the existing bank governance model. Practitioners and scholars have called for a more stakeholder-oriented approach of bank

[29] These results can be found in Table A.4 in the Internet Appendix.

management which places more emphasis on the interests of bank stakeholders rather than shareholders, and argue that such approach helps maintain the soundness and stability of the banking system. This paper is the first to present robust empirical evidence to support these calls.

Using the staggered enactment of US state constituency statutes, which permit directors and managers to consider non-shareholding stakeholder interests in corporate decision-making, we identify a negative and significant causal effect of stakeholder orientation on bank risk-taking. Moreover, not only does statute enactment reduce the quantity of risk-taking, further tests show that it also leads to improved quality of bank risk-taking, in terms of higher loan quality, lower tail risk exposure and higher risk-return tradeoff. Together, our findings highlight that a greater emphasis on value creation for stakeholders contributes positively to bank performance, and more generally, to systemic stability.

References

Agle, B.R., Donaldson T., Freeman E., Jensen, M., Mitchell, R., and Wodd, D. (2008) Dialogue: Toward superior stakeholder theory, *Business Ethics Quarterly* **18**, 153-190.

Amore, M.D., Schneider, C., and Žaldokas, A. (2013) Credit supply and corporate innovation, *Journal of Financial Economics* **109**, 835-855.

Arellano, M., and Bover, O. (1995) Another look at the instrumental variable estimation of error-components models, *Journal of Econometrics* **68**, 29-51.

Atanassov, J. (2013) Corporate governance, non-financial stakeholders, and innovation: Evidence from a natural experiment. Working paper.

Bainbridge, S.M. (1992) Interpreting nonshareholder constituency statutes, *Pepperdine Law Review* **19**, 971-1025.

Barzuza, M., (2009) The state of state antitakeover law, *Virginia Law Review* **95**,1973-2052.

Becker, B., and Strömberg, P. (2012) Fiduciary duties and equity-debtholder conflicts, *Review of Financial Studies* **25**, 1931-1969.

Beltratti, A., and Stulz, R.M. (2012) The credit crisis around the globe: Why did some banks perform better? *Journal of Financial Economics* **105**, 1-17.

Bertrand, M., and Mullainathan, S. (2003) Enjoying the quiet life? Corporate governance and managerial preferences, *Journal of Political Economy* **111**, 1043-1075.

Bertrand, M., Duflo, E., and Mullainathan, S. (2004) How much should we trust difference in differences estimates? *Quarterly Journal of Economics* **119**, 249-275.

Bethel, J.E., and Liebeskind, J.P. (1998) Diversification and the legal organization of the firm, *Orgnization Science* **9**, 49-67.

Blundell, R., and Bond, S. (1998) Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics* **87**, 115-143.

Citi Group (2014) Global Citizenship Report.
[http://www.citigroup.com/citi/about/data/corp_citizenship/2014-citi-global-citizenship-report-en.pdf]

Claessens, S., and Laeven, L. (2004) What drives bank competition? Some international evidence, *Journal of Money, Credit and Banking* **36**, 563-583.

Cornaggia, J., Mao, Y., Tian, X., and Wolfe, B. (2015) Does banking competition affect innovation? *Journal of Financial Economics* **115**, 189-209.

Cornell, B., and Shapiro, A.C. (1987) Corporate stakeholders and corporate finance, *Financial Management* **16**, 5-14.

Deng, X., Kang, J. K., and Sin Low, B. (2013) Corporate social responsibility and stakeholder value maximization: Evidence from mergers, *Journal of Financial Economics* **110**, 87–109.

Demirgüç-Kunt, A., and Huizinga, H. (2004) Market discipline and deposit insurance. *Journal of Monetary Economics* **51**, 375-399.

Demsetz, R.S., and Strahan, P.E. (1997) Diversification, size, and risk at bank holding companies, *Journal of Money, Credit and Banking* **29**, 300-313.

Ellul, A., and Yerramilli, V. (2013) Stronger risk controls, lower risk: Evidence from U.S. bank holding companies, *Journal of Finance* **68**, 1757–1803.

Fahlenbrach, R., and Stulz, R.M. (2011) Bank CEO incentives and the credit crisis, *Journal of Financial Economics* **99**, 11-26.

Fahlenbrach, R., Prilmeier, R., and Stulz, R.M., (2012) This time is the same: Using bank performance in 1998 to explain bank performance during the recent financial crisis, *Journal of Finance* **67**, 2139-2185.

Fisch, J.E. (2005) Measuring efficiency in corporate law: The role of shareholder primacy, *Journal of Corporation Law* **31**, 637-674.

Flammer, C., and Kacperczyk, A., The impact of stakeholder orientation on innovation: Evidence from a natural experiment, *Management Science*, forthcoming.

Flammer C., and Luo, J., Corporate social responsibility as an employee governance tool: Evidence from a quasi-experiment, *Strategic Management Journal*, forthcoming.

Fombrun, C., and Shanley, M. (1990) What's in a name? Reputation building and corporate strategy, *The Academy of Management Journal* **33**, 233-258.

Freeman, R.E. (1984) Strategic management: A stakeholder approach, Boston: Pitman.

Freeman, R.E., Wicks, A.C., and Parmar, B. (2004) Stakeholder Theory and "The Corporate Objective Revisited", *Organization Science* **15**, 364-369

Gavis, A.C. (1990) A framework for satisfying corporate directors' responsibilities under state nonshareholder constituency statutes: The use of explicit contracts, *University of Pennsylvania Law Review* **138**, 1451-1497.

Godfrey, P.C., Merrill, C.B., and Hansen, J.M. (2009) The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management analysis, *Strategic Management Journal* **30**, 425-445.

Goetz, M.R., Laeven, L., and Levine, R. (2016) Does the geographic expansion of banks reduce risk? *Journal of Financial Economics* **120**, 346-362.

Greenley, G.E., and Foxall, G.R. (1997) Multiple stakeholder orientation in UK companies and the implications for company performance, *Journal of Management Studies* **34**, 259-284.

Hale, K. (2003) Corporate law and stakeholders: Moving beyond stakeholder statutes, *Arizona Law Review* **45**, 823-856.

Hanlon, M., and Heitzman, S. (2010) A review of tax research. *Journal of Accounting and Economics* **50**, 127-178.

Heider, F., and Ljungqvist, A. (2015) As certain as debt and taxes: Estimating the tax sensitivity of leverage from exogenous state tax changes, *Journal of Financial Economics* **118**, 684-712.

Hirtle, B. (2007) Public disclosure, risk, and performance at bank holding companies. FRB of New York Staff Report No. 293.

HSBC Holding plc, 2013. Sustainability report. [http://www.hsbc.com/~/media/hsbc-com/citizenship/sustainability/pdf/140519-hsbc-sustainability-report-2013.pdf]

Imbens, G., and Wooldridge, J. (2009) Recent developments in the econometrics of program evaluation, *Journal of Economic Literature* **47**, 5-86.

Jayaratne, J., and Strahan, P.E. (1996) The finance-growth nexus: evidence from bank branch deregulation, *Quarterly Journal of Economics* **111**, 639-670.

Jensen, M., and Meckling, W. (1976) Theory of the firm: managerial behavior, agency costs, and ownership structure. *Journal of Financial Economic* **3**, 305-360.

Keeley, M. C. (1990) Deposit insurance, risk, and market power in banking, *American Economic Review* **80**, 1183–1200.

Laeven, L. (2013) Corporate governance: What's special about banks? *Annual Review of Financial Economics* **5**, 63-92.

Laeven, L., and Levine, R. (2009) Bank governance, regulation and risk taking, *Journal of Financial Economics* **93**, 259-275.

Luo, X., and Bhattacharya, C.B. (2006) Corporate social responsibility, customer satisfaction, and market value, *Journal of Marketing* **70**, 1-18.

Luoma P., and Goodstein, J. (1999) Stakeholders and corporate boards: International influences on board composition and structure, *Academic of Management Journal* **42**, 553-563.

Macey, J.R., and O'Hara, M. (2003) The corporate governance of banks, *Economic Policy Review* **9**, 91-107.

Martinez-Miera, D., and Repullo, R. (2010) Does competition reduce the risk of bank failure? *Review of Financial Studies* **23**, 3638-3664.

McDaniel, M.W. (1991) Stockholders and stakeholders, *Stetson Law Review* **21**, 121-162.

Mehran, H., Morrsion, A.D., and Shapiro, J.D. (2011) Corporate governance and banks: What have we learned from the financial crisis? FRB of New York Staff Report No.502.

Morgan, D. (2002) Rating banks: risk and uncertainty in an opaque industry. *American Economic Review* 92, 874-888.

Orts, E.W. (1992) Beyond sharheolders: interpreting corporate constituency statutes, *George Washington Law Review* **61**, 14-135.

Rice, T., and Strahan, P. (2010) Does credit competition affect small-firm finance? *Journal of Finance* **65**, 861-889.

Roberts, M., and Whited, T. (2012) Endogeneity in empirical corporate finance, in George Constantinides, Milton Harris, and Rene Stulz, eds. Handbook of the Economics of Finance Vol. 2, Elsevier.

Rosenbaum, P.R. (2009) Design of observational studies, Springer, New York.

Saunders, A., Strock, E., and Travlos, N. G. (1990) Ownership structure, deregulation, and bank risk taking, *Journal of Finance* **45**, 643–654.

Senior Supervisors Group (2009). Senior Supervisors Group report on risk management lessons from the global banking crisis of 2008. [http://www.fsb.org/2009/10/r_0910/]

Slovin, M.B., Sushka, M.E., and Polonchek, J.A. (1993) The value of bank durability: Borrowers as bank stakeholders, *Journal of Finance* **48**, 247-266.

Smith, D.G. (1998) The shareholder primacy norm. *Journal of Corporation Law* **23**, 277-323.

