Social Capital and Bank Accounting Transparency

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Abstract

Using a sample of public and private banks and a county-level index for social capital, we study how social capital relates to accounting transparency. In a region with high social capital, individuals have a greater propensity to honor an obligation and there is greater mutual trust within a much denser network that deters opportunistic/self-serving actions such as misrepresentation of accounting numbers and taking excessive risk for personal gain (Jha and Chen 2015). Consistent with expectations, our analysis indicates that social capital is positively associated with accounting transparency (proxied by accounting restatements and income-increasing earnings management) and this relationship is stronger for small, unaudited private banks. Additionally, we document that social capital is negatively associated with bank risk taking in the 2000-2006 pre-financial crisis period. We also find that banks in low social capital counties that are likely to engage in higher risk taking and have lower financial reporting transparency experienced more bank failures and bank trouble during the 2007-2009 financial crisis.

Keywords: Accounting Transparency; Social Capital; Restatements; Earnings Management; Financial Crisis; Bank Failure

Data Availability: Data are available from the sources identified in the text.

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1. INTRODUCTION

It is generally believed that the lax regulatory enforcement of financial reporting transparency in the banking system was a key contributor to the financial crisis of 2007-2009.[1] According to Costello et al. (2015), "In the aftermath of the crisis, investors, market participants, and members of the financial press accused weak banking regulators of catering to the interests of the financial industry to extract private benefits such as future job employment opportunities. Other commentators, however, have a more benign view of this lack of regulatory action. According to this alternative view, banking regulators loosened their standards during the financial crisis because stringent regulatory oversight of financial transparency could force multiple financial institutions to restore their capital ratios by cutting new lending and selling assets". Although there is a sizable literature on the role of formal institutions such as regulatory monitoring and corporate governance (e.g., Laeven and Levine 2009; Beltratti and Stulz 2012; Costello et al. 2015) on bank financial reporting transparency and risk-taking, there is sparse evidence on the role of informal institutions on bank accounting transparency prior to and during the financial crisis. Given this gap in the literature, we focus on one important informal institution -- social capital -- and its relation to bank accounting transparency during the period surrounding the 2007-2009 financial crisis.

Using social capital as the proxy for informal institutions and accounting restatements as the measure for financial reporting transparency, we develop two research hypotheses. First, we posit that social capital is positively related to bank accounting transparency. We reason that

[1] See for example, The Financial Crisis Inquiry Report issued by the National Commission on the Causes of the Financial and Economic Crisis in the United States.

social capital influences mutual trust between bankers and others, which acts as a deterrent to opportunistic/self-serving actions, and acts as a social norm for collective actions that weaken bank managers' motives for distorting financial reports. Second, we are more interested in the relation between social capital and financial accounting transparency for small, community-based banks that are less subject to internal and external monitoring mechanisms. We focus on small, unaudited, private banks with assets less than $500 million that are not subject to FDICIA internal controls and mandatory auditing requirements and that are most likely to be community-based financial institutions.[2] Given that these banks have less formal internal and external monitoring, informal institutions such as social capital are likely to play a more prominent role in disciplining bank managers. Furthermore, network and social norm effects of social capital have the potential to play a more direct role in small, community-based banks than do large financial institutions that operate across different regions and countries. We posit that the relation between social capital and bank accounting transparency is stronger for small, unaudited, private banks than in other banks.

Following Woolcock (2001), we define social capital as the norms and the networks that facilitate collective action. In a high social-capital region, individuals have a greater propensity to honor an obligation and to have greater mutual trust within a much denser network, both of which deter opportunistic/self-serving actions such as misrepresentation of accounting numbers

[2] In response to the savings and loan debacle of the 1980s, the United States Congress enacted the Federal Deposit Insurance Corporation Improvement Act (FDICIA) in 1991 to strengthen the financial condition of the banking and thrift industries. While FDICIA contains much more than deposit insurance reform, of particular interest are the requirements for annual audit and reporting of management's and auditors' assessments of the effectiveness of internal control for banks with $500 million or more in total assets. More specifically, FDICIA requires the management of these institutions to evaluate the internal control over financial reporting and the auditor to attest to the report on the effectiveness of internal controls over financial reporting. These regulations, especially the regulations related to internal control requirements for financial reporting, were passed ostensibly to enhance the transparency of reported financial information. In particular, these provisions were intended to aid in the early detection of problems in the financial management of insured banks, since early warning systems depend on reliable accounting information.

and taking excessive risk for personal gain (Jha and Chen 2015). Consistent with this notion, prior literature documents that social capital is negatively associated with opportunistic behavior such as corruption (La Porta et al. 1997), crime (Buonanno et al. 2009), and transaction costs associated with financial exchanges, such as buying stocks and obtaining loans (Guiso et al. 2004). Unlike research that focuses on public firms from unregulated industries (for example, Jha and Chen 2015), we study both public and private firms from the highly regulated banking industry.

We follow Rupasingha and Goetz (2008) to construct a social-capital index for each U.S. county. Rupasingha and Goetz (2008) use a principal component analysis of two measures of norms and two measures of networks to construct an index for each county for the years 1997, 2005, and 2009.[3] Our main measure of financial reporting transparency is the likelihood of restatements of regulatory call reports (commonly referred to as Call Reports).[4] Restatements of Call Reports are particularly well-suited to capture reporting transparency because regulators must audit the content of these reports as part of their on-site examinations. Call Reports include banks' financial information and supporting schedules and must be filed each quarter by all banks in the United States. According to the FDIC, Call Reports "are extensively used by the bank regulatory agencies in their daily off-site bank monitoring activities [and] … are also used by the public, the Congress of the United States, state banking authorities, researchers, bank

[3] Specifically, the social capital variable is constructed by using the first factor from a principal component analysis of the following four measures: 1) the sum of the religious organizations, civic and social associations, business associations, political organizations, professional organizations, labor organizations, bowling centers, physical fitness facilities, public golf courses, sport clubs, managers and promoters, membership sports and recreation clubs; 2) the total number of nongovernment organizations excluding the ones with an international focus; 3) the percentage of votes cast; and 4) the census response rate.

[4] Basel (1998, p. 15) defines transparency as the "disclosure of reliable and timely information that enables users of that information to make an accurate assessment of a bank's financial condition and performance, its business activities, and the risks related to those activities."

rating agencies and the academic community." We use restatements as the main proxy for poor financial reporting transparency because prior literature documents that restatements are indicative of weaknesses in internal control systems (Doyle et al. 2007) and are positively correlated with other measures of low reporting quality such as accruals estimation errors (Dechow et al. 2011). We also use income-increasing abnormal loan loss provisions (ALLP) as an alternate measure for poor accounting transparency because prior literature indicates that ALLP is a proxy for opportunistic earnings management (Kanagaretnam et al. 2003, 2010).[5]

We use accounting data on private and public banks from the Commercial Bank Quarterly Call Reports (aggregated to annual data) that are available from the Federal Reserve Bank of Chicago to empirically investigate our main research questions about the relation between social capital and bank accounting transparency. Our sample consists of 50,626 bank-year observations spanning 2000 to 2009. We limit the sample to these years because social capital data are not available after 2009. Our tests cover two sub-periods: the seven years (2000-2006) before the financial crisis, and the financial crisis itself (2007-2009).[6]

We report several key findings. First, we find that social capital has a strong negative relationship with the likelihood of bank restatements. As predicted, this association is stronger for small, unaudited, private banks. These results are both statistically and economically

[5] U.S. regulators use the Uniform Financial Rating System, informally known as CAMELS ratings, to assess the health of individual banks. Following an on-site examination, bank examiners assign a score from 1 (best) to 6 (worst) for each of the six CAMELS components as well as a single summary measure, known as the composite rating. In most cases, the intensity of regulatory monitoring and supervision is based on the composite CAMELS rating. Given that the CAMELS rating system is primarily based on accounting numbers from regulatory filings, a reliable financial reporting system is critical to the effectiveness of the regulatory process. This is especially true for private banks that do not file audited financial statements for broader public consumption.

[6] It is generally accepted that the financial crisis started in the later part of 2007 (Ryan 2008; Erkens et al. 2012). According to NBER, the banking crisis started in the third quarter of 2007.

significant.[7] Second, our main results hold for the pre-crisis and crisis period sub-samples as well as for three types of restatements that correct for income-increasing, large income-increasing, and income-decreasing items. Third, we document a strong negative relation between social capital and income-increasing ALLP, our alternate proxy for bank accounting transparency. In additional tests, we document a strong negative association between social capital and bank risk-taking in the pre-crisis period and a strong negative association between social capital and bank financial trouble and failure during the crisis-period. Our main results are robust to several sensitivity tests, including employing an indicator variable to proxy for high social capital, controlling for regional effects, sub-sample analyses within each region, and using only 2005 and 2009 data for which social capital scores are available directly from Rupasingha and Goetz (2008).

Our study contributes to the literature in several important ways. First, we demonstrate that even in an opaque and highly regulated industry such as banking, informal institutions such as social capital matter. In particular, our results show that the implications of informal institutions such as social capital are more pronounced for small, unaudited, private banks. This is important evidence, given that the overwhelming majority of banks around the world are private and, consequently, not subject to the full extent of regulatory scrutiny. Second, prior literature on informal institutions focuses on public firms from unregulated industries whereas we focus on both public and private banks. Third, our study contributes to research investigating the relation between culture and corporate and individual decision making (e.g., Hilary and Hui 2009; Chui et al. 2010; Kanagaretnam et al. 2014). Our findings support the growing awareness

[7] A one standard deviation increase in social capital is associated with a 4.84% decrease in the probability of restatement.

among researchers studying corporate decisions that informal institutions such as social capital matter in financial decisions, even when those decisions are made by professional managers.

The rest of this paper is organized as follows. We discuss related research and develop our hypotheses on the relation between social capital and bank accounting transparency in the next section. We present the research design and describe the data in section three, discuss the results in section four, and offer conclusions in the final section.

2. RESEARCH BACKGROUND AND HYPOTHESES

LaPorta et al. (1997), in their summary of prior literature, assert that social capital determines the performance of a society's institutions. Following Woolcock (2001), we define social capital as the norms and the networks that facilitate collective action. A high social capital region has individuals with a greater propensity to honor an obligation and a greater mutual trust within a much denser network that act as a deterrent to opportunistic/self-serving actions such as misrepresentation of accounting numbers or taking excessive risk for personal gain (Jha and Chen 2015).

In our context there are multiple channels through which social capital can improve accounting transparency. Following the definition of social capital as the norms and the networks that facilitate collective action, we explore the influence of the social norms aspect of social capital on bank accounting transparency. Sunstein (1996) defines norms as "… social attitudes of approval and disapproval, specifying what ought to be done and what ought not to be done …" Society utilizes control mechanisms such as "open criticism" and "withdrawal of social support" (Hechter and Opp 2001; Horne 2009) to punish violations of these norms. Conversely, individuals who comply with these norms may receive "higher levels of social recognition

(public acknowledgement of their status, merits, or personality) and respect." (Stavrova et al. 2013).[8] Unethical behavior (e.g., falsifying financial statements) clearly violates acceptable social norms. Therefore, management of a bank located in a high social capital area would be less likely to violate a social norm because of the social sanctions and criticism that would ensue.

Fukayama (1995) and Prusak and Cohen (2001) emphasize the role of social capital as integral in the creation of trust in a society. Mutual trust is another channel through which social capital can influence financial transparency. Guiso et al. (2004) argue that trust is the attribute of social capital that enhances financial development in a country because it increases the use of financial contracts. They find that people in countries with higher levels of trust are more likely to invest in the stock market and utilize checks. LaPorta et al. (1997) report that countries with higher levels of trust exhibit higher levels of education and civic participation, and lower levels of corruption. Pevzner et al. (2015) contend that trust can influence investor reactions to corporate earnings announcements in two disparate ways. Announcements made in countries with higher levels of societal trust may be viewed as more credible and therefore result in stronger market reactions. Conversely, these announcements may generate weaker market responses if investors in more trusting countries are less concerned about agency conflicts and information asymmetry between management and shareholders. Their results support the former view.

