Disclosure Regulation in Commercial Banking: Lessons from the National Banking Era*

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Abstract

I exploit variation in the adoption of disclosure regulation across states to examine their impact on the development and stability of commercial banks. The empirical results suggest that requirements to report financial statements in local newspapers promote the stability and development of banks, while periodic on-site examinations do not contribute to these outcomes. I also analyze the 1888 Illinois and Michigan popular vote on their banking laws. Counties with powerful landowners voted less

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favorably for the enactment of these laws. The findings suggest that incumbent groups oppose disclosure rules because their passage foster financial development and threaten their private interests.

1 Introduction

Does disclosure regulation promote the stability and development of commercial banking? Recent regulatory efforts to improve disclosure standards in banking reignited the debate over this question. Yet the motives and consequences of disclosure regulation in the banking sector remain largely unexplored (Leuz and Wysocki, 2008). A potential reason lies in the challenges that researchers face to uncover persuasive empirical evidence on this topic. Small innovations in individual disclosure standards of modern banking systems are unlikely to produce economically meaningful effects. Large regulatory events, such as the Sarbanes-Oxley Act and Dodd-Frank Act do not pose similar obstacles, but the lack of temporal and spatial variation in their adoption complicates the distinction between the effects of disclosure regulation and those of other concurrent macroeconomic and regulatory shocks.

I use a quasi-natural experiment to identify the impact of disclosure regulation in banking. From the beginning of the National Banking era in 1863 until the implementation of the Federal Reserve system in 1914, several U.S. state regulators adopted laws requiring state-regulated banks to publish reports of financial condition in local newspapers and requiring state examiners to conduct periodic on-site supervisions of state banks.

This setting avoids many of the empirical challenges that Harold Mulherin (2007) identifies on the extant disclosure regulation literature. First, the adoption of these rules represented a significant switch from a regime with no disclosure requirements to a regime that required publication of basic financial information that depositors could use to monitor the liquidity and solvency of the bank. Second, the extensive variation in the adoption dates of these regulations within a political and economic union – the U.S. state economies of late nineteenth and early twentieth centuries – eases concerns that concurrent macroeconomic events explain the results. Finally, state-regulated and national-regulated banks competed

in the same geographical markets, thereby allowing me to benchmark the evolution of state banks with that of national banks that were subject to the same economic shocks, but were not affected directly by the state disclosure regulation.

The theoretical literature that examines the consequences of disclosure regulation in commercial banking offers conflicting predictions.[1] Arguments in favor of disclosure rules stress that they bind bankers to disclose credible financial information to the public. In turn, information allows depositors to gauge the risk profile of banks, hence disciplining bankers to avoid diverting resources or taking excessive risks. Otherwise, depositors "vote with their feet" or price protect by demanding a higher deposit rate on their contracts (Jensen and Meckling, 1976). Dewatripont and Tirole (1994) further suggest that disclosure regulation attenuates free-rider problems among the unsophisticated depositors who cannot coordinate their bank monitoring efforts. In short, the proponents of disclosure regulation contend that it is an innovation that mitigates agency problems, thereby reducing the threat of expropriation, enhancing depositors' confidence in the banking system, and raising the stability and competitiveness of banking markets.

By contrast, recent studies suggest disclosure regulation could destabilize a banking sector and hamper its growth. In Morris and Shin (2002), information disclosure – especially if it is imprecise – could raise the likelihood of bank runs, because public information is not only informative of the bank's financial condition, but also of other depositors' actions. As a result, depositors put greater than optimal weight on public information, which could trigger inefficient bank runs.[2] Gigler, Kanodia, Sapra, and Venugopalan (2009) model a second-

[1] Goldstein and Sapra (2011) recently review the theoretical arguments in favor of and against public disclosure of information in the financial industry.

[2] Cannon (1910); Gorton and Mullineaux (1987); and Kroszner (1999) describe how, during episodes of crisis, city clearinghouses suppressed disclosure of its members' individual financial information and acted like a single firm by providing aggregate information of the clearinghouse itself. This mechanism offers a vivid demonstration that 19th-century bankers worried about the potential destabilizing effects of disclosing

best environment in which more public disclosure could distort investment decisions when investors face price pressures. In addition, a vast literature going back to Coase (1960) argues that one-size-fits-all disclosure standards are inefficient because commercial bankers could privately contract their own disclosure arrangements. Finally, reporting requirements and especially public on-site supervision entail government intervention, thereby raising concerns about distortions and corruption stemming from regulatory capture (e.g. Stigler, 1971; Kane, 1989).

My findings suggest disclosure rules contributed to the stability and development of these banking systems. Specifically, the yearly failure rate of the banking systems at the state level – a measure of banking stability – dropped relative to its pre-regulatory level in states adopting these rules. The evolution of aggregate balance-sheet ratios also suggests state banks were safer after the implementation of disclosure requirements: the capital ratios of state banks dropped about three percentage points, deposit rates of state banks converged toward those of national banks, and depositors in state banks substituted short-term demand deposits for long-term deposits. The empirical analysis also indicates reporting requirements favorably affected the total number of banks per capita in the state and the average interest rate on loans – two measures of financial development during that period. The positive effect on financial development is consistent with Rajan and Zingales (2003b) and Leuz and Wysocki (2008), who argue disclosure regulation facilitates entry and competition by enhancing the credibility of potential entrants and reducing the importance of reputation and established connections in local banking markets. Interestingly, periodic on-site examinations of state banks did not incrementally contribute to the stability and development of these systems. Despite the benefits of public supervision posited in Dewatripont and Tirole (1994),

public information.

the higher likelihood of regulatory capture stemming from repeated interactions between government officials and commercial bankers could explain this result.

These results are subject to several caveats. First, state lawmakers often passed disclosure requirements in conjunction with other banking regulations. To the extent that it is not feasible to control for every change in banking regulation occurring during the sample period, I face a potential correlated omitted variables problem. The adoption of double liability provisions – which extended the liability of shareholders from the amount of their initial investment to an additional amount up to par value of the shares owned – are a good candidate to proxy for the overall regulatory scrutiny of state regulator during that period. According to Grossman, 2001, double liability was the most commonly used form of prudential regulation during the sample period. Hence, in robustness analysis, I gauge the sensitivity of the empirical results to the introduction of double liability provisions. Second, the adoption of disclosure regulation could be associated with local shocks to economic conditions that have different effects on the two types of banking systems. Under these conditions, the evolution of national banks does not adequately proxy for the evolution of state banks in the absence of regulation and, as a result, the estimator does not isolate the effect of regulation. A specific concern is that state banks had greater freedom to make loans secured by real estate. Thus shocks to the price of real estate that also influence regulatory actions to adopt disclosure regulation could distort the results. To assuage this concern, I test the sensitivity of the analysis to the inclusion of variables proxying for the proportion of real estate loans held in each banking system.

Some states chose to adopt disclosure regulation decades later than their neighboring states as figures 1 and 2 illustrate. This pattern is puzzling in light of the empirical findings suggesting a strong positive influence of regulation on the operation of banking systems.

Thus, the positive results associated with disclosure regulation must be reconciled with the sluggish adoption of the legislation in some states. I examine the motivations behind the adoption of regulation using insights from the private interests literature (Stigler, 1971; Peltzman, 1976). In particular, I examine whether some classes of incumbents had incentives to influence the adoption of disclosure regulation (Leuz and Oberholzer-Gee, 2006; Leuz and Wysocki, 2008). To do so, I examine the county-by-county voting patterns in the 1888 popular vote of the banking laws in Illinois and Michigan. In 1887, the legislatures of both states approved banking laws creating a state banking supervisory authority that was required to periodically inspect state banks. White (1985) suggests that lobbying groups were capable of influencing the outcomes of other popular votes on banking law in Illinois. Accordingly, I interpret the popular vote in each county as a small laboratory that can be used to gauge whether the strength of the different private interest groups is associated with significant and predictable variation in the cross-county voting patterns.

Following Rajan and Ramcharan (2011b) and Rajan and Zingales (2003a), I analyze whether the strength of agricultural elites and incumbent financiers explains cross-county variation in voting patterns. Low levels of financial development meant large landowners with loanable surpluses had market power over small farmers who had no other sources of credit (Rajan and Ramcharan, 2011b). Thus agricultural elites had incentives to oppose disclosure regulation that promoted financial development and facilitated small farmers' access to finance. The empirical findings suggest counties with greater inequality in agricultural land size distribution were more likely to vote against the legislation. Small bankers were likely to also have incentives to fight against disclosure regulation because it provided new entrants with a credible mechanisms to affirm their reputation thereby reducing entry barriers. Consistent with studies documenting the opposition of small banks to regulation that

promotes entry in banking markets (Kroszner and Strahan, 1999; Rajan and Ramcharan, 2011a), I also find that counties primarily served by small private banks were less likely to vote for these laws.

The political economy analysis of the determinants of the adoption of disclosure regulation suggests that powerful political interest may have had private incentives to oppose disclosure regulation that potentially benefited the local banking systems. Therefore, it is possible to argue that states with powerful and well-organized large landowners and small banks were less likely to adopt disclosure regulation early, even when their effects were predictably positive for local banking systems. By contrast, when private bankers and agricultural elites were not well-organized, disclosure regulation found no political barriers and could be more easily passed even if their effects were not as significant. In the last section of the study, I assess whether the effects of disclosure regulation varied with the strength of large landowners and private bankers and I find empirical evidence suggesting that when disclosure regulation is passed in states with high prevalence of private interests, its effects are significantly larger.

This study makes several contributions. First, Leuz and Wysocki (2008) claim the link between disclosure regulation and financial development remains largely unexplored.[3] Barth, Caprio, and Levine (2004) use a cross-country survey of bank regulatory practices to probe the merits of private monitoring and public supervision in preventing bank failures and promoting financial development. The authors find that private monitoring fosters stability and development, whereas empowering public supervisors might not achieve these outcomes. However, the authors acknowledge that potential simultaneity bias limits the persuasiveness of the empirical evidence. My findings reinforce those of Barth et al. (2004) in a new hand-

[3]Various studies (Ahmed, Takeda, and Thomas, 1999; Beatty and Liao, 2011; Bushman and Williams, 2012) investigate the relation between the properties of accounting systems and the operating performance of commercial banks but do not directly test their implications for financial development and growth.

collected panel dataset and setting that provides better identification of the main effects.

Second, I provide evidence on the effects of mandatory disclosure regulation on firms' behavior. Prior studies (e.g., Jin and Leslie, 2003) show that disclosure regulation mandating publication of standardized product-quality information influences firms' choices of product quality. My paper provides evidence that mandatory disclosure regulation promoting financial accounting transparency have impacts that go beyond the well-studied effects in securities markets: a primitive form of disclosure regulation can affect real economic outcomes of the banking sector such as its failure rate, the composition of the maturity structure of banking deposits, and the competitive environment in banking markets.

Finally, this study enhances our understanding of the regulatory process of disclosure and monitoring regulation. In particular, I investigate a unique historical setting in which the decision to implement a disclosure and supervisory system was left to the popular vote. I exploit this setting to shed light on the interplay of political and economic forces influencing the passage of these regulations. In this sense, I add to the related literature on the political economy of accounting standards (Watts and Zimmerman, 1978; Ramanna, 2008), by studying the motives underlying the adoption of mandatory disclosure rules.

The study is organized as follows. Section two provides institutional details on the banking systems of the national banking era and develops the hypotheses. Section three details the data. Section four sketches the empirical framework used in the paper. The empirical results on the effect of disclosure regulation in the stability and development of the banking systems are contained in Section five. In Section six, I delineate the political economy analysis of disclosure regulation and report its results. Section seven presents results on cross-sectional differences across states with different prevalences of special interests and Section eight concludes.

2 Institutional setting, conceptual framework and empirical hypotheses.

Three different banking systems operated concurrently in the U.S. state economies of the late 19th and early 20th-centuries. National banks were chartered by federal authorities and since inception were subject to a tight oversight by federal regulators. State banks operated under a charter granted by state banking authorities. Some state regulators did not initially impose reporting requirements and periodic on-site examinations on these institutions, but with the passage of time, state authorities recognized the need to revise the banking laws of the pre-Civil War period. As figures 1 and 2 illustrate, by the time the Federal Reserve system was created in 1914, all state legislatures had implemented reporting requirements and nearly all had adopted periodic on-site examinations statutes, the exceptions being Kentucky, Mississippi, and New Hampshire. Federal and state-chartered banks also competed with "private" banks that consisted of small unregulated proprietorships that were not granted limited liability and whose main business was to furnish credit in rural areas.

The state disclosure laws were heterogeneous in many dimensions: The accounting items that had to be recognized in the public reports of condition varied a lot across states and in some instances seemed to be adapted to local circumstances;[4] some states clearly defined rules for recognition of losses in the law, whereas others did not; and different state regulators established different periodicity of reporting requirements and on-site examinations. While it would be interesting to exploit the heterogeneity in the disclosure rules, the analysis is complicated by the fact that in many states, lawmakers left the task of implementing the

[4]Figure 3, displays the format of the reports of condition that Mississippi state banks had to publish in local newspapers. The requirement to recognize the amount that state banks held in Levee bonds was rather unique.

regulatory details to bank supervisors.

Despite the heterogeneity in the implementation of reporting requirements, historical accounts suggest their adoption unequivocally bolstered the confidence of depositors in the banking system. Barnett and Cooke (1911) considered these regulations as crucial to the good standing and trustworthiness of banks in the eyes of their community. Banking magazines (e.g. **?**) and official reports (e.g., Report of Study Commission for Indiana Financial Institutions) also suggest that reporting requirements were an important safeguard of the system. In this study, I empirically analyze the effect of two important components of the disclosure and public supervision frameworks: the mandatory publication of banks' financial statements in local newspapers and the periodic on-site supervision of state banks by public examiners.

The adoption of reporting requirements contributed to the safety of the banking system through at least two channels. First, these rules improved the ex-ante transparency of financial institutions and facilitated the comparison of financial statements across banks, allowing depositors to assess the liquidity and solvency position of commercial banks.[5,6] In turn, greater scrutiny precluded bankers from taking unduly risky actions that endanger depositors' wealth. An excerpt from the report of the Indiana commission epitomizes this idea: "Informed public opinion is irresistible. When banks are forced to inform the public

[5]Figure 4 provides an example of a standard bank statement published in a local newspaper of South Carolina. The statement has a similar format to that of the majority of bank statements that I have observed in the journals of the era.

[6]Figure 5 displays an excerpt taken from the July 1878 article in the Bankers' Magazine, that tutors depositors on how to read financial statements and on what can they learn about the bank from reading their financial statements. The article is interesting in the sense that illustrates what people from that era considered to be informative aspects of the financial statements and what they thought they could learn from them. In fact, the author of the article mentions that the financial statements "while truthful of their face, may cover a great deal of rottenness", but he also emphasizes there is important information to extract from the "surplus fund", which "shows whether the past operations of the bank have been profitable..." and from disclosed cash assets and deposit liabilities, which reveal "[the bank's] ... ability to meet its immediate indebtness."

regularly as to the amounts of their questionable assets..., no longer will they dare abuse sound principles." Second, reporting requirements clarified the liability standards associated with the manipulation of financial statements, enhancing the ex-post accountability of bank officers and directors. The reporting requirement laws required bank directors to approve the banks' periodic reports of condition and defined punishments for material misrepresentation of their true financial condition. By clarifying the standards of liability of directors and reducing the uncertainty associated with litigation Glaeser and Shleifer (2003), reporting requirements increased incentives for board members to monitor the activities of executive directors.[7]

On the other hand, Morris and Shin (2002) suggest requirements to publicly report information could induce panic-based runs that destabilize banking systems. Because financial statements do not only convey information on fundamentals but also on the actions of other depositors, agents tend to overreact to public financial reports. The inability of depositors to coordinate their actions leads them to overweight public signals due to their strategic value, exacerbating their reaction to public information.[8] Thus publication of financial reports in local newspapers could induce panic-based runs in banks whose financial condition would not generate a run had the financial information remained private. Gigler et al. (2009) suggest information disclosure could result in inefficient investment choices because it could exacerbate managerial short-termist incentives.