Springer, J.D. (1999) Corporate constituency statutes: Hollow hopes and false fears, *Annual Survey of American Law* **85**, 85-128.

The Wall Street Journal (2010) Bank Bonuses and the Communitarian Spirit. [http://www.wsj.com/articles/SB10001424052748704586504574654461600537756]

Titman, S. (1984) The effect of capital structure on a firm's liquidation decision, *Journal of Financial Economics* **13**, 137-151.

Wintoki, M.B., Linck, J.S., and Netter, J.M. (2012) Endogeneity and the dynamics of internal corporate governance, *Journal of Financial Economics* **105**, 581-606.

TABLE 1

A list showing the passage of constituency statutes over time

This table shows the staggered passage of constituency statutes in US states over time and the number of treated BHCs. The total number of treated BHCs is 166 in 28 states of constituency statute enactment.

State	Year	No. of affected BHCs
Ohio	1984	
Illinois	1985	
Maine	1986	
Arizona	1987	1
Minnesota	1987	1
New Mexico	1987	1
New York	1987	11
Wisconsin	1987	3
Idaho	1988	1
Louisiana	1988	3
Tennessee	1988	4
Virginia	1988	9
Florida	1989	5
Georgia	1989	7
Hawaii	1989	1
Indiana	1989	7
Iowa	1989	4
Kentucky	1989	5
Massachusetts	1989	7
Missouri	1989	5
New Jersey	1989	20
Oregon	1989	2
Mississippi	1990	4
Pennsylvania	1990	23
Rhode Island	1990	2
South Dakota	1990	
Wyoming	1990	
Nevada	1991	1
North Carolina	1993	11
North Dakota	1993	
Connecticut	1997	5
Vermont	1998	1
Maryland	1999	12
Texas	2006	10
Nebraska	2007	
Total	35 states	166 BHCs incorporated in 28 states

TABLE 2
Summary statistics and correlation matrix

The table presents the summary statistics (Panel A) and correlation matrix (Panel B) of the bank variables used in this study. Our sample consists of 939 (9,248 bank-year observations) publicly traded US BHCs that file FR Y-9C reports with the Federal Reserve over the 1986-2012 period. All bank fundamental information is obtained from the Bank Regulatory Database. All stock information of the BHCs are downloaded from CRSP. All other accounting information and firm attributes are from Compustat. All continuous variables are winsorized at the 1st and 99th percentiles.

Panel A: Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Median	Max
Total risk	9,248	0.409	0.239	0.129	0.343	1.558
IVol	9,248	0.382	0.231	0.115	0.319	1.514
Z-score	9,248	0.298	0.165	-0.002	0.273	0.958
Bad loan/TA	9,248	0.007	0.011	0.000	0.003	0.063
Tail risk	9,248	0.054	0.031	0.015	0.045	0.199
ROA	9,248	0.011	0.012	-0.043	0.013	0.032
ROE	9,248	0.121	0.173	-0.866	0.157	0.366
NONINT/TA	9,248	0.012	0.010	0.001	0.010	0.063
NONCORE/TA	9,248	0.126	0.082	0.016	0.106	0.435
LOAN/TA	9,248	0.649	0.119	0.250	0.661	0.875
Deflated total assets (in mil.)	9,248	17,707	110,729	111	1,412	2,069,691
MVBVEQ	9,248	1.480	0.743	0.213	1.367	4.091
FREQ	9,248	0.002	0.004	0.000	0.001	0.120
Annual return	9,248	0.140	0.375	-0.752	0.112	1.353

Panel B: Correlation matrix

	Variables	V1	V2	V3	V4	V5	V6	V7	V8	V9
V1	*ROA*	1.00	0.89	0.21	-0.20	-0.09	0.10	0.51	-0.18	0.37
V2	*ROE*	—	1.00	0.17	-0.16	-0.09	0.12	0.44	-0.18	0.37
V3	*NONINT/TA*	—	—	1.00	0.03	-0.17	0.39	0.24	0.14	0.06
V4	*NONCORE/TA*	—	—	—	1.00	0.16	0.10	-0.05	0.11	-0.18
V5	*LOAN/TA*	—	—	—	—	1.00	-0.15	-0.05	-0.04	-0.12
V6	*Ln(TA)*	—	—	—	—	—	1.00	0.17	0.37	-0.01
V7	*MVBVEQ*	—	—	—	—	—	—	1.00	-0.03	0.38
V8	*FREQ*	—	—	—	—	—	—	—	1.00	-0.06
V9	*Annual returns*	—	—	—	—	—	—	—	—	1.00
V10	*Total risk*	-0.59	-0.57	-0.08	0.14	0.08	-0.22	-0.35	0.22	-0.26
V11	*IVol*	-0.58	-0.56	-0.13	0.11	0.09	-0.32	-0.36	0.12	-0.22
V12	*Z-score*	0.46	0.33	0.11	-0.12	-0.04	0.13	0.24	-0.07	0.04
V13	*Bad loan /TA*	-0.56	-0.55	-0.06	0.24	0.19	0.02	-0.37	0.21	-0.28
V14	*Tail risk*	-0.60	-0.58	-0.08	0.16	0.10	-0.21	-0.38	0.21	-0.35

TABLE 3
Constituency statutes and bank risk-taking

This table reports the results of the regressions that examine the impact of stakeholder orientation on bank risk-taking. The regression models follow the difference-in-differences methodology of equation (2) that exploits the state-level staggered passage of constituency statutes. The dependent variables are bank total risk (*Total risk*), idiosyncratic risk (*IVol*), Z-score (*Z-score*), bad loans to total assets (*Bad loan/TA*), and tail risk (*Tail risk*). The main explanatory variable of interest is *Constituency Statute*, which is a treatment dummy variable taking on a value of one when a constituency statue is enacted in a state where a BHC is incorporated, and a value of zero otherwise. All other variables are defined in Appendix A. All regressions are estimated with bank and year fixed effects, and standard errors reported in parentheses are clustered at the bank level. Data are for the 1986-2012 period. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent variables	*Total risk*	*IVol*	*Z-score*	*Bad loan/TA*	*Tail risk*
	1	2	3	4	5
Constituency Statute	-0.025**	-0.027**	0.037***	-0.001***	-0.003*
	(0.012)	(0.012)	(0.009)	(0.000)	(0.002)
ROA	-7.603***	-7.694***	4.401***	-0.383***	-0.981***
	(0.428)	(0.427)	(0.174)	(0.021)	(0.053)
NONINT/TA	3.694***	3.346***	-0.011	0.138***	0.440***
	(0.737)	(0.689)	(0.436)	(0.031)	(0.087)
NONCORE/TA	0.058	0.093*	-0.146***	0.008***	0.010
	(0.053)	(0.053)	(0.039)	(0.003)	(0.007)
LOAN/TA	-0.013	-0.018	0.058	0.008***	0.000
	(0.052)	(0.050)	(0.037)	(0.002)	(0.006)
Ln(TA)	-0.048***	-0.058***	0.032***	0.001**	-0.005***
	(0.010)	(0.011)	(0.008)	(0.000)	(0.001)
MVBVEQ	-0.001	-0.002	-0.018***	-0.001***	-0.003***
	(0.006)	(0.006)	(0.004)	(0.000)	(0.001)
FREQ	7.817***	5.097***	-0.598	0.095**	0.925***
	(1.199)	(1.101)	(0.430)	(0.040)	(0.178)
Intercept	0.725***	0.802***	0.015	-0.011***	0.089***
	(0.082)	(0.081)	(0.059)	(0.003)	(0.010)
Bank FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Obs.	9,248	9,248	9,248	9,248	9,248
Adj. R^2	0.585	0.533	0.408	0.612	0.611

TABLE 4
Robustness checks

This table reports the results of our robustness tests. The dependent variables are the five bank risk-taking measures, including total risk (*Total risk*), idiosyncratic risk (*IVol*), Z-score (*Z-score*), bad loans to assets (*Bad loan/TA*), and tail risk (*Tail risk*). For brevity, we only report the estimated coefficients and firm-clustered robust standard errors of *Constituency Statute*, which is a treatment dummy variable taking on a value of one when a constituency statue is enacted in a state where a BHC is incorporated, and a value of zero otherwise. The bank control variables are identical to those used in the baseline model and are defined in the Appendix. Rows 1 and 2 cluster the standard errors by state of location and state of incorporation, respectively. Row 3 adjusts for serial correlation in the error terms using the two-step procedure following Bertrand, Duflo and Mullainathan (2004). Rows 4 and 5 control for state of location fixed effects and state of incorporation fixed effects, respectively. Row 6 controls for state economic activity, including the state GDP growth and log population. Row 7 reports the results of weighted least squares (WLS) regressions with weights calculated as the inverse of the number of bank-year observations in each state of incorporation. Row 8 exclude states without statute passage (excluded 16 states). Row 9 controls for regional time trend by including region-year fixed effects. Rows 10 to Row 16 control for the time-varying effects of bank characteristics on risk-taking. Row 17 restricts the sample to end in 1995. Row 18 controls for banking competition, as measured by the concentration of loans within states of location. All regressions are estimated with bank and year fixed effects, and standard errors reported in parentheses are clustered at the bank level, if not stated otherwise. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