In more recent research, Garrett et al. (2014) demonstrate a positive relationship between employee trust in management and financial reporting quality (i.e., higher quality of accruals and

[8] Recent research explores whether social proximity enhances business partnerships. For example, Hedge and Tumlinson (2014) find that U.S. venture capitalists are more likely to select start-ups with co-ethnic executives for investment, particularly when the probability of the start-up's success appears low. Ethnic proximity between venture capitalists and the start-ups they invest in is positively related to performance, measured by IPOs and net income after IPO. Shane and Cable (2002) find that social ties between entrepreneurs influence their selection of ventures to fund through a process of information transfer.

lower likelihood of misstated financial statements). Trust increases the sharing of information within a company and thereby facilitates the production of higher quality financial statements. Employees who do not trust management might withhold, or even distort, information. In a similar vein, Nanda and Wysocki (2013) document a positive association between trust and financial reporting quality (i.e., earnings transparency and timely recognition of bad news). They attribute this finding to the view that more trusting individuals place greater credibility in management disclosures. The opposing perspective suggests that more trusting individuals assign a lower probability to being cheated and, therefore, have less demand for management disclosures. These two studies focus on individual and societal trust. Additionally, both studies examine public firms in non-regulated industries.

In summary, the above studies suggest that social capital, which is related to the norms and networks that facilitate collective action and serves as a possible mechanism that enhances trust, is positively related to financial reporting transparency. Given this reasoning, we hypothesize the following (stated in alternate form):

H1: Social capital is positively related to financial reporting transparency.

Because banks operate in a highly regulated environment and are monitored by both federal and state agencies, their financial misreporting may be more constrained than those of industrial firms. Therefore, the impact of social capital on bank accounting transparency may be muted in the banking industry vis-à-vis a non-regulated industry. With this in mind, we also examine a sub-sample of banks that are subject to much lower regulatory scrutiny. In particular, we focus on a sub-sample of small, private banks that are not subject to FDICIA internal control requirements and not required to have external audits.

Extant literature documents the importance of internal controls for bank stability and earnings quality. In a report to the Congress, the General Accounting Office (1991) examined the failure of 39 banks in the 1980s (i.e., in the pre-FDICIA period) and argued that, to be fully effective, a reform should improve the internal controls of banks so that the enhancements are properly applied in the preparation of reports and financial statements. In that regard, Altamuro and Beatty (2010) examine several earnings quality measures prior to and following FDICIA and find that the mandated internal control requirements increased the validity of loan loss provisions, earnings persistence and cash flow predictability, and reduced benchmark-beating and accounting conservatism for affected versus unaffected banks.

Kanagaretnam et al. (2010) study the relation between earnings management through loan loss provisions and fees paid to the external auditor. They document a strong negative association between income-increasing abnormal loan loss provisions and both unexpected total fees and unexpected nonaudit fees for small banks. That is, small banks that are exempted from FDICIA internal controls exhibit a stronger association between auditor fees and income-increasing earnings management. In summary, Altamuro and Beatty (2010) and Kanagaretnam et al. (2010) provide consistent evidence that banks that comply with FDICIA internal control requirements have higher earnings quality.

Prior literature also examines the effects of FDICIA internal control requirements on bank risk-taking. Jin et al. (2013a) study the impact of FDICIA internal control requirements on bank risk-taking behavior prior to the 2007-2009 financial crisis and the consequent implications for bank failure and financial trouble during the crisis. They provide evidence that banks required to comply with the FDICIA internal control requirements took lower risks in the pre-

crisis period. Furthermore, these banks were less likely to experience failure and financial trouble during the crisis.

In a related study, Jin et al. (2013b), examine the unintended consequences of the 2005 increase from $500 million to $1 billion in the asset threshold for the FDICIA internal control reporting requirements. They focus on a test sample of banks that increased their total assets from between $100 million and $500 million prior to the change in regulation to between $500 million and $1 billion within two years following the change. These affected banks were no longer subject to the internal control requirements but would have been had the regulation not been changed. Jin et al. (2013b) hypothesize that these affected banks were likely to make riskier loans, which increased the likelihood of failure during the crisis period. They report evidence consistent with this hypothesis. Affected banks had a higher likelihood of failure during the crisis period than did banks from two different control samples. They also find that auditor reputation (i.e., whether the bank is audited by a Big 4 auditor or an industry specialist auditor) has a moderating effect on the likelihood of failure for these affected banks. Collectively, prior literature provides evidence of higher quality earnings and lower risk-taking for larger banks subject to FDICIA internal controls.

Recent research documents that auditing enhances the earnings quality and stability of banks (Kanagertnam et al. 2010; Jin et al. 2011; Barton et al. 2014). For example, Barton et al. (2014) using a sample of privately held commercial banks, find that having a voluntary financial statement audit is associated with a 38% decrease in the likelihood of bank failure. They also find no differential effect between mandatory and voluntary audits, providing further evidence that the association between audit and reduced likelihood of failure is attributable to having an audit, not to choosing to have an audit.

Given these findings, we focus on the sub-sample of unaudited private banks that are not subject to FDICIA internal control reporting requirements which are mostly small, community-based financial institutions. The evidence presented above indicates that these banks exhibit lower earnings quality and higher risk-taking. Therefore, we reason that the effects of social capital as an alternate monitoring mechanism for accounting transparency could be greater for these small, unaudited, private, less regulated banks. Furthermore, in small, community-based banks, network and social norm effects of social capital could play a more direct role compared to large financial institutions that are spread across regions and countries.[9] Given these reasons, we hypothesize the following (stated in alternate form):

H2: The positive relation between social capital and financial reporting transparency is stronger for small, unaudited, private banks.

3. RESEARCH METHOD AND DATA

Measure of Restatements

Our primary measure of (poor) bank financial reporting transparency is based on whether the bank is required to restate prior financial reports. We obtain information on restatements from the Call Reports (item RIAD B507: Cumulative Effect of Changes in Accounting Principles and Corrections of Material Accounting Errors). We construct the restatement variable by identifying

[9] Community-based banks are founded by domestic residents. The purpose of community-based banks is to serve local customers. Community banks typically originate all of their mortgage loans in-house so they personally interact with their customers; as a result, community banks do more screening of customers and pass less low-quality mortgages to customers than large banks (Fogel, Kali and Yeager 2011). Since bank managers know local customers personally and have a common social norm in community-based banks, the bank managers can overcome information asymmetry between themselves and potential customers. Local banks interact with the potential borrowers and the community on both sides of their balance sheets and have an important informational advantage over nonlocal banks (Ergungor and Moulton 2014). The social norm factors (i.e., religion, culture, organization membership, etc.) are predicted to have a larger impact on the bank managers' decisions on financial reporting among small community-based banks than among large banks. Degryse and Ongena (2005) study the effect on loan conditions of geographical distance between firms, the lending bank, and all other banks in the vicinity. They find that loan rates are negatively associated with the distance between the firm and the lending bank, indicating that banks are more careful in lending depositors' money to nearby customers than far away customers.

banks with restatements during the year. We use an indicator variable, *RESTATEMENT*, which equals 1 if the bank had a restatement in the year, and 0 otherwise. Banks with restatements are regarded as having poor financial reporting transparency. During the sample period, the vast majority of the banks (93%) had no restatements; the remaining 7% had one or more restatements.

Measure of Social Capital

We construct a social-capital index for each county following the steps in Rupasingha and Goetz (2008). They use a principal component analysis of two measures of norms and two measures of networks to construct an index for each county for the years 1997, 2005, and 2009. The social-capital index for each county and the underlying data used to construct the index are available at the Northeast Regional Center for Rural Development (NERCRD). The Rupasingha and Goetz (2008) approach to measuring social capital is the most comprehensive measure of social capital at the county level (Jha and Chen 2015) and has been used by many authors, including Putnam (2007), Deller and Deller (2010), and Hopkins (2011).

Following Rupasingha and Goetz (2008), we use voter turnout in presidential elections and the census response rate as two measures of social norms. Higher values of these variables represent higher social capital. Alesina and La Ferrara (2000) use the percentage who voted in the 1996 presidential election as a component variable in the construct of a social-capital index. Knack (2002) uses the census response rate as a component measure of social capital.

Following Rupasingha and Goetz (2008), we use the number of social and civic associations and the number of nongovernmental organizations (NGO) in the county as two measures of networks. Social and civic associations include physical fitness facilities, public golf courses, religious organizations, sports clubs, political organizations, professional organizations,

business associations, and labor organizations in the county. We normalize both these measures by the population of the county. Knack (2002), Hopkins (2011), and Jha and Chen (2015) use these two measures of networks as component measures of the social capital index.

We then extract the first principal component of these four measures and use it to construct an index of social capital for each county for the years 1997, 2005, and 2009. We linearly interpolate the data to fill in the years 2000 to 2004 and 2006 to 2008. We describe the detailed procedure for constructing the social-capital index in the Appendix.

Empirical Model

Our full sample period extends from January 1, 2000 to December 31, 2009. This period includes the January 2000 to December 2006 pre-crisis period and the January 2007 to December 2009 financial crisis. Our key variable of interest is the social capital of the county where the bank is headquartered. We use the following five multivariate regression models for the main tests of our hypotheses:

$$RESTATEMENT = \beta_0 + \beta_1 SOCIAL\_CAPITAL + \beta_2 SIZE + \beta_3 CAP + \beta_4 NPL + \beta_5 LIQUIDITY + \beta_6 ALL + \beta_7 ROA + \beta_8 LOSS + \beta_9 GROWTH + \beta_{10} PUBLIC + Year\ Indicators + \varepsilon \quad (1)$$

$$INCOME\_INCREASE = \beta_0 + \beta_1 SOCIAL\_CAPITAL + \beta_2 SIZE + \beta_3 CAP + \beta_4 NPL + \beta_5 LIQUIDITY + \beta_6 ALL + \beta_7 ROA + \beta_8 LOSS + \beta_9 GROWTH + \beta_{10} PUBLIC + Year\ Indicators + \varepsilon \quad (2)$$

$$LARGE\_INCOME\_INCREASE = \beta_0 + \beta_1 SOCIAL\_CAPITAL + \beta_2 SIZE + \beta_3 CAP + \beta_4 NPL + \beta_5 LIQUIDITY + \beta_6 ALL + \beta_7 ROA + \beta_8 LOSS + \beta_9 GROWTH + \beta_{10} PUBLIC + Year\ Indicators + \varepsilon \quad (3)$$

$$INCOME\_DECREASE = \beta_0 + \beta_1 SOCIAL\_CAPITAL + \beta_2 SIZE + \beta_3 CAP + \beta_4 NPL + \beta_5 LIQUIDITY + \beta_6 ALL + \beta_7 ROA + \beta_8 LOSS + \beta_9 GROWTH + \beta_{10} PUBLIC + Year\ Indicators + \varepsilon \quad (4)$$

$$ABS\_ALLP = \beta_0 + \beta_1 SOCIAL\_CAPITAL + \beta_2 SIZE + \beta_3 CAP + \beta_4 NPL + \beta_5 LIQUIDITY + \beta_6 ALL + \beta_7 ROA + \beta_8 LOSS + \beta_9 GROWTH + \beta_{10} PUBLIC + Year\ Indicators + \varepsilon \quad (5)$$

We include detailed definitions of the variables in the appendix. Our unit of analysis is the bank-year. In the restatement logistic regression (1), our dependent variable, *RESTATEMENT*, is an indicator variable that equals 1 if *RIADB507* (Restatements due to corrections of material accounting errors and changes in accounting principles) is either positive or negative for the bank-year, and 0 otherwise. Our key variable of interest, *SOCIAL_CAPITAL*, is the measure of the social capital at the county level. As described above, it is constructed following Rupasingha and Goetz (2008). Based on our hypothesis, we predict that $\beta_{1,}$ the coefficient on *SOCIAL_CAPITAL*, is negative.

We include four categories of firm-specific control variables that we expect to be associated with the likelihood of restatement in earnings, earnings management, risk-taking, and the likelihood of failure or financial trouble, as identified in prior banking studies (e.g., Cole and Gunther 1995; Jin et al. 2011; Kanagaretnam et al. 2014). These categories include asset quality (the strength of assets), capital adequacy (the ability of capital to cover potential future losses), performance, and bank listing status (whether the bank is a public or a private bank). In addition, we control for year fixed effects.

The measures of asset quality are the ratio of non-performing loans to total assets (*NPL*), total assets (*SIZE*), the ratio of cash to assets (*LIQUIDITY*), and the ratio of loan loss allowance to total assets (*ALL*). The capital adequacy measure included is the ratio of Tier 1 capital to total risk-weighted assets (*CAP*). The performance measures are return on assets ratio (*ROA*), an indicator variable for negative earnings (*LOSS*), and annual asset growth rate (*GROWTH*).

We expect *SIZE*, *NPL*, and *LOSS* to be positively associated with the likelihood of earnings restatement (*RESTATEMENT*) because banks that are larger or more complex, have a higher percentage of non-performing loans, or accounting losses are more likely to have

accounting errors or mistakes in earnings reporting than banks that are smaller, have a lower percentage of non-performing loans, or positive earnings. We do not predict the direction of the association between Tier 1 capital ratio and the likelihood of earnings restatement. However, Ng and Rusticus (2015) find a positive and significant association between tier 1 capital ratio and the likelihood of restatement. We expect *PUBLIC* to be positively associated with the likelihood of earnings restatement because the regulators and the auditors are more likely to detect accounting errors in public than in private banks.