Prior to the introduction of periodic on-site supervision, reporting requirements were primarily enforced through the threat of private litigation. According to contemporaneous

[7] As an example, the January 1881 edition of the Bankers' Magazine cites the case of *Trustees v Bossieux*, where the board of directors was found liable for the defalcation in the bank, because of their continued negligence "to know the true condition of affairs", while "they publish favorable annual reports."

[8] Hertzberg, Liberti, and Paravisini (2010) offer empirical evidence of this mechanism by showing that due to strategic complementarities in agents' actions, public information amplifies the effects of a news shock relative to private information.

sources "[officers and directors were] liable for damages to any one dealing with the corporation relying on the truth of such statements."[9] Moreover, disclosure laws considerably reduced the uncertainty associated with private litigation by introducing clear standards of liability and criminal penalties for misrepresentation of the financial condition of a bank. Thus, the fear of reputation losses and criminal sanctions were the primary deterrents of mistatements in reports of condition prior to the adoption of periodic on-site supervision. State regulators – either a specialized state banking authority or the state auditor/comptroller – also enforced compliance with the reporting rules, but according to a June 1897 article in the Bankers' Magazine, their powers varied considerably across state lines and in many states they could only inspect a bank if there was a strong suspicion of irregularities. Finally, independent private audits of banks' financial reports were rare, albeit increasingly frequent by the end of the sample period. Nonetheless, the effectiveness of these audits as an enforcement mechanism in unclear. The auditing profession was taking its first steps, and according to Wootton and Wolk (1992), the Federal Reserve System did not issue the first proposal for a uniform set of auditing procedures until 1918. In addition, the liability standards of auditors were not well defined throughout the entire sample period.

State legislators passed mandatory periodic on-site examinations for state banks either at the same time or some time after the introduction of reporting requirements – with the exception of the state of Georgia, which implemented periodic on-site supervisions one year prior to the introduction of reporting requirements. The introduction of periodic on-site supervision represented an important shift in the supervision and enforcement regime of state banks. Banking systems that adopted these statutes granted greater powers to regulators, who could then periodically elicit important information from state bankers and ensure that

[9]Excerpt taken from the replies to law and banking questions section of the January 1902 edition of the Bankers' Magazine.

banks did not misrepresent their financial condition. The main advantage of this supervisory regime is that public supervisors can use their powers to elicit detailed information about the operation of banks more effectively than private plaintiffs (La Porta, Lopez-de Silanes, and Shleifer, 2006), hence placing public regulators in a priviledged position to prevent managerial malfeasance. Thus, the introduction of periodic on-site supervision could prove beneficial especially if the threat of private litigation is insufficient to deter irregularities. However, periodic on-site supervisions are only effective if the bank examiners remain independent and focused on their task of monitoring banks on behalf of the large number of unsophisticated depositors in the economy. Stigler (1971) and Peltzman (1976) remind us that regulators do not always defend the best interest of society and that the regulatory process can engender more resource misallocation than that generated by an unregulated economy. Kane (1989) provides a vivid description of how regulators were captured during the savings & loans crisis and amplified an already negative downturn in the economy.

A potential concern for the analysis in this study is that under a standard set of assumptions, banks have incentives to voluntarily disclose their private information (e.g., Grossman and Hart, 1980; Grossman, 1981). Hence, reporting requirements did not necessarily imply more information disclosure by state banks operating in the adopting states because they could already have been disclosing their financial statements in local newspapers. While, the theoretical literature in accounting has shown that the unraveling mechanism of Grossman and Hart (1980) does not necessarily work if there are some costs associated with disclosure (Verrecchia, 1983), it would be interesting to investigate how pervasive was voluntary disclosure in the pre-regulatory period. Unfortunately, an investigation into this issue is complicated by the limited access to historical newspapers in many local banking markets. Nevertheless, there are some news articles suggesting that voluntary disclosure was far from

pervasive. For instance, a September 26th, 1896 article in the Guthrie Daily Leader contains a summary of the report of the Governor of Oklahoma stating that the Governor of Oklahoma requested voluntary financial statements from state banks but could only get a handle of 18 bank statements out of the 52 state banks doing business in the state.

While it seems reasonable to argue that the disclosure requirements would have been more important if they materially raised the amount of information that was available for depositors to process, there are reasons to believe reporting requirements should have a material impact even if voluntary disclosures were pervasive in the pre-regulatory period. First, voluntary disclosures do not bind bankers to disclose information to depositors. In a voluntary disclosure regime, bankers cannot credibly commit to future disclosures if disclosure is not their preferred action in certain states of the world. As Mahoney (1995) suggests, disclosure rules are an effective low-cost mechanism to credibly assure depositors that information will be available in the future. Second, these statutes contained clauses requiring bankers to take an oath that their financial reports were truthful. Violations would be punished as perjury. Hence these rules provided access to criminal sanctions that were not available under private contracting, thereby discouraging false statements of condition.[10] Finally, disclosure regulation could also solve a costly coordination problem among state banks, which would struggle to negotiate and agree on a single set of comparable standards for the financial reports.[11] Standardization of financial reports enhances comparability and, as a result, should improve bank monitoring by lowering the costs of distinguishing "unhealthy" from "healthy" banks.

[10] A chronicle written for the Bankers' Magazine provides evidence that contemporary observers were well aware of this issue: "voluntary statements or reports published without any legal obligation would be of no permanent advantage because they are without sanction...The law does not require them [voluntary statements] to be made and therefore it does not require them to be true; if false, there is no penalty and if made under oath there would be no perjury."

[11] When state banking laws did not explicitly address this issue, the decision on what to report was left to the bank regulators.

In any case, the existence of pervasive voluntary disclosures in the pre-regulatory period should only reduce the likelihood of finding a statistically significant association between regulatory events and outcome variables and thereby should work against rejecting the null hypothesis of no impact of mandatory disclosure.

The arguments of the preceding paragraphs preview the main tension in the study. The introduction of reporting requirements and periodic on-site examination could alleviate agency problems between bankers and depositors, reducing the threat of expropriation, limiting excessive risk-taking, raising depositors' confidence in the system, and promoting competition in banking markets. Yet, regulatory innovations could destabilize markets – in the case of reporting requirements – or create the opportunity for regulatory capture of bank examiners by incumbent bankers. The partial equilibrium analysis developed in this study sheds light on some effects of these regulations. Thus, the study informs the debate about the economic trade-offs underlying disclosure regulation in the banking industry and contributes to a better understanding of the circumstances under which these regulatory actions are desirable from a policy point of view.

In what follows, I detail how disclosure regulation could affect the specific outcome variables that I use to evaluate the evolution of the stability and development in the banking systems.

2.1 The impact of regulation on banking stability.

One of the main premises underlying the analysis is that disclosure regulation reduces the threat of resource diversion and excessive risk-taking. Ideally, I would use measures of the total amount of resources diverted by bankers and of the risk of the asset portfolio of banks to empirically test this hypothesis. However, data limitations restrict the analysis to assessing

the impact of disclosure regulation on the failure rate of financial institutions. The use of the failure rate variable entails the implicit assumption that the reduction in failure rates stems from a reduction in failures and suspensions due to mismanagement or excessive risk-taking.

Prediction 1: Banking systems that adopt mandatory reporting and supervisory examinations requirements experience lower failure rates after the adoption of these statutes.

Reporting requirements should lower the costs of information acquisition for depositors and thereby raise monitoring intensity. In turn, more monitoring should increase the probability of early detection and, in equilibrium, reduce bankers' incentives to engage in delinquent behavior (e.g., Becker, 1968). In addition, by lowering the costs for an individual depositor to monitor the bank and allowing government officials to periodically provide delegated monitoring services, reporting requirements and periodic on-site examinations could also mitigate costly free-riding.

Yet, disclosure regulation can be detrimental to financial stability. The recent literature on global games, (Morris and Shin, 2002) suggests disclosure of noisy public information might increase the likelihood of bank runs. Thus, public information potentially aggravates the coordination problem among depositors, whose incentives to run on the bank are influenced by their expectations of how other depositors will act. Cordella and Yeyati (1998) suggest that when banks have limited control over their asset portfolios, disclosure has little influence on risk management, but allows depositors to readjust their required deposit rates to the risk fluctuations of banks' assets. Hence disclosure requirements destroy intertemporal risk-sharing opportunities and could raise the aggregate failure rate of the system. Finally, Kane (1989) reminds us how regulatory capture can exacerbate a banking crisis and result in higher failure rates.

2.2 Impact on Balance-Sheet Composition and Depositors' Confidence.

In the previous subsection, I hypothesize that disclosure regulation enhances banking stability by facilitating private monitoring. If the banking system becomes safer with the adoption of disclosure regulation, other balance-sheet ratios and equilibrium prices should behave as if the perceived level of depositor protection in the banking system increased.

Prediction 2: The adoption of reporting requirements and periodic examinations substitutes for other safeguards against managerial malfeasance and bank failure.

To test this hypothesis, I examine the impact of disclosure regulation on (1) the aggregate equity capital ratios of the banking systems, (2) the maturity structure of deposits in the banking system, and (3) the equilibrium interest rate in the deposit markets. The main premise is that disclosure regulation was a low-cost regulatory innovation that improved the overall level of deposit protection in the market, thereby allowing commercial banks to scale back on alternative mechanisms to protect depositors.

In the absence of deposit insurance, equity capital was the main safeguard of depositors against losses in banks' assets portfolios. Thus, in equilibrium, bankers tend to hold more equity capital when agency and adverse selection problems are more severe. Holmstrom and Tirole (1997), suggest incentives to exert costly and unobservable monitoring efforts decrease as the percentage of deposits financed by uninformed depositors increases. Hence depositors rationally require bankers to raise their equity stake to elicit effective monitoring. In Gertler and Kiyotaki (2010), bankers have the option to divert a fraction of the assets under their control. To avoid this outcome, the value of the banks' equity held by insiders must be kept above the potential net proceedings from diversion. Disclosure regulation mitigates agency issues and, as a result, lower the incentive-compatible level of equity required from banks.

Disclosure regulation should also affect the deposit maturity in the banking system. Calomiris and Kahn (1991) and Diamond and Rajan (2001) explain the demand-deposit contract as a mechanism that allows bankers to commit against the possibility of diversion activities. The demand-deposit is effective in preventing expropriation, because the sequential service constraint built into the demand-deposit contract prevents any possible renegotiation between banks and depositors. The destruction of value stemming from bank runs reduces the spoils that bankers can collect from a diversion strategy, reducing their incentives to divert. To that extent, the demand-deposit contract effectively reduces agency costs, at the expense of some strategic fragility that occasionally results in destructive bank runs. Disclosure regulation reduces the threat of diversion and, consequently, alleviates the need to use a high proportion of short-term demand-deposits.[12] Longer deposit maturities are also consistent with an increase in households' trust in the banking systems (Guiso, Sapienza, and Zingales, 2004). Households respond to improvements in legal enforcement and lower threat of embezzlement, by adjusting their investment portfolio toward contracts whose characteristics require greater trust in financial institutions. Thus the effect of disclosure regulation on the trust in financial systems can also explain a change in maturity structure of banks' deposits.[13]

Finally, reporting requirements and periodic examinations reduce agency conflicts between depositors and bankers and consequently, the need to compensate these risks in the deposit market. This prediction bears a resemblance to those of other accounting studies that uncover a relation between disclosure and reductions in the cost of debt (Sengupta, 1998; Ball, Hail, and Vasvari, 2009). Alternatively, disclosure regulation could have also

[12]Demand-deposit contracts imply immediate payment at the depositor's request.

[13]The model of Guiso et al. (2004) is primarily oriented to study the role of social capital in financial development. Nevertheless, the authors also derive results relating the role of legal enforcement to households' supply of capital.

reduced the informational and financial frictions that dampened capital mobility in the US interregional capital markets (Eichengreen, 1984). To that extent, the adoption of disclosure requirements results in a convergence in the prices of capital across banking systems, which would also be consistent with the above prediction.

Alternative hypotheses to the above predictions are possible. For instance, reporting requirements could be strategic complements with equity capital ratios, thereby forcing commercial bankers to raise their equity ratios. If more public information empowers depositors to demand more protection in the form of increases in equity capital ratios, capital ratios and disclosure regulation could be positively correlated. Another example comes from Shleifer and Wolfenzon (2002), who propose a model in which an increase in the probability of detection of managerial malfeasance could result in an upward shift in demand for deposits that is met by an increase in the equilibrium deposit rate. Therefore, the overall effect of disclosure regulation on these variables is unclear and ultimately an empirical question.

2.3 Impact on Market Structure and Access to Credit.

Promoting financial development in an environment with poor disclosure and enforcement standards is difficult. In an opaque environment, depositors will trust their savings only to reputed banks with whom they have established a prior relationship. Moreover, because depositors have no information concerning the character of new commercial bankers, they demand compensation for the greater uncertainty that trusting the new banker entails. However, in the spirit of Stiglitz and Weiss (1981), this mechanism exacerbates the adverse selection by keeping honest commercial bankers out of the market and limiting the pool of potential entrants to "dubious bankers" who seek to extract an immediate gain by engaging in fraudulent activities. The information asymmetry between depositors and bankers raises

barriers to entry because it limits the set of potential entrants to people of good standing in each respective local community. Incumbent financiers exploit this market power to ration the supply of loans in the market and extract abnormal rents.

The introduction of mandatory disclosure requirements and supervisory examinations levels the playing field between incumbent financiers and potential entrants. With a well-defined and impartial legal infrastructure, depositors will no longer be held hostage by the established reputation of the incumbent financiers and will be able to scrutinize the financial condition of new entrants and securely switch their savings to more efficient bankers offering better compensation for savings. In turn, competition will flourish, and access to credit will be less restrained. The following hypothesis is based on Rajan and Zingales (2003a,b), who stress the role of disclosure regulation as a pre-requisite for financial development because the failure to adopt an accounting and disclosure system that promotes transparency significantly reduces potential entry of new firms and financial intermediaries.

Prediction 3: The adoption of reporting and examination requirements improves financial development and access to credit in adopting states.

Rajan and Zingales (2003a) define financial development as the "...ease with which any entrepreneur or company with a sound project can obtain finance and the confidence with which investors expect an adequate return.". This concept is difficult to measure. I follow Rajan and Ramcharan (2011b), who use the total number of banks per capita and the average loan rates in the market as proxies for financial development and access to credit, respectively. The total number of banks per capita is a meaningful measure of financial development, especially during a period in which distance was an important factor in economic activity and the policy debates concerning access to credit generally revolved around the geographic proximity of banks. The average loan rate practiced by the regional banking

systems is a proxy for the cost of credit. A lower cost of credit is plausibly associated with greater competition in the banking markets and wider access of credit to "entrepreneurs and companies with sound projects."

Nonetheless, the requirement to publish periodic reports of financial condition could have raised the fixed and operating costs of operating a commercial banks, hence reducing profitability and entry into local banking markets. Furthermore, state banking regulators could have been systematically captured by incumbent bankers who exert pressure to limit competition, thereby hurting the financial development and access to credit in the state. Thus, these questions must ultimately be addressed empirically.