		Dependent variables:									
		Total risk		*IVol*		*Z-score*		*Bad loan/TA*		*Tail risk*	
Row		*Coef.*	*S.E*	*Coef.*	*S.E*	*Coef.*	*S.E*	*Coef.*	*S.E*	*Coef.*	*S.E*
1	Clustered by state of location	-0.025***	(0.009)	-0.027***	(0.008)	0.037***	(0.010)	-0.001	(0.001)	-0.003**	(0.001)
2	Clustered by state of incorporation	-0.025**	(0.010)	-0.027***	(0.010)	0.037***	(0.009)	-0.001*	(0.001)	-0.003**	(0.001)
3	Serial correlation in the error terms	-0.017**	(0.008)	-0.017**	(0.008)	0.018***	(0.006)	-0.001**	(0.000)	-0.002*	(0.001)
4	State of location FE	-0.022**	(0.009)	-0.023**	(0.009)	0.000	(0.010)	-0.002*	(0.001)	-0.003**	(0.001)
5	State of incorporation FE	-0.030**	(0.014)	-0.033**	(0.014)	0.023**	(0.010)	-0.001***	(0.000)	-0.004**	(0.002)
6	Controlling for state economic condition	-0.026**	(0.012)	-0.028**	(0.012)	0.037***	(0.009)	-0.001***	(0.000)	-0.003*	(0.002)
7	WLS	-0.038**	(0.019)	-0.039**	(0.018)	0.042***	(0.016)	-0.001*	(0.001)	-0.004*	(0.002)
8	Exclude states with no statute passage	-0.045**	(0.022)	-0.047**	(0.021)	0.037*	(0.021)	-0.001	(0.001)	-0.006**	(0.003)
9	Controlling for *Region×Year FE*	-0.025*	(0.013)	-0.028**	(0.013)	0.045***	(0.009)	-0.002***	(0.000)	-0.003	(0.002)
10	Controlling for *ROA×Year*	-0.022*	(0.012)	-0.024**	(0.011)	0.038***	(0.009)	-0.001**	(0.000)	-0.003*	(0.001)
11	Controlling for *NONINT/TA×Year*	-0.028**	(0.012)	-0.030**	(0.012)	0.038***	(0.010)	-0.001***	(0.000)	-0.003**	(0.001)
12	Controlling for *NONCORE/TA×Year*	-0.028**	(0.012)	-0.029**	(0.012)	0.040***	(0.010)	-0.001**	(0.000)	-0.003**	(0.002)
13	Controlling for *LOAN/TA×Year*	-0.022*	(0.013)	-0.023*	(0.012)	0.037***	(0.009)	-0.001**	(0.000)	-0.003*	(0.002)
14	Controlling for *Ln(TA)×Year*	-0.021*	(0.012)	-0.023**	(0.011)	0.037***	(0.009)	-0.001***	(0.000)	-0.002*	(0.001)
15	Controlling for *MVBVEQ×Year*	-0.022*	(0.012)	-0.023**	(0.011)	0.032***	(0.010)	-0.001**	(0.000)	-0.003*	(0.001)
16	Controlling for *FREQ×Year*	-0.023*	(0.013)	-0.025**	(0.012)	0.037***	(0.010)	-0.001**	(0.000)	-0.003*	(0.002)
17	Time window up to 1995 (3,058 obs.)	-0.028**	(0.014)	-0.029**	(0.014)	0.028**	(0.011)	-0.001*	(0.000)	-0.003*	(0.002)
18	Controlling for *H-index* and *H-index*^{2} (State of location)	-0.027**	(0.012)	-0.029**	(0.012)	0.039***	(0.009)	-0.001***	(0.000)	-0.003**	(0.002)

TABLE 5
Dynamic treatment effects

This table reports results of the regressions that examine the dynamic treatment effects of the enactment of the constituency statutes on bank risk-taking. Specifically, we regress our five bank risk-taking measures (*Total risk*, *IVol*, *Z-score*, *Bad loan/TA*, and *Tail risk*) on four indicator variables—$Before^{-2\ or\ -1}$, $Current^{0}$, $After^{+1}$, and $After^{>=+2}$—to examine *when* the significant effects of statute enactment occur. $Before^{-2\ or\ -1}{}_{st}$ is a dummy variable equal to one if it is one or two years before a constituency statute is enacted, $Current^{0}{}_{st}$ is a dummy variable equal to one if it is the year of a statute enactment, $After^{+1}{}_{st}$ is a dummy variable equal to one if it is one year after a statute enactment, and $After^{>=+2}{}_{st}$ is dummy variable equal to one if it is two or more years after a constituency statute is enacted. All other variables are defined in Appendix A. All regressions are estimated with bank and year fixed effects, and standard errors reported in parentheses are clustered at the bank level. Data are for the 1986-2012 period. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent variables	*Total risk*	*IVol*	*Z-score*	*Bad loan/TA*	*Tail risk*
	1	2	3	4	5
$Before^{-2\ or\ -1}$	-0.015	-0.017	0.010	-0.001	-0.002
	(0.013)	(0.013)	(0.012)	(0.000)	(0.002)
$Current^{0}$	-0.021	-0.024	0.037**	-0.001**	-0.002
	(0.016)	(0.015)	(0.016)	(0.001)	(0.002)
$After^{+1}$	-0.025	-0.027	0.035**	-0.002**	-0.003
	(0.018)	(0.017)	(0.016)	(0.001)	(0.002)
$After^{>=+2}$	-0.042**	-0.044**	0.047***	-0.002***	-0.005**
	(0.019)	(0.019)	(0.014)	(0.001)	(0.002)
ROA	-7.602***	-7.694***	4.399***	-0.383***	-0.981***
	(0.427)	(0.426)	(0.174)	(0.021)	(0.053)
NONINT/TA	3.697***	3.349***	-0.012	0.138***	0.441***
	(0.737)	(0.689)	(0.435)	(0.031)	(0.087)
NONCORE/TA	0.057	0.092*	-0.145***	0.008***	0.009
	(0.054)	(0.054)	(0.039)	(0.003)	(0.007)
LOAN/TA	-0.012	-0.017	0.057	0.008***	0.000
	(0.052)	(0.050)	(0.037)	(0.002)	(0.006)
Ln(TA)	-0.048***	-0.057***	0.032***	0.001**	-0.005***
	(0.010)	(0.011)	(0.008)	(0.000)	(0.001)
MVBVEQ	-0.001	-0.002	-0.018***	-0.001***	-0.003***
	(0.006)	(0.006)	(0.004)	(0.000)	(0.001)
FREQ	7.825***	5.105***	-0.603	0.095**	0.926***
	(1.200)	(1.102)	(0.430)	(0.040)	(0.178)
Intercept	0.726***	0.803***	0.014	-0.011***	0.090***
	(0.082)	(0.081)	(0.059)	(0.003)	(0.010)
Bank FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Obs.	9,248	9,248	9,248	9,248	9,248
Adj. R^2	0.586	0.534	0.408	0.612	0.611

TABLE 6
Placebo tests

This table reports the results of the three placebo tests that randomize the assignment of the enactment of constituency statutes. In placebo test 1, we obtain the event year distribution of the constituency statutes and then randomly assign states into each of these enactment years (without replacement) following the distribution. In other words, we keep the distribution of the enactment years but disrupt the correct assignment of enactment years to states. In placebo test 2, among the 35 treated states, we randomly assign the enactment years to these states. Therefore, we keep the distribution of the state unchanged, but disrupt the correct timing of the enactment. In placebo test 3, we randomize both the treatment years and states (with no replacement, i.e., there are no multiply-treated states). For each test, within each randomized placebo sample, we regress bank risk-taking on the placebo constituency statute treatment variable using the baseline difference-in-differences model and store its coefficient estimates. We repeat this procedure for 5,000 times to obtain a distribution of the placebo statute estimates and then compare them with the coefficients estimated from the real data sample. Panel A reports the average coefficients and standard errors for the placebo constituency statute treatment variable across the 5,000 placebo samples for each placebo test for the five risk-taking measures. Panel B reports the number of cases (and in percentage) in which the placebo coefficient estimate for Constituency statutes are smaller than the coefficient estimate from the real data sample (reported in Table 3). ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Regression results

Dependent variables		*Total risk*	*IVol*	*Z-score*	*Bad loan/TA*	*Tail risk*
		1	2	3	4	5
Placebo test 1 (Keeping event year distribution the same)	*Placebo Constituency Statute*	0.001	0.001	-0.003	0.000	0.000
		(0.014)	(0.014)	(0.013)	(0.001)	(0.002)
Placebo test 2 (Randomizing the treatment years)	*Placebo Constituency Statute*	-0.003	-0.004	-0.003	-0.001	0.000
		(0.010)	(0.010)	(0.009)	(0.001)	(0.001)
Placebo test 3 (Randomizing both the treatment years and states)	*Placebo Constituency Statute*	0.000	0.000	0.000	0.000	0.000
		(0.010)	(0.010)	(0.009)	(0.001)	(0.001)

Panel B: Distribution of placebo coefficient estimates

Number of placebo samples with **smaller** placebo coefficient than the actual coefficient estimate for *Constituency Statutes* (as reported in Table 3).	Placebo test 1	Yes	431	367	4,995	415	428
		No	4,569	4,633	5	4,585	4,572
		%	0.914	0.927	0.999	0.917	0.914
	Placebo test 2	Yes	77	43	5,000	998	94
		No	4,923	4,957	0	4,002	4,906
		%	0.985	0.991	1.000	0.800	0.981
	Placebo test 3	Yes	91	59	4,998	272	79
		No	4,909	4,941	2	4,728	4,921
		%	0.982	0.988	1.000	0.946	0.984

TABLE 7
Coincidental banking policy changes

Panel A of this table reports the number of treated BHCs and the years of changes in constituency statutes, the interstate and intrastate deregulation policies, and the erection of out-of-state entry barriers for interstate branching activities (as captured by the Rice and Strahan index). The details for interstate deregulation are collected from Amore, Schneider and s Žaldokas (2013); the details for intrastate deregulation are collected from Jayaratne and Strahan (1996); and the details for the out-of-state entry barriers for interstate branching activities are collected from Rice and Strahan (2010). The Rice and Strahan index (*RS index*) has four components. We add one to *RS index* if a state has any one of the following provisions, (i) the minimum age of the target institution, (ii) de novo interstate branching, (iii) the acquisition of individual branches, and (iv) a state-wide deposit cap. The last four columns show the years in which the state has put a provision in place. For some states, we use ↑ and ↓ to denote an addition and removal of an entry barrier, respectively. We highlight in grey shading those state-years in which the enactment of constituency statutes coincided with other policy changes and there are three in total affecting 13 BHCs.