In the income-increasing logistic regression model (2), the dependent variable, *INCOME_INCREASE*, is an indicator variable that equals 1 if *RIADB507* is *negative* for the bank-year, and 0 otherwise. A negative restatement in earnings means a downward revision of current earnings. In other words, *INCOME_INCREASE* represents the likelihood of an income-increasing item that subsequently triggers a restatement that reduces current earnings. We predict that social capital is negatively associated with the likelihood of an income-increasing action. In the large-income-increasing logistic regression model (3), the dependent variable, *LARGE_INCOME_INCREASE*, is an indicator variable that equals 1 if the ratio of *RIADB507* to beginning total assets is less than -0.05%, and 0 otherwise. *LARGE_INCOME_INCREASE*, therefore, represents the likelihood of a large-income-increasing item that subsequently triggers a restatement that reduces current earnings by a large amount. We predict that social capital is negatively associated with the likelihood of a large-income-increasing item. In the income-decreasing logistic regression model (4), the dependent variable, *INCOME_DECREASE*, is an indicator variable that equals 1 if *RIADB507* is *positive* for the bank-year, and 0 otherwise. *INCOME_DECREASE* represents the likelihood of an income-decreasing item that subsequently triggers a restatement that increases current earnings. We predict that social capital is negatively

associated with the likelihood of an income-decreasing item. As we do in the restatement regressions, we expect *SIZE*, *CAP*, *NPL*, *PUBLIC*, and *LOSS* to be positively associated with the likelihood of an income-increasing restatement, the likelihood of a large-income-increasing restatement, and the likelihood of an income-decreasing restatement.

In the earnings management OLS regression model (5), the dependent variable, *ABS_ALLP*, is the absolute value of negative abnormal loan loss provisions. Following prior literature (e.g., Kanagaretnam et al. 2010), we first estimate the following OLS regression to separate the normal and abnormal components of LLP:

$$LLP = \alpha_0 + \alpha_1 CHO + \alpha_2 NAL + \alpha_3 HOM + \alpha_4 COM + \alpha_5 SIZE + \alpha_6 CAP + \alpha_7 GLOANS + \varepsilon \qquad (6)$$

where *LLP* is loan loss provisions divided by total assets; *CHO* is loan charge-offs divided by total assets, *NAL* is non-accrual loans divided by total assets; *HOM* is the sum of individual non-mortgage loans and 1-4 family residential loans divided by total assets; *COM* is commercial loans divided by total assets; *SIZE* is the natural logarithm of total assets; *CAP* is Tier 1 capital divided by risk-weighted assets, G*LOANS* is the change in total loans, divided by beginning total loans. We then classify bank-years with negative residuals from the first stage regression (6) as bank-years with income-increasing ALLP and use the absolute values of these income-increasing loan loss provisions (*ABS_ALLP*), which reflect the extent of income-increasing earnings management, as our measure of opportunistic earnings management. We predict that social capital is negatively associated with income-increasing earnings management (*ABS_ALLP*). We expect that *CAP*, *NPL*, and *LOSS* are positively associated with the level of income-increasing earnings management.

For our additional tests on bank risk-taking and bank performance during the crisis-period, we use the following four multivariate regression models. The key variable of interest is again the social capital of the county where the bank is headquartered.

$$Z\_SCORE = \beta_0 + \beta_1 ASOCIAL\_CAPITAL + \beta_2 ASIZE + \beta_3 ACAP + \beta_4 ANPL + \beta_5 ALIQUIDITY + \beta_6 AALL + \beta_7 AROA + \beta_8 ALOSS + \beta_9 AGROWTH + \beta_{10} APUBLIC + \varepsilon \quad (7)$$

$$SD\_EARNINGS = \beta_0 + \beta_1 ASOCIAL\_CAPITAL + \beta_2 ASIZE + \beta_3 ACAP + \beta_4 ANPL + \beta_5 ALIQUIDITY + \beta_6 AALL + \beta_7 AROA + \beta_8 ALOSS + \beta_9 AGROWTH + \beta_{10} APUBLIC + \varepsilon \quad (8)$$

$$FAIL = \beta_0 + \beta_1 SOCIAL\_CAPITAL + \beta_2 SIZE + \beta_3 CAP + \beta_4 NPL + \beta_5 LIQUIDITY + \beta_6 ALL + \beta_7 ROA + \beta_8 LOSS + \beta_9 GROWTH + \beta_{10} PUBLIC + \varepsilon \quad (9)$$

$$TROUBLE = \beta_0 + \beta_1 SOCIAL\_CAPITAL + \beta_2 SIZE + \beta_3 CAP + \beta_4 NPL + \beta_5 LIQUIDITY + \beta_6 ALL + \beta_7 ROA + \beta_8 LOSS + \beta_9 GROWTH + \beta_{10} PUBLIC + \varepsilon \quad (10)$$

In the OLS risk-taking regression models (7) and (8), following prior literature, we use *Z_SCORE* and *SD_EARNINGS*, respectively, as the dependent variables (Laeven and Levine 2009; Houston et al. 2010; Kanagaretnam et al. 2014). *Z_SCORE* is the negative value of the natural logarithm of the ratio of return on assets plus capital ratio to the standard deviation of return on assets over the pre-crisis period 2000-2006.[10] *SD_EARNINGS* is the standard deviation of earnings before taxes and loan and lease losses provisions divided by total loans over the period 2000-2006. Our key variable of interest is average social capital (*ASOCIAL_CAPITAL*), measured as the average of *SOCIAL_CAPITAL* over 2000-2006. We predict that social capital is negatively related to bank risk-taking behavior in the pre-crisis period.

[10] Z-SCORE reflects the number of standard deviations a bank's return on assets has to drop below its expected value before equity is depleted and the bank is insolvent. Since higher Z-SCORE indicates that the bank is more stable and less risky, we use the negative value so that a higher value indicates greater risk.

The control variables include average values over 2000-2006 of Tier 1 capital (*ACAP*), non-performing loans (*ANPL*), liquidity (*ALIQUIDITY*), allowance for loan losses (*AALL*), return on assets (*AROA*), incidence of loss (*ALOSS*), and growth rate of total assets (*AGROWTH*), as well as an indicator for whether the bank is a public bank (*APUBLIC*). Based upon prior research, we expect *ASIZE* and *AROA* to be negatively associated with the risk-taking variables (Z_*SCORE* and *SD_EARNINGS*) because larger banks and banks with higher earnings are expected to take fewer risks than smaller banks and banks with lower earnings. We expect *ANPL, ALIQUIDITY, AALL, ALOSS,* and *AGROWTH* to be positively associated with the risk-taking variables because banks with more non-performing loans, higher liquidity, higher loan loss allowance, more frequent losses, and higher growth in assets may have higher operating risks. We similarly expect *APUBLIC* to be negatively associated with the risk-taking variables.

In the bank failure and financial trouble logistic regression models (9) and (10), we use the indicator variables of bank failure (*FAIL*) and bank financial trouble (*TROUBLE*), respectively, as the dependent variables. *FAIL* is an indicator variable that equals 1 if the bank was closed by the FDIC in the years 2007-2009, and 0 otherwise. *TROUBLE* is an indicator variable that equals 1 if the bank satisfied any of the following four conditions in 2007: (1) Tier 1 capital ratio was less than 4%, (2) the ratio of loan loss provisions to total loans was greater than 1%, (3) ROA was less than -5%, and (4) the bank was listed as a failed bank in the FDIC website during 2007-2009; and 0 otherwise. We delete banks that met any of the troubled bank criteria in 2006 from the subsample of troubled banks so that it includes only banks that were healthy in 2006.

We use *FAIL* and *TROUBLE* in our crisis period regression tests. The coefficient of interest is the coefficient on *SOCIAL_CAPITAL*. We predict that social capital is negatively

related to the likelihood of bank failure and financial trouble. We expect that *SIZE*, *CAP*, and *LIQUIDITY* are negatively associated with bank failure and financial trouble. Larger banks and banks with greater capital and higher ability to meet their financial obligations were less likely to fail or have financial trouble during the financial crisis than smaller banks and banks with lower capital and less ability to meet their financial obligations. We expect *NPL, ALL, LOSS,* and *GROWTH* to be positively associated with the likelihood of bank failure and financial trouble because banks with more non-performing loans, higher loan loss allowances, losses, and higher growth in assets are more likely to have higher operating risks that lead to bank failure and financial trouble.

To control for the possibility that the error terms might be correlated, we cluster the standard errors at the county level in regression models (1)-(5) and (7)-(10). Because we cluster at the county level, we automatically control for clustering at the firm level (Bertrand et al. 2004; Dinc 2005; Cameron and Miller 2011). We control for year fixed effects in regression models (1)-(5).

Data and Descriptive Statistics

We obtain data on banks' financial information from the Call Reports (FFIEC 031 Consolidated Reports of Condition and Income for a Bank with Domestic and Foreign Offices and FFIEC 041 Consolidated Reports of Condition and Income for a Bank with Domestic Offices Only) that banks file with the Federal Reserve, the Federal Deposit Insurance Corporation, or the Office of the Comptroller of the Currency.[11] In the Call Reports, U.S. public and private banks are required to present their financial position and the results of operations on a consolidated basis in accordance with U.S. generally accepted accounting principles (GAAP). Because most of the

[11] The data is available in machine-readable form at the Chicago Federal Reserve website: https://www.chicagofed.org/banking/financial-institution-reports/commercial-bank-data

banks in our sample are private, the Call Reports are the only source of publicly available financial information for them.

Our sample consists of 50,626 bank-year observations for public and private banks containing Call Report data to construct all variables for the years ending December 31, 2000 through December 31, 2009. The sample is limited to these years because the social capital data are not available after 2009. It covers two sub-periods: the seven years preceding the financial crisis (2000-2006), and the financial crisis itself (2007-2009). We focus on these sub-periods for three reasons. First, the risk-taking behaviors and earnings management activities should be most significant among banks in the years preceding the financial crisis. Second, the majority of bank failures were concentrated in 2007-2009 and there were very few failures prior to 2006. Third, the effect of social capital in constraining risk-taking behavior of banks should be most apparent during the financial crisis. The full sample is used to test whether social capital is negatively associated with the likelihood of restatements in financial reports and managerial risk taking behavior during the pre-crisis period and the likelihood of bank failure/trouble during the crisis period.

Table 1 provides descriptive statistics for the variables used in the regression analysis. Panel A shows the distribution of the variables used in the main tests. The percentage of restatements is 6.7%, with 4.1% income-increasing and 2.6% income-decreasing. The percentage of large-income-increasing restatements is 1.9%. We use restatements as a proxy for overall financial reporting transparency. The average absolute ALLP is 0.001.

Panel B presents the distribution of the variables used in the additional tests. It shows that the average values of the two risk measures, *Z_SCORE* and *SD_EARNINGS*, are -1.615 and

0.010, respectively. The bank failure rate is 5.0% and bank financial trouble rate is 18.6% during the 2007-2009 crisis period.

Following Ng and Rusticus (2015), we use restatements as the main indicator of poor financial reporting transparency. These restatements could be due to either weak internal control systems or deliberate earnings management behavior. Our evidence shows that the percentage of upward restatements (4.1%) is significantly higher than the percentage of downwards restatements (2.6%). We also observe that in many cases the restatements are due to missing important adjusting entries and deferred income taxes in the financial statements. This suggests that our restatement variable captures both intentional and unintentional errors in the financial reports.

Table 2 presents two panels of Pearson correlations of the social capital variable and the dependent variables, including the restatement measures, risk measures, and bank failure and financial trouble measures. Univariate correlations with the dependent variables are in the hypothesized directions.

Table 3 presents univariate comparisons of the incidence of restatements and the mean values of *ABS_ALLP* for banks headquartered in high and low social capital counties for different sample partitions. Consistent with Hypotheses 1 and 2, we find that the incidence of restatements and the mean values of *ABS_ALLP* are lower for banks headquartered in high social capital counties and this result holds for small, unaudited private banks. We next discuss the results of the multivariate analysis.

4. EMPIRICAL RESULTS

To study the relations between social capital and financial reporting transparency of banks, we first examine whether social capital is associated with the following financial reporting

transparency indicators: restatements, income-increasing restatements, large-income-increasing restatements, and income-decreasing restatements. We then examine the association between social capital and income-increasing earnings management through ALLP. As additional evidence, we examine the association between social capital and bank risk-taking in the pre-crisis period and study whether social capital can reduce the likelihood of bank failure and financial trouble during the 2007-2009 crisis period.