3 Data and Summary Statistics

3.1 Adoption of the Disclosure and Monitoring Regulations.

I collect the years of adoption of reporting requirements and periodic on-site examinations in each state from Barnett and Cooke (1911). To confirm the validity of this information, I tracked every state legislative act introducing these regulations. In the majority of cases, the dates coincided with those provided in Barnett and Cooke (1911).[14] Table 1 summarizes the dates of introduction and implementation of these regulations, and figures 1 and 2 graphically illustrate these adoption dates. The use of this data source entails some caveats. As discussed in Barnett and Cooke (1911), the passage of these legislative acts does not necessarily coincide

[14] A rare exception occurred for the state of Arizona, whose stated year of adoption in Barnett and Cooke (1911) is 1897, but no legislative act could be found for that year. Instead, I found an 1893 legislative act mandating reporting requirements and period examinations. I use 1893 as the adopting date for Arizona in the empirical analysis. Small problems also occur with the states of Illinois and Michigan. Barnett and Cooke (1911) indicate the adoption of periodic examinations dated from 1887. The statutes were indeed approved in 1887. However, in both states, the 1887 act had to be approved by a referendum, which only took place in 1888. All empirical results are robust to these empirical research choices.

with their implementation and enforcement.[15]Yet, I expect the measurement bias to work against the possibility of finding a significant result, because a banking system is categorized as subject to disclosure and periodic supervision requirements when in fact no change took place.

Substantial heterogeneity exists in the content of the legislative acts implementing these provisions. The state acts differed in terms of the periodicity of reporting and examination requirements, penalties on infractors, and compensation of state examiners, among other implementation issues. Some legislative acts also introduced or altered other banking regulations such as minimum capital and reserve requirements. Barnett and Cooke (1911) claim the state regulators introducing minimum capital requirements[16] for state banks ensured that the new capital limits were not binding for any existing state bank. Therefore, I would not expect my results to be biased in any significant way by the concurrent introduction of capital and reserve requirements in some states. In any case, I view the introduction of disclosure regulation as the first-order effect associated with the passage of most of these laws.

3.2 Measures of Financial Stability and Development.

To assess the impact of these regulations on the stability of state banking systems, I hand-collected the number of bank failures at the state, year, and banking-system level from the Annual Reports of the Comptroller of the Currency. From 1892 to 1913, the Comptroller of the Currency included a table in its annual report indicating the number of failures and

[15]The case of Illinois is illustrative of this problem. The reporting requirement regulation for state banks dated back to the pre-Civil War period. However, according to contemporary sources cited in the Chicago Tribune, this requirement was not enforced until the passage of the 1888 banking law.

[16]The minimum capital requirements is the minimum level of equity capital required by regulators. The state and federal regulators of the National Banking era overwhelmingly established capital limits in terms of an absolute dollar value that varied with the population of the town where the bank was located.

suspensions and the estimated assets and liabilities of the failed and suspended commercial state banks. These numbers were courtesy of the Bradstreet Magazine, a monthly periodical that specialized in offering statistics of business failures by state to its readers. Despite the Comptroller's efforts to collect statistics on state bank failures, no data are available in the reports of the Comptroller of the Currency prior to 1892.

The annual statewide aggregate balance-sheet data of each banking system is taken from the United States Historical Data on Bank Market Structure, 1896-1955 (ICPSR 2393 by Flood, 1998). This dataset was compiled from the All Bank Statistics, created by the Board of Governors of the Federal Reserve System with the cooperation of the State Banking Supervisory Authorities, and the Office of the Comptroller of the Currency. The All Bank Statistics data are a revised series of the principal assets and liabilities components of the National and State banking systems by year and state. The data were assembled using information from several sources, namely, the annual reports of the Comptroller of the Currency and several state regulators' reports. Hence the information contained in this dataset is arguably more reliable than that presented in the annual tables offered by the Office of the Comptroller of the Currency in its annual reports. Nevertheless, thede data entail some limitations. According to the dataset manuals, some states did not require information about some balance-sheet items in some years. In those cases, the dataset imputed the missing values by interpolating over the years when information is available. This problem is less of a concern for the equity ratio analysis, which uses broad categories of information that were always available, but poses a greater threat for the analysis using the maturity structure of deposits.

The number of banks per state is taken from Barnett and Cooke (1911), who compiled the statistical information on the number of national, state and private banks by state and

year for the 1876–1909 period. The sources for these tables are the annual reports of the Comptroller of the Currency and the reports of state banking regulators. Barnett and Cooke (1911) also provide information on the number of small private banks taken from the annual editions of the Homans' Bankers Almanac and its continuations. Scant information is available regarding private banks, because of their unregulated nature. The Homans' Bankers Almanac was a bankers' directory that collected information about all types of banks, including private banks. According to Barnett and Cooke (1911), the information provided in these directories is reliable in that it closely corresponds to the official enumerations carried out by the Commissioner of Internal Revenue for the years 1880, 1881, and 1882.

I extracted the loan and deposit rate at the state, year, and banking-system level for the years 1889, 1894, and 1899 from the 1899 edition of the Annual Report of the Comptroller of the Currency. In 1899, the Comptroller of the Currency surveyed national and state banks in each state and reserve city about the rates of interest that they had set on loans and paid on deposits on three dates: July 12, 1889; July 18, 1894; and June 30, 1899. The Comptroller's 1899 Annual Report reported the average loan and deposit rates by state and reserve city for each date. This dataset is potentially subject to significant survivorship bias because only those banks that survived for more than ten years were able to report on the rates that they had practiced in 1889. But unless the bias affects the treatment and control groups differently, the identification strategy used in the empirical analysis alleviates these concerns .

3.3 Voting and Demographic Data.

I obtain state-level demographic data from the US Census and County Data Books (Haines, 2004), complemented with data from the National Historical Geographical Information Sys-

tem.[17] In some specifications in which I do not control for state-year fixed effects, I control for total population in the state, which I compute by interpolating the total population numbers in the decennial census using a natural cubic spline. I also control for the percentage of population in the state living in cities of 25,000 or more using the same type of method.

I hand-collected the county-level votes on the 1888 banking popular vote and presidential elections from the records of Illinois elections returns available in microfilm at the University of Chicago's Regenstein Library. The county-level election returns for Michigan are available in the official directory and legislative manual of the state of Michigan for the years 1889–1890. To supplement the regressions in the second part of the study, I also obtained county level data from the 1890 census data taken from the same source mentioned above. Finally, I obtained counts of the number of national, state, and private banks per county in the State of Illinois and Michigan from 1887 Homans' Bankers Almanac.

3.4 Summary Statistics

Panel A of Table 2 presents summary statistics of relevant variables for state and national banking systems separately. The main takeaways from this table are that state banks seem comparable in size and number to national banks, but as I previously mentioned, different restrictions in their loan porfolios imply they hold a much larger share of their portfolio in real estate loans. These statistics validate the assessment of an editorial in the Bankers' Magazine in its February 1902 edition, which stated that "as a rule we find State banks with equal or greater capital side by side with national banks. The possession of capital does not by any means induce the starting of a national bank in preference to a state bank. The real reason of the growth of these institutions is greater power in making loans, greater freedom

[17] extracted from www.nhgis.org

from restrictions that seem to personally interfere with the personal independence of the banker."

The differences-in-differences analysis in Table 2, Panel B decomposes the sample averages of the main outcome variables for each type of banking system into a pre- and post-reporting-requirements period. State laws did not affect national banks, so the sample averages for the national banks in the pre-period correspond to the set of state-years prior to the adoption of reporting requirements for state banks. The results generally line up with what would be expected under the hypotheses described in previous sections. The exception comes from the average deposit-rate analysis of state banks, which increases relative to that of national banks in the period after the adoption of reporting requirements. Nevertheless, the multivariate analysis shows that after I control for state and year effects, the results for the average deposit rate have the expected sign. Another unexpected empirical fact is that national banks hold a significantly larger percentage of demand-deposits both before and after the introduction of reporting requirements for state banks. In equilibrium, banking systems in which conflicts of interest are more severe should have a larger percentage of demandable deposits. A potential explanation for these findings is that commercial banks sought to match the maturity structure of their assets and liabilities. Given that state banks hold a larger percentage of assets with long maturities (e.g., real estate loans), their aggregate deposit maturity will also tend to be longer. In any case, the diff-in-diff analysis is consistent with the agency-theoretical prediction posited above.

4 Empirical Implementation

The U.S. state economies of the National Banking era are a useful laboratory in which to study disclosure regulation for various reasons. The setting entails considerable variation in the temporal and spatial implementation of reporting and periodic examination requirements within a relatively homogeneous set of political, economic, and social institutions. The availability of variation in disclosure rules within a single political unit reduces concerns that institutional differences, such as the respect for the rule of law or the level of social capital, affect the results, whereas the inter-temporal and spatial variation ensures common macroeconomic trends or market-wide shocks are not driving the results.

Nevertheless, disclosure and accounting regulation is not imposed exogenously (Watts and Zimmerman, 1978). Legislation often emerges from regulators' reactions to external conditions, such as economic shocks or political pressure from powerful lobbies. To the extent that state banks react to external conditions that prompt policymakers to adopt new regulations, the estimated coefficients could capture the effect of these concurrent events rather than the real disclosure-regulation effect. The coexistence of national and state banking systems within the same state and time period provides the possibility of controlling for state-year-specific shocks that simultaneously affect the banking outcomes and the politicians' decisions to adopt new regulations, thereby addressing this potential source of endogeneity in the results.

Suppose the outcomes of the state banking system follow a simple components-of-variance model:

$$Y_{it}^{St} = \eta_i^{St} + \gamma_t^{St} + \mu X_{it}^{St} + \beta D_{it}^{St} + \epsilon_{it} + \epsilon_{it}^{St} \tag{1}$$

where Y_{it}^{St} is the outcome of interest for the state banking system in state i and year t, η_i^{St} is the permanent component associated with state i, γ_t^{St} is a economy-wide shock associated with each period of time, X_{it}^{St} are time-varying determinants of the outcome of interest, D_{it}^{St} is an indicator variable for the adoption of reporting requirements or periodic examinations, and $\epsilon_{it} + \epsilon_{it}^{St}$ is an unobservable idiosyncratic shock to the variable of interest that can be subdivided into two orthogonal shocks: a state-year common component ϵ_{it} and a state-banking-system-specific component ϵ_{it}^{St}.

The outcomes of the national banking systems follow a similar type of model:

$$Y_{it}^{Nat} = \eta_i^{Nat} + \gamma_t^{Nat} + \alpha X_{it}^{Nat} + \epsilon_{it} + \epsilon_{it}^{Nat}$$

which includes no treatment variable because national banks were always subject to reporting and periodic examinations requirements. As such, the permanent component associated with each state η_i^{Nat} will capture the tighter regulation of national banks. All other variables are defined as in equation 1.

Under conditional independence of disclosure regulation $\left\{Y_{1it}^{St}, Y_{0it}^{St}\right\} \perp D_{it}^{St} | t, i, X_{it}^{St}$, that is, if the potential outcomes of the banking system are independent of treatment status conditioning on observables, the differences-in-differences estimator could consistently estimate the disclosure regulation effects β, and these estimates would only require data from the state banking system aggregates.

However, a more realistic approach is to consider that state regulators have their own objectives and their best incentives could be correlated with the unobserved temporary shocks $\left\{\epsilon_{it}, \epsilon_{it}^{St}\right\}$ in the state economy. Suppose the banking regulators in state i and period t enact new disclosure regulation if:

$$v_{it} \leq \bar{v}, \tag{2}$$

where v_{it} is a random variable, distributed with mean μ_{it}, variance σ_v, and $\bar{v}$ is a threshold value below which the policy-maker decides to enact the regulation. Note the state-year-specific mean μ_{it} may itself be conditional on observable variables such as the state's economic growth, demographics, or even the influence of incumbent groups.

Assuming linearity of the conditional expectation of the variables of interest in the selection variable v_{it},[18] the expected value of the variable of interest of the state banking system conditional on disclosure regulation is

$$E\left(Y_{it}^{St}|v_{st} \leq \bar{v}\right) = E\left(Y_{0it}^{St}\right) + \beta D_{it}^{St} + \left[cov\left(\epsilon_{it}, v_{it}\right) + cov\left(\epsilon_{it}^{St}, v_{it}\right)\right] \times \lambda^{\star}, \tag{3}$$

where $\lambda^{\star} = -\frac{E[v_{st}|v_{st}<\bar{v}]}{\sigma_v}$. Thus the expected value of the outcome variable conditional on being treated is equal to its potential outcome if it was not treated $E\left(Y_{0it}^{St}\right)$ plus the treatment effects β plus two components that reflect the covariance between the state politicians' selection variable and the idiosyncratic state-year-specific shock. The main takeaway is that the differences-in-differences estimator will capture not only the treatment effect β, but also the last term of equation (3). Thus, the estimator will be biased if the regulators' decisions are correlated with the state-year-specific shocks ϵ_{it}.

The expected value of the outcome of interest for the national banking system conditional on the adoption of regulation in the state banking system is defined as

$$E\left(Y_{it}^{Nat}|v_{it} \leq \bar{v}\right) = E\left(Y_{0it}^{Nat}\right) + \left[cov\left(\epsilon_{it}, v_{it}\right) + cov\left(\epsilon_{it}^{Nat}, v_{it}\right)\right] \times \lambda^{\star}. \tag{4}$$

[18] A sufficient condition is that the variables are jointly normally distributed.

Taking differences between (3) and (4) yields

$$E\left(Y_{it}^{St}|v_{it}\leq\bar{v}\right)-E\left(Y_{it}^{Nat}|v_{it}\leq\bar{v}\right)=E\left(Y_{0it}^{St}-Y_{0it}^{Nat}\right)+\beta D_{it}^{St}+\left[cov\left(\epsilon_{it}^{St},v_{it}\right)-cov\left(\epsilon_{it}^{Nat},v_{it}\right)\right]\times\lambda^{\star}. \tag{5}$$

By differencing the outcomes of the two systems, I neutralize the effect of the covariance between the common idiosyncratic state-year-specific shocks ϵ_{it} and the v_{it}. In simple terms, this strategy eliminates the identification threat stemming from the regulators' incentives to enact regulation in response to changes in statewide economic conditions such as a wave of non-business failures in the state or the emergence in the demand for banking services by the state manufacturing sector.

The main empirical specification in this study is a triple-differences model[19] that exploits the variation in the implementation of disclosure regulation across banking system to draw causal inference. Assuming $cov\left(\epsilon_{it}^{St},v_{it}\right)-cov\left(\epsilon_{it}^{Nat},v_{it}\right)=0$, the following empirical model unbiasedly estimates β:

$$Y_{ist}=\alpha_{it}+\eta_{st}+\rho_{is}+\beta D_{ist-1}+\gamma X_{ist}+\epsilon_{ist}, \tag{6}$$

where Y_{ist} is the outcome of interest for banking system s, in state i and period t, α_{it} represents state-year fixed effects controlling for time-varying factors within each state, such as state economic growth or yearly business failures in each state, and η_{st} are banking system-year fixed effects, that control for common shocks to a banking system in a particular year. As an example, macroeconomic trends or even amendments to the regulations of each banking system would be absorbed by η_{st}. ρ_{is} represents state-banking system fixed effects that

[19]The triple-differences estimator is often employed in labor econometrics studies (e.g., Yelowitz, 1995)

control for the invariant characteristics and rules of each banking systems in each state, X_{ist} is a vector of observable state-year-banking system characteristics that affect the outcome of interest, and D_{ist-1} is an indicator variable taking the value of one if state s enacts disclosure regulation for state banking system in period *t-1*, and zero otherwise. Finally ϵ_{ist} is a random error term. In short, identification stems from the variation in the adoption of disclosure regulation across banking systems within a particular state and year.

A close inspection of equation 5 reveals the critical assumption underlying this exercise. The empirical design assumes $cov\left(\epsilon_{it}^{St}, v_{it}\right) - cov\left(\epsilon_{it}^{Nat}, v_{it}\right) = 0$; that is, the policy-makers selection variable is unrelated to state-year transitory shocks that affect differentially the state and national banking systems. This assumption carries two major concerns. According to Barnett and Cooke (1911), the different types of banking systems were not randomly distributed in terms of their location within each state. Specifically, national banks were more common in urban areas due to higher minimum capital requirements, whereas state banks could be found in urban and semi-urban areas. In addition, other contemporaneous sources (**?**) identify the main difference between state banks and national banks as the "greater freedom from restrictions that seem to personally interfere with the personal independence of the banker and less fear of prosecution if things go wrong." In terms of the model, there is a serious identification threat if factors associated with these differences also drive the adoption of disclosure regulation; that is, if they affect v_{it}. I explicitly deal with these concerns in the robustness section.