Panel A: Description of coincidental banking policy changes

State	No. of affected BHCs	Constituency statutes	Interstate deregulation	Intrastate deregulation	*RS index*			
					(i) Min. of age of institution	(ii) Allows de novo interstate branching	(iii) Interstate branching with acquisitions	(iv) Statewide deposits
Ohio		1984	1985	1979	—	—	—	—
Illinois		1985	1986	1988	↑1997; ↓2004	↑1997; ↓2004	↑1997; ↓2004	—
Maine		1986	1978	1975	—	—	—	—
Arizona	1	1987	1986	1972	1996	1996	↑1996; ↓2001	—
Minnesota	1	1987	1986	—	1997	1997	1997	—
New Mexico	1	1987	1989	1991	1996	1996	1996	—
New York	11	1987	1982	1976	1997	1997	—	—
Wisconsin	3	1987	1987	1990	1996	1996	1996	—
Idaho	1	1988	1985	1972	1995	1995	1995	—
Louisiana	3	1988	1987	1988	1997	1997	1997	—
Tennessee	4	1988	1985	1985	1997	↑1997; ↓2001	↑1997; ↓1998	—
Virginia	9	1988	1985	1978	—	—	—	—
Florida	5	1989	1985	1988	1997	1997	1997	—
Georgia	7	1989	1985	1983	1997	1997	1997	—
Hawaii	1	1989	>1993	1986	↑1997; ↓2001	↑1997; ↓2001	↑1997; ↓2001	—
Indiana	7	1989	1986	1989	1998	—	—	—
Iowa	4	1989	1991	—	1996	1996	1996	1996
Kentucky	5	1989	1984	1990	↑1997; ↓2000	1997	1997	1997
Massachusetts	7	1989	1983	1984	1996	—	—	—
Missouri	5	1989	1986	1990	1995	1995	1995	1995
New Jersey	20	1989	1986	1977	—	1996	—	—

Oregon	2	1989	1986	1985	1997	1997	1997	—
Mississippi	4	1990	1988	1986	1997	1997	1997	1997
Pennsylvania	23	1990	1986	1982	—	—	—	—
Rhode Island	2	1990	1984	1972	—	—	—	—
South Dakota		1990	1988	1987	1996	1996	1996	—
Wyoming		1990	1987	1988	1997	1997	1997	—
Nevada	1	1991	1985	1972	1995	1995	1995	—
North Carolina	11	1993	1985	1972	—	—	—	—
North Dakota		1993	1991	1987	—	↑1997; ↓2003	↑1997; ↓2003	1997
Connecticut	5	1997	1983	1980	1995	—	—	—
Vermont	1	1998	1988	1972	↑1996; ↓2001	↑1996; ↓2001	—	—
Maryland	12	1999	1985	1972	—	—	—	—
Texas	10	2006	1987	1988	1995	↑1995; ↓1999	↑1995; ↓1999	1995
Nebraska		2007	—	—	1997	1997	1997	1997

Panel B: Controlling for coincidental banking policy changes

Dependent variables	*Total risk*	*IVol*	*Z-score*	*Bad loan/TA*	*Tail risk*
	1	2	3	4	5
			(1) Excluding WI, LA and IN		
Constituency Statute	-0.024*	-0.026**	0.036***	-0.001***	-0.003*
	(0.013)	(0.013)	(0.010)	(0.000)	(0.002)
Bank controls	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Obs.	8,726	8,726	8,726	8,726	8,726
Adj. R^2	0.582	0.532	0.411	0.610	0.607
			(2) Controlling for Inter and Intra		
Constituency Statute	-0.025**	-0.027**	0.037***	-0.001***	-0.003*
	(0.013)	(0.012)	(0.009)	(0.000)	(0.002)
Inter	-0.006	-0.009	0.017	0.000	0.000
	(0.020)	(0.021)	(0.019)	(0.000)	(0.003)
Intra	-0.011	-0.011	0.029*	0.001	-0.002
	(0.020)	(0.020)	(0.017)	(0.001)	(0.003)
Bank controls	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Obs.	9,248	9,248	9,248	9,248	9,248
Adj. R^2	0.585	0.533	0.409	0.612	0.611
			(3) Controlling for RS index		
Constituency Statute	-0.023*	-0.025**	0.036***	-0.001***	-0.003*
	(0.012)	(0.012)	(0.009)	(0.000)	(0.002)
RS index	0.005	0.005	-0.002	0.000	0.001
	(0.004)	(0.003)	(0.004)	(0.000)	(0.000)
Bank controls	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Obs.	9,248	9,248	9,248	9,248	9,248
Adj. R^2	0.586	0.534	0.408	0.612	0.611

(4) Controlling for Inter, Intra and RS index					
Constituency Statute	-0.023*	-0.026**	0.037***	-0.001***	-0.003*
	(0.013)	(0.012)	(0.009)	(0.000)	(0.002)
Inter	-0.007	-0.011	0.017	0.000	-0.000
	(0.020)	(0.020)	(0.019)	(0.000)	(0.003)
Intra	-0.013	-0.014	0.030*	0.001	-0.003
	(0.020)	(0.020)	(0.017)	(0.001)	(0.003)
RS index	0.005	0.005	-0.003	0.000	0.001*
	(0.003)	(0.003)	(0.004)	(0.000)	(0.000)
Bank controls	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Obs.	9,248	9,248	9,248	9,248	9,248
Adj. R^2	0.586	0.534	0.409	0.612	0.611

TABLE 8
Placebo constituency statutes using bordering states

This table reports the results of our placebo test which use the treated states' bordering states as placebo states (*Placebo Constituency Statute*) for the baseline risk-taking regressions. For each treated state, we find an adjacent state that has the closest GDP (pre-treatment) and assign to it the statute passage. The details of the placebo states can be found in Table A.2 of the Internet Appendix. The dependent variables are bank total risk (*Total risk*), idiosyncratic risk (*IVol*), Z-score (*Z-score*), bad loans to total assets (*Bad loan/TA*), and tail risk (*Tail risk*). All other variables are defined in Appendix A. All regressions are estimated with bank and year fixed effects, and standard errors reported in parentheses are clustered at the bank level. Data are for the 1986-2012 period. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent variables	*Total risk*	*IVol*	*Z-score*	*Bad loan/TA*	*Tail risk*
	1	2	3	4	5
Placebo Constituency Statute	0.007	0.009	-0.006	-0.000	0.001
	(0.012)	(0.012)	(0.010)	(0.001)	(0.002)
ROA	-7.606***	-7.699***	4.404***	-0.383***	-0.981***
	(0.428)	(0.427)	(0.173)	(0.021)	(0.053)
NONINT/TA	3.671***	3.318***	0.017	0.138***	0.437***
	(0.736)	(0.689)	(0.437)	(0.031)	(0.087)
NONCORE/TA	0.059	0.094*	-0.147***	0.008***	0.010
	(0.053)	(0.053)	(0.040)	(0.003)	(0.007)
LOAN/TA	-0.013	-0.018	0.059	0.008***	0.000
	(0.052)	(0.050)	(0.036)	(0.002)	(0.006)
Ln(TA)	-0.049***	-0.058***	0.033***	0.001**	-0.005***
	(0.010)	(0.010)	(0.008)	(0.000)	(0.001)
MVBVEQ	-0.001	-0.002	-0.018***	-0.001***	-0.003***
	(0.006)	(0.006)	(0.004)	(0.000)	(0.001)
FREQ	7.802***	5.080***	-0.578	0.094**	0.923***
	(1.199)	(1.102)	(0.433)	(0.040)	(0.178)
Intercept	0.728***	0.805***	0.010	-0.010***	0.090***
	(0.082)	(0.081)	(0.059)	(0.003)	(0.010)
Bank FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Obs.	9,248	9,248	9,248	9,248	9,248
Adj. R^2	0.585	0.533	0.406	0.612	0.611

TABLE 9
Treated BHCs and neighboring control BHCs across state borders

This table reports the results of the regressions examining whether our difference-in-differences estimates are confounded by unobserved changes in local economic conditions. For each treated BHC, we match to a control firm that is located in a neighboring state without passing the constituency statute and closest in bank size. For each matched pair of BHCs, we include the bank-years before and after the passage of statute to construct a matched subsample. To increase the likelihood that the treated BHC and control BHC share similar local economic conditions, we first remove all matched pairs with distance more than 500 miles. We also restrict the distance between the treated and control BHCs to lie within 250 miles and 125 miles, which correspond to the 75th and 50th percentiles in distance of the matched sample, respectively. On each distance restricted subsample, we estimate the baseline difference-in-differences regression of equation (2). The dependent variables include bank total risk (*Total risk*), idiosyncratic risk (*IVol*), Z-score (*Z-score*), bad loans to total assets (*Bad loan/TA*), and tail risk (*Tail risk*). The main explanatory variable of interest is *Constituency Statute*, which is a treatment dummy variable taking on a value of one when a constituency statue is enacted in a state where a BHC is incorporated, and a value of zero otherwise. The bank controls are identical to those used in the baseline model and are defined in the Appendix. All regressions are estimated with bank and year fixed effects, and standard errors reported in parentheses are clustered at the bank level. We only report the estimates for *Constituency Statute* for brevity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent variables	*Total risk*	*IVol*	*Z-score*	*Bad loan/TA*	*Tail risk*
	1	2	3	4	5
Panel A: Within 500 miles					
Constituency Statute	-0.081***	-0.076***	0.062**	-0.002	-0.010***
	(0.027)	(0.026)	(0.027)	(0.002)	(0.004)
Bank controls	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Obs.	520	520	520	520	520
Adj. R^2	0.772	0.779	0.653	0.770	0.779
Panel B: Within 250 miles					
Constituency Statute	-0.084**	-0.078**	0.058*	-0.003	-0.011**
	(0.035)	(0.034)	(0.032)	(0.002)	(0.004)
Bank controls	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Obs.	396	396	396	396	396
Adj. R^2	0.767	0.772	0.663	0.770	0.777