For each regression specification, we first conduct the tests on the full sample. We then divide the full sample into a public banks subsample and a private banks subsample and estimate the regressions for each subsample. We subdivide the private banks subsample into two smaller subsamples: audited private banks and unaudited private banks. In order to separate private banks into audited and unaudited groups, we need to determine whether the banks have been audited by an external auditor. We obtain banks' audit status from the March 31 Call Reports that specify whether the prior year was audited. The March 31 Call Reports provide a field (RCFD6724) that denotes whether the year-end financial statements were audited.

We present our primary regression results relating social capital to bank financial reporting transparency in Table 4. Panel A shows the regression results for the full sample period 2000-2009. Panels B and C show the regression results for the pre-crisis period 2000-2006 and the crisis period 2007-2009, respectively. In Panel A, Column 1 tabulates regression results for the full sample of bank-years (50,626 observations) based on a logistic regression of the restatement indicator variable (*RESTATEMENT*) on the variable of interest (*SOCIAL_CAPITAL)* and other control variables that prior research identifies are associated with reporting transparency. Columns 2 and 3 tabulate regression results for the public banks subsample (1,756 bank-year observations) and the private banks subsample (48,870 bank-year observations).

Columns 4 and 5 tabulate regression results for the audited private banks subsample (19,467 bank-year observations) and the unaudited private banks subsample (29,403 bank-year observations). Consistent with Hypothesis 1, the results in Column 1 indicate that social capital is negatively and significantly associated with the likelihood of restatements in financial reports. The results in Column 2 show that social capital is not associated with the likelihood of restatements among public banks. Column 3 demonstrates that social capital is negatively and significantly associated with the likelihood of restatements among private banks. Column 4 shows that social capital is not associated with the likelihood of restatement among audited private banks. Column 5 shows that social capital is negatively and significantly associated with the likelihood of restatements among unaudited private banks, lending strong support to Hypothesis 2. The results in Columns 2 and 4 indicate that social capital does not have a significant effect on bank accounting transparency and reporting quality for public banks and for audited private banks. Columns 3 and 5 suggest that in the absence of a formal governance and auditor scrutiny, social capital has a positive impact on bank accounting transparency and reporting quality by reducing the likelihood of restatements. The extensive and comprehensive construct of social capital covers civic, cultural, athletic, recreational, religious, business, professional, and political associations in each county. High social capital in a county improves the county residents' quality of life and ethical principles. Thus, the county's ethical environment is enhanced by social capital. Given this, we assert that social capital serves as an effective monitoring mechanism to constrain opportunistic actions such as financial misreporting.

We repeat the regressions separately for the 2000-2006 pre-crisis period and the 2007-2009 crisis period and present the results in Panels B and C of Table 4. Consistent with the results reported in Panel A, the regression results indicate that social capital is negatively and

significantly associated with the likelihood of restatements for the full sample, the private banks subsample, and the unaudited private banks subsample. The evidence consistently suggests that social capital acts as an external mechanism that constrains managers' opportunistic reporting actions in the absence of formal governance and auditor scrutiny. The difference between Panel B and Panel C is that social capital constrains the likelihood of restatements to a much greater extent during the crisis period of 2007-2009 than during the pre-crisis period of 2000-2006. For example, Column 1 of Panel B shows that the estimated coefficient on *SOCIAL_CAPITAL* is -0.036 and Column 1 of Panel C shows that the estimated coefficient on *SOCIAL_CAPITAL* is -0.062. These results suggest that the extent to which social capital reduces the likelihood of restatements nearly doubled from the pre-crisis period to the crisis period.

Panels A, B, and C of Table 5 present the regression results examining the relation between social capital and income-increasing restatements, large-income-increasing restatements, and income-decreasing restatements, respectively, from 2000 to 2009. We note that in all three panels social capital is negatively and significantly associated with the likelihood of restatements for the full sample, the private banks subsample, and the unaudited private banks subsample, and that social capital is not reliably related to the likelihood of restatements for the public banks sample and the audited private banks subsample. The results indicate that not only is social capital associated with a lower likelihood of income-increasing restatements and large-income-increasing restatements, but it is also associated with a lower likelihood of income-decreasing restatements.

Table 6 reports the regression results relating social capital and income-increasing ALLP during the pre-crisis period, 2000-2006.[12] We use the absolute value of negative ALLP as the earnings management measure. Columns 1 and 3 show that social capital is negatively and significantly associated with the absolute value of negative ALLP (*ABS_ALLP*) for the full sample and for the private banks subsample, whereas Column 2 shows that social capital is not significantly related to the earnings management measure in the public banks subsample. In Columns 4 and 5, we find that in both the audited and the unaudited private bank subsamples, social capital is negatively and significantly associated with the earnings management measure. The results suggest that social capital can indeed constrain opportunistic income-increasing earnings management behaviors among private banks, which are subject to less regulatory monitoring and auditor scrutiny.

In Table 7, we present results relating social capital to managerial risk taking behavior during the pre-crisis period 2000-2006. If social capital constrains managerial opportunistic behavior before the crisis, then risk taking should be negatively associated with social capital, implying that banks headquartered in high social capital counties should exhibit less risk taking behavior than banks in low social capital counties. Panels A and B show the results of regressions with *Z_SCORE* and *SD_EARNINGS*, respectively, as the proxies for risk taking. In both panels, we find a negative and significant coefficient on social capital in the full sample regression, in the private banks subsample regression, and in the private and unaudited banks subsample regression. The coefficient on social capital in the public banks subsample is significant only at the 10% level. These results support the contention that higher social capital

[12] We restrict this test to the pre-crisis period, because large LLPs and loan charge-offs during the financial crisis will most likely skew the results for the crisis period.

effectively reduced managerial risk taking behaviors of private banks (especially the unaudited private banks) in the pre-crisis period.

Table 8 presents the results of regressions that examine the association between social capital and the likelihood of bank failure or financial trouble during the crisis period of 2007-2009. This test is a natural extension of our earnings management test and risk taking test. Since we find that social capital can reduce earnings management and risk taking behaviors prior to the financial crisis, we expect that social capital is negatively correlated with the instability of banks (i.e., likelihood of bank failure and financial trouble) during the crisis. Panel A shows the regression results relating social capital to bank failure and Panel B reports corresponding results relating social capital to bank financial trouble. The negative coefficients on *SOCIAL_CAPITAL* in Panels A and B suggest that social capital can reduce the likelihood of bank failure and financial trouble in both public and private banks, leading us to conclude that higher social capital in the county can reduce opportunistic actions by bank executives during the pre-crisis period (including more transparent financial reporting and reduced risk-taking), and therefore reduce the likelihood of bank failure and financial trouble during the crisis period.

Robustness Checks

We conduct several sensitivity tests. In the first test, we use an indicator variable (*SC*) for Social Capital, where *SC* is defined as 1 if the social capital index (*SOCIAL_CAPTIAL*) is above or equal to the median value, and 0 otherwise. We conduct the regression tests using the indicator variable *SC* and find that the coefficient on *SC* is significantly negatively related to the financial reporting transparency variable, *RESTATEMENT*, for the full sample and for the private unaudited banks subsample.

One concern with our main findings is that there might be some regional variables that are missing from our model and these omitted variables might bias our results. For example, the Midwest is considered more politically and socially conservative than the east and west coasts, and banks headquartered in the Midwest might have a lower likelihood of restatements than banks in the east and the west. We conduct the following sensitivity test to mitigate this concern. We follow Jha and Chen (2015) and construct indicator variables that capture whether the bank is headquartered in the West (CA, CO, ID, MT, NM , NV, OR, UT, WA, WY), the Northeast (CT, MA, ME, NH, NJ, NY, PA, RI, VT), the South (AL, AR, AZ, DC, DE, FL, GA, KY, LA, MD, MS, NC, SC, TN, TX, VA, WV, MS), or the Midwest (IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, OK, SD, WI) based on the US census classifications, and add these indicator variables to our main model. We continue to find that banks headquartered in high social-capital counties have a lower likelihood of restatements; the coefficient on *SOCIAL_CAPITAL* is negative and significant at the 1% level for the full sample and the private unaudited banks subsample. Despite the partial absorption of the social-capital effect by adding the four regional indicators into the main model, we continue to find that local social capital is reliably related to bank financial reporting transparency.

In the third sensitivity test, we conduct a separate analysis for each of the four regions to verify whether *SOCIAL_CAPITAL* continues to have a consistent effect on financial reporting transparency for banks headquartered in each of the four regions (West, Northeast, South, and Midwest). When we estimate a separate regression for each region, the coefficient on *SOCIAL_CAPITAL* continues to be negative and significant at the 1% level for all four regions for the full sample and the private unaudited banks subsample (not tabulated). Furthermore, the estimated coefficients on *SOCIAL_CAPITAL* across the four regions are quite similar in size.

This gives us more confidence that our regression model is not missing any regionally specific variables.

Rupasingha and Goetz (2008) have compiled an updated version of the social capital index for 2000, 2005, and 2009 which is available on the NERCRD website. In the fourth sensitivity test, we use the Rupasingha and Goetz (2008) social-capital index for the two years, 2005 and 2009 that are included in our sample period, and re-estimate the main test without doing linear interpolation to fill in the intervening years. The sample size drops to 10,858 bank-years because we use only banks that have data available for 2005 and 2009. We find that the main results (not tabulated) continue to hold for both years.

In the final robustness check, we conduct the test using the absolute value of ALLP as the earnings management measure. We find that social capital continues to be negatively and significantly related to this measure of financial reporting transparency. We also continue to find a negative relation between social capital and absolute value of ALLP for the private banks subsample but not for the public banks subsample.

5. CONCLUSIONS

The primary research questions addressed in this study are whether and how social capital relates to bank accounting transparency and whether this relation is stronger for small, unaudited private banks. We address these questions by analyzing a sample of public and private banks from the U.S. over the period 2000-2009, prior to and during the most recent financial crisis. In additional tests, we explore the relation between social capital and bank risk-taking in the pre-crisis period and between social capital and bank failure and financial trouble during the 2007-2009 financial crisis.

Our empirical results indicate that banks headquartered in high social capital counties have a lower likelihood of financial restatements and lower levels of income-increasing ALLP and these effects are prevalent predominantly in small, unaudited private banks. Additionally, we find that banks in high social capital counties exhibit lower levels of risk taking as reflected in two accounting-based risk variables, volatility of earnings and z-score. Lastly, we find that banks in high social capital counties are less likely to fail or experience financial trouble during the crisis period.

Our primary contribution is to document that differences in social capital are related to differences in bank financial reporting properties, risk taking, and financial distress. In particular, our results show that, the effects of informal institutions such as social capital are more pronounced for small, unaudited private banks. This is important evidence, given that an overwhelming majority of banks around the world are private banks and, consequently, are not subject to the full extent of regulatory scrutiny. Additionally, prior literature on informal institutions has focused on public firms from non-regulated industries whereas we examine both public and private banks. Our study also contributes to research investigating the relation between culture and corporate and individual decision making (e.g., Hilary and Hui 2009; Chui et al. 2010; Kanagaretnam et al. 2014). Our findings support the growing awareness among researchers of corporate decisions that informal institutions such as social capital are important in financial decisions, even when those decisions are made by professional managers.