5 Empirical Results

5.1 Effects on Financial Stability

Table 3 presents the results for the failure-rate analysis. In all specifications, I control for potential non-linear effects of the number of banks in the failure-rate variable by including five splines for the number-of-banks variable.[20] Overall, the results support the prediction that reporting requirements significantly reduced the incidence of bank failures in the state banking systems. I estimate the impact of reporting requirements to be a 0.8 to 2.4 percentage points reduction on the average failure rate. Columns (1) and (2) show the difference in average banking system failure rates before and after the adoption of these regulations. The coefficients are negative but not statistically significant. Nonetheless, these results are not critical because they do not account for important sources of variation. Columns (3)-(6) present the results with the fixed-effects structure. The coefficients associated with reporting requirements become statistically significant in column (3) and remains economically significant in the full-fledged model of column (5) despite becoming statistically insignificant due to the loss of degrees of freedom that the full fixed-effects structure entails. The incremental effect of periodic on-site supervision remains insignificant in these specifications. Columns (7) and (8) include controls for the aggregate solvency and liquidity of the system. I introduce these controls because these regulations affect the prudential ratios of the banking system. After controlling for these variables, the magnitude of the estimated coefficients increases relative to those of prior specifications, providing comfort concerning the stability of the results.

My estimates of columns (7) and (8) suggest reporting requirements reduce the failure

[20] All results are robust to this research design choice.

rate of state banks between 1.8 and 2.4 percentage points. These estimates compare to an unconditional average of the failure rate of state banks prior to the introduction of reporting requirements of 1.8 percent. Thus the magnitude of the estimates in the complete model of Table 3 are arguably overstated. A potential explanation is that states with very few banks had very large failure rates whenever a single bank failed, thereby originating outliers that could affect the results. I re-estimate the model of columns (7) and (8) in a restricted sample including only banking systems with more than 10 banks. In unreported results, I find a 0.8 percentage point reduction in the failure-rate coefficient after the introduction of reporting requirements. I also re-estimate the same empirical model using weighted least squares regression to put less weight into smaller banking systems. Using weighted least squares, the adoption of reporting requirements results in 0.9 p.p. reduction in the failure-rate of state banks – also unreported. In both alternative specifications, the economic magnitude becomes more plausible, while the coefficients remain statistically significant at the 5% level.

Overall, the results support the hypothesis that reporting requirements enhance the stability of the banking system. They also suggest periodic on-site supervision does not incrementally contribute to the stability of the system.

5.2 Effects on Aggregate Balance-Sheet Ratios and Deposit Rates

In what follows, I confine my attention to the main empirical specification presented in equation 6. Table 4 presents evidence on the impact of disclosure regulation on equity capital ratios and deposit structure of financial intermediaries. The results in columns (1) and (2) support the predictions of the agency theoretical models of financial intermediation. The adoption of reporting requirements is associated with a significant three percentage

points reduction [21] in the equity capital ratio. Column (2) suggests periodic examinations do not have significant effects on equity capital ratios.

The remaining columns in Table 4 show the results of the deposit structure analysis. After the introduction of reporting requirements, the fraction of short-term demand-deposits decreases by approximately four percentage points, whereas the share of long-term time deposits rises by approximately five percentage points. The results also suggest periodic examinations significantly reduce the maturity of deposit liabilities. The coefficient is economically weaker than that of reporting requirements but statistically significant. A possible interpretation is that depositors react negatively to the increase in government intervention in the banking system.

The implementation of the main empirical specification to the deposit-rate analysis is limited by the relatively small size of the deposit-rate sample. I opted for the following empirical specification:

$$Y_{ist} = \alpha_t + \rho_{is} + \beta D_{ist-1} + \epsilon_{ist}$$

where Y_{ist} is either the deposit or loan rate for banking system i in state s and period t, α_t represents year fixed effects that are introduced to control for common variation in the bank rates across time, ρ_{is} are state-banking system fixed effects that control for the invariant characteristics and rules of banking systems in each state, and the remaining variables are defined as in the main empirical specification.

[21] To empirically assess the economic magnitude of the estimated coefficients, I reestimated the empirical model using weighted least squares regression. Similar to the results presented in the previous subsection, the comparison suggests that when smaller banking systems are given less weigth in the analysis, results lose economic significance. In particular, the adoption of reporting requirements continues to influence the outcome variables in the same direction but the magnitudes are halved relative to the main specification.

Table 5 presents the results of the deposit-rate analysis. Columns (1) and (3) support the prediction that reporting requirements reduce the equilibrium rate paid by state banks in the deposit market. The statistical evidence indicates that deposit rates drop between 0.4 and 0.8 percentage points following the adoption of these regulations. The model of column (3) indicates that periodic examinations have a statistically insignificant effect on deposit rate. Columns (5) and (7) display the empirical results of estimating the main empirical specification in equation 6. Unsurprisingly, the loss of degrees of freedom makes the results statistically insignificant. Nevertheless, I find no signs of attenuation of the regression results relative to the less demanding analyses of columns (1) and (3).

Overall, the results of the deposit rate analysis are reassuring because the sample period of the analysis only partially overlaps with that of the aggregate balance-sheet regressions. The stability of the main findings across different sample periods and outcome variables indicates the main mechanisms driving the results are in effect regardless of the sample period examined in the paper.

5.3 Effects on Financial Development and Access to Credit.

The empirical proxy for financial development used in this study is the total number of banks per capita operating in the state. According to Rajan and Ramcharan (2011b), the structure of banking was primarily local and as such the number of banks per capita is crucial for access to financial services. Alas, the total number of banks per capita in a state does not contain within-state-year variation as the other outcome variables do. As a result, I estimate the impact of disclosure regulation using the following diff-in-diff specification:

$$Y_{it} = \alpha_t + \rho_i + \beta D_{it-1} + \omega X_{it} + \epsilon_{it}$$

where Y_{it} is the natural log of the total number of banks per capita in state i and year t, α_t is a year fixed effect, ρ_i represents the state-fixed effects, D_{it-1} is defined as above, and X_{it} includes five splines for the total population in the state and the percentage of urban population. Finally, ϵ_{it} is a state-year-specific idiosyncratic shock.

The results of Table 6 suggest the introduction of reporting requirements is associated with a 15 percent increase in the total number of banks per capita in the state. The results of column (2) indicate periodic examinations do not have a statistically significant effect on financial development. The loan-rate analysis follows a similar model to that employed in the deposit-rate analysis. Table 5 suggests the interest rate on loans – whose evolution is a measure of changes in access to credit – decreases by one p.p. with the introduction of reporting requirements. The results provide indirect evidence that disclosure regulation eases entry restrictions by allowing potential entrants to commit to disclosure, and by facilitating access to capital for new bankers. Nevertheless, more direct evidence and tests on the precise mechanism through which mandatory disclosure affects the cost of entry for banking institutions would be valuable.

6 Analysis of the Banking Referenda in Illinois and Michigan

In some states, the adoption of reporting requirements lagged that of their neighboring states by several decades. This pattern is puzzling in light of the above empirical findings suggesting a positive influence of disclosure regulation on financial stability and development as this association suggests that benevolent politicians could effortlessly improve the welfare of their population by implementing simple policies that raised the transparency of their state banks.

Thus the positive results associated with disclosure regulation must be reconciled with the sluggish adoption of the legislation in some states. This section explores the motivations behind the adoption of disclosure regulation in the banking sector through the guidance of the private interests literature. I examine whether the presence of some interest groups hinder or foster the passage of these statutes. Specifically, I focus on the role of two interest groups that could potentially lose their rents with the adoption of legislation promoting financial development: large landowners and small private bankers.

According to Rajan and Ramcharan (2011b), the agricultural elite had incentives to hamper financial development in their communities. First, the large loanable surpluses that large landowners generated, would earn higher rents if competition in local banking markets was not intense. Second, the unavailability of banking facilities meant large landowners could extract rents out of tenants and small farmers, who would have no other options to finance their equipments purchases for their activities. Finally, underdeveloped credit markers also meant large landowners were the only source of inside liquidity in the community. Hence large landowners could take advantage of financial distress by acquiring land at bargain prices.

Small private bankers might also have had incentives to restrict financial development. As discussed in Rajan and Zingales (2003b), without a basic set of government regulations preventing fraud and abuse, depositors only trust their savings to the most reputed and trusted bankers in their community. Hence the set of potential entrants is limited to members of the community with sufficient reputational capital, thereby allowing incumbent financiers to take advantage of these entry barriers to extract abnormal rents. Reporting requirements and periodic on-site examinations are arguably part of the basic set of rules ensuring a minimum level of depositor protection. Small private bankers, who were unregulated and relied

on superior reputational and relationship capital, had incentives to campaign against the introduction of regulations that would reduce barriers to entry and erode their competitive advantage.

I examine the county voting patterns in the 1888 referenda of the banking laws in Illinois and Michigan to shed light on these issues. The constitutions of these states required any amendment to the general banking law to be ratified through a popular vote. In 1887, both state legislatures approved amendments to the general banking law creating a state banking supervisory authority that was required to periodically inspect every state-chartered financial institution at least once a year. Moreover, according to unofficial contemporary sources, the Illinois referendum might have also been a vote on reporting requirements because the pre-Civil War law mandating disclosure of financial statements for state banks was not enforced by any institution. As noted in White (1985), who studies the Illinois bank branching referendum of 1924, powerful political and economic lobbies organized to persuade voters to side with them, whereas the public interest was too diffuse to form a strong coalition. I study the county outcomes of these referenda as small-scale experiments unveiling which pressure groups pushed for or against disclosure regulation.

I follow Rajan and Ramcharan (2011b) and measure the strength of landed interests using the Gini coefficient[22] of the agricultural land size distribution in each county. A high value of this measure indicates the coexistence of a large agricultural elite and a large number of small farmers within the county. This coexistence is a necessary condition for the existence of a potentially exploitative relation that could be severed by financial development. A measure of the strength of small private bankers is the percentage of private bankers among the financial institutions in the county. A high percentage of private bankers suggests the

[22]Details concerning the computation of this measure can be found in Rajan and Ramcharan (2011b)

county is served primarily by banks relying on reputation to conduct their business. The introduction of an intermediate layer of regulation would threaten their rents, because their reputational capital becomes less important and their markets become more exposed to entry from outsiders.

To test these issues, I implement the following empirical specification:

$$\%Yes\ Vote_i = \alpha + \beta_1 Gini_i + \beta_2 Banks\ p.c._i + \beta_3 No\ Banks_i + \beta_4 \%\ Private_i + \gamma X_i + \epsilon_i,$$

where $\%Yes\ Vote$ is the percentage of votes in the county in favor of the regulation, $Gini$ is the Gini coefficient of inequality in the distribution in agricultural land size in the county, $Banks\ p.c.$ is the number of banks per one thousand inhabitants in the county, $No\ Banks$ is an indicator variable that takes the value of one if the county does not have any commercial banks of any type, $\%\ Private$ is the percentage of private banks in terms of the total number of banks in the county, and X_i is a set of control variables for demographics, political preferences, and economic development in the county.

Results are reported in Table 7. Consistent with the above hypotheses, greater inequality in the distribution of landed interests and higher percentages of private bankers are negatively associated with the percentage of county votes in favor of the legislation. The coefficients on the Gini index variable are very robust to the inclusion of other covariates. The coefficient is not attenuated as I introduce more controls for demographic and political characteristics in the analysis. In addition, the Gini index coefficient becomes weaker as the proportion of manufacturing output to total output increases in the county. This finding – which resembles that of Rajan and Ramcharan (2011b) – suggests intensive consumers of the banking services, such as manufacturers, act as a countervailing force muting the influence of the agricultural

elite. The coefficients of the small private banks variable are attenuated as I include more variables in the analysis. This reduction in economic and statistical significance raises some concerns about the real importance of small private banks as an interest group opposing disclosure regulation.

These results are subject to an important caveat. The laws that were subject to the referenda in these states also contained provisions that implemented minimum capital requirements and double liability of stockholders; that is the stockholders were responsible for the liabilities of the bank up to the double of the subscribed capital in the institution. To that extent, one could claim the joint introduction of these regulations counfound the results. Nevertheless, these statutes of the law constitute an increase in entry barriers and therefore should bias against finding results in the hypothesized direction. In fact, White (1985) suggests incumbent financiers lobby for the introduction of regulation that raises capital requirements.

Overall, the results support the idea that political and economic interests lobby against regulations to protect their private interests. The staggered introduction of these regulations could be related to a sustained loss of influence of the agricultural elites and incumbent financiers in shaping the regulatory environment. To the extent that both national and state banks were more prevalent in urban and semi-urban areas, these results provide some validity to the analysis in the first part of the study, regarding the consequences of these regulation.

7 Role of Private Interests in the Effects of Disclosure Regulation

The analyses of the previous sections suggest that reporting requirements advance the stability and development of the banking system and that some interest groups have incentives to deter disclosure regulation in order to preserve their rents. I explore whether the treatment effects of disclosure regulation varies with the inequality of land distribution and with the percentage of small private banks in the state. For various reasons, treatment effects are unlikely to be uniform throughout the United. States. Yet, how the relative strength of these interest groups affects the role of reporting requirements and periodic examinations is unclear. On one hand, incumbent financiers and the agricultural elite have incentives to use their political clout to undermine the effective implementation and enforcement of these disclosure statutes. Hence disclosure regulation, because of its poor enforcement, will have a weak impact in states with strong private interests (e.g. Christensen et al., 2012). On the other hand, once disclosure regulation and particularly reporting requirements are adopted, private interest groups may be able to do little to undermine its enforcement. Glaeser and Shleifer (2003) argue disclosure regulation may be less prone to subversion of justice than contract or tort law. Hence private interest groups have incentives to use all their clout to deter disclosure regulation because after its passage circumventing it would be difficult. Lawmakers in states with a high prevalence of private interests will face stiff opposition on this subject and will only pass these rules when they are clearly needed. Accordingly, I expect disclosure regulation to have stronger effects when private interests are particularly powerful. To explore this empirical question and test for cross-sectional differences in the effects of these regulatory innovations, I extend the main empirical specification to include

partitioning variables that allow the estimation of different slope coefficients in states with high/low predominance of adversarial interests:

$$Y_{ist} = \alpha_{it} + \eta_{st} + \rho_{is} + \theta D_{ist-1} \times Part_{High} + \omega D_{ist-1} \times Part_{Low} + \gamma X_{ist} + \epsilon_{ist} \qquad (7)$$

I implement two partitioning variables that proxy for the strength of the selected private interest group in each state. $Part_{High}$ is an indicator variable taking the value of one if the value of the Gini coefficient of inequality in land size distribution or the percentage of private banks in the state exceed the respective median value across all states in a particular year. The remaining variables' definition is similar to that presented in the main empirical specification. For the sake of brevity, Table 8 reports the results for the failure rate and number of banks per capita variables.[23]

Panel A of Table 8 shows the impact of differences in inequality of agricultural land size distribution on the effects of regulatory policy. Consistent with the hypothesis that a strong agricultural elite exerted pressure to delay the passage of disclosure regulation, the results suggest reporting requirements and periodic examinations had a statistically significant larger impact in states where landed interests were most prevalent. [24]The empirical analysis of

[23]The results using the equity capital ratio, proportion of demand-deposits and proportion of time deposits are not substantially different from those presented in Table 8. The only anomaly that must be reported is that the equity capital ratio drops significantly more after the introduction of reporting requirements in States with low inequality of agricultural land size distribution.