Panel C: Within 125 miles					
Constituency Statute	-0.101**	-0.096**	0.033	-0.003	-0.011*
	(0.047)	(0.047)	(0.054)	(0.004)	(0.006)
Bank controls	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Obs.	176	176	176	176	176
Adj. R^2	0.773	0.774	0.554	0.785	0.777

TABLE 10
Evaluating the inclusion restriction using the KLD index

This table reports results of the validation tests that regress bank risk-taking on an alternative firm-level measure of stakeholder orientation based on KLD data. The dependent variables are bank total risk (*Total risk*), unsystematic risk (*IVol*), Z-score (*Z-score*), bad loans to total assets (*Bad loan /TA*), and tail risk (*Tail risk*). The main explanatory variable of interest is *KLD*. To construct *KLD*, we follow the two-step approach of Deng, Kang and Low (2013). First, in each of the five dimensions—community, natural environment, product quality, employees and diversity—we standardize the number of strengths and concerns by the corresponding number of strength and concern indicators. Second, we sum the standardized ratings across the five dimensions for strengths and concerns, respectively, and then take the difference between the standardized total strength score and the standardized total concern score. This difference is *KLD* of which a larger value is assigned to a more stakeholder-oriented BHC in a given year. All other variables are defined in Appendix A. Panel A reports results of the regressions that are estimated with bank and year fixed effects. Panel B reports results of change-on-change regressions that replace both the dependent and explanatory variables in Panel A with their changes over the past year. Year fixed effects are included in all regressions in Panel B. Panel C reports the one-step dynamic panel system GMM estimator developed by Arellano and Bover (1995) and Blundell and Bond (1998). We use two and all further period lagged bank risk-taking measures and one and all further period lags of all right hand side variables as instruments for the difference equation and the corresponding lagged differences as instruments for the regressions in level. AR(1) and AR(2) report the *p*-values of tests for first- and second-order serial correlations of the first-difference residuals, respectively. We also report the *p*-value of the Hansen test of over-identifying restrictions under the null of instrument validity. Standard errors reported in parentheses are clustered at the bank level in both panels. Only the variables of interest are reported for brevity. Data are for the 1991-2010 period. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent variables	*Total risk*	*IVol*	*Z-score*	*Bad loan/TA*	*Tail risk*
	1	2	3	4	5
Panel A: Bank fixed effects model					
KLD	-0.028***	-0.018**	0.017*	-0.002*	-0.004***
	(0.010)	(0.009)	(0.010)	(0.001)	(0.001)
Bank controls	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Obs.	1,557	1,557	1,557	1,557	1,557
Adj. R^2	0.884	0.836	0.725	0.647	0.882

Panel B: Change-on-change regressions					
ΔKLD	-0.044***	-0.023**	0.019*	-0.000	-0.005***
	(0.014)	(0.011)	(0.011)	(0.001)	(0.002)
Bank controls (in changes)	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Obs.	1,198	1,198	1,198	1,198	1,198
Adj. R^2	0.808	0.739	0.602	0.272	0.802
Panel C: Dynamic Panel regressions					
Risk (-1)	0.406***	0.405***	0.641***	0.819***	0.341***
	(0.046)	(0.052)	(0.027)	(0.128)	(0.043)
KLD	-0.052***	-0.041***	0.027***	-0.002*	-0.007***
	(0.012)	(0.010)	(0.008)	(0.001)	(0.002)
Bank controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Obs.	1,206	1,206	1,206	1,206	1,206
AR(1)	0.000	0.000	0.000	0.004	0.000
AR(2)	0.105	0.177	0.116	0.812	0.114
Hansen *J*-Statistics *p*-value	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]

TABLE 11
Stakeholder orientation and bank risk-return sensitivity

This table reports the results of regressions examining the relation between the passage of constituency statutes and bank risk-return sensitivity. The dependent variables are bank performance measures, including return on assets (*ROA*), return on equity (*ROE*), market to book equity ratio (*MVBVEQ*), and annual buy-and-hold stock returns (*Annual return*). *Total risk* is bank total risk. *Constituency Statute* is a treatment dummy variable taking on a value of one when a constituency statue is enacted in a state where a BHC is incorporated, and a value of zero otherwise. The bank control variables are defined in the Appendix. All regressions are estimated with bank and year fixed effects, and standard errors reported in parentheses are clustered at the bank level. Data are for the 1986-2012 period. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent variables	*ROA*	*ROE*	*MVBVEQ*	*Annual returns*
	1	2	3	4
Total risk	-0.021***	-0.239***	-0.470***	-0.322***
	(0.001)	(0.016)	(0.091)	(0.049)
Constituency Statute	-0.002***	-0.033***	-0.089	-0.061**
	(0.001)	(0.008)	(0.056)	(0.024)
Total risk×Constituency Statute	0.004**	0.044**	0.128*	0.194***
	(0.002)	(0.018)	(0.071)	(0.052)
NONINT/TA	0.238***	2.416***	6.412**	2.837***
	(0.029)	(0.335)	(2.590)	(0.795)
NONCORE/TA	-0.010***	-0.054*	0.116	-0.422***
	(0.003)	(0.033)	(0.203)	(0.093)
LOAN/TA	0.004**	0.024	0.126	-0.210***
	(0.002)	(0.018)	(0.131)	(0.061)
Ln(TA)	-0.001**	-0.006	-0.017	-0.114***
	(0.000)	(0.004)	(0.033)	(0.012)
Intercept	0.019***	0.236***	1.340***	1.141***
	(0.003)	(0.032)	(0.245)	(0.095)
Bank FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Obs.	9,248	9,248	9,248	9,248
Adj. R^2	0.421	0.368	0.532	0.426

Appendix. Detailed variable definitions and sources.

Variables	Description	Source
Bank risk-taking (Risk):		
Total risk	A measure of total bank risk, computed as the annualized standard deviation of daily stock returns in each calendar year.	CRSP
IVol	A measure of bank idiosyncratic risk, computed as the annualized standard deviation of the residuals of the following time-series regressions (estimated for each BHC in each year): $$R_{it} = \alpha_i + \beta_{1i} R_{mkt,t} + \beta_{2i} INTEREST_t + \varepsilon_{it}.$$ where R_{it} is the daily stock returns of BHC i, $R_{mkt,t}$ is excess market returns on the value-weighted CRSP market index, and $INTEREST_t$ is the yield on three-month Treasury bills. The time-series regression is estimated for each BHC in each calendar year. We require a minimum of 60 available daily stock return observations for the estimation. The use of no minimum requirements, 30-day, or 90-day minimum requirements in the estimations do not affect our main conclusions.	CRSP
Z-score	A measure of bank risk-taking, defined as follows: $$Z_{it} = (ROA_{it} + CAR_{it})/\sigma_{it}$$ where *ROA* is return on assets, *CAR* is the capital-asset ratio, and σ is the annualized standard deviation of bank daily stock returns.	FR Y-9C; CRSP

Bad loan/TA	A measure of credit risk on a BHC's loan portfolio, calculated as the ratio of the sum of loans 90 days or more past due and nonaccrual loans to total assets.	FR Y-9C
Tail risk	A measure of bank tail risk exposure, defined as the negative of the average return on a BHC's stock over its 5% worst return days in a given calendar year.	CRSP
Stakeholder orientation:		
Constituency Statute	A treatment dummy variable, equal to one when a constituency statute is enacted and zero otherwise.	Barzuza (2009)
$Before^{-1 \text{ or } -2}$	A dummy variable, equal to one for years that occur one or two years before a constituency statute is enacted and zero otherwise.	Barzuza (2009)
$Current^{0}$	A dummy variable, equal to one for years of statute enactment and zero otherwise.	Barzuza (2009)
$After^{+1}$	A dummy variable, equal to one for years that occur after a constituency statute is enacted and zero otherwise.	Barzuza (2009)
$After^{>=+2}$	A dummy variable, equal to one for years that occur two or more years after a constituency statute is enacted and zero otherwise.	Barzuza (2009)
KLD	A firm-level measure of stakeholder orientation based on KLD data. Following Deng, Kang and Low (2013), we use a two-step approach to construct an overall KLD rating (KLD) for each BHC that measures the banks' overall well-beings to stakeholders. First, for each of the five dimensions—community, natural environment, product quality, employees and diversity—we standardize the number of strengths and concerns by the corresponding number of strength and concern indicators. Second, we sum the standardized ratings across the five dimensions of strengths and concerns, respectively, then take the difference	KLD

	between the standardized total strength score and the standardized total concern score to arrive at *KLD*.	
Bank variables:		
ROA	Bank returns on assets, defined as earnings before taxes and extraordinary items divided by total assets.	FR Y-9C
ROE	Bank returns on equity, defined as earnings before taxes and extraordinary items divided by book equity.	FR Y-9C
NONINT/TA	Ratio of total non-interest income to total assets.	FR Y-9C
NONCORE/TA	Ratio of "non-core" deposits to total assets. Core deposits include deposits held in domestic offices of subsidiaries of a BHC, excluding all time deposits of over $100,000 and any brokered deposits. Non-core deposits are calculated by subtracting core deposits from total deposits.	FR Y-9C
LOAN/TA	Ratio of total loans to total assets.	FR Y-9C
TA	Deflated total assets, deflated by the US GDP deflator with a base year of 2005.	FRY-9C; Federal Reserve Bank of St. Louis
MVBVEQ	The ratio of the market value of equity to the book value of common equity. The market value of equity is calculated as the product of stock price and the number of shares outstanding from CRSP.	FR Y-9C; CRSP
FREQ	The ratio of the average daily trading volume of shares in a year to the number of shares outstanding at the beginning of each year.	CRSP; Compustat
Annual return	Bank annual buy-and-hold stock returns.	CRSP