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Appendix

Variables	Description
Main Dependent Variable:	
RESTATEMENT	This variable is an indicator variable that equals 1 if the RIADB507 variable (Restatements due to corrections of material accounting errors and changes in accounting principles) is positive or negative for the bank in the year, and 0 otherwise.
INCOME_INCREASE	This variable is an indicator variable that equals 1 if the RIADB507 variable (Restatements due to corrections of material accounting errors and changes in accounting principles) is *negative* for the bank-year, and 0 otherwise.
LARGE_INCOME_INCREASE	This variable is an indicator variable that equals 1 if the ratio of the RIADB507 variable (Restatements due to corrections of material accounting errors and changes in accounting principles) to the beginning total assets is less than -0.05%, and 0 otherwise.
INCOME_DECREASE	This variable is an indicator variable that equals 1 if the RIADB507 variable (Restatements due to corrections of material accounting errors and changes in accounting principles) is *positive* for the bank-year, and 0 otherwise.
ABS_ALLP	This variable is the absolute value of negative abnormal loan loss provisions. We first estimate the OLS regression: *LLP* = intercept + *CHO* + *NAL* + *HOM* + *COM* + *SIZE* + *CAP* + *GLOANS* + residual, where *LLP* is loan loss provisions scaled by total assets; *CHO* is loan charge-offs divided by total assets, *NAL* is non-accrual loans divided by total assets; *HOM* is the sum of individual non-mortgage loans and 1-4 family residential loans divided by total assets; *COM* is commercial loans divided by total assets; *SIZE* is the natural logarithm of total assets; *CAP* is Tier 1 capital divided by risk-weighted assets, G*LOANS* is the change in total loans divided by beginning total loans. We then keep the bank-years with negative residuals from the regression as the bank-years with income-increasing loan loss provisions. We use the absolute value of the income-increasing loan loss provisions as our earnings management measure.
Dependent Variables for Supporting Tests:	
Z_SCORE	This variable is the negative value of the natural logarithm of the ratio of the return on assets plus the capital ratio divided by the standard deviation of the return on assets over the pre-crisis period 2000-2006.
SD_EARNINGS	This variable is the standard deviation of annual earnings before taxes and loan and lease loss provisions divided by total loans over the period 2000-2006.
FAIL	This indicator variable equals 1 if the bank was closed by the FDIC in the years 2007-2009, and 0 otherwise.
TROUBLE	This variable is an indicator variable that equals 1 if the bank satisfies any of the following four conditions in 2007: (1) Tier 1 capital ratio is less than 4%, (2) the ratio of loan loss provision to total loans is greater than 1%, (3) ROA is less than -5%, and (4) the bank is listed as a failed bank in the FDIC website during 2007-2009; and 0 otherwise. We delete troubled banks in 2006 from our troubled banks subsample so that our troubled banks subsample includes only banks that were healthy in 2006.
Main Research Variable:	
SOCIAL_CAPITAL	This variable is the measure of the social capital at the county level. It is constructed following Rupasingha and Goetz (2008). Specifically, the variable is constructed by using the first component from a principal component analysis that uses four different measures. For example, we use the following four measures: assn97, nccs97, pvote96, respn00 for 1997, where assn97 is the sum of the religious organizations, civic and social associations, business associations,

	political organizations, professional organizations, labor organizations, bowling centers, physical fitness facilities, public golf courses, sport clubs, managers and promoters, membership sports and recreation clubs, and membership organizations not elsewhere classified in 1997. We divide the total by 12 because there are 12 different categories. Further, we also divide it by the population of the county. We then multiply it by 10,000. The measure nccs97 is the total number of nongovernment organizations excluding the ones with an international focus in 1997 divided by the population multiplied by 10,000. The measure pvote96 is the number of votes casted divided by the population above 18 times 100. The measure respn00 is the census response rate. Then we use a principal component analysis and use the first component to construct the social capital index for each county. We use an analogous approach for 2005 and 2009. For each of these years, we use the presidential elections and census response closest to 2005 and 2009, respectively. We then linearly interpolate and fill the social capital data for the in-between years. *Source: Northeast Regional Center for Rural Development (NERCRD), Rupasingha and Goetz (2008)*
Firm-Level Controls used in the Regressions:	
SIZE	This variable is the natural logarithm of total assets.
CAP	This variable is the ratio of Tier 1 capital to total risk-weighted assets.
NPL	This variable is the ratio of non-performing loans to total assets.
LIQUIDITY	This variable is the ratio of cash to total assets.
ALL	This variable is the ratio of loan loss allowance to total assets.
ROA	This variable is the ratio of net income to total assets.
LOSS	This variable is an indicator variable that equals 1 if *ROA* is negative, and 0 otherwise.
GROWTH	This variable is the change of total assets divided by beginning total assets.
PUBLIC	This variable is an indicator variable that equals 1 if the firm is a public bank trading in a major exchange, and 0 otherwise.
ASOCIAL_CAPITAL	This variable is the average value of *SOCIAL_CAPITAL* during the pre-crisis period 2000-2006.
ASIZE	This variable is the average value of *SIZE* during the pre-crisis period 2000-2006.
ACAP	This variable is the average value of *CAP* during the pre-crisis period 2000-2006.
ANPL	This variable is the average value of *NPL* during the pre-crisis period 2000-2006.
ALIQUIDITY	This variable is the average value of *LIQUIDITY* during the pre-crisis period 2000-2006.
AALL	This variable is the average value of *ALL* during the pre-crisis period 2000-2006.
AROA	This variable is the average value of *ROA* during the pre-crisis period 2000-2006.
ALOSS	This variable is the average value of *LOSS* during the pre-crisis period 2000-2006.
AGROWTH	This variable is the average value of *GROWTH* during the pre-crisis period 2000-2006.
APUBLIC	This variable is the average value of *PUBLIC* during the pre-crisis period 2000-2006.

Table 1
Descriptive Statistics for Variables in the Main Tests and Supporting Tests

Panel A: Descriptive statistics for variables in the main tests

	N	Mean	Median	Q1	Q3	Standard Deviation
Dependent Variable						
RESTATEMENT	50,626	0.067	0	0	0	0.250
INCOME_INCREASE	50,626	0.041	0	0	0	0.198
LARGE_INCOME_INCREASE	50,626	0.019	0	0	0	0.136
INCOME_DECREASE	50,626	0.026	0	0	0	0.160
ABS_ALLP	18,615	0.001	0.0007	0.0003	0.001	0.002
Independent Variables						
SOCIAL_CAPITAL	50,626	0.010	-0.087	-0.843	0.684	1.181
SIZE	50,626	11.790	11.700	10.965	12.500	1.196
CAP	50,626	0.100	0.091	0.079	0.111	0.033
NPL	50,626	0.003	0.0004	0	0.003	0.005
LIQUIDITY	50,626	0.051	0.038	0.026	0.060	0.045
ALL	50,626	0.035	0.032	0.025	0.041	0.017
ROA	50,626	0.021	0.024	0.014	0.033	0.196
LOSS	50,626	0.085	0	0	0	0.279
GROWTH	50,626	0.090	0.059	0.010	0.127	0.142
PUBLIC	50,626	0.035	0	0	0	0.183

Panel B: Descriptive statistics for variables in the supporting tests

	N	Mean	Median	Q1	Q3	Standard Deviation
Dependent Variable						
Z_SCORE	6,261	-1.615	-1.743	-2.194	-1.183	0.874
SD_EARNINGS	6,722	0.010	0.007	0.005	0.010	0.020
FAIL	16,090	0.050	0	0	0	0.219
TROUBLE	13,531	0.186	0	0	0	0.389
Independent Variables						
ASOCIAL_CAPITAL	6,722	-0.018	-0.111	-0.921	0.694	1.194
ASIZE	6,722	11.776	11.676	10.960	12.468	1.208
ACAP	6,722	0.099	0.090	0.079	0.109	0.032
ANPL	6,722	0.003	0.001	0.0001	0.003	0.004
ALIQUIDITY	6,722	0.049	0.039	0.028	0.057	0.034
AALL	6,722	0.034	0.033	0.026	0.040	0.015
AROA	6,722	0.020	0.025	0.017	0.033	0.496
ALOSS	6,722	0.052	0	0	0	0.178
AGROWTH	6,722	0.110	0.072	0.031	0.142	0.133
APUBLIC	6,722	0.030	0	0	0	0.170

Table 1 reports the descriptive statistics for the variables used in the regressions. Our full sample includes 50,626 bank-year observations from 2000 to 2009. We collect the data from the Commercial Bank Data Call Reports from the Federal Reserve Bank of Chicago (http://www.chicagofed.org/). We winsorize the top and bottom 1% of each continuous variable. Variables are defined in the Appendix.

Table 2
Pearson Correlations for Variables in the Main Tests and Supporting Tests

Panel A: Pearson correlations for variables in the main tests

	Variable	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	*RESTATEMENT*	**0.77**	**0.52**	**0.61**	**0.04**	**-0.03**	**0.03**	**0.01**	**0.02**	0.00	0.01	**-0.02**	**0.03**	-0.01	**0.03**
2	*INCOME_INCREASE*	1.00	**0.67**	**-0.03**	**0.03**	**-0.02**	**0.03**	-0.01	**0.01**	**-0.02**	-0.01	-0.04	**0.02**	**-0.01**	**0.02**
3	*LARGE_INCOME_INCREASE*		1.00	**-0.02**	**0.04**	**-0.01**	0.04	**0.01**	**0.02**	-0.01	0.02	-0.04	**0.03**	**-0.03**	**0.01**
4	*INCOME_DECREASE*			1.00	**0.02**	**-0.02**	**0.01**	**0.02**	**0.02**	**0.01**	**0.02**	**-0.03**	**0.02**	-0.01	**0.01**
5	*ABS_ALLP*				1.00	**-0.04**	**-0.08**	**0.10**	**0.11**	**0.06**	**0.28**	**-0.04**	**0.19**	**-0.02**	**-0.02**
6	*SOCIAL_CAPITAL*					1.00	**-0.28**	**0.06**	**0.04**	**0.03**	0.00	**0.02**	**-0.10**	**-0.14**	**-0.06**
7	*SIZE*						1.00	**-0.28**	**-0.14**	**-0.27**	**0.01**	**0.01**	**-0.03**	**0.14**	**0.28**
8	*CAP*							1.00	**0.11**	**0.09**	**0.02**	**0.04**	**-0.05**	**-0.11**	**-0.08**
9	*NPL*								1.00	**0.05**	**0.11**	0.00	**0.04**	**-0.09**	**-0.05**
10	*LIQUIDITY*									1.00	**0.02**	**-0.03**	**0.09**	**-0.04**	**-0.06**
11	*ALL*										1.00	**-0.05**	**0.30**	**-0.16**	**0.01**
12	*ROA*											1.00	**-0.10**	0.01	0.00
13	*LOSS*												1.00	**0.02**	**0.02**
14	*GROWTH*													1.00	**0.05**
15	*PUBLIC*														1.00

Panel B: Pearson correlations for variables in the supporting tests

	Variable	2	3	4	5	6	7	8	9	10	11	12
1	*SD_EARNINGS*	**0.25**	**-0.06**	0.00	**0.21**	**0.10**	**0.07**	**0.13**	**0.09**	**0.21**	**0.05**	-0.02
2	*Z_SCORE*	1.00	**-0.07**	**-0.22**	**-0.04**	**0.09**	**0.13**	**0.12**	**-0.32**	**0.48**	**0.20**	**-0.05**
3	*ASOCIAL_CAPITAL*		1.00	**-0.26**	**0.05**	**0.08**	**0.03**	**0.04**	0.02	**-0.06**	**-0.22**	**-0.04**
4	*ASIZE*			1.00	**-0.28**	**-0.19**	**-0.29**	**-0.04**	**0.03**	**-0.17**	**0.16**	**0.24**
5	*ACAP*				1.00	**0.16**	**0.11**	**0.09**	**0.02**	**0.06**	**-0.07**	**-0.06**
6	*ANPL*					1.00	**0.08**	**0.19**	0.01	**0.06**	**-0.18**	**-0.06**
7	*ALIQUIDITY*						1.00	-0.01	**-0.06**	**0.06**	**-0.10**	**-0.07**
8	*AALL*							1.00	**-0.03**	**0.14**	**-0.12**	-0.02
9	*AROA*								1.00	**-0.08**	0.02	0.00
10	*ALOSS*									1.00	**0.18**	-0.01
11	*AGROWTH*										1.00	**0.07**
12	*APUBLIC*											1.00

Table 2 reports the Pearson Correlations for the variables used in regression tests. Bold numbers are significant at less than the 5% level. Our sample used in the main tests includes 50,626 bank-year observations from 2000 to 2009. Our sample used in the risk-taking regressions includes 6,722 observations. We collect the data from the Commercial Bank Data Call Reports from the Federal Reserve Bank of Chicago (http://www.chicagofed.org/). We winsorize the top and bottom 1% of each continuous variable. Variables are defined in the Appendix.