[24]These results seemingly stand in contrast with those of Christensen et al., 2012, who find that the effect of implementing international accounting standards is stronger in countries with better regulatory enforcement. These differences can be reconciled by taking into account the ease of third-party enforcement in each case. It is plausible that depositors and community members can cheaply verify and report to local bank examiners about the implementation of the reporting requirements by local state banks, whereas the representative stakeholder of a modern public firms cannot plausibly gauge whether a complex set of international accounting standards is implemented effectively. Thus, while in the former case the effectiveness of regulatory enforcement may not be crucial to the effective implementation of the regulation, in the latter case the implementation of accounting standards may only produce effects when accompanied by strong

Panel B in Table 8 does not yield any strong results. Differences in the proportion of banking institutions belonging to the small private banking system do not significantly affect the effectiveness of the policies. The evidence indicates private banks did not have significant influence over state regulation. The apparent disconnect between these results and those of the previous section may be explained using public choice theory. Private banks could be too small and dispersed to actively influence regulatory policy at the state level, but large enough to coordinate their efforts to campaign against disclosure regulation at the county level.

8 Conclusion

The recent financial crisis revived the need to understand how disclosure regulation affects the stability and development of the banking system. The debate surrounding the disclosure of the results of the stress-test exercises conducted on major banking institutions in the United States and Europe generated significant interest. Nonetheless, empirical studies that could inform this debate are still scarce.

This paper investigates the impact of introducing disclosure regulation in the U.S. state banking systems of the late nineteenth century on the stability and development of the banking systems. Examining these historical episodes is important mainly for two reasons: (1) historical events could offer important insights on how market forces react to disclosure regulation that potentially alleviated the conflicts-of-interest issues between bankers and their clients. Kroszner (2010) suggests that policy-makers value historical analysis motivated by economic theory and rooted on a deep understanding of institutions and markets. According to Kroszner (2010) this type of analysis could provide guidance to policy-makers on how

enforcement by the local regulators.

to think about a problem and effectively respond to it; and (2) the historical setting offers an opportunity to explore relevant changes in disclosure laws and accurately measure the effects of plausibly exogenous shocks on various outcomes of interest. In current settings, such material changes in disclosure laws are very rare and when they exist they generally lack the temporal and spatial variation that would enable the researcher to persuasively estimate the effects of disclosure regulations in naturally-occurring data. Hence, focusing on a historical setting allows researchers to go beyond simple cross-sectional designs where causation is many times muddled with correlation.

Yet, a natural concern regarding the use of historical events to study disclosure regulation, is the extent to which these results are generalizable and could serve as basis for policy discussion. In fact, over the past century, banking products became increasingly complex, the speed of information flow increased dramatically and the prudential regulation structure in most countries now include many other safeguards. These changes have potentially altered the relative importance of disclosure regulation relative to other microprudential standards. While I acknowledge that historical quasi-natural experiments entail a loss of "realism" relative to the analysis of naturally-ocurring data in a modern setting, I believe that the insights that can be drawn from these experiments usefully complement those of other studies that analyze current data in a cross-country settings. In fact, in my view, the empirical evidence in this study reinforces that of studies such as Barth, Caprio, and Levine (2004), La Porta et al. (2006) that use cross-country surveys to probe the relative merits of mandatory disclosure and public enforcement policies and find that promoting disclosure regulation and liability standards is more effective in fostering market development than promoting public enforcement. On the other hand, the lessons taken from the banking systems of National Banking Era could also be important for the banking systems of current developing countries

insofar as both banking systems operated in economies that have crucial needs for capital formation but are inserted in environments that present great obstacles to their operation due to the lack of strong governance institutions. To this extent, it is interesting that in a recent article, The Economist magazine suggests that in response to the woes of Vietnamese banking systems, Vietnamese politicians should assign priority to promoting a regulatory overhaul that leads to greater transparency and the adoption of international accounting standards.

My analysis allows me to identify how disclosure regulation affects the stability and development in systems where few regulations protecting depositors are in place. I add to the literature by providing empirical evidence suggesting that, in these circumstances, disclosure regulation matters. I consider that the empirical findings on this paper contain important insights that could be valuable for an informed discussion of the role of disclosure regulation in modern banking systems.

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Appendix - Additional Sensitivity Tests

In this appendix, I report a series of robustness checks gauging the sensitivity of the main analysis in the text to (1) alternative methods for computation of standard errors, (2) alternative sample compositions, (3) alternative proxies for financial stability, and (4) inclusion of additional control variables. In what follows, I test the robustness of the main results using the empirical model of column (8) in Table 3 and column (2) of Table 6.

First, I analyze the impact of disclosure regulation, clustering the standard errors at the state-banking system level. Bertrand, Duflo, and Mullainathan (2004) argue that when the dependent variable is serially correlated and the treatment variables change little over time, the OLS standard errors of differences-in-differences estimators are likely to understate the true standard deviation. Even though, the failure rate variable is not highly serially correlated and the treatment variable is not defined at the state level, I cluster the standard errors at the state-banking system level to check the sensitivity of the statistical inferences to these issues. The first row of Table 9 shows the reporting-requirements coefficient remains statistically significant at the ten percent level.

Second, I check the sensitivity of the results to the exclusion of states that adopted the disclosure regulation during or immediately after the financial crises of 1893 and 1907.[25] If policymakers react to episodes of banking crisis by adopting new regulations, the estimated coefficients could partially capture mean reversion in the failure rate and number of banks. I address this concern by excluding states that adopted regulations in the year of or one year after a financial crisis episode. The results presented in the second row of Table 9 confirm this concern does not significantly affect the results. If anything, the coefficient on the reporting-requirements variable becomes stronger in the financial-stability regression,

[25]The 1893 and 1907 crises are the only systemic crises during my sample period.

whereas the periodic-examinations coefficient remains non-significant.

Third, I employ alternative measures of financial stability. I hand-collected the failure-rate variable used in the main analysis from the Annual Reports of the Comptroller of the Currency. Hence this analysis is prone to human errors in the data-collection stage. I use an alternative failure-rate variable provided in Grossman (2001) to test the robustness of the results to the hand-collection process. This dataset also contains a measure of the total assets in failed banks as a percentage of the total assets in the banking system. I use this variable to gauge the sensitivity of the main results to an alternative proxy for financial stability. The Grossman (2001) dataset is not as comprehensive in terms its coverage of the states. Nevertheless, the results are not sensitive to the use of alternative proxies for financial stability.

Finally, I check the robustness to the inclusion of additional control variables. State legislatures often passed statutes altering or imposing minimum capital and reserve requirements concurrently with those passing disclosure and regular examinations requirements. However, as I previously discussed, controlling for these requirements is cumbersome, because they varied within state according to the population of the place where the state bank was located. Alternatively, I control for the introduction of double liability for state banks. Under double liability, shareholders of failing banks were liable not only for the amount of their initial investment, but also for an additional amount up to par value of the shares owned. Double liability was viewed as a risk-reducing measure and as such can be regarded as complementary to the introduction of capital and reserve requirements. Moreover, according to Grossman (2001), no other regulatory innovation spread as far and as rapidly as double liability, thereby suggesting this regulatory innovation was very important. In the fifth row of Table 9, I present the results of the main analysis after controlling for the effects

of the double-liability statutes, using the data provided in Grossman (2001). The results show the coefficient on the reporting-requirements variable is not sensitive to the introduction of a control variable for the double liability statute. The same cannot be said of the results for the financial-development analysis. After I control for double liability, the coefficient associated with reporting requirements loses economic magnitude and its statistical significance. However, the use of this sample halves the number of available observation in the financial development analysis. Thus the fact that in the analysis the coefficient displays some heterogeneity and loses some statistical power is not surprising.

Another concern regarding the interpretation of the results is that the effects of reporting requirements and those of periodic on-site supervision cannot be adequately separated because the effects of these regulatory interventions are unlikely to be independent from each other. This type of concern could be easily addressed if the timing of adoption of disclosure regulation was assigned at random. However, a quick inspection of Table 1 reveals that the adoption of these rules is often clustered, thereby raising concerns that the reporting requirements treatment effect is capturing the potential incremental effect that results from the joint adoption of the two disclosure rules. To gauge whether this is a reasonable concern, I partitioned the reporting requirements variable into states that adopted reporting requirements in conjunction with periodic on-site supervision and states that adopted just the reporting requirements variable. I empirically test if the effects of reporting requirements in the number of banks operating in the state stems primarily from the states that adopted reporting requirements and periodic on-site examinations at the same time. The results of this analysis (untabulated) suggest that the effects of reporting requirements do not significantly depend on whether these laws are adopted in conjunction with periodic on-site examinations.

The other main source of concern is that local shocks to economic conditions generate the cross-sectional and temporal variation in the adoption of disclosure regulation and differentially affect the two types of banking systems. A potential threat stems from the different regulatory restrictions imposed on the composition of the asset portfolios of national and state banks. National banks could only acquire real-estate-backed assets in the process of debt collection and these assets had to be disposed of within five years (Barnett and Cooke, 1911). State banks faced less stringent limitations on their holdings of real estate assets. As a result, if the intertemporal and spatial variation in disclosure regulation is related to shocks affecting the value of real estate assets, the main empirical analysis could be flawed. Ideally, I would parse out the variation in the failure-rate variable that stems from shocks to a local index of real estate prices and use only the variation in failure rates that is orthogonal to the real estate prices. However, to my knowledge, no such real estate price index exists at the state or county level for that time period. Alternatively, I control for the percentage of loans collateralized by real estate in the total assets of the banking system in each state and year. If local shocks to real estate values are indeed originating bias in the empirical results, controlling for the fraction of real estate assets held in the banking systems as a percentage of total assets should absorb a portion of that variation, which should result in an attenuation of the coefficients in the main empirical analysis. Row 6 of Table 9 shows the results are not sensitive to the inclusion of these control variables, hence alleviating concerns that the main empirical estimates are caused by the asymmetric impact of real estate shocks on both banking systems.

As a final robustness exercise, I implement an empirical specification that allows me to control for characteristics of the state that vary across time but are invariant across banking systems within a state-year. The empirical strategy is to estimate the following empirical

specification:

$$Y_{i,State,t} - Y_{i,Nat,t} = \underbrace{\eta_{State,t} - \eta_{Nat,t}}_{\eta_t^\star} + \underbrace{\rho_{s,State} - \rho_{s,Nat}}_{\rho_s^\star} + \beta D_{i,State,t-1} + \gamma \left(X_{i,State,t} - X_{i,Nat,t} \right) + \omega X_{it} + \epsilon_{i,State,t} - \epsilon_{i,Nat,t} \tag{8}$$

Taking differences between state and national banking systems within each state-year, I obtain an equivalent estimator to that of the main empirical model in equation 7. Yet, this within-differences estimator allows me to control for state-year events that plausibly have asymmetrical effects on each banking system. To the extent that national banks are more concentrated in urban centers than state banks, it is important to gauge whether including factors that disproportionately affect the urban centers within each state (e.g. surge in the manufacturing sector) attenuate the coefficients associated with the reporting-requirements variable. Attenuation would suggest that systematic differences in geographical location of state and national banks drive the main results in the paper. I estimate the above empirical model while controlling for the log of total population, the urbanization rate, and manufacturing output in the state as a percentage of agricultural and manufacturing output. Row 7 of Table 9 suggests inclusion of these factors in the empirical specification does not significantly affect the results.

Table 1: Reporting Requirements and Regulatory Examinations Adoption Dates

State	Rep.	Exam.	State	Rep.	Exam.	State	Rep.	Exam.
Alabama	1904	1904	Maryland	1870	1898	Oregon	1907	1907
Arizona	1893	1893	Massachusetts	(a)	(a)	Pennsylvania	(a)	1891
Arkansas	1913	1913	Michigan	(a)	1888	Rhode Island	(a)	1908
California	1878	1878	Minnesota	(a)	1878	South Carolina	1906	1906
Colorado	1877	1907	Mississippi	1888	1914	South Dakota	1891	1891
Connecticut	(a)	(a)	Missouri	1877	1895	Tennessee	(a)	1914
Delaware	1903	1903	Montana	1887	1895	Texas	1905	1905
Florida	1869	1889	Nebraska	1877	1889	Utah	1888	1905
Georgia	1891	1890	Nevada	1907	1907	Vermont	(a)	(a)
Idaho	1905	1905	New Hampshire	(a)	-	Virginia	1884	1910
Illinois	(a)	1888	New Jersey	(a)	1889	Washington	1886	1907
Indiana	(a)	1873	New Mexico	1884	1903	West Virginia	1891	1891
Iowa	(a)	1873	New York	(a)	1884	Wisconsin	(a)	1895
Kansas	1891	1891	North Carolina	1887	1889	Wyoming	1888	1888
Kentucky	1869	-	North Dakota	1890	1890			
Louisiana	1882	1898	Ohio	(a)	1908			
Maine	(a)	(a)	Oklahoma	1897	1897			

(a) stands for implemented in the pre-civil war period.

Table 2: Summary Statistics of the Banking Systems Characteristics

Panel A presents descriptive statistics of selected variables for state and national banking systems separately. The sample period corresponding to each variable varies considerably due to data availability issues. *Number of Banks* is the number of banks in each banking system for each year and state as reported by Barnett and Cooke (1911). *Total Assets* and *Total Deposits* for each banking system are taken from Flood (1998). *Real Estate Loans* is defined as $(Real\ Estate\ Loans)/Total\ Assets$, where *Real Estate Loans* is taken from the aggregate balance-sheets of each banking system for each state and year provided by Flood (1998). Panel B presents differences-in-differences analysis for the main outcome variables used in the study. National banks were always regulated, thus the Pre-National cell in the diff-in-diff tables correspond to the average ratios for national banks for state-years in which state banks were not regulated. *Failure Rate* is defined as $(No.Failure)/No.Banks$, where the number of failures in each banking system for each year and state are taken from the statistics reported in each Annual Report of the Comptroller of the Currency between 1892 and 1908 and the number of banks in each banking system for each year and state are taken from Barnett and Cooke (1911). *Equity Capital Ratio* is defined as $(Capital+Surplus)/Total\ Assets$, where capital, surplus and total liabilities are taken from the aggregate balance-sheets of each banking system for each state and year provided by Flood (1998). *% Demand Dep, % Time Dep* are defined as $(Demand\ Deposits)/Total\ Deposits$ and $(Time\ Deposits)/Total\ Deposits$, respectively. Demand and time deposits.are also taken from Flood (1998). *Average Loan Rate* and *Average Deposit Rate* are the average loan and deposit rate for state and national banks that answered the Comptroller's inquiry to state and national banks in each state and year regarding the rates they practiced at prespecified dates in time. Standard errors are robust to heteroskedasticity.