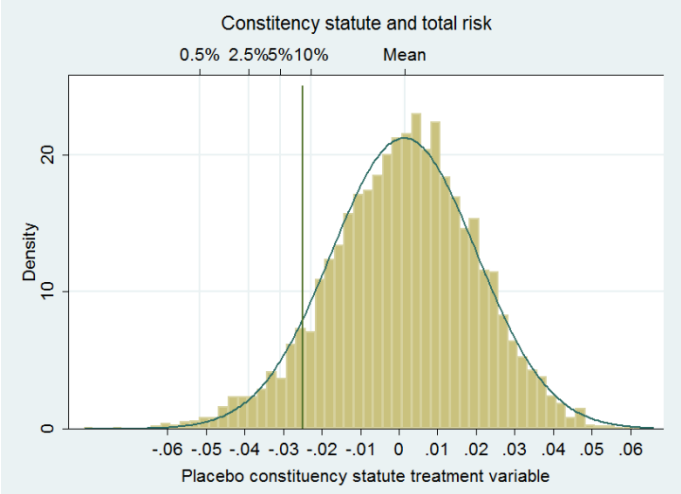
H-index (State of location)	Bank competition, calculated as the sum of a BHC's squared market shares in total loans granted in the state of location in a given year.	FR Y-9C; Compustat
H-index (Incorp state)	Bank competition, calculated as the sum of a BHC's squared market shares in total loans granted in the state of incorporation in a given year.	FR Y-9C; Compustat
RS index	The Rice-Strahan index of interstate banking deregulation based on Rice and Strahan (2010). It takes on values from zero (deregulated) to four (highly regulated) based on deregulation changes in a state.	Rice and Strahan (2010)
Inter	A dummy variable taking on the value of zero (one) prior to (from the year of) interstate deregulation (onward) during the 1980s and 1990s as described in Amore, Schneider and Žaldokas (2013).	Amore, Schneider and Žaldokas (2013)
Intra	A dummy variable taking on the value of zero (one) prior to (from the year of) intrastate deregulation (onward) during the 1970s, 1980s and 1990s as described in Jayaratne and Strahan (1996).	Jayaratne and Strahan (1996).

Internet Appendix

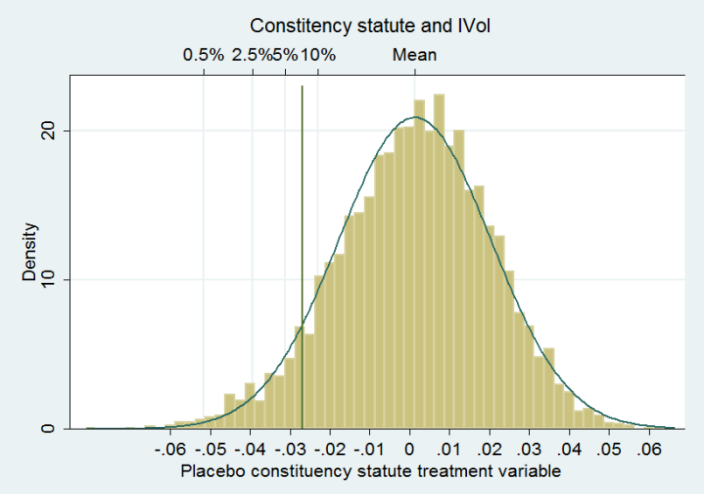
Not included in the paper

This version: 30 May 2016

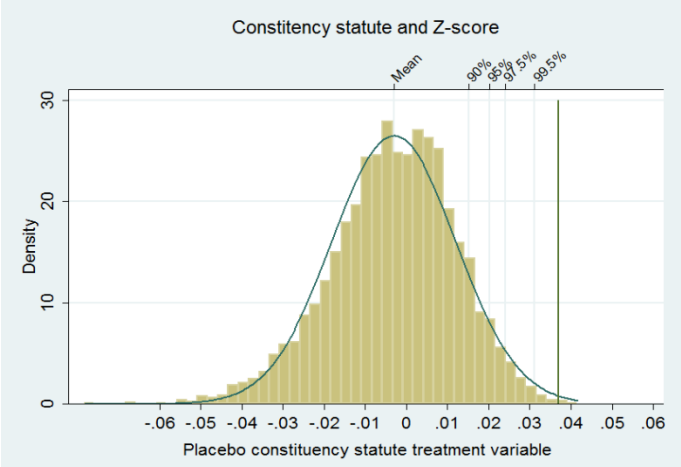
Figure A.1. Placebo test 1 - Non-parametric distribution of the coefficient estimates of *Constituency Statute*



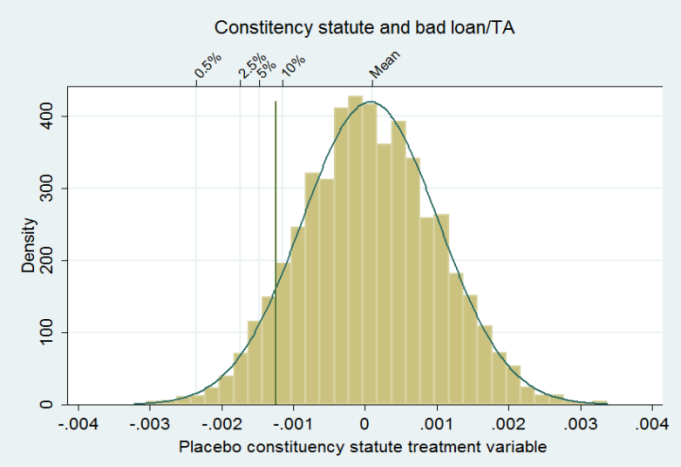
1A: *Total risk*



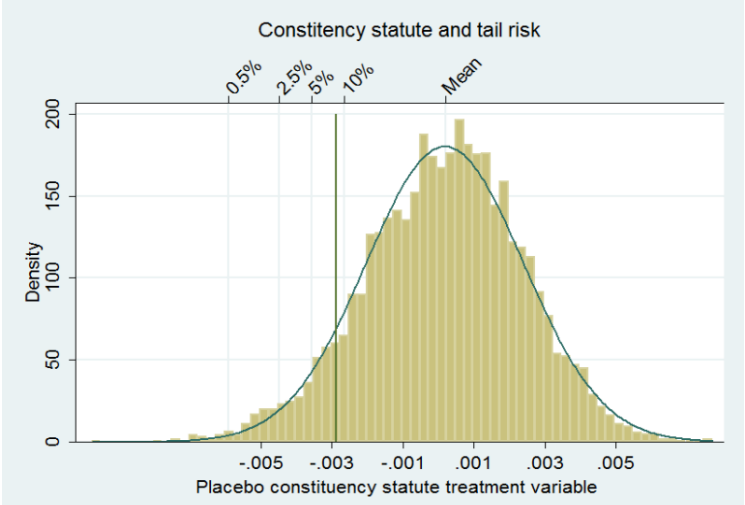
1B: *IVol*



1C: *Z-score*

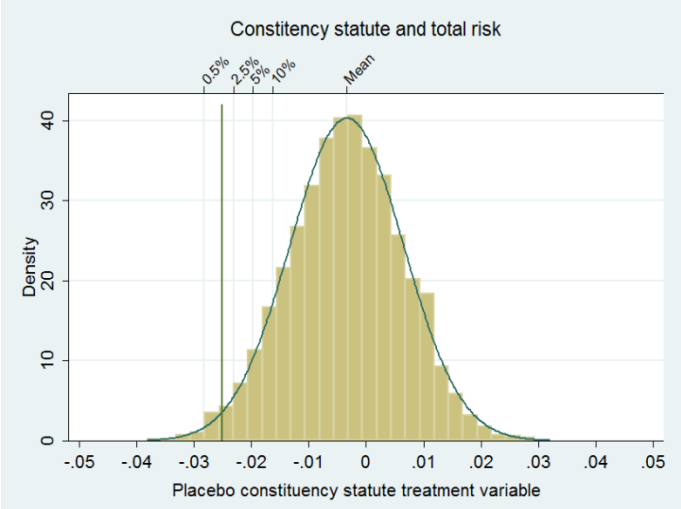


1D: *Bad loan/TA*

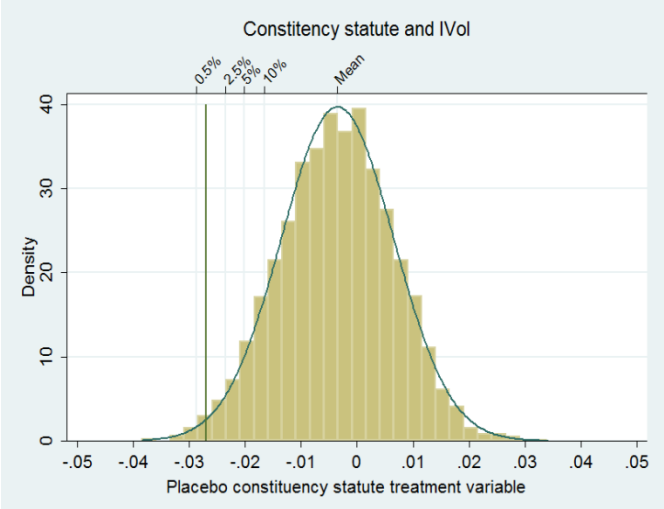


1E: *Tail risk*

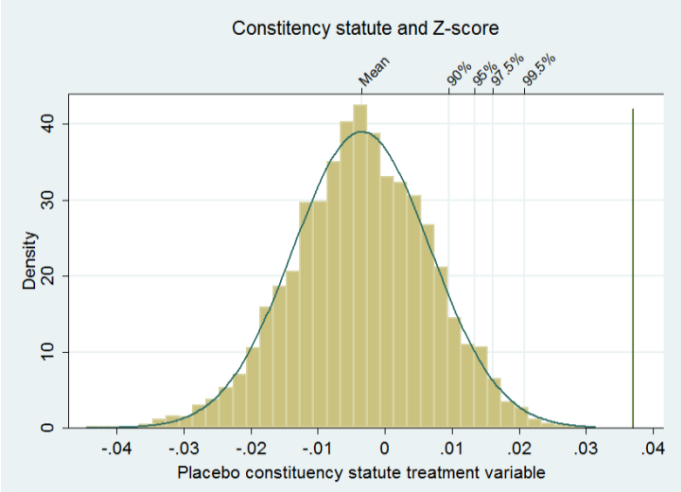
Figure A.2. Placebo test 2 - Non-parametric distribution of the coefficient estimates of *Constituency Statute*