Table 3
Univariate Tests

Panel A: The Mean Difference in Proportion of Banks with Restatements between Banks Located in High Social Capital Counties and Banks Located in Low Social Capital Counties for Different Samples during 2000-2009

Sample (number of bank-years)	Mean *RESTATEMENT* for Banks Headquartered in High Social Capital Counties (number of bank-years)	Mean *RESTATEMENT* for Banks Headquartered in High Social Capital Counties (number of bank-years)	Difference (t-value)
Full Sample (50,626)	0.059 (25,313)	0.075 (25,313)	-0.016*** (-7.49)
Public Banks Subsample (1,756)	0.087 (878)	0.119 (878)	-0.032** (-2.20)
Private Banks Subsample (48,870)	0.058 (24,434)	0.074 (24,436)	-0.016*** (-7.10)
Private and Audited Banks Subsample (19,467)	0.073 (9,736)	0.078 (9,731)	-0.005 (-1.12)
Private and Unaudited Banks Subsample (29,403)	0.052 (14,695)	0.067 (14,708)	-0.015*** (-5.42)

Panel B: The Mean Difference in Proportion of Banks with Income-Increasing Restatements between Banks Located in High Social Capital Counties and Banks Located in Low Social Capital Counties for Different Samples during 2000-2009

Sample (number of bank-years)	Mean *INCOME_INCREASE* for Banks Headquartered in High Social Capital Counties (number of bank-years)	Mean *INCOME_INCREASE* for Banks Headquartered in Low Social Capital Counties (number of bank-years)	Difference (t-value)
Full Sample (50,626)	0.036 (25,313)	0.045 (25,313)	-0.009*** (-2.56)
Public Banks Subsample (1,756)	0.049 (878)	0.079 (878)	-0.030** (-2.54)
Private Banks Subsample (48,870)	0.036 (24,434)	0.045 (24,436)	-0.009*** (-4.94)
Private and Audited Banks Subsample (19,467)	0.047 (9,736)	0.046 (9,731)	0.001 (0.37)
Private and Unaudited Banks Subsample (29,403)	0.032 (14,695)	0.040 (14,708)	-0.008*** (-3.84)

Table 3 (Cont'd)

Panel C: The Mean Difference in Proportion of Banks with Large-Income-Increasing Restatements between Banks Located in High Social Capital Counties and Banks Located in Low Social Capital Counties for Different Samples during 2000-2009

Sample (number of bank-years)	Mean *LARGE_INCOME_INCREASE* for Banks Headquartered in High Social Capital Counties (number of bank-years)	Mean *LARGE_INCOME_INCREASE* for Banks Headquartered in Low Social Capital Counties (number of bank-years)	Difference (t-value)
Full Sample (50,626)	0.017 (25,313)	0.021 (25,313)	-0.004*** (-3.21)
Public Banks Subsample (1,756)	0.021 (878)	0.034 (878)	-0.013* (-1.76)
Private Banks Subsample (48,870)	0.017 (24,434)	0.020 (24,436)	-0.003*** (-2.89)
Private and Audited Banks Subsample (19,467)	0.020 (9,736)	0.021 (9,731)	-0.001 (0.31)
Private and Unaudited Banks Subsample (29,403)	0.015 (14,695)	0.019 (14,708)	-0.004** (-2.50)

Panel D: The Mean Difference in Proportion of Banks with Income-Decreasing Restatements between Banks Located in High Social Capital Counties and Banks Located in Low Social Capital Counties for Different Samples during 2000-2009

Sample (number of bank-years)	Mean *INCOME_DECREASE* for Banks Headquartered in High Social Capital Counties (number of bank-years)	Mean *INCOME_DECREASE* for Banks Headquartered in Low Social Capital Counties (number of bank-years)	Difference (t-value)
Full Sample (50,626)	0.022 (25,313)	0.030 (25,313)	-0.008*** (-5.36)
Public Banks Subsample (1,756)	0.038 (878)	0.040 (878)	-0.002 (-0.25)
Private Banks Subsample (48,870)	0.022 (24,434)	0.029 (24,436)	-0.007*** (-5.00)
Private and Audited Banks Subsample (19,467)	0.027 (9,736)	0.032 (9,731)	-0.005** (-2.22)
Private and Unaudited Banks Subsample (29,403)	0.020 (14,695)	0.027 (14,708)	-0.007*** (-3.73)

Table 3 (Cont'd)

Panel E: The Mean Difference in Absolute Value of Income-Increasing ALLP between Banks Located in High Social Capital Counties and Banks Located in Low Social Capital Counties for Different Samples during 2000-2006

Sample (number of bank-years)	Mean *ABS_ALLP* for Banks Headquartered in High Social Capital Counties (number of bank-years)	Mean *ABS_ALLP* for Banks Headquartered in Low Social Capital Counties (number of bank-years)	Difference (t-value)
Full Sample (18,615)	0.0010 (9,308)	0.0012 (9,307)	-0.0002*** (-5.25)
Public Banks Subsample (598)	0.00095 (299)	0.00089 (299)	0.00006 (0.68)
Private Banks Subsample (18,017)	0.0010 (9,006)	0.0012 (9,011)	-0.0002*** (-5.55)
Private and Audited Banks Subsample (6,705)	0.0010 (3,352)	0.0012 (3,353)	-0.0002*** (-5.24)
Private and Unaudited Banks Subsample (11,312)	0.0010 (5,654)	0.0012 (5,658)	-0.0002*** (-5.80)

Table 3 reports the univariate test results for the mean differences in bank reporting transparency variables for banks located in high social capital counties versus banks located in low social capital counties for full sample, public banks subsample, private banks subsample, private and audited banks subsample, and private and unaudited banks subsample. We define banks located in high (low) social capital counties if the social capital index is above or equal to (below) the median social capital index in the sample. Panel A shows the mean difference in proportion of banks with restatements for banks located in high social capital counties versus banks located in low social capital counties. Panel B shows the mean difference in proportion of banks with income-increasing restatements for banks located in high social capital counties versus banks located in low social capital counties. Panel C shows the mean difference in proportion of banks with large-income-increasing restatements for banks located in high social capital counties versus banks located in low social capital counties. Panel D shows the mean difference in proportion of banks with income-decreasing restatements for banks located in high social capital counties versus banks located in low social capital counties. Panel E shows the mean difference in absolute value of income-increasing ALLP for banks located in high social capital counties versus banks located in low social capital counties. We collect the data from the Commercial Bank Data Call Reports from the Federal Reserve Bank of Chicago (http://www.chicagofed.org/). We winsorize the top and bottom 1% of all the continuous variables. *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively, based on a two-tailed test. Variables are defined in the Appendix.

Table 4
The Effect of Social Capital on Restatements

Panel A: The Effect of Social Capital on Restatements of Banks during 2000-2009

	Full Sample	Public Banks Subsample	Private Banks Subsample	Private and Audited Banks Subsample	Private and Unaudited Banks Subsample
	Dependent Variable = *RESTATEMENT*	Dependent Variable = *RESTATEMENT*	Dependent Variable = *RESTATEMENT*	Dependent Variable = *RESTATEMENT*	Dependent Variable = *RESTATEMENT*
Variable	Coefficient (Wald Chi-Square) (1)	Coefficient (Wald Chi-Square) (2)	Coefficient (Wald Chi-Square) (3)	Coefficient (Wald Chi-Square) (4)	Coefficient (Wald Chi-Square) (5)
SOCIAL_CAPITAL	-0.041*** (15.31)	-0.036 (0.56)	-0.043*** (15.20)	-0.018 (0.67)	-0.044*** (10.01)
SIZE	0.053*** (19.64)	0.160*** (20.11)	0.047*** (14.88)	0.056*** (10.43)	0.033* (3.82)
CAP	1.305*** (10.55)	3.853** (4.85)	1.266*** (9.64)	1.122* (3.41)	1.184** (4.45)
NPL	7.640*** (18.44)	24.822* (3.71)	7.426*** (16.66)	10.358*** (17.81)	4.571** (4.53)
LIQUIDITY	-0.087 (0.12)	0.567 (0.10)	-0.123 (0.23)	-0.063 (0.04)	-0.344 (0.48)
ALL	-1.255* (2.75)	-8.053** (4.34)	-1.069 (2.04)	-0.882 (0.59)	-1.100 (1.66)
ROA	-1.191*** (7.63)	-5.174** (6.55)	-1.122*** (7.61)	-0.334 (0.73)	-1.622 (2.33)
LOSS	0.133*** (9.04)	0.233 (1.46)	0.120*** (7.05)	0.069 (1.24)	0.184** (5.53)
GROWTH	-0.184** (6.06)	-0.649** (5.77)	-0.144*** (3.54)	-0.211** (4.24)	-0.055 (0.25)
PUBLIC	0.158*** (16.74)				
Intercept	-2.208*** (185.78)	-3.439*** (34.45)	-2.143*** (170.71)	-2.204*** (78.38)	-1.985*** (82.84)
YEAR FIXED EFFECTS	YES	YES	YES	YES	YES
Log-Likelihood	-12,333	-557	-11,765	-5,181	-6,560
Pseudo-R^2	0.012	0.056	0.009	0.007	0.011
Percent Concordant	55.7	65.0	55.0	53.6	55.3
# of Observations	50,626	1,756	48,870	19,467	29,403

Table 4 (Cont'd)

Panel B: The Effect of Social Capital on Restatements of Banks during the Pre-Crisis Period 2000-2006

	Full Sample	Public Banks Subsample	Private Banks Subsample	Private and Audited Banks Subsample	Private and Unaudited Banks Subsample
	Dependent Variable = *RESTATEMENT*	Dependent Variable = *RESTATEMENT*	Dependent Variable = *RESTATEMENT*	Dependent Variable = *RESTATEMENT*	Dependent Variable = *RESTATEMENT*
Variable	Coefficient (Wald Chi-Square) (1)	Coefficient (Wald Chi-Square) (2)	Coefficient (Wald Chi-Square) (3)	Coefficient (Wald Chi-Square) (4)	Coefficient (Wald Chi-Square) (5)
SOCIAL_CAPITAL	-0.036*** (8.24)	0.027 (0.128)	-0.037*** (8.65)	-0.014 (0.39)	-0.034** (4.53)
SIZE	-0.040*** (6.83)	-0.005 (0.005)	-0.041*** (6.77)	-0.028 (1.26)	-0.055*** (6.96)
CAP	1.621*** (8.18)	3.915 (1.802)	1.599*** (8.06)	1.363 (2.67)	1.771*** (7.38)
NPL	9.679*** (19.11)	23.267 (1.018)	9.552*** (18.40)	11.369*** (10.75)	7.337*** (7.89)
LIQUIDITY	0.583* (3.18)	2.166 (0.702)	0.568* (2.92)	0.519 (1.26)	0.480 (1.26)
ALL	0.416 (0.20)	-6.061 (0.555)	0.540 (0.33)	0.113 (0.01)	1.014 (0.66)
ROA	-1.594* (3.80)	-7.368 (1.614)	-1.555** (3.86)	-0.188 (0.15)	-4.615* (3.38)
LOSS	0.021 (0.10)	-0.156 (0.157)	0.019 (0.07)	0.034 (0.14)	-0.077 (0.31)
GROWTH	0.068 (0.53)	-0.305 (0.650)	0.087 (0.83)	-0.020 (0.02)	0.180 (1.51)
PUBLIC	0.105 (2.43)				
Intercept	-1.356*** (43.64)	-1.572 (2.115)	-1.346*** (41.70)	-1.420*** (17.34)	-1.176*** (21.54)
YEAR FIXED EFFECTS	YES	YES	YES	YES	YES
Log-Likelihood	-7,153	-229	-6,921	-3,099	-3,797
Pseudo-R^2	0.011	0.023	0.011	0.007	0.017
Percent Concordant	54.8	55.9	55.0	52.5	57.0
# of Observations	34,536	1,102	33,435	13,386	20,049

Table 4 (Cont'd)

Panel C: The Effect of Social Capital on Restatements of Banks during the Crisis Period 2007-2009

	Full Sample	Public Banks Subsample	Private Banks Subsample	Private and Audited Banks Subsample	Private and Unaudited Banks Subsample
	Dependent Variable = *RESTATEMENT*	Dependent Variable = *RESTATEMENT*	Dependent Variable = *RESTATEMENT*	Dependent Variable = *RESTATEMENT*	Dependent Variable = *RESTATEMENT*
Variable	Coefficient (Wald Chi-Square) (1)	Coefficient (Wald Chi-Square) (2)	Coefficient (Wald Chi-Square) (3)	Coefficient (Wald Chi-Square) (4)	Coefficient (Wald Chi-Square) (5)
SOCIAL_CAPITAL	-0.062*** (11.81)	-0.089 (0.92)	-0.063*** (11.31)	-0.027 (-0.03)	-0.068*** (8.77)
SIZE	0.151*** (88.22)	0.248*** (25.62)	0.145*** (77.06)	0.143*** (0.14)	0.135*** (40.16)
CAP	0.312 (0.37)	1.713 (0.32)	0.274 (0.28)	0.347 (0.35)	-0.082 (0.01)
NPL	3.486 (1.77)	20.467 (1.90)	3.234 (1.47)	7.608* (7.61)	-1.204 (0.14)
LIQUIDITY	-0.827*** (6.66)	-0.084 (0.02)	-0.877*** (7.46)	-0.885** (-0.89)	-0.890* (3.78)
ALL	-3.802*** (12.48)	-9.758** (4.92)	-3.505*** (10.51)	-2.503 (-2.50)	-4.183*** (11.18)
ROA	-0.613*** (3.94)	-2.033 (1.34)	-0.576* (3.26)	0.001 (0.01)	-0.840*** (7.05)
LOSS	0.059 (1.67)	0.152 (0.51)	0.050 (1.19)	-0.034 (-0.03)	0.132** (5.32)
GROWTH	-0.338*** (11.22)	-1.007* (3.23)	-0.292*** (7.95)	-0.317** (-0.32)	-0.222 (1.61)
PUBLIC	0.140*** (5.36)				
Intercept	-2.982*** (185.60)	-4.100*** (26.74)	-2.915*** (168.93)	-2.875*** (-2.87)	-2.775*** (90.74)
YEAR FIXED EFFECTS	YES	YES	YES	YES	YES
Log-Likelihood	-4,939	-297	-4,638	-2,005	-2,622
Pseudo-R^2	0.038	0.072	0.030	0.023	0.036
Percent Concordant	61.9	65.6	60.8	59.4	62.0
# of Observations	16,090	654	15,436	6,081	9,355

Table 4 reports the results for the logistic regression on restatements with standard errors clustered by counties. Panel A shows the regressions results for the full sample which includes 50,626 bank-year observations from 2000 to 2009. Panel B shows the regression results for the pre-crisis period sample which includes 34,536 bank-year observations from 2000 to 2006. Panel C shows the regression results for the crisis period sample which includes 16,090 bank-year observations from 2007-2009. We collect the data from the Commercial Bank Data Call Reports from the Federal Reserve Bank of Chicago (http://www.chicagofed.org/). We winsorize the top and bottom 1% of all the continuous variables. *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively, based on a two-tailed test. Variables are defined in the Appendix.