Panel A: Descriptive statistics of selected variables disaggregated by banking system type

	State Banking System						National Banking System					
	N	Mean	St. Dev	p25	p50	p75	N	Mean	St. Dev	p25	p50	p75
Number of Banks	1727	106.7	158.8	7	36	144	1734	85.8	111.3	17	48	100
Total Assets	864	199,352	495,781	22,232	61,372	149,897	864	148,474	303,136	20,863	52,757	125,205
Total Deposits	864	163,457	419,717	16,308	45,669	124,721	864	108,560	235,020	13,238	34,172	91,519
Real Estate Loans	864	15.6	10.2	8.8	12.4	20.3	864	1.0	0.8	0.4	.8	1.4

Panel B: Differences-in-differences in outcome variables

Dependent variable: Failure Rate			
	Pre	Post	ΔPost-Pre
State	0.018	0.006	-0.012
	(0.006)	(0.0008)	(0.006)
National	0.008	0.006	-0.002
	(0.003)	(0.0007)	(0.002)
ΔSt.-Nat.	0.01	0.0007	-0.009
	(0.006)	(0.001)	(0.006)

Dependent variable: Equity Capital Ratio			
	Pre	Post	ΔPost-Pre
State	29.8	20.2	-9.6
	(0.9)	(0.2)	(0.9)
National	26.5	22.6	-3.9
	(0.8)	(0.2)	(0.8)
ΔSt.-Nat.	3.3	-2.4	-5.7
	(1.2)	(0.3)	(1.2)

Dependent variable: % Demand Dep.			
	Pre	Post	ΔPost-Pre
State	71.8	51.1	-20.7
	(1.6)	(0.8)	(1.8)
National	78.4	70.1	-8.3
	(1.3)	(0.4)	(1.4)
ΔSt.-Nat.	-6.6	-19.1	-12.4
	(2.1)	(0.9)	(2.3)

Dependent variable: % Time Dep.			
	Pre	Post	ΔPost-Pre
State	24.7	45.9	21.2
	(1.7)	(0.9)	(1.9)
National	10.7	12.1	1.4
	(1.5)	(0.4)	(1.6)
ΔSt.-Nat.	14.0	33.8	19.8
	(2.3)	(1.0)	(2.5)

Dependent variable: Av. Loan Rate			
	Pre	Post	ΔPost-Pre
State	10.97	8.32	-2.64
	(0.56)	(0.21)	(0.59)
National	9.73	7.81	-1.91
	(0.41)	(0.21)	(0.46)
ΔSt.-Nat.	1.24	0.51	-0.73
	(0.70)	(0.30)	(0.75)

Dependent variable: Av. Deposit Rate			
	Pre	Post	ΔPost-Pre
State	3.78	3.86	0.08
	(0.46)	(0.13)	(0.47)
National	3.88	3.19	-0.69
	(0.22)	(0.11)	(0.24)
ΔSt.-Nat.	-0.10	0.67	0.77
	(0.51)	(0.17)	(0.53)

Table 3: Effects of Reporting Requirements and Periodic Examinations on Bank Failure Rates

This sample comprises 1,857 observations referring to the failure rate of national and state banking systems for 48 US states and territories in the period ranging from 1892 to 1913. *Fail. Rate* is defined as $^{(No.Failure)}/_{No.Banks}$, where the number of failures in each banking system for each year and state are taken from the statistics reported in each Annual Report of the Comptroller of the Currency between 1892 and 1913 and the number of banks in each banking system for each year and state are taken from Barnett and Cooke (1911). *Rep* is an indicator variable that takes the variable of one beginning in the year after the adoption of mandatory reporting requirements by the state legislatures. *Exam* is also an indicator variable that takes the value of one beginning in the year after the enactment of periodic on-site supervisions by state examiners. Capital Ratio and Liquidity Ratio are defined as $^{(Capital+Surplus)}/_{Total\ Assets}$ and $\frac{(Cash\ Assets)}{Total\ Assets}$, respectively. All specifications control for non-linear effects of the number of banks in the banking system in each year and state using four splines for the number of banks variable.

Results are reported for eight empirical specifications. Specifications (1) and (2) examine the univariate correlations between reporting requirements, periodic on-site supervisions and the failure rate without controlling for the aggregate solvability and liquidity of the system. Specifications (3) and (4) are identical to (1) and (2) except for the inclusion of indicator variables that control for characteristics that are invariant at the state-year and banking system-year levels. Specifications (5) and (6) are similar to (3) and (4) but further control for possible state-banking system type fixed effect. These specifications are those corresponding to the full-fledged model presented in the empirical implementation section. Specification (7) and (8) presents the same fixed effects structure of (5) and (6) but includes includes controls for the aggregate solvency and liquidity of the system. It is worth noting that the number of observation in these specfications is smaller due to the unavailability of aggregate balance-sheet data over the 1892-1896 period. In all specifications, I control for the number of banks in each banking system including five splines of the number of banks variable. Standard errors are heteroskedasticity-robust.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Fail. Rate	Fail. Rate	Fail. Rate	Fail. Rate	Fail. Rate	Fail. Rate	Fail. Rate	Fail. Rate
Rep	-0.0083	-0.0045	-0.0116*	-0.0035	-0.0128	-0.0184	-0.0186*	-0.0242*
	(0.005)	(0.006)	(0.007)	(0.010)	(0.010)	(0.015)	(0.010)	(0.013)
Exam		-0.0044		-0.0003		0.0065		0.0064
		(0.003)		(0.007)		(0.011)		(0.008)
Capital Ratio							-0.0434	-0.0419
							(0.036)	(0.036)
Liq. Ratio							0.0025	0.0031
							(0.011)	(0.011)
Observations	1,857	1,857	1,857	1,857	1,857	1,857	1,467	1,467
Adjusted R-squared	0.031	0.032	0.164	0.219	0.191	0.191	0.278	0.278
State-Year fixed effects?	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Year-BankType fixed effects?	No	No	Yes	Yes	Yes	Yes	Yes	Yes
State-BankType fixed effects?	No	No	No	No	Yes	Yes	Yes	Yes

*, **, and *** indicate statistical significance at the 10%, 5%, and 1%, respectively for a two-tailed test

Table 4: Effects of Mandatory Reporting and Supervisory Examinations on Banking Outcomes

This sample comprises 1,728 observations refering to the national and state banking systems for 48 US states and territories in the period ranging from 1896 to 1913. *Capital Ratio* is defined as $^{(Capital+Surplus)}/_{Total\ Assets}$, where capital, surplus and total assets are taken from the aggregate balance-sheets of each banking system for each state and year provided by Flood (1998). *Time Dep.* is defined as $^{(Time\ Deposits)}/_{Total\ Deposits}$, where time deposits and total deposits are taken from the aggregate balance-sheets of each banking system for each state and year provided by Flood (1998). *Demand Dep.* is defined as $^{(Demand\ Deposits)}/_{Total\ Deposits}$, where demand-deposits and total deposits are taken from the aggregate balance-sheets of each banking system for each state and year provided in Flood (1998), *Rep* is an indicator variable that takes the variable of one beginning in the year after the adoption of mandatory reporting requirements by the state legislatures. *Exam* is also an indicator variable that takes the value of one beginning in the year after the enactment of periodic on-site supervisions by state examiners.

Results are reported for six empirical specifications. Specifications (1) and (2) examine the impact of reporting requirements and mandatory periodic on-site supervisions on the aggregate equity capital ratio while controling for control for characteristics that are invariant at the state-year, banking system-year and state-banking system levels. Specifications (3),(4) and (5), (6) have a similar specification to (1) and (2) but analyze the impact of reporting requirements and mandatory periodic on-site supervisions on the percentage of long-term and short-term deposits, respectively. In all specifications, the standard errors are robust to heteroskedasticity.

	(1)	(2)	(3)	(4)	(5)	(6)
	Capital Ratio	Capital. Ratio	Time Dep.	Time Dep.	Demand Dep.	Demand Dep.
Rep	-0.0276***	-0.0354***	0.0516***	0.0784***	-0.0400***	-0.0620***
	(0.007)	(0.013)	(0.018)	(0.020)	(0.014)	(0.019)
Exam		0.0088		-0.0302***		0.0247*
		(0.011)		(0.012)		(0.014)
Observations	1,728	1,728	1,728	1,728	1,728	1,728
Adjusted R-squared	0.892	0.892	0.961	0.961	0.949	0.949
State-Year fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes
Year-BankType fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes
State-BankType fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes

*, **, and *** indicate statistical significance at the 10%, 5%, and 1%, respectively for a two-tailed test

Table 5: Effects of Reporting Requirements and Periodic Examinations on Deposit and Loan rates

This sample comprises 263 observations refering to the average deposits and loan rates practiced by national and state commercial banks located in non-reserve cities of 48 US states and territories as of June 30th of 1889, 1894 and 1899. The data was collected from the 1899 Annual Report of the Comptroller of the Currency and result from a questionnaire sent by the Comptroller of the Currency in 1899 asking all commercial banks to report their average deposit and loan rates as of June 30th of 1889, 1894 and 1899. The data are gathered from tables included in the 1899 Annual Report of the Comptroller of the Currency containing the average deposit and loan rates by state and reserve city. I follow Gendreau (1984) in dropping the observations relating to reserve cities due to the confounding effects stemming from the role of clearinghouses in these reserve cities as deterrents to interest rate competition (see Cannon (1910)). *Int Dep* and *Int Loan* are the average deposit and loan rate for state and national banks answering the Comptroller's questionnaire in each state and year. *Rep* is an indicator variable that takes the variable of one beginning in the year after the adoption of mandatory reporting requirements by the state legislatures. *Exam* is also an indicator variable that takes the value of one beginning in the year after the introduction of mandatory examinations by the state's official supervisors.

Results are reported for eight empirical specifications. Specifications (1) and (2) examine the impact of reporting requirements in a differences-in-differences specification that includes fixed effects for each year and also for each possible state-banking system type combination. Specifications (3) and (4) are similar to (1) and (2) but includes both types of treatment effects variables. The specifications (5)-(8) implement the full model presented in the empirical implementation section. In all specifications, the standard errors are clustered at the state-year level.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Int Dep	Int Loan	Int Dep	Int Loan	Int Dep	Int Loan	Int Dep	Int Loan
Rep	-0.4379**	-1.0257**	-0.8192**	-1.0098**	-0.5437	-0.9814	-0.7463	-0.8470
	(0.185)	(0.397)	(0.394)	(0.478)	(0.572)	(0.987)	(0.755)	(1.012)
Exam			0.4169	-0.0174			0.2569	-0.1704
			(0.375)	(0.279)			(0.660)	(0.389)
Observations	263	263	263	263	263	263	263	263
Adjusted R-squared	0.737	0.895	0.739	0.894	0.781	0.966	0.779	0.966
State-Year fixed effects?	No	No	No	No	Yes	Yes	Yes	Yes
Year-BankType fixed effects?	No	No	No	No	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes	No	No	No	No
State-BankType fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

*, **, and *** indicate statistical significance at the 10%, 5%, and 1%, respectively for a two-tailed test

Table 6: Effects of Mandatory Reporting and Supervisory Examinations on Market Structure

This sample contains 1,637 observations covering 48 US states and territories over the 1876-1913 period. The unit of observation in this analysis is the state-year level. The outcome variable is defined as $ln\left(^{Tot\ banks}/_{Tot.\ Pop.}\right)$, where *Tot banks* is the total number of banks (national, state, and private) operating in the state and *Tot Pop.* is the total state population each year. Total number of banks was computed from data gathered from Barnett and Cooke (1911), whereas the total state population was taken from the decennial US census and interpolated for the non-decennial years. *Rep* is an indicator variable that takes the variable of one beginning the year after the adoption of reporting requirements in local newspapers. *Exam* is also an indicator variable that takes the value of one beginning the year after the introduction of periodc on-site examinations by state supervisors. All regressions include splines for time-varying population levels and urbanization rates.
Results are reported for three empirical specifications. Specifications (1) and (2) examine the impact of reporting requirements and mandatory supervisory examinations in a standard differences-in-difference specification that includes fixed effects for each year and state. In all specifications, the standard errors are clustered at the state level.

	(1)	(2)
	Log (Tot. Banks per capita)	Log (Tot Banks per capita)
Rep	0.1607**	0.1773**
	(0.071)	(0.082)
Exam		-0.0299
		(0.067)
Observations	1,637	1,637
Adjusted R-squared	0.888	0.888
Controls?	Yes	Yes
State fixed effects?	Yes	Yes
Year fixed effects?	Yes	Yes

*, **, and *** indicate statistical significance at the 10%, 5%, and 1%, respectively for a two-tailed test

Table 7: Banking Referenda Analysis

This sample contains 180 observations covering 180 county referendum results in Illinois and Michigan in 1888. The unit of observation in this analysis is the county level. The outcome variable *% Yes* is defined as the percentage of favorable votes for the banking law in the county. *Ln (Gini)* is the measure of inequality in the size distribution of agricultural land in the county, and proxies for the power and incentives of agricultural elites to oppose financial development. It is calculated as the log of the Gini coefficient – see Rajan and Ramcharan (2011b) for details on the calculation of this measure – of the size of landed interests in the county using the 1890 census data on the size distribution of agricultural land. *Banks p.c.* is the total number of banks (national, state, and private) operating in the county per thousand inhabitants. *No banks* is a dummy variable that takes the value of one if the county does not possess any banking facility as of 1888. *% Private Bk.* is the percentage of private unincorporated banks as a percentage of total banks in the county. *% Democrat* is the percentage of democrat votes by county in the 1888 presidential elections. *% Progressive* is the percentage of progressive votes by county in the 1888 presidential elections. *Election Part.* is the percentage of presidential election turnout in the county. Ln(Total Population) is the log of the total population in the county as of 1888. This value is interpolated using the cubic splines method from the 1880 and 1890 census data. % Urbanization is the total population living in cities of +25,000 inhabitants as of 1890. % Black is the percentage of population in the county of African-American origins. Ln(Gini)×Manu. Share is an interaction term between the log Gini index and the manufacturing share in the county where the latter is defined as the value of manufacturing output in the county divided by the value of manufacturing output in the county plus the value of agricultural output in the county. *Manu. Share* is defined similarly. Standard errors are robust to heteroskedasticity.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	% Yes	% Yes	% Yes	% Yes	% Yes	% Yes	% Yes
Ln(Gini)	-0.2849***		-0.2891***	-0.3162***	-0.2635***	-0.6816***	-0.3416***
	(0.071)		(0.071)	(0.070)	(0.074)	(0.194)	(0.074)
Banks p.c.		0.1222	-0.0165	0.1311	0.0374	-0.1159	0.1160
		(0.126)	(0.124)	(0.123)	(0.121)	(0.128)	(0.136)
No Banks		-0.0685	-0.1221	-0.0925	-0.0216	-0.1554**	-0.0793
		(0.083)	(0.084)	(0.081)	(0.094)	(0.077)	(0.089)
% Private Bk.		-0.1584***	-0.1484***	-0.1566***	-0.0598	-0.0848	-0.0951*
		(0.055)	(0.054)	(0.052)	(0.052)	(0.053)	(0.049)
% Democrat				-0.2291			-0.1937
				(0.272)			(0.276)
% Progressive				-0.8185			-1.0867
				(1.144)			(1.128)
Election Part.				-1.6812**			-1.2542**
				(0.651)			(0.556)
Ln(Total Population)					-0.0161		0.0043
					(0.028)		(0.029)
% Urbanization					0.3688***		0.1195
					(0.083)		(0.126)
% Black					-0.7580*		-0.7620*
					(0.396)		(0.433)
Ln(Gini)×Manu. Share						0.5077**	
						(0.239)	
Manu. Share						0.7519***	0.1734**
						(0.239)	(0.087)
Observations	180	180	180	180	180	179	179
Adjusted R-squared	0.068	0.023	0.088	0.129	0.161	0.195	0.203
Specification	Agr. Elite	Inc. Fin	Agr. + Fin.	Political	Demographic	Manufacturing	All controls

*, **, and *** indicate statistical significance at the 10%, 5%, and 1%, respectively for a two-tailed test

Table 8: Impact of Regulations in States with Different Levels of Private Interests.

For this analysis, I partition the treatment sample into two groups representing states with high/low inequality in agricultural land size distribution (Panel A) and high/low presence of unregulated private banks (Panel B). In Panel A, I use the Gini coefficient of land size distribution to assign the state to the high partition if its value is higher than the sample median for that particular year. In Panel B, I assign states to the high partition if the proportion of private banks in the state's total number of banks is higher than the median value. The values of the Gini coefficient of land size distribution are only available for census years. Hence, for the non-decennial years, I interpolate the Gini coefficient values using a natural cubic spline. The empirical specifications used in the analysis are similar to those presented in columns (7) and (8) of the failure-rate analysis and columns (1) and (2) of the financial-development analysis.