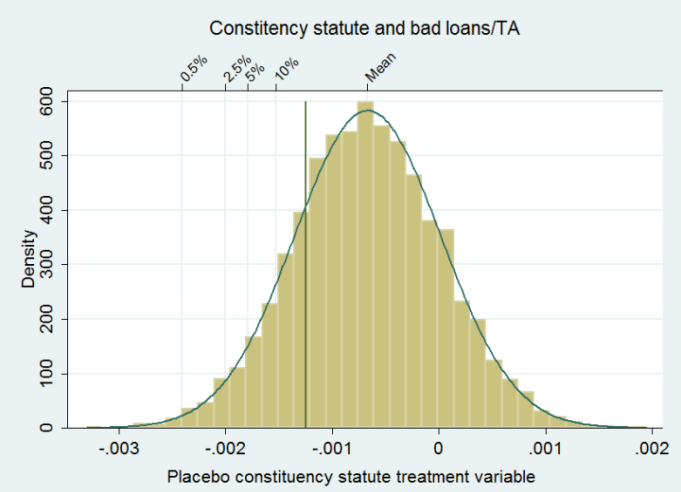
2A: *Total risk*



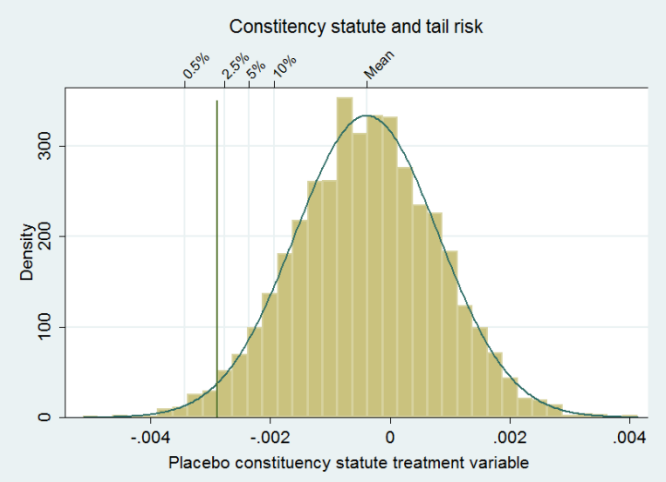
2B: *IVol*



2C: *Z-score*

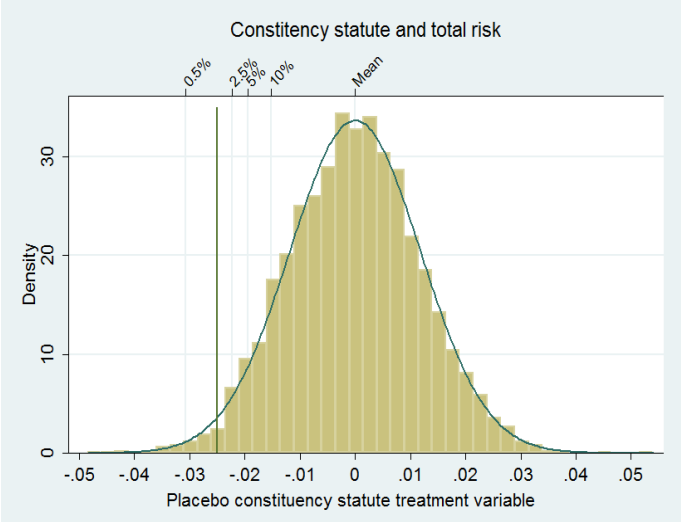


2D: *Bad loan/TA*

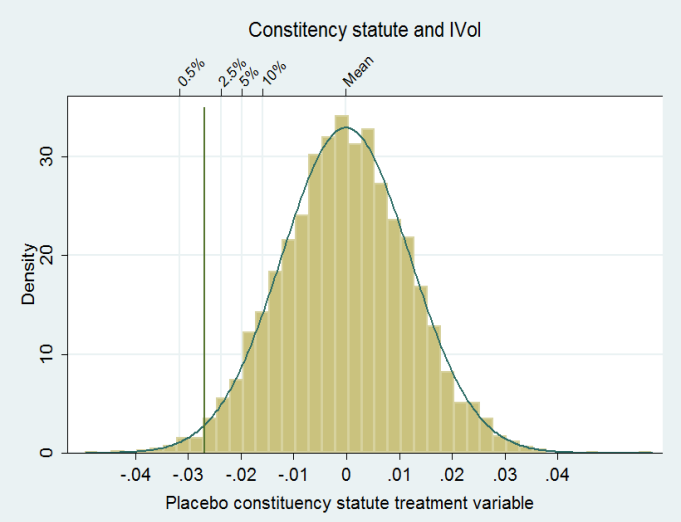


2E: *Tail risk*

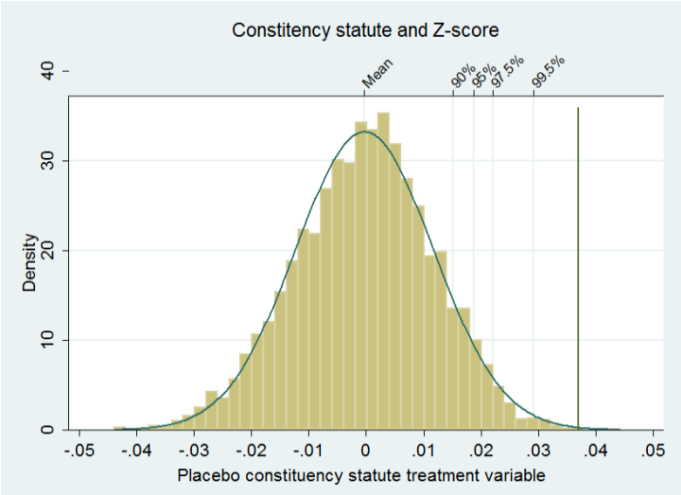
Figure A.3. Placebo test 3 - Non-parametric distribution of the coefficient estimates of *Constituency Statute*