Table 5
The Effect of Social Capital on Income-Increasing and Income-Decreasing Restatements of Banks

Panel A: The Effect of Social Capital on Income-Increasing Restatements of Banks during 2000-2009

	Full Sample	Public Banks Subsample	Private Banks Subsample	Private and Audited Banks Subsample	Private and Unaudited Banks Subsample
	Dependent Variable = *INCOME_INCREASE*	Dependent Variable = *INCOME_INCREASE*	Dependent Variable = *INCOME_INCREASE*	Dependent Variable = *INCOME_INCREASE*	Dependent Variable = *INCOME_INCREASE*
Variable	Coefficient (Wald Chi-Square) (1)	Coefficient (Wald Chi-Square) (2)	Coefficient (Wald Chi-Square) (3)	Coefficient (Wald Chi-Square) (4)	Coefficient (Wald Chi-Square) (5)
SOCIAL_CAPITAL	-0.028** (5.64)	-0.066 (1.24)	-0.028** (5.52)	-0.004 (0.04)	-0.031** (4.05)
SIZE	0.060*** (23.13)	0.151*** (12.37)	0.055*** (18.52)	0.071*** (16.34)	0.040** (5.31)
CAP	0.629* (2.90)	1.494 (0.42)	0.616* (2.76)	0.534 (1.02)	0.579 (1.13)
NPL	7.190*** (12.75)	21.783* (2.97)	6.998*** (11.82)	9.568*** (9.58)	4.789** (4.14)
LIQUIDITY	-0.579* (3.30)	-3.784 (2.01)	-0.542* (2.96)	-0.991*** (6.93)	-0.237 (0.38)
ALL	-2.662*** (12.90)	-10.552** (5.61)	-2.428*** (10.91)	-3.469*** (8.06)	-1.271 (2.21)
ROA	-0.020 (1.68)	-5.578*** (8.99)	-0.019 (1.52)	-0.747 (2.55)	-0.009 (0.45)
LOSS	0.222*** (32.95)	0.175 (0.78)	0.206*** (27.20)	0.116* (3.64)	0.250*** (20.87)
GROWTH	-0.286*** (12.04)	-0.957*** (8.24)	-0.238*** (7.61)	-0.321*** (7.34)	-0.142 (1.22)
PUBLIC	0.127*** (7.64)				
Intercept	-2.413*** (218.99)	-3.101*** (16.00)	-2.367*** (207.01)	-2.411*** (103.18)	-2.282*** (100.70)
YEAR FIXED EFFECTS	YES	YES	YES	YES	YES
Log-Likelihood	-8,555	-395	-8,149	-3,611	-4,521
Pseudo-R^2	0.011	0.065	0.008	0.010	0.007
Percent Concordant	54.9	67.2	53.9	55.2	52.2
# of Observations	50,626	1,756	48,870	19,467	29,403

Table 5 (Cont'd)

Panel B: The Effect of Social Capital on Large-Income-Increasing Restatements of Banks during 2000-2009

	Full Sample	Public Banks Subsample	Private Banks Subsample	Private and Audited Banks Subsample	Private and Unaudited Banks Subsample
	Dependent Variable = *LARGE_INCOME_INCREASE*	Dependent Variable = *LARGE_INCOME_INCREASE*	Dependent Variable = *LARGE_INCOME_INCREASE*	Dependent Variable = *LARGE_INCOME_INCREASE*	Dependent Variable = *LARGE_INCOME_INCREASE*
Variable	Coefficient (Wald Chi-Square) (1)	Coefficient (Wald Chi-Square) (2)	Coefficient (Wald Chi-Square) (3)	Coefficient (Wald Chi-Square) (4)	Coefficient (Wald Chi-Square) (5)
SOCIAL_CAPITAL	-0.040*** (8.63)	-0.082 (1.15)	-0.039*** (8.12)	-0.035 (2.36)	-0.041** (6.22)
SIZE	0.008 (0.20)	0.022 (0.14)	0.007 (0.16)	0.053** (4.52)	-0.028 (1.62)
CAP	1.013** (4.97)	2.063 (0.41)	0.989** (4.75)	1.146* (2.87)	0.785 (1.64)
NPL	7.808*** (13.28)	36.855** (4.94)	7.529*** (12.07)	11.192*** (9.23)	4.298 (2.62)
LIQUIDITY	-0.875** (5.71)	-6.654* (3.07)	-0.791** (4.74)	-0.691* (2.72)	-0.948* (3.63)
ALL	-2.270** (5.58)	-9.018** (4.45)	-2.094** (4.67)	-3.878** (6.23)	-0.513 (0.21)
ROA	-0.015 (1.17)	-5.635** (5.56)	-0.013 (0.98)	-0.717 (1.20)	-0.005 (0.20)
LOSS	0.267*** (34.14)	0.169 (0.34)	0.256*** (29.22)	0.195*** (7.30)	0.288*** (26.62)
GROWTH	-0.675*** (29.96)	-1094*** (10.29)	-0.646*** (25.96)	-0.824*** (18.03)	-0.428** (6.13)
PUBLIC	0.169*** (7.53)				
Intercept	-2.158*** (89.52)	-1.774 (2.55)	-2.157*** (85.02)	-2.612*** (60.85)	-1.805*** (38.62)
YEAR FIXED EFFECTS	YES	YES	YES	YES	YES
Log-Likelihood	-4,667	-208	-4,953	-1,909	-2,534
Pseudo-R^2	0.014	0.064	0.012	0.019	0.010
Percent Concordant	55.2	67.7	54.3	57.9	51.8
# of Observations	50,626	1,756	48,870	19,467	29,403

Table 5 (Cont'd)

Panel C: The Effect of Social Capital on Income-Decreasing Restatements of Banks during 2000-2009

	Full Sample	Public Banks Subsample	Private Banks Subsample	Private and Audited Banks Subsample	Private and Unaudited Banks Subsample
	Dependent Variable = *INCOME_DECREASE*	Dependent Variable = *INCOME_DECREASE*	Dependent Variable = *INCOME_DECREASE*	Dependent Variable = *INCOME_DECREASE*	Dependent Variable = *INCOME_DECREASE*
Variable	Coefficient (Wald Chi-Square) (1)	Coefficient (Wald Chi-Square) (2)	Coefficient (Wald Chi-Square) (3)	Coefficient (Wald Chi-Square) (4)	Coefficient (Wald Chi-Square) (5)
SOCIAL_CAPITAL	-0.049*** (16.82)	0.011 (0.02)	-0.052*** (17.91)	-0.031 (1.53)	-0.051*** (11.04)
SIZE	0.022 (2.34)	0.112** (4.53)	0.017 (1.29)	0.012 (0.32)	0.011 (0.28)
CAP	1.521*** (9.43)	5.148** (4.68)	1.477*** (8.34)	1.462* (3.62)	1.357** (4.91)
NPL	5.727*** (9.18)	18.931 (0.85)	5.571*** (8.48)	7.636*** (7.60)	2.941 (1.26)
LIQUIDITY	0.616** (4.85)	4.273*** (6.93)	0.499* (3.10)	0.967** (4.56)	-0.049 (0.02)
ALL	1.225 (1.77)	-1.380 (0.12)	1.266 (1.91)	2.667* (3.71)	-0.024 (0.01)
ROA	-0.605* (3.55)	-2.454 (0.92)	-0.565* (3.12)	0.247 (0.25)	-1.134* (3.52)
LOSS	0.073 (2.61)	0.200 (0.64)	0.061 (1.55)	-0.024 (0.10)	0.162** (5.18)
GROWTH	0.005 (0.03)	-0.040 (0.01)	0.020 (0.05)	0.011 (0.01)	0.054 (0.17)
PUBLIC	0.158** (6.64)				
Intercept	-2.456*** (147.77)	-3.875*** (18.77)	-2.386*** (131.27)	-2.377*** (57.04)	-2.239*** (69.69)
YEAR FIXED EFFECTS	YES	YES	YES	YES	YES
Log-Likelihood	-6,090	-277	-5,806	-2,554	-3,239
Pseudo-R^2	0.010	0.042	0.008	0.009	0.010
Percent Concordant	52.6	60.2	51.8	51.1	51.7
# of Observations	50,626	1,756	48,870	19,467	29,403

Table 5 reports the results for the logistic regression on banks' income-increasing and income-decreasing restatements with standard errors clustered by counties. Panel A shows the regression results on banks' income-increasing behaviors for the full sample which includes 50,626 bank-year observations from 2000 to 2009. Panel B shows the regression results on banks' large-income-increasing behaviors for the full sample which includes 50,626 bank-year observations from 2000 to 2009. Panel C shows the regression results on banks' income-decreasing behaviors for the full sample which includes 50,626 bank-year observations from 2000 to 2009. We collect the data from the Commercial Bank Data Call Reports from the Federal Reserve Bank of Chicago (http://www.chicagofed.org/). We winsorize the top and bottom 1% of all the continuous variables. *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively, based on a two-tailed test. Variables are defined in the Appendix.

Table 6
The Effect of Social Capital on Income-Increasing Abnormal Loan Loss Provisions during the Pre-Crisis Period 2000-2006

	Full Sample	Public Banks Subsample	Private Banks Subsample	Private and Audited Banks Subsample	Private and Unaudited Banks Subsample
	Dependent Variable = *ABS_ALLP*	Dependent Variable = *ABS_ALLP*	Dependent Variable = *ABS_ALLP*	Dependent Variable = *ABS_ALLP*	Dependent Variable = *ABS_ALLP*
Variable	Coefficient (t-value) (1)	Coefficient (t-value) (2)	Coefficient (t-value) (3)	Coefficient (t-value) (4)	Coefficient (t-value) (5)
SOCIAL_CAPITAL	-0.0001*** (-7.33)	-0.00003 (-0.65)	-0.0001*** (-7.36)	-0.0001*** (-4.72)	-0.0001*** (-6.46)
SIZE	-0.00001 (-0.52)	0.00004 (1.02)	-0.00001 (-0.61)	-0.00004* (-1.94)	0.00002 (0.78)
CAP	0.003*** (4.83)	0.006* (1.85)	0.003*** (4.88)	-0.0002 (-0.30)	0.005*** (5.96)
NPL	0.023*** (7.06)	0.008 (0.41)	0.023*** (7.05)	0.016*** (3.19)	0.027*** (6.42)
LIQUIDITY	0.002*** (3.53)	-0.002 (-1.22)	0.002*** (3.56)	0.0005 (0.97)	0.002*** (3.60)
ALL	0.025*** (19.12)	0.021*** (3.06)	0.025*** (18.96)	0.030*** (12.21)	0.022*** (13.55)
ROA	0.0003 (0.17)	-0.0003 (-0.07)	0.0003 (0.17)	0.002 (0.58)	-0.001 (-0.39)
LOSS	0.001*** (9.59)	0.002 (1.62)	0.001*** (9.44)	0.002*** (7.00)	0.001*** (6.02)
GROWTH	0.0004*** (3.43)	0.001*** (3.55)	0.0003*** (2.74)	0.0002 (1.17)	0.0005*** (2.91)
PUBLIC	-0.0001* (-1.67)				
Intercept	-0.0001 (-0.44)	0.0001 (0.14)	-0.0001 (-0.35)	0.0004 (1.53)	-0.0005 (-1.42)
YEAR FIXED EFFECTS	YES	YES	YES	YES	YES
R-Square	0.120	0.169	0.120	0.152	0.109
# of Observations	18,615	598	18,017	6,705	11,312

Table 6 reports the results for the OLS regression models with standard errors clustered by counties. Our pre-crisis period sample includes 18,615 bank-year observations during 2000-2006. We collect the data from the Commercial Bank Data Call Reports from the Federal Reserve Bank of Chicago (http://www.chicagofed.org/). We winsorize the top and bottom 1% of all the continuous variables. *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively, based on a two-tailed test. Variables are defined in the Appendix.