Panel A: Inequality in Agricultural Land Size Distribution

	(1)	(2)	(3)	(4)
	Fail. Rate	Fail. Rate	Ln(Tot.Bks p.c.)	Ln(Tot.Bks p.c.)
Rep×High Gini	-0.0333***	-0.0407***	0.1958***	0.1438*
	(0.011)	(0.013)	(0.061)	(0.079)
Rep×Low Gini	0.0010	-0.0072	0.0528	0.1273
	(0.008)	(0.014)	(0.072)	(0.080)
Exam×High Gini		0.0085		0.0734
		(0.007)		(0.072)
Exam×Low Gini		0.0091		-0.1293
		(0.011)		(0.082)
Observations	1,381	1,381	1,681	1,681
Adjusted R-squared	0.315	0.315	0.887	0.889
F-Test for Difference in Rep. Coefficients (p-value)	.0009***	.022**	.0056*	.778
F-Test for Difference in Exam Coefficients (p-value)	-	.960	-	.013**
Fixed effects?	Yes	Yes	Yes	Yes

Panel B: Differences in Prevalence of Small Private Banks

	(1)	(2)	(3)	(4)
	Fail. Rate	Fail. Rate	Ln(Tot.Bks p.c.)	Ln(Tot.Bks p.c.)
Rep×High Pct. Private Bks	-0.0226**	-0.0302**	0.1063	0.1538*
	(0.011)	(0.013)	(0.071)	(0.079)
Rep×Low Pct. Private Bks	-0.0147*	-0.0249**	0.1760**	0.2254**
	(0.009)	(0.012)	(0.079)	(0.100)
Exam×High Pct. Private Bks		0.0088		0.0224
		(0.007)		(0.068)
Exam×Low Pct. Private Bks		0.0101		-0.0788
		(0.010)		(0.101)
Observations	1,132	1,381	1,508	1,681
Adjusted R-squared	0.336	0.296	0.890	0.884
F-Test for Difference in Rep. Coefficients (p-value)	.2025	.609	.1849	.397
F-Test for Difference in Exam Coefficients (p-value)	-	.875	-	.323
Fixed effects?	Yes	Yes	Yes	Yes

*, **, and *** indicate statistical significance at the 10%, 5%, and 1%, respectively for a two-tailed test

Table 9: Sensitivity Analysis for the Effects of Rep. Requirements and Supervisory Examinations.

This analysis uses the empirical models presented in column (8) of Table 3 and column (2) of Table 6. I report empirical results for the following robustness checks: (1) clustering the standard-errors in the failure rate analysis at the state-year level, (2) excluding from the sample, states adopting reporting requirements or periodic examinations in the year of or one year after a banking crisis episode, (3) using alternative data for the failure rate, (4) using the share of assets in failed banks in total assets of the state banking system as an alternative dependent variable, (5) controlling for the adoption of double liability provisions in the state, (6) controlling for the proportion of real estate loans held by the banking systems, and (7) using an alternative specification that takes differences between banking systems within a state in a given year to include state specific factors that vary through time, namely the state's natural log of total population, its urbanization rate and the percentage of output coming from the manufacturing sector.

Panel A: Financial-stability Analysis

		Rep. Requirements		Reg. Examinations	
	N	Coefficient	St. Dev	Coefficient	St. Dev
(1) Clustering by state-banking system	1,467	-0.0242*	(0.013)	0.0064	(0.005)
(2) No states adopting during financial crises	1,185	-0.0415**	(0.017)	0.0124	(0.014)
(3) Failure rate variable from Grossman (2001)	1,262	-0.0231*	(0.013)	0.0049	(0.007)
(4) % Assets in failed banks	1,256	-0.0153*	(0.009)	0.0007	(0.004)
(5) Controlling Double Liability	1,155	-0.0193**	(0.009)	0.0070	(0.007)
(6) Controlling % Real Estate Loans	1,381	-0.0283**	(0.013)	0.0097	(0.008)
(7) Controlling for state-year variables	715	-0.0254**	(0.011)	0.0089*	(0.005)
Panel B: Financial-Development Analysis					
(1) Clustering by state	1,637	0.1773**	(0.082)	-0.0299	(0.067)
(2) No states adopting during financial crises	1,392	0.1634*	(0.095)	-0.0034	(0.069)
(3) Controlling for double liability	784	0.0630	(0.066)	-0.0067	(0.056)

*, **, and *** indicate statistical significance at the 10%, 5%, and 1%, respectively for a two-tailed test

Figure 1: Year of adoption of reporting requirements.

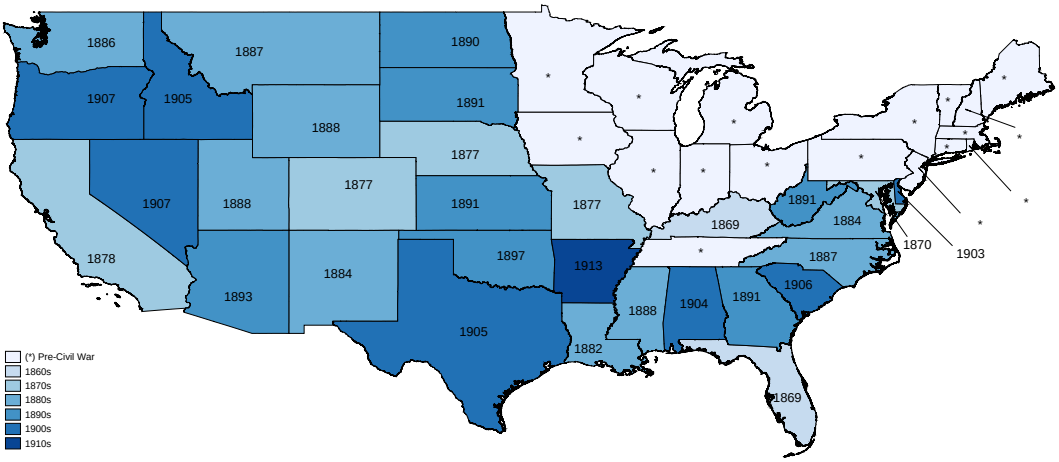


Figure 2: Year of adoption of periodic on-site examinations.

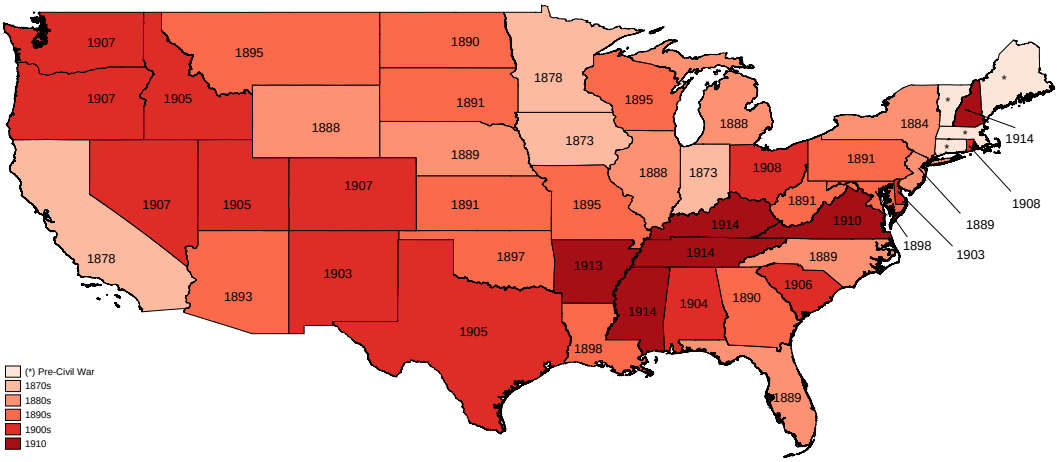
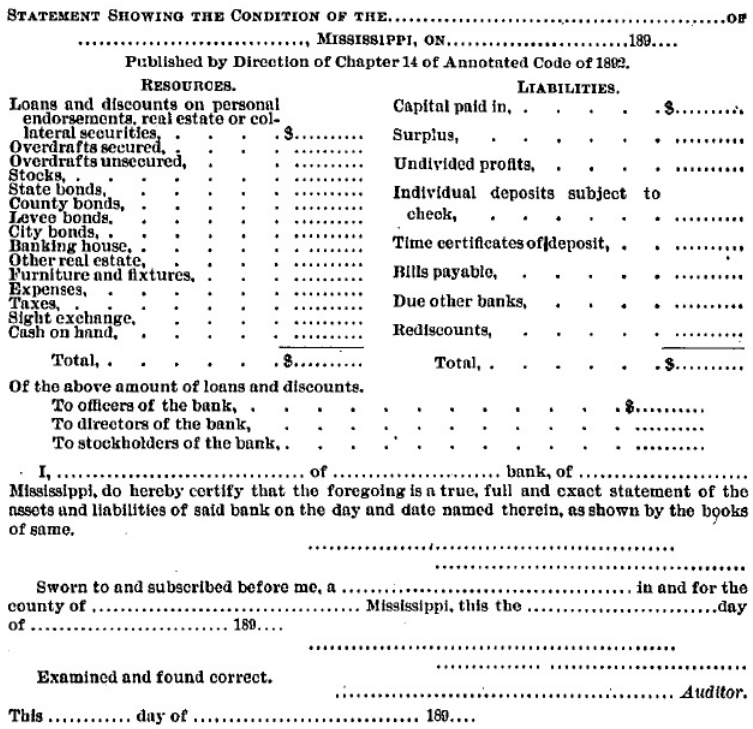


Figure 3: Statement of Condition for Mississippi state banks



STATEMENT SHOWING THE CONDITION OF THE.....OF

....., MISSISSIPPI, ON.....189....

Published by Direction of Chapter 14 of Annotated Code of 1892.

RESOURCES.		LIABILITIES.	
Loans and discounts on personal endorsements, real estate or collateral securities,	$.....	Capital paid in,	$.....
Overdrafts secured,	.....	Surplus,	.....
Overdrafts unsecured,	.....	Undivided profits,	.....
Stocks,	.....	Individual deposits subject to check,	.....
State bonds,	.....	Time certificates of deposit,	.....
County bonds,	.....	Bills payable,	.....
Levee bonds,	.....	Due other banks,	.....
City bonds,	.....	Rediscounts,	.....
Banking house,	.....		
Other real estate,	.....		
Furniture and fixtures,	.....		
Expenses,	.....		
Taxes,	.....		
Sight exchange,	.....		
Cash on hand,	.....		
Total,	$.....	Total,	$.....

Of the above amount of loans and discounts.

To officers of the bank, $.....

To directors of the bank, ...

To stockholders of the bank, ...

I, ... of ..... bank, of ..... Mississippi, do hereby certify that the foregoing is a true, full and exact statement of the assets and liabilities of said bank on the day and date named therein, as shown by the books of same.

.....

.....

Sworn to and subscribed before me, a ..... in and for the county of ..... Mississippi, this the .....day of ..... 189....

.....

.....

Examined and found correct.

..... *Auditor.*

This ..... day of ..... 189....

Figure 4: Example of a bank statement published in local newspaper

'SQUIRE CRISP'S GAL'S PARTY.

Sister Green and Sister Turnipseed Gossip About Social Affairs.

"Good mornin', Sister Green. How be ye?"

"Good mornin', Sister Turnipseed. I ain't feelin' much; I've got sich a mis'ry in me knee. Pears like it's goin' to be stiff, so I'm afeard it mought be this new distress—pegleg-ry. What's the news with ye?"

"La, bless ye! the weather's been so dry, there hain't no news, only the party down to 'Squire Crisp's t'other Wednesday night."

"Do tell! How was it? Was you there?"

"No, I wa'n't there, but I hearn all about it. You know how purty an' nice the 'Squire's little darter, Miss Annie, is? Well, she had three young gals, just as sweet an' purty as she is, a-visitin' her. Who was they? La, yes; I thought you knowed. One was her cousin, Miss Robins, an' t'other two was Miss Duncanses from C'lumbia. Well, four purty gals in one house was more than these here boys could stant 'thout having a party, so Miss Annie axed the 'Squire an' he said he didn't care. So all the boys and gals in town was invited an' went. After they all got there an' caught ther breth, Mrs. Maude Maxwell's oldest gal, Julie, handed 'round pieces o' paper with poetry writ on 'em an' cut ha'f in two—one ha'f to a boy an' t'other to a gal. The boy an' gal holdin' the pieces that would make sense was pardners. They had to set down to tables an' see who could stick the most goobers with a hat pin, an' you never have seed hat pins an' goobers fly so in your life! 'Jest hearin' about it made me think o' when me an' Joshua Brown was sparkin', years ago. When they counted up, that little Biemann gal what works as stenografher for Col. Jeames had more'n anybody, an' Miss Fannie Early had the fewest. Who is she? Land sakes, now, I dunno. All I know is her an' her sister has been up here fum Anderson. Then 'fore ye could think good, here they come with ice cream an' two kinds o' cake. This kep' everybody quiet fur a little an' then this here young lawyer, Hughs, riz up to 'sent the prizes. Nobody but him knowed who was the lucky ones, an' he liked to 've never told. Finally, he sed for Miss Biemann to stand up, an' he made like he was a jedge passin' sentence on 'er. From the way he talked you'd a thought the poor gal had done some'n turrible. Then he done that Miss Early the same way an' it made me feel right sorry fer 'em jest to hear it told. When he finished his say everbody jest chipped, but I don't see nothin' funny about it myself. After this somethin' sorter of a soothin' natur was needed, so Miss Annie an' one o' her friends acted some songs that Miss Margie Brenneck played on the pianner. By this time it was elebben o'clock and they wasn't axed to stay any longer, so everbody said they had a good time an' left."

"Well, I say!"

Locals from Connerose.

Connerose, Sept. 13.—Special: Rev. J. H. Ayers will, if not providentially hindered, fill his regular appointment here next Saturday and Sunday.

R. H. Dilworth and family, of Walhalla, spent the past week-end with Mr. Dilworth's mother, Mrs. R. H. Dilworth, of this place.

E. C. Marett, of Pair Play, and Rev. A. P. Marett, of Westminster, spent some time last week very pleasantly here with W. O. Alexander, Sr., and family.

We regret exceedingly to learn of the death of Reuben Lee, which occurred at his home in the Poplar Springs section yesterday afternoon. The loss falls heaviest on the stricken family, and there is a deep sorrow throughout a large acquaintance in this and other communities.

Henry Arve, wife and two children, of South Union, spent Saturday and Sunday visiting in our community. They are expected to move to this community in the near future. We will be glad to welcome these good people to our midst and wish them much success.

Mr. and Mrs. S. D. Addis have been recent visitors to relatives in this community.

Quite a number of our Connerose people attended the baptizings at New Hope and West Union Sunday.

Misses Madera and Janie Alexander returned to their home here last week after a pleasant visit to relatives and friends in Toccoa, Avalon and other points in Georgia. They report a pleasant time.

Mrs. Hesse, of Walhalla, is on an extended visit to her daughter-in-law, Mrs. Nettie Hesse, here. Mrs. Hesse is a very jolly old lady and is always welcome in our midst.

Prof. J. R. Lyles and Miss Ada Marett closed a very successful term of school at Oak Grove Friday. Prof. Lyles is a young man of great promise, and we predict for him a brilliant and successful future. Miss Ada is a cultured young lady of charming personality, and we feel that success will be hers.

Mrs. Enoch Breazeale will leave to-day for an extended visit to her son, K. D. Breazeale, in Cordele, Ga. She will be accompanied to Atlanta by her son, Jas. G. Breazeale, of Westminster.

Lyston and Robert Morgan, of Pickens, made a combined business and pleasure trip to this community last week.

Mary, the little daughter of W. O. Alexander, Jr., had the misfortune to get both her hands and feet severely burned by playing in the embers where Mrs. Hettie Alexander had been washing. She is doing very well at present.

T. D. Alexander and Mrs. T. L. Alexander an, little daughter, Margaret, spent last Sabbath in Walhalla with friends.

A. M. Alexander, of Westminster, was a welcome visitor to his father, W. O. Alexander, and family, Saturday and Sunday. K. E. R.

Dr. King's New Life Pills
The best in the world.

MRS. J. W. HARRISON DEAD.

Passed Away this Morning at Three O'clock at Family Residence.