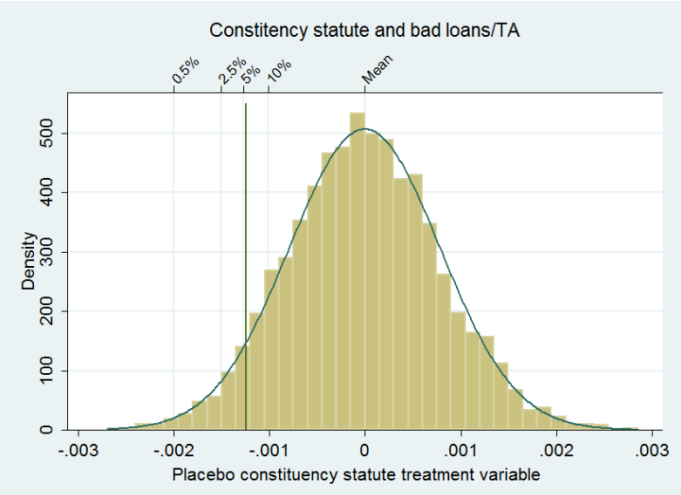
3A: *Total risk*



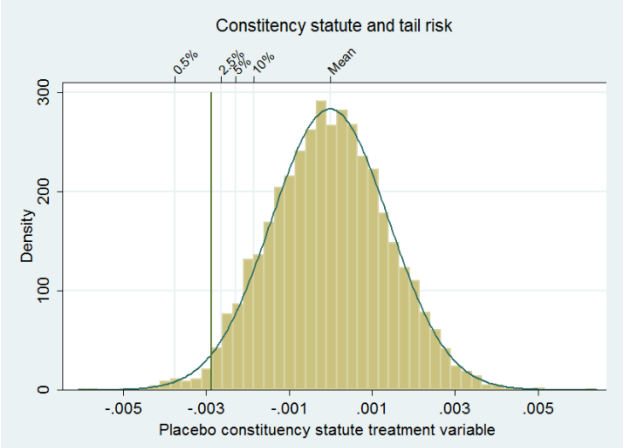
3B: *IVol*



3C: *Z-score*



3D: *Bad loan/TA*



3E: *Tail risk*

TABLE A.1
Constituency Statute and Bank Stakeholder Performance

This table reports the results of regressions that examine how the passage of constituency statutes influence the likelihood of bank's layoffs of employees and the effective tax rates. The main explanatory variable of interest is *Constituency Statute*, which is a treatment dummy variable taking on a value of one when a constituency statue is enacted in a state where a BHC is incorporated, and a value of zero otherwise. Both columns 1 and 2 are logit regressions. The dependent variable in column 1 (2) is an indicator variable equal to one when a bank's rate of change in the number of employees is less than zero (less than the 10^{th} percentile in the sample), and zero otherwise. Column 3 is an OLS regression where the dependent variable is the effective tax rate (*GAAP ETR*), computed as the ratio of tax expense to pre-tax earnings. The bank controls are identical to those used in the baseline model and are defined in the Appendix. The logit regressions include year fixed effects and the OLS regression of column 3 includes both bank and year fixed effects. Standard errors reported in parentheses are clustered at the bank level. Data are for the 1986-2012 period. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent variables	*Indicator if rate of change of employees is*		*ETR*
	<0	*<10th percentile*	
	Logit		OLS
	1	2	3
Constituency Statute	-0.132**	-0.267***	0.068*
	(0.065)	(0.083)	(0.040)
ROA	-32.131***	-50.300***	2.877***
	(2.929)	(3.621)	(0.356)
NONINT/TA	13.030***	31.292***	0.161
	(3.325)	(4.011)	(0.629)
NONCORE/TA	-2.505***	-0.241	-0.035
	(0.397)	(0.563)	(0.082)
LOAN/TA	-0.376	0.566	0.201***
	(0.256)	(0.374)	(0.050)
Ln(TA)	0.119***	0.026	0.052***
	(0.022)	(0.028)	(0.010)
MVBVEQ	-0.366***	-0.344***	0.002
	(0.074)	(0.089)	(0.006)
FREQ	-2.041	5.014	-0.711
	(7.603)	(9.670)	(0.929)
Intercept	-0.419	-2.541***	-0.392***
	(0.274)	(0.400)	(0.097)
Bank FE	No	No	Yes
Year FE	Yes	Yes	Yes
Obs.	9,049	9,049	6,395
Adj. R^2			0.084
Pseudo R^2	0.064	0.102	

TABLE A.2
Details of the placebo states for Section 4.6

Panel A of this table provides the details of the placebo states that are bordering the treated states and have the closest state GDP in the year prior to the treatment. Panel B reports the univariate comparison (at the state level) of the pre-treatment GDP across the treated and the placebo states using mean and median tests.

Panel A: Descriptions of the placebo bordering states

	Treatment states		Placebo bordering states	
Year	State	State GDP pre-treatment	Border states	State GDP pre-treated
1987	Arizona	55,881	Colorado	60,970
1987	Minnesota	79,450	Iowa	43,226
1987	New Mexico	21,807	Oklahoma	48,997
1987	New York	390,104	Pennsylvania	187,386
1987	Wisconsin	77,824	Indiana	86,437
1988	Idaho	13,996	Wyoming	10,370
1988	Louisiana	78,488	Arkansas	32,664
1988	Tennessee	80,715	North Carolina	113,262
1988	Virginia	117,603	Maryland	91,380
1989	Florida	224,848	Alabama	66,008
1989	Georgia	126,565	South Carolina	57,329
1989	Hawaii	26,799	-	-
1989	Indiana	99,492	Michigan	180,621
1989	Iowa	49,088	Minnesota	91,896
1989	Kentucky	61,851	West Virginia	25,876
1989	Massachusetts	151,625	Connecticut	90,707
1989	Missouri	95,760	Kansas	46,698
1989	New Jersey	194,709	New York	456,557
1989	Oregon	49,138	Neveda	24,987
1990	Mississippi	37,208	Tennessee	91,579
1990	Pennsylvania	233,162	Ohio	217,817
1990	Rhode Island	21,059	New Hampshire	23,777
1990	South Dakota	11,790	North Dakota	10,729
1990	Wyoming	11,437	Montana	12,630
1991	Nevada	30,980	Utah	31,249
1993	North Carolina	159,337	Virginia	158,990
1993	North Dakota	12,896	South Dakota	14,886
1997	Connecticut	129,111	Rhode Island	26,454
1998	Vermont	15,521	Maine	30,775
1999	Maryland	171,402	Delaware	35,955
2006	Texas	999,641	Louisiana	200,436
2007	Nebraska	78,581	Missouri	234,124

Panel B: Comparing state GDP prior to the treatment year

	Treatment states		Placebo bordering states		*p*-value	
	Mean	Median	Mean	Median	Mean	Median
State GDP	122,121	78,535	90,477	57,329	0.351	0.464

TABLE A.3
Summary statistics and correlation matrix of the KLD-merged BHC sample

The table presents the summary statistics (Panel A) and correlation matrix (Panel B) of the KLD-merged BHC sample. This sample consists of 316 (1,557 bank-year observations) publicly traded US BHCs that file FR Y-9C reports with the Federal Reserve over the 1991-2010 period. All bank fundamental information comes from the Bank Regulatory Database. All stock information of the BHCs are downloaded from CRSP. All other accounting information and firm attributes come from Compustat. All continuous variables are winsorized at the 1st and 99th percentiles.

Panel A: Summary statistics for the KLD-merged samples

Variable	Obs	Mean	Std. Dev.	Min	Median	Max
Total risk	1,557	0.397	0.238	0.140	0.309	1.303
IVol	1,557	0.315	0.192	0.110	0.255	1.194
Z-score	1,557	0.369	0.207	0.006	0.347	1.262
Bad loan/TA	1,557	0.009	0.012	0.000	0.005	0.067
Tail risk	1,557	0.052	0.032	0.017	0.041	0.176
KLD	1,557	-0.044	0.347	-1.233	0.000	2.757
ROA	1,557	0.013	0.014	-0.054	0.015	0.059
ROE	1,557	0.127	0.187	-0.985	0.162	0.415
NONINT/TA	1,557	0.020	0.035	0.002	0.013	0.316
NONCORE/TA	1,557	0.146	0.093	0.012	0.121	0.513
LOAN/TA	1,557	0.647	0.150	0.051	0.676	0.884
Deflated total assets (in millions)	1,557	46,409	181,501	429	4,623	2,063,178
MVBVEQ	1,557	1.834	0.877	0.264	1.759	5.145
FREQ	1,557	0.005	0.006	0.000	0.003	0.067
Annual return	1,557	0.075	0.322	-0.767	0.084	0.947

Panel B: Correlation matrix

	Variables	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10
V1	*KLD*	1.00	-0.01	0.02	0.02	0.10	-0.04	0.34	0.05	0.14	0.00
V2	*ROA*	—	1.00	0.89	0.40	-0.19	-0.21	0.10	0.56	-0.32	0.44
V3	*ROE*	—	—	1.00	0.13	-0.13	-0.14	0.12	0.52	-0.34	0.45
V4	*NONINT/TA*	—	—	—	1.00	-0.11	-0.46	0.17	0.26	0.10	0.06
V5	*NONCORE/TA*	—	—	—	—	1.00	0.05	-0.04	-0.02	0.07	-0.12
V6	*LOAN/TA*	—	—	—	—	—	1.00	-0.30	-0.20	-0.11	-0.10
V7	*Ln(TA)*	—	—	—	—	—	—	1.00	0.05	0.34	0.00
V8	*MVBVEQ*	—	—	—	—	—	—	—	1.00	-0.26	0.44
V9	*FREQ*	—	—	—	—	—	—	—	—	1.00	-0.20
V10	*Annual returns*	—	—	—	—	—	—	—	—	—	1.00
V11	*Total risk*	0.00	-0.60	-0.62	-0.01	0.22	0.10	-0.08	-0.43	0.50	-0.43
V12	*IVol*	-0.01	-0.64	-0.66	-0.05	0.25	0.14	-0.16	-0.40	0.44	-0.40
V13	*Z-score*	0.01	0.59	0.41	0.39	-0.29	-0.18	0.13	0.31	-0.26	0.30
V14	*Bad loan/TA*	0.02	-0.57	-0.58	-0.10	0.17	0.22	-0.01	-0.49	0.38	-0.32
V15	*Tail risk*	0.00	-0.61	-0.62	-0.01	0.22	0.10	-0.08	-0.45	0.50	-0.47

TABLE A.4
Stakeholder orientation and risk-return sensitivity—using KLD data

This table reports the results of regressions that examine the relation between stakeholder orientation and risk-return sensitivity based on the KLD-merged data. The dependent variables for columns 1 to 4 are changes in bank return on assets (*ΔROA*), return on equity (*ΔROE*), market-to-book equity ratio (*ΔMVBVEQ*), and annual stock returns (*Annual return*), respectively. The bank controls are identical to those used in Table 7 and are defined in the Appendix. All regressions include year fixed effects, and standard errors reported in parentheses are clustered at the bank level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent variables	*ΔROA*	*ΔROE*	*ΔMVBVEQ*	*ΔAnnual returns*
	1	2	3	4
ΔTotal risk	-0.033***	-0.471***	-0.659***	-0.524***
	(0.005)	(0.074)	(0.124)	(0.119)
ΔKLD	0.001	0.007	-0.028	-0.018
	(0.001)	(0.021)	(0.049)	(0.043)
ΔTotal risk×ΔKLD	0.017***	0.231***	0.298***	0.338**
	(0.004)	(0.071)	(0.109)	(0.132)
ΔNONINT/TA	0.656***	6.255***	5.829*	8.676**
	(0.101)	(1.404)	(3.434)	(3.636)
ΔNONCORE/TA	-0.017	-0.090	0.904**	-0.265
	(0.011)	(0.144)	(0.451)	(0.246)
ΔLOAN/TA	-0.010	-0.205	-0.266	-0.565
	(0.009)	(0.148)	(0.410)	(0.349)
ΔLn(TA)	0.003	0.089**	-0.586***	-0.211***
	(0.003)	(0.042)	(0.118)	(0.079)
Intercept	0.000	-0.010	-0.149***	0.195***
	(0.001)	(0.015)	(0.054)	(0.065)
Year FE	Yes	Yes	Yes	Yes
Obs.	1,206	1,206	1,206	1,206
Adj. R^2	0.300	0.211	0.389	0.380