Table 7
The Effect of Social Capital on Banks' Risking-taking during the Pre-Crisis Period 2000-2006

Panel A: The Effect of Social Capital on Banks' Z-Score during the Pre-Crisis Period 2000-2006

	Full Sample	Public Banks Subsample	Private Banks Subsample	Private and Audited Banks Subsample	Private and Unaudited Banks Subsample
	Dependent Variable = *Z_SCORE*	Dependent Variable = *Z_SCORE*	Dependent Variable = *Z_SCORE*	Dependent Variable = *Z_SCORE*	Dependent Variable = *Z_SCORE*
Variable	Coefficient (t-value) (1)	Coefficient (t-value) (2)	Coefficient (t-value) (3)	Coefficient (t-value) (4)	Coefficient (t-value) (5)
ASOCIAL_CAPITAL	-0.053*** (-5.81)	-0.095* (-1.70)	-0.053*** (-5.83)	-0.031 (-1.62)	-0.047*** (-4.73)
ASIZE	-0.138*** (-11.29)	-0.011 (-0.20)	-0.138*** (-11.01)	-0.162*** (-8.40)	-0.124*** (-8.52)
ACAP	-0.666 (-1.41)	7.791** (2.27)	-0.751 (-1.60)	-0.772 (-1.17)	-0.576 (-1.21)
ANPL	8.964*** (2.88)	3.106 (0.10)	8.917*** (2.87)	4.145 (0.77)	8.751** (2.57)
ALIQUIDITY	1.599*** (5.18)	1.114 (0.56)	1.643*** (5.25)	2.028*** (3.74)	1.329*** (3.30)
AALL	5.100*** (5.83)	4.212 (0.63)	5.21*** (5.96)	4.665*** (2.87)	5.651*** (5.96)
AROA	-5.719** (-2.57)	-42.780*** (-6.18)	-5.57** (-2.54)	-1.654 (-1.28)	-11.032*** (-2.80)
ALOSS	2.663*** (11.93)	3.129*** (4.00)	2.65*** (11.90)	2.933*** (11.15)	2.278*** (6.91)
AGROWTH	2.135*** (15.88)	1.892*** (4.28)	2.11*** (15.51)	2.431*** (10.46)	1.840*** (11.20)
APUBLIC	-0.111** (-1.98)				
Intercept	-0.331* (-1.89)	-1.859** (-1.99)	-0.332* (-1.84)	-0.099 (-0.38)	-0.345 (-1.56)
R-Square	0.337	0.594	0.333	0.390	0.316
# of Observations	6,261	179	6,082	1,748	4,334

Table 7 (Cont'd)

Panel B: The Effect of Social Capital on Banks' Volatility of Earnings before Taxes and Loan Loss Provisions during the Pre-Crisis Period 2000-2006

	Full Sample	Public Banks Subsample	Private Banks Subsample	Private and Audited Banks Subsample	Private and Unaudited Banks Subsample
	Dependent Variable = *SD_EARNINGS*	Dependent Variable = *SD_EARNINGS*	Dependent Variable = *SD_EARNINGS*	Dependent Variable = *SD_EARNINGS*	Dependent Variable = *SD_EARNINGS*
Variable	Coefficient (t-value) (1)	Coefficient (t-value) (2)	Coefficient (t-value) (3)	Coefficient (t-value) (4)	Coefficient (t-value) (5)
ASOCIAL_CAPITAL	-0.001*** (-0.001)	-0.001* (-1.67)	-0.001*** (-3.22)	-0.001 (-1.65)	-0.001*** (-3.24)
ASIZE	0.002** (0.002)	-0.0001 (-0.20)	0.002** (2.39)	0.004*** (2.78)	0.0003 (0.84)
ACAP	0.123** (0.123)	0.020 (0.75)	0.124** (2.22)	0.243** (2.43)	0.036** (2.29)
ANPL	0.304* (0.304)	-0.359 (-1.62)	0.309* (1.92)	1.037** (2.42)	0.106 (1.20)
ALIQUIDITY	0.040*** (4.30)	-0.018 (-1.18)	0.041*** (4.32)	0.064*** (3.05)	0.031*** (3.35)
AALL	0.080** (2.22)	0.097** (2.18)	0.080** (2.21)	0.220** (2.50)	0.039* (1.70)
AROA	0.137 (0.76)	0.040 (0.86)	0.137 (0.76)	-0.118 (-0.47)	0.405*** (3.74)
ALOSS	0.037*** (3.99)	0.025*** (3.07)	0.037*** (4.01)	0.018 (1.38)	0.052*** (4.99)
AGROWTH	0.011** (2.41)	0.004 (1.05)	0.011** (2.29)	0.015** (2.39)	0.012** (2.35)
APUBLIC	-0.002** (-2.44)				
Intercept	-0.014*** (-0.014)	0.002 (0.55)	-0.014*** (-4.06)	-0.028*** (-3.05)	-0.011*** (-3.21)
R-Square	0.133	0.340	0.133	0.176	0.262
# of Observations	6,722	203	6,519	1,948	4,571

Table 7 reports the results for three OLS regression models that use bank risk taking measures as the dependent variables. In Panel A, the dependent variable *Z_SCORE* is the negative average value of the natural logarithm of the ratio of the return on assets plus the capital ratio divided by the standard deviation of the return on assets over the period 2000-2006. In Panel B, the dependent variable *SD_EARNINGS* is the standard deviation of earnings before taxes and loan and lease losses provisions scaled by total assets over the period 2000-2006. We collect the data from the Commercial Bank Data Call Reports from the Federal Reserve Bank of Chicago (http://www.chicagofed.org/). We winsorize the top and bottom 1% of all the continuous variables. *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively, based on a two-tailed test. Variables are defined in the Appendix.

Table 8
The Effect of Social Capital on Bank Failure and Bank Financial Trouble during the Crisis Period 2007-2009

Panel A: The Effect of Social Capital on Bank Failure during the Crisis Period 2007-2009

	Full Sample	Public Banks Subsample	Private Banks Subsample	Private and Audited Banks Subsample	Private and Unaudited Banks Subsample
	Dependent Variable = *FAIL*	Dependent Variable = *FAIL*	Dependent Variable = *FAIL*	Dependent Variable = *FAIL*	Dependent Variable = *FAIL*
Variable	Coefficient (Wald Chi-Square) (1)	Coefficient (Wald Chi-Square) (2)	Coefficient (Wald Chi-Square) (3)	Coefficient (Wald Chi-Square) (4)	Coefficient (Wald Chi-Square) (5)
SOCIAL_CAPITAL	-0.190*** (22.40)	-0.532*** (8.98)	-0.172*** (18.31)	-0.170*** (8.97)	-0.164*** (9.82)
SIZE	0.005 (0.04)	-0.195** (3.89)	0.019 (0.51)	0.025 (0.39)	0.019 (0.28)
CAP	-14.460*** (52.31)	-23.443*** (12.25)	-14.051*** (44.80)	-11.661*** (17.93)	-18.081*** (43.44)
NPL	14.862*** (12.46)	15.425 (0.27)	15.012*** (11.92)	11.784** (5.08)	18.079*** (11.01)
LIQUIDITY	-4.807*** (67.08)	-0.567 (0.08)	-5.085*** (67.14)	-6.398*** (40.29)	-4.229*** (23.97)
ALL	11.897*** (63.64)	6.812 (2.34)	12.018*** (64.31)	13.154*** (31.28)	11.075*** (41.85)
ROA	-1.322** (6.24)	0.773 (0.07)	-1.412*** (7.21)	-1.238 (0.80)	-1.540*** (12.05)
LOSS	0.448*** (60.87)	0.452* (2.81)	0.455*** (56.50)	0.415*** (13.86)	0.453*** (26.23)
GROWTH	0.382* (3.24)	0.429 (0.69)	0.370* (3.14)	0.402* (3.67)	0.269 (0.73)
PUBLIC	0.246* (3.71)				
Intercept	-0.997*** (6.86)	2.585 (2.42)	-1.194*** (7.78)	-1.417** (6.25)	-0.882* (2.74)
Log-Likelihood	-2,422	-181	-2,227	-992	-1,223
Pseudo-R^2	0.094	0.157	0.090	0.093	0.089
Percent Concordant	85.0	80.4	85.0	83.6	86.2
# of Observations	16,090	654	15,436	6,081	9,355

Table 8 (Cont'd)
Panel B: The Effect of Social Capital on Bank Financial Trouble during the Crisis Period 2007-2009

	Full Sample	Public Banks Subsample	Private Banks Subsample	Private and Audited Banks Subsample	Private and Unaudited Banks Subsample
	Dependent Variable = *TROUBLE*	Dependent Variable = *TROUBLE*	Dependent Variable = *TROUBLE*	Dependent Variable = *TROUBLE*	Dependent Variable = *TROUBLE*
Variable	Coefficient (Wald Chi-Square) (1)	Coefficient (Wald Chi-Square) (2)	Coefficient (Wald Chi-Square) (3)	Coefficient (Wald Chi-Square) (4)	Coefficient (Wald Chi-Square) (5)
SOCIAL_CAPITAL	-0.217*** (31.60)	-0.360** (4.94)	-0.210*** (29.14)	-0.131*** (7.65)	-0.223*** (18.70)
SIZE	-0.072*** (9.52)	-0.188* (3.33)	-0.064** (6.62)	-0.070* (3.24)	-0.057* (2.97)
CAP	-4.922*** (21.23)	-23.685*** (12.25)	-4.578*** (16.42)	-2.954** (5.23)	-8.380*** (12.00)
NPL	8.798** (4.99)	-25.538 (0.31)	9.312** (5.43)	5.048 (1.12)	14.265** (6.05)
LIQUIDITY	-2.942*** (19.21)	-0.689 (0.08)	-3.045*** (18.38)	-3.334*** (13.80)	-2.721** (6.58)
ALL	11.970*** (74.36)	7.878* (2.98)	12.146*** (76.72)	12.473*** (35.09)	11.564*** (35.89)
ROA	-1.699* (2.75)	1.631 (0.24)	-1.713 (2.54)	-3.189*** (12.28)	-1.380*** (8.85)
LOSS	0.671*** (101.53)	0.603** (4.46)	0.671*** (93.45)	0.563*** (48.19)	0.631*** (62.86)
GROWTH	1.611*** (112.23)	0.535 (0.39)	1.655*** (122.10)	1.707*** (62.57)	1.365*** (32.47)
PUBLIC	0.188 (1.56)				
Intercept	-0.917*** (7.70)	2.574 (2.17)	-1.053*** (8.41)	-0.962* (3.64)	-0.848 (2.66)
Log-Likelihood	-2,692	-199	-2,532	-1,274	-1,233
Pseudo-R^2	0.105	0.145	0.104	0.129	0.080
Percent Concordant	84.0	78.6	84.2	84.0	83.2
# of Observations	13,531	552	12,979	5,037	7,942

Table 8 reports the results for the logistic regression models with standard errors clustered by counties. Panel A shows the results for bank failure regressions. The dependent variable *FAIL* is defined as one if the bank failed during the crisis period 2007-2009, and zero otherwise. Panel B shows the results for bank financial trouble regressions. The dependent variable *TROUBLE* is defined as 1 if the bank had experienced financial trouble during the crisis period 2007-2009, and 0 otherwise. A bank has experienced financial trouble during 2007-2009 if the bank satisfied any of the following four conditions in 2007: (1) Tier 1 capital ratio is less than 4%, (2) the ratio of loan loss provision to total loans is greater than 1%, (3) ROA is less than -5%, and (4) the bank is listed as a failed bank in FDIC website during 2007-2009. We delete troubled banks in 2006 from our troubled banks subsample so that our troubled banks subsample includes only the healthy banks in 2006. We collect the data from the Commercial Bank Data Call Reports from the Federal Reserve Bank of Chicago (http://www.chicagofed.org/). We winsorize the top and bottom 1% of each continuous variable. *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively, based on a two-tailed test. Variables are defined in the Appendix.