The people of Walhalla were this morning grieved to learn that about 3 o'clock Mrs. Mary J. Harrison, widow of the late Gen. J. W. Harrison, had passed away. Mrs. Harrison had been an invalid suffering from the infirmities of age, for years, and her death, though expected at any time during the past **ten days, has cast a deep gloom over the entire community. She had been confined to her home for several years, and much of that time to her bed. She was a patient and** resigned sufferer, and during the long years of her declining health and strength calmly awaited the end, ready to answer the summons at any moment. She was a consistent member of the Presbyterian church, in which, until her declining health prevented, she was an earnest and active worker. Her long life had been a benediction to those of her own home and a wide circle of intimate friends. She was about 91 years of age.

Mrs. Harrison leaves to mourn her death three sons and three daughters —I. H. Harrison and Frank E. Harrison, of Walhalla; George A. Harrison, of Landrum, S. C.; Mrs. Ida Darby and Mrs. G. A. Norman, of Walhalla; Mrs. T. T. Broyles, of Birmingham. To these and numerous other close relatives is extended the sympathy of many friends in their hour of sorrow and great loss.

Funeral arrangements have not yet been made, these being dependent on the arrival of relatives and the weather conditions. The interment will, however, be in the family lot in Westview cemetery some time to-morrow.

New Advertisements this Week.

Keep an eye on The Courier's advertising columns each week. The live merchants of the county use these columns to tell the people what they have for them. You will find that it pays to watch what the merchants and other dealers have to offer through our columns. These gentlemen and firms have new announcements this week:

Anderson, Ruskin, Seneca.

Bauknight, C. W. & J. E., Walhalla.

Carter Hardware Co., Walhalla.

Financial statements of the Bank of Walhalla and People's Bank, Walhalla; Seneca Bank and Citizens' Bank, Seneca; the Westminster Bank. (Deposit your money in one of these banks. A study of their statements will show you that it is both safe and profitable to do so.)

Humphries, C. H., Walhalla.

Moss & Ansel, Walhalla.

Master's Sale.

Pitchford, C. W., Walhalla.

There are also numerous legal notices, sales, etc., that are of general interest. Read them and keep posted as to what's going on.

Items from Toxaway.

Toxaway, Sept. 13.—Special: Rev. J. H. Stone filled his regular appointment at this place Sunday and preached a very interesting sermon.

Farmers are busy gathering their fodder and hay.

Miss Artie Stewart was the guest of Miss Avie Duke Sunday.

Mr. and Mrs. J. T. Smith visited Mr. and Mrs. Jas. Smith, of the Holly Springs section, recently.

Miss Cora Lyle, of the Pleasant Hill section, was the guest of the Misses Cobb Saturday and Sunday.

J. M. Davis had the misfortune to get his horse badly cut on barbed wire on the 12th instant.

School closed at this place last Friday. It was under the management of Mrs. Jas. Hunter.

The boys in this community are training their mules to walk foot logs. N. C.

Ebenezer News Notes.

Ebenezer, Sept. 13.—Special: We have been having quite a revival of religion in our community. Rev. Marett conducted a week's meeting at Wolf Stake, resulting in fourteen additions to the church. These were baptized at the old Flat Rock muster ground last Sunday morning. There was quite a crowd, as usual, to witness the ceremony. We will be excused for mentioning the fact that Mr. and Mrs. John Thomas, who live on the Old Rock, entertained quite a number of their relatives and friends that day. Uncles, aunts and cousins to the number of twenty or more, gathered there, but John and his good lady were equal to the occasion and made every one feel at home.

We have had a very interesting meeting at Ebenezer Presbyterian church. The pastor, Rev. Mr. Wilcox, was assisted by the Rev. Mills, of Clemson, who is a very able minister, and his preaching will be long remembered by the people of this community.

Mrs. Ogg, of Columbia, visited the family of Tom Owens last week. She was accompanied by her little daughter, Ruth, who was quite ill during her visit.

Our school at this place closed last Friday, and Mr. Hughs came over and gave the children a talk, which was highly appreciated by both children and patrons. This school was taught by Miss Bessie Wood, of the New Hope section. She seems to have given general satisfaction and performed her duties faithfully.

D. L.

New York Banker Cuts Throat.

New York, Sept. 13—John W. Castles, president of the Union Trust Company of this city, capitalized at $1,000,000, a director in other well known corporations and prominent in club and social life in this city and the South, cut his throat from ear to ear in the Grand Union Hotel this afternoon and was found dead stretched across a bed to-night. He had been in ill health for some time and his suicide is ascribed solely to a nervous breakdown, and not to financial troubles.

THE HIGH SCHOOL STANDARD.

The Future Course of these Schools Will Attract Attention.

Columbia, Sept. 13.—For some time the State Board of Education has been working to secure a standardization in the high schools of the State. Practically every college now measures its entrance requirements in units. The Association of Southern Colleges has adopted this method and at least three South Carolina Colleges are requiring 14 units for admission to their freshman classes. In order to secure recognition of thorough high school work, the State Board of Education, on September 7, adopted the following resolution:

"That a State High School diploma signed by the chairman and the secretary of the State Board and by the high school inspector, be given to every pupil completing fourteen standard units in any course of study in any of the public high schools of the State of South Carolina."

The graduate of any high school can, under this resolution, secure the State Board diploma, provided the school actually does 14 units of high school work. It is not required that the high school be State aided, for a number of the best city schools in the State are operating under special acts of the General Assembly and not under the general school law. It will be interesting to see how many secondary schools in South Carolina will meet the requirements.

Fairview Farmers' Union.

All members of Fairview Union are requested to meet September 18th at 2 o'clock p. m., as we have special business to attend to.

J. F. Alexander, President.

Bishop Ward Ill in Oricnt.

Nashville, Tenn., Sept. 7.—Bishop Seth Ward, of the Methodist Episcopal Church, South, whose home is in Hamton, Texas, is critically ill at Yokohama, Japan, having been taken ill on board ship while on his way from America.

Statement of the Condition of THE BANK OF WALHALLA,

located at Walhalla, S. C., at the close of business September 8th, 1909.

Resources.	
Loans and discounts	$125773 64
Overdrafts	1722 86
Bonds and Stocks owned by the bank	15000 00
Banking house	1500 00
Furniture and fixtures	1650 00
Due from banks and trust companies	13722 58
Currency	1214 00
Gold	282 00
Silver and other coin	855 75
Checks and cash items	104 38
Total	$164,366 21
Liabilities.	
Capital stock paid in	$ 30000 00
Surplus fund	5000 00
Undivided profits, less current expenses and taxes paid	6111 80
Due to banks and trust companies	1433 14
Individual deposits subject to check	42375 53
Demand certificates of deposit	1326 78
Time certificates of deposit	73118 96
Bills payable, including certificates for money borrowed	5000 00
Total	$164,366 21

State of South Carolina, County of Oconee.—Before me came W. L. Verner, Cashier of the above named Bank, who, being duly sworn, says that the above and foregoing statement is a true condition of said Bank, as shown by the books of said Bank.

W. L. VERNER.

Sworn to and subscribed before me this 10th day of September, 1909.

(L.S.) W. D. Moss, N. P. for S. C.

Correct—Attest:

J. D. VERNER,
J. W. SHELOR,
JOHN W. WIGHTLIFFE,
Directors.

Statement of the Condition of THE CITIZENS' BANK,

located at Seneca, S. C., at the close of business September 8th, 1909.

Resources.	
Loans and discounts	$183,470 32
Overdrafts	91 70
Bonds and stocks owned by the bank	50 00
Banking house	11886 24
Furniture and fixtures	4613 41
Due from banks and trust companies	31757 67
Currency	3600 00
Gold	600 00
Silver and other coin	894 29
Checks and cash items	17 25
Total	$236980 88
Liabilities.	
Capital stock paid in	$ 50000 00
Surplus fund	4000 00
Undivided profits, less current expenses and taxes paid	16021 48
Due to banks and trust companies	341 56
Individual deposits subject to check	86353 61
Time certificates of deposit	23184 73
Cashier's checks	79 50
Notes and bills rediscounted	15000 00
Bills payable, including certifiates for money borrowed	42000 00
Total	$236980 88

State of South Carolina, County of Oconee.—Before me came L. A. Edwards, President of the above named Bank, who, being duly sworn, says that the above and foregoing statement is a true condition of said Bank, as shown by the books of said Bank.

L. A. EDWARDS.

Sworn to and subscribed before me this 11th day of September, 1909.

(L.S.) H. F. Alexander, N. P. & C.

Correct—Attest:

J. G. HYFF,
W. J. LUNNEY,
W. F. AUSTIN,
Directors.

Statement of the Condition of THE WESTMINSTER BANK,

located at Westminster, S. C., at the close of business September 8, 1909.

Resources.	
Loans and discounts	$229354 19
Overdrafts	6378 23
Bonds and stock owned by the bank	20075 00
Banking house	5000 00
Furniture and fixtures	1000 00
Due from banks and trust companies	24655 47
Currency	2872 00
Gold	195 00
Silver and other coin	1748 78
Checks and cash items	75 75
Total	$291354 42
Liabilities.	
Capital stock paid in	$100000 00
Undivided profits, less current expenses and taxes paid	11469 67
Due to banks and trust companies	32 30
Dividends unpaid	48 00
Individual deposits subject to check	51678 87
Time certificates of deposit	65816 58
Cashiers checks	309 00
Bills payable, including certificates for money borrowed	62000 00
Total	$291354 42

State of South Carolina, County of Oconee.—Before me came T. Peden Anderson, Cashier of the above named bank, who, being duly sworn, says that the above and foregoing statement is a true condition of said bank, as shown by the books of said bank.

T. PEDEN ANDERSON.

Sworn to and subscribed before me this 10th day of September, 1909.

(L.S.) F. M. Cross, Notary Public.

Correct—Attest:

W. P. ANDERSON,
D. L. NORRIS,
M. S. STRIBLING,
Directors.

Statement of the Condition of THE SENECA BANK,

located at Seneca, S. C., at the close of business September 8, 1909.

Resources.	
Loans and discounts	$120111 04
Overdrafts	3462 56
Banking house	1600 00
Furniture and fixtures	1400 00
Due from banks and trust companies	11084 28
Currency	3886 00
Gold	1795 00
Silver and other coin	1664 71
Total	$145003 69
Liabilities.	
Capital stock paid in	$ 20400 00
Surplus fund	9600 00
Undivided profits, less current expenses and taxes paid	6859 15
Due to banks and trust companies	2356 93
Individual deposits subject to check	65106 64
Time certificates of deposit	30581 12
Cashier's checks	99 85
Bills payable, including certificates for money borrowed	10000 00
Total	$145003 69

State of South Carolina, County of Oconee.—Before me came F. S. HOLLEMAN, Cashier of the above named bank, who, being duly sworn, says that the above and foregoing statement is a true condition of said bank, as shown by the books of said bank.

F. S. HOLLEMAN.

Sworn to and subscribed before me this 11th day of September, 1909.

(L.S.) R. L. Nimmons, N. P. for S. C.

Correct—Attest:

J. W. BYRD,
E. C. DOYLE,
J. J. BALLENGER,
Directors.

Statement of the Condition of THE PEOPLE'S BANK,

located at Walhalla, S. C., at the close of business September 8th, 1909.

Resources.	
Loans and discounts	$108860 59
Overdrafts	3295 20
Furniture and fixtures	1600 00
Due from banks and trust companies	15029 36
Currency	365 00
Gold	1470 00
Silver and other coin	286 51
Checks and cash items	5112 43
Total	$135873 09
Liabilities.	
Capital stock paid in	$ 30000 00
Surplus fund	6000 00
Undivided profits, less current expenses and taxes paid	3715 72
Due to banks and trust companies	763 99
Dividends unpaid	35 00
Individual deposits subject to check	41066 17
Time certificates of deposit	54292 21
Total	$135873 09

State of South Carolina, County of Oconee.—Before me came Geo. Seaborn, Cashier of the above named bank, who, being duly sworn, says that the above and foregoing statement is a true condition of said bank, as shown by the books of said bank.

GEO. SEABORN Cashier.

Sworn to and subscribed before me this 13th day of September, 1909.

(L. S.) A. P. CRISP.

Magistrate Oconee Co., S. C.

Correct—Attest:

W. A. SMOTHER,
J. W. BELL,
JAMES SEABORN,
Directors.

NOTICE OF FINAL SETTLEMENT AND DISCHARGE.—Notice is hereby given that the undersigned will make application to D. A. Smith, Judge of Probate for Oconee county, in the State of South Carolina, at his office at Walhalla Court House, on Thursday, September 30, 1909, at 11 o'clock in the forenoon, or as soon thereafter as said application can be heard, for leave to make final settlement of the Estate of EMMA L. ANDERSON, deceased, and obtain final discharge as Administrator of said Estate.

S. N. HUGHS, Administrator.
September 1, 1909. 35-38

FORD

Nothing High Priced but the Quality.

Another Car Load in a Few Days.

Be sure to see L. O. White at Garage.

Carter Hardware Co.,
WALHALLA, S. C.

Save the Grass!

Save the grass you could not kill. It will save you several dollars and make your 1910 account smaller.

We want to sell you a Grass Blade or anything you want in Hardware, Groceries, Crockery, Shoes, Notions, Hats, Pants, Overalls, Shirts, Dry Goods and Tinware.

All Low Cut Shoes, Straw Hats and Summer Goods at reduced prices.

12 Wood Slate Pencils for 5 cents.

J. W. BYRD & CO., Seneca.
WE APPRECIATE YOUR TRADE.

This Space is Reserved for
C. W. Pitchford,
who is in New York, buying his
Fall Stock.

STYLE CENTER
For Men and Boys.

Get Your Boys' and Girls' School Shoes from

C. H. HUMPHRIES,
HATS SHOES CLOTHING FURNISHINGS
WALHALLA, S. C.

REAL ESTATE FOR SALE.

Farm Lands,
Mountain Lands,
Timbered Lands,
Water Powers.
Call on me---
M. S. STRIBLING
Seneca, S. C.
Office Over Seneca Hardware Co.

T. E. ALEXANDER,
The Land Man
WALHALLA, S. C.

Ice, Ice, Ice.

We deliver Ice in any quantity anywhere in Walhalla. Books of Ice Tickets in convenient form. Full weight guaranteed. It is our effort to please all customers in quantity, quality and polite and satisfactory service.

You get pure Ice from our wagon.

LIVINGSTON ICE COMPANY.

Figure 5: How to read bank statements.

HOW TO READ BANK STATEMENTS.

BY GEORGE WALKER.

Publicity is one of the most esteemed safeguards of modern banking. That it is by no means a complete one, is shown by the ever-recurring bankruptcies of institutions which have not avoided publicity, and have made a fair showing in their published statements. The trouble in these cases is two-fold: on the one hand, the statements, while perhaps truthful on their face, may cover a great deal of rottenness, and on the other hand, the public, for whose enlightenment they are intended, has not learned how to interpret them. There is a certain measure of information which any business man of average understanding may derive from a bank statement, and it is far from being an unimportant measure. On the contrary, when dealing with the transactions of a large number of institutions, statistics are almost always an unerring indication of strength or weakness.

We propose, in a brief space, to point out some of the simplest rules by which bank statements are to be interpreted, and to show what can, and what cannot, be learned by means of them.

The balance sheet of a bank, like all other balance sheets, is made up of items of debit and credit; the gain or loss account, which strikes the balance between all the other accounts, being Profit and Loss, which, if the bank is in a sound condition, should be found on the side of Liabilities, and not of Resources. In the simpler and more popular phraseology of our National accounts, however, the old fashioned name, Profit and Loss, does not appear; but in place of it, the items "Surplus Fund," and "Undivided Profits," which can only be found on the right side of the Ledger.

Now, what are the usual and legitimate debits and credits which should figure in a bank account? What, in other words, do its debts and assets properly consist of? The three principal items of liability are capital, circulation and deposits. The bank owes its stockholders for the capital invested by them in the business; it owes the general public for the circulating notes which it has issued, and which are outstanding; and it owes its private customers for the sums of money which they have deposited with it in account current. Besides these leading items of indebtedness, it owes other banks and bankers for collections made for their account, and often for direct deposits, which do not essentially differ from the deposits made by individuals. Country